



Annex 7: Literature study report

This annex includes the search terms, flowcharts and lists of excluded papers for the PICO questions included in the guideline.

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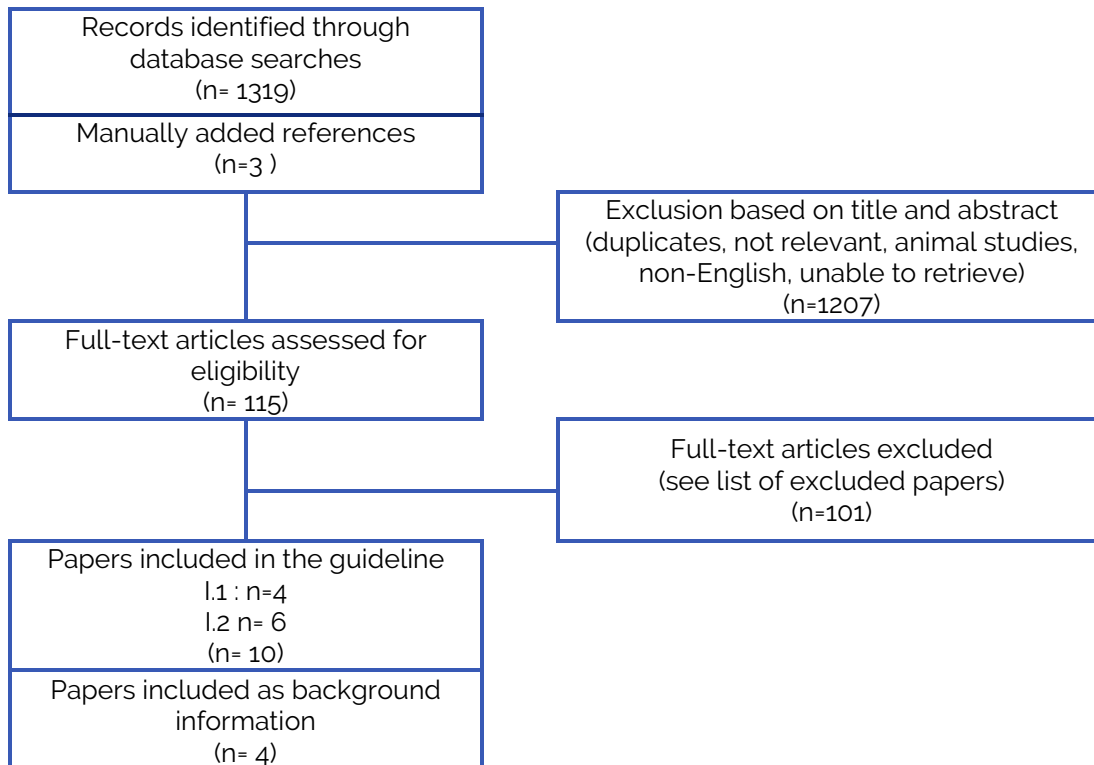
QUESTION I.1 CAN CLINICAL SYMPTOMS PREDICT THE PRESENCE OF ENDOMETRIOSIS?

QUESTION I.2 DOES THE USE OF SYMPTOM DIARIES OR QUESTIONNAIRES COMPARED TO TRADITIONAL HISTORY TAKING LEAD TO IMPROVED OR EARLIER DIAGNOSIS OF ENDOMETRIOSIS?

Search strings (combined I.1 + I.2)

DATABASE	Search string
PUBMED	((("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND (symptom[Title] OR symptoms[Title] OR sign[Title] OR diagnosis[Title]) AND (Dysmenorrhoea OR dyspareunia OR "Pelvic pain" OR "Infertility" OR "Dyschezia" OR "hematemesis" OR "Fatigue" OR "Ovulation pain" OR Mittelschmerz OR Dysuria OR hematuria OR Sciatica OR "back pain" OR Lethargy OR Menorrhagia OR "excessive menstrual loss" OR "premenstrual spotting" OR "Intermenstrual bleeding" OR "cyclical" OR catamenial OR "anal bleeding" OR "Cystitis" OR "gastrointestinal symptoms")) OR ((("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND (((symptom[Title] OR symptoms[Title] OR sign[Title] OR diagnosis[Title]) AND (Diary OR questionnaire OR EHP-30)) OR ("symptom questionnaire" OR "symptom diary" OR EHP-30)))
COCHRANE	(Endometriosis OR endometriotic OR endometrioma) AND (symptom OR symptoms OR sign OR diagnosis) AND (Dysmenorrhoea OR dyspareunia OR "Pelvic pain" OR "Infertility" OR "Dyschezia" OR "hematemesis" OR "Fatigue" OR "Ovulation pain" OR Mittelschmerz OR Dysuria OR hematuria OR Sciatica OR "back pain" OR Lethargy OR Menorrhagia OR "excessive menstrual loss" OR "premenstrual spotting" OR "Intermenstrual bleeding" OR "cyclical" OR catamenial OR "anal bleeding" OR "Cystitis" OR "gastrointestinal symptoms" OR diary OR questionnaire OR EHP-30)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Abbas S, Ihle P, Koster I, Schubert I. Prevalence and incidence of diagnosed endometriosis and risk of endometriosis in patients with endometriosis-related symptoms: findings from a statutory health insurance-based cohort in Germany. <i>Eur J Obstet Gynecol Reprod Biol</i> 2012;160: 79-83.	Not relevant to the PICO question
Aerts L, Grangier L, Dallenbach P, Wenger JM, Streuli I, Bianchi-Demicheli F, Pluchino N. Understanding sexual pain in endometriosis. <i>Minerva Ginecol</i> 2019;71: 224-234.	Outcome assessment
Aliani F, Ashrafi M, Arabipoor A, Shahrokh-Tehranejad E, Jahanian Sadatmahalleh S, Akhond MR. Comparison of the symptoms and localisation of endometriosis involvement according to fertility status of endometriosis patients. <i>J Obstet Gynaecol</i> 2018;38: 536-542.	Not relevant to the PICO question
Al-Jefout M, Alnawaiseh N, Yaghi S, Alqaisi A. Prevalence of Endometriosis and Its Symptoms among Young Jordanian Women with Chronic Pelvic Pain Refractory to Conventional Therapy. <i>J Obstet Gynaecol Can</i> 2018;40: 165-170.	Not relevant to the PICO question
Almeida OD, Jr., Val-Gallas JM. Office microlaparoscopy under local anesthesia in the diagnosis and treatment of chronic pelvic pain. <i>J Am Assoc Gynecol Laparosc</i> 1998;5: 407-410.	Treatment, not diagnosis
Apostolopoulos NV, Alexandraki KI, Gorry A, Coker A. Association between chronic pelvic pain symptoms and the presence of endometriosis. <i>Arch Gynecol Obstet</i> 2016;293: 439-445.	No adjustment
Aredo JV, Heyrana KJ, Karp BI, Shah JP, Stratton P. Relating Chronic Pelvic Pain and Endometriosis to Signs of Sensitization and Myofascial Pain and Dysfunction. <i>Semin Reprod Med</i> 2017;35: 88-97.	Narrative review
Ballard K, Lane H, Hudelist G, Banerjee S, Wright J. Can specific pain symptoms help in the diagnosis of endometriosis? A cohort study of women with chronic pelvic pain. <i>Fertil Steril</i> 2010;94: 20-27.	No adjusted analysis; pain intensity and not "cyclical/noncyclical" pain as in protocol
Bourdel N, Alves J, Pickering G, Ramilo I, Roman H, Canis M. Systematic review of endometriosis pain assessment: how to choose a scale? <i>Hum Reprod Update</i> 2015;21: 136-152.	Outcome assessment
Bourdel N, Chauvet P, Billone V, Douridas G, Fauconnier A, Gerbaud L, Canis M. Systematic review of quality of life measures in patients with endometriosis. <i>PLoS One</i> 2019;14: e0208464.	Not relevant to the PICO question
Brosens I, Puttemans P, Campo R, Gordts S, Kinkel K. Diagnosis of endometriosis: pelvic endoscopy and imaging techniques. <i>Best Pract Res Clin Obstet Gynaecol</i> 2004;18: 285-303.	Newer data available
Burton C, Iversen L, Bhattacharya S, Ayansina D, Saraswat L, Sleeman D. Pointers to earlier diagnosis of endometriosis: a nested case-control study using primary care electronic health records. <i>Br J Gen Pract</i> 2017;67: e816-e823.	Not relevant to the PICO question
Butrick CW. Patients with chronic pelvic pain: endometriosis or interstitial cystitis/painful bladder syndrome? <i>Jsls</i> 2007;11: 182-189.	Not relevant to the PICO question
Chapron C, Barakat H, Fritel X, Dubuisson JB, Breart G, Fauconnier A. Presurgical diagnosis of posterior deep infiltrating endometriosis based on a standardized questionnaire. <i>Hum Reprod</i> 2005;20: 507-513.	Not relevant to the PICO question
Chapron C, Fauconnier A, Dubuisson JB, Barakat H, Vieira M, Breart G. Deep infiltrating endometriosis: relation between severity of dysmenorrhoea and extent of disease. <i>Hum Reprod</i> 2003;18: 760-766.	Not relevant
Chauvet P, Auclair C, Mourgues C, Canis M, Gerbaud L, Bourdel N. Psychometric properties of the French version of the Endometriosis Health Profile-30, a health-related quality of life instrument. <i>J Gynecol Obstet Hum Reprod</i> 2017;46: 235-242.	Outcome assessment
Chauvet P, Guiguet-Auclair C, Comptour A, Denouel A, Gerbaud L, Canis M, Bourdel N. Feelings and expectations in endometriosis: Analysis of open comments from a cohort of endometriosis patients. <i>J Gynecol Obstet Hum Reprod</i> 2018;47: 281-287.	Outcome assessment
Collin GR, Russell JC. Endometriosis of the colon. Its diagnosis and management. <i>Am Surg</i> 1990;56: 275-279.	Not relevant to the PICO question
Colwell HH, Mathias SD, Pasta DJ, Henning JM, Steege JF. A health-related quality-of-life instrument for symptomatic patients with endometriosis: a validation study. <i>Am J Obstet Gynecol</i> 1998;179: 47-55.	Outcome assessment
Cranney R, Condous G, Reid S. An update on the diagnosis, surgical management, and fertility outcomes for women with endometrioma. <i>Acta Obstet Gynecol Scand</i> 2017;96: 633-643.	Narrative review
Dai Y, Leng JH, Lang JH, Li XY, Zhang JJ. Anatomical distribution of pelvic deep infiltrating endometriosis and its relationship with pain symptoms. <i>Chin Med J (Engl)</i> 2012;125: 209-213.	Outcome is not diagnosis



Darrow SL, Vena JE, Batt RE, Zielesny MA, Michalek AM, Selman S. Menstrual cycle characteristics and the risk of endometriosis. <i>Epidemiology</i> 1993;4: 135-142.	Risk factors, not relevant for diagnosis
de Freitas Fonseca M, Aragao LC, Sessa FV, Dutra de Resende JA, Jr., Crispi CP. Interrelationships among endometriosis-related pain symptoms and their effects on health-related quality of life: a sectional observational study. <i>Obstet Gynecol Sci</i> 2018;61: 605-614.	Outcome assessment
de Resende Junior JAD, Crispi CP, Cardeman L, Buere RT, Fonseca MF. Urodynamic observations and lower urinary tract symptoms associated with endometriosis: a prospective cross-sectional observational study assessing women with deep infiltrating disease. <i>Int Urogynecol J</i> 2018;29: 1349-1358.	Not relevant to the PICO question
DiVasta AD, Vitonis AF, Laufer MR, Missmer SA. Spectrum of symptoms in women diagnosed with endometriosis during adolescence vs adulthood. <i>Am J Obstet Gynecol</i> 2018;218: 324.e321-324.e311.	Adolescent endometriosis
Dmowski WP, Lesniewicz R, Rana N, Pepping P, Noursalehi M. Changing trends in the diagnosis of endometriosis: a comparative study of women with pelvic endometriosis presenting with chronic pelvic pain or infertility. <i>Fertil Steril</i> 1997;67: 238-243.	Not relevant to the PICO question
Ek M, Roth B, Ekstrom P, Valentin L, Bengtsson M, Ohlsson B. Gastrointestinal symptoms among endometriosis patients--A case-cohort study. <i>BMC Womens Health</i> 2015;15: 59.	No relevant addition to the chapter
Evans SF, Brooks TA, Esterman AJ, Hull ML, Rolan PE. The comorbidities of dysmenorrhea: a clinical survey comparing symptom profile in women with and without endometriosis. <i>J Pain Res</i> 2018;11: 3181-3194.	Not relevant to the PICO question
Facchin F, Barbara G, Saita E, Mosconi P, Roberto A, Fedele L, Vercellini P. Impact of endometriosis on quality of life and mental health: pelvic pain makes the difference. <i>J Psychosom Obstet Gynaecol</i> 2015;36: 135-141.	Outcome assessment
Facchin F, Buggio L, Ottolini F, Barbara G, Saita E, Vercellini P. Preliminary insights on the relation between endometriosis, pelvic pain, and employment. <i>Gynecol Obstet Invest</i> 2019;84: 190-195.	Not relevant to the PICO question
Fauconnier A, Chapron C, Dubuisson JB, Vieira M, Dousset B, Breart G. Relation between pain symptoms and the anatomic location of deep infiltrating endometriosis. <i>Fertil Steril</i> 2002;78: 719-726.	Not relevant - outcome is not diagnosis
Fauconnier A, Staraci S, Darai E, Descamps P, Nisolle M, Panel P, Roman H, Boukdedid R. A self-administered questionnaire to measure the painful symptoms of endometriosis: Results of a modified DELPHI survey of patients and physicians. <i>J Gynecol Obstet Hum Reprod</i> 2018;47: 69-79.	Outcome assessment
Fauconnier A, Staraci S, Huchon C, Roman H, Panel P, Descamps P. Comparison of patient- and physician-based descriptions of symptoms of endometriosis: a qualitative study. <i>Hum Reprod</i> 2013;28: 2686-2694.	Not relevant to the PICO question
Fawole AO, Bello FA, Ogunbode O, Odukogbe AT, Nkwocha GC, Nnoaham KE, Zondervan KT, Akintan A, Abdus-Salam RA, Okunlola MA. Endometriosis and associated symptoms among Nigerian women. <i>Int J Gynaecol Obstet</i> 2015;130: 190-194.	Not relevant to the PICO question
Fedele L, Bianchi S, Bocciolone L, Di Nola G, Parazzini F. Pain symptoms associated with endometriosis. <i>Obstet Gynecol</i> 1992;79: 767-769.	Outdated paper
Fedele L, Bianchi S, Carmignani L, Berlanda N, Fontana E, Frontino G. Evaluation of a new questionnaire for the presurgical diagnosis of bladder endometriosis. <i>Hum Reprod</i> 2007;22: 2698-2701.	Specific for bladder endometriosis
Fedele L, Parazzini F, Bianchi S, Arcaini L, Candiani GB. Stage and localization of pelvic endometriosis and pain. <i>Fertil Steril</i> 1990;53: 155-158.	Not relevant to the PICO question
Flores I, Abreu S, Abac S, Fourquet J, Laboy J, Rios-Bedoya C. Self-reported prevalence of endometriosis and its symptoms among Puerto Rican women. <i>Int J Gynaecol Obstet</i> 2008;100: 257-261.	Not relevant to the PICO question
Fourquet J, Baez L, Figueroa M, Iriarte RI, Flores I. Quantification of the impact of endometriosis symptoms on health-related quality of life and work productivity. <i>Fertil Steril</i> 2011;96: 107-112.	Outcome assessment
Gambadauro P, Carli V, Hadlaczk G. Depressive symptoms among women with endometriosis: a systematic review and meta-analysis. <i>Am J Obstet Gynecol</i> 2019;220: 230-241.	Depression as symptom
Gao X, Yeh YC, Outley J, Simon J, Botteman M, Spalding J. Health-related quality of life burden of women with endometriosis: a literature review. <i>Curr Med Res Opin</i> 2006;22: 1787-1797.	Not relevant to the PICO question - QoL
Gupta J, Cardoso LF, Harris CS, Dance AD, Seckin T, Baker N, Ferguson YO. How do adolescent girls and boys perceive symptoms suggestive of endometriosis among their peers? Findings from focus group discussions in New York City. <i>BMJ Open</i> 2018;8: e020657.	Not relevant to the PICO question
Hansen KE, Kesmodel US, Baldursson EB, Kold M, Forman A. Visceral syndrome in endometriosis patients. <i>Eur J Obstet Gynecol Reprod Biol</i> 2014;179: 198-203.	Not relevant to the PICO question



Hassa H, Tanir HM, Uray M. Symptom distribution among infertile and fertile endometriosis cases with different stages and localisations. <i>Eur J Obstet Gynecol Reprod Biol</i> 2005;119: 82-86.	Cross-sectional study
Jenkinson C, Kennedy S, Jones G. Evaluation of the American version of the 30-item Endometriosis Health Profile (EHP-30). <i>Qual Life Res</i> 2008;17: 1147-1152.	Outcome assessment
Jia SZ, Leng JH, Sun PR, Lang JH. Translation and psychometric evaluation of the simplified Chinese-version Endometriosis Health Profile-30. <i>Hum Reprod</i> 2013;28: 691-697.	Outcome assessment
Jones G, Jenkinson C, Kennedy S. Evaluating the responsiveness of the Endometriosis Health Profile Questionnaire: the EHP-30. <i>Qual Life Res</i> 2004;13: 705-713.	Outcome assessment
Jun SH, Lathi RB. Pelvic pain after gonadotropin administration as a potential sign of endometriosis. <i>Fertil Steril</i> 2007;88: 986-987.	Outcome assessment
Karp BI, Sinaii N, Nieman LK, Silberstein SD, Stratton P. Migraine in women with chronic pelvic pain with and without endometriosis. <i>Fertility and sterility</i> 2011;95: 895-899.	Not relevant to the PICO question
Kaufman LC, Smyrk TC, Levy MJ, Enders FT, Oxentenko AS. Symptomatic intestinal endometriosis requiring surgical resection: clinical presentation and preoperative diagnosis. <i>Am J Gastroenterol</i> 2011;106: 1325-1332.	Not relevant to the PICO question
Khong SY, Lam A, Luscombe G. Is the 30-item Endometriosis Health Profile (EHP-30) suitable as a self-report health status instrument for clinical trials? <i>Fertil Steril</i> 2010;94: 1928-1932.	Outcome assessment
Lasmar RB, Lasmar BP, Celeste RK, Larbig A, De Wilde RL. Validation of a score to guide endometriosis therapy for the non-specialized gynecologist. <i>Int J Gynaecol Obstet</i> 2015;131: 78-81.	Not relevant to the PICO question
Lea R, Bancroft K, Whorwell PJ. Irritable bowel syndrome, chronic pelvic inflammatory disease and endometriosis: a comparison of symptomatology. <i>Eur J Gastroenterol Hepatol</i> 2004;16: 1269-1272.	Not relevant to the PICO question
Lemaire GS. More than just menstrual cramps: symptoms and uncertainty among women with endometriosis. <i>J Obstet Gynecol Neonatal Nurs</i> 2004;33: 71-79.	Not relevant to the PICO question
Luscombe GM, Markham R, Judio M, Grigoriu A, Fraser IS. Abdominal bloating: an under-recognized endometriosis symptom. <i>J Obstet Gynaecol Can</i> 2009;31: 1159-1171.	Opinion
Mabrouk M, Ferrini G, Montanari G, Di Donato N, Raimondo D, Stanghellini V, Corinaldesi R, Seracchioli R. Does colorectal endometriosis alter intestinal functions? A prospective manometric and questionnaire-based study. <i>Fertil Steril</i> 2012;97: 652-656.	Not relevant to the PICO question
Mahmood TA, Templeton AA, Thomson L, Fraser C. Menstrual symptoms in women with pelvic endometriosis. <i>Br J Obstet Gynaecol</i> 1991;98: 558-563.	More recent data available
Maiorana A, Scafidi Fonti GM, Audino P, Rosini R, Alio L, Oliveri AM, Milito AM. The role of EHP-30 as specific instrument to assess the quality of life of Italian women with endometriosis. <i>Minerva Ginecol</i> 2012;64: 231-238.	Outcome assessment
Mao AJ, Anastasi JK. Diagnosis and management of endometriosis: the role of the advanced practice nurse in primary care. <i>J Am Acad Nurse Pract</i> 2010;22: 109-116.	Not relevant to the PICO question
Maroun P, Cooper MJ, Reid GD, Keirse MJ. Relevance of gastrointestinal symptoms in endometriosis. <i>Aust N Z J Obstet Gynaecol</i> 2009;49: 411-414.	Descriptive analysis only
Mathiasen M, Egekvist AG, Kesmodel US, Knudsen UB, Seyer-Hansen M. Similar evolution of pain symptoms and quality of life in women with and without endometriosis undergoing assisted reproductive technology (ART). <i>Acta Obstet Gynecol Scand</i> 2019;98: 77-85.	Outcome assessment
Matorras R, Rodriguez F, Pijoan JI, Soto E, Perez C, Ramon O, Rodriguez-Escudero F. Are there any clinical signs and symptoms that are related to endometriosis in infertile women? <i>Am J Obstet Gynecol</i> 1996;174: 620-623.	Outdated paper
Missmer SA, Bove GM. A pilot study of the prevalence of leg pain among women with endometriosis. <i>J Bodyw Mov Ther</i> 2011;15: 304-308.	Not relevant to the PICO question
Missmer SA, Hankinson SE, Spiegelman D, Barbieri RL, Marshall LM, Hunter DJ. Incidence of laparoscopically confirmed endometriosis by demographic, anthropometric, and lifestyle factors. <i>Am J Epidemiol</i> 2004;160: 784-796.	Not relevant to the PICO question
Moore J, Barlow D, Jewell D, Kennedy S. Do gastrointestinal symptoms vary with the menstrual cycle? <i>Br J Obstet Gynaecol</i> 1998;105: 1322-1325.	Not relevant to the PICO question
Nirula R, Greaney GC. Incisional endometriosis: an underappreciated diagnosis in general surgery. <i>J Am Coll Surg</i> 2000;190: 404-407.	Not relevant to the PICO question
Nogueira-Silva C, Costa P, Martins C, Barata S, Alho C, Calhaz-Jorge C, Osorio F. Validation of the Portuguese Version of EHP-30 (The Endometriosis Health Profile-30). <i>Acta Med Port</i> 2015;28: 347-356.	Outcome assessment
Nojomi M, Bijari B, Akhbari R, Kashanian M. The Assessment of Reliability and Validity of Persian Version of the Endometriosis Health Profile (EHP-30). <i>Iran J Med Sci</i> 2011;36: 84-89.	Outcome assessment
Nunes FR, Ferreira JM, Bahamondes L. Pain threshold and sleep quality in women with endometriosis. <i>Eur J Pain</i> 2015;19: 15-20.	Not relevant to the PICO question



Pacchiarotti A, Milazzo GN, Biasiotta A, Truini A, Antonini G, Frati P, Gentile V, Caserta D, Moscarini M. Pain in the upper anterior-lateral part of the thigh in women affected by endometriosis: study of sensitive neuropathy. <i>Fertil Steril</i> 2013;100: 122-126.	Not relevant to the PICO question
Parazzini F, Cipriani S, Bianchi S, Gotsch F, Zanconato G, Fedele L. Risk factors for deep endometriosis: a comparison with pelvic and ovarian endometriosis. <i>Fertil Steril</i> 2008;90: 174-179.	Risk factors, not relevant for diagnosis
Parazzini F, Mais V, Cipriani S. Adhesions and pain in women with first diagnosis of endometriosis: results from a cross-sectional study. <i>J Minim Invasive Gynecol</i> 2006;13: 49-54.	Not relevant to the PICO question
Parazzini F, Mais V, Cipriani S. Adhesions and pain in women with first diagnosis of endometriosis: results from a cross-sectional study. <i>J Minim Invasive Gynecol</i> 2006;13: 49-54.	Not relevant to the PICO question
Porpora MG, Koninckx PR, Piazzè J, Natili M, Colagrande S, Cosmi EV. Correlation between endometriosis and pelvic pain. <i>J Am Assoc Gynecol Laparosc</i> 1999;6: 429-434.	Not relevant to the PICO question
Ramin-Wright A, Kohl Schwartz AS, Geraedts K, Rauchfuss M, Wolfer MM, Haeberlin F, von Orelli S, Eberhard M, Imthurn B, Imesch P et al. Fatigue - a symptom in endometriosis. <i>Hum Reprod</i> 2018.	Not relevant
Renner SP, Boosz AS, Burghaus S, Maihofner C, Beckmann MW, Fasching PA, Jud SM. Visual pain mapping in endometriosis. <i>Arch Gynecol Obstet</i> 2012;286: 687-693.	Outcome assessment
Riazi H, Tehranian N, Ziaei S, Mohammadi E, Hajizadeh E, Montazeri A. Clinical diagnosis of pelvic endometriosis: a scoping review. <i>BMC Womens Health</i> 2015;15: 39.	Scoping review
Riazi H, Tehranian N, Ziaei S, Mohammadi E, Hajizadeh E, Montazeri A. Patients' and physicians' descriptions of occurrence and diagnosis of endometriosis: a qualitative study from Iran. <i>BMC Womens Health</i> 2014;14: 103.	Not relevant to the PICO question
Ripps BA, Martin DC. Correlation of focal pelvic tenderness with implant dimension and stage of endometriosis. <i>J Reprod Med</i> 1992;37: 620-624.	Not relevant to the PICO question - clinical examination
Roman H, Ness J, Suciú N, Bridoux V, Gourcerol G, Leroi AM, Tuech JJ, Ducrotte P, Savoye-Collet C, Savoye G. Are digestive symptoms in women presenting with pelvic endometriosis specific to lesion localizations? A preliminary prospective study. <i>Hum Reprod</i> 2012;27: 3440-3449.	Outcome is not diagnosis
Schliep KC, Mumford SL, Peterson CM, Chen Z, Johnstone EB, Sharp HT, Stanford JB, Hammoud AO, Sun L, Buck Louis GM. Pain typology and incident endometriosis. <i>Hum Reprod</i> 2015;30: 2427-2438.	No relevant addition to the chapter
Schoep ME, Nieboer TE, van der Zanden M, Braat DDM, Nap AW. The impact of menstrual symptoms on everyday life: a survey among 42,879 women. <i>Am J Obstet Gynecol</i> 2019;220: 569.e561-569.e567.	Not endometriosis
Seitz C, Lanius V, Lippert S, Gerlinger C, Haberland C, Oehmke F, Tinneberg HR. Patterns of missing data in the use of the endometriosis symptom diary. <i>BMC Womens Health</i> 2018;18: 88.	Not relevant to the PICO question
Shum LK, Bedaiwy MA, Allaire C, Williams C, Noga H, Albert A, Lisonkova S, Yong PJ. Deep Dyspareunia and Sexual Quality of Life in Women With Endometriosis. <i>Sex Med</i> 2018;6: 224-233.	Outcome assessment
Signorello LB, Harlow BL, Cramer DW, Spiegelman D, Hill JA. Epidemiologic determinants of endometriosis: a hospital-based case-control study. <i>Ann Epidemiol</i> 1997;7: 267-741.	Pathogenesis of endometriosis
Sinaii N, Plumb K, Cotton L, Lambert A, Kennedy S, Zondervan K, Stratton P. Differences in characteristics among 1,000 women with endometriosis based on extent of disease. <i>Fertil Steril</i> 2008;89: 538-545.	Outcome is not diagnosis
Soliman AM, Coyne KS, Zaiser E, Castelli-Haley J, Fuldeore MJ. The burden of endometriosis symptoms on health-related quality of life in women in the United States: a cross-sectional study. <i>J Psychosom Obstet Gynaecol</i> 2017;38: 238-248.	Outcome assessment
Stratton P, Berkley KJ. Chronic pelvic pain and endometriosis: translational evidence of the relationship and implications. <i>Hum Reprod Update</i> 2011;17: 327-346.	Not relevant to the PICO question
Stratton P, Khachikyan I, Sinaii N, Ortiz R, Shah J. Association of chronic pelvic pain and endometriosis with signs of sensitization and myofascial pain. <i>Obstetrics and gynecology</i> 2015;125: 719-728.	Not relevant to the PICO question
Stull DE, Wasiake R, Kreif N, Raluy M, Colligs A, Seitz C, Gerlinger C. Validation of the SF-36 in patients with endometriosis. <i>Qual Life Res</i> 2014;23: 103-117.	Outcome assessment
Szendei G, Hernadi Z, Devenyi N, Csapo Z. Is there any correlation between stages of endometriosis and severity of chronic pelvic pain? Possibilities of treatment. <i>Gynecol Endocrinol</i> 2005;21: 93-100.	Outcome assessment
Touboul C, Amate P, Ballester M, Bazot M, Fauconnier A, Darai E. Quality of Life Assessment Using EuroQOL EQ-5D Questionnaire in Patients with Deep Infiltrating Endometriosis: The Relation with Symptoms and Locations. <i>Int J Chronic Dis</i> 2013;2013: 452134.	Outcome assessment



Treloar SA, Bell TA, Nagle CM, Purdie DM, Green AC. Early menstrual characteristics associated with subsequent diagnosis of endometriosis. <i>Am J Obstet Gynecol</i> 2010;202: 534.e531-536.	Not relevant
van de Burgt TJ, Hendriks JC, Kluivers KB. Quality of life in endometriosis: evaluation of the Dutch-version Endometriosis Health Profile-30 (EHP-30). <i>Fertil Steril</i> 2011;95: 1863-1865.	Outcome assessment
van de Burgt TJ, Kluivers KB, Hendriks JC. Responsiveness of the Dutch Endometriosis Health Profile-30 (EHP-30) questionnaire. <i>Eur J Obstet Gynecol Reprod Biol</i> 2013;168: 92-94.	Outcome assessment
Vannuccini S, Lazzeri L, Orlandini C, Morgante G, Bifulco G, Fagiolini A, Petraglia F. Mental health, pain symptoms and systemic comorbidities in women with endometriosis: a cross-sectional study. <i>J Psychosom Obstet Gynaecol</i> 2018;39: 315-320.	Not relevant to the PICO question
Vercellini P, Trespidi L, De Giorgi O, Cortesi I, Parazzini F, Crosignani PG. Endometriosis and pelvic pain: relation to disease stage and localization. <i>Fertil Steril</i> 1996;65: 299-304.	Outdated paper
Wickstrom K, Spira J, Edelstam G. Responsiveness of the Endometriosis Health Profile-30 questionnaire in a Swedish sample: an observational study. <i>Clin Exp Obstet Gynecol</i> 2017;44: 413-418.	Outcome assessment
Winkel CA. Role of a symptom-based algorithmic approach to chronic pelvic pain. <i>Int J Gynaecol Obstet</i> 2001;74 Suppl 1: S15-20.	Not endometriosis
Yavuzcan A, Caglar M, Dilbaz S, Ustun Y, Ozdemir I, Yildiz E, Ozbilgec S, Kumru S. Clinical symptoms and diagnostic tools that are related to infertility and hydrosalpinx formation in women with advanced stage endometriosis complicated by endometrioma. <i>Ginekol Pol</i> 2013;84: 765-769.	Not relevant to the PICO question
Zondervan KT, Yudkin PL, Vessey MP, Dawes MG, Barlow DH, Kennedy SH. Patterns of diagnosis and referral in women consulting for chronic pelvic pain in UK primary care. <i>Br J Obstet Gynaecol</i> 1999;106: 1156-1161.	Not relevant to the PICO question

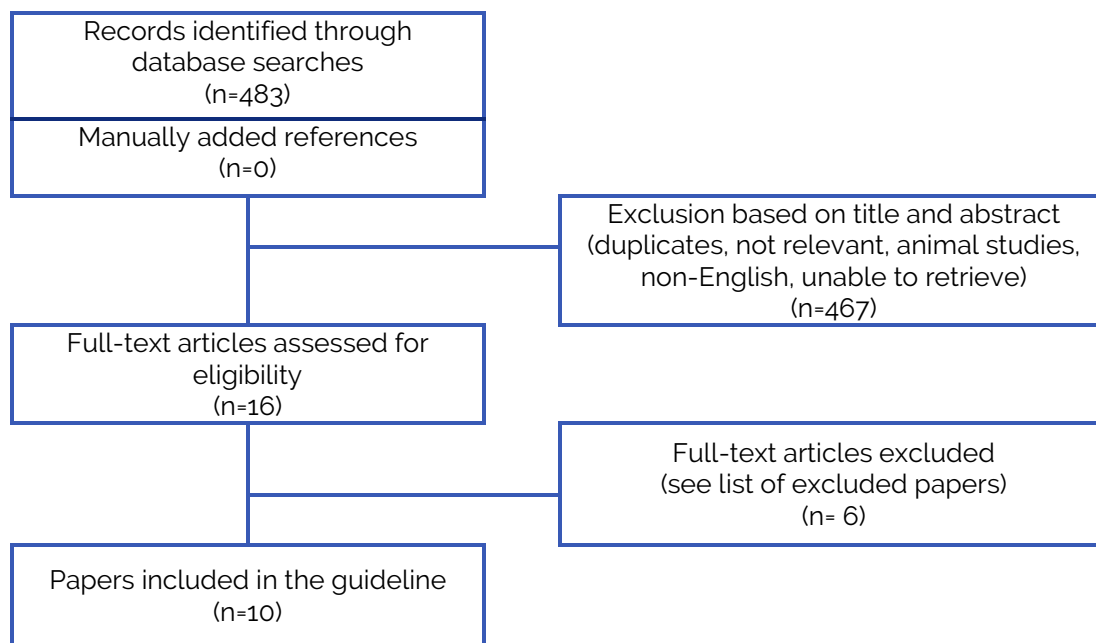


QUESTION 1.3 DOES CLINICAL EXAMINATION OF SYMPTOMATIC WOMEN RELIABLY PREDICT THE PRESENCE OF ENDOMETRIOSIS?

Search strings

DATABASE	Search string
PUBMED	((“Endometriosis”[Mesh] OR “Endometriosis” OR “endometriotic” OR “endometrioma”) AND (“Clinical examination”[Title] OR “physical examination”[Title] OR “pelvic examination”[Title])) OR (“Endometriosis”[Title] AND “Physical Examination”[Mesh])

Flowchart



List of excluded papers

Reference	Exclusion criterion
Bhatti M, Ketheeswaran A, Arnold A, Nesbitt-Hawes E, Deans R, Won H, Abbott J. Pelvic examination may be meaningfully taught to novices and be used to predict operating times for laparoscopic excision of endometriosis in one surgical procedure. <i>Aust N Z J Obstet Gynaecol</i> 2018;58: 239-246.	Pelvic examination used to predict laparoscopy time/duration
Boyer SC, Pukall CF. Pelvic examination experiences in women with and without chronic pain during intercourse. <i>J Sex Med</i> 2014;11: 3035-3050.	Pelvic examination in association with pain during intercourse
Marasinghe JP, Senanayake H, Saravanabhava N, Arambepola C, Condous G, Greenwood P. History, pelvic examination findings and mobility of ovaries as a sonographic marker to detect pelvic adhesions with fixed ovaries. <i>J Obstet Gynaecol Res</i> 2014;40: 785-790.	Detection of adhesions
Moragianni VA. Can we finally move away from the surgical diagnosis of endometriosis? <i>Fertil Steril</i> 2012;98: 609.	Opinion
Paulson JD. Correlation of anterior vaginal wall pain with endometriosis in infertile patients. <i>J Reprod Med</i> 2009;54: 145-150.	Not clinical examination
Ripps BA, Martin DC. Focal pelvic tenderness, pelvic pain and dysmenorrhea in endometriosis. <i>J Reprod Med</i> 1991;36: 470-472.	Only descriptive analysis

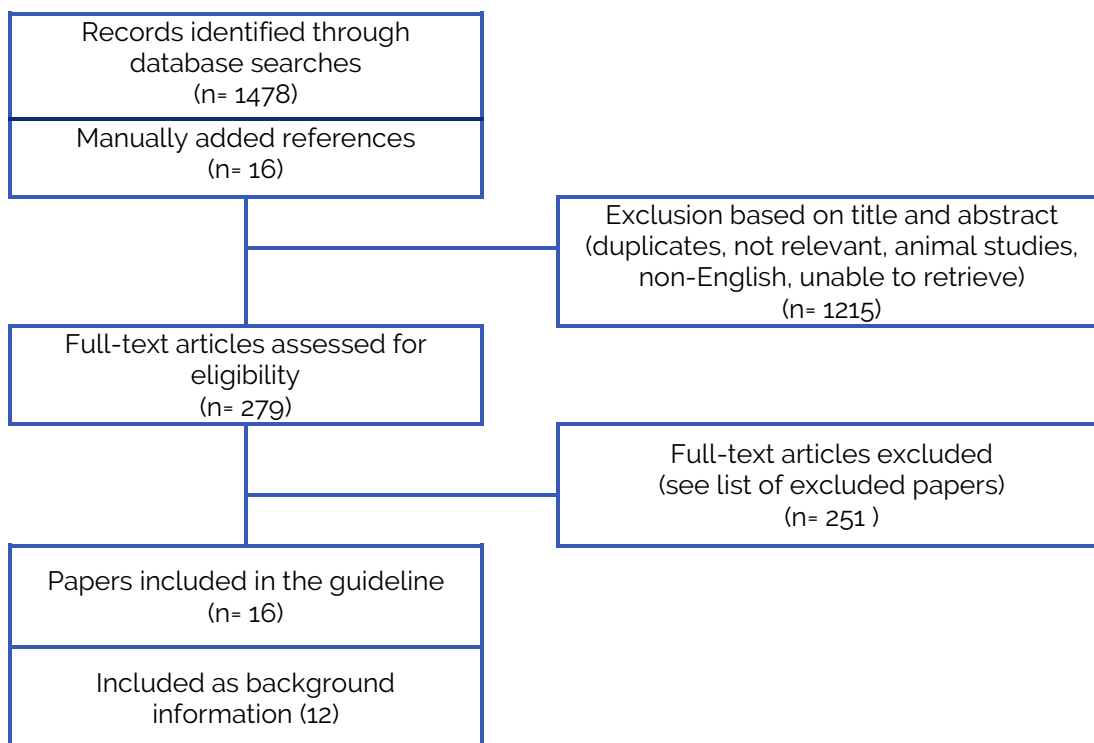


QUESTION 1.4 ARE MEDICAL TECHNOLOGIES RELIABLE IN DIAGNOSING ENDOMETRIOSIS AND ESTABLISHING THE EXTENT OF THE DISEASE?

Search strings

DATABASE	Search string
PUBMED	(("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND (Diagnosis[Title] OR Diagnose[Title] OR extent[Title] OR monitor[Title] OR monitoring[Title]) AND (Laparoscopy OR Histology OR "Laparoscopy"[Mesh] OR "Histology"[Mesh] OR Biopsy OR "Biopsy"[Mesh] OR ultrasonography OR "ultrasonography"[MeSH] OR ultrasound OR "ultrasonics"[MeSH] OR "ultrasonics" OR Sonography OR MRI OR "Magnetic Resonance Imaging" OR "Magnetic Resonance Imaging"[Mesh] OR Biochemistry OR immunology OR immunological OR Biomarker OR "Biomarkers"[Mesh] OR blood OR serum OR plasma OR urine OR saliva OR endometrium OR CA125 OR CA-125 OR "CA 125" OR "CA-125 Antigen"[Mesh] OR "Ba enema" OR "Barium enema" OR Endoscopy OR Endoscopy[MESH] OR Radiology OR CT OR "CT scan" OR X-ray OR "X ray" OR "computed tomography" OR "Tomography, X-Ray Computed"[Mesh])) OR (("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma" OR "pelvic pain") AND ("empirical"))
COCHRANE	("Endometriosis" OR "endometriotic" OR "endometrioma") AND (Diagnosis OR extent OR monitor OR monitoring) AND (Laparoscopy OR Histology OR Biopsy OR ultrasonography OR ultrasound OR "ultrasonics" OR Sonography OR MRI OR "Magnetic Resonance Imaging" OR Biochemistry OR immunology OR immunological OR Biomarker OR "Biomarkers" OR blood OR serum OR plasma OR urine OR saliva OR endometrium OR CA125 OR CA-125 OR "CA 125" OR "Ba enema" OR "Barium enema" OR Endoscopy OR Radiology OR CT OR "CT scan" OR X-ray OR "X ray" OR "computed tomography")

Flowchart





List of excluded papers

Reference	Exclusion criterium
Abrao MS, Goncalves MO, Dias JA, Jr., Podgaec S, Chamie LP, Blasbalg R. Comparison between clinical examination, transvaginal sonography and magnetic resonance imaging for the diagnosis of deep endometriosis. <i>Hum Reprod</i> 2007;22: 3092-3097.	Included in review Moura 2019
Abrao MS, Podgaec S, Dias JA, Jr., Goncalves MO. Diagnosis of rectovaginal endometriosis. <i>Hum Reprod</i> 2008;23: 2386; author reply 2386-2387.	Irrelevant publication type
Abrao MS, Podgaec S, Filho BM, Ramos LO, Pinotti JA, de Oliveira RM. The use of biochemical markers in the diagnosis of pelvic endometriosis. <i>Hum Reprod</i> 1997;12: 2523-2527.	More recent data available
Acimovic M, Vidakovic S, Milic N, Jeremic K, Markovic M, Milosevic-Djeric A, Lazovic-Radonjic G. Survivin and VEGF as Novel Biomarkers in Diagnosis of Endometriosis. <i>J Med Biochem</i> 2016;35: 63-68.	Not relevant
Agarwal SK, Chapron C, Giudice LC, Laufer MR, Leyland N, Missmer SA, Singh SS, Taylor HS. Clinical diagnosis of endometriosis: a call to action. <i>Am J Obstet Gynecol</i> 2019;220: 354.e351-354.e312.	Irrelevant publication type
Aghaey Meibody F, Mehdizadeh Kashi A, Zare Mirzaie A, Ghajarie Bani Amam M, Shariati Behbahani A, Zolali B, Najafi L. Diagnosis of endometrial nerve fibers in women with endometriosis. <i>Arch Gynecol Obstet</i> 2011;284: 1157-1162.	Not relevant for the PICO question
Alcazar JL, Guerriero S, Laparte C, Ajossa S, Ruiz-Zambrana A, Melis GB. Diagnostic performance of transvaginal gray-scale ultrasound for specific diagnosis of benign ovarian cysts in relation to menopausal status. <i>Maturitas</i> 2011;68: 182-188.	More recent studies and reviews available
Alcazar JL, Guerriero S, Minguez JA, Ajossa S, Paoletti AM, Ruiz-Zambrana A, Jurado M. Adding cancer antigen 125 screening to gray scale sonography for predicting specific diagnosis of benign adnexal masses in premenopausal women: is it worthwhile? <i>J Ultrasound Med</i> 2011;30: 1381-1386.	Recent review on the topic is available
Alcazar JL, Laparte C, Jurado M, Lopez-Garcia G. The role of transvaginal ultrasonography combined with color velocity imaging and pulsed Doppler in the diagnosis of endometrioma. <i>Fertil Steril</i> 1997;67: 487-491.	More recent studies and reviews available
Aleem F, Pennisi J, Zeitoun K, Predanic M. The role of color Doppler in diagnosis of endometriomas. <i>Ultrasound Obstet Gynecol</i> 1995;5: 51-54.	Old study replaced by new studies also of the IOTA group
Al-Jefout M, Andreadis N, Tokushige N, Markham R, Fraser I. A pilot study to evaluate the relative efficacy of endometrial biopsy and full curettage in making a diagnosis of endometriosis by the detection of endometrial nerve fibers. <i>Am J Obstet Gynecol</i> 2007;197: 578.e571-574.	Not relevant for the PICO Question
Al-Jefout M, Dezarnaulds G, Cooper M, Tokushige N, Luscombe GM, Markham R, Fraser IS. Diagnosis of endometriosis by detection of nerve fibres in an endometrial biopsy: a double blind study. <i>Hum Reprod</i> 2009;24: 3019-3024.	Not relevant for the PICO Question
Alkatout I, Meinhold-Heerlein I, Keckstein J, Mettler L. Endometriosis: A concise practical guide to current diagnosis and treatment. <i>J Turk Ger Gynecol Assoc</i> 2018;19: 173-175.	Practical guide rather than relevant data
Anastasi E, Granato T, Falzarano R, Storelli P, Ticino A, Frati L, Panici PB, Porpora MG. The use of HE4, CA125 and CA72-4 biomarkers for differential diagnosis between ovarian endometrioma and epithelial ovarian cancer. <i>J Ovarian Res</i> 2013;6: 44.	Not relevant
Anastasi E, Manganaro L, Granato T, Benedetti Panici P, Frati L, Porpora MG. Is CA72-4 a useful biomarker in differential diagnosis between ovarian endometrioma and epithelial ovarian cancer? <i>Dis Markers</i> 2013;35: 331-335.	Not relevant
Anastasiu. C.V., et al., Biomarkers for the Noninvasive Diagnosis of Endometriosis: State of the Art and Future Perspectives. <i>Int J Mol Sci</i> , 2020. 21(5).	narrative review
Ant O, Ozaksit G, Guzel AI, Cavkaytar S, Kaba M, Topcu HO. Clinical significance of serum follistatin levels in the diagnosis of ovarian endometrioma and benign ovarian cysts. <i>Taiwan J Obstet Gynecol</i> 2015;54: 236-239.	not relevant
Asimakopoulos G. Ureteral endometriosis: diagnosis and management. <i>Rev Med Chir Soc Med Nat Iasi</i> 2006;110: 575-581.	No new information
Bagan P, Berna P, Assouad J, Hupertan V, Le Pimpec Barthes F, Riquet M. Value of cancer antigen 125 for diagnosis of pleural endometriosis in females with recurrent pneumothorax. <i>Eur Respir J</i> 2008;31: 140-142.	Not relevant
Barcellos MB, Lasmar B, Lasmar R. Agreement between the preoperative findings and the operative diagnosis in patients with deep endometriosis. <i>Arch Gynecol Obstet</i> 2016;293: 845-850.	Not relevant for the PICO question
Bar-Hava I, Rabinerson D, Kaplan B, Orvieto R, Levy T, Shalev Y, Ben-Rafael Z, Dekel A. The characterization of common ovarian cysts in premenopausal women. <i>Ultrasound in obstetrics & gynecology</i> 2001;17: 140-144.	Old study replaced by new studies also of the IOTA group



Barra F, Scala C, Biscaldi E, Vellone VG, Ceccaroni M, Terrone C, Ferrero S. Ureteral endometriosis: a systematic review of epidemiology, pathogenesis, diagnosis, treatment, risk of malignant transformation and fertility. <i>Hum Reprod Update</i> 2018;24: 710-730.	Broad review on subtype of endometriosis
Barra, F., et al., A Prospective Study Comparing Three-Dimensional Rectal Water Contrast Transvaginal Ultrasonography and Computed Tomographic Colonography in the Diagnosis of Rectosigmoid Endometriosis. <i>Diagnostics (Basel)</i> , 2020. 10(4).	Not relevant for the PICO question
Barrueto FF, Audlin KM, Gallicchio L, Miller C, MacDonald R, Alonsozana E, Johnston M, Helzlsouer KJ. Sensitivity of Narrow Band Imaging Compared With White Light Imaging for the Detection of Endometriosis. <i>Journal of minimally invasive gynecology</i> 2015;22: 846-852.	Not relevant for the PICO question
Batt RE, Smith RA. The diagnosis of premenarcheal endometriosis. <i>Fertil Steril</i> 2005;84: 546; author reply 546-547.	Not relevant publication type
Bazot M, Darai E, Biau DJ, Ballester M, Dessolle L. Learning curve of transvaginal ultrasound for the diagnosis of endometriomas assessed by the cumulative summation test (LC-CUSUM). <i>Fertil Steril</i> 2011;95: 301-303.	Excluded from review Nisenblat 2016, study design
Bazot M, Darai E, Hourani R, Thomassin I, Cortez A, Uzan S, Buy JN. Deep pelvic endometriosis: MR imaging for diagnosis and prediction of extension of disease. <i>Radiology</i> 2004;232: 379-389.	Excluded from review Nisenblat 2016, population overlapping with Bazot 2009
Bazot M, Darai E. Diagnosis of deep endometriosis: clinical examination, ultrasonography, magnetic resonance imaging, and other techniques. <i>Fertil Steril</i> 2017;108: 886-894.	Recent Cochrane review on the topic available
Bazot M, Malzy P, Cortez A, Roseau G, Amouyal P, Darai E. Accuracy of transvaginal sonography and rectal endoscopic sonography in the diagnosis of deep infiltrating endometriosis. <i>Ultrasound Obstet Gynecol</i> 2007;30: 994-1001.	Excluded from review Nisenblat, population overlapping with Bazot 2009
Bazot M, Stivalet A, Darai E, Coudray C, Thomassin-Naggara I, Poncelet E. Comparison of 3D and 2D FSE T2-weighted MRI in the diagnosis of deep pelvic endometriosis: preliminary results. <i>Clin Radiol</i> 2013;68: 47-54.	More recent studies and reviews available
Bedaivvy MA, Falcone T, Sharma RK, Goldberg JM, Attaran M, Nelson DR, Agarwal A. Prediction of endometriosis with serum and peritoneal fluid markers: a prospective controlled trial. <i>Human reproduction (oxford, england)</i> 2002;17: 426-431.	Not relevant for clinical practice
Belghiti J, Thomassin-Naggara I, Zacharopoulou C, Zilberman S, Jarbouli L, Bazot M, Ballester M, Darai E. Contribution of Computed Tomography Enema and Magnetic Resonance Imaging to Diagnose Multifocal and Multicentric Bowel Lesions in Patients With Colorectal Endometriosis. <i>J Minim Invasive Gynecol</i> 2015;22: 776-784.	Not relevant for the PICO question
Berger J, Henneman O, Rhemrev J, Smeets M, Jansen FW. MRI-Ultrasound Fusion Imaging for Diagnosis of Deep Infiltrating Endometriosis - A Critical Appraisal. <i>Ultrasound Int Open</i> 2018;4: E85-e90.	Intervention not relevant for the PICO Question - New MRI technique
Biscaldi E, Ferrero S, Leone Roberti Maggiore U, Remorgida V, Venturini PL, Rollandi GA. Multidetector computerized tomography enema versus magnetic resonance enema in the diagnosis of rectosigmoid endometriosis. <i>Eur J Radiol</i> 2014;83: 261-267.	Included in review Nisenblat 2016
Biscaldi E, Ferrero S, Remorgida V, Rollandi GA. MDCT enteroclysis urography with split-bolus technique provides information on ureteral involvement in patients with suspected bowel endometriosis. <i>American journal of roentgenology</i> 2011;196: W635-W640.	limited to special more invasive technique
Biscaldi, E., et al., Magnetic Resonance Rectal Enema Versus Computed Tomographic Colonography in the Diagnosis of Rectosigmoid Endometriosis. <i>J Comput Assist Tomogr</i> , 2020. 44(4): p. 501-510.	Not relevant for the PICO question
Blumenthal RD, Taylor A, Samoszuk M, Goldenberg DM. Unique molecular markers in human endometriosis: implications for diagnosis and therapy. <i>Expert Rev Mol Med</i> 2001;3: 1-12.	More recent data available
Bozdech JM. Endoscopic diagnosis of colonic endometriosis. <i>Gastrointest Endosc</i> 1992;38: 568-570.	Outdated paper
Bratila E, Comandasu DE, Coroleuca C, Cirstoiu MM, Berceanu C, Mehedintu C, Bratila P, Vladareanu S. Diagnosis of endometriotic lesions by sonovaginography with ultrasound gel. <i>Med Ultrason</i> 2016;18: 469-474.	More recent studies and reviews available
Brosens I, Campo R, Gordts S. Office hydrolaparoscopy for the diagnosis of endometriosis and tubal infertility. <i>Curr Opin Obstet Gynecol</i> 1999;11: 371-377.	Intervention not included in the guideline
Brosens I, Puttemans P, Campo R, Gordts S, Brosens J. Non-invasive methods of diagnosis of endometriosis. <i>Curr Opin Obstet Gynecol</i> 2003;15: 519-522.	Outdated paper
Buchweitz O, Wulffing P, Malik E. Interobserver variability in the diagnosis of minimal and mild endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2005;122: 213-217.	More recent data/reviews available
Cantley RL, Yoxtheimer L, Molnar S. The role of peritoneal washings in the diagnosis of endometriosis. <i>Diagn Cytopathol</i> 2018;46: 447-451.	Not relevant



Cetin C, Serdaroglu H, Tuzlali S. The importance of endometrial nerve fibers and macrophage cell count in the diagnosis of endometriosis. <i>Iran J Reprod Med</i> 2013;11: 405-414.	Not relevant for the PICO question
Chamie LP, Blasbalg R, Goncalves MO, Carvalho FM, Abrao MS, de Oliveira IS. Accuracy of magnetic resonance imaging for diagnosis and preoperative assessment of deeply infiltrating endometriosis. <i>Int J Gynaecol Obstet</i> 2009;106: 198-201.	Included in review Nisenblat 2016
Chapron C, Vieira M, Chopin N, Balleyguier C, Barakat H, Dumontier I, Roseau G, Fauconnier A, Foulot H, Dousset B. Accuracy of rectal endoscopic ultrasonography and magnetic resonance imaging in the diagnosis of rectal involvement for patients presenting with deeply infiltrating endometriosis. <i>Ultrasound Obstet Gynecol</i> 2004;24: 175-179.	More recent studies and reviews available
Chen X, Liu H, Sun W, Guo Z, Lang J. Elevated urine histone 4 levels in women with ovarian endometriosis revealed by discovery and parallel reaction monitoring proteomics. <i>J Proteomics</i> 2019: 103398.	Recent review on the topic is available
Cho S, Cho H, Nam A, Kim HY, Choi YS, Park KH, Cho DJ, Lee BS. Neutrophil-to-lymphocyte ratio as an adjunct to CA-125 for the diagnosis of endometriosis. <i>Fertil Steril</i> 2008;90: 2073-2079.	Not relevant for clinical practice
Coccia ME, Rizzello F. Ultrasonographic staging: a new staging system for deep endometriosis. <i>Ann N Y Acad Sci</i> 2011;1221: 61-69.	Not relevant for the PICO question
Costa A, Sartini A, Garibaldi S, Cencini M. Deep endometriosis induced spontaneous colon rectal perforation in pregnancy: laparoscopy is advanced tool to confirm diagnosis. <i>Case Rep Obstet Gynecol</i> 2014;2014: 907150.	Not relevant for diagnosis of endometriosis
De Sanctis P, Elmakky A, Farina A, Caramelli E, Seracchioli R, Mabrouk M, Mignemi G, Venturoli S, Villa G, Guerrini M et al. Matrix metalloproteinase-3 mRNA: a promising peripheral blood marker for diagnosis of endometriosis. <i>Gynecol Obstet Invest</i> 2011;71: 118-123.	not relevant
Deslandes, A., et al., Current Status of Transvaginal Ultrasound Accuracy in the Diagnosis of Deep Infiltrating Endometriosis Before Surgery: A Systematic Review of the Literature. <i>J Ultrasound Med</i> , 2020. 39(8): p. 1477-1490.	Recent review but no impact on the evidence or conclusions
Di Paola V, Manfredi R, Castelli F, Negrelli R, Mehrabi S, Pozzi Mucelli R. Detection and localization of deep endometriosis by means of MRI and correlation with the ENZIAN score. <i>Eur J Radiol</i> 2015;84: 568-574.	Use of surgical classification on MRI
Dogan MM, Ugur M, Soysal SK, Soysal ME, Ekici E, Gokmen O. Transvaginal sonographic diagnosis of ovarian endometrioma. <i>Int J Gynaecol Obstet</i> 1996;52: 145-149.	Old study replaced by new studies also of the IOTA group
Dominguez F. Search for new molecular biomarkers to diagnose endometriosis continues. <i>Fertil Steril</i> 2018;109: 615-616.	Not relevant
Dutta M, Joshi M, Srivastava S, Lodh I, Chakravarty B, Chaudhury K. A metabonomics approach as a means for identification of potential biomarkers for early diagnosis of endometriosis. <i>Mol Biosyst</i> 2012;8: 3281-3287.	Not relevant
Dwivedi U, Shukla S, Anand N, Parashar C, Husain N. Scar Endometriosis: Cytological Diagnosis. <i>JNMA J Nepal Med Assoc</i> 2018;56: 550-552.	Not relevant
Ekerhovd E, Wienerroith H, Staudach A, Granberg S. Preoperative assessment of unilocular adnexal cysts by transvaginal ultrasonography: a comparison between ultrasonographic morphologic imaging and histopathologic diagnosis. <i>Am J Obstet Gynecol</i> 2001;184: 48-54.	More recent studies and reviews available
El Bishry G, Tselos V, Pathi A. Correlation between laparoscopic and histological diagnosis in patients with endometriosis. <i>J Obstet Gynaecol</i> 2008;28: 511-515.	Not relevant
Elgafor EL Sharkwy IA. Combination of non-invasive and semi-invasive tests for diagnosis of minimal to mild endometriosis. <i>Arch Gynecol Obstet</i> 2013;288: 793-797.	classification of mild endometriosis
El-Kasti MM, Wright C, Fye HK, Roseman F, Kessler BM, Becker CM. Urinary peptide profiling identifies a panel of putative biomarkers for diagnosing and staging endometriosis. <i>Fertility and sterility</i> 2011;95: 1261-1266.e1261-1266.	Included in review Liu 2015
Fassbender A, Waelkens E, Verbeeck N, Kyama CM, Bokor A, Vodolazkaia A, Van de Plas R, Meuleman C, Peeraer K, Tomassetti C et al. Proteomics analysis of plasma for early diagnosis of endometriosis. <i>Obstet Gynecol</i> 2012;119: 276-285.	Included in review Gupta 2016
Fastrez M, Artigas C, Sirtaine N, Wimana Z, Caillet M, Rozenberg S, Flamen P. Value of the (68)Ga-DOTATATE PET-CT in the diagnosis of endometriosis. A pilot study. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;212: 69-74.	Paper is not usefull for endometriosis diagnosis
Fastrez M, Nogarede C, Tondeur M, Sirtaine N, Rozenberg S. Evaluation of 18FDG PET-CT in the diagnosis of endometriosis: a prospective study. <i>Reprod Sci</i> 2011;18: 540-544.	Included in review Nisenblat 2016
Fawzy M, Amer T. Efficacy of transabdominal sonoelastography in the diagnosis of caesarean section scar endometrioma: A pilot study. <i>J Obstet Gynaecol</i> 2015;35: 832-834.	Paper does not fit the PICO question
Ferrero S, Biscaldi E, Morotti M, Venturini PL, Remorgida V, Rollandi GA, Valenzano Menada M. Multidetector computerized tomography enteroclysis vs. rectal water	Included in review Nisenblat 2016



contrast transvaginal ultrasonography in determining the presence and extent of bowel endometriosis. <i>Ultrasound Obstet Gynecol</i> 2011;37: 603-613.	
Ferrero S, Biscaldi E, Vellone VG, Venturini PL, Leone Roberti Maggiore U. Computed tomographic colonography vs rectal water- contrast transvaginal sonography in diagnosis of rectosigmoid endometriosis: a pilot study. <i>Ultrasound Obstet Gynecol</i> 2017;49: 515-523.	Not relevant for the PICO question
Ferrero S, Scala C, Stabilini C, Vellone VG, Barra F, Leone Roberti Maggiore U. Transvaginal sonography with vs without bowel preparation in diagnosis of rectosigmoid endometriosis: prospective study. <i>Ultrasound Obstet Gynecol</i> 2019;53: 402-409.	Only rectosigmoid endometriosis discussed
Florio P, Reis FM, Torres PB, Calonaci F, Toti P, Bocchi C, Linton EA, Petraglia F. Plasma urocortin levels in the diagnosis of ovarian endometriosis. <i>Obstet Gynecol</i> 2007;110: 594-600.	Recent review on the topic is available
Francica G, Scarano F. Delayed diagnosis is associated with changes in the clinical and ultrasound features of subcutaneous endometriosis near cesarean section scars. <i>J Ultrasound</i> 2009;12: 101-106.	Focus on extrapelvic endometriosis
Francica G. Reliable clinical and sonographic findings in the diagnosis of abdominal wall endometriosis near cesarean section scar. <i>World J Radiol</i> 2012;4: 135-140.	Focus on extrapelvic endometriosis
Fraser MA, Agarwal S, Chen I, Singh SS. Routine vs. expert-guided transvaginal ultrasound in the diagnosis of endometriosis: a retrospective review. <i>Abdom Imaging</i> 2015;40: 587-594.	Need for expertise in US
Gajbhiye R, Bendigeri T, Ghuge A, Bhusane K, Begum S, Warty N, Sawant R, Padte K, Humane A, Dasmahapatra P et al. Panel of Autoimmune Markers for Noninvasive Diagnosis of Minimal-Mild Endometriosis. <i>Reprod Sci</i> 2017;24: 413-420.	Recent review on the topic is available
Gajbhiye R, Sonawani A, Khan S, Suryawanshi A, Kadam S, Warty N, Raut V, Khole V. Identification and validation of novel serum markers for early diagnosis of endometriosis. <i>Hum Reprod</i> 2012;27: 408-417.	Not relevant for clinical practice
Ghazi N, Arjmand M, Akbari Z, Mellati AO, Saheb-Kashaf H, Zamani Z. (1)H NMR- based metabolomics approaches as non- invasive tools for diagnosis of endometriosis. <i>Int J Reprod Biomed (Yazd)</i> 2016;14: 1-8.	Not relevant for clinical practice
Gleicher N, Karande V, Rabin D, Dudkiewicz A, Pratt D. The bubble test: a new tool to improve the diagnosis of endometriosis. <i>Hum Reprod</i> 1995;10: 923-926.	More recent data/reviews available
Goncalves MO, Dias JA, Jr., Podgaec S, Averbach M, Abrao MS. Transvaginal ultrasound for diagnosis of deeply infiltrating endometriosis. <i>Int J Gynaecol Obstet</i> 2009;104: 156-160.	More recent studies and reviews available
Gordts S, Campo R, Brosens I. Office transvaginal hydrolaparoscopy for early diagnosis of pelvic endometriosis and adhesions. <i>J Am Assoc Gynecol Laparosc</i> 2000;7: 45-49.	Irrelevant intervention
Grasso RF, Di Giacomo V, Sedati P, Sizzi O, Florio G, Faiella E, Rossetti A, Del Vescovo R, Zobel BB. Diagnosis of deep infiltrating endometriosis: accuracy of magnetic resonance imaging and transvaginal 3D ultrasonography. <i>Abdom Imaging</i> 2010;35: 716-725.	More recent studies and reviews available / small study
Griffiths A, Koutsouridou R, Vaughan S, Penketh R, Roberts SA, Torkington J. Transrectal ultrasound and the diagnosis of rectovaginal endometriosis: a prospective observational study. <i>Acta Obstet Gynecol Scand</i> 2008;87: 445-448.	More recent studies and reviews available
Griffiths AN, Koutsouridou RN, Penketh RJ. Rectovaginal endometriosis -- a frequently missed diagnosis. <i>J Obstet Gynaecol</i> 2007;27: 605-607.	More recent data/reviews available
Guerriero S, Ajossa S, Garau N, Alcazar JL, Mais V, Melis GB. Diagnosis of pelvic adhesions in patients with endometrioma: the role of transvaginal ultrasonography. <i>Fertil Steril</i> 2010;94: 742-746.	Not relevant for the PICO question
Guerriero S, Ajossa S, Gerada M, D'Aquila M, Piras B, Melis GB. "Tenderness-guided" transvaginal ultrasonography: a new method for the detection of deep endometriosis in patients with chronic pelvic pain. <i>Fertil Steril</i> 2007;88: 1293-1297.	More recent studies and reviews available
Guerriero S, Ajossa S, Mais V, Risalvato A, Lai MP, Melis GB. The diagnosis of endometriomas using colour Doppler energy imaging. <i>Hum Reprod</i> 1998;13: 1691-1695.	More recent studies and reviews available
Guerriero S, Ajossa S, Minguez JA, Jurado M, Mais V, Melis GB, Alcazar JL. Accuracy of transvaginal ultrasound for diagnosis of deep endometriosis in uterosacral ligaments, rectovaginal septum, vagina and bladder: systematic review and meta-analysis. <i>Ultrasound Obstet Gynecol</i> 2015;46: 534-545.	Recent Cochrane review on the topic available
Guerriero S, Ajossa S, Orozco R, Perniciano M, Jurado M, Melis GB, Alcazar JL. Accuracy of transvaginal ultrasound for diagnosis of deep endometriosis in the rectosigmoid: systematic review and meta-analysis. <i>Ultrasound Obstet Gynecol</i> 2016;47: 281-289.	Recent Cochrane review on the topic available
Guerriero S, Ajossa S, Paoletti AM, Mais V, Angiolucci M, Melis GB. Tumor markers and transvaginal ultrasonography in the diagnosis of endometrioma. <i>Obstet Gynecol</i> 1996;88: 403-407.	More recent studies and reviews available



Guerriero S, Alcazar JL, Pascual MA, Ajossa S, Gerada M, Bargellini R, Virgilio B, Melis GB. Diagnosis of the most frequent benign ovarian cysts: is ultrasonography accurate and reproducible? <i>J Womens Health (Larchmt)</i> 2009;18: 519-527.	More recent studies and reviews available
Guerriero S, Mais V, Ajossa S, Paoletti AM, Angiolucci M, Melis GB. Transvaginal ultrasonography combined with CA-125 plasma levels in the diagnosis of endometrioma. <i>Fertil Steril</i> 1996;65: 293-298.	Included in review Nisenblat 2016
Guerriero S, Mallarini G, Ajossa S, Risalvato A, Satta R, Mais V, Angiolucci M, Melis GB. Transvaginal ultrasound and computed tomography combined with clinical parameters and CA-125 determinations in the differential diagnosis of persistent ovarian cysts in premenopausal women. <i>Ultrasound Obstet Gynecol</i> 1997;9: 339-343.	More recent studies and reviews available / small study
Guerriero S, Pascual MA, Ajossa S, Rodriguez I, Zajicek M, Rolla M, Rams NL, Yulzari V, Bardin R, Buonomo F et al. Learning curve for the ultrasonographic diagnosis of deep endometriosis using a structured off-line training program. <i>Ultrasound Obstet Gynecol</i> 2018.	Focusses on teaching
Gupta K, Rajwanshi A, Srinivasan R. Endometriosis of the kidney: diagnosis by fine-needle aspiration cytology. <i>Diagn Cytopathol</i> 2005;33: 60-61.	Not relevant for the PICO question
Guralp, O., et al., Non-invasive diagnosis of endometriosis and moderate-severe endometriosis with serum CA125, endocan, YKL-40, and copeptin quadruple panel. <i>J Obstet Gynaecol</i> , 2020: p. 1-6.	Not relevant for clinical practice
Ha HK, Lim YT, Kim HS, Suh TS, Song HH, Kim SJ. Diagnosis of pelvic endometriosis: fat-suppressed T1-weighted vs conventional MR images. <i>AJR Am J Roentgenol</i> 1994;163: 127-131.	More recent studies and reviews available
Halis G, Mechsner S, Ebert AD. The diagnosis and treatment of deep infiltrating endometriosis. <i>Dtsch Arztebl Int</i> 2010;107: 446-455; quiz 456.	Not relevant for the PICO question
Harada T, Kubota T, Aso T. Usefulness of CA19-9 versus CA125 for the diagnosis of endometriosis. <i>Fertil Steril</i> 2002;78: 733-739.	Recent review on the topic is available
Hefler-Frischmuth K, Hefler LA, Heinze G, Paseka V, Grimm C, Tempfer CB. Serum C-reactive protein in the differential diagnosis of ovarian masses. <i>Eur J Obstet Gynecol Reprod Biol</i> 2009;147: 65-68.	Not relevant for clinical practice
Heller DS, Fitzhugh VA. Abdominal wall endometriosis: a rarely anticipated diagnosis: a 16-year experience and brief literature review. <i>J Reprod Med</i> 2014;59: 110-112.	Focussed on abdominal wall endometriosis
Hirsch M, Davis CJ. Preoperative assessment and diagnosis of endometriosis: are we any closer? <i>Curr Opin Obstet Gynecol</i> 2015;27: 284-290.	Superficial review
Hirsch M, Duffy JMN, Deguara CS, Davis CJ, Khan KS. Diagnostic accuracy of Cancer Antigen 125 (CA125) for endometriosis in symptomatic women: a multi-center study. <i>European journal of obstetrics gynecology and reproductive biology</i> 2017;210: 102-107.	Recent review on the topic is available
Hompes PG, Koninckx PR, Kennedy S, van Kamp GF, Verstraeten RA, Cornillie F. Serum CA-125 concentrations during midfollicular phase, a clinically useful and reproducible marker in diagnosis of advanced endometriosis. <i>Clin Chem</i> 1996;42: 1871-1874.	Recent review on the topic is available
Hornstein MD, Harlow BL, Thomas PP, Check JH. Use of a new CA 125 assay in the diagnosis of endometriosis. <i>Hum Reprod</i> 1995;10: 932-934.	Recent review on the topic is available
Hsu AL, Khachikyan I, Stratton P. Invasive and noninvasive methods for the diagnosis of endometriosis. <i>Clin Obstet Gynecol</i> 2010;53: 413-419.	opinion paper
Hsu M, Terris B, Wu TT, Zen Y, Eng HL, Huang WT, Yeh MM. Endometrial cysts within the liver: a rare entity and its differential diagnosis with mucinous cystic neoplasms of the liver. <i>Hum Pathol</i> 2014;45: 761-767.	Paper does not fit the PICO question
Hudelist G, Ballard K, English J, Wright J, Banerjee S, Mastoroudes H, Thomas A, Singer CF, Keckstein J. Transvaginal sonography vs. clinical examination in the preoperative diagnosis of deep infiltrating endometriosis. <i>Ultrasound Obstet Gynecol</i> 2011;37: 480-487.	Included in review Nisenblat 2016
Hudelist G, English J, Thomas AE, Tinelli A, Singer CF, Keckstein J. Diagnostic accuracy of transvaginal ultrasound for non-invasive diagnosis of bowel endometriosis: systematic review and meta-analysis. <i>Ultrasound Obstet Gynecol</i> 2011;37: 257-263.	More recent Cochrane review available
Hudelist G, Fritzer N, Staettner S, Tammaa A, Tinelli A, Sparic R, Keckstein J. Uterine sliding sign: a simple sonographic predictor for presence of deep infiltrating endometriosis of the rectum. <i>Ultrasound Obstet Gynecol</i> 2013;41: 692-695.	Included in review Nisenblat 2016
Hudelist G, Oberwinkler KH, Singer CF, Tuttlies F, Rauter G, Ritter O, Keckstein J. Combination of transvaginal sonography and clinical examination for preoperative diagnosis of pelvic endometriosis. <i>Hum Reprod</i> 2009;24: 1018-1024.	Excluded from review Nisenblat 2016, combination of tests
Imaoka I, Wada A, Kaji Y, Hayashi T, Hayashi M, Matsuo M, Sugimura K. Developing an MR imaging strategy for diagnosis of ovarian masses. <i>Radiographics</i> 2006;26: 1431-1448.	more on adnexal masses than endometriosis
Irungu S, Mavrelou D, Worthington J, Blyuss O, Saridogan E, Timms JF. Discovery of non-invasive biomarkers for the diagnosis of endometriosis. <i>Clin Proteomics</i> 2019;16: 14.	Not relevant for clinical practice



Jaramillo-Cardoso, A., et al., Pelvic MRI in the diagnosis and staging of pelvic endometriosis: added value of structured reporting and expertise. <i>Abdom Radiol (NY)</i> 2020; 45(6): p. 1623-1636.	Feasibility of MRI
Jiang J, Liu Y, Wang K, Wu X, Tang Y. Rectal water contrast transvaginal ultrasound versus double-contrast barium enema in the diagnosis of bowel endometriosis. <i>BMJ Open</i> 2017;7: e017216.	Lower quality study
Jing J, Qiao Y, Suginami H, Taniguchi F, Shi H, Wang X. Two novel serum biomarkers for endometriosis screened by surface-enhanced laser desorption/ionization time-of-flight mass spectrometry and their change after laparoscopic removal of endometriosis. <i>Fertility and sterility</i> 2009;92: 1221-1227.	Not relevant for clinical practice
Kafali H, Artuc H, Demir N. Use of CA125 fluctuation during the menstrual cycle as a tool in the clinical diagnosis of endometriosis; a preliminary report. <i>Eur J Obstet Gynecol Reprod Biol</i> 2004;116: 85-88.	More recent data available
Kavallaris A, Kohler C, Kuhne-Heid R, Schneider A. Histopathological extent of rectal invasion by rectovaginal endometriosis. <i>Hum Reprod</i> 2003;18: 1323-1327.	Not relevant for the PICO Question
Kawaguchi Y, Hanaoka J, Ohshio Y, Igarashi T, Okamoto K, Kaku R, Hayashi K, Ishida M. Diagnosis of thoracic endometriosis with immunohistochemistry. <i>J Thorac Dis</i> 2018;10: 3468-3472.	Not relevant
Khan KS, Tryposkiadis K, Tirlapur SA, Middleton LJ, Sutton AJ, Priest L, Ball E, Balogun M, Sahdev A, Roberts T et al. MRI versus laparoscopy to diagnose the main causes of chronic pelvic pain in women: a test-accuracy study and economic evaluation. <i>Health Technol Assess</i> 2018;22: 1-92.	Not specific for endometriosis
Kiesel L, Sourouni M. Diagnosis of endometriosis in the 21st century. <i>Climacteric</i> 2019;22: 296-302.	Irrelevant publication type
Kikuchi I, Kuwatsuru R, Yamazaki K, Kumakiri J, Aoki Y, Takeda S. Evaluation of the usefulness of the MRI jelly method for diagnosing complete cul-de-sac obliteration. <i>Blomed research international</i> 2014;2014.	not common technique discussed
Kikuchi I, Takeuchi H, Kuwatsuru R, Kitade M, Kumakiri J, Kuroda K, Takeda S. Diagnosis of complete cul-de-sac obliteration (CCDSO) by the MRI jelly method. <i>J Magn Reson Imaging</i> 2009;29: 365-370.	Excluded from review Nisenblat 2016, insufficient diagnostic accuracy information
Kim HJ, Lee SY, Shin YR, Park CS, Kim K. The Value of Diffusion-Weighted Imaging in the Differential Diagnosis of Ovarian Lesions: A Meta-Analysis. <i>PLoS One</i> 2016;11: e0149465.	Irrelevant intervention
Kim KR. Utility of trichrome and reticulin stains in the diagnosis of superficial endometriosis of the uterine cervix. <i>Int J Gynecol Pathol</i> 2001;20: 173-176.	Not relevant for the PICO Question
Kitawaki J, Ishihara H, Koshihara H, Kiyomizu M, Teramoto M, Kitaoka Y, Honjo H. Usefulness and limits of CA-125 in diagnosis of endometriosis without associated ovarian endometriomas. <i>Hum Reprod</i> 2005;20: 1999-2003.	Included in review Nisenblat 2016
Kobayashi H, Sugimoto H, Onishi S, Nakano K. Novel biomarker candidates for the diagnosis of ovarian clear cell carcinoma. <i>Oncol Lett</i> 2015;10: 612-618.	Not endometriosis
Kobayashi H, Yamada Y, Kawahara N, Ogawa K, Yoshimoto C. Modern approaches to noninvasive diagnosis of malignant transformation of endometriosis. <i>Oncol Lett</i> 2019;17: 1196-1202.	Recent review on the topic is available
Koninckx PR, Meuleman C, Oosterlynck D, Cornillie FJ. Diagnosis of deep endometriosis by clinical examination during menstruation and plasma CA-125 concentration. <i>Fertil Steril</i> 1996;65: 280-287.	Recent review on the topic is available
Kruger K, Behrendt K, Niedobitek-Kreuter G, Koltermann K, Ebert AD. Location-dependent value of pelvic MRI in the preoperative diagnosis of endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2013;169: 93-98.	More recent studies and reviews available
Kuessel L, Jaeger-Lansky A, Pateisky P, Rossberg N, Schulz A, Schmitz AA, Staudigl C, Wenzl R. Cytokeratin-19 as a biomarker in urine and in serum for the diagnosis of endometriosis--a prospective study. <i>Gynecol Endocrinol</i> 2014;30: 38-41.	Included in review Liu 2015
Kurdoglu Z, GURSOY R, Kurdoglu M, Erdem M, Erdem O, Erdem A. Comparison of the clinical value of CA 19-9 versus CA 125 for the diagnosis of endometriosis. <i>Fertil Steril</i> 2009;92: 1761-1763.	Higher quality evidence available, comparison not relevant
Kyama CM, Mihalyi A, Gevaert O, Waelkens E, Simsa P, Van de Plas R, Meuleman C, De Moor B, D'Hooghe TM. Evaluation of endometrial biomarkers for semi-invasive diagnosis of endometriosis. <i>Fertil Steril</i> 2011;95: 1338-1343.e1331-1333.	Not relevant for clinical practice
Kyama CM, T'Jampens D, Mihalyi A, Simsa P, Debrock S, Waelkens E, Landuyt B, Meuleman C, Fulop V, Mwenda JM et al. ProteinChip technology is a useful method in the pathogenesis and diagnosis of endometriosis: a preliminary study. <i>Fertil Steril</i> 2006;86: 203-209.	not relevant
Lee YR. CT imaging findings of ruptured ovarian endometriotic cysts: emphasis on the differential diagnosis with ruptured ovarian functional cysts. <i>Korean J Radiol</i> 2011;12: 59-65.	Not relevant for the PICO question (ruptured cyst diagnosis)



Lenhard M, Stieber P, Hertlein L, Kirschenhofer A, Furst S, Mayr D, Nagel D, Hofmann K, Krockner K, Burges A. The diagnostic accuracy of two human epididymis protein 4 (HE4) testing systems in combination with CA125 in the differential diagnosis of ovarian masses. <i>Clin Chem Lab Med</i> 2011;49: 2081-2088.	Not relevant for clinical practice
Leonardi, M., et al. Deep endometriosis transvaginal ultrasound in the workup of patients with signs and symptoms of endometriosis: a cost analysis. <i>Bjog</i> , 2019. 126(12): p. 1499-1506.	Cost analysis
Leonardi, M., et al. International survey finds majority of gynecologists are not aware of and do not utilize ultrasound techniques to diagnose and map endometriosis. <i>Ultrasound Obstet Gynecol</i> , 2020. 56(3): p. 324-328.	US acceptability / uptake
Leonardi, M., et al. Prevalence of negative sliding sign representing pouch of Douglas obliteration during pelvic transvaginal ultrasound for any indication. <i>Ultrasound Obstet Gynecol</i> , 2020. 56(6): p. 928-933.	Not relevant for the PICO Question
Leone Roberti Maggiore U, Biscaldi E, Vellone VG, Venturini PL, Ferrero S. Magnetic resonance enema vs rectal water-contrast transvaginal sonography in diagnosis of rectosigmoid endometriosis. <i>Ultrasound Obstet Gynecol</i> 2017;49: 524-532.	Included in review Moura 2019
Leone Roberti Maggiore U, Ferrero S, Candiani M, Somigliana E, Vigano P, Vercellini P. Bladder Endometriosis: A Systematic Review of Pathogenesis, Diagnosis, Treatment, Impact on Fertility, and Risk of Malignant Transformation. <i>Eur Urol</i> 2017;71: 790-807.	Broad review on subtype of endometriosis
Leone Roberti Maggiore U, Ferrero S, Mangili G, Bergamini A, Inversetti A, Giorgione V, Vigano P, Candiani M. A systematic review on endometriosis during pregnancy: diagnosis, misdiagnosis, complications and outcomes. <i>Hum Reprod Update</i> 2016;22: 70-103.	Paper focused on complications rather than diagnosis
Lermann J, Mueller A, Körber F, Oppelt P, Beckmann MW, Dittrich R, Renner SP. Evaluation of high-sensitivity C-reactive protein in comparison with C-reactive protein as biochemical serum markers in women with endometriosis. <i>Fertility and sterility</i> 2010;93: 2125-2129.	Not relevant for clinical practice
Leslie C, Ma T, McElhinney B, Leake R, Stewart CJ. Is the detection of endometrial nerve fibers useful in the diagnosis of endometriosis? <i>Int J Gynecol Pathol</i> 2013;32: 149-155.	Not relevant for the PICO question
Li J, Gao Y, Guan L, Zhang H, Sun J, Gong X, Li D, Chen P, Ma Z, Liang X et al. Discovery of Phosphatidic Acid, Phosphatidylcholine, and Phosphatidylserine as Biomarkers for Early Diagnosis of Endometriosis. <i>Front Physiol</i> 2018;9: 14.	Not relevant
Li J, Guan L, Zhang H, Gao Y, Sun J, Gong X, Li D, Chen P, Liang X, Huang M et al. Endometrium metabolomic profiling reveals potential biomarkers for diagnosis of endometriosis at minimal-mild stages. <i>Reprod Biol Endocrinol</i> 2018;16: 42.	Not relevant
Lier, M.C.I., et al. Comparison of enhanced laparoscopic imaging techniques in endometriosis surgery: a diagnostic accuracy study. <i>Surgical endoscopy</i> , 2020. 34(1): p. 96-104.	Intervention not relevant for the PICO Question - intra-operative imaging
Lue JR, Pyrzak A, Allen J. Improving accuracy of intraoperative diagnosis of endometriosis: Role of firefly in minimal access robotic surgery. <i>J Minim Access Surg</i> 2016;12: 186-189.	Case report
Luisi S, Pinzauti S, Regini C, Petraglia F. Serum markers for the noninvasive diagnosis of endometriosis. <i>Womens Health (Lond)</i> 2015;11: 603-610.	Recent review on the topic is available
Mabrouk M, Elmakky A, Caramelli E, Farina A, Mignemi G, Venturoli S, Villa G, Guerrini M, Manuzzi L, Montanari G et al. Performance of peripheral (serum and molecular) blood markers for diagnosis of endometriosis. <i>Arch Gynecol Obstet</i> 2012;285: 1307-1312.	Included in review Nisenblat 2016
Macario S, Chassang M, Novellas S, Baudin G, Delotte J, Toullalan O, Chevallier P. The value of pelvic MRI in the diagnosis of posterior cul-de-sac obliteration in cases of deep pelvic endometriosis. <i>AJR Am J Roentgenol</i> 2012;199: 1410-1415.	More recent studies and reviews available
Maheux-Lacroix, S., et al. Diagnostic Accuracy of Intraoperative Tools for Detecting Endometriosis: A Systematic Review and Meta-analysis. <i>J Minim Invasive Gynecol</i> , 2020. 27(2): p. 433-440.e1.	Intervention not relevant for the PICO Question - intra-operative imaging
Mahutte NG, Matalliotakis IM, Goumenou AG, Vassiliadis S, Koumantakis GE, Arici A. Inverse correlation between peritoneal fluid leptin concentrations and the extent of endometriosis. <i>Hum Reprod</i> 2003;18: 1205-1209.	More recent data available
Mais V, Guerriero S, Ajossa S, Angiolucci M, Paoletti AM, Melis GB. The efficiency of transvaginal ultrasonography in the diagnosis of endometrioma. <i>Fertil Steril</i> 1993;60: 776-780.	Only lesion-level analysis
Malik E, Berg C, Meyhofer-Malik A, Buchweitz O, Moubayed P, Diedrich K. Fluorescence diagnosis of endometriosis using 5-aminolevulinic acid. <i>Surg Endosc</i> 2000;14: 452-455.	Intervention is only relevant in research context
Marchino GL, Gennarelli G, Enria R, Bongioanni F, Lipari G, Massobrio M. Diagnosis of pelvic endometriosis with use of macroscopic versus histologic findings. <i>Fertil Steril</i> 2005;84: 12-15.	More recent data/reviews available



Matsushima T, Kaseki H, Ishihara K, Araki T. Assessment of fallopian tube cytology for the diagnosis of endometriosis and hydrosalpinx. <i>J Nippon Med Sch</i> 2002;69: 445-450.	Outdated paper
Menada MV, Remorgida V, Abbamonte LH, Fulcheri E, Ragni N, Ferrero S. Transvaginal ultrasonography combined with water-contrast in the rectum in the diagnosis of rectovaginal endometriosis infiltrating the bowel. <i>Fertil Steril</i> 2008;89: 699-700.	More recent studies and reviews available
Menakaya U, Reid S, Infante F, Condous G. The 'sliding sign' in conjunction with sonovaginography: is this the optimal approach for the diagnosis of Pouch of Douglas obliteration and posterior compartment deep infiltrating endometriosis? <i>Australas J Ultrasound Med</i> 2013;16: 118-123.	Recent Cochrane review on the topic available
Mettler L, Schollmeyer T, Lehmann-Willenbrock E, Schuppler U, Schmutzler A, Shukla D, Zavala A, Lewin A. Accuracy of laparoscopic diagnosis of endometriosis. <i>Jsls</i> 2003;7: 15-18.	More recent data/reviews available
Mezzi G, Ferrari S, Arcidiacono PG, Di Puppo F, Candiani M, Testoni PA. Endoscopic rectal ultrasound and elastosonography are useful in flow chart for the diagnosis of deep pelvic endometriosis with rectal involvement. <i>J Obstet Gynaecol Res</i> 2011;37: 586-590.	US technique rarely used
Mihalyi A, Gevaert O, Kyama CM, Simsa P, Pochet N, De Smet F, De Moor B, Meuleman C, Billen J, Blanckaert N et al. Non-invasive diagnosis of endometriosis based on a combined analysis of six plasma biomarkers. <i>Hum Reprod</i> 2010;25: 654-664.	Included in review Nisenblat 2016
Moore J, Copley S, Morris J, Lindsell D, Golding S, Kennedy S. A systematic review of the accuracy of ultrasound in the diagnosis of endometriosis. <i>Ultrasound Obstet Gynecol</i> 2002;20: 630-634.	More recent Cochrane review available
Moses SH, Clark TJ. Current practice for the laparoscopic diagnosis and treatment of endometriosis: a national questionnaire survey of consultant gynaecologists in UK. <i>BJog</i> 2004;111: 1269-1272.	Outdated paper
Muzii L, Bellati F, Plotti F, Mancini N, Palaia I, Zullo MA, Angioli R, Panici PB. Ultrasonographic evaluation of postoperative ovarian cyst formation after laparoscopic excision of endometriomas. <i>Journal of the American Association of Gynecologic Laparoscopists</i> 2004;11: 457-461.	Information is limited only after surgery and not real to endometriomas
Ni J, Han B, Liang J, Wang F. Three-dimensional 3D ultrasound combined with power Doppler for the differential diagnosis of endometrial lesions among infertile women. <i>Int J Gynaecol Obstet</i> 2019;145: 212-218.	Discusses endometrium not endometriosis
Nisenblat V, Prentice L, Bossuyt PM, Farquhar C, Hull ML, Johnson N. Combination of the non-invasive tests for the diagnosis of endometriosis. <i>Cochrane Database Syst Rev</i> 2016;7: Cd012281.	Irrelevant intervention
Noventa M, Saccardi C, Litta P, Quaranta M, D'Antona D, Gizzo S. Innovative ultrasound techniques for diagnosis of deep pelvic endometriosis: more confusion or a possible solution to the dilemma? <i>Ultrasound Obstet Gynecol</i> 2015;45: 355-356.	More recent studies and reviews available
Noventa M, Saccardi C, Litta P, Vitagliano A, D'Antona D, Abdulrahim B, Duncan A, Alexander-Sefre F, Aldrich CJ, Quaranta M et al. Ultrasound techniques in the diagnosis of deep pelvic endometriosis: algorithm based on a systematic review and meta-analysis. <i>Fertil Steril</i> 2015;104: 366-383.e362.	Recent Cochrane review on the topic available
Noventa, M., et al., Imaging Modalities for Diagnosis of Deep Pelvic Endometriosis: Comparison between Trans-Vaginal Sonography, Rectal Endoscopy Sonography and Magnetic Resonance Imaging. <i>A Head-to-Head Meta-Analysis. Diagnostics (Basel)</i> , 2019, 9(4).	Recent review but no impact on the evidence or conclusions
O DF, Flores I, Waelkens E, D'Hooghe T. Noninvasive diagnosis of endometriosis: Review of current peripheral blood and endometrial biomarkers. <i>Best Pract Res Clin Obstet Gynaecol</i> 2018;50: 72-83.	Recent Cochrane review available
Odukoya OA, Wheatcroft N, Weetman AP, Cooke ID. The prevalence of endometrial immunoglobulin G antibodies in patients with endometriosis. <i>Human reproduction (oxford, england)</i> 1995;10: 1214-1219.	Not relevant for clinical practice
Ognong-Boulema A, Dohan A, Hoeffel C, Stanek A, Golfier F, Glehen O, Valette PJ, Rousset P. Adnexal masses associated with peritoneal involvement: diagnosis with CT and MRI. <i>Abdom Radiol (NY)</i> 2017;42: 1975-1992.	Recent Cochrane review on the topic available
Oliveira MAP, Raymundo TS, Soares LC, Pereira TRD, Demoro AVE. How to Use CA-125 More Effectively in the Diagnosis of Deep Endometriosis. <i>Biomed Res Int</i> 2017;2017: 9857196.	Recent review on the topic is available
Oliveira-Filho M, Rao VS, Eleuterio J, Jr., Medeiros FC. Fine needle aspiration cytology: a tool to diagnose cervical and vaginal endometriosis in low-income places. <i>Acta Cytol</i> 2013;57: 203-206.	Not relevant for the PICO question
Pacchiarotti A, Frati P, Milazzo GN, Catalano A, Gentile V, Moscarini M. Evaluation of serum anti-Mullerian hormone levels to assess the ovarian reserve in women with severe endometriosis. <i>European journal of obstetrics gynecology and reproductive biology</i> 2014;172: 62-64.	Recent review on the topic is available
Pachori G, Sharma R, Sunaria RK, Bayla T. Scar endometriosis: Diagnosis by fine needle aspiration. <i>J Cytol</i> 2015;32: 65-67.	Low quality paper



Pascual MA, Guerriero S, Hereter L, Barri-Soldevila P, Ajossa S, Graupera B, Rodriguez I. Diagnosis of endometriosis of the rectovaginal septum using introital three-dimensional ultrasonography. <i>Fertil Steril</i> 2010;94: 2761-2765.	Not relevant for the PICO question
Pascual MA, Guerriero S, Hereter L, Barri-Soldevila P, Ajossa S, Graupera B, Rodriguez I. Three-dimensional sonography for diagnosis of rectovaginal septum endometriosis: interobserver agreement. <i>J Ultrasound Med</i> 2013;32: 931-935.	Focus on interobserver agreement
Pascual MA, Tresserra F, Lopez-Marin L, Ubeda A, Grases PJ, Dexeus S. Role of color Doppler ultrasonography in the diagnosis of endometriotic cyst. <i>J Ultrasound Med</i> 2000;19: 695-699.	Excluded from review Nisenblat 2016, Population, outcome and study design outside inclusion criteria
Pateisky P, Pils D, Szabo L, Kuessel L, Husslein H, Schmitz A, Wenzl R, Yotova I. hsa-miRNA-154-5p expression in plasma of endometriosis patients is a potential diagnostic marker for the disease. <i>Reproductive biomedicine online</i> 2018;37: 449-466.	Not relevant for clinical practice
Philip CA, Bisch C, Coulon A, de Saint-Hilaire P, Rudigoz RC, Dubernard G. Correlation between three-dimensional rectosonography and magnetic resonance imaging in the diagnosis of rectosigmoid endometriosis: a preliminary study on the first fifty cases. <i>Eur J Obstet Gynecol Reprod Biol</i> 2015;187: 35-40.	Publication type / Preliminary study
Pin, L., et al., Exploratory study of the interest of MR susceptibility-weighted imaging for the pre-operative assessment of pelvic endometriosis extent. <i>Eur J Radiol</i> , 2019. 118: p. 245-250.	Not relevant for the PICO question
Pishvaian AC, Ahlawat SK, Garvin D, Haddad NG. Role of EUS and EUS-guided FNA in the diagnosis of symptomatic rectosigmoid endometriosis. <i>Gastrointest Endosc</i> 2006;63: 331-335.	Not relevant for the PICO question
Polak G, Wertel I, Koziot-Montewka M, Tarkowski R, Kotarski J. Investigation of glutathione concentrations in peritoneal fluid from women with and without endometriosis. <i>European journal of obstetrics, gynecology, and reproductive biology</i> 2003;109: 206-208.	Not relevant for clinical practice
Quinn M, Slade R. Diagnosis of endometriosis: utility of MRI? <i>Fertil Steril</i> 2003;80: 1071-1072; author reply 1072.	opinion paper
Randall GW, Gantt PA, Poe-Zeigler RL, Bergmann CA, Noel ME, Strawbridge WR, Richardson-Cox B, Hereford JR, Reiff RH. Serum antiendometrial antibodies and diagnosis of endometriosis. <i>Am J Reprod Immunol</i> 2007;58: 374-382.	Not relevant for clinical practice
Redwine DB. Diaphragmatic endometriosis: diagnosis, surgical management, and long-term results of treatment. <i>Fertil Steril</i> 2002;77: 288-296.	Paper does not fit the PICO question
Reid S, Condous G. The issues surrounding the pre-operative TVS diagnosis of rectovaginal septum endometriosis. <i>Australas J Ultrasound Med</i> 2014;17: 2-3.	opinion paper
Reid S, Condous G. Update on the ultrasound diagnosis of deep pelvic endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;209: 50-54.	Recent Cochrane review on the topic available
Reid S, Lu C, Casikar I, Reid G, Abbott J, Cario G, Chou D, Kowalski D, Cooper M, Condous G. Prediction of pouch of Douglas obliteration in women with suspected endometriosis using a new real-time dynamic transvaginal ultrasound technique: the sliding sign. <i>Ultrasound Obstet Gynecol</i> 2013;41: 685-691.	Included in review Nisenblat 2016
Ribeiro HS, Ribeiro PA, Rossini L, Rodrigues FC, Donadio N, Aoki T. Double-contrast barium enema and transectal endoscopic ultrasonography in the diagnosis of intestinal deeply infiltrating endometriosis. <i>J Minim Invasive Gynecol</i> 2008;15: 315-320.	Included in review Nisenblat 2016
Rizzello F, Capezzuoli T, D'Amato Scherbatoff I, Cozzolino M, Gandini L, Coccia ME. Three-Dimensional Power Doppler Vascularization in Women With Ovarian Endometriomas and Relationship With Associated Painful Symptoms. <i>J Ultrasound Med</i> 2017;36: 2271-2278.	Not relevant for the PICO question
Roman H, Kouteich K, Gromez A, Hochain P, Resch B, Marpeau L. Endorectal ultrasound accuracy in the diagnosis of rectal endometriosis infiltration depth. <i>Fertil Steril</i> 2008;90: 1008-1013.	More recent studies and reviews available
Ros C, Martinez-Serrano MJ, Rius M, Abrao MS, Munros J, Martinez-Zamora MA, Gracia M, Carmona F. Bowel Preparation Improves the Accuracy of Transvaginal Ultrasound in the Diagnosis of Rectosigmoid Deep Infiltrating Endometriosis: A Prospective Study. <i>J Minim Invasive Gynecol</i> 2017;24: 1145-1151.	Not relevant for the PICO question
Ros, C., et al., Accuracy of Transvaginal Ultrasound Compared to Cystoscopy in the Diagnosis of Bladder Endometriosis Nodules. <i>J Ultrasound Med</i> , 2020.	Not relevant for the PICO question
Rosa ESAC, Rosa ESJC, Ferriani RA. Serum CA-125 in the diagnosis of endometriosis. <i>Int J Gynaecol Obstet</i> 2007;96: 206-207.	Recent review on the topic is available
Rosefort A, Huchon C, Estrade S, Paternostre A, Bernard JP, Fauconnier A. Is training sufficient for ultrasound operators to diagnose deep infiltrating endometriosis and bowel involvement by transvaginal ultrasound? <i>J Gynecol Obstet Hum Reprod</i> 2019;48: 109-114.	Not relevant for the PICO question - discusses US training
Rousset P, Gregory J, Rousset-Jablonski C, Hugon-Rodin J, Regnard JF, Chapron C, Coste J, Golfier F, Revel MP. MR diagnosis of diaphragmatic endometriosis. <i>Eur Radiol</i> 2016;26: 3968-3977.	Paper does not fit the PICO question



Ruan YQ, Liang WG, Huang SH. Analysis of laparoscopy on endometriosis patients with high expression of CA125. <i>European review for medical and pharmacological sciences</i> 2015;19: 1334-1337.	Recent review on the topic is available
Saba L, Guerriero S, Sulcis R, Pilloni M, Ajossa S, Melis G, Mallarini G. MRI and "tenderness guided" transvaginal ultrasonography in the diagnosis of recto-sigmoid endometriosis. <i>J Magn Reson Imaging</i> 2012;35: 352-360.	Included in review Moura 2019
Saccardi C, Cosmi E, Borghero A, Tregnaghi A, Dessole S, Litta P. Comparison between transvaginal sonography, saline contrast sonovaginography and magnetic resonance imaging in the diagnosis of posterior deep infiltrating endometriosis. <i>Ultrasound Obstet Gynecol</i> 2012;40: 464-469.	More recent studies and reviews available
Sanchez-Ferrer ML, Jimenez-Velazquez R, Mendiola J, Prieto-Sanchez MT, Canovas-Lopez L, Carmona-Barnosi A, Corbalan-Biyang S, Hernandez-Penalver AI, Adoamnei E, Nieto A et al. Accuracy of anogenital distance and anti-Mullerian hormone in the diagnosis of endometriosis without surgery. <i>Int J Gynaecol Obstet</i> 2019;144: 90-96.	Irrelevant intervention
Sandré, A., et al., Comparison of three-dimensional rectosonography, rectal endoscopic sonography and magnetic resonance imaging performances in the diagnosis of rectosigmoid endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> , 2019. 240: p. 288-292.	Not relevant for the PICO question
Savelli L, Fabbri F, Zannoni L, De Meis L, Di Donato N, Mollo F, Seracchioli R. Preoperative ultrasound diagnosis of deep endometriosis: importance of the examiner's expertise and lesion size. <i>Australas J Ultrasound Med</i> 2012;15: 55-60.	Practical limitations of US diagnosis
Scardapane A, Bettocchi S, Lorusso F, Stabile Ianora AA, Vimercati A, Ceci O, Lasciarrea M, Angelelli G. Diagnosis of colorectal endometriosis: contribution of contrast enhanced MR-colonography. <i>Eur Radiol</i> 2011;21: 1553-1563.	More recent studies and reviews available
Schipper E, Nezhat C. Video-assisted laparoscopy for the detection and diagnosis of endometriosis: safety, reliability, and invasiveness. <i>Int J Womens Health</i> 2012;4: 383-393.	Limited relevance for the PICO question
Schliep KC, Chen Z, Stanford JB, Xie Y, Mumford SL, Hammoud AO, Boiman Johnstone E, Dorais JK, Varner MW, Buck Louis GM et al. Endometriosis diagnosis and staging by operating surgeon and expert review using multiple diagnostic tools: an inter-rater agreement study. <i>Bjog</i> 2017;124: 220-229.	Interobserver variability assessed
Schroder J, Lohner M, Doniec JM, Dohrmann P. Endoluminal ultrasound diagnosis and operative management of rectal endometriosis. <i>Dis Colon Rectum</i> 1997;40: 614-617.	More recent studies and reviews available / small study
Scioscia, M., et al., Differential Diagnosis of Endometriosis by Ultrasound: A Rising Challenge. <i>Diagnostics (Basel)</i> , 2020. 10(10).	Not relevant for the PICO question
Scioscia, M., et al., Sonographic Differential Diagnosis in Deep Infiltrating Endometriosis: The Bowel. <i>Biomed Res Int</i> , 2019. 2019: p. 5958402.	Not relevant for the PICO question
Scioscia, M., et al., Ultrasound Differential Diagnosis in Deep Infiltrating Endometriosis of the Urinary Tract. <i>J Ultrasound Med</i> , 2020. 39(11): p. 2261-2275.	Not relevant for the PICO question
Seckin B, Oruc AS, Turkcapar F, Ugur M. The relation of pelvic pain and dense adhesions to Doppler ultrasound findings in patients with ovarian endometriomas. <i>Archives of gynecology and obstetrics</i> 2013;287: 723-728.	Interesting data on vascularization, but not relevant for the PICO question
Seydel AS, Sickel JZ, Warner ED, Sax HC. Extrapelvic endometriosis: diagnosis and treatment. <i>Am J Surg</i> 1996;171: 239.	Paper does not fit the PICO question
Sharma D, Dahiya K, Duhan N, Bansal R. Diagnostic laparoscopy in chronic pelvic pain. <i>Archives of gynecology and obstetrics</i> 2011;283: 295-297.	comparison to old imaging diagnostic criteria
Sharpe-Timms KL. Haptoglobin expression by shed endometrial tissue fragments found in peritoneal fluid. <i>Fertility and sterility</i> 2005;84: 22-30.	Not relevant for clinical practice
Shen M, Gao Y, Ma X, Wang B, Wu J, Wang J, Li J, Tian J, Jia J. Hormonal biomarkers for the noninvasive diagnosis of endometriosis: A protocol for a network meta-analysis of diagnostic test accuracy. <i>Medicine (Baltimore)</i> 2018;97: e12898.	Study type inappropriate
Signorile PG, Baldi A. A tissue specific magnetic resonance contrast agent, Gd-AMH, for diagnosis of stromal endometriosis lesions: a phase I study. <i>J Cell Physiol</i> 2015;230: 1270-1275.	Not imaging / not relevant for the PICO question
Signorile PG, Baldi A. Prototype of Multiplex Bead Assay for Quantification of Three Serum Biomarkers for In Vitro Diagnosis of Endometriosis. <i>J Cell Physiol</i> 2016;231: 2622-2627.	Not relevant for clinical practice
Signorile PG, Baldi A. Serum biomarker for diagnosis of endometriosis. <i>J Cell Physiol</i> 2014;229: 1731-1735.	Recent review on the topic is available
Socolov R, Butureanu S, Angioni S, Sindilar A, Boiculese L, Cozma L, Socolov D. The value of serological markers in the diagnosis and prognosis of endometriosis: a prospective case-control study. <i>Eur J Obstet Gynecol Reprod Biol</i> 2011;154: 215-217.	Not relevant for clinical practice
Sokalska A, Timmerman D, Testa AC, Van Holsbeke C, Lissoni AA, Leone FP, Jurkovic D, Valentin L. Diagnostic accuracy of transvaginal ultrasound examination for assigning a specific diagnosis to adnexal masses. <i>Ultrasound Obstet Gynecol</i> 2009;34: 462-470.	Excluded from review Nisenblat 2016. Population



	and outcome outside inclusion criteria
Somigliana E, Vercellini P, Vigano P, Benaglia L, Crosignani PG, Fedele L. Non-invasive diagnosis of endometriosis: the goal or own goal? <i>Hum Reprod</i> 2010;25: 1863-1868.	opinion paper
Stowell SB, Wiley CM, Perez-Reyes N, Powers CN. Cytologic diagnosis of peritoneal fluids. Applicability to the laparoscopic diagnosis of endometriosis. <i>Acta Cytol</i> 1997;41: 817-822.	More recent data/reviews available
Stratton P, Winkel C, Premkumar A, Chow C, Wilson J, Hearn-Stokes R, Heo S, Merino M, Nieman LK. Diagnostic accuracy of laparoscopy, magnetic resonance imaging, and histopathologic examination for the detection of endometriosis. <i>Fertility and sterility</i> 2003;79: 1078-1085.	Included in review Nisenblat 2016
Sumathi VP, McCluggage WG. CD10 is useful in demonstrating endometrial stroma at ectopic sites and in confirming a diagnosis of endometriosis. <i>J Clin Pathol</i> 2002;55: 391-392.	More recent data available
Sutcu HK, Celik GIT, Akpak YK, Akar ME, Taskin O, Ozdem S, Uzun G. The value of CA-125, CA 19-9, interleukin-6, interleukin-8 and hsCRP in the diagnosis of endometriosis. <i>Acta medica mediterranea</i> 2015;31: 793-799.	Recent review on the topic is available
Suzumori N, Zhao XX, Suzumori K. Elevated angiogenin levels in the peritoneal fluid of women with endometriosis correlate with the extent of the disorder. <i>Fertil Steril</i> 2004;82: 93-96.	Recent review on the topic is available
Tabbara SO, Covell JL, Abbitt PL. Diagnosis of endometriosis by fine-needle aspiration cytology. <i>Diagn Cytopathol</i> 1991;7: 606-610.	Outdated paper
Takahashi K, Okada S, Ozaki T, Kitao M, Sugimura K. Diagnosis of pelvic endometriosis by magnetic resonance imaging using "fat-saturation" technique. <i>Fertil Steril</i> 1994;62: 973-977.	Recent Cochrane review on the topic available
Tammaa A, Fritzer N, Lozano P, Krell A, Salzer H, Salama M, Hudelist G. Interobserver agreement and accuracy of non-invasive diagnosis of endometriosis by transvaginal sonography. <i>Ultrasound Obstet Gynecol</i> 2015;46: 737-740.	Interobserver assessment
Taylor HS, Adamson GD, Diamond MP, Goldstein SR, Horne AW, Missmer SA, Snabes MC, Surrey E, Taylor RN. An evidence-based approach to assessing surgical versus clinical diagnosis of symptomatic endometriosis. <i>Int J Gynaecol Obstet</i> 2018;142: 131-142.	Not relevant
Thubert T, Santulli P, Marcellin L, Menard S, M'Baye M, Streuli I, Borghese B, de Ziegler D, Chapron C. Measurement of hs-CRP is irrelevant to diagnose and stage endometriosis: prospective study of 834 patients. <i>Am J Obstet Gynecol</i> 2014;210: 533.e531-533.e510.	Not relevant for clinical practice
Tokmak A, Ugur M, Tonguc E, Var T, Moraloglu O, Ozaksit G. The value of urocortin and Ca-125 in the diagnosis of endometrioma. <i>Arch Gynecol Obstet</i> 2011;283: 1075-1079.	Recent review on the topic is available
Turocy JM, Benacerraf BR. Transvaginal sonography in the diagnosis of deep infiltrating endometriosis: A review. <i>J Clin Ultrasound</i> 2017;45: 313-318.	Recent Cochrane review on the topic available
Valenzano Menada M, Remorgida V, Abbamonte LH, Nicoletti A, Ragni N, Ferrero S. Does transvaginal ultrasonography combined with water-contrast in the rectum aid in the diagnosis of rectovaginal endometriosis infiltrating the bowel? <i>Hum Reprod</i> 2008;23: 1069-1075.	Recent Cochrane review on the topic available
van der Wat J, Kaplan MD. Modified virtual colonoscopy: a noninvasive technique for the diagnosis of rectovaginal septum and deep infiltrating pelvic endometriosis. <i>J Minim Invasive Gynecol</i> 2007;14: 638-643.	Not relevant for the PICO question
Vercellini P, Fedele L, Molteni P, Arcaini L, Bianchi S, Candiani GB. Laparoscopy in the diagnosis of gynecologic chronic pelvic pain. <i>Int J Gynaecol Obstet</i> 1990;32: 261-265.	More recent data/reviews available
Vercellini P, Vendola N, Bocciolone L, Rognoni MT, Carinelli SG, Candiani GB. Reliability of the visual diagnosis of ovarian endometriosis. <i>Fertil Steril</i> 1991;56: 1198-1200.	Outdated paper
Verit FF, Hilali NG. Comparing high-sensitivity C-reactive protein (hs-CRP) with CRP as a soluble serum marker for the diagnosis of women with endometriosis. <i>Fertil Steril</i> 2010;94: e51; author reply e52.	Not relevant for clinical practice
Vigano P, Somigliana E, Gaffuri B, Santorsola R, Busacca M, Vignali M. Endometrial release of soluble intercellular adhesion molecule 1 and endometriosis: relationship to the extent of the disease. <i>Obstet Gynecol</i> 2000;95: 115-118.	More recent data available
Vodolazkaia A, El-Aalamat Y, Popovic D, Mihalyi A, Bossuyt X, Kyama CM, Fassbender A, Bokor A, Schols D, Huskens D et al. Evaluation of a panel of 28 biomarkers for the non-invasive diagnosis of endometriosis. <i>Hum Reprod</i> 2012;27: 2698-2711.	Not relevant
Wang F, Wang H, Jin D, Zhang Y. Serum miR-17, IL-4, and IL-6 levels for diagnosis of endometriosis. <i>Medicine (Baltimore)</i> 2018;97: e10853.	Not relevant
Wang L, Liu HY, Shi HH, Lang JH, Sun W. Urine peptide patterns for non-invasive diagnosis of endometriosis: a preliminary prospective study. <i>Eur J Obstet Gynecol Reprod Biol</i> 2014;177: 23-28.	Included in review Liu 2015



Wanyonyi SZ, Sequeira E, Mukono SG. Correlation between laparoscopic and histopathologic diagnosis of endometriosis. <i>Int J Gynaecol Obstet</i> 2011;115: 273-276.	Not relevant
Wild, M., et al., MRI for the diagnosis and staging of deeply infiltrating endometriosis: a national survey of BSGE accredited endometriosis centres and review of the literature. <i>Br J Radiol</i> , 2020. 93(1114): p. 20200690.	Feasibility of MRI
Wood C, Kuhn R, Tsaltas J. Laparoscopic diagnosis of endometriosis. <i>Aust N Z J Obstet Gynaecol</i> 2002;42: 277-281.	More recent data/reviews available
Xie M, Zhang X, Zhan J, Ren Y, Wang W. Potential role of strain elastography for detection of the extent of large-scar endometriosis. <i>J Ultrasound Med</i> 2013;32: 1635-1642.	Paper does not fit the PICO question
Yan Z, Chunxia Q, Lian L, Xuye Z, Yali L. Serum HE4 is more suitable as a biomarker than CA125 in Chinese women with benign gynecologic disorders. <i>African historical studies</i> 2014;14: 913-918.	not a relevant intervention
Yang H, Zhu L, Wang S, Lang J, Xu T. Noninvasive diagnosis of moderate to severe endometriosis: the platelet-lymphocyte ratio cannot be a neoadjuvant biomarker for serum cancer antigen 125. <i>J Minim Invasive Gynecol</i> 2015;22: 373-377.	Recent review on the topic is available
Yarmish G, Sala E, Goldman DA, Lakhman Y, Soslow RA, Hricak H, Gardner GJ, Alberto Vargas H. Abdominal wall endometriosis: differentiation from other masses using CT features. <i>Abdominal radiology</i> 2016: 1-7.	Paper does not fit the PICO question
Yi YC, Wang SC, Chao CC, Su CL, Lee YL, Chen LY. Evaluation of serum autoantibody levels in the diagnosis of ovarian endometrioma. <i>J Clin Lab Anal</i> 2010;24: 357-362.	Not relevant for clinical practice
Yong PJ, Sutton C, Suen M, Williams C. Endovaginal ultrasound-assisted pain mapping in endometriosis and chronic pelvic pain. <i>J Obstet Gynaecol</i> 2013;33: 715-719.	paper does not add relevant information
Zhang QF, Chen GY, Liu Y, Huang HJ, Song YF. Relationship between resistin and IL-23 levels in follicular fluid in infertile patients with endometriosis undergoing IVF-ET. <i>Advances in clinical and experimental medicine</i> 2017;26: 1431-1435.	Not relevant for clinical practice
Zhang, X., T. He, and W. Shen. Comparison of physical examination, ultrasound techniques and magnetic resonance imaging for the diagnosis of deep infiltrating endometriosis: A systematic review and meta-analysis of diagnostic accuracy studies. <i>Exp Ther Med</i> , 2020. 20(4): p. 3208-3220.	Recent review but no impact on the evidence or conclusions
Zhou, Y., et al., Accuracy of transvaginal ultrasound for diagnosis of deep infiltrating endometriosis in the uterosacral ligaments: Systematic review and meta-analysis. <i>J Gynecol Obstet Hum Reprod</i> , 2020: p. 101953.	Not relevant for the PICO question
Zhu H, Lei H, Wang Q, Fu J, Song Y, Shen L, Huang W. Serum carcinogenic antigen (CA)-125 and CA 19-9 combining pain score in the diagnosis of pelvic endometriosis in infertile women. <i>Clin Exp Obstet Gynecol</i> 2016;43: 826-829.	Not relevant
Zucchini C, De Sanctis P, Facchini C, Di Donato N, Montanari G, Bertoldo V, Farina A, Curti A, Seracchioli R. Performance of Circulating Placental Growth Factor as A Screening Marker for Diagnosis of Ovarian Endometriosis: A Pilot Study. <i>Int J Fertil Steril</i> 2016;9: 483-489.	Recent review on the topic is available

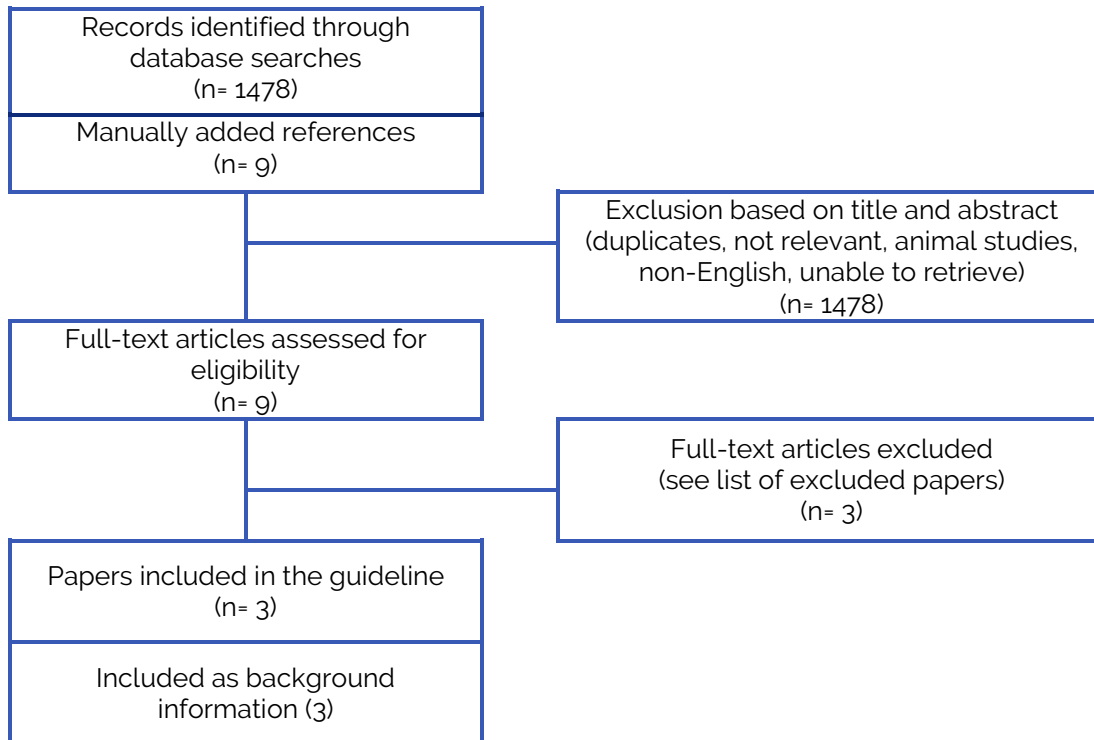


QUESTION 1.5 DOES DIAGNOSTIC LAPAROSCOPY COMPARED TO EMPIRICAL MEDICAL TREATMENT RESULT IN BETTER SYMPTOM MANAGEMENT IN WOMEN SUSPECTED OF ENDOMETRIOSIS?

Search strings

see Question 1.4 – Same search term, different selection of papers

Flowchart



List of excluded papers

Reference	Exclusion criterium
Garry R. Diagnosis of endometriosis and pelvic pain. <i>Fertil Steril</i> 2006;86: 1307-1309; discussion 1317.	Opinion paper
Kennedy S. Should a diagnosis of endometriosis be sought in all symptomatic women? <i>Fertil Steril</i> 2006;86: 1312-1313; discussion 1317.	Opinion paper
Olive DL. Empirical therapy with leuprorelin acetate for endometriosis in the United States. <i>Drugs Today (Barc)</i> 2005;41 Suppl A: 5-10.	Opinion paper

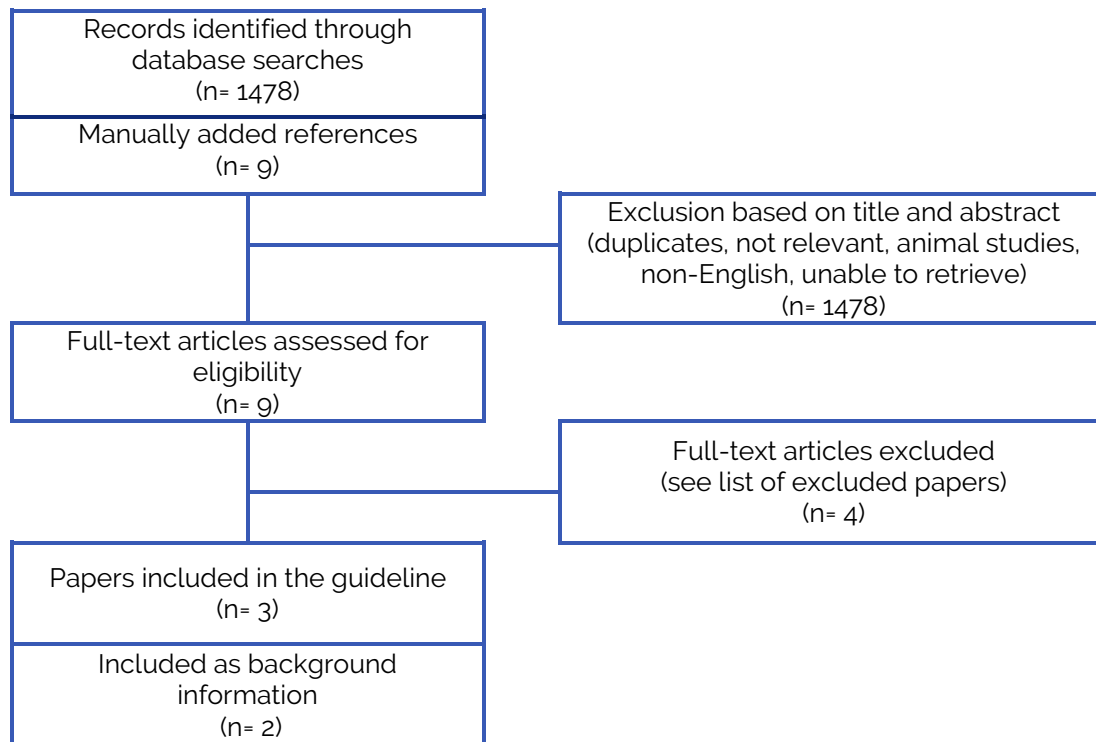


QUESTION 1.6 IS LONG TERM MONITORING OF WOMEN WITH ENDOMETRIOSIS BENEFICIAL IN PREVENTING ADVERSE OUTCOMES (RECURRENCE, COMPLICATIONS, MALIGNANCY) ?

Search strings

see Question 1.4 – Same search term, different selection of papers

Flowchart



List of excluded papers

Reference	Exclusion criterium
Matalliotakis I, Makrigiannakis A, Karkavitsas N, Psaroudakis E, Froudarakis G, Koumantakis E. Use of CA-125 in the diagnosis and management of endometriosis: influence of treatment with danazol. <i>Int J Fertil Menopausal Stud</i> 1994;39: 100-104.	Relevant Intervention is not Included
Matsuzaki S, Canis M, Pouly JL, Rabischong B, Botchorishvili R, Mage G. Relationship between delay of surgical diagnosis and severity of disease in patients with symptomatic deep infiltrating endometriosis. <i>Fertil Steril</i> 2006;86: 1314-1316; discussion 1317.	Relevant Intervention is not Included
Mohamed ML, El Behery MM, Mansour SA. Comparative study between VEGF-A and CA-125 in diagnosis and follow-up of advanced endometriosis after conservative laparoscopic surgery. <i>Arch Gynecol Obstet</i> 2013;287: 77-82.	Relevant Intervention is not Included
Ria R, Loverro G, Vacca A, Ribatti D, Cormio G, Roccaro AM, Selvaggi L. Angiogenesis extent and expression of matrix metalloproteinase-2 and -9 agree with progression of ovarian endometriomas. <i>Eur J Clin Invest</i> 2002;32: 199-206.	Study Population: Too small. Methodology: Limited to Stage III/IV



QUESTION I.7 DOES EARLY DIAGNOSIS OF ENDOMETRIOSIS VERSUS LATE DIAGNOSIS LEAD TO BETTER QUALITY OF LIFE?

NARRATIVE QUESTION

Search strings : not applicable

This question is a narrative question. The section was prepared based on expert opinion and selected papers from the literature searches performed in the diagnosis section. Three papers were included in the narrative section.

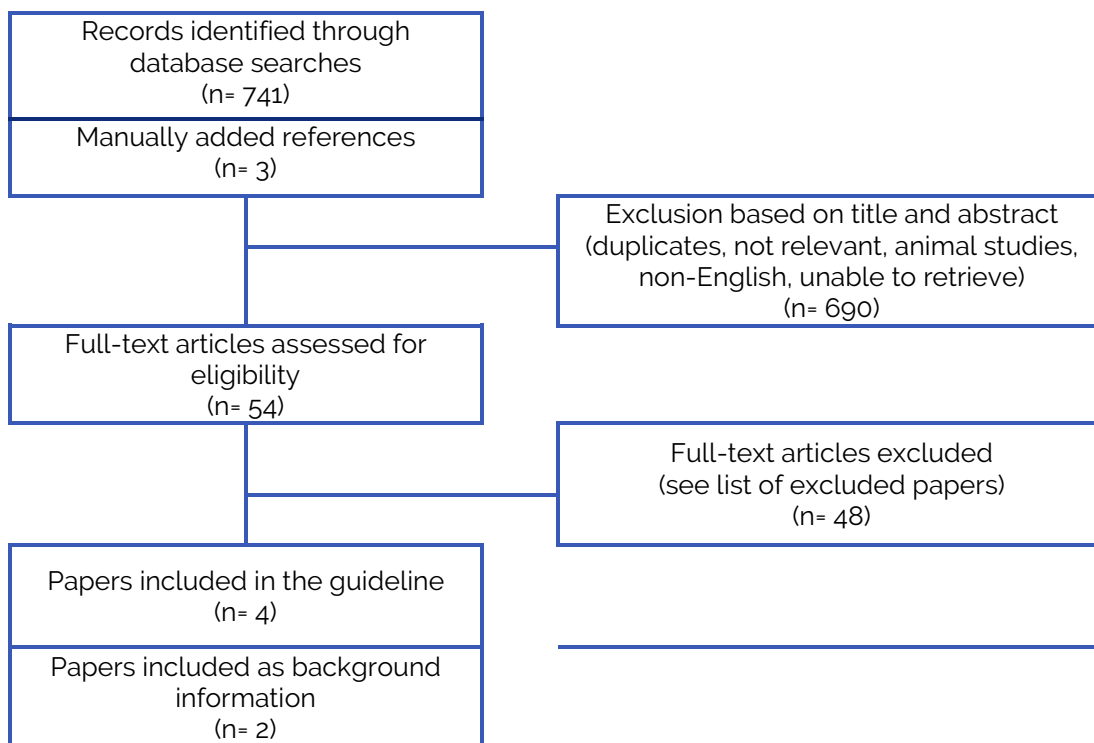


QUESTION II.1 ARE ANALGESICS EFFECTIVE FOR SYMPTOMATIC RELIEF OF PAINFUL SYMPTOMS ASSOCIATED WITH ENDOMETRIOSIS ?

Search strings

DATABASE	Search string
PUBMED	("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND (Paracetamol OR acetaminophen OR "Acetaminophen"[Mesh] OR "Anti-Inflammatory Agents, Non-Steroidal"[Mesh] OR Aspirin OR "acetylsalicylic acid" OR "Aspirin"[Mesh] OR "Ibuprofen"[Mesh] OR Ibuprofen OR "Cyclooxygenase Inhibitors" OR "Cyclooxygenase Inhibitors"[Mesh] OR NSAIDs OR Codeine OR "Codeine"[Mesh] OR Pethidine OR meperidine OR "Meperidine"[Mesh] OR Opiate OR opioid OR "Analgesics, Opioid"[Mesh] OR Neuromodulator OR "Neurotransmitter Agents"[Mesh] OR amitriptyline OR Gabapentin OR Narcotic OR "Narcotics"[Mesh] OR "Dentin Desensitizing Agents"[Mesh] OR Analgesics OR "Analgesics"[Mesh])
COCHRANE	(Endometriosis OR endometriotic OR endometrioma) AND (Paracetamol OR acetaminophen OR "Non-Steroidal Anti-Inflammatory Agents" OR Aspirin OR "acetylsalicylic acid" OR Ibuprofen OR "Cyclooxygenase Inhibitors" OR NSAIDs OR Codeine OR R Pethidine OR meperidine OR Opiate OR opioid OR Neuromodulator OR "Neurotransmitter Agents" OR amitriptyline OR Gabapentin OR Narcotic OR "Narcotics" OR "Dentin Desensitizing Agents" OR Analgesics)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Arablou T, Kolaoudou-Mohammadi R. Curcumin and endometriosis: Review on potential roles and molecular mechanisms. <i>Biomed Pharmacother</i> 2018;97: 91-97.	Intervention not relevant (curcumin)
Avraham S, Seidman DS. Surgery versus pharmacological treatment for endometriosis. <i>Womens Health (Lond)</i> 2014;10: 161-166.	Not relevant
Bellessort B, Bachelot A, Grouthier V, De Lombares C, Narboux-Neme N, Garagnani P, Pirazzini C, Astigliano S, Mastracci L, Fontaine A et al. Comparative analysis of molecular signatures suggests the use of gabapentin for the management of endometriosis-associated pain. <i>J Pain Res</i> 2018;11: 715-725.	Not relevant - molecular paper
Biggs WS, Carey ET, McIntyre JM. Limited evidence guides empiric Tx of female chronic pelvic pain. <i>J Fam Pract</i> 2018;67: E1-e9.	Commentary/Review
Bilgic E, Guzel E, Kose S, Aydin MC, Karaismailoglu E, Akar I, Usubutun A, Korkusuz P. Endocannabinoids modulate apoptosis in endometriosis and adenomyosis. <i>Acta Histochem</i> 2017;119: 523-532.	Not relevant
Bordman R, Jackson B. Below the belt: approach to chronic pelvic pain. <i>Can Fam Physician</i> 2006;52: 1556-1562.	Commentary/Review
Caruso S, Iraci Sareri M, Casella E, Ventura B, Fava V, Cianci A. Chronic pelvic pain, quality of life and sexual health of women treated with palmitoylethanolamide and alpha-lipoic acid. <i>Minerva Ginecol</i> 2015;67: 413-419.	No comparison group
Cheong YC, Smotra G, Williams AC. Non-surgical interventions for the management of chronic pelvic pain. <i>Cochrane Database Syst Rev</i> 2014: Cd008797.	Endometriosis excluded from this review
Clemenza S, Sorbi F, Noci I, Capezzuoli T, Turrini I, Carriero C, Buffi N, Fambrini M, Petraglia F. From pathogenesis to clinical practice: Emerging medical treatments for endometriosis. <i>Best Pract Res Clin Obstet Gynaecol</i> 2018;51: 92-101.	Commentary/Review
Cobellis L, Razzi S, De Simone S, Sartini A, Fava A, Danero S, Gioffre W, Mazzini M, Petraglia F. The treatment with a COX-2 specific inhibitor is effective in the management of pain related to endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2004;116: 100-102.	Quality of the study is questionable (small sample size n=28)
Connolly TP. Cyclooxygenase-2 inhibitors in gynecologic practice. <i>Clin Med Res</i> 2003;1: 105-110.	Commentary/review
da Silva DM, Gross LA, Neto EPG, Lessey BA, Savaris RF. The use of resveratrol as an adjuvant treatment of pain in endometriosis: a randomized clinical trial. <i>Journal of the endocrine society</i> 2017;1: 359-369.	Study drug is not superior to placebo (Randomised n=40 - Resveratol vs placebo)
Davis CJ, McMillan L. Pain in endometriosis: effectiveness of medical and surgical management. <i>Current opinion in obstetrics & gynecology</i> 2003;15: 507-512.	Commentary/Review
Dull AM, Moga MA, Dimienescu OG, Sechel G, Burtea V, Anastasiu CV. Therapeutic Approaches of Resveratrol on Endometriosis via Anti-Inflammatory and Anti-Angiogenic Pathways. <i>Molecules</i> 2019;24.	Commentary/review
Ebert AD, Bartley J, David M. Aromatase inhibitors and cyclooxygenase-2 (COX-2) inhibitors in endometriosis: new questions--old answers? <i>Eur J Obstet Gynecol Reprod Biol</i> 2005;122: 144-150.	Commentary/review
Evans S, Moalem-Taylor G, Tracey DJ. Pain and endometriosis. <i>Pain</i> 2007;132 Suppl 1: S22-25.	Commentary/Review
Fagervold B, Jenssen M, Hummelshoj L, Moen MH. Life after a diagnosis with endometriosis - a 15 years follow-up study. <i>Acta Obstet Gynecol Scand</i> 2009;88: 914-919.	Not relevant
Ferrero S, Barra F, Leone Roberti Maggiore U. Current and Emerging Therapeutics for the Management of Endometriosis. <i>Drugs</i> 2018;78: 995-1012.	Commentary/Review
Ferrero S, Evangelisti G, Barra F. Current and emerging treatment options for endometriosis. <i>Expert Opin Pharmacother</i> 2018;19: 1109-1125.	General on medical treatment
Ferrero S, Remorgida V, Venturini PL. Current pharmacotherapy for endometriosis. <i>Expert Opin Pharmacother</i> 2010;11: 1123-1134.	Commentary/Review
Gelbaya TA, El-Halwagy HE. Focus on primary care: chronic pelvic pain in women. <i>Obstet Gynecol Surv</i> 2001;56: 757-764.	Commentary/Review
Giugliano E, Cagnazzo E, Soave I, Lo Monte G, Wenger JM, Marci R. The adjuvant use of N-palmitoylethanolamine and transpolydatin in the treatment of endometriotic pain. <i>Eur J Obstet Gynecol Reprod Biol</i> 2013;168: 209-213.	No control group
Green IC, Cohen SL, Finkenzeller D, Christo PJ. Interventional therapies for controlling pelvic pain: what is the evidence? <i>Curr Pain Headache Rep</i> 2010;14: 22-32.	Commentary/Review
Hamid AM, Madkour WA, Moawad A, Elzaher MA, Roberts MP. Does cabergoline help in decreasing endometrioma size compared to LHRH agonist? A prospective randomized study. <i>Arch Gynecol Obstet</i> 2014;290: 677-682.	Not relevant
Hayes EC, Rock JA. COX-2 inhibitors and their role in gynecology. <i>Obstet Gynecol Surv</i> 2002;57: 768-780.	Commentary/review



Horne AW, Vincent K, Cregg R, Daniels J. Is gabapentin effective for women with unexplained chronic pelvic pain? <i>Bmj</i> 2017;358: j3520.	Neuromodulators (not endometriosis specific)/ commentary rather than full paper
Indraccolo U, Barbieri F. Effect of palmitoylethanolamide-polydatin combination on chronic pelvic pain associated with endometriosis: preliminary observations. <i>Eur J Obstet Gynecol Reprod Biol</i> 2010;150: 76-79.	Review - Intervention not included.
Indraccolo U, Indraccolo SR, Mignini F. Micronized palmitoylethanolamide/trans-polydatin treatment of endometriosis-related pain: a meta-analysis. <i>Ann Ist Super Sanita</i> 2017;53: 125-134.	Meta-analysis of low quality evidence. Intervention not included.
Jackson B, Telner DE. Managing the misplaced: approach to endometriosis. <i>Can Fam Physician</i> 2006;52: 1420-1424.	Commentary/Review
Kamencic H, Thiel JA. Pentoxifylline after conservative surgery for endometriosis: a randomized, controlled trial. <i>Journal of minimally invasive gynecology</i> 2008;15: 62-66.	Surgical intervention included
Koppan A, Hamori J, Vranics I, Garai J, Kriszbacher I, Bodis J, Rebek-Nagy G, Koppan M. Pelvic pain in endometriosis: painkillers or sport to alleviate symptoms? <i>Acta Physiol Hung</i> 2010;97: 234-239.	Questionnaire study, no medical treatment
Kotlyar A, Shue S, Liu X, Falcone T. Effect of disease-modifying anti-rheumatic drugs on therapeutic outcomes among women with endometriosis. <i>Int J Gynaecol Obstet</i> 2018;141: 228-233.	Not relevant
Kyama CM, Mihalyi A, Simsa P, Mwenda JM, Tomassetti C, Meuleman C, D'Hooghe TM. Non-steroidal targets in the diagnosis and treatment of endometriosis. <i>Curr Med Chem</i> 2008;15: 1006-1017.	Commentary/review
Lamvu G, Soliman AM, Manthena SR, Gordon K, Knight J, Taylor HS. Patterns of Prescription Opioid Use in Women With Endometriosis: Evaluating Prolonged Use, Daily Dose, and Concomitant Use With Benzodiazepines. <i>Obstet Gynecol</i> 2019;133: 1120-1130.	Epidemiological paper on prescribing habits
Laschke MW, Menger MD. Anti-angiogenic treatment strategies for the therapy of endometriosis. <i>Hum Reprod Update</i> 2012;18: 682-702.	Molecular paper
Lete I, Mendoza N, de la Viuda E, Carmona F. Effectiveness of an antioxidant preparation with N-acetyl cysteine, alpha lipoic acid and bromelain in the treatment of endometriosis-associated pelvic pain: LEAP study. <i>Eur J Obstet Gynecol Reprod Biol</i> 2018;228: 221-224.	No comparison group
Lu D, Song H, Li Y, Clarke J, Shi G. Pentoxifylline for endometriosis. <i>Cochrane Database Syst Rev</i> 2012;1: Cd007677.	Intervention not relevant
Nasir L, Bope ET. Management of pelvic pain from dysmenorrhea or endometriosis. <i>J Am Board Fam Pract</i> 2004;17 Suppl: S43-47.	Commentary/Review
Oladosu FA, Tu FF, Hellman KM. Nonsteroidal antiinflammatory drug resistance in dysmenorrhea: epidemiology, causes, and treatment. <i>Am J Obstet Gynecol</i> 2018;218: 390-400.	Dysmenorrhea, not endometriosis (commentary)
Olivares C, Bilotas M, Buquet R, Borghi M, Sueldo C, Tesone M, Meresman G. Effects of a selective cyclooxygenase-2 inhibitor on endometrial epithelial cells from patients with endometriosis. <i>Hum Reprod</i> 2008;23: 2701-2708.	Molecular paper
Olivares CN, Bilotas MA, Ricci AG, Baranao RI, Meresman GF. Anastrozole and celecoxib for endometriosis treatment, good to keep them apart? <i>Reproduction</i> 2013;145: 119-126.	Commentary/review
Rafique S, Decherney AH. Medical Management of Endometriosis. <i>Clin Obstet Gynecol</i> 2017;60: 485-496.	Commentary/Review
Rocha MG, Gomes VA, Tanus-Santos JE, Rosa-e-Silva JC, Candido-dos-Reis FJ, Nogueira AA, Poli-Neto OB. Reduction of blood nitric oxide levels is associated with clinical improvement of the chronic pelvic pain related to endometriosis. <i>Braz J Med Biol Res</i> 2015;48: 363-369.	Not relevant
Sinaii N, Cleary SD, Younes N, Ballweg ML, Stratton P. Treatment utilization for endometriosis symptoms: a cross-sectional survey study of lifetime experience. <i>Fertil Steril</i> 2007;87: 1277-1286.	Not relevant
Streuli I, de Ziegler D, Santulli P, Marcellin L, Borghese B, Batteux F, Chapron C. An update on the pharmacological management of endometriosis. <i>Expert Opin Pharmacother</i> 2013;14: 291-305.	Commentary/Review
Trummer D, Walzer A, Groettrup-Wolfers E, Schmitz H. Efficacy, safety and tolerability of the CCR1 antagonist BAY 86-5047 for the treatment of endometriosis-associated pelvic pain: a randomized controlled trial. <i>Acta Obstet Gynecol Scand</i> 2017;96: 694-701.	Intervention not included in the PICO question (RCT - n=110 BAY 86-5047 vs placebo)
Wu Y, Wang LP, Pan JQ. Nicotinic acetylcholine receptor agonists may be a novel therapy for endometriosis. <i>Med Hypotheses</i> 2011;77: 745-747.	Not relevant
Zuberi NF, Rizvi JH. Critical appraisal of endometriosis management for pain and subfertility. <i>J Pak Med Assoc</i> 2003;53: 152-156.	Commentary/Review

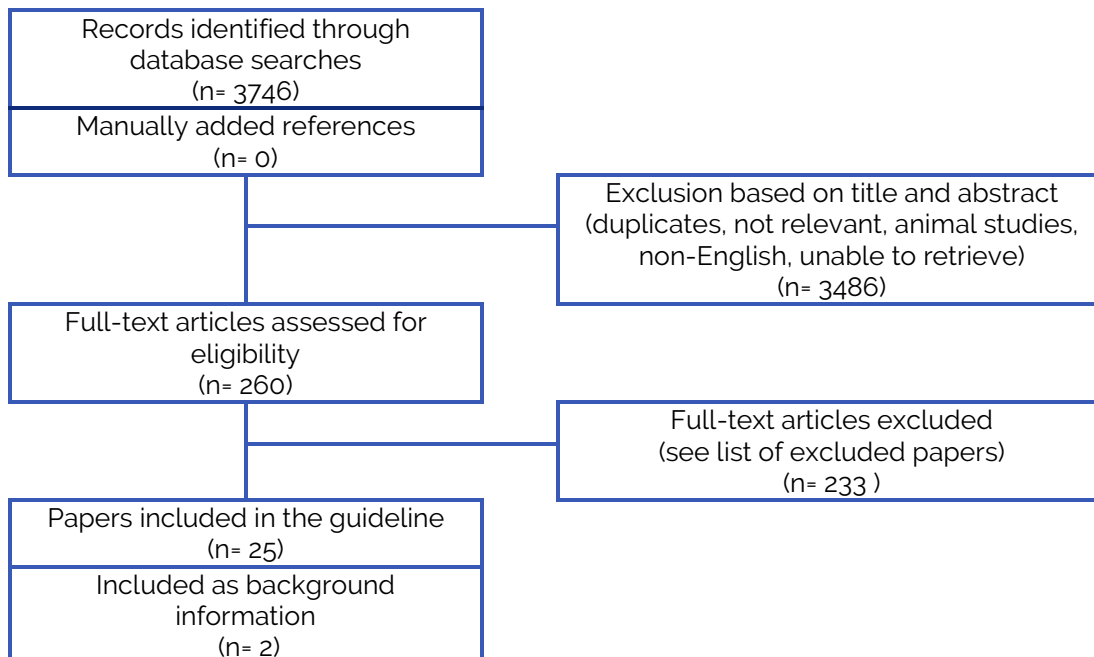


QUESTION II.2 ARE HORMONE THERAPIES EFFECTIVE FOR PAINFUL SYMPTOMS ASSOCIATED WITH ENDOMETRIOSIS?

Search strings

DATABASE	Search string
PUBMED	("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND ("Gonadotropin-Releasing Hormone Agonist" OR "Gonadotropin-Releasing Hormone"[Mesh] OR "GnRH agonists" OR GnRHa OR "luteinizing hormone releasing hormone agonist" OR "LHRH agonist" OR "Gonadotrophin releasing hormone agonist" OR Leuprorelin OR "Leuprolide"[Mesh] OR leuprolide OR "leuprolide acetate" OR buserelin OR goserelin OR "Goserelin"[Mesh] OR Zoladex OR Nafarelin OR "Nafarelin"[Mesh] OR diphereline OR Triptorelin OR tryptorelin OR "Gonadotrophin releasing hormone antagonist" OR "GnRH antagonist" OR Cetrorelix OR Cetrotide OR Ganirelix OR Orgalutran OR Gestrinone OR "Gestrinone"[Mesh] OR "levonorgestrel-releasing intrauterine system" OR "levonorgestrel-releasing intrauterine device" OR Progestin OR "Progestins"[Mesh] OR Progestagen OR Progesterone OR Norethisterone OR Norethindrone OR "Norethindrone"[Mesh] OR "medroxy progesterone acetate" OR "medroxyprogesterone acetate" OR "Medroxyprogesterone Acetate"[Mesh] OR dydrogesterone OR "Dydrogesterone"[Mesh] OR dienogest OR Levonorgestrel OR "Levonorgestrel"[Mesh] OR Mirena Coil OR Norgestrel OR "Norgestrel"[Mesh] OR desogestrel OR "Desogestrel"[Mesh] OR cyproterone acetate OR "Cyproterone Acetate"[Mesh] OR "Aromatase Inhibitors"[Mesh] OR "aromatase inhibitor" OR Anastrozole OR letrozole OR exemestane OR SPRM OR "selective progesterone receptor modulator" OR "Ulipristal acetate" OR Asoprisnil OR CDB-4124 OR SERM OR "Selective Estrogen Receptor Modulators"[Mesh] OR "Selective Estrogen Receptor Modulator" OR clomifene OR femarelle OR ormeloxifene OR raloxifene OR tamoxifen OR toremifene OR "Contraceptives, Oral, Combined"[Mesh] OR Contraceptive OR "Contraceptive Agents"[Mesh] OR "Contraceptives, Oral"[Mesh] OR danazol) AND (Pain OR "Pain"[Mesh] OR symptom OR symptoms OR painful OR dysmenorrhea OR "Dysmenorrhea"[Mesh] OR dyspareunia OR "Dyspareunia"[Mesh] OR dyschezia OR "Constipation"[Mesh] OR "pelvic pain" OR "quality of life" OR Recurrence OR "Recurrence"[Mesh] OR "side effect" OR "adverse event" OR complication OR "Intraoperative Complications"[Mesh] OR "Postoperative Complications"[Mesh])
COCHRANE	(Endometriosis OR endometriotic OR endometrioma) AND ("Gonadotropin-Releasing Hormone Agonist" OR "Gonadotropin-Releasing Hormone" OR "GnRH agonists" OR GnRHa OR "luteinizing hormone releasing hormone agonist" OR "LHRH agonist" OR "Gonadotrophin releasing hormone agonist" OR Leuprorelin OR leuprolide OR "leuprolide acetate" OR buserelin OR goserelin OR Zoladex OR Nafarelin OR diphereline OR Triptorelin OR tryptorelin OR "Gonadotrophin releasing hormone antagonist" OR "GnRH antagonist" OR Cetrorelix OR Cetrotide OR Ganirelix OR Orgalutran OR Gestrinone OR "levonorgestrel-releasing intrauterine system" OR "levonorgestrel-releasing intrauterine device" OR Progestin OR "Progestins" OR Progestagen OR Progesterone OR Norethisterone OR Norethindrone OR "medroxy progesterone acetate" OR "medroxyprogesterone acetate" OR dydrogesterone OR dienogest OR Levonorgestrel OR Mirena Coil OR Norgestrel OR desogestrel OR cyproterone acetate OR "Aromatase Inhibitors" OR "aromatase inhibitor" OR Anastrozole OR letrozole OR exemestane OR SPRM OR "selective progesterone receptor modulator" OR "Ulipristal acetate" OR Asoprisnil OR CDB-4124 OR SERM OR "Selective Estrogen Receptor Modulator" OR clomifene OR femarelle OR ormeloxifene OR raloxifene OR tamoxifen OR toremifene OR Contraceptive OR "Contraceptive Agents" OR danazol) AND (Pain OR symptom OR symptoms OR painful OR dysmenorrhea OR dyspareunia OR dyschezia OR "Constipation" OR "pelvic pain" OR "quality of life" OR Recurrence OR "side effect" OR "adverse event" OR complication OR "Intraoperative Complications" OR "Postoperative Complications")

Flowchart





List of excluded papers

Reference	Exclusion criterium
Abdou AM, Ammar IMM, Alnemr AAA, Abdelrhman AA. Dienogest Versus Leuprolide Acetate for Recurrent Pelvic Pain Following Laparoscopic Treatment of Endometriosis. <i>J Obstet Gynaecol India</i> 2018;68: 306-313.	Post-operative medical treatment
Abu Hashim H. Gonadotrophin-releasing hormone analogues and endometriosis: current strategies and new insights. <i>Gynecol Endocrinol</i> 2012;28: 314-321.	Narrative review
Acien P, Perez-Albert G, Quereda FJ, Sanchez-Ferrer M, Garcia-Almela A, Velasco I. Treatment of endometriosis with transvaginal ultrasound-guided drainage under GnRH analogues and recombinant interleukin-2 left in the cysts. <i>Gynecol Obstet Invest</i> 2005;60: 224-231.	Relevant intervention is not included
Acien P, Quereda FJ, Gomez-Torres MJ, Bermejo R, Gutierrez M. GnRH analogues, transvaginal ultrasound-guided drainage and intracystic injection of recombinant interleukin-2 in the treatment of endometriosis. <i>Gynecol Obstet Invest</i> 2003;55: 96-104.	Relevant outcomes are not assessed or inappropriately assessed
Acs N, O'Brien C, Jiang P, Burke J, Jimenez R, Garner E, Chwalisz K. Treatment of endometriosis-associated pain with elagolix, an oral GnRH antagonist: results from a phase 2, randomized controlled study. <i>Journal of endometriosis</i> 2015;7: 56-62.	Overruled by the data from the phase III trials
Adamson GD, Heinrichs WL, Henzl MR, Yuzpe AA, Bergquist C, Jacobson JJ, Eriksson S, Kwei L, Gilbert SM. Therapeutic efficacy and bone mineral density response during and following a three-month re-treatment of endometriosis with nafarelin (Synarel). <i>Am J Obstet Gynecol</i> 1997;177: 1413-1418.	Relevant outcomes are not assessed or inappropriately assessed
Agarwal SK, Daniels A, Drosman SR, Udoff L, Foster WG, Pike MC, Spicer DV, Daniels JR. Treatment of Endometriosis with the GnRHa Deslorelin and Add-Back Estradiol and Supplementary Testosterone. <i>Biomed Res Int</i> 2015;2015: 934164.	Relevant patients are not included, or only as subgroup
Agarwal SK. Impact of six months of GnRH agonist therapy for endometriosis. Is there an age-related effect on bone mineral density? <i>J Reprod Med</i> 2002;47: 530-534.	Relevant outcomes are not assessed or inappropriately assessed
Akram H, Khanum Z, Nasir A, Rana T. Goserline versus danazol in the treatment of endometriosis. <i>Ann king edward med coll</i> 2006;12: 47-49.	More recent data available - comparison to Danazol no longer considered relevant
Alessandro P, Luigi N, Felice S, Maria PA, Benedetto MG, Stefano A. Research development of a new GnRH antagonist (Elagolix) for the treatment of endometriosis: a review of the literature. <i>Arch Gynecol Obstet</i> 2017;295: 827-832.	Literature review, but more recent data available
Alkatout I, Mettler L, Beteta C, Hedderich J, Jonat W, Schollmeyer T, Salmassi A. Combined surgical and hormone therapy for endometriosis is the most effective treatment: prospective, randomized, controlled trial. <i>J Minim Invasive Gynecol</i> 2013;20: 473-481.	Relevant intervention is not included
Andres MP, Mendes RFP, Hernandez C, Araujo SEA, Podgaec S. Hormone treatment as first line therapy is safe and relieves pelvic pain in women with bowel endometriosis. <i>Einstein (Sao Paulo)</i> 2019;17: eAO4583.	Relevant patients are not included, or only as subgroup
Angioni S, Cofelice V, Pontis A, Tinelli R, Socolov R. New trends of progestins treatment of endometriosis. <i>Gynecol Endocrinol</i> 2014;30: 769-773.	Narrative review
Angioni S, Nappi L, Pontis A, Sedda F, Luisi S, Mais V, Melis GB. Dienogest. A possible conservative approach in bladder endometriosis. Results of a pilot study. <i>Gynecol Endocrinol</i> 2015;31: 406-408.	Pilot study
Angioni S, Pontis A, Malune ME, Cela V, Luisi S, Litta P, Vignali M, Nappi L. Is dienogest the best medical treatment for ovarian endometriomas? Results of a multicentric case control study. <i>Gynecol Endocrinol</i> 2019: 1-3.	Not relevant
Angioni, S., et al. Is dienogest the best medical treatment for ovarian endometriomas? Results of a multicentric case control study. <i>Gynecol Endocrinol</i> , 2020. 36(1): p. 84-86.	Data are insufficient to support a statement on progression to be included in the guideline
Attar E, Bulun SE. Aromatase inhibitors: the next generation of therapeutics for endometriosis? <i>Fertil Steril</i> 2006;85: 1307-1318.	more recent review available
Bahamondes L, Petta CA, Fernandes A, Monteiro I. Use of the levonorgestrel-releasing intrauterine system in women with endometriosis, chronic pelvic pain and dysmenorrhea. <i>Contraception</i> 2007;75: S134-139.	More recent systematic review available
Bahamondes L, Valeria Bahamondes M, Shulman LP. Non-contraceptive benefits of hormonal and intrauterine reversible contraceptive methods. <i>Hum Reprod Update</i> 2015;21: 640-651.	Not relevant
Barbieri RL. Primary gonadotropin-releasing hormone agonist therapy for suspected endometriosis: a nonsurgical approach to the diagnosis and treatment of chronic pelvic pain. <i>Am J Manag Care</i> 1997;3: 285-290.	Outdated, more recent review available



Barra F, Scala C, Mais V, Guerriero S, Ferrero S. Investigational drugs for the treatment of endometriosis, an update on recent developments. <i>Expert Opin Investig Drugs</i> 2018;27: 445-458.	Expert Opinion
Barra, F., et al., Long-Term Administration of Dienogest for the Treatment of Pain and Intestinal Symptoms in Patients with Rectosigmoid Endometriosis. <i>J Clin Med</i> , 2020. 9(1).	retrospective analysis
Batioglu S, Celikkanat H, Ugur M, Mollamahmutoglu L, Yesilyurt H, Kundakci M. The use of GnRH agonists in the treatment of endometriomas with or without drainage. <i>J Pak Med Assoc</i> 1996;46: 30-32.	Relevant outcomes are not assessed or inappropriately assessed
Batzer FR. GnRH analogs: options for endometriosis-associated pain treatment. <i>J Minim Invasive Gynecol</i> 2006;13: 539-545.	Narrative review
Baxter N, Black J, Duffy S. The effect of a gonadotrophin-releasing hormone analogue as first-line management in cyclical pelvic pain. <i>J Obstet Gynaecol</i> 2004;24: 64-66.	Relevant patients are not included, or only as subgroup
Bedaiwy MA, Allaire C, Alfaraj S. Long-term medical management of endometriosis with dienogest and with a gonadotropin-releasing hormone agonist and add-back hormone therapy. <i>Fertil Steril</i> 2017;107: 537-548.	Narrative review - different treatments
Bedaiwy MA, Casper RF. Treatment with leuprolide acetate and hormonal add-back for up to 10 years in stage IV endometriosis patients with chronic pelvic pain. <i>Fertil Steril</i> 2006;86: 220-222.	Relevant patients are not included, or only as subgroup
Bergqvist A. A comparative study of the acceptability and effect of goserelin and nafarelin on endometriosis. <i>Gynecol Endocrinol</i> 2000;14: 425-432.	not relevant - acceptability
Bergqvist IA. Hormonal regulation of endometriosis and the rationales and effects of gonadotrophin-releasing hormone agonist treatment: a review. <i>Hum Reprod</i> 1995;10: 446-452.	Outdated, more recent review available
Bergstrom I, Freyschuss B, Jacobsson H, Landgren BM. The effect of physical training on bone mineral density in women with endometriosis treated with GnRH analogs: a pilot study. <i>Acta Obstet Gynecol Scand</i> 2005;84: 380-383.	Relevant outcomes are not assessed or inappropriately assessed
Bhattacharya SM, Tolasaria A, Khan B. Vaginal danazol for the treatment of endometriosis-related pelvic pain. <i>Int J Gynaecol Obstet</i> 2011;115: 294-295.	Intervention excluded from the guideline
Bressler LH, Bernardi LA, Snyder MA, Wei JJ, Bulun S. Treatment of endometriosis-related chronic pelvic pain with Ulipristal Acetate and associated endometrial changes. <i>HSOA J Reprod Med Gynaecol Obstet</i> 2017;2.	Intervention not included in the key question
Bromham DR, Booker MW, Rose GL, Wardle PG, Newton JR. A multicentre comparative study of gestrinone and danazol in the treatment of endometriosis. <i>Journal of obstetrics and gynaecology</i> 1995;15: 188-194.	Old data, recent reviews available
Brown J, Farquhar C. An overview of treatments for endometriosis. <i>Jama</i> 2015;313: 296-297.	Literature review on medical treatment in general
Buggio L, Lazzari C, Monti E, Barbara G, Berlanda N, Vercellini P. "Per vaginam" topical use of hormonal drugs in women with symptomatic deep endometriosis: a narrative literature review. <i>Arch Gynecol Obstet</i> 2017;296: 435-444.	Literature review on medical treatment in general
Buggio L, Somigliana E, Barbara G, Frattaruolo MP, Vercellini P. Oral and depot progestin therapy for endometriosis: towards a personalized medicine. <i>Expert Opin Pharmacother</i> 2017;18: 1569-1581.	Narrative review
Carson SA, Jain JK. Depot Medroxyprogesterone Acetate Subcutaneous Injection 104 mg/0.65 mL (DMPA-SC 104) is Associated With Fewer Hypoestrogenic Symptoms in Patients With Endometriosis Than Leuprolide Acetate. <i>Fertility and sterility</i> 2005;84: S191-192.	Publication type - abstract
Caruso S, Iraci M, Cianci S, Casella E, Fava V, Cianci A. Quality of life and sexual function of women affected by endometriosis-associated pelvic pain when treated with dienogest. <i>J Endocrinol Invest</i> 2015;38: 1211-1218.	Relevant outcomes are not assessed or inappropriately assessed
Caruso, S., et al., Does Nomegestrol Acetate Plus 17β-Estradiol Oral Contraceptive Improve Endometriosis-Associated Chronic Pelvic Pain in Women? <i>J Womens Health (Larchmt)</i> , 2020. 29(9): p. 1184-1191.	Not relevant
Caruso, S., et al., Effects of long-term treatment with Dienogest on the quality of life and sexual function of women affected by endometriosis-associated pelvic pain. <i>J Pain Res</i> , 2019. 12: p. 2371-2378.	Outcomes are not relevant
Carvalho N, Margatho D, Cursino K, Benetti-Pinto CL, Bahamondes L. Control of endometriosis-associated pain with etonogestrel-releasing contraceptive implant and 52-mg levonorgestrel-releasing intrauterine system: randomized clinical trial. <i>Fertil Steril</i> 2018;110: 1129-1136.	Higher quality study from the same group is available
Casper RF. Progestin-only pills may be a better first-line treatment for endometriosis than combined estrogen-progestin contraceptive pills. <i>Fertil Steril</i> 2017;107: 533-536.	Narrative review - Progestin-only pills vs OCP
Cedars MI, Lu JK, Meldrum DR, Judd HL. Treatment of endometriosis with a long-acting gonadotropin-releasing hormone agonist plus medroxyprogesterone acetate. <i>Obstet Gynecol</i> 1990;75: 641-645.	Relevant patients are not included, or only as subgroup



Cetin T, Vardar MA, Demir C, Burgut R. Etiology of serum CA-125 in patients with endometriosis treated with a gonadotrophin-releasing hormone agonist (Buserelin). <i>Gynecol Obstet Invest</i> 1994;38: 249-252.	Relevant outcomes are not assessed or inappropriately assessed
Chandra A, Rho AM, Jeong K, Yu T, Jeon JH, Park SY, Lee SR, Moon HS, Chung HW. Clinical experience of long-term use of dienogest after surgery for ovarian endometrioma. <i>Obstet Gynecol Sci</i> 2018;61: 111-117.	Post-operative medical treatment
Chawla S. Treatment of Endometriosis and Chronic Pelvic Pain with Letrozole and Norethindrone Acetate. <i>Med J Armed Forces India</i> 2010;66: 213-215.	more recent data available
Chen JM, Gao HY, Ding Y, Yuan X, Wang Q, Li Q, Jiang GH. Efficacy and safety investigation of Kuntai capsule for the add-back therapy of gonadotropin releasing hormone agonist administration to endometriosis patients: a randomized, double-blind, blank- and tibolone-controlled study. <i>Chin Med J (Engl)</i> 2015;128: 427-432.	Relevant intervention is not included
Chen, Y., et al., Efficacy of ten interventions for endometriosis: A network meta-analysis. <i>J Cell Biochem</i> , 2019. 120(8): p. 13076-13084.	Comparison of treatments, not considered helpful for the guideline
Cheong YC, Smotra G, Williams AC. Non-surgical interventions for the management of chronic pelvic pain. <i>Cochrane Database Syst Rev</i> 2014: Cd008797.	Literature review, not endometriosis specific
Choktanasiri W, Boonkasemsanti W, Sittisomwong T, Kunathikom S, Suksompong S, Udomsubpayakul U, Rojanasakul A. Long-acting triptorelin for the treatment of endometriosis. <i>Int J Gynaecol Obstet</i> 1996;54: 237-243.	No control group
Chwalisz K, Garg R, Brenner RM, Schubert G, Elger W. Selective progesterone receptor modulators (SPRMs): a novel therapeutic concept in endometriosis. <i>Ann N Y Acad Sci</i> 2002;955: 373-388; discussion 389-393, 396-406.	Intervention not included in the key question
Chwalisz K, Perez MC, Demanno D, Winkel C, Schubert G, Elger W. Selective progesterone receptor modulator development and use in the treatment of leiomyomata and endometriosis. <i>Endocr Rev</i> 2005;26: 423-438.	Intervention not included in the key question
Cobellis L, Razzi S, Fava A, Severi FM, Igarashi M, Petraglia F. A danazol-loaded intrauterine device decreases dysmenorrhea, pelvic pain, and dyspareunia associated with endometriosis. <i>Fertil Steril</i> 2004;82: 239-240.	Intervention excluded from the guideline
Compston JE, Yamaguchi K, Croucher PI, Garrahan NJ, Lindsay PC, Shaw RW. The effects of gonadotrophin-releasing hormone agonists on iliac crest cancellous bone structure in women with endometriosis. <i>Bone</i> 1995;16: 261-267.	Relevant outcomes are not assessed or inappropriately assessed
Crosignani PG, De Cecco L, Gastaldi A, Venturini PL, Oldani S, Vegetti W, Semino A, La Commare P, Vercellini P. Leuprolide in a 3-monthly versus a monthly depot formulation for the treatment of symptomatic endometriosis: a pilot study. <i>Hum Reprod</i> 1996;11: 2732-2735.	Relevant patients are not included, or only as subgroup
Cucinella G, Granese R, Calagna G, Svelato A, Saitta S, Tonni G, De Franciscis P, Colacurci N, Perino A. Oral contraceptives in the prevention of endometrioma recurrence: does the different progestins used make a difference? <i>Arch Gynecol Obstet</i> 2013;288: 821-827.	Not relevant
Davis L, Kennedy SS, Moore J, Prentice A. Oral contraceptives for pain associated with endometriosis. <i>Cochrane Database Syst Rev</i> 2007: Cd001019.	Replaced by more updated Cochrane review on the topic
Dawood MY. Impact of medical treatment of endometriosis on bone mass. <i>Am J Obstet Gynecol</i> 1993;168: 674-684.	Outdated, more recent review available
Del Forno S, Mabrouk M, Arena A, Mattioli G, Giaquinto I, Paradisi R, Seracchioli R. Dienogest or Norethindrone acetate for the treatment of ovarian endometriomas: Can we avoid surgery? <i>Eur J Obstet Gynecol Reprod Biol</i> 2019;238: 120-124.	Relevant outcomes are not assessed or inappropriately assessed
Della Corte, L., et al., Tolerability considerations for gonadotropin-releasing hormone analogues for endometriosis. <i>Expert Opin Drug Metab Toxicol</i> , 2020. 16(9): p. 759-768.	Narrative review
Denny E, Weckesser A, Jones G, Bibila S, Daniels J, Bhattacharya S. Women's experiences of medical treatment for endometriosis and its impact on PRE-EMPT trial participation: a qualitative study. <i>Pilot Feasibility Stud</i> 2018;4: 168.	Relevant outcomes are not assessed or inappropriately assessed
DiVasta AD, Feldman HA, Sadler Gallagher J, Stokes NA, Laufer MR, Hornstein MD, Gordon CM. Hormonal Add-Back Therapy for Females Treated With Gonadotropin-Releasing Hormone Agonist for Endometriosis: A Randomized Controlled Trial. <i>Obstet Gynecol</i> 2015;126: 617-627.	Relevant outcomes are not assessed or inappropriately assessed
Donnez J, Dewart PJ, Hedon B, Perino A, Schindler AE, Blumberg J, Querleu D. Equivalence of the 3-month and 28-day formulations of triptorelin with regard to achievement and maintenance of medical castration in women with endometriosis. <i>Fertil Steril</i> 2004;81: 297-304.	Relevant outcomes are not assessed or inappropriately assessed
Egekvis AG, Marinovskij E, Forman A, Kesmodel US, Graumann O, Seyer-Hansen M. Conservative treatment of rectosigmoid endometriosis: A prospective study. <i>Acta Obstet Gynecol Scand</i> 2019.	Relevant patients are not included, or only as subgroup
Fagervold B, Jenssen M, Hummelshoj L, Moen MH. Life after a diagnosis with endometriosis - a 15 years follow-up study. <i>Acta Obstet Gynecol Scand</i> 2009;88: 914-919.	Relevant intervention is not included



Farquhar C, Prentice A, Singla AA, Selak V. Danazol for pelvic pain associated with endometriosis. <i>Cochrane Database of Systematic Reviews</i> 2007.	Intervention excluded from the guideline
Fedele L, Bianchi S, Montefusco S, Frontino G, Carmignani L. A gonadotropin-releasing hormone agonist versus a continuous oral contraceptive pill in the treatment of bladder endometriosis. <i>Fertil Steril</i> 2008;90: 183-184.	Recent systematic review available
Fedele L, Bianchi S, Zanconato G, Portuese A, Raffaelli R. Use of a levonorgestrel-releasing intrauterine device in the treatment of rectovaginal endometriosis. <i>Fertil Steril</i> 2001;75: 485-488.	Not relevant
Fedele L, Bianchi S, Zanconato G, Tozzi L, Raffaelli R. Gonadotropin-releasing hormone agonist treatment for endometriosis of the rectovaginal septum. <i>Am J Obstet Gynecol</i> 2000;183: 1462-1467.	Relevant patients are not included, or only as subgroup
Felix Wong WS, Danforn Lim CE. Hormonal treatment for endometriosis associated pelvic pain. <i>Iran J Reprod Med</i> 2011;9: 163-170.	Literature review on medical treatment in general
Ferreira RA, Vieira CS, Rosa ESJC, Rosa-e-Silva AC, Nogueira AA, Ferriani RA. Effects of the levonorgestrel-releasing intrauterine system on cardiovascular risk markers in patients with endometriosis: a comparative study with the GnRH analogue. <i>Contraception</i> 2010;81: 117-122.	Relevant outcomes are not assessed or inappropriately assessed
Ferrero S, Camerini G, Ragni N, Menada MV, Venturini PL, Remorgida V. Triptorelin improves intestinal symptoms among patients with colorectal endometriosis. <i>Int J Gynaecol Obstet</i> 2010;108: 250-251.	Publication type
Ferrero S, Camerini G, Ragni N, Venturini PL, Biscaldi E, Remorgida V. Norethisterone acetate in the treatment of colorectal endometriosis: a pilot study. <i>Hum Reprod</i> 2010;25: 94-100.	Relevant patients are not included, or only as subgroup
Ferrero S, Remorgida V, Venturini PL, Bizzarri N. Endometriosis: the effects of dienogest. <i>BMJ Clin Evid</i> 2015;2015.	The review of Andres Mde on the same topic was considered more appropriate
Ferrero S, Tramalloni D, Venturini PL, Remorgida V. Vaginal danazol for women with rectovaginal endometriosis and pain symptoms persisting after insertion of a levonorgestrel-releasing intrauterine device. <i>Int J Gynaecol Obstet</i> 2011;113: 116-119.	Intervention excluded from the guideline
Ferrero S, Venturini PL, Gillott DJ, Remorgida V. Letrozole and norethisterone acetate versus letrozole and triptorelin in the treatment of endometriosis related pain symptoms: a randomized controlled trial. <i>Reprod Biol Endocrinol</i> 2011;9: 88.	Not relevant - pain symptoms caused by only rectovaginal endometriosis, small sample size
Ferrero, S., et al., Treatment of rectovaginal endometriosis with the etonogestrel-releasing contraceptive implant. <i>Gynecol Endocrinol</i> , 2020. 36(6): p. 540-544.	Not relevant
Fraser HM, Sandow J, Cowen GM, Lumsden MA, Haining R, Smith SK. Long-term suppression of ovarian function by a luteinizing-hormone releasing hormone agonist implant in patients with endometriosis. <i>Fertil Steril</i> 1990;53: 61-68.	Relevant patients are not included, or only as subgroup
Fu J, Song H, Zhou M, Zhu H, Wang Y, Chen H, Huang W. Progesterone receptor modulators for endometriosis. <i>Cochrane Database Syst Rev</i> 2017;7: Cd009881.	Intervention not included in the key question
Fuldeore MJ, Marx SE, Chwalisz K, Smeeding JE, Brook RA. Add-back therapy use and its impact on LA persistence in patients with endometriosis. <i>Curr Med Res Opin</i> 2010;26: 729-736.	Relevant outcomes are not assessed or inappropriately assessed
Gerlinger C, Faustmann T, Hassall JJ, Seitz C. Treatment of endometriosis in different ethnic populations: a meta-analysis of two clinical trials. <i>BMC Womens Health</i> 2012;12: 9.	meta-analysis, but not relevant
Gestrinone versus a gonadotropin-releasing hormone agonist for the treatment of pelvic pain associated with endometriosis: a multicenter, randomized, double-blind study. Gestrinone Italian Study Group. <i>Fertil Steril</i> 1996;66: 911-919.	Old data, recent reviews available
Glasser M. The clinical and economic benefits of GnRH agonist in treating endometriosis. <i>Am J Manag Care</i> 1999;5: S316-326.	Expert opinion
Godin R, Marcoux V. Vaginally Administered Danazol: An Overlooked Option in the Treatment of Rectovaginal Endometriosis? <i>J Obstet Gynaecol Can</i> 2015;37: 1098-1103.	Intervention excluded from the guideline
Goenka L, George M, Sen M. A peek into the drug development scenario of endometriosis - A systematic review. <i>Biomed Pharmacother</i> 2017;90: 575-585.	Literature review on medical treatment in general
Hansen KA, Eyster KM. A review of current management of endometriosis in 2006: an evidence-based approach. <i>S D Med</i> 2006;59: 153-159.	Literature review on medical treatment in general
Harada M, Osuga Y, Izumi G, Takamura M, Takemura Y, Hirata T, Yoshino O, Koga K, Yano T, Taketani Y. Dienogest, a new conservative strategy for extragenital endometriosis: a pilot study. <i>Gynecol Endocrinol</i> 2011;27: 717-720.	extragenital endometriosis/pilot study
Harada T, Ohta I, Endo Y, Sunada H, Noma H, Taniguchi F. SR-16234, a Novel Selective Estrogen Receptor Modulator for Pain Symptoms with Endometriosis: An Open-label Clinical Trial. <i>Yonago Acta Med</i> 2017;60: 227-233.	Intervention not included in the key question



Harrison RF, Barry-Kinsella C. Efficacy of medroxyprogesterone treatment in infertile women with endometriosis: a prospective, randomized, placebo-controlled study. <i>Fertil Steril</i> 2000;74: 24-30.	Fertility outcomes, rather than pain
Heinemann, K., et al., Safety of Dienogest and Other Hormonal Treatments for Endometriosis in Real-World Clinical Practice (VIPOS): A Large Noninterventional Study. <i>Adv Ther</i> , 2020. 37(5): p. 2528-2537.	Publication type - study protocol
Hornstein MD, Gleason RE, Barbieri RL. A randomized double-blind prospective trial of two doses of gestrinone in the treatment of endometriosis. <i>Fertility and sterility</i> 1990;53: 237-241.	Old data, recent reviews available
Howard FM. An evidence-based medicine approach to the treatment of endometriosis-associated chronic pelvic pain: placebo-controlled studies. <i>J Am Assoc Gynecol Laparosc</i> 2000;7: 477-488.	Literature review on medical treatment in general
Howell R, Edmonds DK, Dowsett M, Crook D, Lees B, Stevenson JC. Gonadotropin-releasing hormone analogue (goserelin) plus hormone replacement therapy for the treatment of endometriosis: a randomized controlled trial. <i>Fertil Steril</i> 1995;64: 474-481.	Randomized controlled trial Supported by Zeneca Pharmaceuticals
Hsu CC, Lin YS, Wang ST, Huang KE. Immunomodulation in women with endometriosis receiving GnRH agonist. <i>Obstet Gynecol</i> 1997;89: 993-998.	Relevant outcomes are not assessed or inappropriately assessed
Hull ME, Barbieri RL. Nafarelin in the treatment of endometriosis. Dose management. <i>Gynecol Obstet Invest</i> 1994;37: 263-264.	Relevant outcomes are not assessed or inappropriately assessed
Igarashi M, Iizuka M, Abe Y, Ibuki Y. Novel vaginal danazol ring therapy for pelvic endometriosis, in particular deeply infiltrating endometriosis. <i>Hum Reprod</i> 1998;13: 1952-1956.	Intervention excluded from the guideline
Irahara M, Harada T, Momoeda M, Tamaki Y. Hormonal and histological study on irregular genital bleeding in patients with endometriosis during treatment with dienogest, a novel progestational therapeutic agent. <i>Reprod Med Biol</i> 2007;6: 223-228.	Relevant outcomes are not assessed or inappropriately assessed
Jackson B, Telner DE. Managing the misplaced: approach to endometriosis. <i>Can Fam Physician</i> 2006;52: 1420-1424.	Literature review on medical treatment in general
Jacobs LA, Field CS, Thie JL, Coulam CB. Treatment of endometriosis with the GnRH agonist nafarelin acetate. <i>Int J Fertil</i> 1991;36: 30-35.	Relevant patients are not included, or only as subgroup
Jacobson J, Harris SR, Bullingham RE. Low dose intranasal nafarelin for the treatment of endometriosis. <i>Acta Obstet Gynecol Scand</i> 1994;73: 144-150.	No control group
Jeng CJ, Chuang L, Shen J. A comparison of progestogens or oral contraceptives and gonadotropin-releasing hormone agonists for the treatment of endometriosis: a systematic review. <i>Expert Opin Pharmacother</i> 2014;15: 767-773.	Intervention not included in the key question
Jenkins TR, Liu CY, White J. Does response to hormonal therapy predict presence or absence of endometriosis? <i>J Minim Invasive Gynecol</i> 2008;15: 82-86.	Empirical treatment in diagnosis of endometriosis
Jeong SH, Lee D, Kim SK, Jee BC. Symptom-alleviating effect and adverse effect of dienogest in Korean women with endometriosis. <i>Gynecol Endocrinol</i> 2018;34: 970-974.	Not relevant
Johnson N, Farquhar C. Endometriosis. <i>BMJ Clin Evid</i> 2007;2007.	Literature review on medical treatment in general
Kennedy SH, Williams IA, Brodribb J, Barlow DH, Shaw RW. A comparison of nafarelin acetate and danazol in the treatment of endometriosis. <i>Fertil Steril</i> 1990;53: 998-1003.	Randomized, but biased due to selecting treatment based on disease severity
Kiilholma P, Tuimala R, Kivinen S, Korhonen M, Hagman E. Comparison of the gonadotropin-releasing hormone agonist goserelin acetate alone versus goserelin combined with estrogen-progestogen add-back therapy in the treatment of endometriosis. <i>Fertil Steril</i> 1995;64: 903-908.	Older RCT
Kim ML, Cho YJ, Kim MK, Jung YW, Yun BS, Seong SJ. The efficacy of long-term maintenance therapy with a levonorgestrel-releasing intrauterine system for prevention of ovarian endometrioma recurrence. <i>Int J Gynaecol Obstet</i> 2016;134: 256-259.	Not the relevant outcomes (recurrence)
Kim SA, Um MJ, Kim HK, Kim SJ, Moon SJ, Jung H. Study of dienogest for dysmenorrhea and pelvic pain associated with endometriosis. <i>Obstet Gynecol Sci</i> 2016;59: 506-511.	Recent RCTs and reviews available
Kitawaki J, Ishihara H, Kiyomizu M, Honjo H. Maintenance therapy involving a tapering dose of danazol or mid/low doses of oral contraceptive after gonadotropin-releasing hormone agonist treatment for endometriosis-associated pelvic pain. <i>Fertil Steril</i> 2008;89: 1831-1835.	Intervention excluded from the guideline
Kitawaki J, Kusuki I, Yamanaka K, Suganuma I. Maintenance therapy with dienogest following gonadotropin-releasing hormone agonist treatment for endometriosis-associated pelvic pain. <i>Eur J Obstet Gynecol Reprod Biol</i> 2011;157: 212-216.	Intervention (maintenance therapy) not included in the guideline



Kohama T, Herai K, Inoue M. Effect of French maritime pine bark extract on endometriosis as compared with leuprorelin acetate. <i>J Reprod Med</i> 2007;52: 703-708.	Relevant intervention is not included
Kohler G, Faustmann TA, Gerlinger C, Seitz C, Mueck AO. A dose-ranging study to determine the efficacy and safety of 1, 2, and 4mg of dienogest daily for endometriosis. <i>Int J Gynaecol Obstet</i> 2010;108: 21-25.	Included in review Andres 2015
Koshiha A, Mori T, Okimura H, Akiyama K, Kataoka H, Takaoka O, Ito F, Matsushima H, Kusuki I, Kitawaki J. Dienogest therapy during the early stages of recurrence of endometrioma might be an alternative therapeutic option to avoid repeat surgeries. <i>J Obstet Gynaecol Res</i> 2018;44: 1970-1976.	Relevant outcomes are not assessed or inappropriately assessed
Kupker W, Felberbaum RE, Krapp M, Schill T, Malik E, Diedrich K. Use of GnRH antagonists in the treatment of endometriosis. <i>Reprod Biomed Online</i> 2002;5: 12-16.	Relevant outcomes are not assessed or inappropriately assessed
Lang J, Yu Q, Zhang S, Li H, Gude K, von Ludwig C, Ren X, Dong L. Dienogest for Treatment of Endometriosis in Chinese Women: A Placebo-Controlled, Randomized, Double-Blind Phase 3 Study. <i>J Womens Health (Larchmt)</i> 2018;27: 148-155.	Not relevant
Lee DY, Lee JY, Seo JW, Yoon BK, Choi D. Gonadotropin-releasing hormone agonist with add-back treatment is as effective and tolerable as dienogest in preventing pain recurrence after laparoscopic surgery for endometriosis. <i>Arch Gynecol Obstet</i> 2016;294: 1257-1263.	Post-operative medical treatment
Lee SR, Yi KW, Song JY, Seo SK, Lee DY, Cho S, Kim SH. Efficacy and Safety of Long-Term Use of Dienogest in Women With Ovarian Endometrioma. <i>Reprod Sci</i> 2018;25: 341-346.	Not relevant
Leonardo-Pinto JP, Benetti-Pinto CL, Cursino K, Yela DA. Dienogest and deep infiltrating endometriosis: The remission of symptoms is not related to endometriosis nodule remission. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;211: 108-111.	Not relevant
Leyland, N., et al., A Clinician's Guide to the Treatment of Endometriosis with Elagolix. <i>J Womens Health (Larchmt)</i> , 2020.	Narrative review
Leyland, N., et al., Elagolix reduced dyspareunia and improved health-related quality of life in premenopausal women with endometriosis-associated pain. <i>Journal of endometriosis and pelvic pain disorders</i> , 2019.	Not relevant
Ling FW. Randomized controlled trial of depot leuprolide in patients with chronic pelvic pain and clinically suspected endometriosis. <i>Pelvic Pain Study Group. Obstet Gynecol</i> 1999;93: 51-58.	Not specifically endometriosis
Lockhat FB, Emembolu JO, Konje JC. The efficacy, side-effects and continuation rates in women with symptomatic endometriosis undergoing treatment with an intra-uterine administered progestogen (levonorgestrel): a 3 year follow-up. <i>Hum Reprod</i> 2005;20: 789-793.	follow up study
Lockhat FB, Emembolu JO, Konje JC. The evaluation of the effectiveness of an intrauterine-administered progestogen (levonorgestrel) in the symptomatic treatment of endometriosis and in the staging of the disease. <i>Hum Reprod</i> 2004;19: 179-184.	Included in the review by Lan 2013 as background information
Luciano DE, Luciano AA. Pain associated with endometriosis: therapeutic options. <i>Womens Health (Lond)</i> 2006;2: 617-626.	Literature review on medical treatment in general
Magini A, Pellegrini S, Tavella K, Forti G, Massi GB, Serio M. Estrogenic suppression by different administration schedules of goserelin depot for treatment of endometriosis. <i>J Endocrinol Invest</i> 1993;16: 775-780.	Relevant outcomes are not assessed or inappropriately assessed
Maia H, Jr., Haddad C, Casoy J. Combining oral contraceptives with a natural nuclear factor-kappa B inhibitor for the treatment of endometriosis-related pain. <i>Int J Womens Health</i> 2013;6: 35-39.	Intervention not included in the key question
Maia H, Jr., Haddad C, Pinheiro N, Casoy J. Advantages of the association of resveratrol with oral contraceptives for management of endometriosis-related pain. <i>Int J Womens Health</i> 2012;4: 543-549.	Intervention not included in the key question
Maiorana A, Incandela D, Parazzini F, Alio W, Mercurio A, Giambanco L, Alio L. Efficacy of dienogest in improving pain in women with endometriosis: a 12-month single-center experience. <i>Arch Gynecol Obstet</i> 2017;296: 429-433.	Not relevant
Makarainen L, Ronnberg L, Kauppila A. Medroxyprogesterone acetate supplementation diminishes the hypoestrogenic side effects of gonadotropin-releasing hormone agonist without changing its efficacy in endometriosis. <i>Fertil Steril</i> 1996;65: 29-34.	Not relevant
Marqui AB. Evaluation of endometriosis-associated pain and influence of conventional treatment: a systematic review. <i>Rev Assoc Med Bras (1992)</i> 2015;61: 507-518.	Literature review on medical treatment in general
Melis GB, Mais V, Paoletti AM, Ajossa S, Guerriero S, Fioretti P. Efficacy and endocrine effects of medical treatment of endometriosis. <i>Ann N Y Acad Sci</i> 1991;622: 275-282.	Relevant outcomes are not assessed or inappropriately assessed



Meresman GF, Bilotas M, Buquet RA, Baranao RI, Sueldo C, Tesone M. Gonadotropin-releasing hormone agonist induces apoptosis and reduces cell proliferation in eutopic endometrial cultures from women with endometriosis. <i>Fertil Steril</i> 2003;80 Suppl 2: 702-707.	Relevant patients are not included, or only as subgroup
Mettler L, Steinmuller H, Schachner-Wunschmann E. Experience with a depot GnRH-agonist (Zoladex) in the treatment of genital endometriosis. <i>Hum Reprod</i> 1991;6: 694-698.	Relevant patients are not included, or only as subgroup
Middleton LJ, Daniels JP, Weckesser A, Bhattacharya S. Preventing recurrence of endometriosis by means of long-acting progestogen therapy (PRE-EMPT): report of an internal pilot, multi-arm, randomised controlled trial incorporating flexible entry design and adaption of design based on feasibility of recruitment. <i>Trials</i> 2017;18: 121.	Publication type not appropriate
Mitwally MF, Gotlieb L, Casper RF. Prevention of bone loss and hypoestrogenic symptoms by estrogen and interrupted progestogen add-back in long-term GnRH-agonist down-regulated patients with endometriosis and premenstrual syndrome. <i>Menopause</i> 2002;9: 236-241.	Relevant outcomes are not assessed or inappropriately assessed
Momoeda M, Hayakawa M, Shimazaki Y, Mizunuma H, Taketani Y. Does the presence of coexisting diseases modulate the effectiveness of a low-dose estrogen/progestin, ethinylestradiol/drospirenone combination tablet in dysmenorrhea? Reanalysis of two randomized studies in Japanese women. <i>Int J Womens Health</i> 2014;6: 989-998.	Not endometriosis specific (mixed population)
Moran C. Important effects of cyproterone acetate on endometriosis? <i>Fertil Steril</i> 2002;78: 886; author reply 886-887.	Publication type - author reply
Morotti M, Venturini PL, Biscaldi E, Racca A, Calanni L, Vellone VG, Stabilini C, Ferrero S. Efficacy and acceptability of long-term norethindrone acetate for the treatment of rectovaginal endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;213: 4-10.	Not relevant
Muneyyirci-Delale O, Anopa J, Charles C, Mathur D, Parris R, Cutler JB, Salame G, Abulafia O. Medical management of recurrent endometrioma with long-term norethindrone acetate. <i>Int J Womens Health</i> 2012;4: 149-154.	Post-operative medical treatment
Munoz-Hernando L, Munoz-Gonzalez JL, Marqueta-Marques L, Alvarez-Conejo C, Tejerizo-Garcia A, Lopez-Gonzalez G, Villegas-Munoz E, Martin-Jimenez A, Jimenez-Lopez JS. Endometriosis: alternative methods of medical treatment. <i>Int J Womens Health</i> 2015;7: 595-603.	Literature review on medical treatment in general
Muzii L, Galati G, Di Tucci C, Di Felicianantonio M, Perniola G, Di Donato V, Benedetti Panici P, Vignali M. Medical treatment of ovarian endometriomas: a prospective evaluation of the effect of dienogest on ovarian reserve, cyst diameter, and associated pain. <i>Gynecol Endocrinol</i> 2019: 1-3.	Relevant outcomes are not assessed or inappropriately assessed
Muzii, L., et al., Medical treatment of ovarian endometriomas: a prospective evaluation of the effect of dienogest on ovarian reserve, cyst diameter, and associated pain. <i>Gynecol Endocrinol</i> , 2020. 36(1): p. 81-83.	Data are insufficient to support a statement on progression to be included in the guideline
Nader, A., et al., Drug-Drug Interaction Studies of Elagolix with Oral and Transdermal Low-Dose Hormonal Add-Back Therapy. <i>Clin Pharmacokinet</i> , 2020.	Not relevant
Nave R, Mellinger U, Klein S, Hoche J, Schmitz H. Absence of Drug-Drug Interaction of Anastrozole on Levonorgestrel Delivered Simultaneously by an Intravaginal Ring: Results of a Phase 2 Trial. <i>J Clin Pharmacol</i> 2019;59: 1022-1028.	Relevant outcomes are not assessed or inappropriately assessed
Nawathe A, Patwardhan S, Yates D, Harrison GR, Khan KS. Systematic review of the effects of aromatase inhibitors on pain associated with endometriosis. <i>Bjog</i> 2008;115: 818-822.	more recent review available
Nezhat CH, Nezhat F, Borhan S, Seidman DS, Nezhat CR. Is hormonal treatment efficacious in the management of ovarian cysts in women with histories of endometriosis? <i>Hum Reprod</i> 1996;11: 874-877.	Relevant outcomes are not assessed or inappropriately assessed
Nirgianakis, K., et al., Risk factors for non-response and discontinuation of Dienogest in endometriosis patients: A cohort study. <i>Acta Obstet Gynecol Scand</i> , 2020.	Patient selection for treatment, not relevant for the key question
Olive DL, Pritts EA. The treatment of endometriosis: a review of the evidence. <i>Ann N Y Acad Sci</i> 2002;955: 360-372; discussion 389-393, 396-406.	Literature review on medical treatment in general
Olive DL. Gonadotropin-releasing hormone agonists for endometriosis. <i>N Engl J Med</i> 2008;359: 1136-1142.	Relevant patients are not included, or only as subgroup
Oppenheimer, A., et al., Do high-dose progestins impair sexual function in women treated for endometriosis? A prospective observational longitudinal study. <i>Acta Obstet Gynecol Scand</i> , 2020.	Outcomes are not relevant
Osuga Y, Torng PL, Jeng CJ. Clinical studies investigating the use of leuprorelin in Asian women with endometriosis: a review. <i>J Obstet Gynaecol</i> 2019;39: 291-296.	Literature review, specific for Asian women
Park SY, Kim SH, Chae HD, Kim CH, Kang BM. Efficacy and safety of dienogest in patients with endometriosis: A single-center observational study over 12 months. <i>Clin Exp Reprod Med</i> 2016;43: 215-220.	Recent RCTs and reviews available



Paulo Leonardo-Pinto J, Laguna Benetti-Pinto C, Angerame Yela D. When Solving Dyspareunia Is Not Enough to Restore Sexual Function in Women With Deep Infiltrating Endometriosis Treated With Dienogest. <i>J Sex Marital Ther</i> 2019;45: 44-49.	Relevant outcomes are not assessed or inappropriately assessed
Perricos A, Wenzl R. Efficacy of elagolix in the treatment of endometriosis. <i>Expert Opin Pharmacother</i> 2017;18: 1391-1397.	Expert opinion
Petta CA, Ferriani RA, Abrao MS, Hassan D, Rosa e Silva JC, Podgaec S, Bahamondes L. A 3-year follow-up of women with endometriosis and pelvic pain users of the levonorgestrel-releasing intrauterine system. <i>Eur J Obstet Gynecol Reprod Biol</i> 2009;143: 128-129.	Publication type (letter)
Pierzynski P, Swiatecka J, Oczeretko E, Laudanski P, Batra S, Laudanski T. Effect of short-term, low-dose treatment with tamoxifen in patients with primary dysmenorrhea. <i>Gynecol Endocrinol</i> 2006;22: 698-703.	Intervention not included in the key question
Pokrzywinski, R.M., et al., Achieving clinically meaningful response in endometriosis pain symptoms is associated with improvements in health-related quality of life and work productivity: analysis of 2 phase III clinical trials. <i>Am J Obstet Gynecol</i> , 2020. 222(6): p. 592.e1-592.e10.	Not relevant - post-hoc analysis of ELARIS trial
Ponpuckdee J, Taneapanichskul S. The effects of implanon in the symptomatic treatment of endometriosis. <i>J Med Assoc Thai</i> 2005;88 Suppl 2: S7-10.	Not relevant
Quaas AM, Weedon EA, Hansen KR. On-label and off-label drug use in the treatment of endometriosis. <i>Fertil Steril</i> 2015;103: 612-625.	Literature review on medical treatment in general
Regidor PA, Regidor M, Kato K, Bier UW, Buhler K, Schindler AE. Long-term follow-up on the treatment of endometriosis with the GnRH-agonist buserelinacetate. Long-term follow-up data (up to 98 months) of 42 patients with endometriosis who were treated with GnRH-agonist buserelinacetate (Suprecur), were evaluated in respect of recurrence of pain symptoms and pregnancy outcome. <i>Eur J Obstet Gynecol Reprod Biol</i> 1997;73: 153-160.	Relevant intervention is not included
Reichel RP, Schweppe KW. Goserelin (Zoladex) depot in the treatment of endometriosis. <i>Zoladex Endometriosis Study Group. Fertil Steril</i> 1992;57: 1197-1202.	Full text assessed, but excluded based on the lack of a control group
Reinecke I, Schultze-Mosgau MH, Nave R, Schmitz H, Ploeger BA. Model-Based Dose Selection for Intravaginal Ring Formulations Releasing Anastrozole and Levonorgestrel Intended for the Treatment of Endometriosis Symptoms. <i>J Clin Pharmacol</i> 2017;57: 640-651.	Relevant outcomes are not assessed or inappropriately assessed
Roghaei MA, Tehrani HG, Taherian A, Koleini N. Effects of Letrozole compared with Danazol on patients with confirmed endometriosis: a randomized clinical trial. <i>International journal of fertility and sterility</i> 2010;4: 67-72.	More recent data available - comparison to Danazol no longer considered relevant
Roman H, Saint Ghislain M, Milles M, Marty N, Hennetier C, Moatassim S, Desnyder E, Abo C. Improvement of digestive complaints in women with severe colorectal endometriosis benefiting from continuous amenorrhoea triggered by triptorelin. A prospective pilot study. <i>Gynecol Obstet Fertil</i> 2015;43: 575-581.	Relevant outcomes are not assessed or inappropriately assessed
Romer T. Long-term treatment of endometriosis with dienogest: retrospective analysis of efficacy and safety in clinical practice. <i>Arch Gynecol Obstet</i> 2018;298: 747-753.	Not relevant
Sagsveen M, Farmer JE, Prentice A, Breeze A. Gonadotrophin-releasing hormone analogues for endometriosis: bone mineral density. <i>Cochrane Database Syst Rev</i> 2003: Cd001297.	Outdated, more recent review available
Samy, A., et al., Medical therapy options for endometriosis related pain, which is better? A systematic review and network meta-analysis of randomized controlled trials. <i>J Gynecol Obstet Hum Reprod</i> , 2020: p. 101798.	Network meta-analysis (NMA) - not considered relevant
Sanfilippo JS, Hur HC. Oral contraceptives for endometriosis-associated pain. <i>J Minim Invasive Gynecol</i> 2006;13: 525-527.	Recent systematic review available
Sansone A, De Rosa N, Giampaolino P, Guida M, Lagana AS, Di Carlo C. Effects of etonogestrel implant on quality of life, sexual function, and pelvic pain in women suffering from endometriosis: results from a multicenter, prospective, observational study. <i>Arch Gynecol Obstet</i> 2018;298: 731-736.	Recent RCTs and reviews available
Scala C, Leone Roberti Maggiore U, Salvatore S, Papaleo E, Remorgida V, Odetto L, Racca A, Venturini PL, Candiani M, Ferrero S. Dienogest for pain symptoms caused by rectovaginal endometriosis resistant to norethisterone acetate: prospective cohort study. <i>Human reproduction (oxford, england)</i> 2014;29: i198-i199.	Publication type - abstract
Schindler AE, Christensen B, Henkel A, Oettel M, Moore C. High-dose pilot study with the novel progestogen dienogestin patients with endometriosis. <i>Gynecol Endocrinol</i> 2006;22: 9-17.	Pilot study
Schindler AE, Foertig P, Kienle E, Regidor PA. Early treatment of endometriosis with GnRH-agonists: impact on time to recurrence. <i>Eur J Obstet Gynecol Reprod Biol</i> 2000;93: 123-125.	Relevant outcomes are not assessed or inappropriately assessed



Schindler AE, Regidor PA, Buehler K. Modes of application of gonadotropin-releasing hormone agonists for endometriosis treatment. <i>Expert Rev Endocrinol Metab</i> 2006;1: 709-714.	Relevant outcomes are not assessed or inappropriately assessed
Schindler AE. Dienogest in long-term treatment of endometriosis. <i>Int J Womens Health</i> 2011;3: 175-184.	Not relevant
Schlaff WD, Dugoff L, Damewood MD, Rock JA. Megestrol acetate for treatment of endometriosis. <i>Obstet Gynecol</i> 1990;75: 646-648.	Recent data and reviews available
Seo JW, Lee DY, Kim SE, Yoon BK, Choi D. Comparison of long-term use of combined oral contraceptive after gonadotropin-releasing hormone agonist plus add-back therapy versus dienogest to prevent recurrence of ovarian endometrioma after surgery. <i>Eur J Obstet Gynecol Reprod Biol</i> 2019;236: 53-57.	Post-operative medical treatment
Shin D, Lee S, Lim KS, Park JS, Shin SG, Jang IJ, Yu KS. Pharmacokinetic study of single and multiple oral administrations of 2 mg dienogest in healthy Korean women. <i>Contraception</i> 2013;87: 750-755.	Pharmacokinetic study
Simon MA, Shulman LP. Subcutaneous versus intramuscular depot methoxyprogesterone acetate: a comparative review. <i>Womens Health (Lond)</i> 2006;2: 191-197.	Not endometriosis specific
Simpson PD, McLaren JS, Rymer J, Morris EP. Minimising menopausal side effects whilst treating endometriosis and fibroids. <i>Post Reprod Health</i> 2015;21: 16-23.	Literature review on side effects
Sinaii N, Cleary SD, Younes N, Ballweg ML, Stratton P. Treatment utilization for endometriosis symptoms: a cross-sectional survey study of lifetime experience. <i>Fertil Steril</i> 2007;87: 1277-1286.	Relevant intervention is not included
Soliman AM, Bonafede M, Farr AM, Castelli-Haley J, Winkel C. Analysis of Adherence, Persistence, and Surgery Among Endometriosis Patients Treated with Leuprolide Acetate Plus Norethindrone Acetate Add-Back Therapy. <i>J Manag Care Spec Pharm</i> 2016;22: 573-587.	Relevant outcomes are not assessed or inappropriately assessed
Soliman AM, Yang H, Du EX, Kelley C, Winkel C. The direct and indirect costs associated with endometriosis: a systematic literature review. <i>Hum Reprod</i> 2016;31: 712-722.	Literature review on cost effectiveness
Song J, Wang Y, Yu L. Clinical comparison of mifepristone and gestrinone for laparoscopic endometriosis. <i>Pak J Pharm Sci</i> 2018;31: 2197-2201.	Old data, recent reviews available
Spitz IM. Clinical utility of progesterone receptor modulators and their effect on the endometrium. <i>Curr Opin Obstet Gynecol</i> 2009;21: 318-324.	Intervention not included in the key question
Strowitzki T, Faustmann T, Gerlinger C, Schumacher U, Ahlers C, Seitz C. Safety and tolerability of dienogest in endometriosis: pooled analysis from the European clinical study program. <i>Int J Womens Health</i> 2015;7: 393-401.	Recent data and reviews available
Strowitzki T, Marr J, Gerlinger C, Faustmann T, Seitz C. Detailed analysis of a randomized, multicenter, comparative trial of dienogest versus leuprolide acetate in endometriosis. <i>Int J Gynaecol Obstet</i> 2012;117: 228-233.	Included in review Andres 2015
Sugimoto K, Nagata C, Hayashi H, Yanagida S, Okamoto A. Use of dienogest over 53 weeks for the treatment of endometriosis. <i>J Obstet Gynaecol Res</i> 2015;41: 1921-1926.	Recent RCTs and reviews available
Surrey ES, Gambone JC, Lu JK, Judd HL. The effects of combining norethindrone with a gonadotropin-releasing hormone agonist in the treatment of symptomatic endometriosis. <i>Fertil Steril</i> 1990;53: 620-626.	Relevant patients are not included, or only as subgroup
Surrey ES, Soliman AM, Agarwal SK, Snabes MC, Diamond MP. Impact of elagolix treatment on fatigue experienced by women with moderate to severe pain associated with endometriosis. <i>Fertil Steril</i> 2019.	Relevant outcomes are not assessed or inappropriately assessed
Surrey ES, Voigt B, Fournet N, Judd HL. Prolonged gonadotropin-releasing hormone agonist treatment of symptomatic endometriosis: the role of cyclic sodium etidronate and low-dose norethindrone "add-back" therapy. <i>Fertil Steril</i> 1995;63: 747-755.	Prospective clinical trial - small numbers
Surrey, E., et al. Long-term outcomes of elagolix in women with endometriosis results from two extension studies. <i>Obstetrics and gynecology</i> , 2018. 132(1): p. 147-160.	Not relevant
Tahara M, Matsuoka T, Yokoi T, Tasaka K, Kurachi H, Murata Y. Treatment of endometriosis with a decreasing dosage of a gonadotropin-releasing hormone agonist (nafarelin): a pilot study with low-dose agonist therapy ("draw-back" therapy). <i>Fertil Steril</i> 2000;73: 799-804.	Pilot study
Takahashi K, Okada S, Okada M, Kitao M, Imaoka I, Sugimura K. Prognostic application of magnetic resonance imaging in patients with endometriomas treated with gonadotropin-releasing hormone analogue. <i>Hum Reprod</i> 1996;11: 1083-1085.	Relevant outcomes are not assessed or inappropriately assessed
Taniguchi F, Enatsu A, Ikebuchi A, Yamane E, Moriyama M, Murakami J, Harada T, Harada T. Efficacy of Norethisterone in Patients with Ovarian Endometrioma. <i>Yonago Acta Med</i> 2017;60: 182-185.	Not relevant
Tarjanne S, Ng CHM, Manconi F, Arola J, Mentula M, Maneck B, Fraser IS, Heikinheimo O. Use of hormonal therapy is associated with reduced nerve fiber density in deep infiltrating, rectovaginal endometriosis. <i>Acta Obstet Gynecol Scand</i> 2015;94: 693-700.	Relevant outcomes are not assessed or inappropriately assessed



Taskin O, Yalcinoglu AI, Kucuk S, Uryan I, Buhur A, Burak F. Effectiveness of tibolone on hypoestrogenic symptoms induced by goserelin treatment in patients with endometriosis. <i>Fertil Steril</i> 1997;67: 40-45.	Relevant outcomes are not assessed or inappropriately assessed
Techatraisak K, Hestiantoro A, Ruey S, Banal-Silao MJ, Kim MR, Seong SJ, Thaufik S, Ahlers C, Shin SY, Lee BS. Effectiveness of dienogest in improving quality of life in Asian women with endometriosis (ENVISIOeN): interim results from a prospective cohort study under real-life clinical practice. <i>BMC Womens Health</i> 2019;19: 68.	Interim results
Trabant H, Widdra W, de Looze S. Efficacy and safety of intranasal buserelin acetate in the treatment of endometriosis: a review of six clinical trials and comparison with danazol. <i>Prog Clin Biol Res</i> 1990;323: 357-382.	Intervention not included in the guideline
Tse CY, Chow AM, Chan SC. Effects of an extended-interval dosing regimen of triptorelin depot on the hormonal profile of patients with endometriosis: prospective observational study. <i>Hong Kong Med J</i> 2000;6: 260-264.	Relevant outcomes are not assessed or inappropriately assessed
Uemura T, Shirasu K, Katagiri N, Asukai K, Suzuki T, Suzuki N, Osada H, Hiroshi M. Low-dose GnRH agonist therapy for the management of endometriosis. <i>J Obstet Gynaecol Res</i> 1999;25: 295-301.	Relevant outcomes are not assessed or inappropriately assessed
Ugur M, Senoz S, Gokmen O. Combined use of a long-acting gonadotropin-releasing hormone agonist and low-dose danazol in advanced stage endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 1996;68: 155-158.	Relevant patients are not included, or only as subgroup
Venturini PL, Fasce V, Costantini S, Anserini P, Cucuccio S, de Cecco L. Treatment of endometriosis with goserelin depot, a long-acting gonadotropin-releasing hormone agonist analog: endocrine and clinical results. <i>Fertil Steril</i> 1990;54: 1021-1027.	Full text assessed, but excluded based on the lack of a control group
Vercellini P, Aimi G, Panazza S, De Giorgi O, Pesole A, Crosignani PG. A levonorgestrel-releasing intrauterine system for the treatment of dysmenorrhea associated with endometriosis: a pilot study. <i>Fertil Steril</i> 1999;72: 505-508.	Pilot study
Vercellini P, Bracco B, Mosconi P, Roberto A, Alberico D, Dhoha D, Somigliana E. Norethindrone acetate or dienogest for the treatment of symptomatic endometriosis: a before and after study. <i>Fertil Steril</i> 2016;105: 734-743.e733.	Not relevant
Vercellini P, Buggio L, Berlanda N, Barbara G, Somigliana E, Bosari S. Estrogen-progestins and progestins for the management of endometriosis. <i>Fertil Steril</i> 2016;106: 1552-1571.e1552.	Narrative review - Estrogen-progestins and progestins
Vercellini P, Buggio L, Borghi A, Monti E, Gattei U, Frattaruolo MP. Medical treatment in the management of deep endometriosis infiltrating the proximal rectum and sigmoid colon: a comprehensive literature review. <i>Acta Obstet Gynecol Scand</i> 2018.	Literature review on medical treatment in general
Vercellini P, Buggio L, Somigliana E. Role of medical therapy in the management of deep rectovaginal endometriosis. <i>Fertil Steril</i> 2017;108: 913-930.	Literature review on medical treatment in general
Vercellini P, Cortesi I, Crosignani PG. Progestins for symptomatic endometriosis: a critical analysis of the evidence. <i>Fertil Steril</i> 1997;68: 393-401.	more recent review available
Vercellini P, Crosignani PG, Somigliana E, Berlanda N, Barbara G, Fedele L. Medical treatment for rectovaginal endometriosis: what is the evidence? <i>Hum Reprod</i> 2009;24: 2504-2514.	Literature review on medical treatment in general
Vercellini P, Fedele L, Pietropaolo G, Frontino G, Somigliana E, Crosignani PG. Progestogens for endometriosis: forward to the past. <i>Hum Reprod Update</i> 2003;9: 387-396.	Outdated, more recent data available
Vercellini P, Frattaruolo MP, Somigliana E, Jones GL, Consonni D, Alberico D, Fedele L. Surgical versus low-dose progestin treatment for endometriosis-associated severe deep dyspareunia II: effect on sexual functioning, psychological status and health-related quality of life. <i>Hum Reprod</i> 2013;28: 1221-1230.	Not relevant
Vercellini P, Ottolini F, Frattaruolo MP, Buggio L, Roberto A, Somigliana E. Shifting from Oral Contraceptives to Norethisterone Acetate, or Vice Versa, because of Drug Intolerance: Does the Change Benefit Women with Endometriosis? <i>Gynecol Obstet Invest</i> 2018;83: 275-284.	Not relevant
Vercellini P, Trespidi L, Panazza S, Bramante T, Mauro F, Crosignani PG. Very low dose danazol for relief of endometriosis-associated pelvic pain: a pilot study. <i>Fertil Steril</i> 1994;62: 1136-1142.	Intervention excluded from the guideline
Vignali, M., et al., Effect of Dienogest therapy on the size of the endometrioma. <i>Gynecol Endocrinol</i> , 2020. 36(8): p. 723-727.	Data are insufficient to support a statement on progression to be included in the guideline
Waller KG, Shaw RW. Gonadotropin-releasing hormone analogues for the treatment of endometriosis: long-term follow-up. <i>Fertil Steril</i> 1993;59: 511-515.	Relevant outcomes are not assessed or inappropriately assessed
Wang ST, Johnson SJ, Mitchell D, Soliman AM, Vora JB, Agarwal SK. Cost-effectiveness of elagolix versus leuprolide acetate for treating moderate-to-severe endometriosis pain in the USA. <i>J Comp Eff Res</i> 2019;8: 337-355.	Relevant outcomes are not assessed or inappropriately assessed



When more is not better: 10 'don'ts' in endometriosis management. An ETIC (*) position statement. <i>Hum Reprod Open</i> 2019;2019: hoz009.	Expert Opinion
Whitaker LH, Williams AR, Critchley HO. Selective progesterone receptor modulators. <i>Curr Opin Obstet Gynecol</i> 2014;26: 237-242.	Intervention not included in the key question
Whitehouse RW, Adams JE, Bancroft K, Vaughan-Williams CA, Elstein M. The effects of nafarelin and danazol on vertebral trabecular bone mass in patients with endometriosis. <i>Clin Endocrinol (Oxf)</i> 1990;33: 365-373.	Relevant outcomes are not assessed or inappropriately assessed
Won HR, Abbott J. Optimal management of chronic cyclical pelvic pain: an evidence-based and pragmatic approach. <i>Int J Womens Health</i> 2010;2: 263-277.	Literature review on medical treatment in general
Wong AY, Tang LC, Chin RK. Levonorgestrel-releasing intrauterine system (Mirena) and Depot medroxyprogesterone acetate (Depoprovera) as long-term maintenance therapy for patients with moderate and severe endometriosis: a randomised controlled trial. <i>Aust N Z J Obstet Gynaecol</i> 2010;50: 273-279.	Not relevant (maintenance therapy)
Wright S, Valdes CT, Dunn RC, Franklin RR. Short-term Lupron or danazol therapy for pelvic endometriosis. <i>Fertil Steril</i> 1995;63: 504-507.	Relevant outcomes are not assessed or inappropriately assessed
Xholli, A., et al., Modification of endometrioma size during hormone therapy containing dienogest. <i>Gynecol Endocrinol</i> , 2020. 36(6): p. 545-549.	Data are insufficient to support a statement on progression to be included in the guideline
Xue HL, Yu N, Wang J, Hao WJ, Li Y, Liu MY. Therapeutic effects of mifepristone combined with Gestrinone on patients with endometriosis. <i>Pak J Med Sci</i> 2016;32: 1268-1272.	Old data, recent reviews available
Yamanaka A, Hada T, Matsumoto T, Kanno K, Shirane A, Yanai S, Nakajima S, Ebisawa K, Ota Y, Andou M. Effect of dienogest on pain and ovarian endometrioma occurrence after laparoscopic resection of uterosacral ligaments with deep infiltrating endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;216: 51-55.	Post-operative medical treatment
Yanase T, Tsuneki I, Tamura M, Kurabayashi T. Relief of uterine bleeding by cyclic administration of dienogest for endometriosis. <i>Gynecol Endocrinol</i> 2014;30: 804-807.	Relevant outcomes are not assessed or inappropriately assessed
Ylanen K, Laatikainen T, Lahteenmaki P, Moo-Young AJ. Subdermal progestin implant (Nestorone) in the treatment of endometriosis: clinical response to various doses. <i>Acta Obstet Gynecol Scand</i> 2003;82: 167-172.	More recent data and reviews available
Yong, P.J., et al., CHC for pelvic pain in women with endometriosis: ineffectiveness or discontinuation due to side-effects. <i>Hum Reprod Open</i> , 2020. 2020(2): p. hoz040.	Not relevant
Yoost J. Understanding benefits and addressing misperceptions and barriers to intrauterine device access among populations in the United States. <i>Patient Prefer Adherence</i> 2014;8: 947-957.	Not endometriosis specific
Yu Q, Zhang S, Li H, Wang P, Zvolanek M, Ren X, Dong L, Lang J. Dienogest for Treatment of Endometriosis in Women: A 28-Week, Open-Label, Extension Study. <i>J Womens Health (Larchmt)</i> 2019;28: 170-177.	not relevant
Yucel N, Baskent E, Karamustafaoglu Balci B, Goynumer G. The levonorgestrel-releasing intrauterine system is associated with a reduction in dysmenorrhoea and dyspareunia, a decrease in CA 125 levels, and an increase in quality of life in women with suspected endometriosis. <i>Aust N Z J Obstet Gynaecol</i> 2018;58: 560-563.	Not confirmed endometriosis patients
Zorn JR, Mathieson J, Risquez F, Comaru-Schally AM, Schally AV. Treatment of endometriosis with a delayed release preparation of the agonist D-Trp6-luteinizing hormone-releasing hormone: long-term follow-up in a series of 50 patients. <i>Fertil Steril</i> 1990;53: 401-406.	Relevant outcomes are not assessed or inappropriately assessed
Zuberi NF, Rizvi JH. Critical appraisal of endometriosis management for pain and subfertility. <i>J Pak Med Assoc</i> 2003;53: 152-156.	Literature review on medical treatment in general

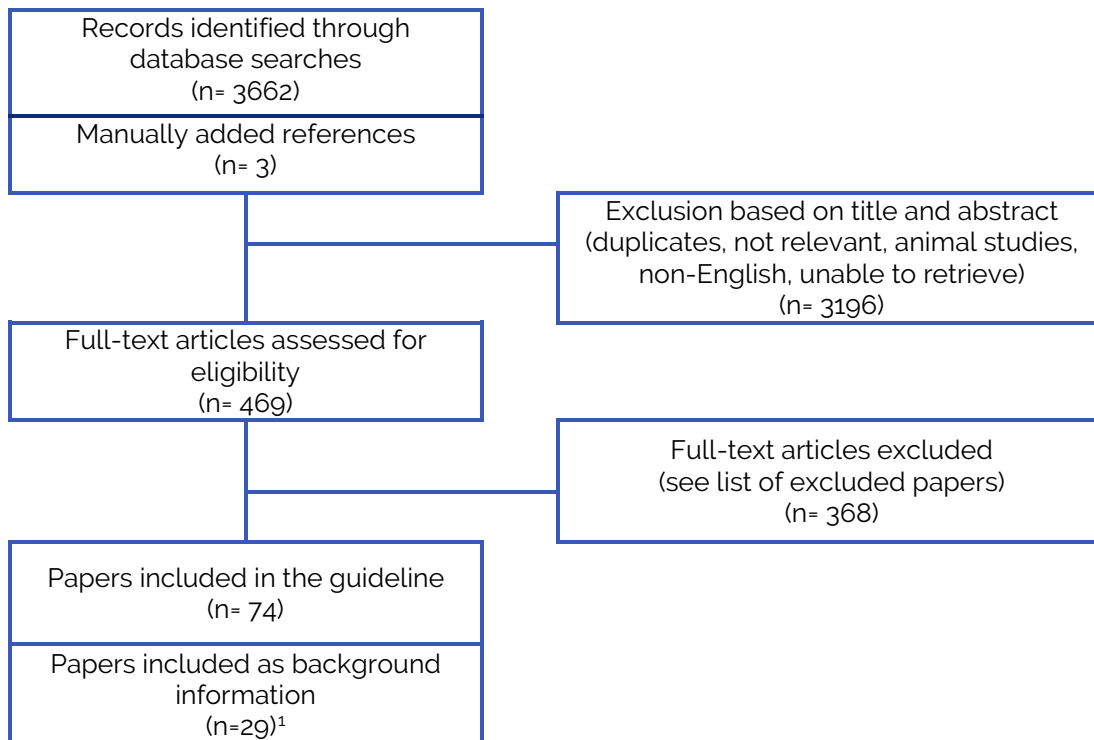


QUESTION II.3 IS SURGERY EFFECTIVE FOR TREATMENT OF PAIN ASSOCIATED WITH ENDOMETRIOSIS?

Search strings

DATABASE	Search string
PUBMED	((("Endometriosis"[Title] OR "endometriotic"[Title] OR "endometrioma"[Title]) AND ("surgery"[Title] OR surgical[Title] OR "Laparoscopy"[Title] OR laparoscopic[Title] OR "Hysterectomy"[Title] OR Oophorectomy[Title] OR "Salpingo-oophorectomy"[Title] OR "Ovariectomy"[Title] OR excision[Title] OR cystectomy[Title] OR excisional[Title] OR neurectomy[Title] OR shaving[Title] OR resection[Title]) AND (Pain OR "Pain"[Mesh] OR symptom OR symptoms OR painful OR dysmenorrhea OR "Dysmenorrhea"[Mesh] OR dyspareunia OR "Dyspareunia"[Mesh] OR dyschezia OR "Constipation"[Mesh] OR "pelvic pain" OR "quality of life" OR Recurrence OR "Recurrence"[Mesh] OR "side effect" OR "adverse event" OR complication OR "Intraoperative Complications"[Mesh] OR "Postoperative Complications"[Mesh])) OR (("Endometriosis"[Title] OR "endometriotic"[Title] OR "endometrioma"[Title]) AND ("surgery"[Title] OR surgical[Title] OR "Laparoscopy"[Title] OR laparoscopic[Title] OR "Hysterectomy"[Title] OR Oophorectomy[Title] OR "Salpingo-oophorectomy"[Title] OR "Ovariectomy"[Title] OR excision[Title] OR cystectomy[Title] OR excisional[Title] OR neurectomy[Title] OR shaving[Title] OR resection[Title]))
COCHRANE	(Endometriosis OR endometriotic OR endometrioma) AND (surgery OR surgical OR "Laparoscopy" OR laparoscopic OR Hysterectomy OR Oophorectomy OR "Salpingo-oophorectomy" OR "Ovariectomy" OR excision OR cystectomy OR excisional OR neurectomy OR shaving OR resection)

Flowchart



¹ 2 papers were included in the evidence table for one subquestion, and listed as background reference for another subsection. Total number of unique included studies is 101



List of excluded papers

Reference	Exclusion criterium
Abo C, Bendifallah S, Jayot A, Nyangoh Timoh K, Tuech JJ, Roman H, Darai E. Discoid resection for colorectal endometriosis: results from a prospective cohort from two French tertiary referral centres. <i>Colorectal Dis</i> 2019.	Uncontrolled study, procedure abandoned in 5%
Abo C, Roman H, Bridoux V, Huet E, Tuech JJ, Resch B, Stochino E, Marpeau L, Darwish B. Management of deep infiltrating endometriosis by laparoscopic route with robotic assistance: 3-year experience. <i>J Gynecol Obstet Hum Reprod</i> 2017;46: 9-18.	Not relevant, paper on robotics in DE postoperative outcomes recorded in composite scores
Abrão, M.S., et al., Optimizing Perioperative Outcomes with Selective Bowel Resection Following an Algorithm Based on Preoperative Imaging for Bowel Endometriosis. <i>J Minim Invasive Gynecol</i> , 2020. 27(4): p. 883-891.	Not a relevant addition to the guideline
Acien P, Nunez C, Quereda F, Velasco I, Valiente M, Vidal V. Is a bowel resection necessary for deep endometriosis with rectovaginal or colorectal involvement? <i>Int J Womens Health</i> 2013;5: 449-455.	Outcome presented is not relevant to our question (no information on pain)
Agnello, M., M. Vottero, and P. Bertapelle. Sacral neuromodulation to treat voiding dysfunction in patients with previous pelvic surgery for deep infiltrating endometriosis: our centre's experience. <i>Int Urogynecol J</i> , 2020.	Not relevant
Akladios C, Faller E, Afors K, Puga M, Albornoz J, Redondo C, Leroy J, Wattiez A. Totally laparoscopic intracorporeal anastomosis with natural orifice specimen extraction (NOSE) techniques, particularly suitable for bowel endometriosis. <i>J Minim Invasive Gynecol</i> 2014;21: 1095-1102.	No data on pain, study on technique of bowel resection
Akladios C, Messori P, Faller E, Puga M, Afors K, Leroy J, Wattiez A. Is ileostomy always necessary following rectal resection for deep infiltrating endometriosis? <i>J Minim Invasive Gynecol</i> 2015;22: 103-109.	Outcome presented is not relevant to our question (no information on pain)
Alborzi S, Foroughinia L, Kumar PV, Asadi N, Alborzi S. A comparison of histopathologic findings of ovarian tissue inadvertently excised with endometrioma and other kinds of benign ovarian cyst in patients undergoing laparoscopy versus laparotomy. <i>Fertil Steril</i> 2009;92: 2004-2007.	not relevant for the key question
Alborzi S, Hosseini-Nohadani A, Poordast T, Shomali Z. Surgical outcomes of laparoscopic endometriosis surgery: a 6 year experience. <i>Curr Med Res Opin</i> 2017;33: 2229-2234.	No randomization
Alessandri F, Lijoi D, Mistrangelo E, Ferrero S, Ragni N, Remorgida V. Ureteral suspension facilitates surgery for deep pelvic endometriosis. <i>Fertil Steril</i> 2007;87: 1222-1224.	Outcome presented is not relevant to our question (no information on pain)
Alkatout I, Mettler L, Beteta C, Hedderich J, Jonat W, Schollmeyer T, Salmassi A. Combined surgical and hormone therapy for endometriosis is the most effective treatment: prospective, randomized, controlled trial. <i>J Minim Invasive Gynecol</i> 2013;20: 473-481.	study compares medical tx Vs surgical tx vs combined tx - not clear surgery assesment
Alves J, Puga M, Fernandes R, Pinton A, Miranda I, Kovoov E, Wattiez A. Laparoscopic Management of Ureteral Endometriosis and Hydronephrosis Associated With Endometriosis. <i>J Minim Invasive Gynecol</i> 2017;24: 466-472.	Pre and postoperative scores for Pain and recorded for ureteric endometriosis, but SD missing
Anaf V, Simon P, El Nakadi I, Simonart T, Noel J, Buxant F. Impact of surgical resection of rectovaginal pouch of douglas endometriotic nodules on pelvic pain and some elements of patients' sex life. <i>J Am Assoc Gynecol Laparosc</i> 2001;8: 55-60.	Study is included in meta-analysis / More recent data available
Angioli R, Muzi L, Montera R, Damiani P, Bellati F, Plotti F, Zullo MA, Oronzi I, Terranova C, Panici PB. Feasibility of the use of novel matrix hemostatic sealant (FloSeal) to achieve hemostasis during laparoscopic excision of endometrioma. <i>J Minim Invasive Gynecol</i> 2009;16: 153-156.	not relevant for the key question
Angioni S, Peiretti M, Zirone M, Palomba M, Mais V, Gomel V, Melis GB. Laparoscopic excision of posterior vaginal fornix in the treatment of patients with deep endometriosis without rectum involvement: surgical treatment and long-term follow-up. <i>Hum Reprod</i> 2006;21: 1629-1634.	More relevant / higher quality data available for the outcomes included in the PICO question
Antonelli A, Simeone C, Zani D, Sacconi T, Minini G, Canossi E, Cunico SC. Clinical aspects and surgical treatment of urinary tract endometriosis: our experience with 31 cases. <i>Eur Urol</i> 2006;49: 1093-1097; discussion 1097-1098.	Outcome presented is not relevant to our question (no information on pain)
Azais H, Rubod C, Ghoneim T, Vassilieff M, Bailly E, Boileau L, Villet R, Collinet P. Persistent urinary retention after surgery for deep infiltrating endometriosis: a multi-center series of 16 cases. <i>Arch Gynecol Obstet</i> 2015;291: 1333-1339.	Outcomes presented is not relevant to our question
Azioni G, Bracale U, Scala A, Capobianco F, Barone M, Rosati M, Pignata G. Laparoscopic ureteroneocystostomy and vesicopsoas hitch for infiltrative ureteral endometriosis. <i>Minim Invasive Ther Allied Technol</i> 2010;19: 292-297.	Outcome presented is not relevant to our question (no information on pain)



Bachmann R, Bachmann C, Lange J, Kramer B, Brucker SY, Wallwiener D, Konigsrainer A, Zdichavsky M. Surgical outcome of deep infiltrating colorectal endometriosis in a multidisciplinary setting. <i>Arch Gynecol Obstet</i> 2014;290: 919-924.	No data on pain, no comparative study
Badescu A, Roman H, Barsan I, Soldea V, Nastasia S, Aziz M, Puscasiu L, Stolnicu S. Patterns of Bowel Invisible Microscopic Endometriosis Reveal the Goal of Surgery: Removal of Visual Lesions Only. <i>J Minim Invasive Gynecol</i> 2018;25: 522-527.e529.	pain is not mentioned
Balasubramaniam, D., et al., Feasibility of Laparoscopic Hysterectomy in Stage IV Pelvic Endometriosis: Our Technique and Outcomes. <i>J Midlife Health</i> , 2020. 11(1): p. 27-33.	Focusses on feasibility
Balaye P, Josset V, Mias S, Perrier MA, Lebaron C, Roman H, Merle V. Surgical Site Infection in Endometriosis Surgery Is a Rare Complication: Results of a Single Center's Prospective Surveillance of Eight Hundred Ninety-Six Procedures. <i>Surg Infect (Larchmt)</i> 2019;20: 395-398.	Not relevant for the key question
Balla A, Quaresima S, Subiela JD, Shalaby M, Petrella G, Sileri P. Outcomes after rectosigmoid resection for endometriosis: a systematic literature review. <i>Int J Colorectal Dis</i> 2018;33: 835-847.	Review but no comparison, no meta-analysis
Ballester M, Belghiti J, Zilberman S, Thomin A, Bonneau C, Bazot M, Thomassin-Naggara I, Darai E. Surgical and clinical impact of extraperitoneal pelvic fascia removal in segmental colorectal resection for endometriosis. <i>J Minim Invasive Gynecol</i> 2014;21: 1041-1048.	No data on pain, study on impact of technique on urinary dysfunction
Ballester M, Chereau E, Dubernard G, Coutant C, Bazot M, Darai E. Urinary dysfunction after colorectal resection for endometriosis: results of a prospective randomized trial comparing laparoscopy to open surgery. <i>Am J Obstet Gynecol</i> 2011;204: 303.e301-306.	Comparison not relevant (laparoscopy compared to laparotomy)
Ballester M, Dubernard G, Wafo E, Bellon L, Amarenco G, Belghiti J, Darai E. Evaluation of urinary dysfunction by urodynamic tests, electromyography and quality of life questionnaire before and after surgery for deep infiltrating endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2014;179: 135-140.	Outcomes presented is not relevant to our question
Barbara G, Facchin F, Meschia M, Bertanda N, Frattaruolo MP, Vercellin IP. When love hurts. A systematic review on the effects of surgical and pharmacological treatments for endometriosis on female sexual functioning. <i>Acta Obstet Gynecol Scand</i> 2017;96: 668-687.	Not relevant for the key question
Bar-Shavit Y, Jaillet L, Chauvet P, Canis M, Bourdel N. Use of indocyanine green in endometriosis surgery. <i>Fertil Steril</i> 2018;109: 1136-1137.	Outcome presented is not relevant to our question
Bastu, E., et al., Improvement in quality of life and pain scores after laparoscopic management of deep endometriosis: a retrospective cohort study. <i>Arch Gynecol Obstet</i> , 2020. 302(1): p. 165-172.	Not a relevant addition to the guideline
Bedaiwy MA, Rahman MY, Chapman M, Frasure H, Mahajan S, von Gruenigen VE, Hurd W, Zanotti K. Robotic-assisted hysterectomy for the management of severe endometriosis: a retrospective review of short-term surgical outcomes. <i>Jsls</i> 2013;17: 95-99.	Pain is not mentioned - too small population
Belghiti J, Ballester M, Zilberman S, Thomin A, Zacharopoulou C, Bazot M, Thomassin-Naggara I, Darai E. Role of protective defunctioning stoma in colorectal resection for endometriosis. <i>J Minim Invasive Gynecol</i> 2014;21: 472-479.	No data on pain
Benassi L, Benassi G, Kaihura CT, Marconi L, Ricci L, Vadora E. Chemically assisted dissection of tissues in laparoscopic excision of endometriotic cysts. <i>J Am Assoc Gynecol Laparosc</i> 2003;10: 205-209.	not relevant for the key question
Bendifallah, S., et al., Surgical outcomes after colorectal surgery for endometriosis: Systematic Review and Meta-Analysis. <i>J Minim Invasive Gynecol</i> , 2020.	Not a relevant addition to the guideline
Berker B, Lashay N, Davarpanah R, Marziali M, Nezhat CH, Nezhat C. Laparoscopic appendectomy in patients with endometriosis. <i>J Minim Invasive Gynecol</i> 2005;12: 206-209.	Outcomes presented are not relevant to our question (no information on pain)
Bertanda N, Frattaruolo MP, Aimi G, Farella M, Barbara G, Buggio L, Vercellini P. 'Money for nothing'. The role of robotic-assisted laparoscopy for the treatment of endometriosis. <i>Reprod Biomed Online</i> 2017;35: 435-444.	Not relevant
Bertanda N, Vercellini P, Fedele L. The outcomes of repeat surgery for recurrent symptomatic endometriosis. <i>Curr Opin Obstet Gynecol</i> 2010;22: 320-325.	More recent/relevant data available
Bokor A, Lukovich P, Csibi N, D'Hooghe T, Lebovic D, Brubel R, Rigo J. Natural Orifice Specimen Extraction during Laparoscopic Bowel Resection for Colorectal Endometriosis: Technique and Outcome. <i>J Minim Invasive Gynecol</i> 2018;25: 1065-1074.	No data on pain, just short-term outcome
Bokor, A., et al., Low Anterior Resection Syndrome (LARS) following different surgical approaches for low rectal endometriosis: a retrospective case-control multicenter study. <i>Acta Obstet Gynecol Scand</i> , 2020.	Not a relevant addition to the guideline
Boni L, Tenconi S, Beretta P, Cromi A, Dionigi G, Rovera F, Dionigi R, Ghezzi F. Laparoscopic colorectal resections with transvaginal specimen extraction for severe endometriosis. <i>Surg Oncol</i> 2007;16 Suppl 1: S157-160.	Not a relevant addition to the guideline



Bonin E, Bridoux V, Chati R, Kermiche S, Coget J, Tuech JJ, Roman H. Diverting stoma-related complications following colorectal endometriosis surgery: a 163-patient cohort. <i>Eur J Obstet Gynecol Reprod Biol</i> 2019;232: 46-53.	Very high diverting stoma rate of 97%!!
Bosev D, Nicoll LM, Bhagan L, Lemyre M, Payne CK, Gill H, Nezhat C. Laparoscopic management of ureteral endometriosis: the Stanford University hospital experience with 96 consecutive cases. <i>J Urol</i> 2009;182: 2748-2752.	Included in more recent review / more recent data available
Bracale U, Azioni G, Rosati M, Barone M, Pignata G. Deep pelvic endometriosis (Adamyas IV stage): multidisciplinary laparoscopic treatments. <i>Acta Chir Iugosl</i> 2009;56: 41-46.	More relevant / higher quality data available for the outcomes included in the PICO question
Braund, S., et al. Risk of Postoperative Stenosis after Segmental Resection versus Disk Excision for Deep Endometriosis Infiltrating the Rectosigmoid: A Retrospective Study. <i>J Minim Invasive Gynecol</i> , 2020.	Not a relevant addition to the guideline
Bravo R, Blaker K, Pigazzi A. Totally intracorporeal robotic en bloc resection for deep infiltrating endometriosis of the rectovaginal wall with natural orifice specimen extraction. <i>Tech Coloproctol</i> 2019.	No data on pain, case report
Bray-Beraldo F, Pereira AMG, Gazzo C, Santos MP, Lopes RGC. Surgical Treatment of Intestinal Endometriosis: Outcomes of Three Different Techniques. <i>Rev Bras Ginecol Obstet</i> 2018;40: 390-396.	Very small prospective study, no pain outcome reported, no comparison
Bridoux V, Roman H, Kianifard B, Vassilief M, Marpeau L, Michot F, Tuech JJ. Combined transanal and laparoscopic approach for the treatment of deep endometriosis infiltrating the rectum. <i>Hum Reprod</i> 2012;27: 418-426.	Data on pain@1y, but no comparison and only 6pts, suspected overlap of data with Roman Fert Steril 2017
Brudie LA, Gaia G, Ahmad S, Finkler NJ, Bigsby GE, Ghurani GB, Kendrick JET, Rakowski JA, Groton JH, Holloway RW. Peri-operative outcomes of patients with stage IV endometriosis undergoing robotic-assisted laparoscopic surgery. <i>J Robot Surg</i> 2012;6: 317-322.	Limitations include the retrospective design and lack of long-term follow-up for recurrence of pain and endometriosis. Furthermore, all data were retrieved from chart review without formal pain-score assessments. Long term analysis of pain relief was not possible in this study because of the referral nature of the practice.
Brunes, M., et al. Impact of hysterectomy on analgesic, psychoactive and neuroactive drug use in women with endometriosis: nationwide cohort study. <i>Bjog</i> , 2020.	Not a relevant addition to the guideline
Burghaus S, Fehm T, Fasching PA, Blum S, Renner SK, Baier F, Brodtkorb T, Fahlbusch C, Findekle S, Haberle L et al. The International Endometriosis Evaluation Program (IEEP Study) - A Systematic Study for Physicians, Researchers and Patients. <i>Geburtshilfe und frauenheilkunde</i> 2016;76: 875-881.	Outcomes presented are not relevant to our question (no information on pain)
Busacca M, Bianchi S, Agnoli B, Candiani M, Calia C, De Marinis S, Vignali M. Follow-up of laparoscopic treatment of stage III-IV endometriosis. <i>J Am Assoc Gynecol Laparosc</i> 1999;6: 55-58.	Extension of the series and longer follow-up should allow us to clarify the role of operative laparoscopy in the management of advanced endometriosis.
Busacca M, Fedele L, Bianchi S, Candiani M, Agnoli B, Raffaelli R, Vignali M. Surgical treatment of recurrent endometriosis: laparotomy versus laparoscopy. <i>Hum Reprod</i> 1998;13: 2271-2274.	More recent/relevant data available
Busacca M, Marana R, Caruana P, Candiani M, Muzii L, Calia C, Bianchi S. Recurrence of ovarian endometrioma after laparoscopic excision. <i>Am J Obstet Gynecol</i> 1999;180: 519-523.	More recent/relevant data available
Busacca M, Vignali M. Ovarian endometriosis: from pathogenesis to surgical treatment. <i>Curr Opin Obstet Gynecol</i> 2003;15: 321-326.	More recent review available
Camanni M, Bonino L, Delpiano EM, Berchiolla P, Migliaretti G, Revelli A, Deltetto F. Laparoscopic conservative management of ureteral endometriosis: a survey of eighty patients submitted to ureterolysis. <i>Reprod Biol Endocrinol</i> 2009;7: 109.	Included in more recent review / more recent data available
Campagnacci R, Perretta S, Guerrieri M, Paganini AM, De Sanctis A, Ciavattini A, Lezoche E. Laparoscopic colorectal resection for endometriosis. <i>Surg Endosc</i> 2005;19: 662-664.	Only a subgroup of patients (with colorectal involvement) are included; very small sample sizes (7 patients are analysed); pain is not analysed as a separate outcome.



Campo S, Campo V, Gambadauro P. Is a positive family history of endometriosis a risk factor for endometrioma recurrence after laparoscopic surgery? <i>Reprod Sci</i> 2014;21: 526-531.	Not relevant for the key question
Candiani, M., et al., Fertility Outcome after CO ₂ Laser Vaporization versus Cystectomy in Women with Ovarian Endometrioma: A Comparative Study. <i>J Minim Invasive Gynecol</i> , 2020.	Outcome PAIN is not included
Cao Q, Lu F, Feng WW, Ding JX, Hua KQ. Comparison of complete and incomplete excision of deep infiltrating endometriosis. <i>Int J Clin Exp Med</i> 2015;8: 21497-21506.	Non-randomised comparison complete versus incomplete surgery, reporting pre- and post-op composite pain scores
Carmona F, Martinez-Zamora A, Gonzalez X, Gines A, Bunesch L, Balasch J. Does the learning curve of conservative laparoscopic surgery in women with rectovaginal endometriosis impair the recurrence rate? <i>Fertil Steril</i> 2009;92: 868-875.	Outcome presented is not relevant to our question (no information on pain)
Carvalho L, Abrao MS, Deshpande A, Falcone T. Robotics as a new surgical minimally invasive approach to treatment of endometriosis: a systematic review. <i>Int J Med Robot</i> 2012;8: 160-165.	Outcomes presented are not relevant to our question (no information on pain)
Cassini D, Cerullo G, Miccini M, Manoochehri F, Ercoli A, Baldazzi G. Robotic hybrid technique in rectal surgery for deep pelvic endometriosis. <i>Surg Innov</i> 2014;21: 52-58.	Not relevant
Catalano GF, Marana R, Caruana P, Muzii L, Mancuso S. Laparoscopy versus microsurgery by laparotomy for excision of ovarian cysts in patients with moderate or severe endometriosis. <i>J Am Assoc Gynecol Laparosc</i> 1996;3: 267-270.	More recent/relevant data available
Ceccaroni M, Ceccarello M, Caleffi G, Clarizia R, Scarperi S, Pastorello M, Molinari A, Ruffo G, Cavalleri S. Total Laparoscopic Ureteroneocystostomy for Ureteral Endometriosis: A Single-Center Experience of 160 Consecutive Patients. <i>J Minim Invasive Gynecol</i> 2019;26: 78-86.	Not relevant
Ceccaroni M, Clarizia R, Bruni F, D'Urso E, Gagliardi ML, Roviglione G, Minelli L, Ruffo G. Nerve-sparing laparoscopic eradication of deep endometriosis with segmental rectal and parametrial resection: the Negrar method. A single-center, prospective, clinical trial. <i>Surg Endosc</i> 2012;26: 2029-2045.	Not relevant
Ceccaroni M, Pontrelli G, Scioscia M, Ruffo G, Bruni F, Minelli L. Nerve-sparing laparoscopic radical excision of deep endometriosis with rectal and parametrial resection. <i>J Minim Invasive Gynecol</i> 2010;17: 14-15.	More recent data available
Ceccaroni, M., et al., Nerve-sparing laparoscopic disc excision of deep endometriosis involving the bowel: a single-center experience on 371 consecutive cases. <i>Surg Endosc</i> , 2020.	Not a relevant addition to the guideline
Ceccaroni, M., et al., Total laparoscopic bladder resection in the management of deep endometriosis: "take it or leave it." Radicality versus persistence. <i>Int Urogynecol J</i> , 2020. 31(8): p. 1683-1690.	Not a relevant addition to the guideline
Ceyhan T, Atay V, Gungor S, Karateke A, Oral O, Baser I. Efficacy of laparoscopically-assisted extracorporeal cystectomy in patients with ovarian endometrioma. <i>J Minim Invasive Gynecol</i> 2006;13: 145-149.	More recent/relevant data available
Chalermchokchareonkit A, Tekasakul P, Chaisitwattana P, Sirimai K, Wahab N. Laparoscopic hysterectomy versus abdominal hysterectomy for severe pelvic endometriosis. <i>Int J Gynaecol Obstet</i> 2012;116: 109-111.	Outcomes presented are not relevant to our question (no information on pain)
Chao, X., et al., Malignant risk of pelvic mass after hysterectomy for adenomyosis or endometriosis. <i>Medicine (Baltimore)</i> , 2020. 99(15): p. e19712.	Not a relevant addition to the guideline
Chapman L, Sharma M, Papalampros P, Gambadauro P, Polyzos D, Papadopoulos N, Magos A. A new technique for temporary ovarian suspension: temporarily displacing the ovaries anterior to the uterus facilitates pelvic side wall access in the laparoscopic treatment of endometriosis. <i>Am J Obstet Gynecol</i> 2007;196: 494.e491-493.	Outcomes presented are not relevant to our question (no information on pain)
Chapron C, Chiodo I, Leconte M, Amsellem-Ouazana D, Chopin N, Borghese B, Dousset B. Severe ureteral endometriosis: the intrinsic type is not so rare after complete surgical exeresis of deep endometriotic lesions. <i>Fertil Steril</i> 2010;93: 2115-2120.	Outcome presented is not relevant to our question (no information on pain)
Chapron C, Dubuisson JB. Laparoscopic management of bladder endometriosis. <i>Acta Obstet Gynecol Scand</i> 1999;78: 887-890.	Outcome presented is not relevant to our question (no information on pain)
Che X, Huang X, Zhang J, Xu H, Zhang X. Is nerve-sparing surgery suitable for deeply infiltrating endometriosis? <i>Eur J Obstet Gynecol Reprod Biol</i> 2014;175: 87-91.	Not relevant
Cheong Y, Tay P, Luk F, Gan HC, Li TC, Cooke I. Laparoscopic surgery for endometriosis: How often do we need to re-operate? <i>J Obstet Gynaecol</i> 2008;28: 82-85.	Study is included in meta-analysis / More recent data available
Chiantera V, Petrillo M, Abesadze E, Sozzi G, Dessole M, Catello Di Donna M, Scambia G, Sehouli J, Mechsner S. Laparoscopic Neuronavigation for Deep Lateral Pelvic Endometriosis: Clinical and Surgical Implications. <i>J Minim Invasive Gynecol</i> 2018;25: 1217-1223.	Outcome presented is not relevant to our question (no information on pain)



Chon SJ, Lee SH, Choi JH, Lee JS. Preoperative risk factors in recurrent endometrioma after primary conservative surgery. <i>Obstet Gynecol Sci</i> 2016;59: 286-294.	Not relevant for the key question
Chopin N, Vieira M, Borghese B, Foulot H, Dousset B, Coste J, Mignon A, Fauconnier A, Chapron C. Operative management of deeply infiltrating endometriosis: results on pelvic pain symptoms according to a surgical classification. <i>J Minim Invasive Gynecol</i> 2005;12: 106-112.	More relevant / higher quality data available for the outcomes included in the PICO question
Ciavattini A, Montik N, Baiocchi R, Cucculelli N, Tranquilli AL. Does previous surgery influence the asymmetric distribution of endometriotic lesions? <i>Gynecol Endocrinol</i> 2004;19: 253-258.	More recent/relevant data available
Clark, N.V., et al., Laparoscopic treatment of endometriosis and predictors of major complications: A retrospective cohort study. <i>Acta Obstet Gynecol Scand</i> , 2020. 99(3): p. 317-323.	Not a relevant addition to the guideline
Coccia ME, Rizzello F, Palagiano A, Scarselli G. Long-term follow-up after laparoscopic treatment for endometriosis: multivariate analysis of predictive factors for recurrence of endometriotic lesions and pain. <i>Eur J Obstet Gynecol Reprod Biol</i> 2011;157: 78-83.	The study was to assess predictive factors for recurrence of endometriotic lesions and pain and part of it that could be used to answer our question by extracting only part of the study reduces the power of the results. In addition there exclusions of cases with postop persistent pain therefore renders the study of no use in our question
Collinet P, Leguevaque P, Neme RM, Cela V, Barton-Smith P, Hebert T, Hanssens S, Nishi H, Nisolle M. Robot-assisted laparoscopy for deep infiltrating endometriosis: international multicentric retrospective study. <i>Surg Endosc</i> 2014;28: 2474-2479.	Outcome presented is not relevant to our question (no information on pain)
Comptour A, Chauvet P, Canis M, Gremeau AS, Pouly JL, Rabischong B, Pereira B, Bourdel N. Patient Quality of Life and Symptoms after Surgical Treatment for Endometriosis. <i>J Minim Invasive Gynecol</i> 2019;26: 717-726.	Not relevant
Comptour, A., et al., Long-Term Evolution of Quality of Life and Symptoms Following Surgical Treatment for Endometriosis: Different Trajectories for Which Patients? <i>J Clin Med</i> , 2020. 9(8).	Not relevant
Coronado C, Franklin RR, Lotze EC, Bailey HR, Valdes CT. Surgical treatment of symptomatic colorectal endometriosis. <i>Fertil Steril</i> 1990;53: 411-416.	More relevant / higher quality data available for the outcomes included in the PICO question
Crosignani PG, Vercellini P, Biffignandi F, Costantini W, Cortesi I, Imperato E. Laparoscopy versus laparotomy in conservative surgical treatment for severe endometriosis. <i>Fertil Steril</i> 1996;66: 706-711.	Comparison no longer relevant (laparoscopy compared to laparotomy)
Cutner AS, Lazanakis MS, Saridogan E. Laparoscopic ovarian suspension to facilitate surgery for advanced endometriosis. <i>Fertil Steril</i> 2004;82: 702-704.	Outcomes presented are not relevant to our question (no information on pain)
da Cunha, F.L., et al., Laparoscopic treatment of ureteral endometriosis: a systematic review. <i>J Minim Invasive Gynecol</i> , 2020.	No comparison
Daniels J, Gray R, Hills RK, Latthe P, Buckley L, Gupta J, Selman T, Adey E, Xiong T, Champaneria R et al. Laparoscopic uterosacral nerve ablation for alleviating chronic pelvic pain: a randomized controlled trial. <i>JAMA</i> 2009;302: 955-961.	More recent/relevant data available
Darai E, Bazot M, Rouzier R, Houry S, Dubernard G. Outcome of laparoscopic colorectal resection for endometriosis. <i>Curr Opin Obstet Gynecol</i> 2007;19: 308-313.	More recent review available
Darai E, Marpeau O, Thomassin I, Dubernard G, Barranger E, Bazot M. Fertility after laparoscopic colorectal resection for endometriosis: preliminary results. <i>Fertil Steril</i> 2005;84: 945-950.	small sample size
Darai E, Thomassin I, Barranger E, Detchev R, Cortez A, Houry S, Bazot M. Feasibility and clinical outcome of laparoscopic colorectal resection for endometriosis. <i>Am J Obstet Gynecol</i> 2005;192: 394-400.	small population
Darwish B, Roman H. Surgical treatment of deep infiltrating rectal endometriosis: in favor of less aggressive surgery. <i>Am J Obstet Gynecol</i> 2016;215: 195-200.	Clinical opinion
Darwish B, Stochino-Loi E, Pasquier G, Dugardin F, Defortescu G, Abo C, Roman H. Surgical Outcomes of Urinary Tract Deep Infiltrating Endometriosis. <i>J Minim Invasive Gynecol</i> 2017;24: 998-1006.	review/opinion paper
d'Avout-Fourdinier, P., et al., Posterior rectal pouch after large full-thickness disc excision of deep endometriosis infiltrating the low/mid rectum and relationship with digestive functional outcome. <i>J Gynecol Obstet Hum Reprod</i> , 2020. 49(7): p. 101792.	Not a relevant addition to the guideline



de Almeida A, Fernandes LF, Averbach M, Abrao MS. Disc resection is the first option in the management of rectal endometriosis for unifocal lesions with less than 3 centimeters of longitudinal diameter. <i>Surg Technol Int</i> 2014;24: 243-248.	Expert opinion
De Nardi P, Osman N, Ferrari S, Carlucci M, Persico P, Staudacher C. Laparoscopic treatment of deep pelvic endometriosis with rectal involvement. <i>Dis Colon Rectum</i> 2009;52: 419-424.	Very small study population (n=10)
De Neef A, Cadiere GB, Bourgeois P, Barbieux R, Dapri G, Fastrez M. Fluorescence of Deep Infiltrating Endometriosis During Laparoscopic Surgery: A Preliminary Report on 6 Cases. <i>Surg Innov</i> 2018;25: 450-454.	Outcome presented is not relevant to our question (no information on pain)
Deb S, Sahu B, Deen S, Newman C, Powell M. Comparison of tissue effects quantified histologically between PlasmaJet coagulator and Helica thermal coagulator. <i>Archives of gynecology and obstetrics</i> 2012;286: 399-402.	Outcomes presented are not relevant to our question (no information on pain)
Delbos L, Bouet PE, Catala L, Lefebvre C, Teyssedou C, Descamps P, Legendre G. Surgery using plasma energy for deep endometriosis: A quality of life assessment. <i>J Gynecol Obstet Hum Reprod</i> 2018;47: 359-364.	Intervention not included in the PICO question (PLASMAJET)
Di Donato N, Montanari G, Benfenati A, Monti G, Leonardi D, Bertoldo V, Facchini C, Raimondo D, Villa G, Seracchioli R. Sexual function in women undergoing surgery for deep infiltrating endometriosis: a comparison with healthy women. <i>J Fam Plann Reprod Health Care</i> 2015;41: 278-283.	Not relevant
Di Maida, F., et al., Robotic treatment for urinary tract endometriosis: preliminary results and surgical details in a high-volume single-Institutional cohort study. <i>Surg Endosc</i> , 2020. 34(7): p. 3236-3242.	Not a relevant addition to the guideline
Di Prospero F, Micucci G. Is operative laparoscopy safe in ovarian endometriosis? <i>Reprod Biomed Online</i> 2009;18: 167.	More recent/relevant data available
Dimitrijevic D, Vasiljevic M, Anicic R, Brankovic S, Ristic A, Devic A. Recurrence rate of ovarian endometriosis in patients treated with laparoscopic surgery and postoperative suppressive therapy. <i>Clin Exp Obstet Gynecol</i> 2015;42: 339-343.	Not relevant for the key question (post-op medical treatment)
Dousset B, Leconte M, Borghese B, Millischer AE, Roseau G, Arkwright S, Chapron C. Complete surgery for low rectal endometriosis: long-term results of a 100-case prospective study. <i>Ann Surg</i> 2010;251: 887-895.	More recent data/reviews available
Dubernard G, Piketty M, Rouzier R, Houry S, Bazot M, Darai E. Quality of life after laparoscopic colorectal resection for endometriosis. <i>Hum Reprod</i> 2006;21: 1243-1247.	More relevant / higher quality data available for the outcomes included in the PICO question
Duffy JM, Arambage K, Correa FJ, Olive D, Farquhar C, Garry R, Barlow DH, Jacobson TZ. Laparoscopic surgery for endometriosis. <i>Cochrane Database Syst Rev</i> 2014: Cd011031.	More recent meta-analysis available
Dulemba JF, Pelzel C, Hubert HB. Retrospective analysis of robot-assisted versus standard laparoscopy in the treatment of pelvic pain indicative of endometriosis. <i>J Robot Surg</i> 2013;7: 163-169.	Study is included in meta-analysis / More recent data available
El-Din Shawki H. The efficacy of laparoscopic uterosacral nerve ablation (LUNA) in the treatment of unexplained chronic pelvic pain: a randomized controlled trial. <i>Gynecological surgery</i> 2011;8: 31-39.	More recent/relevant data available
Endo, Y., et al., Efficacy of Laparoscopic Partial Cystectomy with a Transurethral Resectoscope in Patients with Bladder Endometriosis: See-Through Technique. <i>Urol Int</i> , 2020. 104(7-8): p. 546-550.	Not a relevant addition to the guideline
English J, Sajid MS, Lo J, Hudelist G, Baig MK, Miles WA. Limited segmental rectal resection in the treatment of deeply infiltrating rectal endometriosis: 10 years' experience from a tertiary referral unit. <i>Gastroenterol Rep (Oxf)</i> 2014;2: 288-294.	The paper specifically concentrates on the examination of pain relief after the intervention, with objective and widely used questionnaires and methods.
Erdem S, Imboden S, Papadia A, Lanz S, Mueller MD, Gloor B, Wormi M. Functional Outcomes After Rectal Resection for Deep Infiltrating Pelvic Endometriosis: Long-term Results. <i>Dis Colon Rectum</i> 2018;61: 733-742.	More relevant / higher quality data available for the outcomes included in the PICO question
Fedele L, Bianchi S, Zanconato G, Bergamini V, Berlanda N, Carmignani L. Long-term follow-up after conservative surgery for bladder endometriosis. <i>Fertil Steril</i> 2005;83: 1729-1733.	Outcome presented is not relevant to our question (no information on pain)
Fedele L, Bianchi S, Zanconato G, Berlanda N, Borruto F, Frontino G. Tailoring radicality in demolitive surgery for deeply infiltrating endometriosis. <i>Am J Obstet Gynecol</i> 2005;193: 114-117.	Outcome presented is not relevant to our question (no information on pain)
Fedele L, Bianchi S, Zanconato G, Bettoni G, Gotsch F. Long-term follow-up after conservative surgery for rectovaginal endometriosis. <i>Am J Obstet Gynecol</i> 2004;190: 1020-1024.	Outcome presented is not relevant to our question (no information on pain)



Ferrero S, Abbamonte LH, Giordano M, Ragni N, Remorgida V. Deep dyspareunia and sex life after laparoscopic excision of endometriosis. <i>Hum Reprod</i> 2007;22: 1142-1148.	Study is included in meta-analysis / More recent data available
Ferrero S, Venturini PL, Gillott DJ, Remorgida V, Leone Roberti Maggiore U. Hemostasis by bipolar coagulation versus suture after surgical stripping of bilateral ovarian endometriomas: a randomized controlled trial. <i>Journal of minimally invasive gynecology</i> 2012;19: 722-730.	not relevant for the key question
Fleisch MC, Hepp P, Kaleta T, Schulte Am Esch J, Rein D, Fehm T, Beyer I. Feasibility and first long-term results after laparoscopic rectal segment resection and vaginal specimen retrieval for deep infiltrating endometriosis. <i>Arch Gynecol Obstet</i> 2014;289: 1241-1247.	Extremely small sample size (4 patients)
Fouda UM, Elsetohy KA, Elshaer HS. Barbed Versus Conventional Suture: A Randomized Trial for Suturing the Endometrioma Bed After Laparoscopic Excision of Ovarian Endometrioma. <i>J Minim Invasive Gynecol</i> 2016;23: 962-968.	not relevant for the key question
Freire MJ, Dinis PJ, Medeiros R, Sousa L, Aguas F, Figueiredo A. Deep Infiltrating Endometriosis-Urinary Tract Involvement and Predictive Factors for Major Surgery. <i>Urology</i> 2017;108: 65-70.	Outcomes presented is not relevant to our question
Frenna V, Santos L, Ohana E, Bailey C, Wattiez A. Laparoscopic management of ureteral endometriosis: our experience. <i>J Minim Invasive Gynecol</i> 2007;14: 169-171.	Included in more recent review / more recent data available
Fritzer N, Hudelist G. Love is a pain? Quality of sex life after surgical resection of endometriosis: a review. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;209: 72-76.	Not relevant for the key question
Fritzer N, Tammaa A, Haas D, Oppelt P, Renner S, Hornung D, Wolfner M, Ulrich U, Hudelist G. When sex is not on fire: a prospective multicentre study evaluating the short-term effects of radical resection of endometriosis on quality of sex life and dyspareunia. <i>Eur J Obstet Gynecol Reprod Biol</i> 2016;197: 36-40.	Study is included in meta-analysis / More recent data available
Garcia-Tejedor, A., et al., Ethanol Sclerotherapy versus Laparoscopic Surgery for Endometrioma Treatment: A Prospective, Multicenter, Cohort Pilot Study. <i>J Minim Invasive Gynecol</i> , 2020. 27(5): p. 1133-1140.	Pilot study
Garry R. The effectiveness of laparoscopic excision of endometriosis. <i>Curr Opin Obstet Gynecol</i> 2004;16: 299-303.	this a summary of findings from different studies up to 2004
Gehrich AP, Aseff JN, Iglesia CB, Fischer JR, Buller JL. Chronic urinary retention and pelvic floor hypertonicity after surgery for endometriosis: a case series. <i>Am J Obstet Gynecol</i> 2005;193: 2133-2137.	Outcomes presented are not relevant to our question (no information on pain)
Ghafarnejad M, Akrami M, Davari-Tanha F, Adabi K, Nekuie S. Vasopressin effect on operation time and frequency of electrocauterization during laparoscopic stripping of ovarian endometriomas: a randomized controlled clinical trial. <i>Journal of reproduction and infertility</i> 2014;15: 199-204.	not relevant for the key question
Ghezzi F, Cromi A, Bergamini V, Serati M, Sacco A, Mueller MD. Outcome of laparoscopic ureterolysis for ureteral endometriosis. <i>Fertil Steril</i> 2006;86: 418-422.	Included in more recent review / more recent data available
Ghezzi F, Cromi A, Ciravolo G, Rampinelli F, Braga M, Boni L. A new laparoscopic-transvaginal technique for rectosigmoid resection in patients with endometriosis. <i>Fertil Steril</i> 2008;90: 1964-1968.	Not relevant
Giampaolino P, Bifulco G, Di Spiezio Sardo A, Mercorio A, Bruzzese D, Di Carlo C. Endometrioma size is a relevant factor in selection of the most appropriate surgical technique: a prospective randomized preliminary study. <i>Eur J Obstet Gynecol Reprod Biol</i> 2015;195: 88-93.	Not relevant for the key question
Giannini A, Pisaneschi S, Malacarne E, Cela V, Melfi F, Perutelli A, Simoncini T. Robotic Approach to Ureteral Endometriosis: Surgical Features and Perioperative Outcomes. <i>Front Surg</i> 2018;5: 51.	Outcome presented is not relevant to our question (no information on pain)
Gornes, H., et al., Identification of a group with high risk of postoperative complications after deep bowel endometriosis surgery: a retrospective study on 164 patients. <i>Arch Gynecol Obstet</i> , 2020. 302(2): p. 383-391.	Not a relevant addition to the guideline
Granese R, Candiani M, Perino A, Venezia R, Cucinella G. Bladder endometriosis: laparoscopic treatment and follow-up. <i>Eur J Obstet Gynecol Reprod Biol</i> 2008;140: 114-117.	Outcome presented is not relevant to our question (no information on pain)
Guyer C, Moors A, Loudon K. An audit of conservative surgery for endometriosis in a district general hospital 1995-1998. <i>J Obstet Gynaecol</i> 2000;20: 514-516.	More recent/relevant data available
Hidaka T, Nakashima A, Hashimoto Y, Saito S. Effects of laparoscopic radical surgery for deep endometriosis on endometriosis-related pelvic pain. <i>Minim Invasive Ther Allied Technol</i> 2012;21: 355-361.	More relevant / higher quality data available for the outcomes included in the PICO question
Hidari T, Hirata T, Arakawa T, Koga K, Neriishi K, Fukuda S, Nakazawa A, Nagashima N, Ma S, Sun H et al. Contralateral ovarian endometrioma recurrence after unilateral salpingo-oophorectomy. <i>BMC Womens Health</i> 2019;19: 59.	Not relevant for the key question



Houtmeyers P, Ceelen W, Gillardin JM, Dhondt M, Pattyn P. Surgery for gastrointestinal endometriosis: indications and results. <i>Acta Chir Belg</i> 2006;106: 413-416.	Small group of patients, huge variety in type of surgery, not only resectom endometriosis
Huang YH, Hsieh CL, Shiau CS, Lo LM, Liou JD, Chang MY. Suitable timing of surgical intervention for ruptured ovarian endometrioma. <i>Taiwan J Obstet Gynecol</i> 2014;53: 220-223.	Not relevant for the key question
Hudelist G, Aas-Eng MK, Birsan T, Berger F, Sevelde U, Kirchner L, Salama M, Dauser B. Pain and fertility outcomes of nerve-sparing, full-thickness disk or segmental bowel resection for deep infiltrating endometriosis-A prospective cohort study. <i>Acta Obstet Gynecol Scand</i> 2018;97: 1438-1446.	No direct comparison, but before-after study, >90% would repeat surgery
Hung, Z.C., et al., Robot-assisted laparoscopic ureteral reconstruction for ureter endometriosis: Case series and literature review. <i>J Chin Med Assoc</i> , 2020. 83(3): p. 288-294.	Not a relevant addition to the guideline
Ip, J.C.Y., et al., Rectal disc resection improves stool frequency in patients with deep infiltrating endometriosis: A prospective study. <i>Aust N Z J Obstet Gynaecol</i> , 2020. 60(3): p. 454-458.	No comparison
Jayot A, Bendifallah S, Abo C, Arfi A, Owen C, Darai E. Feasibility, complications and recurrence following discoid resection for colorectal endometriosis: a series of 93 cases. <i>J Minim Invasive Gynecol</i> 2019.	No data on pain
Jayot A, Nyangoh Timoh K, Bendifallah S, Ballester M, Darai E. Comparison of Laparoscopic Discoid Resection and Segmental Resection for Colorectal Endometriosis Using a Propensity Score Matching Analysis. <i>J Minim Invasive Gynecol</i> 2018;25: 440-446.	No data on pain/recurrence
Jedrzejczak P, Sokalska A, Spaczynski RZ, Duleba AJ, Pawelczyk L. Effects of presacral neurectomy on pelvic pain in women with and without endometriosis. <i>Ginekol Pol</i> 2009;80: 172-178.	More recent/relevant data available
Jelenc F, Ribic-Pucelj M, Juvan R, Kobal B, Sinkovec J, Salamun V. Laparoscopic rectal resection of deep infiltrating endometriosis. <i>J Laparoendosc Adv Surg Tech A</i> 2012;22: 66-69.	No data on pain
Jia SZ, Leng JH, Shi JH, Sun PR, Lang JH. Health-related quality of life in women with endometriosis: a systematic review. <i>Journal of ovarian research</i> 2012;5.	More recent/relevant data available
Johnson N, Wilson M, Farquhar C. Surgical pelvic neuroablation for chronic pelvic pain: a systematic review. <i>Gynaecological endoscopy</i> 2000;9: 351-361.	More recent/relevant data available
Jones KD, Haines P, Sutton CJ. Long-term follow-up of a controlled trial of laser laparoscopy for pelvic pain. <i>JSL S : journal of the society of laparoendoscopic surgeons</i> 2001;5: 111-115.	More relevant / higher quality data available for the outcomes included in the PICO question
Jones KD, Sutton C. Patient satisfaction and changes in pain scores after ablative laparoscopic surgery for stage III-IV endometriosis and endometriotic cysts. <i>Fertil Steril</i> 2003;79: 1086-1090.	Not relevant
Jones KD, Wright JT. Ablative or excisional laparoscopic surgery for endometriotic cysts: resolving the issue. <i>J Am Assoc Gynecol Laparosc</i> 2004;11: 293-296.	More recent review available
Kaiser A, Kopf A, Gericke C, Bartley J, Mechsner S. The influence of peritoneal endometriotic lesions on the generation of endometriosis-related pain and pain reduction after surgical excision. <i>Arch Gynecol Obstet</i> 2009;280: 369-373.	Not relevant
Kaloo PD, Cooper MJ, Reid G. A prospective multi-centre study of major complications experienced during excisional laparoscopic surgery for endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2006;124: 98-100.	Not relevant for the key question
Kanno K, Andou M, Oyama K, Yanai S, Shirane A, Nakajima S, Ebisawa K, Hada T, Ota Y. Laparoscopic Ureteral Reimplantation for Obstructive Megaureter with Deeply Infiltrating Endometriosis. <i>J Minim Invasive Gynecol</i> 2018;25: 372-373.	Likely not presenting outcome that is relevant to our research question
Karadağ, C., et al., Effects of laparoscopic cystectomy on ovarian reserve in patients with endometrioma and dermoid cyst. <i>Turk J Obstet Gynecol</i> , 2020. 17(1): p. 15-20.	The comparison between the groups is probably not relevant for the guideline
Kargar, R., et al., Transversus abdominis plane block under laparoscopic guide versus port-site local anaesthetic infiltration in laparoscopic excision of endometriosis: a double-blind randomised placebo-controlled trial. <i>BJOG</i> , 2019. 126(5): p. 647-654.	Not relevant
Kavallaris A, Banz C, Chalvatzas N, Hornemann A, Luedders D, Diedrich K, Bohlmann M. Laparoscopic nerve-sparing surgery of deep infiltrating endometriosis: description of the technique and patients' outcome. <i>Arch Gynecol Obstet</i> 2011;284: 131-135.	More recent data/reviews available
Kavallaris A, Chalvatzas N, Hornemann A, Banz C, Diedrich K, Agic A. 94 months follow-up after laparoscopic assisted vaginal resection of septum rectovaginale and rectosigmoid in women with deep infiltrating endometriosis. <i>Arch Gynecol Obstet</i> 2011;283: 1059-1064.	Lack of validated questionnaires and high number of lost to FU, also there are no data before operation



Kavallaris A, Mebes I, Evagyelinos D, Dafopoulos A, Beyer DA. Follow-up of dysfunctional bladder and rectum after surgery of a deep infiltrating rectovaginal endometriosis. Arch Gynecol Obstet 2011;283: 1021-1026.	no comparison and mainly focussing on urological outcome
Khazali S, Gorgin A, Mohazzab A, Kargar R, Padmehr R, Shadjoo K, Minas V. Laparoscopic excision of deeply infiltrating endometriosis: a prospective observational study assessing perioperative complications in 244 patients. Arch Gynecol Obstet 2019;299: 1619-1626.	Outcome presented is not relevant to our question
Kim ML, Kim JM, Seong SJ, Lee SY, Han M, Cho YJ. Recurrence of ovarian endometrioma after second-line, conservative, laparoscopic cyst enucleation. Am J Obstet Gynecol 2014;210: 216.e211-216.	Not relevant for the key question
Klugsberger B, Shamiyeh A, Oppelt P, Jabkowski C, Schimetta W, Haas D. Clinical Outcome after Colonic Resection in Women with Endometriosis. Biomed Res Int 2015;2015: 514383.	More relevant / higher quality data available for the outcomes included in the PICO question
Koga K, Takemura Y, Osuga Y, Yoshino O, Hirota Y, Hirata T, Morimoto C, Harada M, Yano T, Taketani Y. Recurrence of ovarian endometrioma after laparoscopic excision. Hum Reprod 2006;21: 2171-2174.	More recent/relevant data available
Kondo W, Bourdel N, Jardon K, Tamburro S, Cavoli D, Matsuzaki S, Botchorishvili R, Rabischong B, Poutly JL, Mage G et al. Comparison between standard and reverse laparoscopic techniques for rectovaginal endometriosis. Surg Endosc 2011;25: 2711-2717.	Outcome presented is not relevant to our question (no information on pain)
Kondo W, Ribeiro R, Zomer MT. Fast-track surgery in intestinal deep infiltrating endometriosis. J Minim Invasive Gynecol 2014;21: 285-290.	No data on pain
Koninckx PR, Timmermans B, Meuleman C, Penninckx F. Complications of CO2-laser endoscopic excision of deep endometriosis. Hum Reprod 1996;11: 2263-2268.	Outcome presented is not relevant to our question (no information on pain)
Koo, J.H., et al., Comparison of the therapeutic efficacy and ovarian reserve between catheter-directed sclerotherapy and surgical excision for ovarian endometrioma. Eur Radiol, 2020.	Ethanol Sclerotherapy versus Laparoscopic Surgery
Kossi J, Setala M, Enholm B, Luostarinen M. The early outcome of laparoscopic sigmoid and rectal resection for endometriosis. Colorectal Dis 2010;12: 232-235.	Pain is not analysed as an outcome.
Kossi J, Setala M, Makinen J, Harkki P, Luostarinen M. Quality of life and sexual function 1 year after laparoscopic rectosigmoid resection for endometriosis. Colorectal Dis 2013;15: 102-108.	A significant proportion of the patients underwent the operation (24%) didn't respond to the follow-up questionnaire. Number of patients are low! (26). The follow-up time is short (1 yr)
Kostrzewa, M., et al., One-year follow-up of ovarian reserve by three methods in women after laparoscopic cystectomy for endometrioma and benign ovarian cysts. Int J Gynaecol Obstet, 2019. 146(3): p. 350-356.	The comparison between the groups is probably not relevant for the guideline
Kucukbas M, Kurek Eken M, Ilhan G, Senol T, Herkiloglu D, Kapudere B. Which factors are associated with the recurrence of endometrioma after cystectomy? J Obstet Gynaecol 2018;38: 372-376.	not relevant for the key question
Lagana AS, Vitale SG, Trovato MA, Palmara VI, Rapisarda AM, Granese R, Sturlese E, De Dominicis R, Alecci S, Padula F et al. Full-Thickness Excision versus Shaving by Laparoscopy for Intestinal Deep Infiltrating Endometriosis: Rationale and Potential Treatment Options. Biomed Res Int 2016;2016: 3617179.	Narrative review
Landi S, Ceccaroni M, Perutelli A, Allodi C, Barbieri F, Fiaccavento A, Ruffo G, McVeigh E, Zanolli L, Minelli L. Laparoscopic nerve-sparing complete excision of deep endometriosis: is it feasible? Hum Reprod 2006;21: 774-781.	More relevant / higher quality data available for the outcomes included in the PICO question
Landi S, Mereu L, Indraccolo U, Favero R, Fiaccavento A, Zaccoletti R, Clarizia R, Barbieri F. Laparoscopic excision of endometriosis may require unilateral parametrectomy. Jsls 2009;13: 496-503.	This is a retrospective study on specific excision approach to parametrial endo assessing bowel, bladder, sexual function after surgery with might affect the hypogastric plexus. Pain component is also addressed but the study is small (12 patients) to draw general conclusions
Landi S, Pontrelli G, Surico D, Ruffo G, Benini M, Soriano D, Mereu L, Minelli L. Laparoscopic disk resection for bowel endometriosis using a circular stapler and a new endoscopic method to control postoperative bleeding from the stapler line. J Am Coll Surg 2008;207: 205-209.	Small group, no data on pain, just feasibility study



Latthe P, Khan KS, Gupta JK, Daniels J, Hills RK, Gray R, Lilford R. A randomised controlled trial to assess the efficacy of Laparoscopic Uterosacral Nerve Ablation (LUNA) in the treatment of chronic pelvic pain: the trial protocol. <i>BMC women's health</i> 2003;3.	Trial protocol
Lawrie TA, Liu H, Lu D, Dowswell T, Song H, Wang L, Shi G. Robot-assisted surgery in gynaecology. <i>Cochrane Database of Systematic Reviews</i> 2019.	Relevant patients are not included - paper not on endometriosis
Lee JH, Choi JS, Jeon SW, Son CE, Bae JW, Hong JH, Lee KW, Lee YS. Laparoscopic incidental appendectomy during laparoscopic surgery for ovarian endometrioma. <i>Am J Obstet Gynecol</i> 2011;204: 28.e21-25.	not relevant for the key question
Lee, H.J., J.S. Lee, and Y.S. Lee, Comparison of serum antimüllerian hormone levels after robotic-assisted vs. laparoscopic approach for ovarian cystectomy in endometrioma. <i>Eur J Obstet Gynecol Reprod Biol</i> , 2020. 249: p. 9-13.	Not a relevant addition to the guideline
Leonardi, M., et al., When to Do Surgery and When Not to Do Surgery for Endometriosis: A Systematic Review and Meta-analysis. <i>J Minim Invasive Gynecol</i> , 2020. 27(2): p. 390-407.e3.	Not a relevant addition to the guideline
Lermann J, Topal N, Adler W, Hildebrandt T, Renner SP, Beckmann MW, Burghaus S. Major and minor complications after resection without bowel resection for deeply infiltrating endometriosis. <i>Arch Gynecol Obstet</i> 2018;298: 991-999.	Outcome presented is not relevant to our question (no information on pain)
Lermann J, Topal N, Renner SP, Beckmann MW, Burghaus S, Adler W, Heindl F. Comparison of preoperative and postoperative sexual function in patients with deeply infiltrating endometriosis with and without bowel resection. <i>Eur J Obstet Gynecol Reprod Biol</i> 2019;239: 21-29.	No data on pain, or recurrence, although important data on sexual function
Li J, Yao X, Zhang J. Treatment of pelvic cavity pain caused by endometriosis with excision of invaded sacrospinous ligament. <i>Pak J Med Sci</i> 2018;34: 1200-1203.	Not relevant for the key question
Li YH, De Vries B, Cooper M, Krishnan S. Bowel and bladder function after resection of deeply infiltrating endometriosis. <i>Aust N Z J Obstet Gynaecol</i> 2014;54: 218-224.	No data on pain
Lim PC, Kang E, Park do H. Robot-assisted total intracorporeal low anterior resection with primary anastomosis and radical dissection for treatment of stage IV endometriosis with bowel involvement: morbidity and its outcome. <i>J Robot Surg</i> 2011;5: 273-278.	Not relevant
Litta P, Saccardi C, D'Agostino G, Florio P, De Zorzi L, Bianco MD. Combined transurethral approach with Versapoint((R)) and laparoscopic treatment in the management of bladder endometriosis: technique and 12 months follow-up. <i>Surg Endosc</i> 2012;26: 2446-2450.	Outcome presented is not relevant to our question
Liu YC, Li YC, Kuo HH, Wang CJ, Wu KY. The use of fibrin sealant (Tisseel) in laparoscopic excision of ovarian endometrioma. <i>Taiwan J Obstet Gynecol</i> 2017;56: 342-345.	Not relevant for the key question
Lockyer, E.K., et al., Treatment of ovarian endometriomas using plasma energy in endometriosis surgery: effect on pelvic pain, return to work, pregnancy and cyst recurrence. <i>Facts Views Vis Obgyn</i> , 2019. 11(1): p. 49-55.	Not a relevant addition to the guideline
Low WY, Edelmann RJ, Sutton C. Short term psychological outcome of surgical intervention for endometriosis. <i>Br J Obstet Gynaecol</i> 1993;100: 191-192.	short article with no control group and many data missing eg staging
Lusuardi L, Hager M, Sieberer M, Schatz T, Kloss B, Hruby S, Jeschke S, Janetschek G. Laparoscopic treatment of intrinsic endometriosis of the urinary tract and proposal of a treatment scheme for ureteral endometriosis. <i>Urology</i> 2012;80: 1033-1038.	Included in more recent review / more recent data available
Luu TH, Uy-Kroh MJ. New Developments in Surgery for Endometriosis and Pelvic Pain. <i>Clin Obstet Gynecol</i> 2017;60: 245-251.	Overview of developments covered in more recent reviews
MacDonald SR, Klock SC, Milad MP. Long-term outcome of nonconservative surgery (hysterectomy) for endometriosis-associated pain in women <30 years old. <i>Am J Obstet Gynecol</i> 1999;180: 1360-1363.	Study is included in meta-analysis / More recent data available
Magrina JF, Espada M, Kho RM, Cetta R, Chang YH, Magtibay PM. Surgical Excision of Advanced Endometriosis: Perioperative Outcomes and Impacting Factors. <i>J Minim Invasive Gynecol</i> 2015;22: 944-950.	Outcome presented is not relevant to our question (no information on pain)
Maher P, Wood C, Hill D. Excision of endometriosis in the pouch of Douglas by combined laparovaginal surgery using the Maher abdominal elevator. <i>J Am Assoc Gynecol Laparosc</i> 1995;2: 199-202.	this is about a specific technique with good outcomes but no comparative measure
Malzoni M, Di Giovanni A, Exacoustos C, Lannino G, Capece R, Perone C, Rasile M, Iuzzolino D. Feasibility and Safety of Laparoscopic-Assisted Bowel Segmental Resection for Deep Infiltrating Endometriosis: A Retrospective Cohort Study With Description of Technique. <i>J Minim Invasive Gynecol</i> 2016;23: 512-525.	Not relevant
Mangler M, Herbstleb J, Mechsner S, Bartley J, Schneider A, Kohler C. Long-term follow-up and recurrence rate after mesorectum-sparing bowel resection among women with rectovaginal endometriosis. <i>Int J Gynaecol Obstet</i> 2014;125: 266-269.	Pain as an outcome was not analysed.



Mangler M, Loddenkemper C, Lanowska M, Bartley J, Schneider A, Kohler C. Histopathology-based combined surgical approach to rectovaginal endometriosis. <i>Int J Gynaecol Obstet</i> 2008;103: 59-64.	Outcomes presented are not relevant to our question (no information on pain)
Marcellin L, Morin C, Santulli P, Marzouk P, Bourret A, Dousset B, Borghese B, Chapron C. History of Uterine Surgery Is Not Associated With an Increased Severity of Bladder Deep Endometriosis. <i>J Minim Invasive Gynecol</i> 2016;23: 1130-1137.	Outcomes presented is not relevant to our question
Martin DC. Hysterectomy for treatment of pain associated with endometriosis. <i>J Minim Invasive Gynecol</i> 2006;13: 566-572.	Analysis of studies published until 2006
Marty N, Touleimat S, Moatassim-Drissa S, Millochou JC, Vallee A, Stochino Loi E, Desnyder E, Roman H. Rectal Shaving Using Plasma Energy in Deep Infiltrating Endometriosis of the Rectum: Four Years of Experience. <i>J Minim Invasive Gynecol</i> 2017;24: 1121-1127.	No data on pain or recurrence rate, although significant improvement in KESS, GIQLI and Wexner scores; but high number lost to F.U.
Matorras R, Elorriaga MA, Pijoan JI, Ramon O, Rodriguez-Escudero FJ. Recurrence of endometriosis in women with bilateral adnexectomy (with or without total hysterectomy) who received hormone replacement therapy. <i>Fertil Steril</i> 2002;77: 303-308.	Not relevant for the key question
Matsuzaki S, Houle C, Darcha C, Pouly JL, Mage G, Canis M. Analysis of risk factors for the removal of normal ovarian tissue during laparoscopic cystectomy for ovarian endometriosis. <i>Hum Reprod</i> 2009;24: 1402-1406.	not relevant for the key question
Maul LV, Morrision JE, Schollmeyer T, Alkatout I, Mettler L. Surgical therapy of ovarian endometrioma: recurrence rates and pregnancy rates. <i>Jsls</i> 2014;18.	Not relevant
Maytham GD, Dowson HM, Levy B, Kent A, Rockall TA. Laparoscopic excision of rectovaginal endometriosis: report of a prospective study and review of the literature. <i>Colorectal Dis</i> 2010;12: 1105-1112.	Prospective observational study, not a review
Melnyk A, Rindos NB, El Khoudary SR, Lee T. Comparison of Laparoscopic Hysterectomy in Patients with Endometriosis with and without an Obliterated Cul-De-Sac. <i>J Minim Invasive Gynecol</i> 2019.	Not relevant
Mereu L, Florio P, Carri G, Pontis A, Petraglia F, Mencaglia L. Clinical outcomes associated with surgical treatment of endometrioma coupled with resection of the posterior broad ligament. <i>Int J Gynaecol Obstet</i> 2012;116: 57-60.	not relevant for the key question
Mereu L, Gagliardi ML, Clarizia R, Mainardi P, Landi S, Minelli L. Laparoscopic management of ureteral endometriosis in case of moderate-severe hydroureteronephrosis. <i>Fertil Steril</i> 2010;93: 46-51.	Included in more recent review / more recent data available
Mereu L, Ruffo G, Landi S, Barbieri F, Zaccocchetti R, Fiaccavento A, Stepniewska A, Pontrelli G, Minelli L. Laparoscopic treatment of deep endometriosis with segmental colorectal resection: short-term morbidity. <i>J Minim Invasive Gynecol</i> 2007;14: 463-469.	No data on pain
Meuleman C, Tomassetti C, D'Hooghe TM. Clinical outcome after laparoscopic radical excision of endometriosis and laparoscopic segmental bowel resection. <i>Curr Opin Obstet Gynecol</i> 2012;24: 245-252.	narrative review based on own data
Milochou JC, Stochino-Loi E, Darwish B, Abo C, Coget J, Chati R, Tuech JJ, Roman H. Multiple Nodule Removal by Disc Excision and Segmental Resection in Multifocal Colorectal Endometriosis. <i>J Minim Invasive Gynecol</i> 2018;25: 139-146.	No data on pain or recurrence rate, although significant improvement in KESS, GIQLI; but high number lost to F.U.!
Milone M, Vignali A, Milone F, Pignata G, Elmore U, Musella M, De Placido G, Mollo A, Fernandez LM, Coretti G et al. Colorectal resection in deep pelvic endometriosis: Surgical technique and post-operative complications. <i>World J Gastroenterol</i> 2015;21: 13345-13351.	Non-randomised; only procedures performed by expert surgeons in standardized surgical indications with standard postoperative management were included
Minas V, Dada T. Laparoscopic treatment of endometriosis and effects on quality of life: a retrospective study using the short form EHP-5 endometriosis specific questionnaire. <i>J Obstet Gynaecol</i> 2014;34: 336-340.	retrospective study
Minelli L, Ceccaroni M, Ruffo G, Bruni F, Pomini P, Pontrelli G, Rolla M, Scioscia M. Laparoscopic conservative surgery for stage IV symptomatic endometriosis: short-term surgical complications. <i>Fertil Steril</i> 2010;94: 1218-1222.	More relevant / higher quality data available for the outcomes included in the PICO question
Minelli L, Fanfani F, Fagotti A, Ruffo G, Ceccaroni M, Mereu L, Landi S, Pomini P, Scambia G. Laparoscopic colorectal resection for bowel endometriosis: feasibility, complications, and clinical outcome. <i>Arch Surg</i> 2009;144: 234-239; discussion 239.	same treatment
Miranda-Mendoza I, Kovoov E, Nassif J, Ferreira H, Wattiez A. Laparoscopic surgery for severe ureteric endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2012;165: 275-279.	Included in more recent review / more recent data available



Misra, G., et al., Laparoscopic ablation or excision with helium thermal coagulator versus electrodiathermy for the treatment of mild-to-moderate endometriosis: randomised controlled trial. <i>Bjog</i> , 2020. 127(12): p. 1528-1535.	Not a relevant addition to the guideline
Moawad NS, Guido R, Ramanathan R, Mansuria S, Lee T. Comparison of laparoscopic anterior discoid resection and laparoscopic low anterior resection of deep infiltrating rectosigmoid endometriosis. <i>Jsls</i> 2011;15: 331-338.	More relevant / higher quality data available for the outcomes included in the PICO question
Moon HS, Shim JE, Lee SR, Jeong K. The Comparison of Robotic Single-Site Surgery to Single-Port Laparoendoscopic Surgery for the Treatment of Advanced-Stage Endometriosis. <i>J Laparoendosc Adv Surg Tech A</i> 2018;28: 1483-1488.	More recent/relevant data available
Morelli L, Perutelli A, Palmeri M, Guadagni S, Mariniello MD, Di Franco G, Cela V, Brundu B, Salerno MG, Di Candio G et al. Robot-assisted surgery for the radical treatment of deep infiltrating endometriosis with colorectal involvement: short- and mid-term surgical and functional outcomes. <i>Int J Colorectal Dis</i> 2016;31: 643-652.	Not relevant
Mosbrucker C, Somani A, Dulemba J. Visualization of endometriosis: comparative study of 3-dimensional robotic and 2-dimensional laparoscopic endoscopes. <i>J Robot Surg</i> 2018;12: 59-66.	Outcomes presented are not relevant to our question (no information on pain)
Moscarini M, Milazzo GN, Assorgi C, Pacchiarotti A, Caserta D. Ovarian stripping versus cystectomy: recurrence of endometriosis and pregnancy rate. <i>Arch Gynecol Obstet</i> 2014;290: 163-167.	No data on pain
Muzii L, Bellati F, Bianchi A, Palaia I, Mancini N, Zullo MA, Angioli R, Panici PB. Laparoscopic stripping of endometriomas: a randomized trial on different surgical techniques. Part II: pathological results. <i>Human reproduction (oxford, england)</i> 2005;20: 1987-1992.	not relevant for the key question
Muzii L, Marana R, Angioli R, Bianchi A, Cucinella G, Vignali M, Benedetti Panici P, Busacca M. Histologic analysis of specimens from laparoscopic endometrioma excision performed by different surgeons: does the surgeon matter? <i>Fertil Steril</i> 2011;95: 2116-2119.	not relevant for the key question
Nankali, A., et al., The effect of unilateral and bilateral laparoscopic surgery for endometriosis on Anti-Mullerian Hormone (AMH) level after 3 and 6 months: a systematic review and meta-analysis. <i>Health Qual Life Outcomes</i> , 2020. 18(1): p. 314.	Not relevant
Nardo LG, Moustafa M, Gareth Beynon DW. Laparoscopic treatment of pelvic pain associated with minimal and mild endometriosis with use of the Helica Thermal Coagulator. <i>Fertil Steril</i> 2005;83: 735-738.	Not relevant
Nezhat C, Hajhosseini B, King LP. Laparoscopic management of bowel endometriosis: predictors of severe disease and recurrence. <i>Jsls</i> 2011;15: 431-438.	Poor methodology, no clear data
Nezhat C, Hajhosseini B, King LP. Robotic-assisted laparoscopic treatment of bowel, bladder, and ureteral endometriosis. <i>Jsls</i> 2011;15: 387-392.	Study is included in meta-analysis / More recent data available
Nezhat C, Kho KA, Morozov V. Use of neutral argon plasma in the laparoscopic treatment of endometriosis. <i>Jsls</i> 2009;13: 479-483.	Outcomes presented are not relevant to our question (no information on pain)
Nezhat C, Lewis M, Kotikela S, Veeraswamy A, Saadat L, Hajhosseini B, Nezhat C. Robotic versus standard laparoscopy for the treatment of endometriosis. <i>Fertil Steril</i> 2010;94: 2758-2760.	Study is included in meta-analysis / More recent data available
Nezhat C, Nezhat F, Nezhat CH, Nasserbakht F, Rosati M, Seidman DS. Urinary tract endometriosis treated by laparoscopy. <i>Fertil Steril</i> 1996;66: 920-924.	Included in more recent review / more recent data available
Nezhat C, Nezhat F, Pennington E. Laparoscopic treatment of infiltrative rectosigmoid colon and rectovaginal septum endometriosis by the technique of videolaparoscopy and the CO2 laser. <i>Br J Obstet Gynaecol</i> 1992;99: 664-667.	More relevant / higher quality data available for the outcomes included in the PICO question
Nezhat C, Nezhat F. A simplified method of laparoscopic presacral neurectomy for the treatment of central pelvic pain due to endometriosis. <i>Br J Obstet Gynaecol</i> 1992;99: 659-663.	More recent/relevant data available
Nezhat CH, Malik S, Nezhat F, Nezhat C. Laparoscopic ureteroneocystostomy and vesicopsoas hitch for infiltrative endometriosis. <i>Jsls</i> 2004;8: 3-7.	Included in more recent review / more recent data available
Nezhat CH, Nezhat F, Roemisch M, Seidman DS, Nezhat C. Laparoscopic trachelectomy for persistent pelvic pain and endometriosis after supracervical hysterectomy. <i>Fertil Steril</i> 1996;66: 925-928.	More recent/relevant data available
Nezhat CH, Seidman DS, Nezhat F, Nezhat C. Are the long-term adverse effects of laparoscopic presacral neurectomy for the management of central pain associated with endometriosis acceptable? <i>Prim Care Update Ob Gyns</i> 1998;5: 197.	More recent/relevant data available
Nezhat CH, Seidman DS, Nezhat FR, Nezhat CR. Long-term outcome of laparoscopic presacral neurectomy for the treatment of central pelvic pain attributed to endometriosis. <i>Obstet Gynecol</i> 1998;91: 701-704.	Study is included in meta-analysis / More recent data available



Nezhat CR, Stevens A, Balassiano E, Soliemannjad R. Robotic-assisted laparoscopy vs conventional laparoscopy for the treatment of advanced stage endometriosis. <i>J Minim Invasive Gynecol</i> 2015;22: 40-44.	Not relevant
Nezhat FR, Sirota I. Perioperative outcomes of robotic assisted laparoscopic surgery versus conventional laparoscopy surgery for advanced-stage endometriosis. <i>Jsls</i> 2014;18.	Not relevant
Nezhat, C., et al., Nerve-Sparing Modified Radical Hysterectomy for Severe Endometriosis and Complex Pelvic Pathology. <i>Cureus</i> , 2020. 12(8): p. e9882.	Not a relevant addition to the guideline
Ng A, Yang P, Wong S, Vancaillie T, Krishnan S. Medium to long-term gastrointestinal outcomes following disc resection of the rectum for treatment of endometriosis using a validated scoring questionnaire. <i>Aust N Z J Obstet Gynaecol</i> 2016;56: 408-413.	No data on pain
Nirgianakis K, McKinnon B, Imboden S, Knabben L, Gloor B, Mueller MD. Laparoscopic management of bowel endometriosis: resection margins as a predictor of recurrence. <i>Acta Obstet Gynecol Scand</i> 2014;93: 1262-1267.	No data on pain
Oliveira MA, Crispi CP, Oliveira FM, Junior PS, Raymundo TS, Pereira TD. Double circular stapler technique for bowel resection in rectosigmoid endometriosis. <i>J Minim Invasive Gynecol</i> 2014;21: 136-141.	No data on pain, study on technique of bowel resection in only 11 pts
Ouchi N, Akira S, Mine K, Ichikawa M, Takeshita T. Recurrence of ovarian endometrioma after laparoscopic excision: risk factors and prevention. <i>J Obstet Gynaecol Res</i> 2014;40: 230-236.	Not relevant for the key question
Pados, G., et al., A European survey on the conservative surgical management of endometriotic cysts on behalf of the European Society for Gynaecological Endoscopy (ESGE) Special Interest Group (SIG) on Endometriosis. <i>Facts Views Vis Obygn</i> , 2020. 12(2): p. 105-108.	Not a relevant addition to the guideline
Palomba S, Zupi E, Falbo A, Russo T, Tolino A, Marconi D, Mattei A, Zullo F. Presacral neurectomy for surgical management of pelvic pain associated with endometriosis: a descriptive review. <i>J Minim Invasive Gynecol</i> 2006;13: 377-385.	Narrative review
Pandis GK, Saridogan E, Windsor AC, Gulumser C, Cohen CR, Cutner AS. Short-term outcome of fertility-sparing laparoscopic excision of deeply infiltrating pelvic endometriosis performed in a tertiary referral center. <i>Fertil Steril</i> 2010;93: 39-45.	Outcome presented is not relevant to our question (no information on pain)
Park JY, Kim DY, Kim SH, Suh DS, Kim JH, Nam JH. Laparoendoscopic Single-site Compared With Conventional Laparoscopic Ovarian Cystectomy for Ovarian Endometrioma. <i>J Minim Invasive Gynecol</i> 2015;22: 813-819.	Not relevant for the key question
Parra, R.S., et al., The impact of laparoscopic surgery on the symptoms and wellbeing of patients with deep infiltrating endometriosis and bowel involvement. <i>J Psychosom Obstet Gynaecol</i> , 2020: p. 1-6.	Not a relevant addition to the guideline
Paulson JD, Borromeo R, Speck G. The success of laser laparoscopy in the treatment of endometriosis: a two-step analysis. <i>Jsls</i> 2001;5: 21-27.	More recent/relevant data available
Paulson JD, Habli M, Alizade A, Borromeo R. The treatment of mild endometriosis with laser laparoscopy: a two-step treatment analysis of patients whose primary therapy was successful. <i>Jsls</i> 2006;10: 30-36.	This paper hasn't measured pain related to endometriosis, it concentrates on pregnancy rates achieved before and after only.
Pellegrino A, Damiani GR, Trio C, Faccioli P, Croce P, Tagliabue F, Dainese E. Robotic Shaving Technique in 25 Patients Affected by Deep Infiltrating Endometriosis of the Rectovaginal Space. <i>J Minim Invasive Gynecol</i> 2015;22: 1287-1292.	Not relevant
Posadzka E, Jach R, Pitynski K, Jablonski MJ. Treatment efficacy for pain complaints in women with endometriosis of the lesser pelvis after laparoscopic electroablation vs. CO2 laser ablation. <i>Lasers Med Sci</i> 2015;30: 147-152.	Not relevant
Possover M, Diebolder H, Plaul K, Schneider A. Laparoscopically assisted vaginal resection of rectovaginal endometriosis. <i>Obstet Gynecol</i> 2000;96: 304-307.	Outcome presented is not relevant to our question (no information on pain)
Possover M. Five-Year Follow-Up After Laparoscopic Large Nerve Resection for Deep Infiltrating Sciatic Nerve Endometriosis. <i>J Minim Invasive Gynecol</i> 2017;24: 822-826.	this is a highly specialised paper on nerve endometriosis – does not apply to the remit of the guideline
Radosa MP, Bernardi TS, Georgiev I, Diebolder H, Camara O, Runnebaum IB. Coagulation versus excision of primary superficial endometriosis: a 2-year follow-up. <i>Eur J Obstet Gynecol Reprod Biol</i> 2010;150: 195-198.	More relevant / higher quality data available for the outcomes included in the PICO question
Raffaelli R, Garzon S, Baggio S, Genna M, Pomini P, Lagana AS, Ghezzi F, Franchi M. Mesenteric vascular and nerve sparing surgery in laparoscopic segmental intestinal resection for deep infiltrating endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2018;231: 214-219.	This is about a specific technique (Mesenteric vascular and nerve Sparing Surgery) not general improvement after surgery



Raimondo, D., et al., Feasibility and safety of laparoscopic approach in obese patients with endometriosis: a multivariable regression analysis. <i>Arch Gynecol Obstet</i> , 2020. 302(3): p. 665-670.	Not relevant
Raimondo, D., et al., Feasibility and safety of two different surgical routes for the eradication of recto-vaginal endometriosis with vaginal mucosa infiltration (Endo-Vag-r study). <i>Acta Obstet Gynecol Scand</i> , 2020. 99(8): p. 1050-1056.	Not a relevant addition to the guideline
Raimondo, D., et al., Impact of Temporary Protective Ileostomy on Intestinal Function and Quality of Life after a 2-Year Follow-up in Patients Who Underwent Colorectal Segmental Resection for Endometriosis. <i>J Minim Invasive Gynecol</i> , 2020. 27(6): p. 1324-1330.	Not a relevant addition to the guideline
Ramachandran A, Dhulkhed S, Bhakta R, Bhat RG, Rao AC, Vasudeva A, Vishalakshi A, Kumar P. Influence of endometriotic cyst diameter and the severity of endometriosis on the ovarian parenchyma excised during laparoscopic cystectomy. <i>J Clin Diagn Res</i> 2013;7: 2241-2243.	Not relevant for the key question
Rampinelli F, Donarini P, Visenzi C, Ficarelli S, Ciravolo G. Surgical laparoscopic treatment of bowel endometriosis with transvaginal resection of the rectum using ultrasonically activated shears: a retrospective cohort study with description of technique. <i>Arch Gynecol Obstet</i> 2018;297: 985-988.	No data on pain
Rausei S, Sambucci D, Spampatti S, Cassinotti E, Dionigi G, David G, Ghezzi F, Uccella S, Boni L. Laparoscopic treatment of deep infiltrating endometriosis: results of the combined laparoscopic gynecologic and colorectal surgery. <i>Surg Endosc</i> 2015;29: 2904-2909.	Low case number, short-term follow-up
Redwine DB, Koning M, Sharpe DR. Laparoscopically assisted transvaginal segmental resection of the rectosigmoid colon for endometriosis. <i>Fertil Steril</i> 1996;65: 193-197.	No data on pain/recurrence
Redwine DB, Wright JT. Laparoscopic treatment of complete obliteration of the cul-de-sac associated with endometriosis: long-term follow-up of en bloc resection. <i>Fertil Steril</i> 2001;76: 358-365.	Study is included in meta-analysis / More recent data available
Redwine DB. Conservative laparoscopic excision of endometriosis by sharp dissection: life table analysis of reoperation and persistent or recurrent disease. <i>Fertil Steril</i> 1991;56: 628-634.	Study is included in meta-analysis / More recent data available
Redwine DB. Endometriosis persisting after castration: clinical characteristics and results of surgical management. <i>Obstet Gynecol</i> 1994;83: 405-413.	Not relevant for the key question
Redwine DB. Remote recollection of preoperative pain in patients undergoing excision of endometriosis. <i>J Am Assoc Gynecol Laparosc</i> 1994;1: 140-145.	Outcomes presented are not relevant to our question (no information on pain)
Remorgida V, Ragni N, Ferrero S, Anserini P, Torelli P, Fulcheri E. How complete is full thickness disc resection of bowel endometriotic lesions? A prospective surgical and histological study. <i>Hum Reprod</i> 2005;20: 2317-2320.	No data on pain, no follow-up
Renner SP, Kessler H, Topal N, Proske K, Adler W, Burghaus S, Haupt W, Beckmann MW, Lermann J. Major and minor complications after anterior rectal resection for deeply infiltrating endometriosis. <i>Arch Gynecol Obstet</i> 2017;295: 1277-1285.	Not relevant
Restaino, S., et al., Robotic surgery vs laparoscopic surgery in patients with diagnosis of endometriosis: a systematic review and meta-analysis. <i>J Robot Surg</i> , 2020. 14(5): p. 687-694.	Not relevant
Ribeiro PA, Rodrigues FC, Kehdi IP, Rossini L, Abdalla HS, Donadio N, Aoki T. Laparoscopic resection of intestinal endometriosis: a 5-year experience. <i>J Minim Invasive Gynecol</i> 2006;13: 442-446.	Outcome presented is not relevant to our question (no information on pain)
Ribeiro SC, Ribeiro RM, Santos NC, Pinotti JA. A randomized study of total abdominal, vaginal and laparoscopic hysterectomy. <i>International journal of gynaecology and obstetrics</i> 2003;83: 37-43.	Outcomes presented are not relevant to our question (no information on pain)
Riiskjaer M, Greisen S, Glavind-Kristensen M, Kesmodel US, Forman A, Seyer-Hansen M. Pelvic organ function before and after laparoscopic bowel resection for rectosigmoid endometriosis: a prospective, observational study. <i>Bjog</i> 2016;123: 1360-1367.	Not relevant to support clinical recommendations
Riley KA, Benton AS, Deimling TA, Kunselman AR, Harkins GJ. Surgical Excision Versus Ablation for Superficial Endometriosis-Associated Pain: A Randomized Controlled Trial. <i>J Minim Invasive Gynecol</i> 2019;26: 71-77.	Small number of patients
Rindos, N.B., I.R. Fulcher, and N.M. Donnellan, Pain and Quality of Life after Laparoscopic Excision of Endometriosis. <i>J Minim Invasive Gynecol</i> , 2020. 27(7): p. 1610-1617.e1.	Not a relevant addition to the guideline
Rizk B, Fischer AS, Lotfy HA, Turki R, Zahed HA, Malik R, Holliday CP, Glass A, Fishel H, Soliman MY et al. Recurrence of endometriosis after hysterectomy. <i>Facts Views Vis Obgyn</i> 2014;6: 219-227.	Not relevant for the key question
Robbins ML. Excision of endometriosis with laparoscopic coagulating shears. <i>J Am Assoc Gynecol Laparosc</i> 1999;6: 199-203.	small series of 14 patients on laparoscopic coagulating shears (LCS) was used, no validate



	questionnaire was used for pain assessment
Roman H, Darwish B, Schmied R, Remorgida V, Tuech JJ. Combined vaginal-laparoscopic-transanal approach for reducing bladder dysfunction after conservative surgery in large deep rectovaginal endometriosis. <i>J Gynecol Obstet Biol Reprod (Paris)</i> 2016;45: 546-548.	Not relevant
Roman H, Hennetier C, Darwish B, Badescu A, Csanyi M, Aziz M, Tuech JJ, Abo C. Bowel occult microscopic endometriosis in resection margins in deep colorectal endometriosis specimens has no impact on short-term postoperative outcomes. <i>Fertil Steril</i> 2016;105: 423-429.e427.	Comparative study, but not between techniques but based on present of BOME or not
Roman H, Milles M, Vassilieff M, Resch B, Tuech JJ, Huet E, Darwish B, Abo C. Long-term functional outcomes following colorectal resection versus shaving for rectal endometriosis. <i>Am J Obstet Gynecol</i> 2016;215: 762.e761-762.e769.	More relevant / higher quality data available for the outcomes included in the PICO question
Roman H, Moatassim-Drissa S, Marty N, Milles M, Vallee A, Desnyder E, Stochino Loi E, Abo C. Rectal shaving for deep endometriosis infiltrating the rectum: a 5-year continuous retrospective series. <i>Fertil Steril</i> 2016;106: 1438-1445.e1432.	Not relevant
Roman H, Rozsnay F, Puscasiu L, Resch B, Belhiba H, Lefebure B, Scotte M, Michot F, Marpeau L, Tuech JJ. Complications associated with two laparoscopic procedures used in the management of rectal endometriosis. <i>Jsls</i> 2010;14: 169-177.	More relevant / higher quality data available for the outcomes included in the PICO question
Roman H, Tarta O, Pura I, Opris I, Bourdel N, Marpeau L, Sabourin JC. Direct proportional relationship between endometrioma size and ovarian parenchyma inadvertently removed during cystectomy, and its implication on the management of enlarged endometriomas. <i>Hum Reprod</i> 2010;25: 1428-1432.	not relevant for the key question
Roman H. A national snapshot of the surgical management of deep infiltrating endometriosis of the rectum and colon in France in 2015: A multicenter series of 1135 cases. <i>J Gynecol Obstet Hum Reprod</i> 2017;46: 159-165.	Pain is not assessed
Roman, H., et al., Baseline severe constipation negatively impacts functional outcomes of surgery for deep endometriosis infiltrating the rectum: results of the ENDORE randomized trial. <i>Journal of gynecology obstetrics and human reproduction</i> , 2019. 48(8): p. 625-629.	Not a relevant addition to the guideline
Roman, H., et al., Combined vaginal-laparoscopic approach vs. laparoscopy alone for prevention of bladder voiding dysfunction after removal of large rectovaginal endometriosis. <i>J Visc Surg</i> , 2020.	Not a relevant addition to the guideline
Roman, H., et al., Excision versus colorectal resection in deep endometriosis infiltrating the rectum: 5-year follow-up of patients enrolled in a randomized controlled trial. <i>Hum Reprod</i> , 2019. 34(12): p. 2362-2371.	Not a relevant addition to the guideline
Roman, H., et al., High postoperative fertility rate following surgical management of colorectal endometriosis. <i>Human reproduction (Oxford, England)</i> , 2018. 33(9): p. 1669-1676.	Not a relevant addition to the guideline
Roman, H., et al., Risk of bowel fistula following surgical management of deep endometriosis of the rectosigmoid: a series of 1102 cases. <i>Hum Reprod</i> , 2020. 35(7): p. 1601-1611.	Not a relevant addition to the guideline
Rozsnay F, Roman H, Resch B, Dugardin F, Berrocal J, Descargues G, Schmied R, Boukerrou M, Marpeau L. Outcomes of surgical management of deep infiltrating endometriosis of the ureter and urinary bladder. <i>Jsls</i> 2011;15: 439-447.	More relevant / higher quality data available for the outcomes included in the PICO question
Ruffo G, Sartori A, Crippa S, Partelli S, Barugola G, Manzoni A, Steinasserer M, Minelli L, Falconi M. Laparoscopic rectal resection for severe endometriosis of the mid and low rectum: technique and operative results. <i>Surg Endosc</i> 2012;26: 1035-1040.	More relevant / higher quality data available for the outcomes included in the PICO question
Ruffo G, Scopelliti F, Scioscia M, Ceccaroni M, Mainardi P, Minelli L. Laparoscopic colorectal resection for deep infiltrating endometriosis: analysis of 436 cases. <i>Surg Endosc</i> 2010;24: 63-67.	Outcome presented is not relevant to our question (no information on pain)
Ruffo G, Stepniewska A, Crippa S, Serboli G, Zardini C, Steinkasserer M, Ceccaroni M, Minelli L, Falconi M. Laparoscopic ileocecal resection for bowel endometriosis. <i>Surg Endosc</i> 2011;25: 1257-1262.	More recent/relevant data available
Saavalainen L, Heikinheimo O, Tiitinen A, Harkki P. Deep infiltrating endometriosis affecting the urinary tract-surgical treatment and fertility outcomes in 2004-2013. <i>Gynecol Surg</i> 2016;13: 435-444.	Outcomes presented is not relevant to our question
Saeki A, Matsumoto T, Ikuma K, Tanase Y, Inaba F, Oku H, Kuno A. The vasopressin injection technique for laparoscopic excision of ovarian endometrioma: a technique to reduce the use of coagulation. <i>J Minim Invasive Gynecol</i> 2010;17: 176-179.	not relevant for the key question
Scattarelli A, Carriou M, Boulet L, Chati R, Coget J, Bridoux V, Tuech JJ, Roman H. C-reactive protein assessment to predict early septic complications after laparoscopic bowel resection for endometriosis: a diagnostic study. <i>Bjog</i> 2019;126: 1176-1182.	No data on pain



Schippert, C., et al., Reproductive capacity and recurrence of disease after surgery for moderate and severe endometriosis - a retrospective single center analysis. <i>BMC Womens Health</i> , 2020. 20(1): p. 144.	Not a relevant addition to the guideline
Schuster MW, Wheeler TL, 2nd, Richter HE. Endometriosis after laparoscopic supracervical hysterectomy with uterine morcellation: a case control study. <i>J Minim Invasive Gynecol</i> 2012;19: 183-187.	Outcomes presented are not relevant to our question (no information on pain)
Scioscia M, Ceccaroni M, Gentile I, Rossini R, Clarizia R, Brunelli D, Ruffo G. Randomized Trial on Fast Track Care in Colorectal Surgery for Deep Infiltrating Endometriosis. <i>J Minim Invasive Gynecol</i> 2017;24: 815-821.	No data on pain
Sengoku K, Miyamoto T, Horikawa M, Katayama H, Nishiwaki K, Kato Y, Kawanishi Y, Saijo Y. Clinicopathologic risk factors for recurrence of ovarian endometrioma following laparoscopic cystectomy. <i>Acta Obstet Gynecol Scand</i> 2013;92: 278-284.	not relevant for the key question
Seo JW, Lee DY, Yoon BK, Choi D. The age-related recurrence of endometrioma after conservative surgery. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;208: 81-85.	Not relevant for the key question
Seracchioli R, Di Donato N, Bertoldo V, La Marca A, Vicenzi C, Zannoni L, Villa G, Monti G, Leonardi D, Giovanardi G et al. The role of ovarian suspension in endometriosis surgery: a randomized controlled trial. <i>J Minim Invasive Gynecol</i> 2014;21: 1029-1035.	Not relevant
Seracchioli R, Ferrini G, Montanari G, Raimondo D, Spagnolo E, Di Donato N. Does laparoscopic shaving for deep infiltrating endometriosis alter intestinal function? A prospective study. <i>Aust N Z J Obstet Gynaecol</i> 2015;55: 357-362.	No data on pain
Seracchioli R, Mabrouk M, Montanari G, Manuzzi L, Concetti S, Venturoli S. Conservative laparoscopic management of urinary tract endometriosis (UTE): surgical outcome and long-term follow-up. <i>Fertil Steril</i> 2010;94: 856-861.	Included in more recent review / more recent data available
Seracchioli R, Poggioli G, Pierangeli F, Manuzzi L, Gualerzi B, Savelli L, Remorgida V, Mabrouk M, Venturoli S. Surgical outcome and long-term follow up after laparoscopic rectosigmoid resection in women with deep infiltrating endometriosis. <i>Bjog</i> 2007;114: 889-895.	small sample size
Seracchioli R, Raimondo D, Arena A, Zanello M, Mabrouk M. Clinical use of endovenous indocyanine green during rectosigmoid segmental resection for endometriosis. <i>Fertil Steril</i> 2018;109: 1135.	Case report on a surgical technique, video attached. Not relevant for the key questions.
Setala M, Harkki P, Matomaki J, Makinen J, Kossi J. Sexual functioning, quality of life and pelvic pain 12 months after endometriosis surgery including vaginal resection. <i>Acta Obstet Gynecol Scand</i> 2012;91: 692-698.	More relevant / higher quality data available for the outcomes included in the PICO question
Setala M, Kossi J, Silventoinen S, Makinen J. The impact of deep disease on surgical treatment of endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2011;158: 289-293.	Outcome presented is not relevant to our question (no information on pain)
Shah PR, Adlakha A. Laparoscopic management of moderate: Severe endometriosis. <i>J Minim Access Surg</i> 2014;10: 27-33.	Relevant outcomes are not assessed
Shimizu Y, Takashima A, Takahashi K, Kita N, Fujiwara M, Murakami T. Long-term outcome, including pregnancy rate, recurrence rate and ovarian reserve, after laparoscopic laser ablation surgery in infertile women with endometrioma. <i>J Obstet Gynaecol Res</i> 2010;36: 115-118.	not relevant for the key question
Siesto G, Ieda N, Rosati R, Vitobello D. Robotic surgery for deep endometriosis: a paradigm shift. <i>Int J Med Robot</i> 2014;10: 140-146.	Outcome presented is not relevant to our question (no information on pain)
Singh, S.S., et al., Surgical Outcomes in Patients With Endometriosis: A Systematic Review. <i>J Obstet Gynaecol Can</i> , 2020. 42(7): p. 881-888.e11.	Not a relevant addition to the guideline
Slack A, Child T, Lindsey I, Kennedy S, Cunningham C, Mortensen N, Koninckx P, McVeigh E. Urological and colorectal complications following surgery for rectovaginal endometriosis. <i>Bjog</i> 2007;114: 1278-1282.	More relevant / higher quality data available for the outcomes included in the PICO question
Soares, M., et al., Systematic Nerve Sparing during Surgery for Deep-infiltrating Posterior Endometriosis Improves Immediate Postoperative Urinary Outcomes. <i>J Minim Invasive Gynecol</i> , 2020.	Not a relevant addition to the guideline
Sokol AI, Chuang K, Milad MP. Risk Factors for Conversion to Laparotomy during Gynecologic Laparoscopy. <i>Journal of the american association of gynecologic laparoscopists</i> 2003;10: 469-473.	More recent/relevant data available
Soliman AM, Du EX, Yang H, Wu EQ, Haley JC. Retreatment Rates Among Endometriosis Patients Undergoing Hysterectomy or Laparoscopy. <i>J Womens Health (Larchmt)</i> 2017;26: 644-654.	Not relevant for the key question
Soriano D, Bouaziz J, Elizur S, Zolti M, Orvieto R, Seidman D, Goldenberg M, Eisenberg VH. Reproductive Outcome Is Favorable After Laparoscopic Resection of Bladder Endometriosis. <i>J Minim Invasive Gynecol</i> 2016;23: 781-786.	Outcomes presented is not relevant to our question



Soto E, Catenacci M, Bedient C, Jelovsek JE, Falcone T. Assessment of Long-Term Bowel Symptoms After Segmental Resection of Deeply Infiltrating Endometriosis: A Matched Cohort Study. <i>J Minim Invasive Gynecol</i> 2016;23: 753-759.	Patients had at least 4Y f.u., but unvalidated Q's were used, also 1993-2007 is a long period to select your patients from; role of laparoscopic surgery unclear
Soysal ME, Soysal S, Gurses E, Ozer S. Laparoscopic presacral neurolysis for endometriosis-related pelvic pain. <i>Hum Reprod</i> 2003;18: 588-592.	More recent/relevant data available
Soysal ME, Soysal S, Vicdan K. Laparoscopically assisted definitive treatment of severe endometriosis. <i>International journal of gynaecology and obstetrics</i> 2001;72: 191-192.	short RCT, no validate questionnaire was used for pain assessment before and after the surgery
Stepniewska A, Grosso G, Molon A, Caleffi G, Perin E, Scioscia M, Mainardi P, Minelli L. Ureteral endometriosis: clinical and radiological follow-up after laparoscopic ureterocystoneostomy. <i>Hum Reprod</i> 2011;26: 112-116.	Included in more recent review / more recent data available
Stopiglia RM, Ferreira U, Faundes DG, Petta CA. Cystoscopy-assisted laparoscopy for bladder endometriosis: modified light-to-light technique for bladder preservation. <i>Int Braz J Urol</i> 2017;43: 87-94.	No outcomes are presented
Sutton CJ, Pooley AS, Ewen SP, Haines P. Follow-up report on a randomized controlled trial of laser laparoscopy in the treatment of pelvic pain associated with minimal to moderate endometriosis. <i>Fertil Steril</i> 1997;68: 1070-1074.	Small sample size
Sweed, M.S., et al., Ovarian Reserve Following Laparoscopic Ovarian Cystectomy vs Cyst Deroofing for Endometriomas. <i>Journal of minimally invasive gynecology</i> , 2019. 26(5): p. 877-882.	Pain was only assessed in a subgroup
Talreja D, Salunke V, Pande S, Gupta C. Successful management of ureteric endometriosis by laparoscopic ureterolysis - A review and report of three further cases. <i>Arab J Urol</i> 2018;16: 342-349.	case series of 3 cases
Tanprasertkul C, Patumanond J, Manusook S, Suwannarurk K, Somprasit C, Sreshthaputra O, Vutyavanich T. Recurrence of Endometrioma Following Conservative Ovarian Endometrioma Cystectomy: Laparoscopy versus Laparotomy. <i>J Med Assoc Thai</i> 2015;98 Suppl 3: S96-100.	Not relevant for the key question
Tarjanne S, Sjoberg J, Heikinheimo O. Radical excision of rectovaginal endometriosis results in high rate of pain relief - results of a long-term follow-up study. <i>Acta Obstet Gynecol Scand</i> 2010;89: 71-77.	More relevant / higher quality data available for the outcomes included in the PICO question
Tarjanne S, Sjoberg J, Heikinheimo O. Rectovaginal endometriosis-characteristics of operative treatment and factors predicting bowel resection. <i>J Minim Invasive Gynecol</i> 2009;16: 302-306.	Outcomes presented are not relevant to our question (no information on pain)
Taylor E, Williams C. Surgical treatment of endometriosis: location and patterns of disease at reoperation. <i>Fertil Steril</i> 2010;93: 57-61.	More recent/relevant data available
Tulandi T, al-Took S. Reproductive outcome after treatment of mild endometriosis with laparoscopic excision and electrocoagulation. <i>Fertil Steril</i> 1998;69: 229-231.	Relevant outcomes are not assessed
Turco, L.C., et al., Long-term evaluation of quality of life and gastrointestinal well-being after segmental colo-rectal resection for deep infiltrating endometriosis (ENDO-RESECT QoL). <i>Arch Gynecol Obstet</i> , 2020. 301(1): p. 217-228.	No comparison
Turco, L.C., et al., Surgery-related complications and long-term functional morbidity after segmental colo-rectal resection for deep infiltrating endometriosis (ENDO-RESECT morb). <i>Arch Gynecol Obstet</i> , 2020. 302(4): p. 983-993.	Not a relevant addition to the guideline
Uccella S, Cromi A, Casarin J, Bogani G, Pinelli C, Serati M, Ghezzi F. Laparoscopy for ureteral endometriosis: surgical details, long-term follow-up, and fertility outcomes. <i>Fertil Steril</i> 2014;102: 160-166.e162.	Included in more recent review / more recent data available
Urbach DR, Reedijk M, Richard CS, Lie KI, Ross TM. Bowel resection for intestinal endometriosis. <i>Dis Colon Rectum</i> 1998;41: 1158-1164.	Small sample size
Vallee A, Ploteau S, Abo C, Stochino-Loi E, Moatassim-Drissa S, Marty N, Merlot B, Roman H. Surgery for deep endometriosis without involvement of digestive or urinary tracts: do not worry the patients! <i>Fertil Steril</i> 2018;109: 1079-1085.e1071.	More relevant / higher quality data available for the outcomes included in the PICO question
Van den Broeck U, Meuleman C, Tomassetti C, D'Hoore A, Wolthuis A, Van Cleynenbreugel B, Vergote I, Enzlin P, D'Hooghe T. Effect of laparoscopic surgery for moderate and severe endometriosis on depression, relationship satisfaction and sexual functioning: comparison of patients with and without bowel resection. <i>Hum Reprod</i> 2013;28: 2389-2397.	Study is included in meta-analysis / More recent data available
Vannuccini S, Reis FM, Coutinho LM, Lazzeri L, Centini G, Petraglia F. Surgical treatment of endometriosis: prognostic factors for better quality of life. <i>Gynecol Endocrinol</i> 2019: 1-5.	Not relevant for the key question



Varol N, Maher P, Healey M, Woods R, Wood C, Hill D, Lolatgis N, Tsaltas J. Rectal surgery for endometriosis--should we be aggressive? <i>J Am Assoc Gynecol Laparosc</i> 2003;10: 182-189.	Pain was not analysed as an outcome. It s not clear how it was assessed by the authors - if it was.
Vashisht A, Gulumser C, Pandis G, Saridogan E, Cutner A. Voiding dysfunction in women undergoing laparoscopic treatment for moderate to severe endometriosis. <i>Fertil Steril</i> 2009;92: 2113-2115.	Not relevant for the key question
Vercellini P, Barbara G, Abbiati A, Somigliana E, Vigano P, Fedele L. Repetitive surgery for recurrent symptomatic endometriosis: what to do? <i>Eur J Obstet Gynecol Reprod Biol</i> 2009;146: 15-21.	More recent/relevant data available
Vercellini P, Carmignani L, Rubino T, Barbara G, Abbiati A, Fedele L. Surgery for deep endometriosis: a pathogenesis-oriented approach. <i>Gynecol Obstet Invest</i> 2009;68: 88-103.	Outcome presented is not relevant to our question
Vercellini P, Crosignani PG, Abbiati A, Somigliana E, Vigano P, Fedele L. The effect of surgery for symptomatic endometriosis: the other side of the story. <i>Hum Reprod Update</i> 2009;15: 177-188.	More recent meta-analysis available
Vercellini P, De Giorgi O, Pisacreta A, Pesole AP, Vicentini S, Crosignani PG. Surgical management of endometriosis. <i>Baillieres Best Pract Res Clin Obstet Gynaecol</i> 2000;14: 501-523.	More recent meta-analysis available
Vercellini P, Fedele L, Aimi G, De Giorgi O, Consonni D, Crosignani PG. Reproductive performance, pain recurrence and disease relapse after conservative surgical treatment for endometriosis: the predictive value of the current classification system. <i>Hum Reprod</i> 2006;21: 2679-2685.	Study is included in meta-analysis / More recent data available
Vercellini P, Frattaruolo MP, Rosati R, Dridi D, Roberto A, Mosconi P, De Giorgi O, Cribiu FM, Somigliana E. Medical treatment or surgery for colorectal endometriosis? Results of a shared decision-making approach. <i>Hum Reprod</i> 2018;33: 202-211.	Not relevant for the key question: comparing medical and surgical treatment; patient-decision-practice
Vercellini P, Somigliana E, Vigano P, De Matteis S, Barbara G, Fedele L. The effect of second-line surgery on reproductive performance of women with recurrent endometriosis: a systematic review. <i>Acta Obstet Gynecol Scand</i> 2009;88: 1074-1082.	More recent/relevant data available
Vesale, E., et al., Voiding Dysfunction after Colorectal Surgery for Endometriosis: A Systematic Review and Meta-analysis. <i>J Minim Invasive Gynecol</i> , 2020. 27(7): p. 1490-1502.e3.	Not a relevant addition to the guideline
Vignali M, Bianchi S, Candiani M, Spadaccini G, Oggioni G, Busacca M. Surgical treatment of deep endometriosis and risk of recurrence. <i>J Minim Invasive Gynecol</i> 2005;12: 508-513.	Outcome presented is not relevant to our question (no information on pain)
Viguera Smith, A., et al., Bowel anastomosis leakage following endometriosis surgery: an evidence based analysis of risk factors and prevention techniques. <i>Facts Views Vis Obgyn</i> , 2020. 12(3): p. 207-225.	Not a relevant addition to the guideline
Vitobello D, Fattizzi N, Santoro G, Rosati R, Baldazzi G, Bulletti C, Palmara V. Robotic surgery and standard laparoscopy: a surgical hybrid technique for use in colorectal endometriosis. <i>J Obstet Gynaecol Res</i> 2013;39: 217-222.	Not relevant
Vlek SL, Lier MCI, Koedam TWA, Melgers I, Dekker J, Bonjer JH, Mijatovic V, Tuynman JB. Transanal minimally invasive rectal resection for deep endometriosis: a promising technique. <i>Colorectal Dis</i> 2017;19: 576-581.	Not relevant
Volpi E, Ferrero A, Sismondi P. Laparoscopic identification of pelvic nerves in patients with deep infiltrating endometriosis. <i>Surg Endosc</i> 2004;18: 1109-1112.	Outcome presented is not relevant to our question (no information on pain)
Wills HJ, Reid GD, Cooper MJ, Tsaltas J, Morgan M, Woods RJ. Bowel resection for severe endometriosis: an Australian series of 177 cases. <i>Aust N Z J Obstet Gynaecol</i> 2009;49: 415-418.	Relevant outcomes are not assessed
Wolthuis AM, Meuleman C, Tomassetti C, D'Hooghe T, Fieuws S, Penninckx F, D'Hoore A. Laparoscopic sigmoid resection with transrectal specimen extraction: a novel technique for the treatment of bowel endometriosis. <i>Hum Reprod</i> 2011;26: 1348-1355.	Not relevant
Woods RJ, Heriot AG, Chen FC. Anterior rectal wall excision for endometriosis using the circular stapler. <i>ANZ J Surg</i> 2003;73: 647-648.	This paper hasn't detected endometriosis related pain, it was examining the safety of the surgical technique.
Wykes CB, Clark TJ, Chakravati S, Mann CH, Gupta JK. Efficacy of laparoscopic excision of visually diagnosed peritoneal endometriosis in the treatment of chronic pelvic pain. <i>Eur J Obstet Gynecol Reprod Biol</i> 2006;125: 129-133.	Study is included in meta-analysis / More recent data available
Xiromeritis P, Saropoulos L, Prapas Y. Laparoscopic partial cystectomy after cystoscopic delimitation of the bladder's endometriotic nodule. <i>Hippokratia</i> 2011;15: 377.	Outcome presented is not relevant to our question (no information on pain)



Yang, F., et al, Age at surgery and recurrence of ovarian endometrioma after conservative surgery: a meta-analysis including 3125 patients. Arch Gynecol Obstet, 2020. 302(1): p. 23-30.	Not relevant
Yang, Y.P., et al, Laparoscopic anterior resection of rectum for rectal deeply infiltrating endometriosis: A short-term prospective randomized trial. Medicine (Baltimore), 2020. 99(47): p. e23309.	Not a relevant addition to the guideline
Yeung P, Jr., Tu F, Bajzak K, Lamvu G, Guzovsky O, Agnelli R, Peavey M, Winer W, Albee R, Sinervo K. A pilot feasibility multicenter study of patients after excision of endometriosis. Jsls 2013;17: 88-94.	Study is included in meta-analysis / More recent data available
Yeung PP, Jr., Shwayder J, Pasic RP. Laparoscopic management of endometriosis: comprehensive review of best evidence. J Minim Invasive Gynecol 2009;16: 269-281.	More recent meta-analysis available
Yildiz, S., et al, The pain symptoms and mass recurrence rates after ovarian cystectomy or uni/bilateral oophorectomy procedures in patients over 40 years old with endometriosis. Ginekol Pol, 2020. 91(6): p. 295-300.	Not a relevant addition to the guideline
Yoshida S, Harada T, Iwabe T, Terakawa N. Laparoscopic surgery for the management of ovarian endometrioma. Gynecol Obstet Invest 2002;54 Suppl 1: 24-27; discussion 27-29.	More recent/relevant data available
Zanetti-Dallenbach R, Bartley J, Muller C, Schneider A, Kohler C. Combined vaginal-laparoscopic-abdominal approach for the surgical treatment of rectovaginal endometriosis with bowel resection: a comparison of this new technique with various established approaches by laparoscopy and laparotomy. Surg Endosc 2008;22: 995-1001.	small sample size
Zhang NN, Sun TS, Yang Q. An effective "water injection"-assisted method for excision of ovarian endometrioma by laparoscopy. Fertil Steril 2019.	Not relevant for the key question
Zheng Y, Zhang N, Lu W, Zhang L, Gu S, Zhang Y, Yi X, Hua K. Rectovaginal fistula following surgery for deep infiltrating endometriosis: Does lesion size matter? J Int Med Res 2018;46: 852-864.	No data on pain
Zilberman S, Ballester M, Touboul C, Chereau E, Sebe P, Bazot M, Darai E. Partial colpectomy is a risk factor for urologic complications of colorectal resection for endometriosis. J Minim Invasive Gynecol 2013;20: 49-55.	No data on pain, no data on recurrence, only complications
Zuberi NF, Rizvi JH. Critical appraisal of endometriosis management for pain and subfertility. JPMA The journal of the pakistan medical association 2003;53: 152-156.	Outcomes presented are not relevant to our question (no information on pain)
Zullo F, Palomba S, Zupi E, Russo T, Morelli M, Sena T, Pellicano M, Mastrantonio P. Long-term effectiveness of presacral neurectomy for the treatment of severe dysmenorrhea due to endometriosis. J Am Assoc Gynecol Laparosc 2004;11: 23-28.	More recent/relevant data available



QUESTION 11.3B IS THERE A SUBGROUP OF WOMEN WITH CONFIRMED ENDOMETRIOSIS WHO RESPOND BETTER TO SURGERY THAN OTHERS?

NARRATIVE QUESTION

Search strings : not applicable

This question is a narrative question. The section was prepared based on expert opinion and selected papers from the literature searches performed in this section.

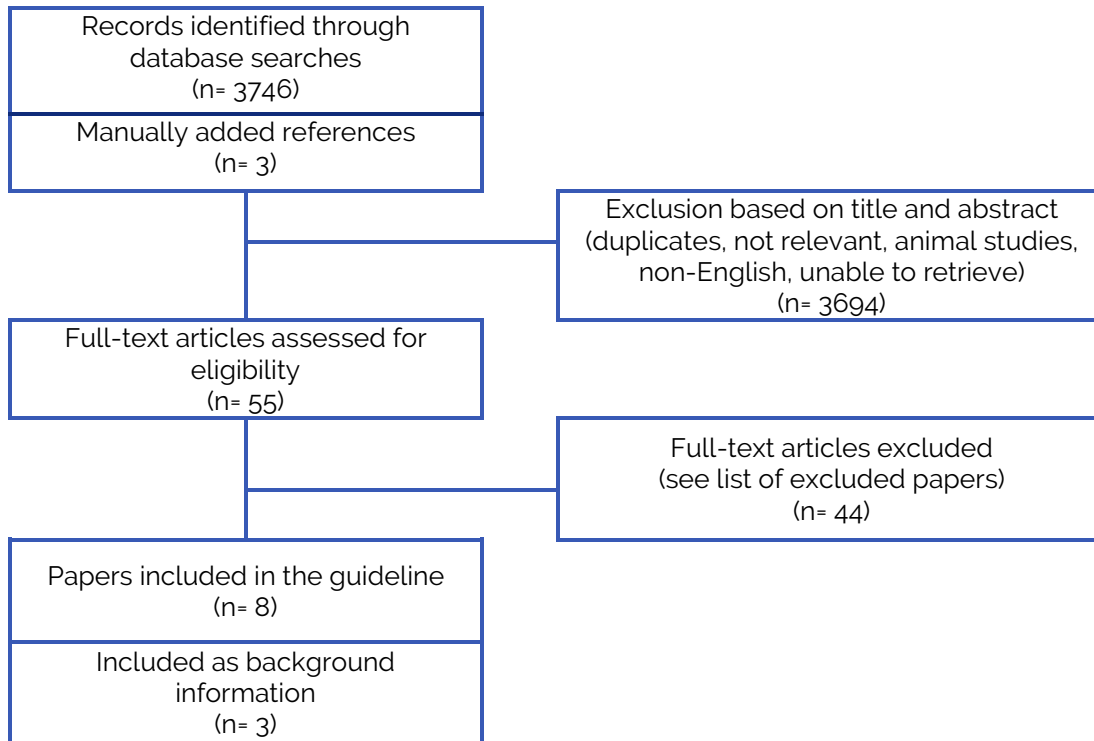


QUESTION II.4 ARE MEDICAL THERAPIES EFFECTIVE AS AN ADJUNCT TO SURGICAL THERAPY?

Search strings

DATABASE	Search string
PUBMED	See question II.2 (identical search term, different selection of papers)
COCHRANE	See question II.2 (identical search term, different selection of papers)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Adachi K, Takahashi K, Nakamura K, Otake A, Sasamoto N, Miyoshi Y, Shioji M, Yamamoto Y, Fujitani M, Wakimoto A et al. Postoperative administration of dienogest for suppressing recurrence of disease and relieving pain in subjects with ovarian endometriomas. <i>Gynecol Endocrinol</i> 2016;32: 646-649.	Retrospective study (lower quality)
Cheewadhanaraks S, Choksuchat C, Dhanaworavibul K, Liabsuetrakul T. Postoperative depot medroxyprogesterone acetate versus continuous oral contraceptive pills in the treatment of endometriosis-associated pain: a randomized comparative trial. <i>Gynecol Obstet Invest</i> 2012;74: 151-156.	More recent data and reviews available
Chen J, Gao H, Li Q, Cong J, Wu J, Pu D, Jiang G. Efficacy and safety of remifemim on peri-menopausal symptoms induced by post-operative GnRH-a therapy for endometriosis: a randomized study versus tibolone. <i>Med Sci Monit</i> 2014;20: 1950-1957.	Outcomes not relevant
Cosson M, Querleu D, Donnez J, Madelenat P, Konincks P, Audebert A, Manhes H. Dienogest is as effective as triptorelin in the treatment of endometriosis after laparoscopic surgery: results of a prospective, multicenter, randomized study. <i>Fertil Steril</i> 2002;77: 684-692.	Outcomes not relevant
Dimitrijevic D, Vasiljevic M, Anicic R, Brankovic S, Ristic A, Devic A. Recurrence rate of ovarian endometriosis in patients treated with laparoscopic surgery and postoperative suppressive therapy. <i>Clin Exp Obstet Gynecol</i> 2015;42: 339-343.	Outcome not relevant (recurrence)
Ferrero S, Abbamonte LH, Parisi M, Ragni N, Remorgida V. Dyspareunia and quality of sex life after laparoscopic excision of endometriosis and postoperative administration of triptorelin. <i>Fertil Steril</i> 2007;87: 227-229.	Not relevant to topic
Han S, Lee H, Kim S, Joo J, Suh D, Kim K, Lee K. Risk factors related to the recurrence of endometrioma in patients with long-term postoperative medical therapy. <i>Ginekol Pol</i> 2018;89: 611-617.	Risk factors narrative
Han Y, Zou SE, Long QQ, Zhang SF. The incidence and characteristics of uterine bleeding during postoperative GnRH agonist treatment combined with estrogen-progestogen add-back therapy in endometriosis patients of reproductive age. <i>International journal of clinical and experimental medicine</i> 2013;6: 583-588.	Commentary and outcome not relevant
Jee BC, Lee JY, Suh CS, Kim SH, Choi YM, Moon SY. Impact of GnRH agonist treatment on recurrence of ovarian endometriomas after conservative laparoscopic surgery. <i>Fertil Steril</i> 2009;91: 40-45.	Outcomes not relevant
Kaser DJ, Missmer SA, Berry KF, Laufer MR. Use of norethindrone acetate alone for postoperative suppression of endometriosis symptoms. <i>J Pediatr Adolesc Gynecol</i> 2012;25: 105-108.	No control group
Kim MK, Chon SJ, Lee JH, Yun BH, Cho S, Choi YS, Lee BS, Seo SK. Postoperative Levonorgestrel-Releasing Intrauterine System Insertion After Gonadotropin-Releasing Hormone Agonist Treatment for Preventing Endometriotic Cyst Recurrence: A Prospective Observational Study. <i>Reprod Sci</i> 2018;25: 39-43.	Not relevant - recurrence as outcome
Kim NY, Ryoo U, Lee DY, Kim MJ, Yoon BK, Choi D. The efficacy and tolerability of short-term low-dose estrogen-only add-back therapy during post-operative GnRH agonist treatment for endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2011;154: 85-89.	Not relevant - add back
Koga K, Osuga Y, Takemura Y, Takamura M, Taketani Y. Recurrence of endometrioma after laparoscopic excision and its prevention by medical management. <i>Front Biosci (Elite Ed)</i> 2013;5: 676-683.	Review commentary
Koga K, Takamura M, Fujii T, Osuga Y. Prevention of the recurrence of symptom and lesions after conservative surgery for endometriosis. <i>Fertil Steril</i> 2015;104: 793-801.	Review commentary
Lee DY, Bae DS, Yoon BK, Choi D. Post-operative cyclic oral contraceptive use after gonadotrophin-releasing hormone agonist treatment effectively prevents endometrioma recurrence. <i>Hum Reprod</i> 2010;25: 3050-3054.	Not relevant - recurrence as outcome
Lee DY, Oh YK, Yoon BK, Choi D. Effects of long-term postoperative oral contraceptive use for the prevention of endometrioma recurrence on bone mineral density in young women. <i>Gynecol Endocrinol</i> 2014;30: 751-754.	Not relevant
Lee DY, Park HG, Yoon BK, Choi D. Effects of different add-back regimens on hypoestrogenic problems by postoperative gonadotropin-releasing hormone agonist treatment in endometriosis. <i>Obstet Gynecol Sci</i> 2016;59: 32-38.	Outcomes not relevant
Li Z, Zhang HY, Zhu YJ, Hu YJ, Qu PP. A randomized study comparing the side effects and hormonal status of triptorelin and leuprorelin following conservative laparoscopic surgery for ovarian endometriosis in Chinese women. <i>Eur J Obstet Gynecol Reprod Biol</i> 2014;183: 164-168.	Side effects
Mabrouk M, Frasca C, Geraci E, Montanari G, Ferrini G, Raimondo D, Alvisi S, Paradisi R, Villa G, Seracchioli R. Combined oral contraceptive therapy in women with posterior deep infiltrating endometriosis. <i>J Minim Invasive Gynecol</i> 2011;18: 470-474.	More recent data and reviews available



Morgante G, Ditto A, La Marca A, De Leo V. Low-dose danazol after combined surgical and medical therapy reduces the incidence of pelvic pain in women with moderate and severe endometriosis. <i>Hum Reprod</i> 1999;14: 2371-2374.	Excluded from Chen 2020 due to "All participants received triptorelin for 6 months post surgery before randomization to danazol or no therapy."
Muzii L, Marana R, Caruana P, Catalano GF, Margutti F, Panici PB. Postoperative administration of monophasic combined oral contraceptives after laparoscopic treatment of ovarian endometriomas: a prospective, randomized trial. <i>Am J Obstet Gynecol</i> 2000;183: 588-592.	More recent data and reviews available
Ouchi N, Akira S, Mine K, Ichikawa M, Takeshita T. Recurrence of ovarian endometrioma after laparoscopic excision: risk factors and prevention. <i>J Obstet Gynaecol Res</i> 2014;40: 230-236.	review commentary
Park HJ, Koo YA, Yoon BK, Choi D. Postoperative long-term maintenance therapy with oral contraceptives after gonadotropin-releasing hormone analog treatment in women with ovarian endometrioma. <i>J Minim Invasive Gynecol</i> 2009;16: 34-39.	Not relevant
Sanghera S, Barton P, Bhattacharya S, Horne AW, Roberts TE. Pharmaceutical treatments to prevent recurrence of endometriosis following surgery: a model-based economic evaluation. <i>BMJ Open</i> 2016;6: e010580.	review commentary
Seo JW, Lee DY, Yoon BK, Choi D. Effects of long-term postoperative dienogest use for treatment of endometriosis on bone mineral density. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;212: 9-12.	Outcomes not relevant
Shin SY, Min JA, Yoon BK, Bae DS, Choi DS. The incidence and characteristics of uterine bleeding during postoperative GnRH agonist treatment combined with tibolone add-back therapy in endometriosis patients of reproductive age. <i>Eur J Obstet Gynecol Reprod Biol</i> 2007;133: 90-94.	Outcomes not relevant
Soliman AM, Bonafede M, Farr AM, Castelli-Haley J, Winkel C. Analysis of subsequent surgery rates among endometriosis patients who underwent surgery with and without concomitant leuprolide acetate therapy. <i>Curr Med Res Opin</i> 2016;32: 1073-1082.	Outcomes not relevant
Soysal S, Soysal ME, Ozer S, Gul N, Gezgin T. The effects of post-surgical administration of goserelin plus anastrozole compared to goserelin alone in patients with severe endometriosis: a prospective randomized trial. <i>Hum Reprod</i> 2004;19: 160-167.	More recent data and reviews available
Takaesu Y, Nishi H, Kojima J, Sasaki T, Nagamitsu Y, Kato R, Isaka K. Dienogest compared with gonadotropin-releasing hormone agonist after conservative surgery for endometriosis. <i>J Obstet Gynaecol Res</i> 2016;42: 1152-1158.	More recent data and reviews available
Takamura M, Koga K, Osuga Y, Takemura Y, Hamasaki K, Hirota Y, Yoshino O, Taketani Y. Post-operative oral contraceptive use reduces the risk of ovarian endometrioma recurrence after laparoscopic excision. <i>Hum Reprod</i> 2009;24: 3042-3048.	Not relevant - recurrence as outcome
Takeuchi K, Kitazawa S, Kitagaki S, Maruo T. Conservative management of post-operative peritoneal cysts associated with endometriosis. <i>Int J Gynaecol Obstet</i> 1998;60: 151-154.	Not relevant to topic
Taylor M, Bowen-Simpkins P, Barrington J. Complications of unopposed oestrogen following radical surgery for endometriosis. <i>J Obstet Gynaecol</i> 1999;19: 647-648.	Narrative review
Tsai HW, Wang PH, Huang BS, Twu NF, Yen MS, Chen YJ. Low-dose add-back therapy during postoperative GnRH agonist treatment. <i>Taiwan J Obstet Gynecol</i> 2016;55: 55-59.	Not relevant - add back
Vercellini P, De Giorgi O, Mosconi P, Stellato G, Vicentini S, Crosignani PG. Cyproterone acetate versus a continuous monophasic oral contraceptive in the treatment of recurrent pelvic pain after conservative surgery for symptomatic endometriosis. <i>Fertil Steril</i> 2002;77: 52-61.	Outcomes not relevant
Vercellini P, Donati A, Ottolini F, Frassinetti A, Fiorini J, Nebuloni V, Frattaruolo MP, Roberto A, Mosconi P, Somigliana E. A stepped-care approach to symptomatic endometriosis management: a participatory research initiative. <i>Fertil Steril</i> 2018;109: 1086-1096.	review commentary
Vercellini P, S DEM, Somigliana E, Buggio L, Frattaruolo MP, Fedele L. Long-term adjuvant therapy for the prevention of postoperative endometrioma recurrence: a systematic review and meta-analysis. <i>Acta Obstet Gynecol Scand</i> 2013;92: 8-16.	Review commentary
Vercellini P, Somigliana E, Daguati R, Vigano P, Meroni F, Crosignani PG. Postoperative oral contraceptive exposure and risk of endometrioma recurrence. <i>Am J Obstet Gynecol</i> 2008;198: 504.e501-505.	Not relevant - recurrence as outcome
Vlahos N, Vlachos A, Triantafyllidou O, Vitoratos N, Creatsas G. Continuous versus cyclic use of oral contraceptives after surgery for symptomatic endometriosis: a prospective cohort study. <i>Fertil Steril</i> 2013;100: 1337-1342.	More recent data and reviews available
Wong AY, Tang L. An open and randomized study comparing the efficacy of standard danazol and modified triptorelin regimens for postoperative disease management of moderate to severe endometriosis. <i>Fertil Steril</i> 2004;81: 1522-1527.	More recent data and reviews available



Wu B, Yang Z, Tobe RG, Wang Y. Medical therapy for preventing recurrent endometriosis after conservative surgery: a cost-effectiveness analysis. <i>Bjog</i> 2018;125: 469-477.	Cost effective analysis
Wu L, Wu Q, Liu L. Oral contraceptive pills for endometriosis after conservative surgery: a systematic review and meta-analysis. <i>Gynecol Endocrinol</i> 2013;29: 883-890.	Not relevant - recurrence as outcome
Yang XH, Ji F, AiLi A, TuerXun H, He Y, Ding Y. Effects of laparoscopic ovarian endometriosis cystectomy combined with postoperative GnRH-a therapy on ovarian reserve, pregnancy, and outcome recurrence. <i>Clin Exp Obstet Gynecol</i> 2014;41: 272-275.	Outcomes not relevant
Zheng Q, Mao H, Xu Y, Zhao J, Wei X, Liu P. Can postoperative GnRH agonist treatment prevent endometriosis recurrence? A meta-analysis. <i>Arch Gynecol Obstet</i> 2016;294: 201-207.	Systematic review on recurrence risk
Zhu S, Zhu Y, Liu Y, Zhang H. Comparison of Outcomes of Different Postoperative Hormone Therapy in the Treatment of Ovarian Endometriosis: A Brief Report. <i>Adv Ther</i> 2018;35: 857-863.	Endometrioma only; outcome recurrence, Retrospective

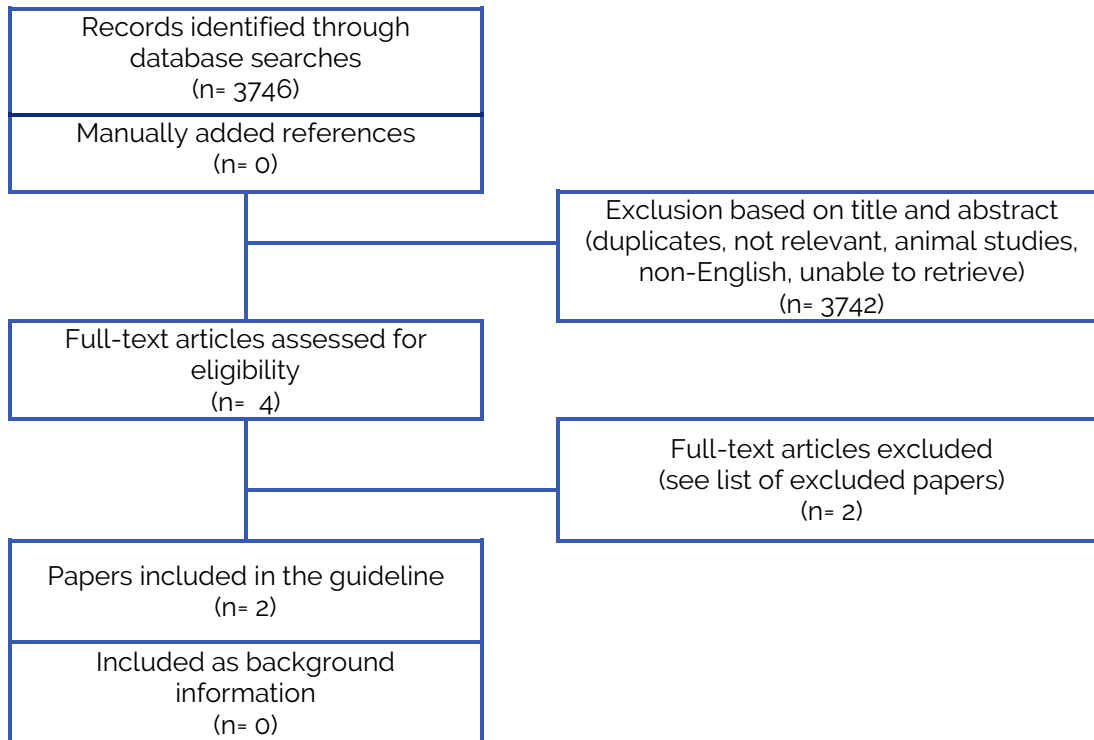


QUESTION II.5 ARE SURGICAL THERAPIES MORE EFFECTIVE THAN MEDICAL THERAPIES FOR WOMEN WITH ENDOMETRIOSIS WITH PAIN SYMPTOMS?

Search strings

DATABASE	Search string
PUBMED	See question II.2 (identical search term, different selection of papers)
COCHRANE	See question II.2 (identical search term, different selection of papers)

Flowchart



List of excluded papers

Reference	Exclusion criterium
Avraham S, Seidman DS. Surgery versus pharmacological treatment for endometriosis. <i>Womens Health (Lond)</i> 2014;10: 161-166.	Narrative review - Not relevant for the question
Berlanda N, Somigliana E, Frattaruolo MP, Buggio L, Dridi D, Vercellini P. Surgery versus hormonal therapy for deep endometriosis: is it a choice of the physician? <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;209: 67-71.	Not relevant for the question (expert opinion)

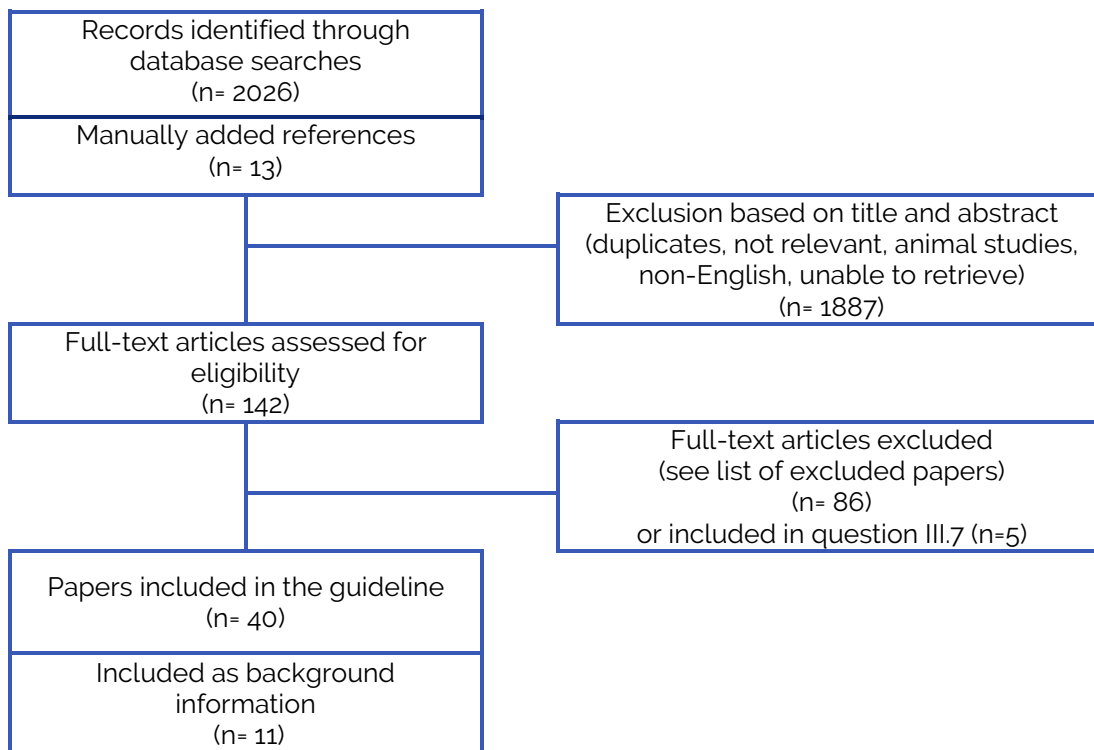


QUESTION II.6 WHAT NON-MEDICAL MANAGEMENT STRATEGIES ARE EFFECTIVE FOR SYMPTOMS ASSOCIATED WITH ENDOMETRIOSIS (PAIN AND QUALITY OF LIFE)?

Search strings

DATABASE	Search string
PUBMED	("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND ("behavioural therapy" OR "Behavior Therapy"[Mesh] OR "Psychological therapy" OR psychotherapy OR "Psychotherapy"[Mesh] OR CBT OR mindfulness OR "relaxation" OR breathing OR TENS OR "Transcutaneous electrical nerve stimulation" OR "Transcutaneous Electric Nerve Stimulation"[Mesh] OR Acupuncture OR "Acupuncture"[Mesh] OR "recreational drugs" OR cannabis OR reflexology OR "Homeopathy"[Mesh] OR "Homeopathy" OR "Traditional Chinese Medicine" OR "Herbal medicine" OR "Herbal Medicine"[Mesh] OR Exercise OR sport OR "Exercise"[Mesh] OR "Sports"[Mesh] OR yoga OR pilates OR Thai Chi OR running OR physiotherapy OR "Physical Therapy Modalities"[Mesh] OR "trigger point therapy" OR "patient support program" OR "Expert patient" OR self-management OR "Self Care"[Mesh] OR "Nutritional advice" OR "Food supplements" OR "Food"[Mesh] OR "Diet"[Mesh] OR Diet OR Vitamin OR "Vitamins"[Mesh] OR Mineral OR "Minerals"[Mesh] OR "Fatty Acids, Omega-3"[Mesh] OR gluten OR "couples therapy" OR counselling OR "Counseling"[Mesh] OR "complementary therapies"[MeSH Terms])
COCHRANE	endometriosis AND ("behavioural therapy" OR "Psychological therapy" OR psychotherapy OR CBT OR mindfulness OR relaxation OR breathing OR TENS OR "Transcutaneous electrical nerve stimulation" OR Acupuncture OR "recreational drugs" OR cannabis OR reflexology OR "Homeopathy" OR "Traditional Chinese Medicine" OR "Herbal medicine" OR Exercise OR sport OR yoga OR pilates OR Thai Chi OR running OR physiotherapy OR "trigger point therapy" OR "patient support program" OR "Expert patient" OR self-management OR "Nutritional advice" OR "Food supplements" OR Diet OR Vitamin OR "Vitamins" OR Mineral OR "couples therapy" OR counselling OR "Counseling" OR "complementary therapies")

Flowchart





List of excluded papers

Reference	Exclusion criterium
Abokhras, I.M., et al., A two-arm parallel double-blind randomised controlled pilot trial of the efficacy of Omega-3 polyunsaturated fatty acids for the treatment of women with endometriosis-associated pain (PurFECT1). <i>PLoS One</i> , 2020. 15(1): p. e0227695.	Does not answer the PICO question
Ahn AC, Schnyer R, Conboy L, Laufer MR, Wayne PM. Electrodermal measures of Jing-Well points and their clinical relevance in endometriosis-related chronic pelvic pain. <i>J Altern Complement Med</i> 2009;15: 1293-1305.	Not relevant for the question
Almassinokiani F, Khodaverdi S, Soleymani-Dodaran M, Akbari P, Pazouki A. Effects of Vitamin D on Endometriosis-Related Pain: A Double-Blind Clinical Trial. <i>Med Sci Monit</i> 2016;22: 4960-4966.	Included in review Huijs 2020
Aredo JV, Heyrana KJ, Karp BI, Shah JP, Stratton P. Relating Chronic Pelvic Pain and Endometriosis to Signs of Sensitization and Myofascial Pain and Dysfunction. <i>Semin Reprod Med</i> 2017;35: 88-97.	Does not answer the PICO question
Armour M, Smith CA, Schabrun S, Steiner GZ, Zhu X, Lawson K, Song J. Manual acupuncture plus usual care versus usual care alone in the treatment of endometriosis-related chronic pelvic pain: study protocol for a randomised controlled feasibility study. <i>Pilot Feasibility Stud</i> 2018;4: 10.	study protocol
Bergstrom I, Freyschuss B, Jacobsson H, Landgren BM. The effect of physical training on bone mineral density in women with endometriosis treated with GnRH analogs: a pilot study. <i>Acta Obstet Gynecol Scand</i> 2005;84: 380-383.	Does not answer the PICO question
Bina F, Soleymani S, Toliat T, Hajimahmoodi M, Tabarrai M, Abdollahi M, Rahimi R. Plant-derived medicines for treatment of endometriosis: A comprehensive review of molecular mechanisms. <i>Pharmacol Res</i> 2019;139: 76-90.	Does not answer the PICO question (mechanism)
Bouaziz J, Bar On A, Seidman DS, Soriano D. The Clinical Significance of Endocannabinoids in Endometriosis Pain Management. <i>Cannabis Cannabinoid Res</i> 2017;2: 72-80.	Not relevant for the question - immunochemistry outcomes
Brooks, T., et al., Predictors of Psychological Outcomes and the Effectiveness and Experience of Psychological Interventions for Adult Women with Chronic Pelvic Pain: A Scoping Review. <i>J Pain Res</i> , 2020. 13: p. 1081-1102.	Not endometriosis specific
Carrubba, A.R., et al., Use of Cannabis for Self-Management of Chronic Pelvic Pain. <i>J Womens Health (Larchmt)</i> , 2020.	Not endometriosis specific
Cobellis L, Castaldi MA, Giordano V, Trabucco E, De Franciscis P, Torella M, Colacurci N. Effectiveness of the association micronized N-Palmitoylethanolamine (PEA)-transpolydatin in the treatment of chronic pelvic pain related to endometriosis after laparoscopic assessment: a pilot study. <i>Eur J Obstet Gynecol Reprod Biol</i> 2011;158: 82-86.	Included in review Huijs, 2020
Darling AM, Chavarro JE, Malspeis S, Harris HR, Missmer SA. A prospective cohort study of Vitamins B, C, E, and multivitamin intake and endometriosis. <i>J Endometr</i> 2013;5: 17-26.	More recent data/review available
de Almeida Borges VR, da Silva JH, Barbosa SS, Nasciutti LE, Cabral LM, de Sousa VP. Development and pharmacological evaluation of in vitro nanocarriers composed of lamellar silicates containing copaiba oil-resin for treatment of endometriosis. <i>Mater Sci Eng C Mater Biol Appl</i> 2016;64: 310-317.	Does not address the key question
De Leo V, Cagnacci A, Cappelli V, Biasioli A, Leonardi D, Seracchioli R. Role of a natural integrator based on lipoic acid, palmitoiletanolamide and myrrh in the treatment of chronic pelvic pain and endometriosis. <i>Minerva Ginecol</i> 2019.	Included in review Huijs 2020
Del Forno, S., et al., Transperineal Ultrasound Visual Feedback Assisted Pelvic Floor Muscle Physiotherapy in Women With Deep Infiltrating Endometriosis and Dyspareunia: A Pilot Study. <i>J Sex Marital Ther</i> , 2020. 46(7): p. 603-611.	Small sample size
East-Powell, M. and R. Reid, Medical synopsis: antioxidant supplementation may support reduction in pelvic pain in endometriosis. <i>Advances in integrative medicine</i> , 2019.	not relevant
Estes, S.J., et al., Depression, Anxiety, and Self-directed Violence in Women with Endometriosis: A Retrospective Matched Cohort Study. <i>Am J Epidemiol</i> , 2020.	Does not answer the PICO question
Fang RC, Tsai YT, Lai JN, Yeh CH, Wu CT. The traditional chinese medicine prescription pattern of endometriosis patients in taiwan: a population-based study. <i>Evid Based Complement Alternat Med</i> 2012;2012: 591391.	Does not answer the PICO question
Fjerbaek A, Knudsen UB. Endometriosis, dysmenorrhea and diet--what is the evidence? <i>Eur J Obstet Gynecol Reprod Biol</i> 2007;132: 140-147.	narrative paper without any conclusions
Flower A, Lewith GT, Little P. Seeking an oracle: using the Delphi process to develop practice guidelines for the treatment of endometriosis with Chinese herbal medicine. <i>J Altern Complement Med</i> 2007;13: 969-976.	Does not answer the PICO question



Fugh-Berman A, Kronenberg F. Complementary and alternative medicine (CAM) in reproductive-age women: a review of randomized controlled trials. <i>Reprod Toxicol</i> 2003;17: 137-152.	Not specific nor relevant patient group
Gao J, Liu HQ, Wang Y, Shang YL, Hu F. Effects of psychological care in patients with endometriosis: A systematic review protocol. <i>Medicine (Baltimore)</i> 2019;98: e14772.	study protocol
Garalejic E, Arsic B, Radakovic J, Bojovic Jovic D, Lekic D, Macanovic B, Soldatovic I, Perovic M. A preliminary evaluation of influence of body mass index on in vitro fertilization outcome in non-obese endometriosis patients. <i>BMC Womens Health</i> 2017;17: 112.	Not relevant
Giampaolino, P., et al., Is there a Relationship Between Vitamin D and Endometriosis? An Overview of the Literature. <i>Curr Pharm Des</i> , 2019. 25(22): p. 2421-2427.	Does not add to the body of evidence presented
Giovane R, Melton C, Konstantinou M, Henderson CE. Psychotherapy with somatosensory stimulation for endometriosis-associated pain: a randomized controlled trial (letter). <i>Obstetrics and gynecology</i> 2017;129: 581RCT.	letter
Green IC, Cohen SL, Finkenzeller D, Christo PJ. Interventional therapies for controlling pelvic pain: what is the evidence? <i>Curr Pain Headache Rep</i> 2010;14: 22-32.	Not endometriosis specific
Halpern G, Schor E, Kopelman A. Nutritional aspects related to endometriosis. <i>Rev Assoc Med Bras (1992)</i> 2015;61: 519-523.	More recent data/review available
Han YF, Hou LH, Zhou YJ, Wu XK. A survey of TCM treatment for endometriosis. <i>J Tradit Chin Med</i> 2009;29: 64-70.	Opinion paper
Harlev A, Gupta S, Agarwal A. Targeting oxidative stress to treat endometriosis. <i>Expert Opin Ther Targets</i> 2015;19: 1447-1464.	Does not answer the PICO question
Harris HR, Chavarro JE, Malspeis S, Willett WC, Missmer SA. Dairy-food, calcium, magnesium, and vitamin D intake and endometriosis: a prospective cohort study. <i>Am J Epidemiol</i> 2013;177: 420-430.	Does not answer the PICO question
Hawkins RS, Hart AD. The use of thermal biofeedback in the treatment of pain associated with endometriosis: preliminary findings. <i>Appl Psychophysiol Biofeedback</i> 2003;28: 279-289.	not relevant
Howard HS. Sexual adjustment counseling for women with chronic pelvic pain. <i>J Obstet Gynecol Neonatal Nurs</i> 2012;41: 692-702.	Opinion paper
Jiang H, Shen Y, Wang XG. Current progress of Chinese medicinal treatment of endometriosis. <i>Chin J Integr Med</i> 2010;16: 283-288.	More recent data/review available
Jorgensen WA, Frome BM, Wallach C. Electrochemical therapy of pelvic pain: effects of pulsed electromagnetic fields (PEMF) on tissue trauma. <i>Eur J Surg Suppl</i> 1994: 83-86.	Not specific for endometriosis
Kohama T, Herai K, Inoue M. Effect of French maritime pine bark extract on endometriosis as compared with leuprorelin acetate. <i>J Reprod Med</i> 2007;52: 703-708.	Not relevant
Kong S, Zhang YH, Liu CF, Tsui I, Guo Y, Ai BB, Han FJ. The complementary and alternative medicine for endometriosis: a review of utilization and mechanism. <i>Evid Based Complement Alternat Med</i> 2014;2014: 146383.	Opinion paper
Leeners, B. and C.M. Farquhar, Benefits of pregnancy on endometriosis: can we dispel the myths? <i>Fertil Steril</i> , 2019. 112(2): p. 226-227.	Does not answer the PICO question
Leonardi, M., et al., Self-management strategies to consider to combat endometriosis symptoms during the COVID-19 pandemic. <i>Hum Reprod Open</i> , 2020. 2020(2): p. hoaa028.	Does not answer the PICO question
Lete I, Mendoza N, de la Viuda E, Carmona F. Effectiveness of an antioxidant preparation with N-acetyl cysteine, alpha lipoic acid and bromelain in the treatment of endometriosis-associated pelvic pain: LEAP study. <i>Eur J Obstet Gynecol Reprod Biol</i> 2018;228: 221-224.	Not relevant
Li Y, Li T, Song S. Evaluation of Efficacy and Safety of Dan'e-Fukang Soft Extract in the Treatment of Endometriosis: A Meta-Analysis of 39 Randomized Controlled Trials Enrolling 5442 Patients. <i>Evid Based Complement Alternat Med</i> 2017;2017: 9767391.	Outcomes not relevant to the PICO question
Lian F, Li XL, Sun ZG, Zhang JW, Liu YH, Ma FM. Effect of Quyu Jiedu granule on microenvironment of ova in patients with endometriosis. <i>Chin J Integr Med</i> 2009;15: 42-46.	Does not answer the PICO question
Liang R, Li P, Peng X, Xu L, Fan P, Peng J, Zhou X, Xiao C, Jiang M. Efficacy of acupuncture on pelvic pain in patients with endometriosis: study protocol for a randomized, single-blind, multi-center, placebo-controlled trial. <i>Trials</i> 2018;19: 314.	Does not answer the PICO question
Liang, X., et al., Clinical research linking Traditional Chinese Medicine constitution types with diseases: a literature review of 1639 observational studies. <i>J Tradit Chin Med</i> , 2020. 40(4): p. 690-702.	Does not answer the PICO question
Lin PY, Tsai YT, Lai JN, Yeh CH, Fang RC. Bian zheng lun zhi as a complementary and alternative treatment for menstrual cramps in women with dysmenorrhea: a prospective clinical observation. <i>Evid Based Complement Alternat Med</i> 2014;2014: 460386.	Does not answer the PICO question



Lu X, Wu Z, Wang M, Cheng W. Effects of vitamin C on the outcome of in vitro fertilization-embryo transfer in endometriosis: A randomized controlled study. <i>J Int Med Res</i> 2018;46: 4624-4633.	Not relevant
Lundeberg T, Lund I. Is there a role for acupuncture in endometriosis pain, or 'endometrialgia'? <i>Acupunct Med</i> 2008;26: 94-110.	Does not answer the PICO question (mechanism)
Machairiotis, N., S. Vasilakaki, and P. Kouroutou, Natural products: Potential lead compounds for the treatment of endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> , 2020. 245: p. 7-12.	Does not answer the PICO question
Magalhaes J. Acupuncture for pain in endometriosis. <i>Sao Paulo Med J</i> 2013;131: 439.	Not relevant - Commentary on Cochrane
Martinez B, Canser E, Gredilla E, Alonso E, Gilsanz F. Management of patients with chronic pelvic pain associated with endometriosis refractory to conventional treatment. <i>Pain Pract</i> 2013;13: 53-58.	Does not answer the PICO question
Meresman, G.F., M. Götte, and M.W. Laschke, Plants as source of new therapies for endometriosis: a review of preclinical and clinical studies. <i>Hum Reprod Update</i> , 2020.	Does not answer the PICO question
Mira TAA, Buen MM, Borges MG, Yela DA, Benetti-Pinto CL. Systematic review and meta-analysis of complementary treatments for women with symptomatic endometriosis. <i>Int J Gynaecol Obstet</i> 2018;143: 2-9.	Review but reporting the results of studies also included in other (more specific) reviews
Miyashita M, Koga K, Izumi G, Sue F, Makabe T, Taguchi A, Nagai M, Urata Y, Takamura M, Harada M et al. Effects of 1,25-Dihydroxy Vitamin D3 on Endometriosis. <i>J Clin Endocrinol Metab</i> 2016;101: 2371-2379.	Does not answer the PICO question (mechanism)
Molina, N.M., et al., New Opportunities for Endometrial Health by Modifying Uterine Microbial Composition: Present or Future? <i>Biomolecules</i> , 2020. 10(4).	Does not answer the PICO question (mechanism)
Moore JS, Gibson PR, Perry RE, Burgell RE. Endometriosis in patients with irritable bowel syndrome: Specific symptomatic and demographic profile, and response to the low FODMAP diet. <i>Aust N Z J Obstet Gynaecol</i> 2017;57: 201-205.	Included in review Huijs 2020
Nct. Botulinum Toxin for Pelvic Pain in Women With Endometriosis. https://clinicaltrials.gov/show/study/NCT01553201 2012.	Does not answer the PICO question
Nyangoh Timoh K, Canlorbe G, Verollet D, Peyrat L, Ballester M, Amarenco G, Darai E. Contribution of sacral neuromodulation to manage persistent voiding dysfunction after surgery for deep infiltrating endometriosis with colorectal involvement: preliminary results. <i>Eur J Obstet Gynecol Reprod Biol</i> 2015;190: 31-35.	Does not address the key question
Oberweis D, Madelenat P, Nisolle M, Demanet E. A pilot double-blind, randomized, placebo-controlled trial of the efficacy of trace elements in the treatment of endometriosis-related pain: study design and methodology. <i>Nutrition and dietary supplements</i> 2016;8: 1-8.	Does not address the key question
O'Hara, R., H. Rowe, and J. Fisher, Self-management in condition-specific health: a systematic review of the evidence among women diagnosed with endometriosis. <i>BMC Womens Health</i> , 2019. 19(1): p. 80.	Does not add to the body of evidence presented
Poli-Neto, O.B., et al., Strength Exercise Has Different Effects on Pressure Pain Thresholds in Women with Endometriosis-Related Symptoms and Healthy Controls: A Quasi-experimental Study. <i>Pain Med</i> , 2020. 21(10): p. 2280-2287.	Does not answer the PICO question
Reid R, Steel A, Wardle J, Adams J. Naturopathic Medicine for the Management of Endometriosis, Dysmenorrhea, and Menorrhagia: A Content Analysis. <i>J Altern Complement Med</i> 2019;25: 202-226.	Not specific for endometriosis
Ried K. Chinese herbal medicine for female infertility: an updated meta-analysis. <i>Complement Ther Med</i> 2015;23: 116-128.	Not specific for endometriosis
Roomaney R, Kagee A. Coping strategies employed by women with endometriosis in a public health-care setting. <i>J Health Psychol</i> 2016;21: 2259-2268.	Coping strategies, no direct intervention of pain
Santanam N, Kavtaradze N, Murphy A, Dominguez C, Parthasarathy S. Antioxidant supplementation reduces endometriosis-related pelvic pain in humans. <i>Transl Res</i> 2013;161: 189-195.	Does not answer the PICO question (mechanism)
Schnyer RN, Iuliano D, Kay J, Shields M, Wayne P. Development of protocols for randomized sham-controlled trials of complex treatment interventions: Japanese acupuncture for endometriosis-related pelvic pain. <i>J Altern Complement Med</i> 2008;14: 515-522.	study protocol
Sesti F, Pietropoli A, Capozzolo T, Broccoli P, Pierangeli S, Bollea MR, Piccione E. Hormonal suppression treatment or dietary therapy versus placebo in the control of painful symptoms after conservative surgery for endometriosis stage III-IV. A randomized comparative trial. <i>Fertil Steril</i> 2007;88: 1541-1547.	Included in review Huijs, 2020
Shan J, Cheng W, Zhai DX, Zhang DY, Yao RP, Bai LL, Cai ZL, Liu YH, Yu CQ. Meta-Analysis of Chinese Traditional Medicine Bushen Huoxue Prescription for Endometriosis Treatment. <i>Evid Based Complement Alternat Med</i> 2017;2017: 5416423.	not relevant
Shoebtham A, Coulson NS. Therapeutic Affordances of Online Support Group Use in Women With Endometriosis. <i>J Med Internet Res</i> 2016;18: e109.	Outcomes not relevant to the PICO question



Showell MG, Brown J, Clarke J, Hart RJ. Antioxidants for female subfertility. <i>Cochrane Database Syst Rev</i> 2013; Cd007807.	Better evidence available on the topic
Simonsen, S.M., et al., About me as a person not only the disease - piloting Guided Self-Determination in an outpatient endometriosis setting. <i>Scand J Caring Sci</i> , 2020. 34(4): p. 1017-1027.	Does not answer the PICO question - very small sample
Sinclair, J., et al., Cannabis Use, a Self-Management Strategy Among Australian Women With Endometriosis: Results From a National Online Survey. <i>J Obstet Gynaecol Can</i> , 2020. 42(3): p. 256-261.	Does not answer the PICO question
Stener-Victorin E. Acupuncture for the relief of endometriosis-related pain. Focus on alternative and complementary therapies 2011;16: 214-215.	Not relevant
Stephens L, Whitehouse J, Polley M. Western herbal medicine, epigenetics, and endometriosis. <i>J Altern Complement Med</i> 2013;19: 853-859.	Not relevant
Teixeira MZ, Podgaec S, Baracat EC. Potentized estrogen in homeopathic treatment of endometriosis-associated pelvic pain: A 24-week, randomized, double-blind, placebo-controlled study. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;211: 48-55.	Not relevant
Teixeira MZ, Podgaec S, Baracat EC. Protocol of randomized controlled trial of potentized estrogen in homeopathic treatment of chronic pelvic pain associated with endometriosis. <i>Homeopathy</i> 2016;105: 240-249.	study protocol
Tsai PJ, Lin YH, Chen JL, Yang SH, Chen YC, Chen HY. Identifying Chinese Herbal Medicine Network for Endometriosis: Implications from a Population-Based Database in Taiwan. <i>Evid Based Complement Alternat Med</i> 2017;2017: 7501015.	Not relevant for the question
Tsuchiya M, Miura T, Hanaoka T, Iwasaki M, Sasaki H, Tanaka T, Nakao H, Katoh T, Ikenoue T, Kabuto M et al. Effect of soy isoflavones on endometriosis: interaction with estrogen receptor 2 gene polymorphism. <i>Epidemiology</i> 2007;18: 402-408.	Does not answer the PICO question (mechanism)
Vercellini P. Introduction: Management of endometriosis: moving toward a problem-oriented and patient-centered approach. <i>Fertil Steril</i> 2015;104: 761-763.	Opinion paper
Xia JF, Inagaki Y, Zhang JF, Wang L, Song PP. Chinese medicine as complementary therapy for female infertility. <i>Chin J Integr Med</i> 2017;23: 245-252.	Not specific for endometriosis
Yang DX, Ma WG, Qu F, Ma BZ. Comparative study on the efficacy of Yiweining and Gestrinone for post-operational treatment of stage III endometriosis. <i>Chin J Integr Med</i> 2006;12: 218-220.	More recent data/review available
Yang L, Adams J, Sibbritt D. Prevalence and factors associated with the use of acupuncture and Chinese medicine: results of a nationally representative survey of 17161 Australian women. <i>Acupunct Med</i> 2017;35: 189-199.	Does not answer the PICO question - not relevant to fertility or pain
Yang Y, Zhao R, Hao Z, Li L, Xu C, Cui Y. Effects of danchi decoction on P450arom, survivin of eutopic endometrium of patients with endometriosis after conservative surgery. <i>African journal of traditional, complementary and alternative medicines</i> 2015;12: 65-71.	Not relevant
Zarbo C, Brugnara A, Compare A, Candeloro I, Secomandi R, Betto E, Fusi F, Marabini R, Malandrino C, Carnelli M et al. Perfectionistic traits and importance given to parenthood are associated with infertility-related quality of life in a sample of infertile women with and without endometriosis. <i>Sex Reprod Healthc</i> 2018;17: 86-90.	Relevant outcomes are not assessed or inappropriately assessed
Zhao L, Wu H, Zhou X, Wang Q, Zhu W, Chen J. Effects of progressive muscular relaxation training on anxiety, depression and quality of life of endometriosis patients under gonadotrophin-releasing hormone agonist therapy. <i>Eur J Obstet Gynecol Reprod Biol</i> 2012;162: 211-215.	Relevant outcomes are not assessed or inappropriately assessed
Zhao RH, Liu Y, Tan Y, Hao ZP, Meng QW, Wang R, Long D, Ding YF, Song DR, Xu C et al. Chinese medicine improves postoperative quality of life in endometriosis patients: a randomized controlled trial. <i>Chin J Integr Med</i> 2013;19: 15-21.	More recent data/review available
Zheng W, Cao L, Xu Z, Ma Y, Liang X. Anti-Angiogenic Alternative and Complementary Medicines for the Treatment of Endometriosis: A Review of Potential Molecular Mechanisms. <i>Evid Based Complement Alternat Med</i> 2018;2018: 4128984.	Does not address the key question (mechanism)
Zhou J, Qu F. Treating gynaecological disorders with traditional Chinese medicine: a review. <i>Afr J Tradit Complement Altern Med</i> 2009;6: 494-517.	Not specific for endometriosis

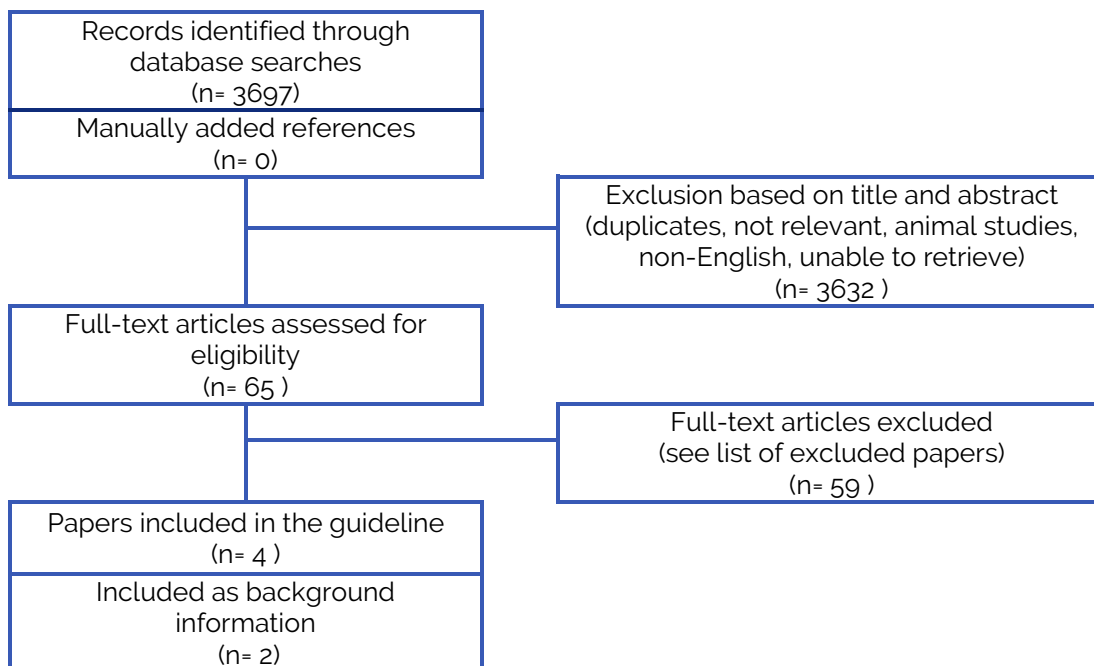


QUESTION III.1 ARE HORMONE/MEDICAL THERAPIES EFFECTIVE FOR TREATMENT OF ENDOMETRIOSIS-ASSOCIATED INFERTILITY?

Search strings

DATABASE	Search string
PUBMED	("Endometriosis"[Title] OR "endometriotic"[Title] OR "endometrioma"[Title]) AND ("Gonadotropin-Releasing Hormone Agonist" OR "Gonadotropin-Releasing Hormone"[Mesh] OR "GnRH agonists" OR GnRHa OR "luteinizing hormone releasing hormone agonist" OR "LHRH agonist" OR "Gonadotrophin releasing hormone agonist" OR Leuprorelin OR "Leuprolide"[Mesh] OR leuprolide OR "leuprolide acetate" OR buserelin OR goserelin OR "Goserelin"[Mesh] OR Zoladex OR Nafarelin OR "Nafarelin"[Mesh] OR diphereline OR Triptorelin OR tryptorelin OR "Gonadotrophin releasing hormone antagonist" OR "GnRH antagonist" OR Cetrorelix OR Cetrotide OR Ganirelix OR Orgalutran OR Gestrinone OR "Gestrinone"[Mesh] OR "levonorgestrel-releasing intrauterine system" OR "levonorgestrel-releasing intrauterine device" OR Progestin OR "Progestins"[Mesh] OR Progestagen OR Progesterone OR Norethisterone OR Norethindrone OR "Norethindrone"[Mesh] OR "medroxy progesterone acetate" OR "medroxyprogesterone acetate" OR "Medroxyprogesterone Acetate"[Mesh] OR dydrogesterone OR "Dydrogesterone"[Mesh] OR dienogest OR Levonorgestrel OR "Levonorgestrel"[Mesh] OR Mirena Coil OR Norgestrel OR "Norgestrel"[Mesh] OR desogestrel OR "Desogestrel"[Mesh] OR cyproterone acetate OR "Cyproterone Acetate"[Mesh] OR "Aromatase Inhibitors"[Mesh] OR "aromatase inhibitor" OR Anastrozole OR letrozole OR exemestane OR SPRM OR "selective progesterone receptor modulator" OR "Ulipristal acetate" OR Asoprisnil OR CDB-4124 OR SERM OR "Selective Estrogen Receptor Modulators"[Mesh] OR "Selective Estrogen Receptor Modulator" OR clomifene OR femelle OR ormeloxifene OR raloxifene OR tamoxifen OR toremifene OR "Contraceptives, Oral, Combined"[Mesh] OR Contraceptive OR "Contraceptive Agents"[Mesh] OR "Contraceptives, Oral"[Mesh] OR danazol OR "surgery" [Subheading] OR surgery OR surgical OR "Laparoscopy"[Mesh] OR laparoscopy OR laparoscopic) AND (pregnancy OR "Pregnancy"[Mesh] OR "Pregnancy Rate"[Mesh] OR "Pregnancy Outcome"[Mesh] OR "Time-to-Pregnancy"[Mesh] OR miscarriage OR "Abortion, Spontaneous"[Mesh] OR "Teratogenesis"[Mesh] OR teratogenicity OR "live birth" OR "Live Birth"[Mesh] OR "Infertility"[Mesh] OR ectopic)
COCHRANE	(Endometriosis OR endometriotic OR endometrioma) AND ("Gonadotropin-Releasing Hormone Agonist" OR "Gonadotropin-Releasing Hormone" OR "GnRH agonists" OR GnRHa OR "luteinizing hormone releasing hormone agonist" OR "LHRH agonist" OR "Gonadotrophin releasing hormone agonist" OR Leuprorelin OR leuprolide OR "leuprolide acetate" OR buserelin OR goserelin OR "Goserelin" OR Zoladex OR Nafarelin OR diphereline OR Triptorelin OR tryptorelin OR "Gonadotrophin releasing hormone antagonist" OR "GnRH antagonist" OR Cetrorelix OR Cetrotide OR Ganirelix OR Orgalutran OR Gestrinone OR "levonorgestrel-releasing intrauterine system" OR "levonorgestrel-releasing intrauterine device" OR Progestin OR "Progestins" OR Progestagen OR Progesterone OR Norethindrone OR "Norethindrone" OR "medroxy progesterone acetate" OR "medroxyprogesterone acetate" OR dydrogesterone OR dienogest OR Levonorgestrel OR Mirena Coil OR Norgestrel OR desogestrel OR "Cyproterone Acetate" OR "aromatase inhibitor" OR Anastrozole OR letrozole OR exemestane OR SPRM OR "selective progesterone receptor modulator" OR "Ulipristal acetate" OR Asoprisnil OR CDB-4124 OR SERM OR "Selective Estrogen Receptor Modulator" OR clomifene OR femelle OR ormeloxifene OR raloxifene OR tamoxifen OR toremifene OR Contraceptive OR danazol OR surgical OR laparoscopy OR laparoscopic) AND (pregnancy OR "Pregnancy Rate" OR "Pregnancy Outcome" OR "Time-to-Pregnancy" OR miscarriage OR "Teratogenesis" OR teratogenicity OR "live birth" OR "Infertility" OR ectopic)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Abu Hashim H. Aromatase Inhibitors for Endometriosis-Associated Infertility; Do We Have Sufficient Evidence? <i>Int J Fertil Steril</i> 2016;10: 270-277.	Does not address the correct interventions
Abu Hashim H. Gonadotrophin-releasing hormone analogues and endometriosis: current strategies and new insights. <i>Gynecol Endocrinol</i> 2012;28: 314-321.	Paper is not focussing on infertility
Alborzi S, Ghotbi S, Parsanezhad ME, Dehbashi S, Alborzi S, Alborzi M. Pentoxifylline therapy after laparoscopic surgery for different stages of endometriosis: a prospective, double-blind, randomized, placebo-controlled study. <i>J Minim Invasive Gynecol</i> 2007;14: 54-58.	Included in review Lu 2012
Alkatout I, Mettler L, Beteta C, Hedderich J, Jonat W, Schollmeyer T, Salmassi A. Combined surgical and hormone therapy for endometriosis is the most effective treatment: prospective, randomized, controlled trial. <i>J Minim Invasive Gynecol</i> 2013;20: 473-481.	Included in review Chen 2020
Angioni S, Nappi L, Pontis A, Sedda F, Luisi S, Mais V, Melis GB. Dienogest. A possible conservative approach in bladder endometriosis. Results of a pilot study. <i>Gynecol Endocrinol</i> 2015;31: 406-408.	pilot study
Avraham S, Seidman DS. Surgery versus pharmacological treatment for endometriosis. <i>Womens Health (Lond)</i> 2014;10: 161-166. doi: 110.2217/whe.2213.2277.	Not relevant for the PICO question
Bianchi S, Busacca M, Agnoli B, Candiani M, Calia C, Vignali M. Effects of 3 month therapy with danazol after laparoscopic surgery for stage III/IV endometriosis: a randomized study. <i>Human reproduction (oxford, england)</i> 1999;14: 1335-1337.	Included in review Chen 2020
Bianchi S, Busacca M, Agnoli B, Candiani M, Calia C, Vignali M. Effects of 3 month therapy with danazol after laparoscopic surgery for stage III/IV endometriosis: a randomized study. <i>Hum Reprod</i> 1999;14: 1335-1337.	Included in review Chen 2020
Bromham DR, Booker MW, Rose GL, Wardle PG, Newton JR. A multicentre comparative study of gestrinone and danazol in the treatment of endometriosis. <i>Journal of obstetrics and gynaecology</i> 1995;15: 188-194.	Included in review Hughes 2007
Brown J, Farquhar C. An overview of treatments for endometriosis. <i>Jama</i> 2015;313: 296-297.	Does not address the PICO question
Busacca M, Somigliana E, Bianchi S, De Marinis S, Calia C, Candiani M, Vignali M. Post-operative GnRH analogue treatment after conservative surgery for symptomatic endometriosis stage III-IV: a randomized controlled trial. <i>Hum Reprod</i> 2001;16: 2399-2402.	Included in review Chen 2020/Hughes 2007
Cahill DJ, Wardle PG, Harlow CR, Hull MG. Effect of progestogen therapy on follicular development, related hormone concentrations and fertilization in vitro in unstimulated cycles and unexplained and endometriosis-associated infertility. <i>Ir Med J</i> 1996;89: 52-53.	More recent data/review included
Camilleri L, Schembri A, Inglott AS. Prevalence, characteristics, and management of endometriosis in an infertile Maltese population. <i>Int J Gynaecol Obstet</i> 2011;115: 293-294.	Does not address the PICO question
Chen Y, Wang H, Wang S, Shi X, Wang Q, Ren Q. Efficacy of ten interventions for endometriosis: A network meta-analysis. <i>J Cell Biochem</i> 2019;120: 13076-13084.	Does not address the PICO question
Chong AP, Keene ME, Thornton NL. Comparison of three modes of treatment for infertility patients with minimal pelvic endometriosis. <i>Fertil Steril</i> 1990;53: 407-410.	Intervention not included in the PICO question
Descamps P, Lansac J. Gn-RH agonists and ovarian endometriosis. <i>Epidemiology</i> 1998;9: 504-510.	Paper is not focussing on infertility
Donnez J, Chantraine F, Nisolle M. The efficacy of medical and surgical treatment of endometriosis-associated infertility: arguments in favour of a medico-surgical approach. <i>Hum Reprod Update</i> 2002;8: 89-94.	Narrative review
Fedele L, Parazzini F, Radici E, Bocciolone L, Bianchi S, Bianchi C, Candiani GB. Buserelin acetate versus expectant management in the treatment of infertility associated with minimal or mild endometriosis: a randomized clinical trial. <i>Am J Obstet Gynecol</i> 1992;166: 1345-1350.	Included in review Hughes 2007
Ferrero S, Remorgida V, Venturini PL, Bizzarri N. Endometriosis: the effects of dienogest. <i>BMJ Clin Evid</i> 2015;2015.	Paper is not focussing on infertility
Finas D, Hornung D, Diedrich K, Schultze-Mosgau A. Cetrorelix in the treatment of female infertility and endometriosis. <i>Expert Opin Pharmacother</i> 2006;7: 2155-2168.	More recent data/review included
Fraser IS, Shearman RP, Jansen RP, Sutherland PD. A comparative treatment trial of endometriosis using the gonadotrophin-releasing hormone agonist, nafarelin, and the synthetic steroid, danazol. <i>Australian & New Zealand journal of obstetrics & gynaecology</i> 1991;31: 158-163.	Included in review Hughes 2007



Goserelin depot versus danazol in the treatment of endometriosis the Australian/New Zealand experience. <i>Australian & New Zealand journal of obstetrics & gynaecology</i> 1996;36: 55-60.	Included in review Hughes 2007
Harrison RF, Barry-Kinsella C. Efficacy of medroxyprogesterone treatment in infertile women with endometriosis: a prospective, randomized, placebo-controlled study. <i>Fertil Steril</i> 2000;74: 24-30.	Included in review Hughes 2007
Igarashi M, Iizuka M, Abe Y, Ibuki Y. Novel vaginal danazol ring therapy for pelvic endometriosis, in particular deeply infiltrating endometriosis. <i>Hum Reprod</i> 1998;13: 1957-1961.	Intervention (Danazol) not included in the PICO question
Khine YM, Taniguchi F, Harada T. Clinical management of endometriosis-associated infertility. <i>Reprod Med Biol</i> 2016;15: 217-225.	Narrative review
Kulenthiran A. Efficacy of danazol treatment in infertile patients with endometriosis. <i>Fertil Steril</i> 1992;57: 523-530.	Intervention not included in the PICO question
Leone Roberti Maggiore U, Gupta JK, Ferrero S. Treatment of endometrioma for improving fertility. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;209: 81-85.	Narrative review
Lessey BA. Medical management of endometriosis and infertility. <i>Fertil Steril</i> 2000;73: 1089-1096.	Narrative review
Lin KC, Chen HF, Huang PT, Wu MY, Ho HN, Yang YS. Effectiveness of postoperative adjuvant therapy in improving reproductive outcome of endometriosis-associated infertility. <i>J Formos Med Assoc</i> 2001;100: 466-470.	More recent/relevant data included
Loverro G, Carriero C, Rossi AC, Putignano G, Nicolardi V, Selvaggi L. A randomized study comparing triptorelin or expectant management following conservative laparoscopic surgery for symptomatic stage III-IV endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2008;136: 194-198.	Included in review Chen 2020
Macer ML, Taylor HS. Endometriosis and infertility: a review of the pathogenesis and treatment of endometriosis-associated infertility. <i>Obstet Gynecol Clin North Am</i> 2012;39: 535-549.	Does not address the PICO question
Maouris P. Asymptomatic mild endometriosis in infertile women: the case for expectant management. <i>Obstet Gynecol Surv</i> 1991;46: 548-551.	Narrative review
Mishra VV, Gaddagi RA, Aggarwal R, Choudhary S, Sharma U, Patel U. Prevalence; Characteristics and Management of Endometriosis Amongst Infertile Women: A One Year Retrospective Study. <i>J Clin Diagn Res</i> 2015;9: QC01-03.	More recent/relevant data included
Mori H, Taketani Y, Uemura T, Miyake A, Tango T. Rates of endometriosis recurrence and pregnancy 1 year after treatment with intranasal buserelin acetate (Suprecur) (a prospective study). <i>J Obstet Gynaecol Res</i> 1999;25: 153-164.	Outcomes assessed are not on infertility
Muller V, Kogan I, Yarmolinskaya M, Niauri D, Gzgzyan A, Aylamazyan E. Dienogest treatment after ovarian endometrioma removal in infertile women prior to IVF. <i>Gynecol Endocrinol</i> 2017;33: 18-21.	Not relevant for the PICO question
Napolitano C, Marziani R, Mossa B, Perniola L, Benagiano G. Management of stage III and IV endometriosis: a 10-year experience. <i>Eur J Obstet Gynecol Reprod Biol</i> 1994;53: 199-204.	Not relevant for the PICO question
Overton CE, Lindsay PC, Johal B, Collins SA, Siddle NC, Shaw RW, Barlow DH. A randomized, double-blind, placebo-controlled study of luteal phase dydrogesterone (Duphaston) in women with minimal to mild endometriosis. <i>Fertil Steril</i> 1994;62: 701-707.	More recent data/review included
Ozkan S, Murk W, Arici A. Endometriosis and infertility: epidemiology and evidence-based treatments. <i>Ann N Y Acad Sci</i> 2008;1127: 92-100.	Narrative review
Paulson JD, Asmar P, Saffan DS. Mild and moderate endometriosis. Comparison of treatment modalities for infertile couples. <i>J Reprod Med</i> 1991;36: 151-155.	More recent/relevant data included
Pavone ME, Bulun SE. Aromatase inhibitors for the treatment of endometriosis. <i>Fertil Steril</i> 2012;98: 1370-1379.	Narrative review
Psaroudakis D, Hirsch M, Davis C. Review of the management of ovarian endometriosis: paradigm shift towards conservative approaches. <i>Curr Opin Obstet Gynecol</i> 2014;26: 266-274.	Narrative review
Reichel RP, Schweppe KW. Goserelin (Zoladex) depot in the treatment of endometriosis. <i>Zoladex Endometriosis Study Group. Fertil Steril</i> 1992;57: 1203-1210.	Paper is not focussing on infertility
Rickes D, Nickel I, Kropf S, Kleinstein J. Increased pregnancy rates after ultralong postoperative therapy with gonadotropin-releasing hormone analogs in patients with endometriosis. <i>Fertil Steril</i> 2002;78: 757-762.	Included in review Chen 2020
Rossmannith WG. Minimal endometriosis: a therapeutic dilemma? <i>Gynecol Endocrinol</i> 2009;25: 762-764. doi: 710.3109/09513590903230432.	Not relevant for the PICO question
Ruiz-Velasco V, Garcia-Luna A, Alcivia JC, Gabino F, Alvarado A, Allende S, Fanghanel G, Espinosa J. Treatment of endometriosis with goserelin. A multicentric study. <i>Clinica e investigacion en ginecologia y obstetricia</i> 1998;25: 212-217.	More recent data/review included
Sawatari Y, Horii T, Hoshiai H. Oily contrast medium as a therapeutic agent for infertility because of mild endometriosis. <i>Minerva Ginecol</i> 1993;45: 241-244.	Intervention not included in the PICO question



Schindler AE. Dienogest in long-term treatment of endometriosis. <i>International journal of women's health</i> 2011;3: 175-184.	Not relevant for the PICO question
Senapati S, Barnhart K. Managing endometriosis-associated infertility. <i>Clin Obstet Gynecol</i> 2011;54: 720-726.	Narrative review
Soong YK, Chang FH, Chou HH, Chang MY, Lee CL, Lai YM, Chang SY. Life table analysis of pregnancy rates in women with moderate or severe endometriosis comparing danazol therapy after carbon dioxide laser laparoscopy plus electrocoagulation or laparotomy plus electrocoagulation versus danazol therapy only. <i>J Am Assoc Gynecol Laparosc</i> 1997;4: 225-230.	Intervention (Danazol) not included in the PICO question
Soriano D, Bouaziz J, Elizur S, Zolti M, Orvieto R, Seidman D, Goldenberg M, Eisenberg VH. Reproductive Outcome Is Favorable After Laparoscopic Resection of Bladder Endometriosis. <i>J Minim Invasive Gynecol</i> 2016;23: 781-786.	More recent/relevant data included
Soritsa D, Saare M, Laisk-Podar T, Peters M, Soritsa A, Matt K, Karro H, Salumets A. Pregnancy rate in endometriosis patients according to the severity of the disease after using a combined approach of laparoscopy, GnRH agonist treatment and in vitro fertilization. <i>Gynecol Obstet Invest</i> 2015;79: 34-39.	Relevant outcome (spontaneous pregnancy) is not assessed
Stepniewska A, Pomini P, Bruni F, Mereu L, Ruffo G, Ceccaroni M, Scioscia M, Guerriero M, Minelli L. Laparoscopic treatment of bowel endometriosis in infertile women. <i>Hum Reprod</i> 2009;24: 1619-1625. doi: 1610.1093/humrep/dep1083. Epub 2009 Apr 1618.	Included in review Iversen 2017
Tanbo T, Fedorcsak P. Endometriosis-associated infertility: aspects of pathophysiological mechanisms and treatment options. <i>Acta Obstet Gynecol Scand</i> 2017;96: 659-667.	Does not address the PICO question
Vercellini P, Cortesi I, Crosignani PG. Progestins for symptomatic endometriosis: a critical analysis of the evidence. <i>Fertil Steril</i> 1997;68: 393-401.	More recent data/review included
Wang J, Zhou F, Dong M, Wu R, Qian Y. Prolonged gonadotropin-releasing hormone agonist therapy reduced expression of nitric oxide synthase in the endometrium of women with endometriosis and infertility. <i>Fertil Steril</i> 2006;85: 1037-1044.	More recent data/review included
Wu L, Wu Q, Liu L. Oral contraceptive pills for endometriosis after conservative surgery: a systematic review and meta-analysis. <i>Gynecol Endocrinol</i> 2013;29: 883-890.	Does not address the PICO question
Xue H, Liu M, Hao W, Li Y. Clinical evaluation of laparoscopic surgery combined with triptorelin acetate in patients with endometriosis and infertility. <i>Pak J Med Sci</i> 2018;34: 1064-1069.	More recent/relevant data included
Xue HL, Yu N, Wang J, Hao WJ, Li Y, Liu MY. Therapeutic effects of mifepristone combined with Gestrinone on patients with endometriosis. <i>Pak J Med Sci</i> 2016;32: 1268-1272. doi: 1210.12669/pjms.12325.10772.	Not relevant for the PICO question
Yang Y, Zhu W, Chen S, Zhang G, Chen M, Zhuang Y. Laparoscopic Surgery Combined with GnRH Agonist in Endometriosis. <i>J Coll Physicians Surg Pak</i> 2019;29: 313-316.	Included in review Chen 2020

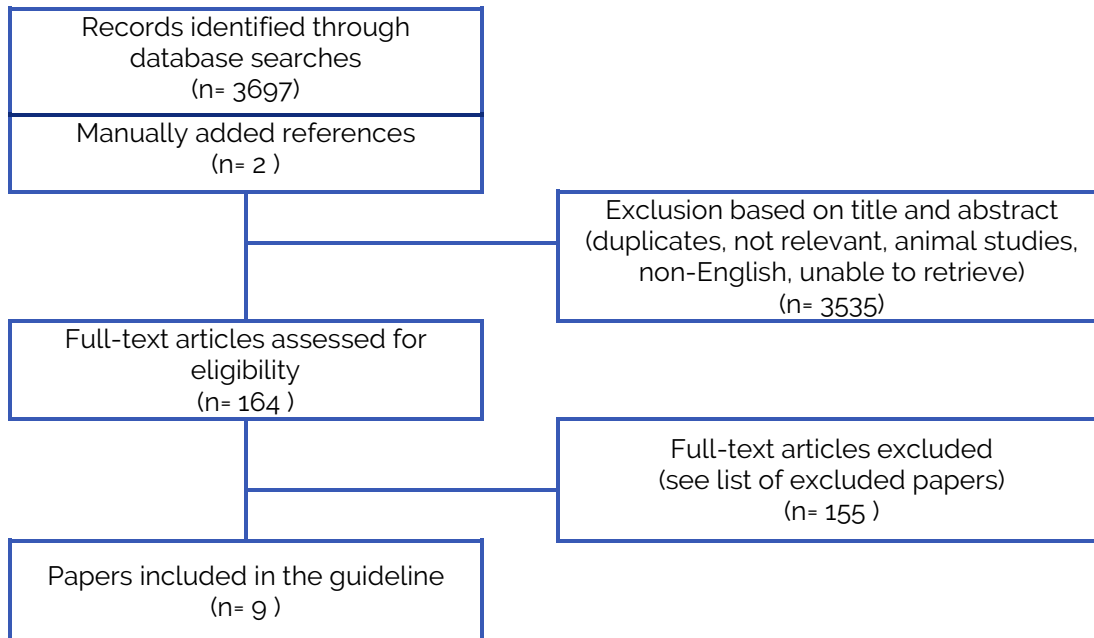


QUESTION III.2 IN WOMEN WITH ENDOMETRIOSIS, IS SURGERY EFFECTIVE TO INCREASE THE CHANCE OF NATURAL PREGNANCY?

Search strings

DATABASE	Search string
PUBMED	See question III.1 (identical search term, different selection of papers)
COCHRANE	See question III.1 (identical search term, different selection of papers)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Abo C, Moatassim S, Marty N, Saint Ghislain M, Huet E, Bridoux V, Tuech JJ, Roman H. Postoperative complications after bowel endometriosis surgery by shaving, disc excision, or segmental resection: a three-arm comparative analysis of 364 consecutive cases. <i>Fertil Steril</i> 2018;109: 172-178 e171.	Not relevant
Adamson GD, Hurd SJ, Pasta DJ, Rodriguez BD. Laparoscopic endometriosis treatment: is it better? <i>Fertil Steril</i> 1993;59: 35-44.	More recent/relevant data included
Adamson GD, Pasta DJ. Surgical treatment of endometriosis-associated infertility: meta-analysis compared with survival analysis. <i>Am J Obstet Gynecol</i> 1994;171: 1488-1504; discussion 1504-1485.	More recent reviews/data available
Alborzi S, Hosseini-Nohadani A, Poordast T, Shomali Z. Surgical outcomes of laparoscopic endometriosis surgery: a 6 year experience. <i>Curr Med Res Opin</i> 2017;33: 2229-2234.	Does not fit with the PICO question
Alborzi S, Momtahan M, Parsanezhad ME, Dehbashi S, Zolghadri J, Alborzi S. A prospective, randomized study comparing laparoscopic ovarian cystectomy versus fenestration and coagulation in patients with endometriomas. <i>Fertility and sterility</i> 2004;82: 1633-1637.	Included in review Dan 2013
Al-Inany H. Laparoscopic ablation is not necessary for minimal or mild lesions in endometriosis associated subfertility. <i>Acta Obstet Gynecol Scand</i> 2001;80: 593-595.	Narrative review
Allerstorfer C, Oppelt P, Enzelsberger SH, Shamiyeh A, Schirnetta W, Shebl OJ, Mayer RB. Delivery after Operation for Deeply Infiltrating Endometriosis. <i>Biomed Res Int</i> 2016;2016:8271452.	Does not fit with the PICO question
Angioni S, Cela V, Sedda F, Stochino Loi E, Cofelice V, Pontis A, Melis GB. Focusing on surgery results in infertile patients with deep endometriosis. <i>Gynecol Endocrinol</i> 2015;31: 595-598.	More recent reviews/data available
Arfi A, Bendifallah S, Mathieu D'argent E, Poupon C, Ballester M, Cohen J, Darai E. Nomogram predicting the likelihood of live-birth rate after surgery for deep infiltrating endometriosis without bowel involvement in women who wish to conceive: A retrospective study. <i>Eur J Obstet Gynecol Reprod Biol</i> 2019;235:81-87.	Not relevant
Ball E, Byrne H, Davis C. The value of two-step operative laparoscopy with interval pituitary suppression in the treatment of infertility caused by severe endometriosis. <i>Curr Opin Obstet Gynecol</i> 2007;19: 303-307.	Narrative review
Balla A, Quaresima S, Subiela JD, Shalaby M, Petrella G, Sileri P. Outcomes after rectosigmoid resection for endometriosis: a systematic literature review. <i>Int J Colorectal Dis</i> 2018;33: 835-847.	Relevant outcomes not reported
Batt RE, Buck GM, Smith RA. Health and fertility outcomes among women surgically treated for endometriosis. <i>J Am Assoc Gynecol Laparosc</i> 1997;4: 435-442.	More recent/relevant data included
Beretta P, Franchi M, Ghezzi F, Busacca M, Zupi E, Bolis P. Randomized clinical trial of two laparoscopic treatments of endometriomas: cystectomy versus drainage and coagulation. <i>Fertility and sterility</i> 1998;70: 1176-1180.	Included in review Dan 2013
Berlanda N, Vercellini P, Somigliana E, Frattaruolo MP, Buggio L, Gattei U. Role of surgery in endometriosis-associated subfertility. <i>Semin Reprod Med</i> 2013;31: 133-143.	narrative review
Blanc M, von Theobald P. Fertility after surgery for deep infiltrating endometriosis. <i>J Gynecol Obstet Hum Reprod</i> 2017;46: 143-146. doi: 110.1016/j.jogoh.2016.1012.1005. Epub 2017 Jan 1030.	More recent/relevant data included
Candiani GB, Vercellini P, Fedele L, Bianchi S, Vendola N, Candiani M. Conservative surgical treatment for severe endometriosis in infertile women: are we making progress? <i>Obstet Gynecol Surv</i> 1991;46: 490-498.	More recent reviews/data available
Candiani M, Ottolina J, Posadzka E, Ferrari S, Castellano LM, Tandoi I, Pagliardini L, Nocun A, Jach R. Assessment of ovarian reserve after cystectomy versus 'one-step' laser vaporization in the treatment of ovarian endometrioma: a small randomized clinical trial. <i>Human reproduction</i> 2018;33: 2205-2211.	Not relevant for the PICO question
Catenacci M, Sastry S, Falcone T. Laparoscopic surgery for endometriosis. <i>Clin Obstet Gynecol</i> 2009;52: 351-361.	narrative review
Centini G, Afors K, Alves J, Argay IM, Koninckx PR, Lazzeri L, Monti G, Zupi E, Wattiez A. Effect of Anterior Compartment Endometriosis Excision on Infertility. <i>JSLs</i> 2018;22(4). JSLs.2018.00067. doi: 00010.04293/JSLs.02018.00067.	Not relevant
Centini G, Afors K, Murtada R, Argay IM, Lazzeri L, Akladios CY, Zupi E, Petraglia F, Wattiez A. Impact of Laparoscopic Surgical Management of Deep Endometriosis on Pregnancy Rate. <i>J Minim Invasive Gynecol</i> 2016;23: 113-119.	More recent/relevant data included
Chang FH, Chou HH, Soong YK, Chang MY, Lee CL, Lai YM. Efficacy of isotopic ¹³ CO ₂ laser laparoscopic evaporation in the treatment of infertile patients with minimal and	Included in review Jin 2014



mild endometriosis: a life table cumulative pregnancy rates study. <i>J Am Assoc Gynecol Laparosc</i> 1997;4: 219-223.	
Chapron C, Fritel X, Dubuisson JB. Fertility after laparoscopic management of deep endometriosis infiltrating the uterosacral ligaments. <i>Rev Prat</i> 1999;49: 269-275.	More recent/relevant data included
Chen Y, Pei H, Chang Y, Chen M, Wang H, Xie H, Yao S. The impact of endometrioma and laparoscopic cystectomy on ovarian reserve and the exploration of related factors assessed by serum anti-Mullerian hormone: a prospective cohort study. <i>J Ovarian Res</i> 2014;7:108. doi: 10.1186/s13048-13014-10108-13040.	Does not fit with the PICO question
Cheong Y, Tay P, Luk F, Gan HC, Li TC, Cooke I. Laparoscopic surgery for endometriosis: How often do we need to re-operate? <i>J Obstet Gynaecol</i> 2008;28: 82-85.	More recent/relevant data included
Chong AP, Luciano A, O'Shaughnessy AM. Laser laparoscopy versus laparotomy in the treatment of infertility patients with severe endometriosis. <i>J Gynecol Surg</i> 1990;6: 179-183. doi: 110.1089/gyn.1990.1086.1179.	More recent/relevant data included
Cirpan T, Akman L, Yucebilgin MS, Terek MC, Kazandi M. Reproductive outcome after surgical treatment of endometriosis--retrospective analytical study. <i>Ginekol Pol</i> 2013;84: 1041-1044.	More recent/relevant data included
Collinet P, Leguevaque P, Neme RM, Cela V, Barton-Smith P, Hebert T, Hanssens S, Nishi H, Nisolle M. Robot-assisted laparoscopy for deep infiltrating endometriosis: international multicentric retrospective study. <i>Surg Endosc</i> 2014;28: 2474-2479.	Not relevant
Creus M, Fabregues F, Carmona F, del Pino M, Manau D, Balasch J. Combined laparoscopic surgery and pentoxifylline therapy for treatment of endometriosis-associated infertility: a preliminary trial. <i>Hum Reprod</i> 2008;23: 1910-1916.	Not relevant
Crosignani PG, Vercellini P, Biffignandi F, Costantini W, Cortesi I, Imperato E. Laparoscopy versus laparotomy in conservative surgical treatment for severe endometriosis. <i>Fertil Steril</i> 1996;66: 706-711.	More recent/relevant data included
Crosignani PG, Vercellini P. Conservative surgery for severe endometriosis: should laparotomy be abandoned definitively? <i>Hum Reprod</i> 1995;10: 2412-2418.	Irrelevant comparison
Darai E, Carbonnel M, Dubernard G, Lavoue V, Coutant C, Bazot M, Ballester M. Determinant factors of fertility outcomes after laparoscopic colorectal resection for endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2010;149: 210-214. doi: 210.1016/j.ejogrb.2009.1012.1032. Epub 2010 Jan 1021.	Included in review Iversen 2017 / Vercellini 2012
Darai E, Dubernard G, Coutant C, Frey C, Rouzier R, Ballester M. Randomized trial of laparoscopically assisted versus open colorectal resection for endometriosis: morbidity, symptoms, quality of life, and fertility. <i>Ann Surg</i> 2010;251: 1018-1023.	Included in review Vercellini 2012
Darai E, Lesieur B, Dubernard G, Rouzier R, Bazot M, Ballester M. Fertility after colorectal resection for endometriosis: results of a prospective study comparing laparoscopy with open surgery. <i>Fertil Steril</i> 2011;95: 1903-1908.	Comparison not relevant for the PICO question
Darai E, Marpeau O, Thomassin I, Dubernard G, Barranger E, Bazot M. Fertility after laparoscopic colorectal resection for endometriosis: preliminary results. <i>Fertil Steril</i> 2005;84: 945-950. doi: 910.1016/j.fertnstert.2005.1004.1037.	Included in review Vercellini 2012
Darwish B, Chanavaz-Lacheray I, Roman H. Swimming Against the Stream: Is Surgery Worthwhile in Women with Deep Infiltrating Endometriosis and Pregnancy Intention? <i>J Minim Invasive Gynecol</i> 2018;25: 1-3.	Publication type not relevant
Darwish B, Stochino-Loi E, Pasquier G, Dugardin F, Defortescu G, Abo C, Roman H. Surgical Outcomes of Urinary Tract Deep Infiltrating Endometriosis. <i>J Minim Invasive Gynecol</i> 2017;24: 998-1006.	not relevant
De Wilde RL, Alvarez J, Brolmann H, Campo R, Cheong Y, Lundorff P, Pawelczyk L, Roman H, di Spiezio Sardo A, Wallwiener M. Adhesions and endometriosis: challenges in subfertility management : (An expert opinion of the ANGEL-The ANti-Adhesions in Gynaecology Expert Panel-group). <i>Arch Gynecol Obstet</i> 2016;294: 299-301.	opinion paper
Dimitrijevic D, Vasiljevic M, Anicic R, Brankovic S, Ristic A, Devic A. Recurrence rate of ovarian endometriosis in patients treated with laparoscopic surgery and postoperative suppressive therapy. <i>Clin Exp Obstet Gynecol</i> 2015;42: 339-343.	Relevant outcomes not reported
Dlugi AM, Saleh WA, Jacobsen G. KTP/532 laser laparoscopy in the treatment of endometriosis-associated infertility. <i>Fertil Steril</i> 1992;57: 1186-1193.	More recent/relevant data included
Donnez J, Squifflet J. Complications, pregnancy and recurrence in a prospective series of 500 patients operated on by the shaving technique for deep rectovaginal endometriotic nodules. <i>Hum Reprod</i> 2010;25: 1949-1958.	More recent/relevant data included
Douay-Hauser N, Yazbeck C, Walker F, Luton D, Madelenat P, Koskas M. Infertile women with deep and intraperitoneal endometriosis: comparison of fertility outcome according to the extent of surgery. <i>J Minim Invasive Gynecol</i> 2011;18: 622-628. doi: 610.1016/j.jmig.2011.1006.1004. Epub 2011 Jul 1028.	Included in review Vercellini 2012
Duffy JM, Arambage K, Correa FJ, Olive D, Farquhar C, Garry R, Barlow DH, Jacobson TZ. Laparoscopic surgery for endometriosis. <i>Cochrane Database Syst Rev</i> 2014: Cd011031.	Older review, more recent version available



Ekine, A.A., et al., The Surgical Benefit of Hysterolaparoscopy in Endometriosis-Related Infertility: A Single Centre Retrospective Study with a Minimum 2-Year Follow-Up. <i>J Clin Med</i> , 2020. 9(2).	Not relevant - retrospective study - Hysterolaparoscopy
Fedele L, Bianchi S, Zanconato G, Bettoni G, Gotsch F. Long-term follow-up after conservative surgery for rectovaginal endometriosis. <i>Am J Obstet Gynecol</i> 2004;190: 1020-1024.	More recent/relevant data included
Ferrero S, Anserini P, Abbamonte LH, Ragni N, Camerini G, Remorgida V. Fertility after bowel resection for endometriosis. <i>Fertil Steril</i> 2009;92: 41-46.	Included in review Vercellini 2012
Ferrero S, Venturini PL, Gillott DJ, Remorgida V, Leone Roberti Maggiore U. Hemostasis by bipolar coagulation versus suture after surgical stripping of bilateral ovarian endometriomas: a randomized controlled trial. <i>Journal of minimally invasive gynecology</i> 2012;19: 722-730.	Relevant outcomes not reported
Ferrier C, Roman H, Alzahrani Y, d'Argent EM, Bendifallah S, Marty N, Perez M, Rubod C, Collinet P, Darai E et al. Fertility outcomes in women experiencing severe complications after surgery for colorectal endometriosis. <i>Hum Reprod</i> 2018;33: 411-415.	Does not fit with the PICO question
Franjoine SE, Bedaiwy MA, AbdelHafez FF, Geng C, Liu JH. Clinical Effectiveness of Modified Laparoscopic Fimbrioplasty for the Treatment of Minimal Endometriosis and Unexplained Infertility. <i>Minim Invasive Surg</i> 2015;2015:730513. doi:10.1155/2015/730513. Epub 732015 May 730516.	Does not fit with the PICO question
Gant NF. Infertility and endometriosis: comparison of pregnancy outcomes with laparotomy versus laparoscopic techniques. <i>Am J Obstet Gynecol</i> 1992;166: 1072-1081.	Irrelevant comparison
Gelbaya TA, Nardo LG. Evidence-based management of endometrioma. <i>Reprod Biomed Online</i> 2011;23: 15-24.	More recent reviews/data available
Georgievska J, Sapunov S, Cekovska S, Vasilevska K. Effect of two laparoscopic techniques for treatment of ovarian endometrioma on ovarian reserve. <i>Medicinski arhiv</i> 2015;69: 88-90.	Comparison not relevant for the PICO question
Gizzo S, Conte L, Di Gangi S, Leggieri C, Quaranta M, Noventa M, Litta P, Saccardi C. Could surgeon's expertise resolve the debate about surgery effectiveness in treatment of endometriosis-related infertility? <i>Arch Gynecol Obstet</i> 2015;292: 217-223.	Not relevant for the PICO question
Goodman LR, Goldberg JM, Flyckt RL, Gupta M, Harwalker J, Falcone T. Effect of surgery on ovarian reserve in women with endometriomas, endometriosis and controls. <i>Am J Obstet Gynecol</i> 2016;215: 589 e581-589 e586.	Relevant outcomes not reported
Gordts S, Campo R, Brosens I, Puttemans P. Endometriosis: modern surgical management to improve fertility. <i>Best Pract Res Clin Obstet Gynaecol</i> 2003;17: 275-287.	Narrative review
Hart RJ, Hickey M, Maouris P, Buckett W. Excisional surgery versus ablative surgery for ovarian endometriomata. <i>Cochrane Database of Systematic Reviews</i> 2008.	More recent reviews/data available
Hudelist G, Tammaa A, Aas-Eng MK, Kirchner L, Fritzer N, Nemeth Z, Lamche M. Outcome of sonography-based minimally invasive surgery for deep infiltrating endometriosis of the ureter and urinary bladder - a retrospective cohort study. <i>Acta Obstet Gynecol Scand</i> 2018;97: 277-284.	Does not fit with the PICO question
Johnstone EB, Link MH. Controversies in the Management of Endometrioma: To Cure Sometimes, to Treat Often, to Comfort Always? <i>Clin Obstet Gynecol</i> 2015;58: 754-764.	More recent reviews/data available
Karaman Y, Uslu H. Complications and their management in endometriosis surgery. <i>Womens Health (Lond)</i> 2015;11: 685-692.	Relevant outcomes not reported
Kavallaris A, Chalvatzas N, Hornemann A, Banz C, Diedrich K, Agic A. 94 months follow-up after laparoscopic assisted vaginal resection of septum rectovaginale and rectosigmoid in women with deep infiltrating endometriosis. <i>Arch Gynecol Obstet</i> 2011;283: 1059-1064.	Included in review Iversen 2017 / vercellini 2012
Ke X, Qian H, Kang L, Wang J, Xie Y, Cheng Z. Clinical analyses of endometriosis after conservative surgery. <i>Int J Clin Exp Med</i> 2015;8: 21703-21706.	Does not fit with the PICO question
Kondo W, Darai E, Yazbeck C, Panel P, Tamburro S, Dubuisson J, Jardon K, Mage G, Madelenat P, Canis M. Do patients manage to achieve pregnancy after a major complication of deeply infiltrating endometriosis resection? <i>Eur J Obstet Gynecol Reprod Biol</i> 2011;154: 196-199.	Not relevant
Kostrzewa, M., et al., One-year follow-up of ovarian reserve by three methods in women after laparoscopic cystectomy for endometrioma and benign ovarian cysts. <i>Int J Gynaecol Obstet</i> , 2019. 146(3): p. 350-356.	Not relevant for the PICO question - compares endometrioma vs ovarian cyst
Lee HJ, Lee JE, Ku SY, Kim SH, Kim JG, Moon SY, Choi YM. Natural conception rate following laparoscopic surgery in infertile women with endometriosis. <i>Clin Exp Reprod Med</i> 2013;40: 29-32.	More recent/relevant data included
Lee, D., et al., Management of endometriosis-related infertility: Considerations and treatment options. <i>Clin Exp Reprod Med</i> , 2020. 47(1): p. 1-11.	narrative review



Leone Roberti Maggiore U, Ferrero S, Candiani M, Somigliana E, Vigano P, Vercellini P. Bladder Endometriosis: A Systematic Review of Pathogenesis, Diagnosis, Treatment, Impact on Fertility, and Risk of Malignant Transformation. <i>Eur Urol</i> 2017;71: 790-807.	Not relevant for the PICO question
Leone Roberti Maggiore U, Scala C, Tafi E, Racca A, Biscaldi E, Vellone VG, Venturini PL, Ferrero S. Spontaneous fertility after expectant or surgical management of rectovaginal endometriosis in women with or without ovarian endometrioma: a retrospective analysis. <i>Fertil Steril</i> 2017;107: 969-976.e965.	Not relevant
Marcoux S, Maheux R, Berube S. Laparoscopic surgery in infertile women with minimal or mild endometriosis. Canadian Collaborative Group on Endometriosis. <i>N Engl J Med</i> 1997;337: 217-222.	Included in review Jin 2014 and Bafort 2020
Marty N, Touleimat S, Moatassim-Drissa S, Millochou JC, Vallee A, Stochino Loi E, Desnyder E, Roman H. Rectal Shaving Using Plasma Energy in Deep Infiltrating Endometriosis of the Rectum: Four Years of Experience. <i>J Minim Invasive Gynecol</i> 2017;24: 1121-1127.	Does not fit with the PICO question
Maul LV, Morrision JE, Schollmeyer T, Alkatout I, Mettler L. Surgical therapy of ovarian endometrioma: recurrence and pregnancy rates. <i>JSLs</i> 2014;18: JSLs-D-13-00223. doi: 00210.04293/JSLs.02014.00223.	More recent/relevant data included
Meuleman C, D'Hoore A, Van Cleynenbreugel B, Beks N, D'Hooghe T. Outcome after multidisciplinary CO2 laser laparoscopic excision of deep infiltrating colorectal endometriosis. <i>Reprod Biomed Online</i> 2009;18: 282-289.	Included in review Iversen 2017
Meuleman C, Tomassetti C, D'Hooghe TM. Clinical outcome after laparoscopic radical excision of endometriosis and laparoscopic segmental bowel resection. <i>Curr Opin Obstet Gynecol</i> 2012;24: 245-252.	Not relevant
Meuleman C, Tomassetti C, D'Hoore A, Buyens A, Van Cleynenbreugel B, Fieuws S, Penninckx F, Vergote I, D'Hooghe T. Clinical outcome after CO(2) laser laparoscopic radical excision of endometriosis with colorectal wall invasion combined with laparoscopic segmental bowel resection and reanastomosis. <i>Hum Reprod</i> 2011;26: 2336-2343.	Included in review Vercellini 2012
Meuleman C, Tomassetti C, Gaspar Da Vitoria Magro M, Van Cleynenbreugel B, D'Hoore A, D'Hooghe T. Laparoscopic treatment of endometriosis. <i>Minerva Ginecol</i> 2013;65: 125-142.	Does not fit with the PICO question
Meuleman C, Tomassetti C, Wolthuis A, Van Cleynenbreugel B, Laenen A, Penninckx F, Vergote I, D'Hoore A, D'Hooghe T. Clinical outcome after radical excision of moderate-severe endometriosis with or without bowel resection and reanastomosis: a prospective cohort study. <i>Ann Surg</i> 2014;259: 522-531.	More recent / relevant data available
Miller PB, Savaris RF, Forstein DA, Likes CE, Nichols C, Cooper LJ, Lessey BA. Laparoscopic surgery improves pregnancy outcomes in women with suspected endometriosis with or without pathological confirmation. <i>Clin Exp Obstet Gynecol</i> 2016;43: 31-36.	More recent/relevant data included
Millochou JC, Stochino-Loi E, Darwish B, Abo C, Coget J, Chati R, Tuech JJ, Roman H. Multiple Nodule Removal by Disc Excision and Segmental Resection in Multifocal Colorectal Endometriosis. <i>J Minim Invasive Gynecol</i> 2018;25: 139-146.	Does not fit with the PICO question
Minelli L, Ceccaroni M, Ruffo G, Bruni F, Pomini P, Pontrelli G, Rolla M, Scioscia M. Laparoscopic conservative surgery for stage IV symptomatic endometriosis: short-term surgical complications. <i>Fertil Steril</i> 2010;94: 1218-1222.	Relevant outcomes not reported
Mircea O, Bartha E, Gheorghe M, Irimia T, Vladareanu R, Puscasiu L. Ovarian Damage after Laparoscopic Cystectomy for Endometrioma. <i>Chirurgia (Bucur)</i> 2016;111: 54-57.	Not relevant for the PICO question
Mircea O, Puscasiu L, Resch B, Lucas J, Collinet P, von Theobald P, Merviel P, Roman H. Fertility Outcomes After Ablation Using Plasma Energy Versus Cystectomy in Infertile Women With Ovarian Endometrioma: A Multicentric Comparative Study. <i>J Minim Invasive Gynecol</i> 2016;23: 1138-1145.	More recent/relevant data included
Moghadami-Tabrizi N, Daftari H, Behjatnia Y, Dabirashrafi H, Zandinejad K. Complication of Laparoscopic Coagulation of an Endometrioma Surface. <i>J Am Assoc Gynecol Laparosc</i> 1996;3: S31.	Case report
Mohr C, Nezhat FR, Nezhat CH, Seidman DS, Nezhat CR. Fertility considerations in laparoscopic treatment of infiltrative bowel endometriosis. <i>JSLs</i> 2005;9: 16-24.	More recent/relevant data included
Moini A, Bahar L, Ashrafinia M, Eslami B, Hosseini R, Ashrafinia N. Fertility Outcome after Operative Laparoscopy versus No Treatment in Infertile Women with Minimal or Mild Endometriosis. <i>Int J Fertil Steril</i> 2012;5: 235-240. Epub 2012 Mar 2020.	Included in review Bafort 2020
Moscarini M, Milazzo GN, Assorgi C, Pacchiarotti A, Caserta D. Ovarian stripping versus cystectomy: recurrence of endometriosis and pregnancy rate. <i>Arch Gynecol Obstet</i> 2014;290: 163-167.	More recent/relevant data included
Murphy AA, Schlaff WD, Hassiakos D, Durmusoglu F, Damewood MD, Rock JA. Laparoscopic cauterization in the treatment of endometriosis-related infertility. <i>Fertil Steril</i> 1991;55: 246-251.	More recent/relevant data included
Muzii L, Achilli C, Bergamini V, Candiani M, Garavaglia E, Lazzeri L, Lecce F, Maiorana A, Maneschi F, Marana R et al. Comparison between the stripping technique and the	Comparison not relevant for the PICO question



combined excisional/ablative technique for the treatment of bilateral ovarian endometriomas: a multicentre RCT. <i>Human reproduction</i> 2015;31: 339-344.	
Muzii L, Achilli C, Lecce F, Bianchi A, Franceschetti S, Marchetti C, Perniola G, Panici PB. Second surgery for recurrent endometriomas is more harmful to healthy ovarian tissue and ovarian reserve than first surgery. <i>Fertility and sterility</i> 2015;103: 738-743.	Not relevant for the PICO question
Muzii L, Luciano AA, Zupi E, Panici PB. Effect of surgery for endometrioma on ovarian function: a different point of view. <i>J Minim Invasive Gynecol</i> 2014;21: 531-533.	Does not fit with the PICO question
Nakagawa K, Ohgi S, Kojima R, Sugawara K, Ito M, Horikawa T, Irahara M, Saito H. Impact of laparoscopic cystectomy on fecundity of infertility patients with ovarian endometrioma. <i>J Obstet Gynaecol Res</i> 2007;33: 671-676.	More recent/relevant data included
Nardo LG, Moustafa M, Beynon DW. Reproductive outcome after laparoscopic treatment of minimal and mild endometriosis using Helica Thermal Coagulator. <i>Eur J Obstet Gynecol Reprod Biol</i> 2006;126: 264-267. doi: 210.1016/j.ejogrb.2005.10.1033. Epub 2005 Dec 1027.	Not relevant
Nirgianakis K, Gasparri ML, Radan AP, Villiger A, McKinnon B, Mosimann B, Papadia A, Mueller MD. Obstetric complications after laparoscopic excision of posterior deep infiltrating endometriosis: a case-control study. <i>Fertil Steril</i> 2018;110: 459-466.	Does not fit with the PICO question
Nyangoh Timoh K, Ballester M, Bendifallah S, Fauconnier A, Darai E. Fertility outcomes after laparoscopic partial bladder resection for deep endometriosis: Retrospective analysis from two expert centres and review of the literature. <i>Eur J Obstet Gynecol Reprod Biol</i> 2018;220:12-17.	Does not fit with the PICO question
Osuga Y, Koga K, Tsutsumi O, Yano T, Maruyama M, Kugu K, Momoeda M, Taketani Y. Role of laparoscopy in the treatment of endometriosis-associated infertility. <i>Gynecol Obstet Invest</i> 2002;53 Suppl 1: 33-39.	Narrative review
Pandis GK, Saridogan E, Windsor AC, Gulumser C, Cohen CR, Cutner AS. Short-term outcome of fertility-sparing laparoscopic excision of deeply infiltrating pelvic endometriosis performed in a tertiary referral center. <i>Fertil Steril</i> 2010;93: 39-45.	Relevant outcomes not reported
Parazzini F. Ablation of lesions or no treatment in minimal-mild endometriosis in infertile women: a randomized trial. <i>Gruppo Italiano per lo Studio dell'Endometriosi. Hum Reprod</i> 1999;14: 1332-1334.	Included in review Jin 2014
Park HJ, Kim H, Lee GH, Yoon TK, Lee WS. Could surgical management improve the IVF outcomes in infertile women with endometrioma?: a review. <i>Obstet Gynecol Sci</i> 2019;62: 1-10.	Relevant outcomes not reported
Paulson JD, Borromeo R, Speck G. The success of laser laparoscopy in the treatment of endometriosis: a two-step analysis. <i>JLS</i> 2001;5: 21-27.	Not relevant
Paulson JD, Habli M, Alizade A, Borromeo R. The treatment of mild endometriosis with laser laparoscopy: a two-step treatment analysis of patients whose primary therapy was successful. <i>JLS</i> 2006;10: 30-36.	Not relevant
Porpora MG, Pultrone DC, Bellavia M, Franco C, Crobu M, Cosmi EV. Reproductive outcome after laparoscopic treatment of endometriosis. <i>Clin Exp Obstet Gynecol</i> 2002;29: 271-273.	More recent/relevant data included
Posadzka E, Nocun A, Jach R, Nessler M, Nessler K, Kialka M. Assessment of ovarian reserve in patients with ovarian endometriosis following laparoscopic enucleation of a cyst accompanied by CO(2) laser ablation or electroablation. <i>Przegl Lek</i> 2016;73: 6-10.	Does not fit with the PICO question
Quicray M, Darwish B, Bridoux V, Roman H. Bowel occlusion in an infertile woman with documented deep endometriosis of the sigmoid colon: Why was it not unexpected? <i>Gynecol Obstet Fertil</i> 2016;44: 727-729. doi: 710.1016/j.gyobfe.2016.1009.1008.	Irrelevant publication type - letter
R DEO, Adami F, Mafra FA, Bianco B, Vilarino FL, Barbosa CP. Causes of endometriosis and prevalent infertility in patients undergoing laparoscopy without achieving pregnancy. <i>Minerva Ginecol</i> 2016;68: 250-258. Epub 2015 Jun 2030.	Does not fit with the PICO question
Rizk B, Turki R, Lotfy H, Ranganathan S, Zahed H, Freeman AR, Shilbayeh Z, Sassy M, Shalaby M, Malik R. Surgery for endometriosis-associated infertility: do we exaggerate the magnitude of effect? <i>Facts Views Vis Obgyn</i> 2015;7: 109-118.	More recent reviews/data available
Roman H, Auber M, Bourdel N, Martin C, Marpeau L, Puscasiu L. Postoperative recurrence and fertility after endometrioma ablation using plasma energy: retrospective assessment of a 3-year experience. <i>J Minim Invasive Gynecol</i> 2013;20: 573-582. doi: 510.1016/j.jmig.2013.1002.1016. Epub 2013 Jun 1010.	Not relevant
Roman H, Auber M, Mokdad C, Martin C, Diguët A, Marpeau L, Bourdel N. Ovarian endometrioma ablation using plasma energy versus cystectomy: a step toward better preservation of the ovarian parenchyma in women wishing to conceive. <i>Fertil Steril</i> 2011;96: 1396-1400.	Not relevant for the PICO question
Roman H, Bubenheim M, Auber M, Marpeau L, Puscasiu L. Antimüllerian hormone level and endometrioma ablation using plasma energy. <i>Jsls</i> 2014;18.	Relevant outcomes not reported
Roman H, Puscasiu L, Lempicki M, Huet E, Chati R, Bridoux V, Tuech JJ, Abo C. Colorectal Endometriosis Responsible for Bowel Occlusion or Subocclusion in Women With Pregnancy Intention: Is the Policy of Primary in Vitro Fertilization Always Safe? <i>J Minim Invasive Gynecol</i> 2015;22: 1059-1067.	Does not fit with the PICO question



Roman H, Quibel S, Auber M, Muszynski H, Huet E, Marpeau L, Tuech JJ. Recurrences and fertility after endometrioma ablation in women with and without colorectal endometriosis: a prospective cohort study. <i>Hum Reprod</i> 2015;30: 558-568.	More recent/relevant data included
Roman H. Colorectal endometriosis and pregnancy wish: why doing primary surgery. <i>Front Biosci (Schol Ed)</i> 2015;7: 83-93.	narrative review
Roman H. Endometriosis surgery and preservation of fertility, what surgeons should know. <i>J Visc Surg</i> 2018;155 Suppl 1: S31-s36.	narrative review
Roman, H., et al., High postoperative fertility rate following surgical management of colorectal endometriosis. <i>Human reproduction</i> , 2018. 33(9): p. 1669-1676.	Not a relevant addition to evidence from review
Roustan A, Perrin J, Debals-Gonthier M, Paulmyer-Lacroix O, Agostini A, Courbiere B. Surgical diminished ovarian reserve after endometrioma cystectomy versus idiopathic DOR: comparison of in vitro fertilization outcome. <i>Hum Reprod</i> 2015;30: 840-847.	Not relevant
Ruiz-Flores FJ, Garcia-Velasco JA. Is there a benefit for surgery in endometrioma-associated infertility? <i>Curr Opin Obstet Gynecol</i> 2012;24: 136-140.	narrative review
Saavalainen L, Heikinheimo O, Tiitinen A, Harkki P. Deep infiltrating endometriosis affecting the urinary tract-surgical treatment and fertility outcomes in 2004-2013. <i>Gynecol Surg</i> 2016;13: 435-444.	Not relevant
Schippert, C., et al., Reproductive capacity and recurrence of disease after surgery for moderate and severe endometriosis - a retrospective single center analysis. <i>BMC Womens Health</i> , 2020. 20(1): p. 144.	More relevant data available (reviews)
Shah DK, Mejia RB, Lebovic DI. Effect of surgery for endometrioma on ovarian function. <i>J Minim Invasive Gynecol</i> 2014;21: 203-209.	narrative review
Shervin A, Mohazzab A, Aminlou M, Kamali K, Padmehr R, Shadjoo K, Jaber-Pour P, Akbari E. Fertility outcome after laparoscopic treatment of advanced endometriosis in two groups of infertile patients with and without ovarian endometrioma. <i>Eur J Obstet Gynecol Reprod Biol</i> 2016;201:46-50.	More recent/relevant data included
Shimizu Y, Takashima A, Takahashi K, Kita N, Fujiwara M, Murakami T. Long-term outcome, including pregnancy rate, recurrence rate and ovarian reserve, after laparoscopic laser ablation surgery in infertile women with endometrioma. <i>J Obstet Gynaecol Res</i> 2010;36: 115-118.	More recent/relevant data included
Singh SS, Suen MW. Surgery for endometriosis: beyond medical therapies. <i>Fertil Steril</i> 2017;107: 549-554.	opinion paper
Stabuszewska-Jozwiak A, Ciebiera M, Baran A, Jakiel G. Effectiveness of laparoscopic surgeries in treating infertility related to endometriosis. <i>Ann Agric Environ Med</i> 2015;22: 329-331. doi: 310.5604/12321966.11152089.	More recent/relevant data included
Somigliana E, Benaglia L, Vigano P, Candiani M, Vercellini P, Fedele L. Surgical measures for endometriosis-related infertility: a plea for research. <i>Placenta</i> 2011;32 Suppl 3: S238-242.	narrative review
Somigliana E, Garcia-Velasco JA. Treatment of infertility associated with deep endometriosis: definition of therapeutic balances. <i>Fertil Steril</i> 2015;104: 764-770.	More recent reviews/data available
Somigliana E, Vercellini P, Daguati R, Giambattista E, Benaglia L, Fedele L. Effect of delaying post-operative conception after conservative surgery for endometriosis. <i>Reprod Biomed Online</i> 2010;20: 410-415.	Does not fit with the PICO question
Soriano D, Adler I, Bouaziz J, Zolti M, Eisenberg VH, Goldenberg M, Seidman DS, Elizur SE. Fertility outcome of laparoscopic treatment in patients with severe endometriosis and repeated in vitro fertilization failures. <i>Fertil Steril</i> 2016;106: 1264-1269. doi: 1210.1016/j.fertnstert.2016.1206.1003. Epub 2016 Jun 1222.	Relevant outcomes not reported
Spencer C, Robarts P. Urological and colorectal complications following surgery for rectovaginal endometriosis. <i>BJOG</i> 2008;115: 539; author reply 539-540.	Does not fit with the PICO question
Spielvogel K, Shwayder J, Coddington CC. Surgical management of adhesions, endometriosis, and tubal pathology in the woman with infertility. <i>Clin Obstet Gynecol</i> 2000;43: 916-928.	narrative review
Stepniewska A, Pomini P, Scioscia M, Mereu L, Ruffo G, Minelli L. Fertility and clinical outcome after bowel resection in infertile women with endometriosis. <i>Reprod Biomed Online</i> 2010;20: 602-609.	More recent/relevant data included
Stochino-Loi E, Darwish B, Mircea O, Touleimat S, Millochou JC, Abo C, Angioni S, Roman H. Does preoperative antimullerian hormone level influence postoperative pregnancy rate in women undergoing surgery for severe endometriosis? <i>Fertil Steril</i> 2017;107: 707-713.e703.	Not relevant for the PICO question
Suginami H, Tokushige M, Taniguchi F, Kitaoka Y. Complete removal of endometriosis improves fecundity. <i>Gynecol Obstet Invest</i> 2002;53 Suppl 1: 12-18.	More recent/relevant data included
Sun, T.T., et al., Fertility Outcomes After Laparoscopic Cystectomy in Infertile Patients with Stage III-IV Endometriosis: a Cohort with 6-10 years of Follow-up. <i>Adv Ther</i> , 2020. 37(5): p. 2159-2168.	Not relevant



Takuma N, Sengoku K, Pan B, Wada K, Yamauchi T, Miyamoto T, Ohsumi D, Ishikawa M. Laparoscopic treatment of endometrioma-associated infertility and pregnancy outcome. <i>Gynecol Obstet Invest</i> 2002;54 Suppl 1: 10.1159/000066292.	More recent/relevant data included
Tang Y, Chen SL, Chen X, He YX, Ye DS, Guo W, Zheng HY, Yang XH. Ovarian damage after laparoscopic endometrioma excision might be related to the size of cyst. <i>Fertil Steril</i> 2013;100: 464-469. doi: 410.1016/j.fertnstert.2013.1003.1033. Epub 2013 Apr 1012.	Not relevant
Tanprasertkul C, Patumanond J, Manusook S, Suwannarurk K, Somprasit C, Sreshthaputra O, Vutyavanich T. Recurrence of Endometrioma Following Conservative Ovarian Endometrioma Cystectomy: Laparoscopy versus Laparotomy. <i>J Med Assoc Thai</i> 2015;98 Suppl 3: S96-100.	Not relevant
Tokushige M, Suginami H, Taniguchi F, Kitaoka Y. Laparoscopic surgery for endometriosis: a long-term follow-up. <i>J Obstet Gynaecol Res</i> 2000;26: 409-416.	More recent/relevant data included
Torres-de la Roche, L.A., et al., A new approach to avoid ovarian failure as well function-impairing adhesion formation in endometrioma infertility surgery. <i>Arch Gynecol Obstet</i> , 2020. 301(5): p. 1113-1115.	Not relevant for the PICO question
Touboul C, Ballester M, Dubernard G, Zilberman S, Thomin A, Darai E. Long-term symptoms, quality of life, and fertility after colorectal resection for endometriosis: extended analysis of a randomized controlled trial comparing laparoscopically assisted to open surgery. <i>Surg Endosc</i> 2015;29: 1879-1887.	More recent / relevant data available
Touleimat S, Huet E, Sanguin S, Roman H. Differed surgery in patient with colorectal endometriosis and pregnancy intention: Is it reasonable? <i>J Gynecol Obstet Hum Reprod</i> 2018;47: 29-31.	Case report
Tsai HD. Infertility treatment in patients with recurrent endometrioma. <i>Int J Gynaecol Obstet</i> 2010;110: 195-196.	Editorial
Tulandi T, al-Took S. Reproductive outcome after treatment of mild endometriosis with laparoscopic excision and electrocoagulation. <i>Fertil Steril</i> 1998;69: 229-231.	More recent/relevant data included
Tulandi T, Mouchawar M. Treatment-dependent and treatment-independent pregnancy in women with minimal and mild endometriosis. <i>Fertil Steril</i> 1991;56: 790-791.	More recent/relevant data included
Uccella S, Cromi A, Agosti M, Casarin J, Pinelli C, Marconi N, Bertoli F, Podesta'-Alluvion C, Ghezzi F. Fertility rates, course of pregnancy and perinatal outcomes after laparoscopic ureterolysis for deep endometriosis: A long-term follow-up study. <i>J Obstet Gynaecol</i> 2016;36: 800-805.	More recent/relevant data included
Uccella S, Cromi A, Casarin J, Bogani G, Pinelli C, Serati M, Ghezzi F. Laparoscopy for ureteral endometriosis: surgical details, long-term follow-up, and fertility outcomes. <i>Fertil Steril</i> 2014;102: 160-166 e162.	Not relevant
Vallee A, Ploteau S, Abo C, Stochino-Loi E, Moatassim-Drissa S, Marty N, Merlot B, Roman H. Surgery for deep endometriosis without involvement of digestive or urinary tracts: do not worry the patients! <i>Fertil Steril</i> 2018;109: 1079-1085.e1071.	Not relevant
Var T, Batioglu S, Tonguc E, Kahyaoglu I. The effect of laparoscopic ovarian cystectomy versus coagulation in bilateral endometriomas on ovarian reserve as determined by antral follicle count and ovarian volume: a prospective randomized study. <i>Fertility and sterility</i> 2011;95: 2247-2250.	Included in review Dan 2013
Vercellini P, Pietropaolo G, De Giorgi O, Daguati R, Pasin R, Crosignani PG. Reproductive performance in infertile women with rectovaginal endometriosis: is surgery worthwhile? <i>Am J Obstet Gynecol</i> 2006;195: 1303-1310.	Included in review Vercellini 2012
Vercellini P, Somigliana E, Daguati R, Barbara G, Abbiati A, Fedele L. The second time around: reproductive performance after repetitive versus primary surgery for endometriosis. <i>Fertil Steril</i> 2009;92: 1253-1255.	Not relevant for the PICO question
Vercellini P, Somigliana E, Vigano P, Abbiati A, Barbara G, Crosignani PG. Surgery for endometriosis-associated infertility: a pragmatic approach. <i>Hum Reprod</i> 2009;24: 254-269.	Not relevant
Vercellini P, Somigliana E, Vigano P, De Matteis S, Barbara G, Fedele L. The effect of second-line surgery on reproductive performance of women with recurrent endometriosis: a systematic review. <i>Acta Obstet Gynecol Scand</i> 2009;88: 1074-1082.	Does not fit with the PICO question
Vercellini P, Vigano P, Frattaruolo MP, Borghi A, Somigliana E. Bowel surgery as a fertility-enhancing procedure in patients with colorectal endometriosis: methodological, pathogenic and ethical issues. <i>Hum Reprod</i> 2018;33: 1205-1211.	Not relevant
Vidal, F., et al., Spontaneous pregnancy rate following surgery for deep infiltrating endometriosis in infertile women: The impact of the learning curve. <i>J Gynecol Obstet Hum Reprod</i> , 2020: p. 101942.	Does not fit with the PICO question
Wattiez A, Puga M, Albornoz J, Faller E. Surgical strategy in endometriosis. <i>Best Pract Res Clin Obstet Gynaecol</i> 2013;27: 381-392.	Does not fit with the PICO question
Yazdani A. Right of reply to: Surgical treatment is an excellent option for women with endometriosis and infertility. <i>Aust N Z J Obstet Gynaecol</i> 2018;58: 134. doi: 110.1111/ajo.12770. Epub 12018 Jan 12723.	author reply



Yoshida S, Harada T, Iwabe T, Terakawa N. Laparoscopic surgery for the management of ovarian endometrioma. <i>Gynecol Obstet Invest</i> 2002;54 Suppl 1: 24-27; discussion 27-29.	More recent/relevant data included
Yu HT, Huang HY, Lee CL, Soong YK, Wang CJ. Side of ovarian endometrioma does not affect the outcome of in vitro fertilization/intracytoplasmic sperm injection in infertile women after laparoscopic cystectomy. <i>J Obstet Gynaecol Res</i> 2015;41: 717-721. doi: 710.1111/jog.12633. Epub 12014 Dec 12616.	Does not fit with the PICO question
Zeng C, Xu JN, Zhou Y, Zhou YF, Zhu SN, Xue Q. Reproductive performance after surgery for endometriosis: predictive value of the revised American Fertility Society classification and the endometriosis fertility index. <i>Gynecol Obstet Invest</i> 2014;77: 180-185.	Not relevant for the PICO question
Zhu W, Tan Z, Fu Z, Li X, Chen X, Zhou Y. Repeat transvaginal ultrasound-guided aspiration of ovarian endometrioma in infertile women with endometriosis. <i>Am J Obstet Gynecol</i> 2011;204: 61 e61-66.	Not relevant



QUESTION III.3 WHICH PATIENTS NEED TREATMENT WITH ASSISTED REPRODUCTION TECHNOLOGY AFTER SURGERY?

NARRATIVE QUESTION

Search strings : not applicable

This question is a narrative question. The section was prepared based on expert opinion and selected papers from the literature searches performed in this section.

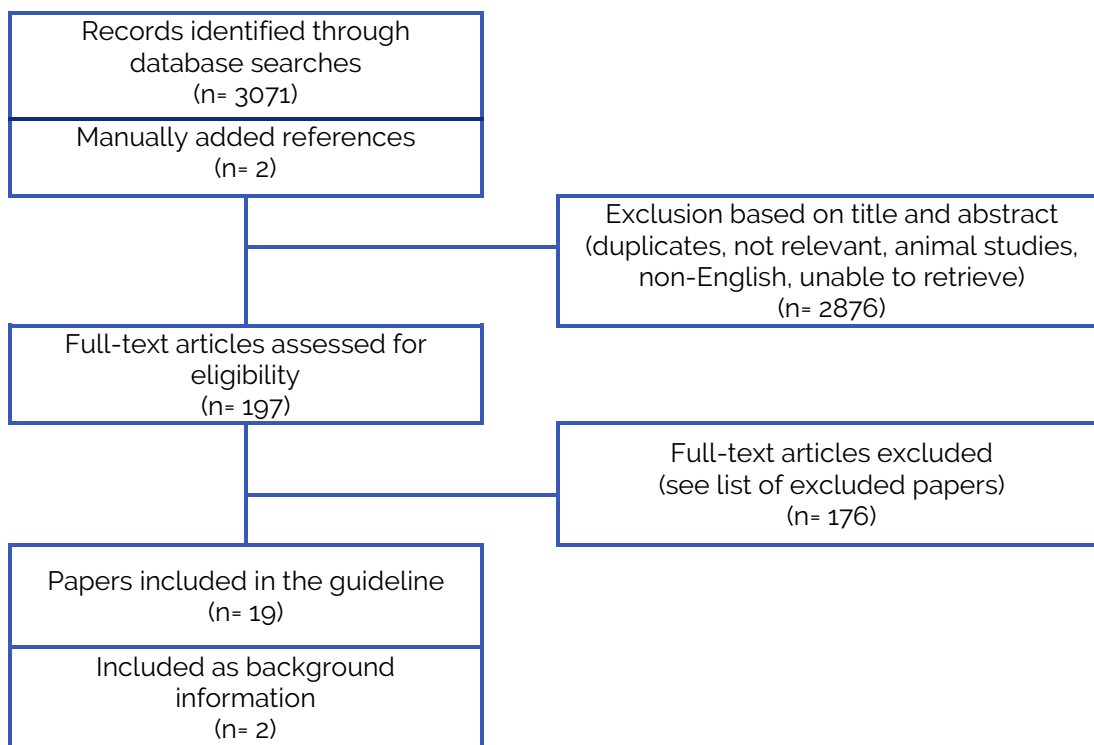


QUESTION III.4 IS MEDICALLY ASSISTED REPRODUCTION EFFECTIVE FOR INFERTILITY ASSOCIATED WITH ENDOMETRIOSIS?

Search strings

DATABASE	Search string
PUBMED	(Endometriosis[Mesh] OR "Endometriosis" OR endometriotic OR endometrioma) AND ("ovarian stimulation" OR Ovulation Induction[Mesh] OR Ovulation Induction OR "super ovulation" OR "ovarian hyperstimulation" OR ART OR Reproductive Techniques, Assisted[Mesh] OR MAC OR "medically assisted conception" OR MAR OR "medically assisted reproduction" OR Reproductive Medicine[Mesh] OR Reproductive Techniques[Mesh] OR IVF OR "in vitro fertilization" OR Fertilization in Vitro[Mesh] OR ICSI OR "Intracytoplasmic sperm injection" OR embryo transfer" OR IUI OR "intrauterine insemination" OR "artificial insemination" OR Insemination, Artificial[Mesh] OR natural cycle) AND (pregnancy OR Pregnancy[Mesh] OR Pregnancy Rate[Mesh] OR Pregnancy Outcome[Mesh] OR Time-to-Pregnancy[Mesh] OR miscarriage OR Abortion, Spontaneous[Mesh] OR Teratogenesis[Mesh] OR teratogenicity OR live birth OR Live Birth[Mesh] OR Infertility[Mesh] OR ectopic)
COCHRANE	(Endometriosis OR endometriotic OR endometrioma) AND (ovarian stimulation OR Ovulation Induction OR super ovulation OR ovarian hyperstimulation OR ART OR Assisted Reproductive Techniques OR MAC OR medically assisted conception OR MAR OR medically assisted reproduction OR Reproductive Medicine OR Reproductive Techniques OR IVF OR in vitro fertilization OR ICSI OR Intracytoplasmic sperm injection OR embryo transfer OR IUI OR intrauterine insemination OR artificial insemination OR natural cycle) AND (pregnancy OR Pregnancy Rate OR Pregnancy Outcome OR Time-to-Pregnancy OR miscarriage OR Spontaneous Abortion OR Teratogenesis OR teratogenicity OR live birth OR Live Birth OR Infertility OR ectopic)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Abu Hashim H, El Rakhawy M, Abd Elaal I. Randomized comparison of superovulation with letrozole vs. clomiphene citrate in an IUI program for women with recently surgically treated minimal to mild endometriosis. <i>Acta Obstet Gynecol Scand</i> 2012;91: 338-345.	Does not report the relevant outcomes
Ahinko-Hakamaa K, Huhtala H, Tinkanen H. Success in intrauterine insemination: the role of etiology. <i>Acta Obstet Gynecol Scand</i> 2007;86: 855-860.	More recent data/reviews available
Al-Azemi M, Bernal AL, Steele J, Gramsbergen I, Barlow D, Kennedy S. Ovarian response to repeated controlled stimulation in in-vitro fertilization cycles in patients with ovarian endometriosis. <i>Hum Reprod</i> 2000;15: 72-75.	More recent data/reviews available
Almog B, Shehata F, Sheizaf B, Tan SL, Tulandi T. Effects of ovarian endometrioma on the number of oocytes retrieved for in vitro fertilization. <i>Fertil Steril</i> 2011;95: 525-527.	Relevant outcomes have not been reported
Arici A, Oral E, Bukulmez O, Duleba A, Olive DL, Jones EE. The effect of endometriosis on implantation: results from the Yale University in vitro fertilization and embryo transfer program. <i>Fertil Steril</i> 1996;65: 603-607.	Included in review Hamdan 2015
Arya S, Kupesic-Plavsic S, Mulla ZD, Dwivedi AK, Crisp Z, Jose J, Noble LS. Ovulation induction and controlled ovarian stimulation using letrozole gonadotropin combination: A single center retrospective cohort study. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;218: 123-128.	Patients with endometriosis are only included as a subgroup
Ashrafi M, Arabjipoor A, Hemat M, Salman-Yazdi R. The impact of the localisation of endometriosis lesions on ovarian reserve and assisted reproduction techniques outcomes. <i>J Obstet Gynaecol</i> 2019;39: 91-97.	Not relevant
Ashrafi M, Fakheri T, Kiani K, Sadeghi M, Akhoond MR. Impact of the endometrioma on ovarian response and pregnancy rate in in vitro fertilization cycles. <i>Int J Fertil Steril</i> 2014;8: 29-34.	Included in review Alshehre 2020
Asoglu, M.R., C. Celik, and M. Bahceci. Frozen blastocyst transfer improves the chance of live birth in women with endometrioma. <i>Gynecol Endocrinol</i> , 2020. 36(10): p. 902-906.	Does not address the PICO question
Ata B, Mumusoglu S, Aslan K, Seyhan A, Kasapoglu I, Avci B, Urman B, Bozdog G, Uncu G. Which is worse? Comparison of ART outcome between women with primary or recurrent endometriomas. <i>Hum Reprod</i> 2017;32: 1427-1431.	Does not address the PICO question (surgery prior to ART)
Azem F, Lessing JB, Geva E, Shahar A, Lerner-Geva L, Yovel I, Amit A. Patients with stages III and IV endometriosis have a poorer outcome of in vitro fertilization-embryo transfer than patients with tubal infertility. <i>Fertil Steril</i> 1999;72: 1107-1109.	Included in review Harb 2013
Ballester M, d'Argent EM, Morcel K, Belaisch-Allart J, Nisolle M, Darai E. Cumulative pregnancy rate after ICSI-IVF in patients with colorectal endometriosis: results of a multicentre study. <i>Hum Reprod</i> 2012;27: 1043-1049.	Does not address the PICO question
Ballester M, Oppenheimer A, d'Argent EM, Touboul C, Antoine JM, Coutant C, Darai E. Nomogram to predict pregnancy rate after ICSI-IVF cycle in patients with endometriosis. <i>Hum Reprod</i> 2012;27: 451-456.	Does not address the PICO question
Ballester M, Oppenheimer A, Mathieu d'Argent E, Touboul C, Antoine JM, Nisolle M, Darai E. Deep infiltrating endometriosis is a determinant factor of cumulative pregnancy rate after intracytoplasmic sperm injection/in vitro fertilization cycles in patients with endometriomas. <i>Fertil Steril</i> 2012;97: 367-372.	Does not address the PICO question
Barbosa MA, Teixeira DM, Navarro PA, Ferriani RA, Nastri CO, Martins WP. Impact of endometriosis and its staging on assisted reproduction outcome: systematic review and meta-analysis. <i>Ultrasound Obstet Gynecol</i> 2014;44: 261-278.	Not relevant - impact of different stage of endometriosis
Barnhart K, Dunsmoor-Su R, Coutifaris C. Effect of endometriosis on in vitro fertilization. <i>Fertil Steril</i> 2002;77: 1148-1155.	More recent data/reviews available
Benaglia L, Bermejo A, Somigliana E, Faulisi S, Ragni G, Fedele L, Garcia-Velasco JA. In vitro fertilization outcome in women with unoperated bilateral endometriomas. <i>Fertil Steril</i> 2013;99: 1714-1719.	Included in review Alshehre 2020
Benaglia L, Candotti G, Papaleo E, Pagliardini L, Leonardi M, Reschini M, Quaranta L, Munaretto M, Vigano P, Candiani M et al. Pregnancy outcome in women with endometriosis achieving pregnancy with IVF. <i>Hum Reprod</i> 2016;31: 2730-2736.	Does not address the PICO question
Benaglia L, Cardellicchio L, Guarneri C, Paffoni A, Restelli L, Somigliana E, Fedele L. IVF outcome in women with accidental contamination of follicular fluid with endometrioma content. <i>Eur J Obstet Gynecol Reprod Biol</i> 2014;181: 130-134.	Does not address the PICO question
Benaglia L, Somigliana E, Santi G, Scarduelli C, Ragni G, Fedele L. IVF and endometriosis-related symptom progression: insights from a prospective study. <i>Hum Reprod</i> 2011;26: 2368-2372.	Not relevant
Bergendal A, Naffah S, Nagy C, Bergqvist A, Sjoblom P, Hillensjo T. Outcome of IVF in patients with endometriosis in comparison with tubal-factor infertility. <i>J Assist Reprod Genet</i> 1998;15: 530-534.	Included in review Hamdan 2015



Bishop, L.A., et al., Endometriosis does not impact live-birth rates in frozen embryo transfers of euploid blastocysts. <i>Fertil Steril</i> , 2020.	Does not address the PICO question
Bongioanni F, Revelli A, Gennarelli G, Guidetti D, Delle Piane LD, Holte J. Ovarian endometriomas and IVF: a retrospective case-control study. <i>Reprod Biol Endocrinol</i> 2011;9: 81.	Included in review Alshehre 2020
Boucret, L., et al., Endometriosis Lowers the Cumulative Live Birth Rates in IVF by Decreasing the Number of Embryos but Not Their Quality. <i>J Clin Med</i> , 2020. 9(8).	Not relevant for the PICO Question
Bourdon M, Santulli P, Maignien C, Gayet V, Pocate-Cheriet K, Marcellin L, Chapron C. The deferred embryo transfer strategy improves cumulative pregnancy rates in endometriosis-related infertility: A retrospective matched cohort study. <i>PLoS One</i> 2018;13: e0194800.	Does not address the PICO question
Bourdon, M., et al., Risk of small for gestational age is reduced after frozen compared with fresh embryo transfer in endometriosis. <i>Reprod Biomed Online</i> , 2020.	Does not address the PICO question
Brosens IA, Lier MC, Mijatovic V, Habiba M, Benagiano G. Severe spontaneous hemoperitoneum in pregnancy may be linked to in vitro fertilization in patients with endometriosis: a systematic review. <i>Fertil Steril</i> 2016;106: 692-703.	Does not address the PICO question
Bukulmez O, Yarali H, Gurgan T. The presence and extent of endometriosis do not effect clinical pregnancy and implantation rates in patients undergoing intracytoplasmic sperm injection. <i>Eur J Obstet Gynecol Reprod Biol</i> 2001;96: 102-107.	Included in review Hamdan 2015
Cahill DJ, Wardle PG, Maile LA, Harlow CR, Hull MG. Ovarian dysfunction in endometriosis-associated and unexplained infertility. <i>J Assist Reprod Genet</i> 1997;14: 554-557.	Included in review Harb 2013
Cantineau AE, Cohlen BJ, Klip H, Heineman MJ. The addition of GnRH antagonists in intrauterine insemination cycles with mild ovarian hyperstimulation does not increase live birth rates--a randomized, double-blinded, placebo-controlled trial. <i>Hum Reprod</i> 2011;26: 1104-1111.	Patients with endometriosis are only included as a subgroup
Cecchino GN, Garcia-Velasco JA. Endometrioma, fertility, and assisted reproductive treatments: connecting the dots. <i>Curr Opin Obstet Gynecol</i> 2018;30: 223-228.	Does not address the PICO question
Ceran, M.U., et al., Psychological domain of quality of life, depression and anxiety levels in in vitro fertilization/intracytoplasmic sperm injection cycles of women with endometriosis: a prospective study. <i>J Psychosom Obstet Gynaecol</i> , 2020: p. 1-8.	Patient perspective
Chaffkin LM, Nulsen JC, Luciano AA, Metzger DA. A comparative analysis of the cycle fecundity rates associated with combined human menopausal gonadotropin (hMG) and intrauterine insemination (IUI) versus either hMG or IUI alone. <i>Fertil Steril</i> 1991;55: 252-257.	Patients with endometriosis are only included as a subgroup
Chang MY, Chiang CH, Hsieh TT, Soong YK, Hsu KH. The influence of endometriosis on the success of gamete intrafallopian transfer (GIFT). <i>J Assist Reprod Genet</i> 1997;14: 76-82.	Not relevant
Chedid S, Camus M, Smitz J, Van Steirteghem AC, Devroey P. Comparison among different ovarian stimulation regimens for assisted procreation procedures in patients with endometriosis. <i>Hum Reprod</i> 1995;10: 2406-2411.	More recent data/reviews available
Coccia ME, Rizzello F, Gianfranco S. Does controlled ovarian hyperstimulation in women with a history of endometriosis influence recurrence rate? <i>J Womens Health (Larchmt)</i> 2010;19: 2063-2069.	Not relevant
Coccia ME, Rizzello F, Mariani G, Bulletti C, Palagiano A, Scarselli G. Impact of endometriosis on in vitro fertilization and embryo transfer cycles in young women: a stage-dependent interference. <i>Acta Obstet Gynecol Scand</i> 2011;90: 1232-1238.	Included in review Hamdan 2015
Coelho Neto MA, Martins Wde P, Luz CM, Jianini BT, Ferriani RA, Navarro PA. Endometriosis, Ovarian Reserve and Live Birth Rate Following In Vitro Fertilization/Intracytoplasmic Sperm Injection. <i>Rev Bras Ginecol Obstet</i> 2016;38: 218-224.	Not relevant
Costello MF. Systematic review of the treatment of ovulatory infertility with clomiphene citrate and intrauterine insemination. <i>Aust N Z J Obstet Gynaecol</i> 2004;44: 93-102.	Patients with endometriosis are only included as a subgroup
Deaton JL, Gibson M, Blackmer KM, Nakajima ST, Badger GJ, Brumsted JR. A randomized, controlled trial of clomiphene citrate and intrauterine insemination in couples with unexplained infertility or surgically corrected endometriosis. <i>Fertil Steril</i> 1990;54: 1083-1088.	More recent data/reviews available
Demirel C, Bastu E, Aydogdu S, Donmez E, Benli H, Tuysuz G, Keskin G, Buyru F. The Presence of Endometrioma Does Not Impair Time-Lapse Morphokinetic Parameters and Quality of Embryos: A Study On Sibling Oocytes. <i>Reprod Sci</i> 2016;23: 1053-1057.	Does not address the PICO question
D'Hooghe TM, Denys B, Spiessens C, Meuleman C, Debrock S. Is the endometriosis recurrence rate increased after ovarian hyperstimulation? <i>Fertil Steril</i> 2006;86: 283-290.	Not relevant
Diaz I, Navarro J, Blasco L, Simon C, Pellicer A, Remohi J. Impact of stage III-IV endometriosis on recipients of sibling oocytes: matched case-control study. <i>Fertil Steril</i> 2000;74: 31-34.	Included in review Hamdan 2015



Dmowski WP, Gleicher N. Does endometriosis have an adverse effect on the fertilization in vitro and the IVF outcome? <i>J Assist Reprod Genet</i> 1998;15: 527-529.	Publication type
Dmowski WP, Pry M, Ding J, Rana N. Cycle-specific and cumulative fecundity in patients with endometriosis who are undergoing controlled ovarian hyperstimulation-intrauterine insemination or in vitro fertilization-embryo transfer. <i>Fertil Steril</i> 2002;78: 750-756.	More recent data/reviews available
Dokras A, Olive DL. Endometriosis and assisted reproductive technologies. <i>Clin Obstet Gynecol</i> 1999;42: 687-698.	More recent data/reviews available
Dong X, Liao X, Wang R, Zhang H. The impact of endometriosis on IVF/ICSI outcomes. <i>Int J Clin Exp Pathol</i> 2013;6: 1911-1918.	Included in review Hamdan 2015
Eijkemans MJ, Lintsen AM, Hunault CC, Bouwmans CA, Hakkaart L, Braat DD, Habbema JD. Pregnancy chances on an IVF/ICSI waiting list: a national prospective cohort study. <i>Hum Reprod</i> 2008;23: 1627-1632.	Patients with endometriosis are only included as a subgroup
Ersahin AA, Arpacı H, Ersahin SS, Celik N, Acet M. AFC vs. AMH: prediction of ovarian response in women with endometrioma undergoing controlled ovarian stimulation. <i>Eur Rev Med Pharmacol Sci</i> 2017;21: 2499-2503.	Not relevant
Esinler I, Bozdogan G, Arıkan I, Demir B, Yaralı H. Endometrioma \leq 3 cm in diameter per se does not affect ovarian reserve in intracytoplasmic sperm injection cycles. <i>Gynecol Obstet Invest</i> 2012;74: 261-264.	very small study
Fedele L, Bianchi S, Marchini M, Villa L, Brioschi D, Parazzini F. Superovulation with human menopausal gonadotropins in the treatment of infertility associated with minimal or mild endometriosis: a controlled randomized study. <i>Fertil Steril</i> 1992;58: 28-31.	More recent data/reviews available
Feichtinger M, Nordenhok E, Olofsson JI, Hadziosmanovic N, Rodriguez-Wallberg KA. Endometriosis and cumulative live birth rate after fresh and frozen IVF cycles with single embryo transfer in young women: no impact beyond reduced ovarian sensitivity—a case control study. <i>J Assist Reprod Genet</i> 2019;36: 1649-1656.	Not relevant\$
Ferraretti AP, Gianaroli L, Magli MC, Devroey P. Mild ovarian stimulation with clomiphene citrate launch is a realistic option for in vitro fertilization. <i>Fertil Steril</i> 2015;104: 333-338.	Patients with endometriosis are only included as a subgroup
Ferrero S, Scala C, Tafi E, Racca A, Venturini PL, Leone Roberti Maggiore U. Impact of large ovarian endometriomas on the response to superovulation for in vitro fertilization: A retrospective study. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;213: 17-21.	Does not report the relevant outcomes
Ferrier, C., et al., Use of the EFI score in endometriosis-associated infertility: A cost-effectiveness study. <i>Eur J Obstet Gynecol Reprod Biol</i> , 2020. 253: p. 296-303.	Does not address the PICO question
Filippi F, Benaglia L, Paffoni A, Restelli L, Vercellini P, Somigliana E, Fedele L. Ovarian endometriomas and oocyte quality: insights from in vitro fertilization cycles. <i>Fertil Steril</i> 2014;101: 988-993.e981.	Does not address the PICO question
Franco Junior JG, Baruffi RL, Mauri AL, Petersen CG, Campos MS. Semi-programmed ovarian stimulation as the first choice in in-vitro fertilization programmes. <i>Hum Reprod</i> 1995;10: 568-571.	Patients with endometriosis are only included as a subgroup
Fujii T, Wada-Hiraike O, Nagamatsu T, Harada M, Hirata T, Koga K, Fujii T, Osuga Y. Assisted reproductive technology pregnancy complications are significantly associated with endometriosis severity before conception: a retrospective cohort study. <i>Reprod Biol Endocrinol</i> 2016;14: 73.	Does not address the PICO question
Geber S, Paraschos T, Atkinson G, Margara R, Winston RM. Results of IVF in patients with endometriosis: the severity of the disease does not affect outcome, or the incidence of miscarriage. <i>Hum Reprod</i> 1995;10: 1507-1511.	Included in review Hamdan 2015
Goker EN, Ozcakir HT, Terek MC, Levi R, Adakan S, Tavmergen E. Controlled ovarian hyperstimulation and intrauterine insemination for infertility associated with endometriosis: a retrospective analysis. <i>Arch Gynecol Obstet</i> 2002;266: 21-24.	More recent data/reviews available
Gonzalez-Comadran M, Schwarze JE, Zegers-Hochschild F, Souza MD, Carreras R, Checa MA. The impact of endometriosis on the outcome of Assisted Reproductive Technology. <i>Reprod Biol Endocrinol</i> 2017;15: 8.	Not relevant
Guo H, Wang Y, Chen Q, Chai W, Lv Q, Kuang Y. Effect of Natural Cycle Endometrial Preparation for Frozen-Thawed Embryo Transfer in Patients with Advanced Endometriosis. <i>Med Sci Monit</i> 2016;22: 4596-4603.	Not relevant
Gupta S, Agarwal A, Agarwal R, Loret de Mola JR. Impact of ovarian endometrioma on assisted reproduction outcomes. <i>Reprod Biomed Online</i> 2006;13: 349-360.	More recent data/reviews available
Guzick DS, Yao YA, Berga SL, Krasnow JS, Stovall DW, Kubik CJ, Zeleznik AJ. Endometriosis impairs the efficacy of gamete intrafallopian transfer: results of a case-control study. <i>Fertil Steril</i> 1994;62: 1186-1191.	Not relevant
Hamdan M, Dunselman G, Li TC, Cheong Y. The impact of endometrioma on IVF/ICSI outcomes: a systematic review and meta-analysis. <i>Hum Reprod Update</i> 2015;21: 809-825.	Relevant for another question
Hickman TN. Impact of endometriosis on implantation. Data from the Wilford Hall Medical Center IVF-ET Program. <i>J Reprod Med</i> 2002;47: 801-808.	Included in review Hamdan 2015



Hodgson, R.M., et al., Interventions for endometriosis-related infertility: a systematic review and network meta-analysis. <i>Fertil Steril</i> , 2020. 113(2): p. 374-382.e2.	Not relevant
Hull MG, Armatage RJ, McDermott A. Use of follicle-stimulating hormone alone (urofollitropin) to stimulate the ovaries for assisted conception after pituitary desensitization. <i>Fertil Steril</i> 1994;62: 997-1003.	Patients with endometriosis are only included as a subgroup
Hull MG, Williams JA, Ray B, McLaughlin EA, Akande VA, Ford WC. The contribution of subtle oocyte or sperm dysfunction affecting fertilization in endometriosis-associated or unexplained infertility: a controlled comparison with tubal infertility and use of donor spermatozoa. <i>Hum Reprod</i> 1998;13: 1825-1830.	Included in review Hamdan 2015
Hulme VA, van der Merwe JP, Kruger TF. Gamete intrafallopian transfer as treatment for infertility associated with endometriosis. <i>Fertil Steril</i> 1990;53: 1095-1096.	Not relevant
Inoue M, Kobayashi Y, Honda I, Awaji H, Fujii A. The impact of endometriosis on the reproductive outcome of infertile patients. <i>Am J Obstet Gynecol</i> 1992;167: 278-282.	Included in review Hamdan 2015
Isaacs JD, Jr., Hines RS, Sopelak VM, Cowan BD. Ovarian endometriomas do not adversely affect pregnancy success following treatment with in vitro fertilization. <i>J Assist Reprod Genet</i> 1997;14: 551-553.	More recent data/reviews available
Isaksson R, Tiitinen A. Superovulation combined with insemination or timed intercourse in the treatment of couples with unexplained infertility and minimal endometriosis. <i>Acta Obstet Gynecol Scand</i> 1997;76: 550-554.	More recent data/reviews available
Jacques M, Freour T, Barriere P, Ploteau S. Adverse pregnancy and neo-natal outcomes after assisted reproductive treatment in patients with pelvic endometriosis: a case-control study. <i>Reprod Biomed Online</i> 2016;32: 626-634.	Does not address the PICO question
Karlstrom PO, Bergh T, Lundkvist O. A prospective randomized trial of artificial insemination versus intercourse in cycles stimulated with human menopausal gonadotropin or clomiphene citrate. <i>Fertil Steril</i> 1993;59: 554-559.	Patients with endometriosis are only included as a subgroup
Karlstrom PO, Bergh T, Lundkvist O. Addition of gonadotrophin-releasing hormone agonist and/or two inseminations with husband's sperm do not improve the pregnancy rate in superovulated cycles. <i>Acta Obstet Gynecol Scand</i> 2000;79: 37-42.	Patients with endometriosis are only included as a subgroup
Kasapoglu I, Kuspinar G, Saribal S, Turk P, Avci B, Uncu G. Detrimental effects of endometriosis on oocyte morphology in intracytoplasmic sperm injection cycles: a retrospective cohort study. <i>Gynecol Endocrinol</i> 2018;34: 206-211.	Relevant outcomes have not been reported
Kashani. Impact of prolonged versus OCP plus long protocol on IVF-ET outcomes in patients with grade III-IV endometriosis: a randomized clinical trial. <i>Acta medica iranica</i> 2018;56: 308-313.	not relevant
Kawwass JF, Crawford S, Session DR, Kissin DM, Jamieson DJ. Endometriosis and assisted reproductive technology: United States trends and outcomes 2000-2011. <i>Fertil Steril</i> 2015;103: 1537-1543.	Not relevant
Kim, S.J., et al., The effects of letrozole on women with endometriosis undergoing ovarian stimulation for in vitro fertilization. <i>Gynecol Endocrinol</i> , 2020. 36(3): p. 257-260.	Does not address the PICO question
Kiran H, Arikan DC, Kaplanoglu M, Bisak U, Cetin MT. Does ovarian endometrioma affect the number of oocytes retrieved for in vitro fertilization? <i>Bratisl Lek Listy</i> 2012;113: 544-547.	Does not address the PICO Question
Kitaya K. Effect of early endometriosis on ovarian reserve and reproductive outcome. <i>Front Biosci (Schol Ed)</i> 2015;7: 40-45.	Narrative review
Kodama H, Fukuda J, Karube H, Matsui T, Shimizu Y, Tanaka T. Benefit of in vitro fertilization treatment for endometriosis-associated infertility. <i>Fertil Steril</i> 1996;66: 974-979.	More recent data/reviews available
Komsky-Elbaz A, Raziq A, Friedler S, Strassburger D, Kasterstein E, Komarovskiy D, Ron-El R, Ben-Ami I. Conventional IVF versus ICSI in sibling oocytes from couples with endometriosis and normozoospermic semen. <i>J Assist Reprod Genet</i> 2013;30: 251-257.	Does not address the PICO question
Kong H, Bu Z, Guo Y, Wang F, Shi H, Hu L, Sun Y. Efficacy and Safety of In Vitro Fertilization (IVF)/Intracytoplasmic Sperm Injection (ICSI) Among Patients with Endometriosis After a Shortened Protocol of Long-Term Pituitary Downregulation. <i>Med Sci Monit</i> 2019;25: 4377-4383.	Not a relevant addition
Kong H, Hu L, Nie L, Yu X, Dai W, Li J, Chen C, Bu Z, Shi H, Wu Q et al. A multi-center, randomized controlled clinical trial of the application of a shortened protocol of long-acting Triptorelin down-regulated prior to IVF/ICSI among patients with endometriosis: A protocol. <i>Reprod Health</i> 2018;15: 213.	Research protocol, no data
Kuivasaari P, Hippelainen M, Anttila M, Heinonen S. Effect of endometriosis on IVF/ICSI outcome: stage III/IV endometriosis worsens cumulative pregnancy and live-born rates. <i>Hum Reprod</i> 2005;20: 3130-3135.	Included in review Hamdan 2015
Kumbak B, Kahraman S, Karlikaya G, Lacin S, Guney A. In vitro fertilization in normoresponder patients with endometriomas: comparison with basal simple ovarian cysts. <i>Gynecol Obstet Invest</i> 2008;65: 212-216.	Included in review Harb 2013
Kuroda K, Ikemoto Y, Ochiai A, Ozaki R, Matsumura Y, Nojiri S, Nakagawa K, Sugiyama R. Combination Treatment of Preoperative Embryo Cryopreservation and Endoscopic Surgery (Surgery-ART Hybrid Therapy) in Infertile Women with Diminished Ovarian	Patients with endometriosis are only included as a subgroup



Reserve and Uterine Myomas or Ovarian Endometriomas. <i>J Minim Invasive Gynecol</i> 2019.	
Li, A., et al., Analysis of IVF/ICSI-FET Outcomes in Women With Advanced Endometriosis: Influence on Ovarian Response and Oocyte Competence. <i>Front Endocrinol (Lausanne)</i> , 2020. 11: p. 427.	Does not address the PICO question
Lin XN, Wei ML, Tong XM, Xu WH, Zhou F, Huang QX, Wen GF, Zhang SY. Outcome of in vitro fertilization in endometriosis-associated infertility: a 5-year database cohort study. <i>Chin Med J (Engl)</i> 2012;125: 2688-2693.	Included in review Harb 2013
Lodhi S, Abdel Fattah A, Abozaid T, Murphy J, Formantini E, Sasy M, Barber K, Abuzeid M. Gamete intra-fallopian transfer or intrauterine insemination after controlled ovarian hyperstimulation for treatment of infertility due to endometriosis. <i>Gynecol Endocrinol</i> 2004;19: 152-159.	Not relevant
Loh SK, Leong NK. Superovulation-intrauterine insemination: an additional tool in the treatment of infertility. <i>Singapore Med J</i> 1996;37: 66-68.	Patients with endometriosis are only included as a subgroup
Luke B, Stern JE, Kotelchuck M, Declercq ER, Cohen B, Diop H. Birth Outcomes by Infertility Diagnosis Analyses of the Massachusetts Outcomes Study of Assisted Reproductive Technologies (MOSART). <i>J Reprod Med</i> 2015;60: 480-490.	Relevant outcomes have not been reported
Mahani IM, Afnan M. The pregnancy rates with intrauterine insemination (IUI) in superovulated cycles employing different protocols (clomiphen citrate (CC), human menopausal gonadotropin (HMG) and HMG+CC) and in natural ovulatory cycle. <i>J Pak Med Assoc</i> 2004;54: 503-505.	Patients with endometriosis are only included as a subgroup
Mahutte NG, Arici A. Endometriosis and assisted reproductive technologies: are outcomes affected? <i>Curr Opin Obstet Gynecol</i> 2001;13: 275-279.	Narrative review
Maignien, C., et al., Deep Infiltrating Endometriosis: a Previous History of Surgery for Endometriosis May Negatively Affect Assisted Reproductive Technology Outcomes. <i>Reprod Sci</i> , 2020. 27(2): p. 545-554.	Not relevant for the PICO Question
Mascarenhas L, Khastgir G, Davies WA, Lee S. Superovulation and timed intercourse: can it provide a reasonable alternative for those unable to afford assisted conception? <i>Hum Reprod</i> 1994;9: 67-70.	Patients with endometriosis are only included as a subgroup
Mathieu d'Argent E, Coutant C, Ballester M, Dessolle L, Bazot M, Antoine JM, Darai E. Results of first in vitro fertilization cycle in women with colorectal endometriosis compared with those with tubal or male factor infertility. <i>Fertil Steril</i> 2010;94: 2441-2443.	More recent data/reviews available
Matorras R, Corcostegui B, Esteban J, Ramon O, Prieto B, Exposito A, Pijoan JI. Fertility in women with minimal endometriosis compared with normal women was assessed by means of a donor insemination program in unstimulated cycles. <i>Am J Obstet Gynecol</i> 2010;203: 345.e341-346.	Not relevant
Meden-Vrtovec H, Tomazevic T, Verdenik I. Infertility treatment by in vitro fertilization in patients with minimal or mild endometriosis. <i>Clin Exp Obstet Gynecol</i> 2000;27: 191-193.	Included in review Harb 2013
Mekaru K, Yagi C, Asato K, Masamoto H, Sakumoto K, Aoki Y. Effects of early endometriosis on IVF-ET outcomes. <i>Front Biosci (Elite Ed)</i> 2013;5: 720-724.	Included in review Hamdan 2015
Michau, A., et al., Predictive factors for pregnancy after controlled ovarian stimulation and intrauterine insemination: A retrospective analysis of 4146 cycles. <i>J Gynecol Obstet Hum Reprod</i> , 2019. 48(10): p. 811-815.	Not relevant
Minguez Y, Rubio C, Bernal A, Gaitan P, Remohi J, Simon C, Pellicer A. The impact of endometriosis in couples undergoing intracytoplasmic sperm injection because of male infertility. <i>Hum Reprod</i> 1997;12: 2282-2285.	Not relevant
Mohamed AM, Chouliaras S, Jones CJ, Nardo LG. Live birth rate in fresh and frozen embryo transfer cycles in women with endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2011;156: 177-180.	Included in review Hamdan 2015
Nicolaus, K., et al., Endometriosis reduces ovarian response in controlled ovarian hyperstimulation independent of AMH, AFC, and women's age measured by follicular output rate (FORT) and number of oocytes retrieved. <i>Arch Gynecol Obstet</i> , 2019. 300(6): p. 1759-1765.	Not relevant for the PICO Question
Nicopoulos JD, Nikolaou D, Richardson R. Endometrioma and IVF outcome-how little we really know. <i>Fertil Steril</i> 2009;92: e21-22; author reply e23.	Publication type
Norenstedt SN, Linderth-Nagy C, Bergendal A, Sjoblom P, Bergqvist A. Reduced developmental potential in oocytes from women with endometriosis. <i>J Assist Reprod Genet</i> 2001;18: 644-649.	Not relevant
Oehninger S, Rosenwaks Z. In vitro fertilization and embryo transfer: an established and successful therapy for endometriosis. <i>Prog Clin Biol Res</i> 1990;323: 319-335.	More recent data/reviews available
Olivennes F, Feldberg D, Liu HC, Cohen J, Moy F, Rosenwaks Z. Endometriosis: a stage by stage analysis--the role of in vitro fertilization. <i>Fertil Steril</i> 1995;64: 392-398.	Included in review Harb 2013



Omland AK, Abyholm T, Fedorcsak P, Ertzeid G, Oldereid NB, Bjercke S, Tanbo T. Pregnancy outcome after IVF and ICSI in unexplained, endometriosis-associated and tubal factor infertility. <i>Hum Reprod</i> 2005;20: 722-727.	More recent data/reviews available
Omland AK, Bjercke S, Ertzeid G, Fedorcsak P, Oldereid NB, Storeng R, Abyholm T, Tanbo T. Intracytoplasmic sperm injection (ICSI) in unexplained and stage I endometriosis-associated infertility after fertilization failure with in vitro fertilization (IVF). <i>J Assist Reprod Genet</i> 2006;23: 351-357.	Included in review Harb 2013
Omland AK, Fedorcsak P, Storeng R, Dale PO, Abyholm T, Tanbo T. Natural cycle IVF in unexplained, endometriosis-associated and tubal factor infertility. <i>Hum Reprod</i> 2001;16: 2587-2592.	Included in review Harb 2013
Opoien HK, Fedorcsak P, Omland AK, Abyholm T, Bjercke S, Ertzeid G, Oldereid N, Mellembakken JR, Tanbo T. In vitro fertilization is a successful treatment in endometriosis-associated infertility. <i>Fertil Steril</i> 2012;97: 912-918.	Included in review Hamdan 2015
Oppenheimer A, Ballester M, Mathieu d'Argent E, Morcel K, Antoine JM, Darai E. Pregnancy Rate after First Intra Cytoplasmic Sperm Injection- In Vitro Fertilisation Cycle in Patients with Endometrioma with or without Deep Infiltrating Endometriosis. <i>Int J Fertil Steril</i> 2013;7: 207-216.	Does not address the PICO Question
Orazov, M.R., et al. Oocyte quality in women with infertility associated endometriosis. <i>Gynecol Endocrinol</i> , 2019, 35(sup1): p. 24-26.	Included in review Alshehre 2020
Ozgur K, Bulut H, Berkkanoglu M, Coetzee K. Reproductive Outcomes of Segmented In Vitro Fertilization in Patients Diagnosed with Endometriomas. <i>J Minim Invasive Gynecol</i> 2018;25: 105-110.	Included in review Alshehre 2020
Ozkan S, Murk W, Arici A. Endometriosis and infertility: epidemiology and evidence-based treatments. <i>Ann N Y Acad Sci</i> 2008;1127: 92-100.	More recent data/reviews available
Pal L, Shifren JL, Isaacson KB, Chang Y, Leykin L, Toth TL. Impact of varying stages of endometriosis on the outcome of in vitro fertilization-embryo transfer. <i>J Assist Reprod Genet</i> 1998;15: 27-31.	More recent data/reviews available
Pallacks C, Hirchenhain J, Krussel JS, Fehm TN, Fehr D. Endometriosis doubles odds for miscarriage in patients undergoing IVF or ICSI. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;213: 33-38.	Relevant outcomes have not been reported
Papaleo E, Ottolina J, Vigano P, Brigante C, Marsiglio E, De Michele F, Candiani M. Deep pelvic endometriosis negatively affects ovarian reserve and the number of oocytes retrieved for in vitro fertilization. <i>Acta Obstet Gynecol Scand</i> 2011;90: 878-884.	Does not address the PICO question
Peeraer K, Debrock S, De Loecker P, Tomassetti C, Laenen A, Welkenhuysen M, Meeuwis L, Pelckmans S, Mol BW, Spiessens C et al. Low-dose human menopausal gonadotrophin versus clomiphene citrate in subfertile couples treated with intrauterine insemination: a randomized controlled trial. <i>Hum Reprod</i> 2015;30: 1079-1088.	Patients with endometriosis are only included as a subgroup
Peterson CM, Hatasaka HH, Jones KP, Poulson AM, Jr., Carrell DT, Urry RL. Ovulation induction with gonadotropins and intrauterine insemination compared with in vitro fertilization and no therapy: a prospective, nonrandomized, cohort study and meta-analysis. <i>Fertil Steril</i> 1994;62: 535-544.	Patients with endometriosis are only included as a subgroup
Polat M, Boynukalin FK, Yarali I, Esinler I, Yarali H. Endometriosis is not associated with inferior pregnancy rates in in vitro fertilization: an analysis of 616 patients. <i>Gynecol Obstet Invest</i> 2014;78: 59-64.	Not relevant
Polat M, Yarali I, Boynukalin K, Yarali H. In vitro fertilization for endometriosis-associated infertility. <i>Womens Health (Lond)</i> 2015;11: 633-641.	Narrative review
Pop-Trajkovic S, Popovic J, Antic V, Radovic D, Stefanovic M, Vukomanovic P. Stages of endometriosis: does it affect in vitro fertilization outcome. <i>Taiwan J Obstet Gynecol</i> 2014;53: 224-226.	Not relevant
Prefumo F, Rossi AC. Endometriosis, endometrioma, and ART results: Current understanding and recommended practices. <i>Best Pract Res Clin Obstet Gynaecol</i> 2018;51: 34-40.	Does not address the PICO question
Queiroz Vaz G, Evangelista AV, Almeida Cardoso MC, Gallo P, Erthal MC, Pinho Oliveira MA. Frozen embryo transfer cycles in women with deep endometriosis. <i>Gynecol Endocrinol</i> 2017;33: 540-543.	Does not address the PICO question
Radzinsky, V.Y., et al. Implantation failures in women with infertility associated endometriosis. <i>Gynecol Endocrinol</i> , 2019, 35(sup1): p. 27-30.	Included in review Alshehre 2020
Reinblatt SL, Ishai L, Shehata F, Son WY, Tulandi T, Almog B. Effects of ovarian endometrioma on embryo quality. <i>Fertil Steril</i> 2011;95: 2700-2702.	Included in review Alshehre 2020
Remorgida V, Anserini P, Croce S, Costa M, Ferraiolo A, Capitanio GL. Comparison of different ovarian stimulation protocols for gamete intrafallopian transfer in patients with minimal and mild endometriosis. <i>Fertil Steril</i> 1990;53: 1060-1063.	More recent data/reviews available
Rinesi L, Morente C, Botti G, Miechi H, Figueroa Casas PR, Tozzini R. Results of assisted reproductive technologies in patients with endometriosis. <i>Fertil Steril</i> 2002;77: 190-192.	More recent data/reviews available



Roque M, Nuto Nobrega B, Valle M, Sampaio M, Geber S, Haahr T, Humaidan P, Esteves SC. Freeze-all strategy in IVF/ICSI cycles: an update on clinical utility. <i>Panminerva Med</i> 2019;61: 52-57.	Does not address the PICO question
Roustan A, Perrin J, Debals-Gonthier M, Paulmyer-Lacroix O, Agostini A, Courbiere B. Surgical diminished ovarian reserve after endometrioma cystectomy versus idiopathic DOR: comparison of in vitro fertilization outcome. <i>Hum Reprod</i> 2015;30: 840-847.	More recent data/reviews available
Rubod C, Fouquet A, Bartolo S, Lepage J, Capelle A, Lefebvre C, Kamus E, Dewailly D, Collinet P. Factors associated with pregnancy after in vitro fertilization in infertile patients with posterior deep pelvic endometriosis: A retrospective study. <i>J Gynecol Obstet Hum Reprod</i> 2019;48: 235-239.	Does not address the PICO question
Safdarian L, Ghalandarpour Attar SN, Aleyasin A, Aghahosseini M, Sarfjoo FS, Hosseinimousa S. Investigation of anti-mullerian hormone (AMH) level and ovarian response in infertile women with endometriosis in IVF cycles. <i>Int J Reprod Biomed (Yazd)</i> 2018;16: 719-722.	Not relevant
Salamun V, Verdenik I, Lagana AS, Vrtacnik-Bokal E. Should we consider integrated approach for endometriosis-associated infertility as gold standard management? Rationale and results from a large cohort analysis. <i>Arch Gynecol Obstet</i> 2018;297: 613-621.	Does not address the PICO question
Sanchez AM, Vanni VS, Bartiromo L, Papaleo E, Zilberberg E, Candiani M, Orvieto R, Vigano P. Is the oocyte quality affected by endometriosis? A review of the literature. <i>J Ovarian Res</i> 2017;10: 43.	Does not address the PICO question
Sanchez, A.M., et al. Does Endometriosis Influence the Embryo Quality and/or Development? Insights from a Large Retrospective Matched Cohort Study. <i>Diagnostics (Basel)</i> , 2020. 10(2).	Not relevant
Santulli P, Bourdon M, Presse M, Gayet V, Marcellin L, Prunet C, de Ziegler D, Chapron C. Endometriosis-related infertility: assisted reproductive technology has no adverse impact on pain or quality-of-life scores. <i>Fertil Steril</i> 2016;105: 978-987.e974.	Does not address the PICO question
Serta RT, Rufo S, Seibel MM. Minimal endometriosis and intrauterine insemination: does controlled ovarian hyperstimulation improve pregnancy rates? <i>Obstet Gynecol</i> 1992;80: 37-40.	Not relevant
Seyer-Hansen M, Egekvist A, Forman A, Riiskjaer M. Risk of bowel obstruction during in vitro fertilization treatment of patients with deep infiltrating endometriosis. <i>Acta Obstet Gynecol Scand</i> 2018;97: 47-52.	Does not address the PICO question
Sharma, S., et al. Pregnancy and Live Birth Rates Are Comparable in Young Infertile Women Presenting with Severe Endometriosis and Tubal Infertility. <i>Reprod Sci</i> , 2020. 27(6): p. 1340-1349.	Not relevant
Shebl O, Sifferlinger I, Habelsberger A, Oppelt P, Mayer RB, Petek E, Ebner T. Oocyte competence in in vitro fertilization and intracytoplasmic sperm injection patients suffering from endometriosis and its possible association with subsequent treatment outcome: a matched case-control study. <i>Acta Obstet Gynecol Scand</i> 2017;96: 736-744.	Not relevant
Simon C, Gutierrez A, Vidal A, de los Santos MJ, Tarin JJ, Remohi J, Pellicer A. Outcome of patients with endometriosis in assisted reproduction: results from in-vitro fertilization and oocyte donation. <i>Hum Reprod</i> 1994;9: 725-729.	Included in review Harb 2013
Simpson CW, Taylor PJ, Collins JA. A comparison of ovulation suppression and ovulation stimulation in the treatment of endometriosis-associated infertility. <i>Int J Gynaecol Obstet</i> 1992;38: 207-213.	More recent data/reviews available
Singh N, Lata K, Naha M, Malhotra N, Tiwari A, Vanamail P. Effect of endometriosis on implantation rates when compared to tubal factor in fresh non donor in vitro fertilization cycles. <i>J Hum Reprod Sci</i> 2014;7: 143-147.	Not relevant
Somigliana E, Infantino M, Benedetti F, Arnoldi M, Calanna G, Ragni G. The presence of ovarian endometriomas is associated with a reduced responsiveness to gonadotropins. <i>Fertil Steril</i> 2006;86: 192-196.	More recent data/reviews available
Stewart EA, Jackson KV, Friedman AJ, Rein MS, Fox JH, Hornstein MD. The effect of baseline complex ovarian cysts on in vitro fertilization outcome. <i>Fertil Steril</i> 1992;57: 1274-1278.	More recent data/reviews available
Stewart LM, Holman CD, Aboagye-Sarfo P, Finn JC, Preen DB, Hart R. In vitro fertilization, endometriosis, nulliparity and ovarian cancer risk. <i>Gynecol Oncol</i> 2013;128: 260-264.	Does not address the PICO question
Stewart LM, Holman CD, Finn JC, Preen DB, Hart R. In vitro fertilization is associated with an increased risk of borderline ovarian tumours. <i>Gynecol Oncol</i> 2013;129: 372-376.	Does not address the PICO question
Stojkowska, S., et al. The impact of laparoscopic treated endometrioma on the live birth rate in IVF/ICSI cycles compared with unexplained infertility: a prospective randomized study. <i>Open access macedonian journal of medical sciences</i> , 2020. 8: p. 160-165.	Not relevant for the PICO Question
Subit M, Gantt P, Broce M, Seybold DJ, Randall G. Endometriosis-associated infertility: double intrauterine insemination improves fecundity in patients positive for antiendometrial antibodies. <i>Am J Reprod Immunol</i> 2011;66: 100-107.	Does not address the PICO Question



Surrey ES. Endometriosis and assisted reproductive technologies: maximizing outcomes. <i>Semin Reprod Med</i> 2013;31: 154-163.	Narrative review
Surrey ES. Endometriosis-Related Infertility: The Role of the Assisted Reproductive Technologies. <i>Biomed Res Int</i> 2015;2015: 482959.	Narrative review
Suzuki T, Izumi S, Matsubayashi H, Awaji H, Yoshikata K, Makino T. Impact of ovarian endometrioma on oocytes and pregnancy outcome in in vitro fertilization. <i>Fertil Steril</i> 2005;83: 908-913.	Not relevant
Takashima A, Takeshita N, Kinoshita T. Pregnancy outcomes after assisted reproductive procedures with embryos that had been derived from affected and unaffected ovaries among women with small unilateral endometriomas. <i>Reprod Med Biol</i> 2017;16: 152-156.	Not relevant
Tanbo T, Omland A, Dale PO, Abyholm T. In vitro fertilization/embryo transfer in unexplained infertility and minimal peritoneal endometriosis. <i>Acta Obstet Gynecol Scand</i> 1995;74: 539-543.	Included in review Hamdan 2015
Thomas S, Sebastian T, Karthikeyan M, Mangalaraj AM, Aleyamma TK, Kamath MS. Effectiveness of spontaneous ovulation as monitored by urinary luteinising hormone versus induced ovulation by administration of human chorionic gonadotrophin in couples undergoing gonadotrophin-stimulated intrauterine insemination: a randomised controlled trial. <i>Bjog</i> 2019;126 Suppl 4: 58-65.	Patients with endometriosis are only included as a subgroup
Tinkanen H, Kujansuu E. In vitro fertilization in patients with ovarian endometriomas. <i>Acta Obstet Gynecol Scand</i> 2000;79: 119-122.	More recent data/reviews available
Turgay, B., et al., Does different subfertility etiology affect pregnancy rates in intrauterineinsemination cycles? <i>Turk J Med Sci</i> , 2019. 49(5): p. 1439-1443.	Not relevant
Vaiarelli, A., et al., Endometriosis shows no impact on the euploid blastocyst rate per cohort of inseminated metaphase-II oocytes: A case-control study. <i>Eur J Obstet Gynecol Reprod Biol</i> , 2020. 256: p. 205-210.	Not relevant
van der Houwen LE, Schreurs AM, Schats R, Lambalk CB, Hompes PG, Mijatovic V. Patient satisfaction concerning assisted reproductive technology treatments in moderate to severe endometriosis. <i>Gynecol Endocrinol</i> 2014;30: 798-803.	Does not address the PICO question
Villette C, Bourret A, Santulli P, Gayet V, Chapron C, de Ziegler D. Risks of tubo-ovarian abscess in cases of endometrioma and assisted reproductive technologies are both under- and overreported. <i>Fertil Steril</i> 2016;106: 410-415.	Does not address the PICO question
Weiss A, Beck-Fruchter R, Golan J, Lavee M, Geslevich Y, Shalev E. Ectopic pregnancy risk factors for ART patients undergoing the GnRH antagonist protocol: a retrospective study. <i>Reprod Biol Endocrinol</i> 2016;14: 12.	Does not address the PICO question
Wu, J., et al., Fertility and Neonatal Outcomes of Freeze-All vs. Fresh Embryo Transfer in Women With Advanced Endometriosis. <i>Front Endocrinol (Lausanne)</i> , 2019. 10: p. 770.	Does not address the PICO question
Wu, M.H., et al., Quality of life among infertile women with endometriosis undergoing IVF treatment and their pregnancy outcomes. <i>J Psychosom Obstet Gynaecol</i> , 2020: p. 1-10.	Patient perspective
Xing W, Lin H, Wu Z, Li Y, Zhang Q. EFFECT OF PELVIC ENDOMETRIOSIS, ENDOMETRIOMAS AND RECURRENT ENDOMETRIOMAS ON IVF-ET/ICSI OUTCOMES. <i>Mater Sociomed</i> 2016;28: 91-94.	Not relevant
Xu B, Guo N, Zhang XM, Shi W, Tong XH, Iqbal F, Liu YS. Oocyte quality is decreased in women with minimal or mild endometriosis. <i>Sci Rep</i> 2015;5: 10779.	Not relevant
Xu Z, Chen W, Chen C, Xiao Y, Chen X. Effect of intrauterine injection of human chorionic gonadotropin before frozen-thawed embryo transfer on pregnancy outcomes in women with endometriosis. <i>J Int Med Res</i> 2019;47: 2873-2880.	Not relevant
Yang C, Geng Y, Li Y, Chen C, Gao Y. Impact of ovarian endometrioma on ovarian responsiveness and IVF: a systematic review and meta-analysis. <i>Reprod Biomed Online</i> 2015;31: 9-19.	Review without RCT included,
Yang P, Wang Y, Wu Z, Pan N, Yan L, Ma C. Risk of miscarriage in women with endometriosis undergoing IVF fresh cycles: a retrospective cohort study. <i>Reprod Biol Endocrinol</i> 2019;17: 21.	Does not address the PICO question
Yang X, Huang R, Cai M, Liang X. Endometriosis has no negative impact on outcomes of in vitro fertilisation in women with poor ovarian response. <i>Bjog</i> 2016;123 Suppl 3: 76-81.	Relatively small number of women with endometriosis
Yanushpolsky EH, Best CL, Jackson KV, Clarke RN, Barbieri RL, Hornstein MD. Effects of endometriomas on oocyte quality, embryo quality, and pregnancy rates in in vitro fertilization cycles: a prospective, case-controlled study. <i>J Assist Reprod Genet</i> 1998;15: 193-197.	Included in review Alshehre 2020
Yilmaz, N., et al., Impact of endometrioma and bilaterality on IVF / ICSI cycles in patients with endometriosis. <i>J Gynecol Obstet Hum Reprod</i> , 2020: p. 101839.	Does not address the PICO question
Zikopoulos K, Kolibianakis EM, Devroey P. Ovarian stimulation for in vitro fertilization in patients with endometriosis. <i>Acta Obstet Gynecol Scand</i> 2004;83: 651-655.	More recent data/reviews available

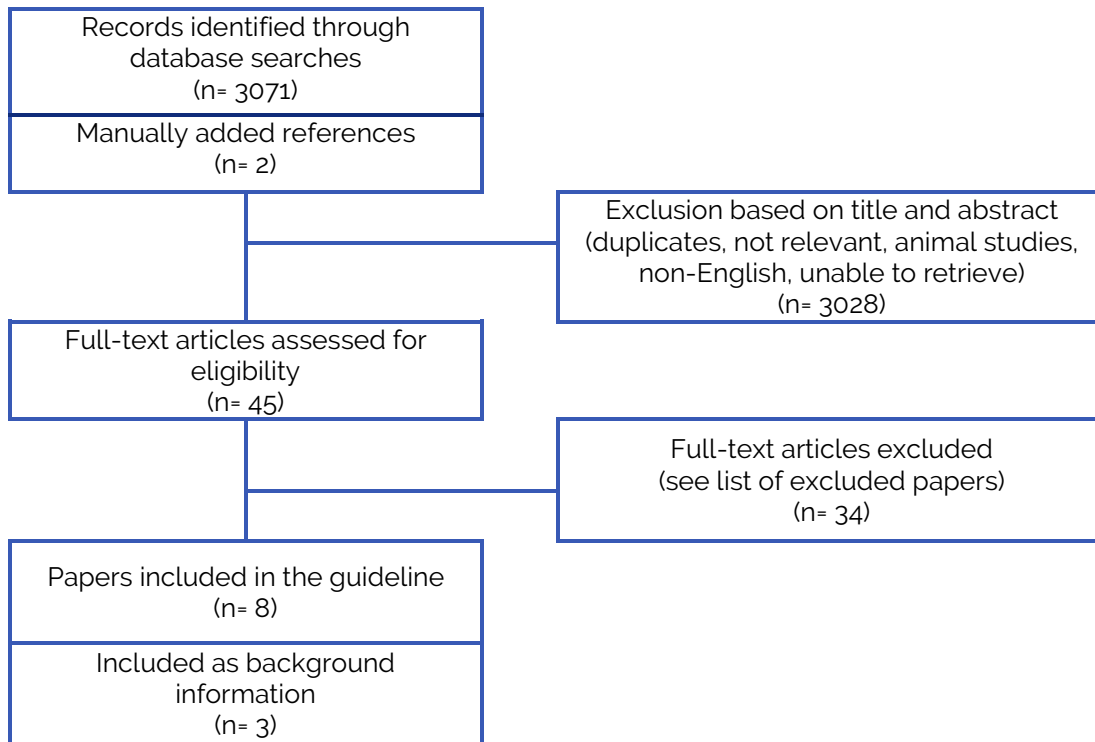


QUESTION III.5 ARE MEDICAL THERAPIES EFFECTIVE AS AN ADJUNCT TO MAR FOR ENDOMETRIOSIS-ASSOCIATED INFERTILITY?

Search strings

DATABASE	Search string
PUBMED	See question III.4 (identical search term, different selection of papers)
COCHRANE	See question III.4 (identical search term, different selection of papers)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Abd Rabbo MS, Elmaghraby HA, Mashali NA, Abdel Moneim ME. Effect of aromatase inhibitor (letrozole) with long agonist protocol on the results of ICSI/ET in females with minimal and mild endometriosis. <i>Alexandria journal of medicine</i> 2012;48: 303-307.	Does not fit with the PICO Question
Abu Hashim H. Aromatase Inhibitors for Endometriosis-Associated Infertility; Do We Have Sufficient Evidence? <i>Int J Fertil Steril</i> 2016;10: 270-277.	Subgroup of relevant patients
Benschop L, Farquhar C, van der Poel N, Heineman MJ. Interventions for women with endometrioma prior to assisted reproductive technology. <i>Cochrane Database Syst Rev</i> 2010: Cd008571.	Not relevant for the PICO Question
Brent K, Hadden WE, Weston-Webb M, Johnson NP. After the FLUSH trial: a prospective observational study of lipiodol flushing as an innovative treatment for unexplained and endometriosis-related infertility. <i>Aust N Z J Obstet Gynaecol</i> 2006;46: 293-297.	Study of safety
Cahill DJ, Wardle PG, Harlow CR, Hull MG. Effect of progestogen therapy on follicular development, related hormone concentrations and fertilization in vitro in unstimulated cycles and unexplained and endometriosis-associated infertility. <i>Hum Reprod</i> 1996;11: 647-650.	subgroup of relevant patients
Cantor A, Tannus S, Son WY, Tan SL, Dahan MH. A comparison of two months pretreatment with GnRH agonists with or without an aromatase inhibitor in women with ultrasound-diagnosed ovarian endometriomas undergoing IVF. <i>Reprod Biomed Online</i> 2019;38: 520-527.	Does not fit with the PICO Question
Curtis P, Jackson A, Bernard A, Shaw RW. Pretreatment with gonadotrophin releasing hormone (GnRH) analogue prior to in vitro fertilisation for patients with endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 1993;52: 211-216.	Subgroup of relevant patients
Dal Prato L, Borini A. Effect of piroxicam administration before embryo transfer on IVF outcome: a randomized controlled trial. <i>Reprod Biomed Online</i> 2009;19: 604-609.	subgroup of relevant patients
Decler W, Osmanagaoglu K, Verschuere K, Comhaire F, Devroey P. RCT to evaluate the influence of adjuvant medical treatment of peritoneal endometriosis on the outcome of IVF. <i>Hum Reprod</i> 2016;31: 2017-2023.	Not relevant
Dicker D, Goldman GA, Ashkenazi J, Feldberg D, Voliovitz I, Goldman JA. The value of pre-treatment with gonadotrophin releasing hormone (GnRH) analogue in IVF-ET therapy of severe endometriosis. <i>Hum Reprod</i> 1990;5: 418-420.	Before after study
Fatima P, Hossain MM, Rahman D, Suman GM. Outcome of pregnancies after inadvertent exposure to GnRH agonist in early pregnancy. <i>Mymensingh Med J</i> 2011;20: 303-307.	Relevant intervention not included
Guo H, Wang Y, Chen Q, Chai W, Sun L, Ai A, Fu Y, Lyu Q, Kuang Y. Use of medroxyprogesterone acetate in women with ovarian endometriosis undergoing controlled ovarian hyperstimulation for in vitro fertilization. <i>Sci Rep</i> 2017;7: 11927.	Not relevant
Hagargi RP, Patil M. Endometrioma and ART: does the needle work? <i>International journal of infertility and fetal medicine</i> 2011;2: 23-31.	Not relevant
He Y, Wu H, He X, Xing Q, Zhou P, Cao Y, Wei Z. Administration of atosiban in patients with endometriosis undergoing frozen-thawed embryo transfer: a prospective, randomized study. <i>Fertil Steril</i> 2016;106: 416-422.	Does not fit with the PICO Question
Kereszturi A, Szollosi J, Daru J, Koloszar S, Pal A. Results of insemination (AIH) following GnRH treatment of endometriosis. <i>Arch Androl</i> 2002;48: 243-249.	Relevant intervention not included
Kim CH, Chae HD, Kang BM, Chang YS, Mok JE. The immunotherapy during in vitro fertilization and embryo transfer cycles in infertile patients with endometriosis. <i>J Obstet Gynaecol Res</i> 1997;23: 463-470.	Does not fit with the PICO Question
Kumbasar S, Gul O, Sik A. Evaluation of the effect of indomethacin and piroxicam administration before embryo transfer on pregnancy rate. <i>J Obstet Gynaecol Res</i> 2017;43: 536-542.	relevant patients not included
Leone Roberti Maggiore U, Gupta JK, Ferrero S. Treatment of endometrioma for improving fertility. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;209: 81-85.	Narrative review - Relevant patients not included
Lin KC, Chen HF, Huang PT, Wu MY, Ho HN, Yang YS. Effectiveness of postoperative adjuvant therapy in improving reproductive outcome of endometriosis-associated infertility. <i>J Formos Med Assoc</i> 2001;100: 466-470.	relevant outcomes inappropriately assessed
Lossi K, Loft A, Freiesleben NL, Bangsboll S, Andersen CY, Pedersen AT, Hartwell D, Andersen AN. Combined down-regulation by aromatase inhibitor and GnRH-agonist in IVF patients with endometriomas-A pilot study. <i>Eur J Obstet Gynecol Reprod Biol</i> 2009;144: 48-53.	Low number of patients, relevant intervention not included
Lu X, Wu Z, Wang M, Cheng W. Effects of vitamin C on the outcome of in vitro fertilization-embryo transfer in endometriosis: A randomized controlled study. <i>J Int Med Res</i> 2018;46: 4624-4633.	Relevant intervention not included



Ma C, Qiao J, Liu P, Chen G. Ovarian suppression treatment prior to in-vitro fertilization and embryo transfer in Chinese women with stage III or IV endometriosis. <i>Int J Gynaecol Obstet</i> 2008;100: 167-170.	Not relevant
Maged AM, Rashwan H, Mahmoud M, El-Mazny A, Farouk M, Belal DS, Marie HM. Effect of Prolonged GnRH Agonist Downregulation on ICSI Outcome in Patients With Endometriomas of Less Than 5 cm: A Randomized Controlled Trial. <i>Reprod Sci</i> 2018;25: 1509-1514.	Not relevant
Moon HS, Park SH, Lee JO, Kim KS, Joo BS. Treatment with piroxicam before embryo transfer increases the pregnancy rate after in vitro fertilization and embryo transfer. <i>Fertil Steril</i> 2004;82: 816-820.	Subgroup of relevant patients
Muller V, Kogan I, Yarmolinskaya M, Niauri D, Gzgzyan A, Aylamazyan E. Dienogest treatment after ovarian endometrioma removal in infertile women prior to IVF. <i>Gynecol Endocrinol</i> 2017;33: 18-21.	Not relevant for the PICO Question
Nama V, Kalu E. Management of endometrioma in women embarking on IVF: paucity of good quality evidence. <i>Fertil Steril</i> 2009;92: e63; author reply e64.	Publication type
Reilly SJ, Glanville EJ, Dhorepatil B, Prentice LR, Mol BW, Johnson NP. The IVF-LUBE trial - a randomized trial to assess Lipiodol(R) uterine bathing effect in women with endometriosis or repeat implantation failure undergoing IVF. <i>Reprod Biomed Online</i> 2019;38: 380-386.	Does not fit with the PICO Question
Rickes D, Nickel I, Kropf S, Kleinstein J. Increased pregnancy rates after ultralong postoperative therapy with gonadotropin-releasing hormone analogs in patients with endometriosis. <i>Fertil Steril</i> 2002;78: 757-762.	Does not fit with the PICO Question
Santanam N, Zonerach N, Parthasarathy S. Myeloperoxidase as a Potential Target in Women With Endometriosis Undergoing IVF. <i>Reprod Sci</i> 2017;24: 619-626.	Relevant intervention not included
Soritsa D, Saare M, Laisk-Podar T, Peters M, Soritsa A, Matt K, Karro H, Salumets A. Pregnancy rate in endometriosis patients according to the severity of the disease after using a combined approach of laparoscopy, GnRH agonist treatment and in vitro fertilization. <i>Gynecol Obstet Invest</i> 2015;79: 34-39.	subgroup of relevant patients
Surrey ES, Silverberg KM, Surrey MW, Schoolcraft WB. Effect of prolonged gonadotropin-releasing hormone agonist therapy on the outcome of in vitro fertilization-embryo transfer in patients with endometriosis. <i>Fertil Steril</i> 2002;78: 699-704.	Does not fit with the PICO Question
Tamura H, Takasaki A, Nakamura Y, Numa F, Sugino N. A pilot study to search possible mechanisms of ultralong gonadotropin-releasing hormone agonist therapy in IVF-ET patients with endometriosis. <i>J Ovarian Res</i> 2014;7: 100.	Relevant intervention not included
van der Houwen LE, Mijatovic V, Leemhuis E, Schats R, Heymans MW, Lambalk CB, Hompes PG. Efficacy and safety of IVF/ICSI in patients with severe endometriosis after long-term pituitary down-regulation. <i>Reprod Biomed Online</i> 2014;28: 39-46.	Included in section III,4
van der Houwen LEE, Lier MCI, Schreurs AMF, van Wely M, Hompes PGA, Cantineau AEP, Schats R, Lambalk CB, Mijatovic V. Continuous oral contraceptives versus long-term pituitary desensitization prior to IVF/ICSI in moderate to severe endometriosis: study protocol of a non-inferiority randomized controlled trial. <i>Hum Reprod Open</i> 2019;2019: hoz001.	study protocol

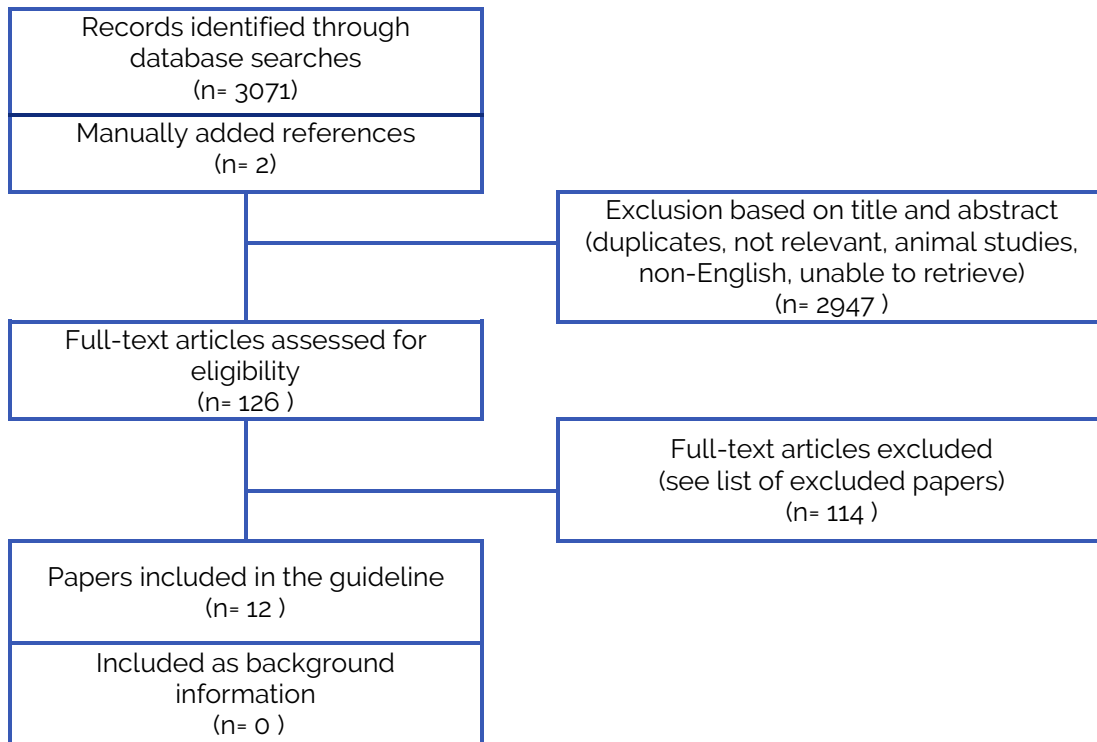


QUESTION III.6 ARE SURGICAL THERAPIES EFFECTIVE AS AN ADJUNCT PRIOR TO MAR FOR ENDOMETRIOSIS-ASSOCIATED INFERTILITY?

Search strings

DATABASE	Search string
PUBMED	See question III.4 (identical search term, different selection of papers)
COCHRANE	See question III.4 (identical search term, different selection of papers)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Abbott J. Surgical treatment is an excellent option for women with endometriosis and infertility. <i>Aust N Z J Obstet Gynaecol</i> 2017;57: 679-681.	Narrative review
Aboulghar MA, Mansour RT, Serour GI, Al-Inany HG, Aboulghar MM. The outcome of in vitro fertilization in advanced endometriosis with previous surgery: a case-controlled study. <i>Am J Obstet Gynecol</i> 2003;188: 371-375.	Included in review Hamdan 2015
Adamson GD. Laparoscopy, in vitro fertilization, and endometriosis: an enigma. <i>Fertil Steril</i> 2005;84: 1582-1584.	Opinion paper
Aflatoonian A, Rahmani E, Rahsepar M. Assessing the efficacy of aspiration and ethanol injection in recurrent endometrioma before IVF cycle: A randomized clinical trial. <i>Iran J Reprod Med</i> 2013;11: 179-184.	More appropriate data available
Alborzi S, Ravanbakhsh R, Parsanezhad ME, Alborzi M, Alborzi S, Dehbashi S. A comparison of follicular response of ovaries to ovulation induction after laparoscopic ovarian cystectomy or fenestration and coagulation versus normal ovaries in patients with endometrioma. <i>Fertil Steril</i> 2007;88: 507-509.	More appropriate data available
Alborzi, S., et al., The success of various endometrioma treatments in infertility: A systematic review and meta-analysis of prospective studies. <i>Reprod Med Biol</i> , 2019, 18(4): p. 312-322.	Does not address the PICO question (Compares surgery versus ART)
AlKudmani B, Gat I, Buell D, Salman J, Zohni K, Librach C, Sharma P. In Vitro Fertilization Success Rates after Surgically Treated Endometriosis and Effect of Time Interval between Surgery and In Vitro Fertilization. <i>J Minim Invasive Gynecol</i> 2018;25: 99-104.	Not relevant
Almog B, Sheizaf B, Shalom-Paz E, Shehata F, Al-Talib A, Tulandi T. Effects of excision of ovarian endometrioma on the antral follicle count and collected oocytes for in vitro fertilization. <i>Fertil Steril</i> 2010;94: 2340-2342.	Included in review Hamdan 2015
Andre GM, Vilarino FL, Christofolini DM, Bianco B, Barbosa CP. Aspiration and ethanol sclerotherapy to treat recurrent ovarian endometriomas prior to in vitro fertilization - a pilot study. <i>Einstein (Sao Paulo)</i> 2011;9: 494-498.	No control group
Ballester M, Roman H, Mathieu E, Touleimat S, Belghiti J, Darai E. Prior colorectal surgery for endometriosis-associated infertility improves ICSI-IVF outcomes: results from two expert centres. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;209: 95-99.	Not relevant
Bansal P, Khoiwal K, Malhotra N, Dadhwal V, Sharma A, Deka D. The Role of GnRH Analogues in Improving Outcome in Women Undergoing Superovulation and Intrauterine Insemination after Surgical Correction of Mild Endometriosis: A Randomized Controlled Trial. <i>Eurasian J Med</i> 2018;50: 105-110.	Relevant intervention not included.
Barri PN, Coroleu B, Tur R, Barri-Soldevila PN, Rodriguez I. Endometriosis-associated infertility: surgery and IVF, a comprehensive therapeutic approach. <i>Reprod Biomed Online</i> 2010;21: 179-185.	Included in review Hamdan 2015
Benoit, L., et al., Predicting the likelihood of a live birth for women with endometriosis-related infertility. <i>Eur J Obstet Gynecol Reprod Biol</i> , 2019, 242: p. 56-62.	Does not address the PICO question
Benschop L, Farquhar C, van der Poel N, Heineman MJ. Interventions for women with endometrioma prior to assisted reproductive technology. <i>Cochrane Database Syst Rev</i> 2010: Cd008571.	Not relevant
Berlanda N, Vercellini P, Somigliana E, Frattaruolo MP, Buggio L, Gattei U. Role of surgery in endometriosis-associated subfertility. <i>Semin Reprod Med</i> 2013;31: 133-143.	Narrative review
Boujenah J, Hugues JN, Sifer C, Cedrin-Durnerin I, Bricou A, Poncelet C. Second live birth after undergoing assisted reproductive technology in women operated on for endometriosis. <i>Fertil Steril</i> 2016;105: 129-133.	Moderate value - Observational/uncontrolled study
Bourdon M, Raad J, Dahan Y, Marcellin L, Maignien C, Even M, Pocate-Cheriet K, Lamau MC, Santulli P, Chapron C. Endometriosis and ART: A prior history of surgery for OMA is associated with a poor ovarian response to hyperstimulation. <i>PLoS One</i> 2018;13: e0202399.	Retrospective controlled study with methodological issues
Cai H, Guan J, Shen H, Han H, Yu X. Impact of surgery for endometriomas on pregnancy outcomes following in vitro fertilization-intracytoplasmic sperm injection. Who should be the preferred laparoscopists: gynecologists or reproductive surgeons? <i>Arch Gynecol Obstet</i> 2017;296: 263-268.	Not relevant
Canis M, Pouly JL, Tamburro S, Mage G, Wattiez A, Bruhat MA. Ovarian response during IVF-embryo transfer cycles after laparoscopic ovarian cystectomy for endometriotic cysts of >3 cm in diameter. <i>Hum Reprod</i> 2001;16: 2583-2586.	Included in review Hamdan 2015
Carneiro MM, Costa LMP, Avila I. To operate or not to operate on women with deep infiltrating endometriosis (DIE) before in vitro fertilization (IVF). <i>JBRA Assist Reprod</i> 2017;21: 120-125.	Review article. Relevant patients are not included. Referenced papers are retrieved



Centini G, Afors K, Murtada R, Argay IM, Lazzeri L, Akladios CY, Zupi E, Petraglia F, Wattiez A. Impact of Laparoscopic Surgical Management of Deep Endometriosis on Pregnancy Rate. <i>J Minim Invasive Gynecol</i> 2016;23: 113-119.	Moderate value - Observational/uncontrolled study
Chapron C, Fritel X, Dubuisson JB. Fertility after laparoscopic management of deep endometriosis infiltrating the uterosacral ligaments. <i>Hum Reprod</i> 1999;14: 329-332.	More recent review/data available
Cheewadhanaraks S. Comparison of fecundity after second laparotomy for endometriosis to in vitro fertilization and embryo transfer. <i>J Med Assoc Thai</i> 2004;87: 361-366.	Does not fit with the PICO question
Chen ML, Lee KC, Yang CT, Hung KH, Wu MH. Simultaneous laparoscopy for endometriotic women undergoing in vitro fertilization. <i>Taiwan J Obstet Gynecol</i> 2012;51: 66-70.	Not relevant
Coccia ME, Rizzello F, Cammilli F, Bracco GL, Scarselli G. Endometriosis and infertility Surgery and ART: An integrated approach for successful management. <i>Eur J Obstet Gynecol Reprod Biol</i> 2008;138: 54-59.	relevant patients not included (study evaluates pregnancy after surgery, with and without IVF (so does not answer Q3))
Darai E, Carbonnel M, Dubernard G, Lavoue V, Coutant C, Bazot M, Ballester M. Determinant factors of fertility outcomes after laparoscopic colorectal resection for endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2010;149: 210-214.	observational study looking at fertility outcome after colorectal surgery for endometriosis
Darai E, Cohen J, Ballester M. Colorectal endometriosis and fertility. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;209: 86-94.	Not relevant for the PICO Question
Darai E, Marpeau O, Thomassin I, Dubernard G, Barranger E, Bazot M. Fertility after laparoscopic colorectal resection for endometriosis: preliminary results. <i>Fertil Steril</i> 2005;84: 945-950.	No control group
De Hondt A, Meuleman C, Tomassetti C, Peeraer K, D'Hooghe TM. Endometriosis and assisted reproduction: the role for reproductive surgery? <i>Curr Opin Obstet Gynecol</i> 2006;18: 374-379.	Narrative review
Demiroglu A, Guven S, Baykal C, Gurgan T. Effect of endometrioma cystectomy on IVF outcome: a prospective randomized study. <i>Reprod Biomed Online</i> 2006;12: 639-643.	More appropriate data available
Dong X, Wang R, Zheng Y, Xiong T, Liao X, Huang B, Zhang H. Surgical treatment for endometrioma does not increase clinical pregnancy rate or live birth/ongoing pregnancy rate after fresh IVF/ICSI treatment. <i>Am J Transl Res</i> 2014;6: 163-168.	More recent review/data available
Donnez J, Wyns C, Nisolle M. Does ovarian surgery for endometriomas impair the ovarian response to gonadotropin? <i>Fertil Steril</i> 2001;76: 662-665.	Inappropriate control group
Donnez J. Women with endometrioma-related infertility face a dilemma when choosing the appropriate therapy: surgery or in vitro fertilization. <i>Fertil Steril</i> 2018;110: 1216-1217.	Does not fit with the PICO question
Duru NK, Dede M, Acikel CH, Keskin U, Fidan U, Baser I. Outcome of in vitro fertilization and ovarian response after endometrioma stripping at laparoscopy and laparotomy. <i>J Reprod Med</i> 2007;52: 805-809.	Included in review Hamdan 2015
Esinler I, Bozdag G, Aybar F, Bayar U, Yarali H. Outcome of in vitro fertilization/intracytoplasmic sperm injection after laparoscopic cystectomy for endometriomas. <i>Fertil Steril</i> 2006;85: 1730-1735.	Included in review Hamdan 2015
Fedele L, Bianchi S, Zanconato G, Berlanda N, Raffaelli R, Fontana E. Laparoscopic excision of recurrent endometriomas: long-term outcome and comparison with primary surgery. <i>Fertil Steril</i> 2006;85: 694-699.	Irrelevant comparison
Ferrier C, Roman H, Alzahrani Y, d'Argent EM, Bendifallah S, Marty N, Perez M, Rubod C, Collinet P, Darai E et al. Fertility outcomes in women experiencing severe complications after surgery for colorectal endometriosis. <i>Hum Reprod</i> 2018;33: 411-415.	More appropriate data available
Fisch JD, Sher G. Sclerotherapy with 5% tetracycline is a simple alternative to potentially complex surgical treatment of ovarian endometriomas before in vitro fertilization. <i>Fertil Steril</i> 2004;82: 437-441.	More recent review/data available
Gandhi AR, Carvalho LF, Nutter B, Falcone T. Determining the fertility benefit of controlled ovarian hyperstimulation with intrauterine insemination after operative laparoscopy in patients with endometriosis. <i>J Minim Invasive Gynecol</i> 2014;21: 101-108.	Not relevant
Garcia-Velasco JA, Arici A. Surgery for the removal of endometriomas before in vitro fertilization does not increase implantation and pregnancy rates. <i>Fertil Steril</i> 2004;81: 1206.	Included in review Hamdan 2015
Garcia-Velasco JA, Mahutte NG, Corona J, Zuniga V, Giles J, Arici A, Pellicer A. Removal of endometriomas before in vitro fertilization does not improve fertility outcomes: a matched, case-control study. <i>Fertil Steril</i> 2004;81: 1194-1197.	More recent review/data available
Garcia-Velasco JA, Somigliana E. Management of endometriomas in women requiring IVF: to touch or not to touch. <i>Hum Reprod</i> 2009;24: 496-501.	Narrative review
Geber S, Ferreira DP, Spyer Prates LF, Sales L, Sampaio M. Effects of previous ovarian surgery for endometriosis on the outcome of assisted reproduction treatment. <i>Reprod Biomed Online</i> 2002;5: 162-166.	relevant patients not included (wrong control group)



Gelbaya TA, Gordts S, D'Hooghe TM, Gergolet M, Nardo LG. Management of endometrioma prior to IVF: compliance with ESHRE guidelines. <i>Reprod Biomed Online</i> 2010;21: 325-330.	Not relevant
Gizzo S, Conte L, Di Gangi S, Leggieri C, Quaranta M, Noventa M, Litta P, Saccardi C. Could surgeon's expertise resolve the debate about surgery effectiveness in treatment of endometriosis-related infertility? <i>Arch Gynecol Obstet</i> 2015;292: 217-223.	Not relevant
Guler I, Erdem A, Oguz Y, Cevher F, Mutlu MF, Bozkurt N, Oktem M, Erdem M. The Impact of laparoscopic surgery of peritoneal endometriosis and endometrioma on the outcome of ICSI cycles. <i>Syst Biol Reprod Med</i> 2017;63: 324-330.	Not relevant
Guo YH, Lu N, Zhang Y, Su YC, Wang Y, Zhang YL, Sun YP. Comparative study on the pregnancy outcomes of in vitro fertilization-embryo transfer between long-acting gonadotropin-releasing hormone agonist combined with transvaginal ultrasound-guided cyst aspiration and long-acting gonadotropin-releasing hormone agonist alone. <i>Contemp Clin Trials</i> 2012;33: 1206-1210.	Not relevant
Guo, H., et al., Impacts of medroxyprogesterone acetate on oocytes and embryos: matched case-control study in women with stage III-IV ovarian endometriosis undergoing controlled ovarian hyperstimulation for in vitro fertilization. <i>Ann Transl Med</i> , 2020. 8(6): p. 377.	Relevant outcomes not reported
Harada M, Takahashi N, Hirata T, Koga K, Fujii T, Osuga Y. Laparoscopic excision of ovarian endometrioma does not exert a qualitative effect on ovarian function: insights from in vitro fertilization and single embryo transfer cycles. <i>J Assist Reprod Genet</i> 2015;32: 685-689.	Not relevant
Hart RJ, Hickey M, Maouris P, Buckett W. Excisional surgery versus ablative surgery for ovarian endometriomata. <i>Cochrane Database Syst Rev</i> 2008: Cdo04992.	Narrative review
Ho HY, Lee RK, Hwu YM, Lin MH, Su JT, Tsai YC. Poor response of ovaries with endometrioma previously treated with cystectomy to controlled ovarian hyperstimulation. <i>J Assist Reprod Genet</i> 2002;19: 507-511.	Included in review Hamdan 2015
Hong SB, Lee NR, Kim SK, Kim H, Jee BC, Suh CS, Kim SH, Choi YM. In vitro fertilization outcomes in women with surgery induced diminished ovarian reserve after endometrioma operation: Comparison with diminished ovarian reserve without ovarian surgery. <i>Obstet Gynecol Sci</i> 2017;60: 63-68.	Inappropriate control group
Horikawa T, Nakagawa K, Ohgi S, Kojima R, Nakashima A, Ito M, Takahashi Y, Saito H. The frequency of ovulation from the affected ovary decreases following laparoscopic cystectomy in infertile women with unilateral endometrioma during a natural cycle. <i>J Assist Reprod Genet</i> 2008;25: 239-244.	Not relevant
Huang HY, Lee CL, Lai YM, Chang MY, Chang SY, Soong YK. The outcome of in vitro fertilization and embryo transfer therapy in women with endometriosis failing to conceive after laparoscopic conservative surgery. <i>J Am Assoc Gynecol Laparosc</i> 1997;4: 299-303.	Included in review Hamdan 2015
Huang XW, Qiao J, Xia EL, Ma YM, Wang Y. Effect of interval after surgery on in vitro fertilization/ intracytoplasmic sperm injection outcomes in patients with stage III/IV endometriosis. <i>Chin Med J (Engl)</i> 2010;123: 2176-2180.	Not relevant
Kahyaoglu S, Ertas E, Kahyaoglu I, Mollamahmutoglu L, Batioglu S. Does laparoscopic cystectomy and cauterization of endometriomas greater than 3 cm diminish ovarian response to controlled ovarian hyperstimulation during IVF-ET? A case-control study. <i>J Obstet Gynaecol Res</i> 2008;34: 1010-1013.	wrong control group
Kereszturi A, Kozinszky Z, Daru J, Pasztor N, Sikovanyecz J, Zadori J, Marton V, Koloszar S, Szollosi J, Nemeth G. Pregnancy Rate after Controlled Ovarian Hyperstimulation and Intrauterine Insemination for the Treatment of Endometriosis following Surgery. <i>Biomed Res Int</i> 2015;2015: 282-301.	Relevant intervention not included
Koike T, Minakami H, Motoyama M, Ogawa S, Fujiwara H, Sato I. Reproductive performance after ultrasound-guided transvaginal ethanol sclerotherapy for ovarian endometriotic cysts. <i>Eur J Obstet Gynecol Reprod Biol</i> 2002;105: 39.	More recent review/data available
Kondo W, Darai E, Yazbeck C, Panel P, Tamburro S, Dubuisson J, Jardon K, Mage G, Madelenat P, Canis M. Do patients manage to achieve pregnancy after a major complication of deeply infiltrating endometriosis resection? <i>Eur J Obstet Gynecol Reprod Biol</i> 2011;154: 196-199.	Not relevant
Kuroda K, Kitade M, Kikuchi I, Kumakiri J, Matsuoka S, Kuroda M, Takeda S. The impact of endometriosis, endometrioma and ovarian cystectomy on assisted reproductive technology. <i>Reprod Med Biol</i> 2009;8: 113-118.	Included in review Hamdan 2015
Lee KH, Kim CH, Lee YJ, Kim SH, Chae HD, Kang BM. Surgical resection or aspiration with ethanol sclerotherapy of endometrioma before in vitro fertilization in infertile women with endometrioma. <i>Obstet Gynecol Sci</i> 2014;57: 297-303.	Included in review Hamdan 2015
Leone Roberti Maggiore U, Gupta JK, Ferrero S. Treatment of endometrioma for improving fertility. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;209: 81-85.	Narrative review



Lessey BA, Gordts S, Donnez O, Somigliana E, Chapron C, Garcia-Velasco JA, Donnez J. Ovarian endometriosis and infertility: in vitro fertilization (IVF) or surgery as the first approach? <i>Fertil Steril</i> 2018;110: 1218-1226.	Does not fit with the PICO question
Littman E, Giudice L, Lathi R, Berker B, Milki A, Nezhat C. Role of laparoscopic treatment of endometriosis in patients with failed in vitro fertilization cycles. <i>Fertil Steril</i> 2005;84: 1574-1578.	relevant patients not included (postoperative mix of spt and IVF pregnancies; assesses the role of surgery after failed IVF on various outcomes, small numbers)
Loh FH, Tan AT, Kumar J, Ng SC. Ovarian response after laparoscopic ovarian cystectomy for endometriotic cysts in 132 monitored cycles. <i>Fertil Steril</i> 1999;72: 316-321.	More recent review/data available
Loo TC, Lin MY, Chen SH, Chung MT, Tang HH, Lin LY, Tsai YC. Endometrioma undergoing laparoscopic ovarian cystectomy: its influence on the outcome of in vitro fertilization and embryo transfer (IVF-ET). <i>J Assist Reprod Genet</i> 2005;22: 329-333.	Included in review Hamdan 2015
Maheshwari, A., et al., Surgery for women with endometrioma prior to in vitro fertilisation: proposal for a feasible multicentre randomised clinical trial in the UK. <i>Hum Reprod Open</i> , 2020. 2020(3): p. hoaa012.	Not relevant
Marconi G, Vilela M, Quintana R, Sueldo C. Laparoscopic ovarian cystectomy of endometriomas does not affect the ovarian response to gonadotropin stimulation. <i>Fertil Steril</i> 2002;78: 876-878.	Included in review Hamdan 2015
Matalliotakis IM, Cakmak H, Mahutte N, Fragouli Y, Arici A, Sakkas D. Women with advanced-stage endometriosis and previous surgery respond less well to gonadotropin stimulation, but have similar IVF implantation and delivery rates compared with women with tubal factor infertility. <i>Fertil Steril</i> 2007;88: 1568-1572.	Included in review Hamdan 2015
McDonnell R, Marjoribanks J, Hart RJ. Ovarian cyst aspiration prior to in vitro fertilization treatment for subfertility. <i>Cochrane Database of Systematic Reviews</i> 2014.	Not relevant
Motte I, Roman H, Clavier B, Jumeau F, Chanavaz-Lacheray I, Letailleur M, Darwish B, Rives N. In vitro fertilization outcomes after ablation of endometriomas using plasma energy: A retrospective case-control study. <i>Gynecol Obstet Fertil</i> 2016;44: 541-547.	Not relevant
Muller V, Kogan I, Yarmolinskaya M, Niauri D, Gzgzyan A, Aylamazyan E. Dienogest treatment after ovarian endometrioma removal in infertile women prior to IVF. <i>Gynecol Endocrinol</i> 2017;33: 18-21.	Not relevant for the PICO Question
Nakagawa K, Ohgi S, Kojima R, Sugawara K, Ito M, Horikawa T, Irahara M, Saito H. Impact of laparoscopic cystectomy on fecundity of infertility patients with ovarian endometrioma. <i>J Obstet Gynaecol Res</i> 2007;33: 671-676.	Included in review Hamdan 2015
Nama V, Kalu E. Management of endometrioma in women embarking on IVF: paucity of good quality evidence. <i>Fertil Steril</i> 2009;92: e63; author reply e64.	Publication type
Nesbitt-Hawes EM, Campbell N, Maley PE, Won H, Hooshmand D, Henry A, Ledger W, Abbott JA. The Surgical Treatment of Severe Endometriosis Positively Affects the Chance of Natural or Assisted Pregnancy Postoperatively. <i>Biomed Res Int</i> 2015;2015: 438790.	Moderate value - Observational/uncontrolled study
Ottolina, J., et al., Ovarian responsiveness in ART after CO2 fiber laser vaporization for endometrioma treatment: preliminary data. <i>Minerva Endocrinol</i> , 2020.	Preliminary data only
Pabuccu R, Onalan G, Goktolga U, Kucuk T, Orhon E, Ceyhan T. Aspiration of ovarian endometriomas before intracytoplasmic sperm injection. <i>Fertil Steril</i> 2004;82: 705-711.	Not relevant
Pagidas K, Falcone T, Hemmings R, Miron P. Comparison of reoperation for moderate (stage III) and severe (stage IV) endometriosis-related infertility with in vitro fertilization-embryo transfer. <i>Fertil Steril</i> 1996;65: 791-795.	Included in review Hamdan 2015
Park H, Kim CH, Kim EY, Moon JW, Kim SH, Chae HD, Kang BM. Effect of second-line surgery on in vitro fertilization outcome in infertile women with ovarian endometrioma recurrence after primary conservative surgery for moderate to severe endometriosis. <i>Obstet Gynecol Sci</i> 2015;58: 481-486.	More appropriate/recent data available
Park HJ, Kim H, Lee GH, Yoon TK, Lee WS. Could surgical management improve the IVF outcomes in infertile women with endometrioma?: a review. <i>Obstet Gynecol Sci</i> 2019;62: 1-10.	Narrative review
Pop-Trajkovic S, Kopitovic V, Popovic J, Antic V, Radovic D, Zivadinovic R. In vitro fertilization outcome in women with endometriosis & previous ovarian surgery. <i>Indian J Med Res</i> 2014;140: 387-391.	relevant patients not included
Rizk B, Turki R, Lotfy H, Ranganathan S, Zahed H, Freeman AR, Shilbayeh Z, Sassy M, Shalaby M, Malik R. Surgery for endometriosis-associated infertility: do we exaggerate the magnitude of effect? <i>Facts Views Vis Obgyn</i> 2015;7: 109-118.	Narrative review
Roman H, Chanavaz-Lacheray I, Ballester M, Bendifallah S, Touleimat S, Tuech JJ, Farella M, Merlot B. High postoperative fertility rate following surgical management of colorectal endometriosis. <i>Hum Reprod</i> 2018;33: 1669-1676.	Does not fit with the PICO question
Roman H, Puscasiu L, Lempicki M, Huet E, Chati R, Bridoux V, Tuech JJ, Abo C. Colorectal Endometriosis Responsible for Bowel Occlusion or Subocclusion in Women	Not relevant



With Pregnancy Intention: Is the Policy of Primary in Vitro Fertilization Always Safe? <i>J Minim Invasive Gynecol</i> 2015;22: 1059-1067.	
Rossi AC, Prefumo F. The effects of surgery for endometriosis on pregnancy outcomes following in vitro fertilization and embryo transfer: a systematic review and meta-analysis. <i>Arch Gynecol Obstet</i> 2016;294: 647-655.	Not relevant
Ruiz-Flores FJ, Garcia-Velasco JA. Is there a benefit for surgery in endometrioma-associated infertility? <i>Curr Opin Obstet Gynecol</i> 2012;24: 136-140.	Narrative review
Shahine LK, Burney RO, Behr B, Milki AA, Westphal LM, Lathi RB. Embryo quality before and after surgical treatment of endometriosis in infertile patients. <i>J Assist Reprod Genet</i> 2009;26: 69-73.	IVF outcome before and after surgery using patients as their own control
Shimizu Y, Takashima A, Takahashi K, Kita N, Fujiwara M, Murakami T. Long-term outcome, including pregnancy rate, recurrence rate and ovarian reserve, after laparoscopic laser ablation surgery in infertile women with endometrioma. <i>J Obstet Gynaecol Res</i> 2010;36: 115-118.	no control group
Somigliana E, Arnoldi M, Benaglia L, Iemmello R, Nicolosi AE, Ragni G. IVF-ICSI outcome in women operated on for bilateral endometriomas. <i>Hum Reprod</i> 2008;23: 1526-1530.	Included in review Hamdan 2015
Somigliana E, Benaglia L, Paffoni A, Busnelli A, Vigano P, Vercellini P. Risks of conservative management in women with ovarian endometriomas undergoing IVF. <i>Hum Reprod Update</i> 2015;21: 486-499.	Narrative review
Somigliana E, Daguati R, Vercellini P, Barbara G, Benaglia L, Crosignani PG. The use and effectiveness of in vitro fertilization in women with endometriosis: the surgeon's perspective. <i>Fertil Steril</i> 2009;91: 1775-1779.	Not relevant
Somigliana E, Vercellini P, Vigano P, Ragni G, Crosignani PG. Should endometriomas be treated before IVF-ICSI cycles? <i>Hum Reprod Update</i> 2006;12: 57-64.	Narrative review
Soriano D, Bouaziz J, Elizur S, Zolti M, Orvieto R, Seidman D, Goldenberg M, Eisenberg VH. Reproductive Outcome Is Favorable After Laparoscopic Resection of Bladder Endometriosis. <i>J Minim Invasive Gynecol</i> 2016;23: 781-786.	Comparison not relevant for the PICO question
Soritsa D, Saare M, Laisk-Podar T, Peters M, Soritsa A, Matt K, Karro H, Salumets A. Pregnancy rate in endometriosis patients according to the severity of the disease after using a combined approach of laparoscopy, GnRH agonist treatment and in vitro fertilization. <i>Gynecol Obstet Invest</i> 2015;79: 34-39.	mixed groups, mixed treatments
Suganuma N, Wakahara Y, Ishida D, Asano M, Kitagawa T, Katsumata Y, Moriwaki T, Furuhashi M. Pretreatment for ovarian endometrial cyst before in vitro fertilization. <i>Gynecol Obstet Invest</i> 2002;54 Suppl 1: 36-40; discussion 41-32.	Included in review Hamdan 2015
Surrey ES, Schoolcraft WB. Does surgical management of endometriosis within 6 months of an in vitro fertilization-embryo transfer cycle improve outcome? <i>J Assist Reprod Genet</i> 2003;20: 365-370.	Not relevant
Takashima A, Takeshita N, Otaka K, Kinoshita T. Effects of bipolar electrocoagulation versus suture after laparoscopic excision of ovarian endometrioma on the ovarian reserve and outcome of in vitro fertilization. <i>J Obstet Gynaecol Res</i> 2013;39: 1246-1252.	Included in review Hamdan 2015
Takuma N, Sengoku K, Pan B, Wada K, Yamauchi T, Miyamoto T, Ohsumi D, Ishikawa M. Laparoscopic treatment of endometrioma-associated infertility and pregnancy outcome. <i>Gynecol Obstet Invest</i> 2002;54 Suppl 1: 30-34; discussion 34-35.	Included in review Hamdan 2015
Tang Y, Chen SL, Chen X, He YX, Ye DS, Guo W, Zheng HY, Yang XH. Ovarian damage after laparoscopic endometrioma excision might be related to the size of cyst. <i>Fertil Steril</i> 2013;100: 464-469.	More recent review/data available
Tao X, Chen L, Ge S, Cai L. Weigh the pros and cons to ovarian reserve before stripping ovarian endometriomas prior to IVF/ICSI: A meta-analysis. <i>PLoS One</i> 2017;12: e0177426.	Not relevant
Toma SK, Stovall DW, Hammond MG. The effect of laparoscopic ablation or danocrine on pregnancy rates in patients with stage I or II endometriosis undergoing donor insemination. <i>Obstet Gynecol</i> 1992;80: 253-256.	More recent review/data available
Tsoumpou I, Kyrgiou M, Gelbaya TA, Nardo LG. The effect of surgical treatment for endometrioma on in vitro fertilization outcomes: a systematic review and meta-analysis. <i>Fertil Steril</i> 2009;92: 75-87.	More recent review available
Vercellini P, Barbara G, Buggio L, Frattaruolo MP, Somigliana E, Fedele L. Effect of patient selection on estimate of reproductive success after surgery for rectovaginal endometriosis: literature review. <i>Reprod Biomed Online</i> 2012;24: 389-395.	Not relevant
Vercellini P, Somigliana E, Vigano P, Abbiati A, Barbara G, Crosignani PG. Surgery for endometriosis-associated infertility: a pragmatic approach. <i>Hum Reprod</i> 2009;24: 254-269.	Narrative review
Vercellini P, Somigliana E, Vigano P, De Matteis S, Barbara G, Fedele L. The effect of second-line surgery on reproductive performance of women with recurrent endometriosis: a systematic review. <i>Acta Obstet Gynecol Scand</i> 2009;88: 1074-1082.	Heterogenous studies mainly reporting on the effect of repeat surgery rather than primary surgery. Only one of the included studies looked at the IVF



	outcome compared to repeat surgery.
Vercellini P, Vigano P, Frattaruolo MP, Borghi A, Somigliana E. Bowel surgery as a fertility-enhancing procedure in patients with colorectal endometriosis: methodological, pathogenic and ethical issues. <i>Hum Reprod</i> 2018;33: 1205-1211.	Narrative review
Wong BC, Gillman NC, Oehninger S, Gibbons WE, Stadtmauer LA. Results of in vitro fertilization in patients with endometriomas: is surgical removal beneficial? <i>Am J Obstet Gynecol</i> 2004;191: 597-606; discussion 606-597.	Included in review Hamdan 2015
Yamamoto S, Umeki M, Maeda T, Yamaguchi M, Hamano T. Poor pregnancy outcome following assisted reproductive technology among women operated on for bilateral endometriomas. <i>Reprod Med Biol</i> 2010;9: 43-49.	Included in review Hamdan 2015
Yazbeck C, Madelenat P, Ayel JP, Jacquesson L, Bontoux LM, Solal P, Hazout A. Ethanol sclerotherapy: a treatment option for ovarian endometriomas before ovarian stimulation. <i>Reprod Biomed Online</i> 2009;19: 121-125.	Not relevant
Yazdani A. Surgery or in vitro fertilization: The simplicity of this question belies its complexity. <i>Aust N Z J Obstet Gynaecol</i> 2017;57: 676-678.	Does not fit with the PICO question
Yu HT, Huang HY, Lee CL, Soong YK, Wang CJ. Side of ovarian endometrioma does not affect the outcome of in vitro fertilization/intracytoplasmic sperm injection in infertile women after laparoscopic cystectomy. <i>J Obstet Gynaecol Res</i> 2015;41: 717-721.	Not relevant
Yu HT, Huang HY, Soong YK, Lee CL, Chao A, Wang CJ. Laparoscopic ovarian cystectomy of endometriomas: surgeons' experience may affect ovarian reserve and live-born rate in infertile patients with in vitro fertilization-intracytoplasmic sperm injection. <i>Eur J Obstet Gynecol Reprod Biol</i> 2010;152: 172-175.	Not relevant
Yu HT, Huang HY, Tseng HJ, Wang CJ, Lee CL, Soong YK. Bilaterality of ovarian endometriomas does not affect the outcome of in vitro fertilization/intracytoplasmic sperm injection in infertile women after laparoscopic cystectomy. <i>Biomed J</i> 2017;40: 295-299.	Not relevant
Zhao, F., et al, Live birth rate comparison of three controlled ovarian stimulation protocols for in vitro fertilization-embryo transfer in patients with diminished ovarian reserve after endometrioma cystectomy: a retrospective study. <i>J Ovarian Res</i> , 2020. 13(1): p. 23.	Not relevant

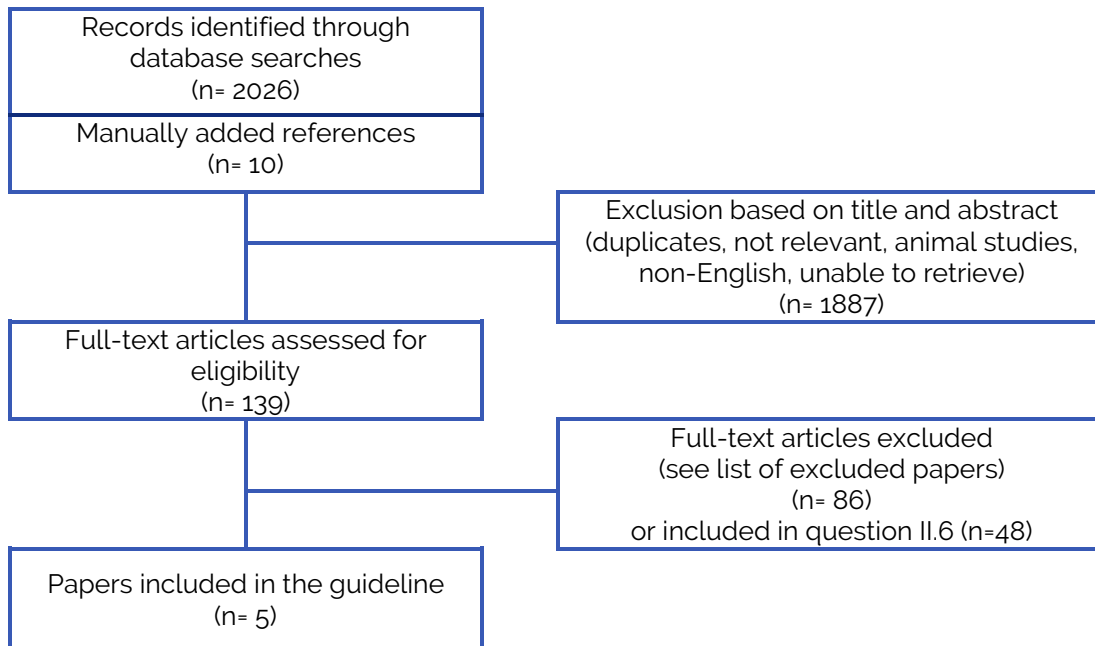


QUESTION III.7 WHAT NON-MEDICAL MANAGEMENT STRATEGIES ARE EFFECTIVE FOR INFERTILITY ASSOCIATED WITH ENDOMETRIOSIS ?

Search strings

DATABASE	Search string
PUBMED	See question II.6 (identical search term, different selection of papers)
COCHRANE	See question II.6 (identical search term, different selection of papers)

Flowchart



List of excluded papers

See question II.6

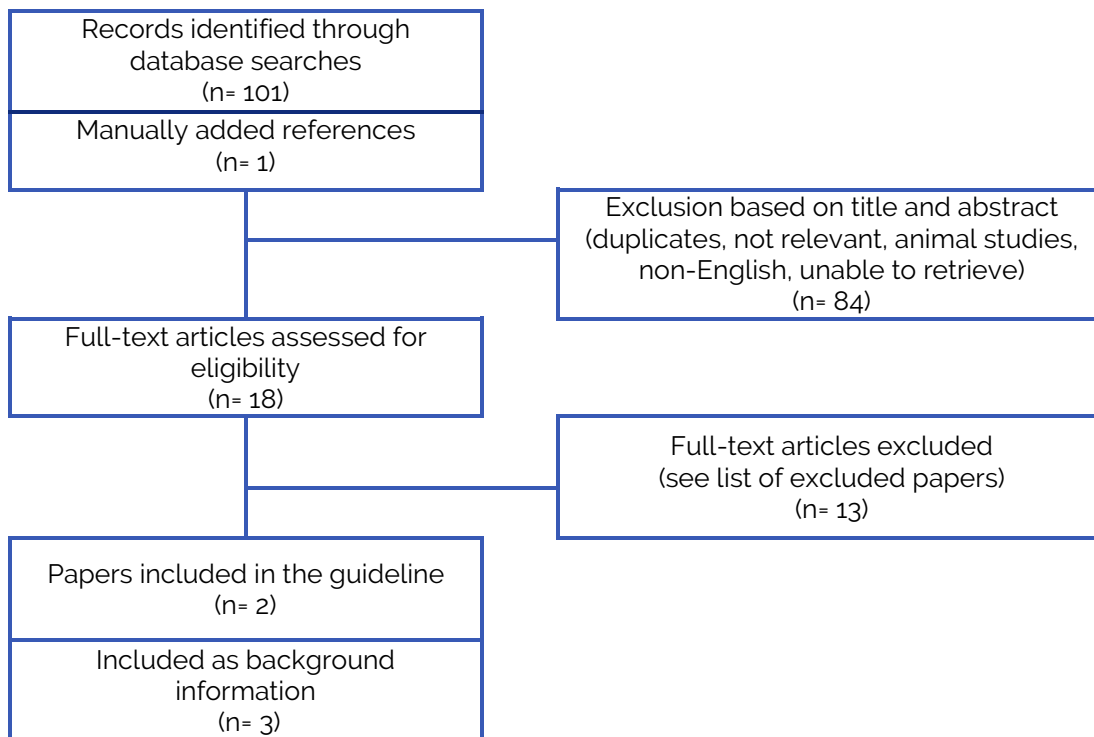


QUESTION III.8 IS ENDOMETRIOSIS AN INDICATION FOR FERTILITY PRESERVATION (OVARIAN TISSUE / OOCYTES)?

Search strings

DATABASE	Search string
PUBMED	("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND ("Oocyte cryopreservation" OR "Oocyte freezing" OR "Egg cryopreservation" OR "Egg freezing" OR "oocyte banking" OR "Oocyte vitrification" OR "egg vitrification" OR (("Cryopreservation"[Mesh] OR "Cryopreservation") AND (oocyte OR egg)) OR "ovarian tissue cryopreservation" OR "ovarian tissue transplantation" OR "ovarian tissue freezing" OR "ovarian cortex cryopreservation" OR "oocyte donation" OR "egg donation" OR "donor oocytes" OR "donor egg") (excluding results III.1, III.2 and III.g)
COCHRANE	(Endometriosis OR endometriotic OR endometrioma) AND ("Oocyte cryopreservation" OR "Oocyte freezing" OR "Egg cryopreservation" OR "Egg freezing" OR "oocyte banking" OR "Oocyte vitrification" OR "egg vitrification" OR "ovarian tissue cryopreservation" OR "ovarian tissue transplantation" OR "ovarian tissue freezing" OR "ovarian cortex cryopreservation" OR "oocyte donation" OR "egg donation" OR "donor oocytes" OR "donor egg")

Flowchart





List of excluded papers

Reference	Exclusion criterium
Calagna, G., et al., Endometriosis and strategies of fertility preservation: a systematic review of the literature. <i>Eur J Obstet Gynecol Reprod Biol</i> , 2020. 254: p. 218-225.	Review does not add relevant information
Elizur SE, Chian RC, Holzer HE, Gidoni Y, Tulandi T, Tan SL. Cryopreservation of oocytes in a young woman with severe and symptomatic endometriosis: a new indication for fertility preservation. <i>Fertil Steril</i> 2009;91: 293.e291-293.	Case report
Fabbri R, Vicenti R, Paradisi R, Rossi S, De Meis L, Seracchioli R, Macciocca M. Transplantation of cryopreserved ovarian tissue in a patient affected by metastatic struma ovarii and endometriosis. <i>Gynecol Endocrinol</i> 2018;34: 558-562.	Case report
Garavaglia E, Sala C, Taccagni G, Traglia M, Barbieri C, Ferrari S, Candiani M, Panina-Bordignon P, Toniolo D. Fertility Preservation in Endometriosis Patients: Anti-Mullerian Hormone Is a Reliable Marker of the Ovarian Follicle Density. <i>Front Surg</i> 2017;4: 40.	Not relevant for the PICO question
Hauzman EE, Garcia-Velasco JA, Pellicer A. Oocyte donation and endometriosis: What are the lessons? <i>Semin Reprod Med</i> 2013;31: 173-177.	Not relevant for the PICO question
Lantsberg, D., et al., The Role of Fertility Preservation in Women with Endometriosis: A Systematic Review. <i>J Minim Invasive Gynecol</i> , 2020. 27(2): p. 362-372.	Review does not add relevant information
Llarena, N.C., T. Falcone, and R.L. Flyckt, Fertility Preservation in Women With Endometriosis. <i>Clin Med Insights Reprod Health</i> , 2019. 13: p. 1179558119873386.	Narrative review
Martyn F, O'Brien YM, Wingfield M. Review of clinical indicators, including serum anti-Mullerian hormone levels, for identification of women who should consider egg freezing. <i>Int J Gynaecol Obstet</i> 2017;138: 37-41.	Not relevant for the PICO question
Mathieu d'Argent, E., et al., Outcomes of fertility preservation in women with endometriosis: comparison of progestin-primed ovarian stimulation versus antagonist protocols. <i>J Ovarian Res</i> , 2020. 13(1): p. 18.	Not relevant for the PICO question
Pluchino, N. and H. Roman, Oocyte vitrification offers more space for a tailored surgical management of endometriosis. <i>Reprod Biomed Online</i> , 2020. 41(5): p. 753-755.	Narrative review
Prapas Y, Goudakou M, Matalliotakis I, Kalogeraki A, Matalliotaki C, Panagiotidis Y, Ravanos K, Prapas N. History of endometriosis may adversely affect the outcome in menopausal recipients of sibling oocytes. <i>Reprod Biomed Online</i> 2012;25: 543-548.	Not relevant for the PICO question
Raad J, Sonigo C, Tran C, Sifer C, Durnerin IC, Grynberg M. Oocyte vitrification for preserving fertility in patients with endometriosis: first observational cohort study... and many unresolved questions. Letter to the Editor. <i>Eur J Obstet Gynecol Reprod Biol</i> 2018;220: 140-141.	Publication type
Simon C, Gutierrez A, Vidal A, de los Santos MJ, Tarin JJ, Remohi J, Pellicer A. Outcome of patients with endometriosis in assisted reproduction: results from in-vitro fertilization and oocyte donation. <i>Hum Reprod</i> 1994;9: 725-729.	Not relevant for the PICO question

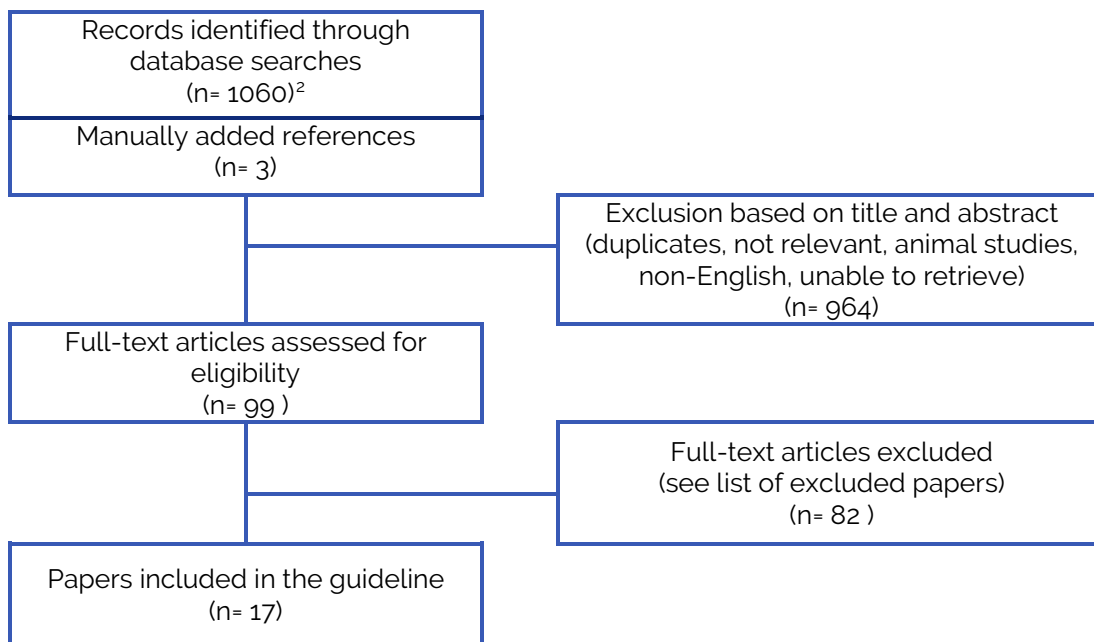


QUESTION III.9 WHAT IS THE IMPACT OF ENDOMETRIOSIS ON PREGNANCY AND OBSTETRIC OUTCOMES?

Search strings

DATABASE	Search string
PUBMED	("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND ("Premature Birth"[Mesh] OR "Obstetric Labor Complications"[Mesh] OR "Pregnancy Complications"[Mesh]) (excluding results III.1/III.2)
COCHRANE	(Endometriosis OR endometriotic OR endometrioma) AND ("Premature Birth" OR "Obstetric Labor Complications" OR "Obstetric complications" OR "Pregnancy Complications")

Flowchart



² In the list of papers to be assessed, 64 references were included that were retrieved from the other searches on fertility related PICO questions (III.1, III.2 and III.4)



List of excluded papers

Reference	Exclusion criterium
Arendt LH, Lindhard MS, Henriksen TB, Forman A, Olsen J, Ramlau-Hansen CH. Maternal endometriosis and genital malformations in boys: a Danish register-based study. <i>Fertil Steril</i> 2017;108: 687-693.	Not relevant for the PICO question
Aris A. A 12-year cohort study on adverse pregnancy outcomes in Eastern Townships of Canada: impact of endometriosis. <i>Gynecol Endocrinol</i> 2014;30: 34-37.	More recent/relevant data available (reviews)
Bailleux M, Bernard JP, Benachi A, Deffieux X. Ovarian endometriosis during pregnancy: a series of 53 endometriomas. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;209:100-104.	More recent/relevant data available (reviews)
Berube S, Marcoux S, Langevin M, Maheux R. Fecundity of infertile women with minimal or mild endometriosis and women with unexplained infertility. The Canadian Collaborative Group on Endometriosis. <i>Fertil Steril</i> 1998;69: 1034-1041.	Does not address the PICO question
Boileau L, Borie F, Laporte S, Tailland ML, Mares P, de Tayrac R. Pelviperitonitis by colorectal perforation in the third trimester of pregnancy after surgery for deep pelvic endometriosis. <i>Fertil Steril</i> 2011;96: e42-44.	Case report
Borisova, A.V., et al., Obstetrical complications and outcome in patients with endometriosis. <i>J Matern Fetal Neonatal Med</i> , 2020: p. 1-15.	Does not fit with the PICO question - review discussing pathogenesis
Bouet PE, Sentilhes L, Lefebvre-Lacoeuille C, Catala L, Gillard P, Descamps P. Endometriosis and spontaneous rupture of uterine vessels with hemothorax during pregnancy. <i>Eur J Obstet Gynecol Reprod Biol</i> 2009;144: 95-96.	Publication type
Brosens I, Brosens JJ, Fusi L, Al-Sabbagh M, Kuroda K, Benagiano G. Risks of adverse pregnancy outcome in endometriosis. <i>Fertil Steril</i> 2012;98: 30-35.	More recent reviews available
Brosens IA, De Sutter P, Hamerlynck T, Imeraj L, Yao Z, Cloke B, Brosens JJ, Dhont M. Endometriosis is associated with a decreased risk of pre-eclampsia. <i>Hum Reprod</i> 2007;22: 1725-1729.	More recent data available (reviews)
Brosens IA, Fusi L, Brosens JJ. Endometriosis is a risk factor for spontaneous hemoperitoneum during pregnancy. <i>Fertil Steril</i> 2009;92: 1243-1245.	More recent reviews available
Carneiro MM, Costa LMP, Torres MDG, Gouvea PS, Avila I. Intestinal Perforation due to Deep Infiltrating Endometriosis during Pregnancy: Case Report. <i>Rev Bras Ginecol Obstet</i> 2018;40: 235-238.	Case report
Chen I, Lalani S, Xie RH, Shen M, Singh SS, Wen SW. Association between surgically diagnosed endometriosis and adverse pregnancy outcomes. <i>Fertil Steril</i> 2018;109: 142-147.	more recent reviews available
Chen ZH, Chen M, Tsai HD, Wu CH. Intrapartum uterine rupture associated with a scarred cervix because of a previous rupture of cystic cervical endometriosis. <i>Taiwan J Obstet Gynecol</i> 2011;50: 95-97. doi: 10.1016/j.tjog.2009.1005.1001.	Case report
Conti N, Cevenini G, Vannuccini S, Orlandini C, Valensise H, Gervasi MT, Ghezzi F, Di Tommaso M, Severi FM, Petraglia F. Women with endometriosis at first pregnancy have an increased risk of adverse obstetric outcome. <i>J Matern Fetal Neonatal Med</i> 2015;28: 1795-1798.	More recent/relevant data available (reviews)
Costa A, Sartini A, Garibaldi S, Cencini M. Deep endometriosis induced spontaneous colon rectal perforation in pregnancy: laparoscopy is advanced tool to confirm diagnosis. <i>Case Rep Obstet Gynecol</i> 2014;2014:907150.:	Case report
D'Agostino C, Surico D, Monga G, Palicelli A. Pregnancy-related decidualization of subcutaneous endometriosis occurring in a post-caesarean section scar: Case study and review of the literature. <i>Pathol Res Pract</i> 2019;215: 828-831.	Case report
Dalsgaard T, Hjordt Hansen MV, Hartwell D, Lidegaard O. Reproductive prognosis in daughters of women with and without endometriosis. <i>Hum Reprod</i> 2013;28: 2284-2288.	Not relevant for the PICO question
Exacoustos C, Lauriola I, Lazzeri L, De Felice G, Zupi E. Complications during pregnancy and delivery in women with untreated rectovaginal deep infiltrating endometriosis. <i>Fertil Steril</i> 2016;106: 1129-1135.e1121.	More recent/relevant data available (reviews)
Farella, M., et al., Pregnancy outcomes in women with history of surgery for endometriosis. <i>Fertil Steril</i> , 2020. 113(5): p. 996-1004.	Not relevant for the PICO question
Farland, L.V., et al., Endometriosis and Risk of Adverse Pregnancy Outcomes. <i>Obstet Gynecol</i> , 2019. 134(3): p. 527-536.	Recent reviews available
Gao FM, Liu GL. Four Case Reports of Endometriosis-Related Hemoperitoneum in Pregnancy. <i>Chin Med J (Engl)</i> 2018;131: 502-504. doi: 510.4103/0366-6999.225048.	Case report
Garcia-Velasco JA, Alvarez M, Palumbo A, Gonzalez-Gonzalez A, Ordas J. Rupture of an ovarian endometrioma during the first trimester of pregnancy. <i>J Clin Endocrinol Metab</i> 1998;83: 911-916.	more recent reviews available
Garcia-Velasco JA, Arici A. Is the endometrium or oocyte/embryo affected in endometriosis? <i>Hum Reprod</i> 1999;14 Suppl 2: 77-89.	More recent reviews available



Glavind MT, Forman A, Arendt LH, Nielsen K, Henriksen TB. Endometriosis and pregnancy complications: a Danish cohort study. <i>Fertil Steril</i> 2017;107: 160-166.	More recent/relevant data available (reviews)
Granese R. Acute abdomen in pregnancy with endometriosis. <i>Acta Obstet Gynecol Scand</i> 2010;89: 844-845.	Case report
Grimbizis G, Camus M, Clasen K, Tournaye H, De Munck L, Devroey P. Endometriomas in pregnancy. <i>Hum Reprod</i> 1998;13: 1188-1193.	More recent data available (reviews)
Grunewald C, Jordens A. Intra-abdominal hemorrhage due to previously unknown endometriosis in the third trimester of pregnancy with uneventful neonatal outcome: a case report. <i>Eur J Obstet Gynecol Reprod Biol</i> 2010;148: 204-205.	Case report
Hadfield RM, Lain SJ, Raynes-Greenow CH, Morris JM, Roberts CL. Is there an association between endometriosis and the risk of pre-eclampsia? A population based study. <i>Hum Reprod</i> 2009;24: 2348-2352.	More recent/relevant data available (reviews)
Harada T, Taniguchi F, Onishi K, Kurozawa Y, Hayashi K, Harada T. Obstetrical Complications in Women with Endometriosis: A Cohort Study in Japan. <i>PLoS One</i> 2016;11: e0168476. doi: 0168410.0161371/journal.pone.0168476. eCollection 0162016.	More recent/relevant data available (reviews)
Hjordt Hansen MV, Dalsgaard T, Hartwell D, Skovlund CW, Lidegaard O. Reproductive prognosis in endometriosis. A national cohort study. <i>Acta Obstet Gynecol Scand</i> 2014;93: 483-489.	More recent/relevant data available (reviews)
Hunter RH. Tubal ectopic pregnancy: a patho-physiological explanation involving endometriosis. <i>Hum Reprod</i> 2002;17: 1688-1691.	More recent reviews available
Inagaki J, Kondo A, Lopez LR, Shoenfeld Y, Matsuura E. Pregnancy loss and endometriosis: pathogenic role of anti-laminin-1 autoantibodies. <i>Ann N Y Acad Sci</i> 2005;1051: 174-184.	More recent reviews available
Inoue T, Moriwaki T, Niki I. Endometriosis and spontaneous rupture of utero-ovarian vessels during pregnancy. <i>Lancet</i> 1992;340: 240-241.	Case report
Jeon H, Min J, Kim DK, Seo H, Kim S, Kim YS. Women with Endometriosis, Especially Those Who Conceived with Assisted Reproductive Technology, Have Increased Risk of Placenta Previa: Meta-analyses. <i>J Korean Med Sci</i> 2018;33: e234.	More recent reviews available
Kitaya K. Effect of early endometriosis on ovarian reserve and reproductive outcome. <i>Front Biosci (Schol Ed)</i> 2015;7: 40-45.	More recent/relevant data available (reviews)
Kmietowicz Z. Endometriosis is linked to greater risk of complications in pregnancy and birth, study finds. <i>Bmj</i> 2015;350: h3252.	More recent/relevant data available (reviews)
Koninckx PR, Zupi E, Martin DC. Endometriosis and pregnancy outcome. <i>Fertil Steril</i> 2018;110: 406-407. doi: 410.1016/j.fertnstert.2018.1006.1029.	Publication type
Kortelahti M, Anttila MA, Hippelainen MI, Heinonen ST. Obstetric outcome in women with endometriosis--a matched case-control study. <i>Gynecol Obstet Invest</i> 2003;56: 207-212.	More recent data available (reviews)
Lam, K.J. and S. Tagaloa. Endometriosis: a rare cause of acute appendicitis in pregnancy. <i>ANZ J Surg</i> , 2020. 90(5): p. 935-937.	Case report
Leonardi M, Papaleo E, Reschini M, Pagliardini L, Benaglia L, Candotti G, Viganò P, Quaranta L, Munaretto M, Candiani M et al. Risk of miscarriage in women with endometriosis: insights from in vitro fertilization cycles. <i>Fertil Steril</i> 2016;106: 386-392 e383.	More recent/relevant data available (reviews)
Li H, Zhu HL, Chang XH, Li Y, Wang Y, Guan J, Cui H. Effects of Previous Laparoscopic Surgical Diagnosis of Endometriosis on Pregnancy Outcomes. <i>Chin Med J (Engl)</i> 2017;130: 428-433.	More recent/relevant data available
Lier M, Malik RF, van Waesberghe J, Maas JW, van Rumpt-van de Geest DA, Coppus SF, Berger JP, van Rijn BB, Janssen PF, de Boer MA et al. Spontaneous haemoperitoneum in pregnancy and endometriosis: a case series. <i>BJOG</i> 2017;124: 306-312.	More recent data available (reviews)
Lin H, Leng JH, Liu JT, Lang JH. Obstetric outcomes in Chinese women with endometriosis: a retrospective cohort study. <i>Chin Med J (Engl)</i> 2015;128: 455-458. doi: 410.4103/0366-6999.151077.	More recent/relevant data available (reviews)
Mannini L, Sorbi F, Noci I, Ghizzoni V, Perelli F, Di Tommaso M, Mattei A, Fambrini M. New adverse obstetrics outcomes associated with endometriosis: a retrospective cohort study. <i>Arch Gynecol Obstet</i> 2017;295: 141-151.	More recent/relevant data available (reviews)
Marcellin L, Santulli P, Gogusev J, Lesaffre C, Jacques S, Chapron C, Goffinet F, Vaiman D, Mehats C. Endometriosis also affects the decidua in contact with the fetal membranes during pregnancy. <i>Hum Reprod</i> 2015;30: 392-405.	Not relevant
Matorras R, Rodriguez F, Gutierrez de Teran G, Pijoan JI, Ramon O, Rodriguez-Escudero FJ. Endometriosis and spontaneous abortion rate: a cohort study in infertile women. <i>Eur J Obstet Gynecol Reprod Biol</i> 1998;77: 101-105.	More recent data available (reviews)
Mekaru K, Masamoto H, Sugiyama H, Asato K, Heshiki C, Kinjyo T, Aoki Y. Endometriosis and pregnancy outcome: are pregnancies complicated by endometriosis a high-risk group? <i>Eur J Obstet Gynecol Reprod Biol</i> 2014;172:36-9.	More recent/relevant data available (reviews)



Menzlova E, Zahumensky J, Gurlich R, Kucera E. Rectal injury following delivery as a possible consequence of endometriosis of the rectovaginal septum. <i>Int J Gynaecol Obstet</i> 2014;124: 85-86.	Case report
Miura, M., et al., Adverse effects of endometriosis on pregnancy: a case-control study. <i>BMC Pregnancy Childbirth</i> , 2019. 19(1): p. 373.	Recent reviews available
Naeh, A., et al., Endometriosis-related Hemoperitoneum in Late Pregnancy. <i>Isr Med Assoc J</i> , 2019. 21(8): p. 557-559.	Case report
Nezhat C, Young S, Burns MK, Johns E, Wang P. Pregnancy complications in patients with endometriosis. <i>Fertil Steril</i> 2017;108: 602-603.	Publication type
Nishikawa A, Kondoh E, Hamanishi J, Yamaguchi K, Ueda A, Sato Y, Konishi I. Ileal perforation and massive intestinal haemorrhage from endometriosis in pregnancy: case report and literature review. <i>Eur J Obstet Gynecol Reprod Biol</i> 2013;170: 20-24.	Case report
Nitahara K, Sasaki M, Ichikawa S, Tsuji K, Yoshida Y. Rupture of perivascular epithelioid cell neoplasm at 34 weeks' gestation: A nonendometriosis case of spontaneous hemoperitoneum in pregnancy. <i>J Obstet Gynaecol Res</i> 2019;45: 709-713.	Case report
Pallacks C, Hirchenhain J, Krussel JS, Fehm TN, Fehr D. Endometriosis doubles odds for miscarriage in patients undergoing IVF or ICSI. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;213: 33-38.	More recent/relevant data available
Pan ML, Chen LR, Tsao HM, Chen KH. Risk of gestational hypertension-preeclampsia in women with preceding endometriosis: A nationwide population-based study. <i>PLoS One</i> 2017;12: e0181261.	More recent/relevant data available
Passos F, Calhaz-Jorge C, Graca LM. Endometriosis is a possible risk factor for spontaneous hemoperitoneum in the third trimester of pregnancy. <i>Fertil Steril</i> 2008;89: 251-252.	Case report
Perez-Lopez FR, Calvo-Latorre J, Alonso-Ventura V, Bueno-Notivol J, Martinez-Dominguez SJ, Chedraui P. Systematic review and meta-analysis regarding the association of endometriosis and preeclampsia in women conceiving spontaneously or through assisted reproductive technology. <i>Pregnancy Hypertens</i> 2018;14: 213-221.	More recent reviews available
Petraglia F, Arcuri F, de Ziegler D, Chapron C. Inflammation: a link between endometriosis and preterm birth. <i>Fertil Steril</i> 2012;98: 36-40.	More recent reviews available
Petresin J, Wolf J, Emir S, Muller A, Boosz AS. Endometriosis-associated Maternal Pregnancy Complications - Case Report and Literature Review. <i>Geburtshilfe Frauenheilkd</i> 2016;76: 902-905.	More recent/relevant data available (reviews)
Pisanu A, Deplano D, Angioni S, Ambu R, Uccheddu A. Rectal perforation from endometriosis in pregnancy: case report and literature review. <i>World J Gastroenterol</i> 2010;16: 648-651.	Case report
Porpora, M.G., et al., Endometriosis and Pregnancy: A Single Institution Experience. <i>Int J Environ Res Public Health</i> , 2020. 17(2).	Recent reviews available
Roche M, Ibarrola M, Lamberto N, Larranaga C, Garcia MA. Spontaneous hemoperitoneum in a twin pregnancy complicated by endometriosis. <i>J Matern Fetal Neonatal Med</i> 2008;21: 924-926.	Case report
Saban, A., et al., Peritoneal adhesions are an independent risk factor for peri- and post-partum infectious morbidity. <i>Eur J Obstet Gynecol Reprod Biol</i> , 2019. 241: p. 60-65.	Recent reviews available
Saha R, Kuja-Halkola R, Tornvall P, Marions L. Reproductive and Lifestyle Factors Associated with Endometriosis in a Large Cross-Sectional Population Sample. <i>J Womens Health (Larchmt)</i> 2017;26: 152-158.	More recent/relevant data available (reviews)
Schweitzer KJ, van Bekkum E, de Groot CJ. Endometriosis with intestinal perforation in term pregnancy. <i>Int J Gynaecol Obstet</i> 2006;93: 152-153. doi: 110.1016/j.ijgo.2006.1001.1022. Epub 2006 Mar 1020.	Not relevant
Setubal A, Sidiropoulou Z, Torgal M, Casal E, Lourenco C, Koninckx P. Bowel complications of deep endometriosis during pregnancy or in vitro fertilization. <i>Fertil Steril</i> 2014;101: 442-446.	Not relevant for the PICO question
Somigliana E, Vigano P, Vignali M. Endometriosis and unexplained recurrent spontaneous abortion: pathological states resulting from aberrant modulation of natural killer cell function? <i>Hum Reprod Update</i> 1999;5: 40-51.	More recent reviews available
Stephansson O, Kieler H, Granath F, Falconer H. Endometriosis, assisted reproduction technology, and risk of adverse pregnancy outcome. <i>Hum Reprod</i> 2009;24: 2341-2347.	More recent/relevant data available (reviews)
Stochino Loi E, Darwish B, Abo C, Millischer-Bellaiche AE, Angioni S, Roman H. Recurrent Hemoperitoneum During Pregnancy in Large Deep Endometriosis Infiltrating the Parametrium. <i>J Minim Invasive Gynecol</i> 2016;23: 643-646.	Case report
Takemura Y, Osuga Y, Fujimoto A, Oi N, Tsutsumi R, Koizumi M, Yano T, Taketani Y. Increased risk of placenta previa is associated with endometriosis and tubal factor infertility in assisted reproductive technology pregnancy. <i>Gynecol Endocrinol</i> 2013;29: 113-115.	More recent/relevant data available (reviews)



Thomin A, Belghiti J, David C, Marty O, Bornes M, Ballester M, Roman H, Darai E. Maternal and neonatal outcomes in women with colorectal endometriosis. <i>BJOG</i> 2018;125: 711-718.	More recent/relevant data available (reviews)
Toki T, Obinata M, Nakayama K, Oguchi O, Fujii S. Ovarian pregnancy associated with microscopic decidualized endometriosis of the ovary: report of a case. <i>Hum Reprod</i> 1998;13: 1353-1356.	Case report
Tomassetti C, Meuleman C, Pexsters A, Mihalyi A, Kyama C, Simsa P, D'Hooghe TM. Endometriosis, recurrent miscarriage and implantation failure: is there an immunological link? <i>Reprod Biomed Online</i> 2006;13: 58-64.	More recent reviews available
Uccella, S., et al., Pregnancy after Endometriosis: Maternal and Neonatal Outcomes according to the Location of the Disease. <i>Am J Perinatol</i> , 2019. 36(S 02): p. S91-s98.	Recent reviews available
Ueda Y, Enomoto T, Miyatake T, Fujita M, Yamamoto R, Kanagawa T, Shimizu H, Kimura T. A retrospective analysis of ovarian endometriosis during pregnancy. <i>Fertil Steril</i> 2010;94: 78-84.	More recent/relevant data available (reviews)
Vercammen EE, D'Hooghe TM. Endometriosis and recurrent pregnancy loss. <i>Semin Reprod Med</i> 2000;18: 363-368.	More recent reviews available
Vercellini P, Ferrari A, Vendola N, Carinelli SG. Growth and rupture of an ovarian endometrioma in pregnancy. <i>Int J Gynaecol Obstet</i> 1992;37: 203-205.	Case report
Vercellini P, Frattaruolo MP, Barbara G, Buggio L, Somigliana E. The ominous association between severe endometriosis, in vitro fertilisation, and placenta previa: raising awareness, limiting risks, informing women. <i>BJOG</i> 2018;125: 12-15.	Not relevant
Vercellini P, Parazzini F, Pietropaolo G, Cipriani S, Frattaruolo MP, Fedele L. Pregnancy outcome in women with peritoneal, ovarian and rectovaginal endometriosis: a retrospective cohort study. <i>BJOG</i> 2012;119: 1538-1543.	More recent/relevant data available (reviews)
Wada S, Yoshiyuki F, Fujino T, Sato C. Uterine vein rupture at delivery as a delayed consequence of laparoscopic surgery for endometriosis: a case report. <i>J Minim Invasive Gynecol</i> 2009;16: 510-512.	Case report
Wu, J., et al., Effect of maternal body mass index on neonatal outcomes in women with endometriosis undergoing IVF. <i>Reprod Biomed Online</i> , 2020. 40(4): p. 559-567.	similar review included
Zullo F, Spagnolo E, Saccone G, Acunzo M, Xodo S, Ceccaroni M, Berghella V. Endometriosis and obstetrics complications: a systematic review and meta-analysis. <i>Fertil Steril</i> 2017;108: 667-672.e665.	More recent reviews available

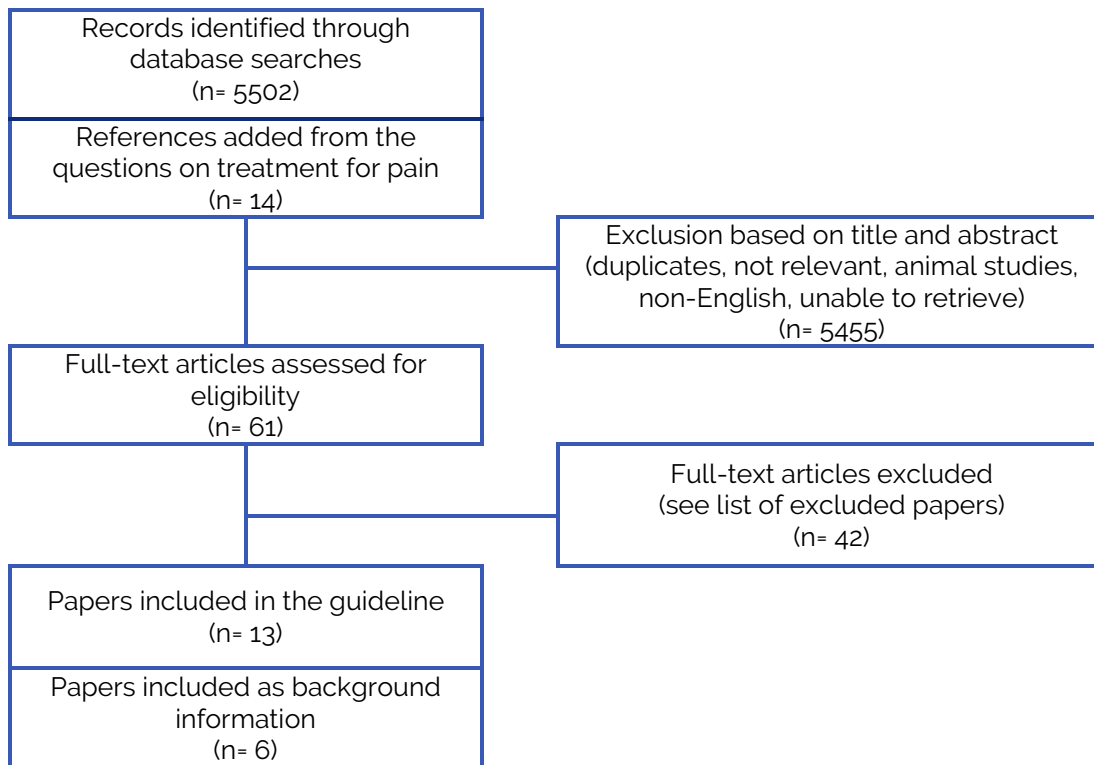


QUESTION IV.1 IS THERE A ROLE FOR SECONDARY PREVENTION OF RECURRENCE OF DISEASE AND PAINFUL SYMPTOMS IN PATIENTS TREATED FOR ENDOMETRIOSIS?

Search strings

DATABASE	Search string
PUBMED	((("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND (prevention OR "risk factor" OR prevent OR recurrence OR recurrent OR "recurrence of symptoms" OR "recurrence of lesions")) OR (("Endometriosis"[Title] OR "endometriotic"[Title] OR "endometrioma"[Title]) AND ("Body Mass Index"[Mesh] OR "Obesity"[Mesh] OR nutrition OR "Diet"[Mesh] OR "Smoking"[Mesh] OR "Exercise"[Mesh] OR alcohol OR "genetic risk" OR "early-life" OR predisposition OR stress OR curcumin))
COCHRANE	(Endometriosis OR endometriotic OR endometrioma) AND (prevention OR "risk factor" OR prevent OR recurrence OR recurrent OR "recurrence of symptoms" OR "recurrence of lesions" OR "Body Mass Index" OR "Obesity" OR nutrition OR "Diet" OR "Smoking" OR "Exercise" OR alcohol OR "genetic risk" OR "early-life" OR predisposition OR stress OR curcumin)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Almassinokiani FMASERMAAHPAS-DMASAJCSVM. Effects of simvastatin in prevention of pain recurrences after surgery for endometriosis. <i>Medical science monitor</i> 2013;19: 534-539.	Not relevant
Bozdag G. Recurrence of endometriosis: risk factors, mechanisms and biomarkers. <i>Womens Health (Lond)</i> 2015;11: 693-699.	Not relevant
Bulletti C, Montini A, Setti PL, Palagiano A, Ubaldi F, Borini A. Vaginal parturition decreases recurrence of endometriosis. <i>Fertil Steril</i> 2010;94: 850-855.	Not relevant
Busacca M, Chiaffarino F, Candiani M, Vignali M, Bertulesi C, Oggioni G, Parazzini F. Determinants of long-term clinically detected recurrence rates of deep, ovarian, and pelvic endometriosis. <i>Am J Obstet Gynecol</i> 2006;195: 426-432.	More recent data/reviews available
Candiani, M., et al., Recurrence Rate after "One-Step" CO(2) Fiber Laser Vaporization versus Cystectomy for Ovarian Endometrioma: A 3-Year Follow-up Study. <i>J Minim Invasive Gynecol</i> , 2020. 27(4): p. 901-908.	Recent review available - study does not add to the body of evidence
Chen YJ, Hsu TF, Huang BS, Tsai HW, Chang YH, Wang PH. Postoperative maintenance levonorgestrel-releasing intrauterine system and endometrioma recurrence: a randomized controlled study (in press). <i>American journal of obstetrics and gynecology</i> 2017.	Included in review Song 2018
Coccia ME, Rizzello F, Gianfranco S. Does controlled ovarian hyperstimulation in women with a history of endometriosis influence recurrence rate? <i>J Womens Health (Larchmt)</i> 2010;19: 2063-2069.	Included in review Somigliana 2019
D'Hooghe TM, Denys B, Spiessens C, Meuleman C, Debrock S. Is the endometriosis recurrence rate increased after ovarian hyperstimulation? <i>Fertil Steril</i> 2006;86: 283-290.	Included in review Somigliana 2019
Ghezzi F, Beretta P, Franchi M, Parissis M, Bolis P. Recurrence of ovarian endometriosis and anatomical location of the primary lesion. <i>Fertil Steril</i> 2001;75: 136-140.	Not relevant
Guo SW, Martin DC. The perioperative period: a critical yet neglected time window for reducing the recurrence risk of endometriosis? <i>Hum Reprod</i> 2019.	Not relevant
Guo SW. Recurrence of endometriosis and its control. <i>Hum Reprod Update</i> 2009;15: 441-461.	More recent review available
Han AR, Lee TH, Kim S, Lee HY. Risk factors and biomarkers for the recurrence of ovarian endometrioma: about the immunoreactivity of progesterone receptor isoform B and nuclear factor kappa B. <i>Gynecol Endocrinol</i> 2017;33: 70-74.	Not relevant
Hayasaka S, Ugajin T, Fujii O, Nabeshima H, Utsunomiya H, Yokomizo R, Yuki H, Terada Y, Murakami T, Yaegashi N. Risk factors for recurrence and re-recurrence of ovarian endometriomas after laparoscopic excision. <i>J Obstet Gynaecol Res</i> 2011;37: 581-585.	More recent data available
He ZX, Sun TT, Wang S, Shi HH, Fan QB, Zhu L, Leng JH, Sun DW, Sun J, Lang JH. Risk Factors for Recurrence of Ovarian Endometriosis in Chinese Patients Aged 45 and Over. <i>Chin Med J (Engl)</i> 2018;131: 1308-1313.	More appropriate data available
Hernández Gutiérrez, A., et al., Post-operative complications and recurrence rate after treatment of bowel endometriosis: Comparison of three techniques. <i>Eur J Obstet Gynecol Reprod Biol X</i> , 2019. 4: p. 100083.	Recent review available - study does not add to the body of evidence
Hidari T, Hirata T, Arakawa T, Koga K, Nerishi K, Fukuda S, Nakazawa A, Nagashima N, Ma S, Sun H et al. Contralateral ovarian endometrioma recurrence after unilateral salpingo-oophorectomy. <i>BMC Womens Health</i> 2019;19: 59.	Not relevant
Kikuchi I, Takeuchi H, Kitade M, Shimanuki H, Kumakiri J, Kinoshita K. Recurrence rate of endometriomas following a laparoscopic cystectomy. <i>Acta Obstet Gynecol Scand</i> 2006;85: 1120-1124.	More recent data/reviews available
Kim ML, Kim JM, Seong SJ, Lee SY, Han M, Cho YJ. Recurrence of ovarian endometrioma after second-line, conservative, laparoscopic cyst enucleation. <i>Am J Obstet Gynecol</i> 2014;210: 216.e211-216.	More appropriate data available
Koga K, Osuga Y, Takemura Y, Takamura M, Taketani Y. Recurrence of endometrioma after laparoscopic excision and its prevention by medical management. <i>Front Biosci (Elite Ed)</i> 2013;5: 676-683.	Not relevant
Kucukbas M, Kurek Eken M, Ilhan G, Senol T, Herkiloglu D, Kapudere B. Which factors are associated with the recurrence of endometrioma after cystectomy? <i>J Obstet Gynaecol</i> 2018;38: 372-376.	More appropriate data available
Lee, N., et al., The recurrence rate of ovarian endometrioma in women aged 40-49 years and impact of hormonal treatment after conservative surgery. <i>Sci Rep</i> , 2020. 10(1): p. 16461.	Recent review available - study does not add to the body of evidence
Li XY, Chao XP, Leng JH, Zhang W, Zhang JJ, Dai Y, Shi JH, Jia SZ, Xu XX, Chen SK et al. Risk factors for postoperative recurrence of ovarian endometriosis: long-term follow-up of 358 women. <i>J Ovarian Res</i> 2019;12: 79.	Recent review available - study does not add to the body of evidence



Liu X, Yuan L, Shen F, Zhu Z, Jiang H, Guo SW. Patterns of and risk factors for recurrence in women with ovarian endometriomas. <i>Obstet Gynecol</i> 2007;109: 1411-1420.	More recent data/reviews available
Ouchi N, Akira S, Mine K, Ichikawa M, Takeshita T. Recurrence of ovarian endometrioma after laparoscopic excision: risk factors and prevention. <i>J Obstet Gynaecol Res</i> 2014;40: 230-236.	More recent/appropriate data available
Paka C, Miller J, Nezhat C. Predictive factors and treatment of recurrence of endometriosis. <i>Minerva Ginecol</i> 2013;65: 105-111.	More recent data/reviews available
Parazzini F, Bertullesi C, Pasini A, Rosati M, Di Stefano F, Shonauer S, Vicino M, Aguzzoli L, Trossarelli GF, Massobrio M et al. Determinants of short term recurrence rate of endometriosis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2005;121: 216-219.	Not relevant
Renner SP, Rix S, Boosz A, Lermann JH, Strissel PL, Thiel FC, Oppelt P, Beckmann MW, Fasching PA. Preoperative pain and recurrence risk in patients with peritoneal endometriosis. <i>Gynecol Endocrinol</i> 2010;26: 230-235.	Not relevant
Revelli A, Modotti M, Ansaldi C, Massobrio M. Recurrent endometriosis: a review of biological and clinical aspects. <i>Obstet Gynecol Surv</i> 1995;50: 747-754.	More recent review available
Roman, H., et al., Excision versus colorectal resection in deep endometriosis infiltrating the rectum: 5-year follow-up of patients enrolled in a randomized controlled trial. <i>Hum Reprod</i> , 2019. 34(12): p. 2362-2371.	Recent review available - study does not add to the body of evidence
Selcuk S, Cam C, Koc N, Kucukbas M, Ozkaya E, Eser A, Karateke A. Evaluation of risk factors for the recurrence of ovarian endometriomas. <i>Eur J Obstet Gynecol Reprod Biol</i> 2016;203: 56-60.	More appropriate data available
Tobiume T, Kotani Y, Takaya H, Nakai H, Tsuji I, Suzuki A, Mandai M. Determinant factors of postoperative recurrence of endometriosis: difference between endometrioma and pain. <i>Eur J Obstet Gynecol Reprod Biol</i> 2016;205: 54-59.	Not relevant
Vercellini P, Fedele L, Aimi G, De Giorgi O, Consonni D, Crosignani PG. Reproductive performance, pain recurrence and disease relapse after conservative surgical treatment for endometriosis: the predictive value of the current classification system. <i>Hum Reprod</i> 2006;21: 2679-2685.	Not relevant
Vignali M, Bianchi S, Candiani M, Spadaccini G, Oggioni G, Busacca M. Surgical treatment of deep endometriosis and risk of recurrence. <i>J Minim Invasive Gynecol</i> 2005;12: 508-513.	More recent data/reviews available
Wattanayingcharoenchai, R., et al., Postoperative hormonal treatment for prevention of endometrioma recurrence after ovarian cystectomy: a systematic review and network meta-analysis. <i>Bjog</i> , 2020.	Other/similar review was considered more appropriate
Yang DX, Ma WG, Qu F, Ma BZ. Comparative study on the efficacy of Yiweining and Gestrinone for post-operational treatment of stage III endometriosis. <i>Chin J Integr Med</i> 2006;12: 218-220.	Included in review Zakhari 2020
Yuan L, Shen F, Lu Y, Liu X, Guo SW. Cyclooxygenase-2 overexpression in ovarian endometriomas is associated with higher risk of recurrence. <i>Fertil Steril</i> 2009;91: 1303-1306.	Not relevant
Yuan M, Wang WW, Li Y, Gao L, Wang T, Wang SX. Risk factors for recurrence of ovarian endometriomas after surgical excision. <i>J Huazhong Univ Sci Technolog Med Sci</i> 2014;34: 213-219.	More appropriate data available
Zakhari, A., et al., Dienogest and the Risk of Endometriosis Recurrence Following Surgery: A Systematic Review and Meta-analysis. <i>J Minim Invasive Gynecol</i> , 2020. 27(7): p. 1503-1510.	Not a relevant addition to Zakhari 2020,
Zhao RH, Hao ZP, Zhang Y, Lian FM, Sun WW, Liu Y, Wang R, Long L, Cheng L, Ding YF et al. Controlling the recurrence of pelvic endometriosis after a conservative operation: comparison between Chinese herbal medicine and western medicine. <i>Chin J Integr Med</i> 2013;19: 820-825.	Not relevant
Zheng Q, Mao H, Xu Y, Zhao J, Wei X, Liu P. Can postoperative GnRH agonist treatment prevent endometriosis recurrence? A meta-analysis. <i>Arch Gynecol Obstet</i> 2016;294: 201-207.	More recent review available
Zhu, Q., et al., Effects of postoperative medical treatment and expectant treatment on dysmenorrhea after conservative laparoscopic surgery for deep-infiltrating endometriosis accompanied by dysmenorrhea. <i>J Int Med Res</i> , 2020. 48(6): p. 300060520931666.	Not relevant for the PICO Question
Zhu, S.Y., et al., Preventive therapeutic options for postoperative recurrence of ovarian endometrioma: gonadotropin-releasing hormone agonist with or without levonorgestrel intrauterine system insertion. <i>Arch Gynecol Obstet</i> , 2020.	Not relevant

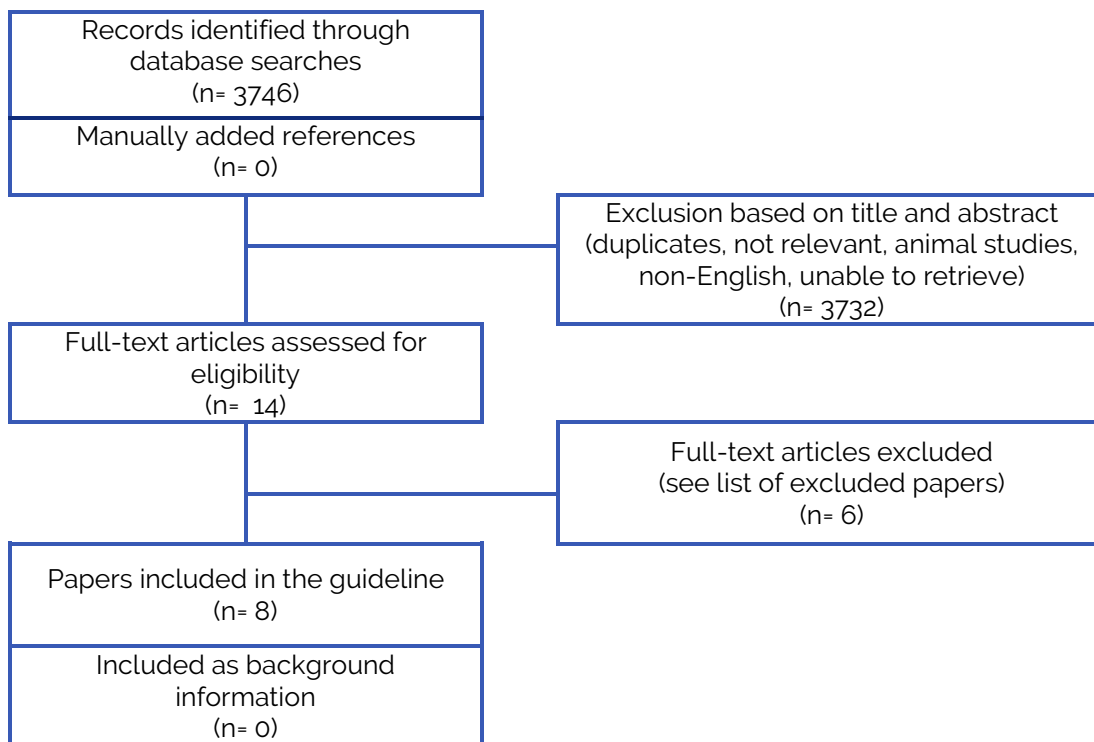


QUESTION IV.2 HOW SHOULD PATIENTS WITH REOCCURRING ENDOMETRIOSIS OR RECURRING SYMPTOMS BE MANAGED? IS REPETITIVE SURGERY EFFECTIVE FOR SYMPTOMS ASSOCIATED WITH ENDOMETRIOSIS?

Search strings

DATABASE	Search string
PUBMED	See question II.2 (identical search term, different selection of papers)
COCHRANE	See question II.2 (identical search term, different selection of papers)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Abushahin F, Goldman KN, Barbieri E, Milad M, Rademaker A, Bulun SE. Aromatase inhibition for refractory endometriosis-related chronic pelvic pain. <i>Fertil Steril</i> 2011;96: 939-942.	Not relevant (persistent instead of recurrence)
Guo SW. Recurrence of endometriosis and its control. <i>Hum Reprod Update</i> 2009;15: 441-461.	More recent studies available
Morotti M, Sozzi F, Remorgida V, Venturini PL, Ferrero S. Dienogest in women with persistent endometriosis-related pelvic pain during norethisterone acetate treatment. <i>Eur J Obstet Gynecol Reprod Biol</i> 2014;183: 188-192.	Not relevant (persistent instead of recurrence)
Nowak-Psiorz I, Ciecwiez SM, Brodowska A, Starczewski A. Treatment of ovarian endometrial cysts in the context of recurrence and fertility. <i>Adv Clin Exp Med</i> 2019;28: 407-413.	Not relevant
Vercellini P, Ottolini F, Frattaruolo MP, Buggio L, Roberto A, Somigliana E. Is Shifting to a Progestin Worthwhile When Estrogen-Progestins Are Inefficacious for Endometriosis-Associated Pain? <i>Reprod Sci</i> 2018;25: 674-682.	Not relevant specifically for recurrence
Vercellini P, Somigliana E, Vigano P, De Matteis S, Barbara G, Fedele L. Post-operative endometriosis recurrence: a plea for prevention based on pathogenetic, epidemiological and clinical evidence. <i>Reprod Biomed Online</i> 2010;21: 259-265.	Expert opinion

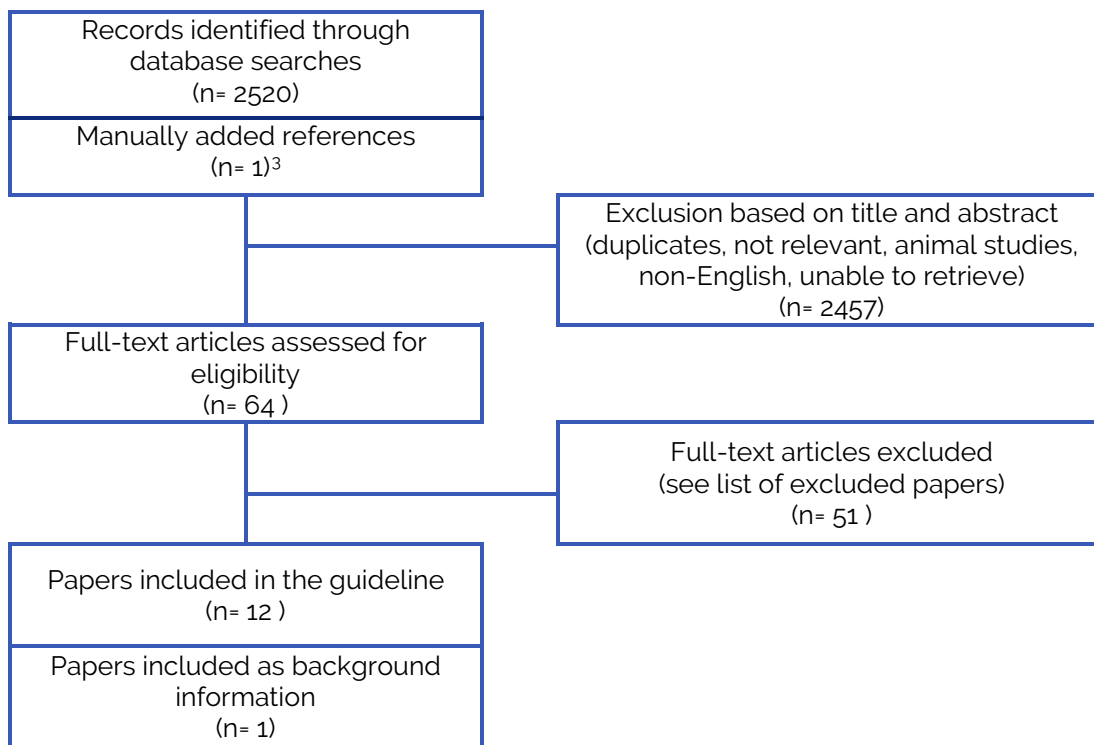


QUESTION V.1 WHICH DIAGNOSTIC PROCEDURES SHOULD BE APPLIED IN ADOLESCENTS WITH POSSIBLE ENDOMETRIOSIS?

Search strings

DATABASE	Search string
PUBMED	("adolescent endometriosis") OR (("Endometriosis"[ti] OR "endometriotic"[ti] OR "endometrioma"[ti]) AND (adolescence OR adolescent OR teenager OR teens OR young)) OR (("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND (adolescencelti OR adolescent[ti] OR teenager[ti] OR teens[ti] OR young[ti]))
COCHRANE	(Endometriosis OR endometriotic OR endometrioma) AND (adolescence OR adolescent OR teenager OR teens OR young)

Flowchart



³ Nisenblat 2016 as a reference to evidence in adults



List of excluded papers

Reference	Exclusion criterium
Abbas S, Ihle P, Koster I, Schubert I. Prevalence and incidence of diagnosed endometriosis and risk of endometriosis in patients with endometriosis-related symptoms: findings from a statutory health insurance-based cohort in Germany. <i>Eur J Obstet Gynecol Reprod Biol</i> 2012;160: 79-83.	relevant intervention is not included
Ahn SH, Singh V, Tayade C. Biomarkers in endometriosis: challenges and opportunities. <i>Fertil Steril</i> 2017;107: 523-532.	relevant patients not included
Ahuja SP, Hertweck SP. Overview of bleeding disorders in adolescent females with menorrhagia. <i>J Pediatr Adolesc Gynecol</i> 2010;23: S15-21.	relevant patients are not included
Andres Mde P, Podgaec S, Carreiro KB, Baracat EC. Endometriosis is an important cause of pelvic pain in adolescence. <i>Rev Assoc Med Bras (1992)</i> 2014;60: 560-564.	relevant intervention is not included
Arruda MS, Petta CA, Abrao MS, Benetti-Pinto CL. Time elapsed from onset of symptoms to diagnosis of endometriosis in a cohort study of Brazilian women. <i>Hum Reprod</i> 2003;18: 756-759.	relevant intervention is not included
Audebert A, Lecointre L, Afors K, Koch A, Wattiez A, Akladios C. Adolescent Endometriosis: Report of a Series of 55 Cases With a Focus on Clinical Presentation and Long-Term Issues. <i>J Minim Invasive Gynecol</i> 2015;22: 834-840.	relevant intervention is not included
Audebert A, Petousis S, Margioulas-Siarkou C, Ravanos K, Prapas N, Prapas Y. Anatomic distribution of endometriosis: A reappraisal based on series of 1101 patients. <i>Eur J Obstet Gynecol Reprod Biol</i> 2018;230: 36-40.	relevant patients only included as subgroup
Bai SW, Cho HJ, Kim JY, Jeong KA, Kim SK, Cho DJ, Song CH, Park KH. Endometriosis in an adolescent population: the severance hospital in Korean experience. <i>Yonsei Med J</i> 2002;43: 48-52.	relevant intervention is not included, probably mainly relevant for low quality health care countries
Ballard KD, Seaman HE, de Vries CS, Wright JT. Can symptomatology help in the diagnosis of endometriosis? Findings from a national case-control study--Part 1. <i>Bjog</i> 2008;115: 1382-1391.	relevant patients are only included as a subgroup
Barber N. Endometriosis in adolescents: don't forget to look for it. <i>J Pediatr Health Care</i> 1995;9: 30-31.	editorial comment
Benagiano G, Bianchi P, Brosens I. Ovarian endometriomas in adolescents often represent active angiogenic disease requiring early diagnosis and careful management. <i>Minerva Ginecol</i> 2017;69: 100-107.	relevant intervention is not included
Brosens I, Gargett CE, Guo SW, Puttemans P, Gordts S, Brosens JJ, Benagiano G. Origins and Progression of Adolescent Endometriosis. <i>Reprod Sci</i> 2016;23: 1282-1288.	expert opinion
Brosens I, Puttemans P, Campo R, Gordts S, Brosens J. Non-invasive methods of diagnosis of endometriosis. <i>Curr Opin Obstet Gynecol</i> 2003;15: 519-522.	not specific for adolescents
Davis GD, Thillet E, Lindemann J. Clinical characteristics of adolescent endometriosis. <i>J Adolesc Health</i> 1993;14: 362-368.	relevant intervention is not included
Dmowski WP, Lesniewicz R, Rana N, Pepping P, Noursalehi M. Changing trends in the diagnosis of endometriosis: a comparative study of women with pelvic endometriosis presenting with chronic pelvic pain or infertility. <i>Fertil Steril</i> 1997;67: 238-243.	relevant patients and interventions are not included
Drosdzol-Cop A, Skrzypulec-Plinta V, Stojko R. Serum and peritoneal fluid immunological markers in adolescent girls with chronic pelvic pain. <i>Obstet Gynecol Surv</i> 2012;67: 374-381.	blood marker as diagnostic tool
Eisenberg VH, Weil C, Chodick G, Shalev V. Epidemiology of endometriosis: a large population-based database study from a healthcare provider with 2 million members. <i>Bjog</i> 2018;125: 55-62.	relevant intervention is not included
Elsheikh A, Milingos S, Kallipolitis G, Loutradis D, Vlachos G, Liapi A, Michalas S. Ovarian tumors in young females. A laparoscopic approach. <i>Eur J Gynaecol Oncol</i> 2001;22: 243-244.	relevant intervention is not included
Emmert C, Romann D, Riedel HH. Endometriosis diagnosed by laparoscopy in adolescent girls. <i>Arch Gynecol Obstet</i> 1998;261: 89-93.	relevant intervention is not included
Eyvazzadeh AD, Smith YR, Lieberman R, Quint EH. A rare case of vulvar endometriosis in an adolescent girl. <i>Fertil Steril</i> 2009;91: 929.e929-911.	case report
Ghai V, Jan H, Shakir F, Haines P, Kent A. Diagnostic delay for superficial and deep endometriosis in the United Kingdom. <i>J Obstet Gynaecol</i> 2019: 1-7.	relevant patients are not included
Gogacz M, Sarzynski M, Napierala R, Sierocinska-Sawa J, Semczuk A. Ovarian endometrioma in an 11-year-old girl before menarche: a case study with literature review. <i>J Pediatr Adolesc Gynecol</i> 2012;25: e5-e7.	case report
Haas D, Chvatal R, Reichert B, Renner S, Shebl O, Binder H, Wurm P, Oppelt P. Endometriosis: a premenopausal disease? Age pattern in 42,079 patients with endometriosis. <i>Arch Gynecol Obstet</i> 2012;286: 667-670.	relevant intervention is not included
Halis G, Mechsner S, Ebert AD. The diagnosis and treatment of deep infiltrating endometriosis. <i>Dtsch Arztebl Int</i> 2010;107: 446-455; quiz 456.	relevant patients are not included



Harada T. Dysmenorrhea and endometriosis in young women. <i>Yonago Acta Med</i> 2013;56: 81-84.	expert opinion
Hassa H, Tanir HM, Uray M. Symptom distribution among infertile and fertile endometriosis cases with different stages and localisations. <i>Eur J Obstet Gynecol Reprod Biol</i> 2005;119: 82-86.	relevant patients are not included
Hoshiai H, Ishikawa M, Sawatari Y, Noda K, Fukaya T. Laparoscopic evaluation of the onset and progression of endometriosis. <i>Am J Obstet Gynecol</i> 1993;169: 714-719.	relevant intervention is not included and relevant patients are only included as a subgroup
Jarrell J. Endometriosis and abdominal myofascial pain in adults and adolescents. <i>Curr Pain Headache Rep</i> 2011;15: 368-376.	relevant patients are only included as a subgroup
Knox B, Ong YC, Bakar MA, Grover SR. A longitudinal study of adolescent dysmenorrhoea into adulthood. <i>Eur J Pediatr</i> 2019;178: 1325-1332.	relevant intervention is not included
Lee DY, Kim HJ, Yoon BK, Choi D. Clinical characteristics of adolescent endometrioma. <i>J Pediatr Adolesc Gynecol</i> 2013;26: 117-119.	relevant intervention is not included
Leibson CL, Good AE, Hass SL, Ransom J, Yawn BP, O'Fallon WM, Melton LJ, 3rd. Incidence and characterization of diagnosed endometriosis in a geographically defined population. <i>Fertil Steril</i> 2004;82: 314-321.	relevant patients only included as a subgroup
Marsh EE, Laufer MR. Endometriosis in premenarcheal girls who do not have an associated obstructive anomaly. <i>Fertil Steril</i> 2005;83: 758-760.	case series of five premenarcheal girls in whom endometriosis was not histologically confirmed
Matalliotakis M, Goulielmos GN, Matalliotaki C, Trivli A, Matalliotakis I, Arici A. Endometriosis in Adolescent and Young Girls: Report on a Series of 55 Cases. <i>J Pediatr Adolesc Gynecol</i> 2017;30: 568-570.	relevant intervention is not included
Miller JA, Missmer SA, Vitonis AF, Sarda V, Laufer MR, DiVasta AD. Prevalence of migraines in adolescents with endometriosis. <i>Fertil Steril</i> 2018;109: 685-690.	relevant intervention not included
Powell J. The approach to chronic pelvic pain in the adolescent. <i>Obstet Gynecol Clin North Am</i> 2014;41: 343-355.	relevant patients only included as subgroup
Sachedina, A. and N. Todd. Dysmenorrhea, Endometriosis and Chronic Pelvic Pain in Adolescents. <i>J Clin Res Pediatr Endocrinol</i> , 2020. 12(Suppl 1): p. 7-17.	Narrative review
Santoro L, D'Onofrio F, Campo S, Ferraro PM, Tondi P, Campo V, Flex A, Gasbarrini A, Santoliquido A. Endothelial dysfunction but not increased carotid intima-media thickness in young European women with endometriosis. <i>Hum Reprod</i> 2012;27: 1320-1326.	relevant intervention is not included
Santos TM, Pereira AM, Lopes RG, Depes Dde B. Lag time between onset of symptoms and diagnosis of endometriosis. <i>Einstein (Sao Paulo)</i> 2012;10: 39-43.	relevant patients and interventions are not included
Shadbolt NA, Parker MA, Orthia LA. Communicating endometriosis with young women to decrease diagnosis time. <i>Health Promot J Austr</i> 2013;24: 151-154.	relevant intervention is not included
Sinaii N, Cleary SD, Younes N, Ballweg ML, Stratton P. Treatment utilization for endometriosis symptoms: a cross-sectional survey study of lifetime experience. <i>Fertil Steril</i> 2007;87: 1277-1286.	relevant patients are not included
Smorgick N, As-Sanie S, Marsh CA, Smith YR, Quint EH. Advanced stage endometriosis in adolescents and young women. <i>J Pediatr Adolesc Gynecol</i> 2014;27: 320-323.	relevant intervention is not included
Smorgick N, Marsh CA, As-Sanie S, Smith YR, Quint EH. Prevalence of pain syndromes, mood conditions, and asthma in adolescents and young women with endometriosis. <i>J Pediatr Adolesc Gynecol</i> 2013;26: 171-175.	relevant intervention is not included
Soliman AM, Fuldeore M, Snabes MC. Factors Associated with Time to Endometriosis Diagnosis in the United States. <i>J Womens Health (Larchmt)</i> 2017;26: 788-797.	relevant patients are not included
Staal AH, van der Zanden M, Nap AW. Diagnostic Delay of Endometriosis in the Netherlands. <i>Gynecol Obstet Invest</i> 2016;81: 321-324.	relevant intervention is not included
Stochino-Loi E, Millochou JC, Angioni S, Touleimat S, Abo C, Chanavaz-Lacheray I, Henriet C, Roman H. Relationship between patient age and disease features in a prospective cohort of 1,560 women affected by endometriosis. <i>J Minim Invasive Gynecol</i> 2019.	Relevant patients are included only as subgroup
Suvitie PA, Hallamaa MK, Matomaki JM, Makinen JI, Perheentupa AH. Prevalence of Pain Symptoms Suggestive of Endometriosis Among Finnish Adolescent Girls (TEENMAPS Study). <i>J Pediatr Adolesc Gynecol</i> 2016;29: 97-103.	relevant intervention is not included
Tani A, Yamamoto S, Maegawa M, Kunimi K, Matsui S, Keyama K, Kato T, Uemura H, Kuwahara A, Matsuzaki T et al. Arterial stiffness is increased in young women with endometriosis. <i>J Obstet Gynaecol</i> 2015;35: 711-715.	relevant intervention is not included
Tempest, N., et al. Laparoscopic Outcomes after Normal Clinical and Ultrasound Findings in Young Women with Chronic Pelvic Pain: A Cross-Sectional Study. <i>J Clin Med</i> , 2020. 9(8).	Not relevant



Youngster M, Laufer MR, Divasta AD. Endometriosis for the primary care physician. <i>Curr Opin Pediatr</i> 2013;25: 454-462.	relevant patients not included (CPP not endometriosis)
Zannoni L, Forno SD, Paradisi R, Seracchioli R. Endometriosis in Adolescence: Practical Rules for an Earlier Diagnosis. <i>Pediatr Ann</i> 2016;45: e332-335.	relevant intervention is not included
Zannoni L, Giorgi M, Spagnolo E, Montanari G, Villa G, Seracchioli R. Dysmenorrhea, absenteeism from school, and symptoms suspicious for endometriosis in adolescents. <i>J Pediatr Adolesc Gynecol</i> 2014;27: 258-265.	relevant patients are not included

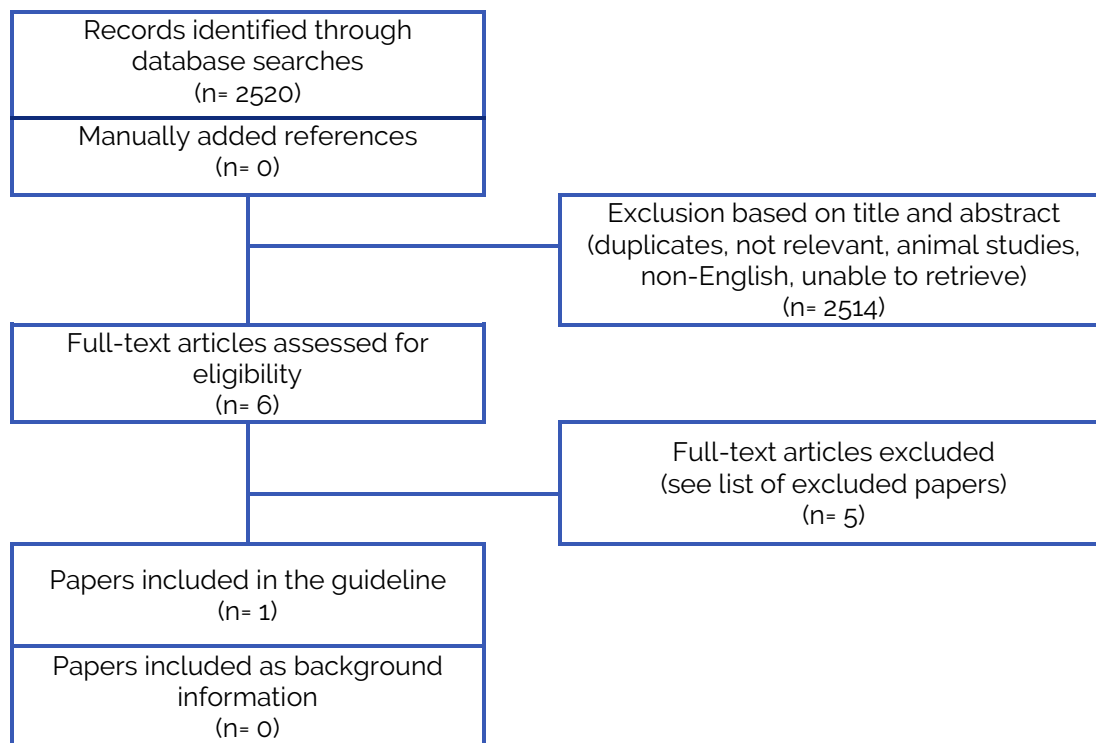


QUESTION V.1B SHOULD DIAGNOSIS OF ENDOMETRIOSIS IN ADOLESCENTS BE CONFIRMED BY HISTOLOGY?

Search strings

DATABASE	Search string
PUBMED	See question V.1 (identical search term, different selection of papers)
COCHRANE	See question V.1 (identical search term, different selection of papers)

Flowchart



List of excluded papers

Reference	Exclusion criterium
Cea Soriano L, Lopez-Garcia E, Schulze-Rath R, Garcia Rodriguez LA. Incidence, treatment and recurrence of endometriosis in a UK-based population analysis using data from The Health Improvement Network and the Hospital Episode Statistics database. <i>Eur J Contracept Reprod Health Care</i> 2017;22: 334-343.	Not relevant for PICO question (not specific for adolescents)
Fong YF, Hon SK, Low LL, Lim Mei Xian K. The clinical profile of young and adolescent women with laparoscopically diagnosed endometriosis in a Singapore tertiary hospital. <i>Taiwan J Obstet Gynecol</i> 2017;56: 181-183.	Not about diagnostics. Relevant patients are not included, or only as subgroup
Gordts S, Puttemans P, Gordts S, Brosens I. Ovarian endometrioma in the adolescent: a plea for early-stage diagnosis and full surgical treatment. <i>Gynecol Surg</i> 2015;12: 21-30.	Opinion paper
Liberis V, Tsikouras P, Zografos C, Ammari A, Dislian V, Iatrou C, Maroulis G. The contribution of laparoscopy to the diagnosis of adnexal masses in young and premenopausal women. <i>Eur J Gynaecol Oncol</i> 2009;30: 402-407.	Not about diagnosis of adolescent endometriosis
Reese KA, Reddy S, Rock JA. Endometriosis in an adolescent population: the Emory experience. <i>J Pediatr Adolesc Gynecol</i> 1996;9: 125-128.	Included in review Janssen 2013

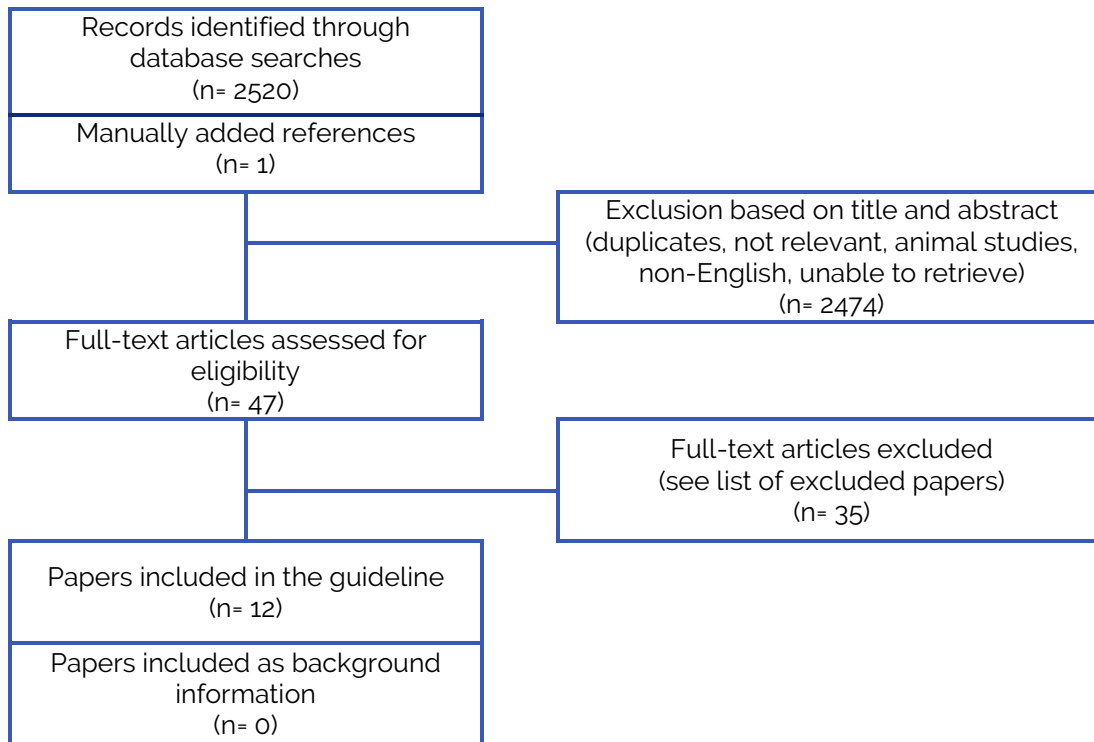


QUESTION V.2 WHAT IS THE BEST TREATMENT FOR ADOLESCENTS WITH (SUSPECTED) ENDOMETRIOSIS?

Search strings

DATABASE	Search string
PUBMED	See question V.1 (identical search term, different selection of papers)
COCHRANE	See question V.1 (identical search term, different selection of papers)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Agarwal SK. Impact of six months of GnRH agonist therapy for endometriosis. Is there an age-related effect on bone mineral density? <i>J Reprod Med</i> 2002;47: 530-534.	Relevant outcomes are not assessed or inappropriately assessed
Al-Jefout M, Alnawaiseh N, Yaghi S, Alqaisi A. Prevalence of Endometriosis and Its Symptoms among Young Jordanian Women with Chronic Pelvic Pain Refractory to Conventional Therapy. <i>J Obstet Gynaecol Can</i> 2018;40: 165-170.	Not addressing the PICO question
Al-Jefout M, Palmer J, Fraser IS. Simultaneous use of a levonorgestrel intrauterine system and an etonogestrel subdermal implant for debilitating adolescent endometriosis. <i>Aust N Z J Obstet Gynaecol</i> 2007;47: 247-249.	Case report
Boyd A, Compston JE, Reeve J, Bell KL, Noble BS, Jones SJ, Loveridge N. Effect of estrogen suppression on the mineralization density of iliac crest biopsies in young women as assessed by backscattered electron imaging. <i>Bone</i> 1998;22: 241-250.	Relevant outcomes are not assessed or inappropriately assessed
Bozdogan G. Recurrence of endometriosis: risk factors, mechanisms and biomarkers. <i>Womens Health (Lond)</i> 2015;11: 693-699.	Not relevant - not addressing adolescent endometriosis
Brady PC, Missmer SA, Laufer MR. Hepatic Adenomas in Adolescents and Young Women with Endometriosis Treated with Norethindrone Acetate. <i>J Pediatr Adolesc Gynecol</i> 2017;30: 422-424.	Case report
Cheong Y, Tay P, Luk F, Gan HC, Li TC, Cooke I. Laparoscopic surgery for endometriosis: How often do we need to re-operate? <i>J Obstet Gynaecol</i> 2008;28: 82-85.	Not relevant - not addressing adolescent endometriosis
Divasta AD, Laufer MR, Gordon CM. Bone density in adolescents treated with a GnRH agonist and add-back therapy for endometriosis. <i>J Pediatr Adolesc Gynecol</i> 2007;20: 293-297.	Relevant outcomes are not assessed or inappropriately assessed
DiVasta AD, Laufer MR. The use of gonadotropin releasing hormone analogues in adolescent and young patients with endometriosis. <i>Curr Opin Obstet Gynecol</i> 2013;25: 287-292.	No new findings compared to already included articles
Gordts S, Puttemans P, Gordts S, Brosens I. Ovarian endometrioma in the adolescent: a plea for early-stage diagnosis and full surgical treatment. <i>Gynecol Surg</i> 2015;12: 21-30.	Narrative review
Hassan E, Kontoravdis A, Hassiakos D, Kalogirou D, Kontoravdis N, Creatsas G. Evaluation of combined endoscopic and pharmaceutical management of endometriosis during adolescence. <i>Clin Exp Obstet Gynecol</i> 1999;26: 85-87.	Older study
Hirsch, M., et al., The Prevalence of Endometriosis in Adolescents with Pelvic Pain: A Systematic Review. <i>J Pediatr Adolesc Gynecol</i> , 2020. 33(6): p. 623-630.	no new insights, individual relevant papers have been included already
Kaponis A, Taniguchi F, Azuma Y, Deura I, Vitsas C, Decavalas GO, Harada T. Current treatment of endometrioma. <i>Obstet Gynecol Surv</i> 2015;70: 183-195.	Not relevant - not addressing adolescent endometriosis
Kaser DJ, Missmer SA, Berry KF, Laufer MR. Use of norethindrone acetate alone for postoperative suppression of endometriosis symptoms. <i>J Pediatr Adolesc Gynecol</i> 2012;25: 105-108.	Not relevant - not specific for adolescent endometriosis
Laufer MR, Einarsson JI. Surgical Management of Superficial Peritoneal Adolescent Endometriosis. <i>J Pediatr Adolesc Gynecol</i> 2019;32: 339-341.	Case report
Laufer MR. Current approaches to optimizing the treatment of endometriosis in adolescents. <i>Gynecol Obstet Invest</i> 2008;66 Suppl 1: 19-27.	Older data, new data are available concerning this topic
Lubianca JN, Gordon CM, Laufer MR. 'Add-back' therapy for endometriosis in adolescents. <i>J Reprod Med</i> 1998;43: 164-172.	Relevant outcomes are not assessed or inappropriately assessed
Mama ST. Advances in the management of endometriosis in the adolescent. <i>Curr Opin Obstet Gynecol</i> 2018;30: 326-330.	Not including the relevant intervention
Newhall-Perry K, Holloway L, Osburn L, Monroe SE, Heinrichs L, Henzl M, Marcus R. Effects of a gonadotropin-releasing hormone agonist on the calcium-parathyroid axis and bone turnover in women with endometriosis. <i>Am J Obstet Gynecol</i> 1995;173: 824-829.	Relevant outcomes are not assessed or inappropriately assessed
Nodler, J.L., et al., Supplementation with vitamin D or ω-3 fatty acids in adolescent girls and young women with endometriosis (SAGE): a double-blind, randomized, placebo-controlled trial. <i>Am J Clin Nutr</i> , 2020. 112(1): p. 229-236.	not about adolescents, not about medical treatment
Oh HK, Sin JI, Kim JH, Hong SY, Lee TS, Choi YS. Effect of age and stage of endometriosis on ovarian follicular loss during laparoscopic cystectomy for endometrioma. <i>Int J Gynaecol Obstet</i> 2011;114: 128-132.	Not relevant - not addressing adolescent endometriosis



Ozyer S, Uzunlar O, Ozcan N, Yesilyurt H, Karayalcin R, Sargin A, Mollamahmutoglu L. Endometriomas in adolescents and young women. <i>J Pediatr Adolesc Gynecol</i> 2013;26: 176-179.	Not addressing the PICO question
Park HJ, Koo YA, Yoon BK, Choi D. Postoperative long-term maintenance therapy with oral contraceptives after gonadotropin-releasing hormone analog treatment in women with ovarian endometrioma. <i>J Minim Invasive Gynecol</i> 2009;16: 34-39.	Not relevant - not specific for adolescent endometriosis
Radosa MP, Bernardi TS, Georgiev I, Diebolder H, Camara O, Runnebaum IB. Coagulation versus excision of primary superficial endometriosis: a 2-year follow-up. <i>Eur J Obstet Gynecol Reprod Biol</i> 2010;150: 195-198.	Not relevant - not specific for adolescent endometriosis
Sachedina, A., et al., Dysmenorrhea in young people: Experiences from a tertiary center with a focus on conservative management. <i>J Obstet Gynaecol Res</i> , 2020.	no relevant intervention
Schwartz, B.I., M. Alexander, and L.L. Breech, Levonorgestrel Intrauterine Device Use for Medical Indications in Nulliparous Adolescents and Young Adults. <i>J Adolesc Health</i> , 2020.	no relevant population
Seckin B, Ozdener T, Tapisiz OL, Batioglu S. Laparoscopic treatment of ovarian cysts in adolescents and young adults. <i>J Pediatr Adolesc Gynecol</i> 2011;24: 300-303.	Not addressing the PICO question
Sengoku K, Miyamoto T, Horikawa M, Katayama H, Nishiwaki K, Kato Y, Kawanishi Y, Saijo Y. Clinicopathologic risk factors for recurrence of ovarian endometrioma following laparoscopic cystectomy. <i>Acta Obstet Gynecol Scand</i> 2013;92: 278-284.	Not relevant - not specific for adolescent endometriosis
Slocum BN, Sanfilippo J. Current methods for the management of endometriosis in adolescent patients. <i>Expert Rev Endocrinol Metab</i> 2017;12: 1-4.	expert opinion
Soliman AM, Du EX, Yang H, Wu EQ, Haley JC. Retreatment Rates Among Endometriosis Patients Undergoing Hysterectomy or Laparoscopy. <i>J Womens Health (Larchmt)</i> 2017;26: 644-654.	Not relevant - not specific for adolescent endometriosis
Song, X.C., et al., Clinical Characteristics and Postoperative Symptoms of 85 Adolescents with Endometriosis. <i>J Pediatr Adolesc Gynecol</i> , 2020. 33(5): p. 519-523.	Unclear surgical intervention
Stavroulis AI, Saridogan E, Creighton SM, Cutner AS. Laparoscopic treatment of endometriosis in teenagers. <i>Eur J Obstet Gynecol Reprod Biol</i> 2006;125: 248-250.	Study is too small to support clinical practice
Ventolini G, Horowitz GM, Long R. Endometriosis in adolescence: a long-term follow-up fecundability assessment. <i>Reprod Biol Endocrinol</i> 2005;3: 14.	effect of surgery not investigated but effect of endometriosis on fertility
Weir E, Mustard C, Cohen M, Kung R. Endometriosis: what is the risk of hospital admission, readmission, and major surgical intervention? <i>J Minim Invasive Gynecol</i> 2005;12: 486-493.	Not relevant - not specific for adolescent endometriosis
Wilson-Harris BM, Nutter B, Falcone T. Long-term fertility after laparoscopy for endometriosis-associated pelvic pain in young adult women. <i>J Minim Invasive Gynecol</i> 2014;21: 1061-1066.	Not relevant - not specific for adolescent endometriosis

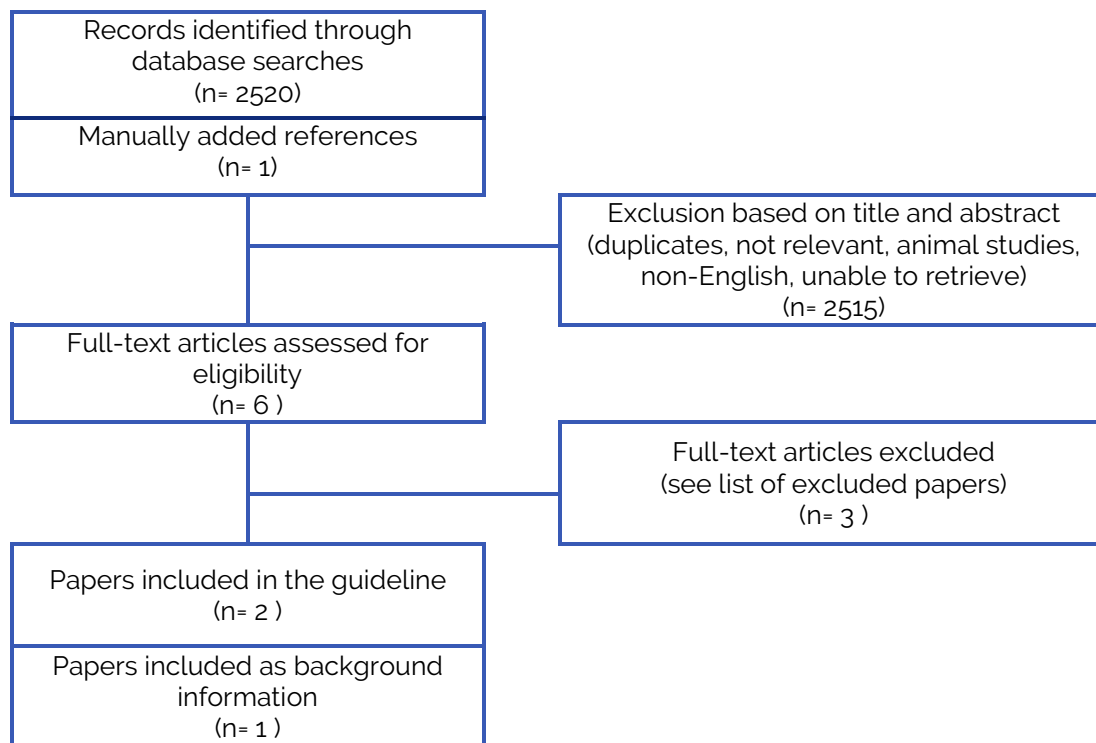


QUESTION V.3 IS ENDOMETRIOSIS IN ADOLESCENTS AN INDICATION FOR FERTILITY PRESERVATION (OVARIAN TISSUE / OOCYTES)?

Search strings

DATABASE	Search string
PUBMED	See question V.1 (identical search term, different selection of papers)
COCHRANE	See question V.1 (identical search term, different selection of papers)

Flowchart



List of excluded papers

Reference	Exclusion criterium
Elizur SE, Chian RC, Holzer HE, Gidoni Y, Tulandi T, Tan SL. Cryopreservation of oocytes in a young woman with severe and symptomatic endometriosis: a new indication for fertility preservation. <i>Fertil Steril</i> 2009;91: 293.e291-293.	Case report
Fabbri R, Vicenti R, Paradisi R, Rossi S, De Meis L, Seracchioli R, Macciocca M. Transplantation of cryopreserved ovarian tissue in a patient affected by metastatic struma ovarii and endometriosis. <i>Gynecol Endocrinol</i> 2018;34: 558-562.	Relevant patients not included
Kitajima M, Defrere S, Dolmans MM, Colette S, Squifflet J, Van Langendonck A, Donnez J. Endometriomas as a possible cause of reduced ovarian reserve in women with endometriosis. <i>Fertil Steril</i> 2011;96: 685-691.	Relevant patients and relevant intervention not included



QUESTION VI.1 IS ENDOMETRIOSIS STILL ACTIVE DURING MENOPAUSE AND IF SO, HOW SHOULD THE SYMPTOMS BE TREATED?

NARRATIVE QUESTION

Search strings : not applicable

This question is a narrative question. The section was prepared based on expert opinion and selected papers from the literature searches performed in this section (QUESTIONS VI.2 and VI.3).

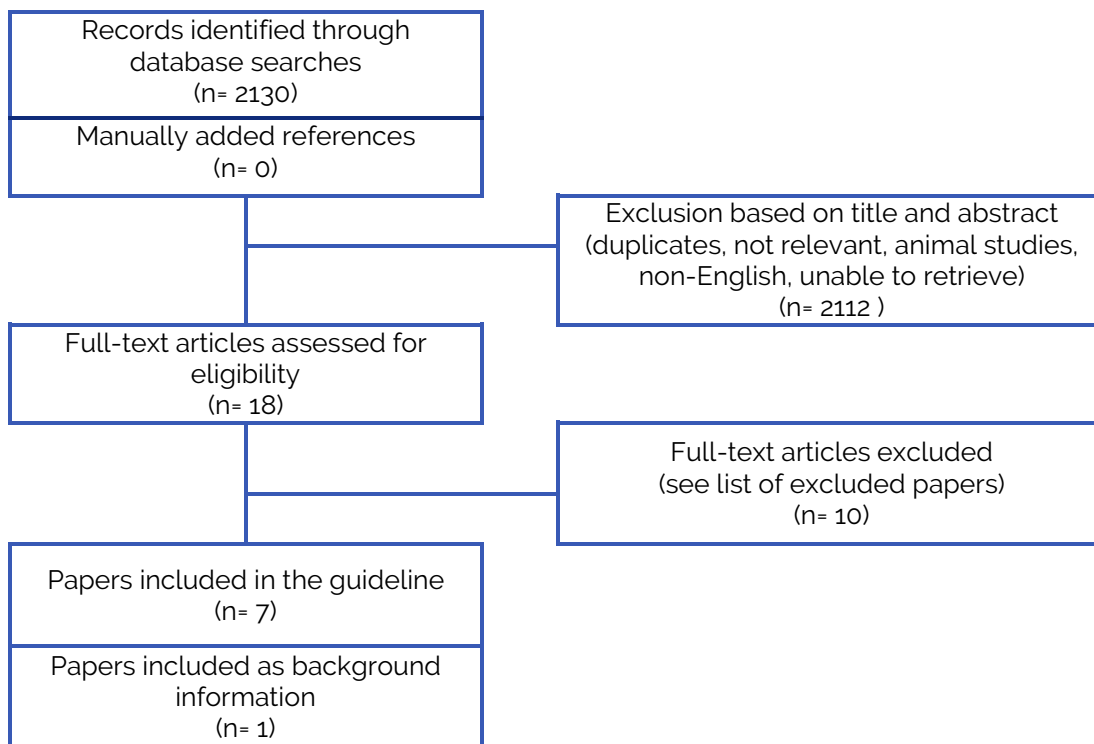


QUESTION VI.2 IS SURGICAL/MEDICAL TREATMENT EFFECTIVE AND SAFE IN WOMEN WITH A HISTORY OF ENDOMETRIOSIS?

Search strings

DATABASE	Search string
PUBMED	(("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND (menopause OR castration OR "surgical menopause" OR "Menopause"[Mesh] OR "Menopause, Premature"[Mesh] OR "Hot Flashes"[Mesh] OR "Hot Flashes" OR vasomotor OR menopausal OR "premature ovarian insufficiency" OR "primary ovarian insufficiency" OR "premature ovarian failure" OR "hormone replacement therapy" OR tibolone OR postmenopausal)) OR (("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND (osteoporosis OR "Osteoporosis, Postmenopausal"[Mesh] OR "Osteoporosis"[Mesh] OR cardiovascular OR vascular OR "Cardiovascular Diseases"[Mesh] OR cancer OR "Neoplasms"[Mesh]) AND (menopause OR menopausal OR postmenopausal OR "Menopause"[Mesh]))
COCHRANE	((Endometriosis OR endometriotic OR endometrioma) AND (menopause OR castration OR "surgical menopause" OR "Hot Flashes" OR vasomotor OR menopausal OR "premature ovarian insufficiency" OR "primary ovarian insufficiency" OR "premature ovarian failure" OR "hormone replacement therapy" OR tibolone OR postmenopausal)) OR (("Endometriosis" OR "endometriotic" OR "endometrioma") AND (osteoporosis OR cardiovascular OR vascular OR "Cardiovascular Diseases" OR cancer OR "Neoplasms") AND (menopause OR menopausal OR postmenopausal))

Flowchart





List of excluded papers

Reference	Exclusion criterium
Alio L, Angioni S, Arena S, Bartiromo L, Bergamini V, Berlanda N, Bonanni V, Bonin C, Buggio L, Candiani M et al. Endometriosis: seeking optimal management in women approaching menopause. <i>Climacteric</i> 2019;22: 329-338.	Not relevant- perimenopausal women
Baloglu A, Bezircioglu I, Cetinkaya B, Karci L, Bicer M. Development of secondary ovarian lesions after hysterectomy without oophorectomy versus unilateral oophorectomy for benign conditions: a retrospective analysis of patients during a nine-year period of observation. <i>Clin Exp Obstet Gynecol</i> 2010;37: 299-302.	Not on endometriosis
He ZX, Sun TT, Wang S, Shi HH, Fan QB, Zhu L, Leng JH, Sun DW, Sun J, Lang JH. Risk Factors for Recurrence of Ovarian Endometriosis in Chinese Patients Aged 45 and Over. <i>Chin Med J (Engl)</i> 2018;131: 1308-1313.	not about surgery for women with endometriosis in menopause
Hickey M, Ambekar M, Hammond I. Should the ovaries be removed or retained at the time of hysterectomy for benign disease? <i>Hum Reprod Update</i> 2010;16: 131-141.	Not about endometriosis in menopause
Inceboz U. Endometriosis after menopause. <i>Womens Health (Lond)</i> 2015;11: 711-715.	Narrative review
Namnoom AB, Hickman TN, Goodman SB, Gehlbach DL, Rock JA. Incidence of symptom recurrence after hysterectomy for endometriosis. <i>Fertil Steril</i> 1995;64: 898-902.	Not relevant - patients with ovarian preservation
Noller KL. Endometriosis persisting after castration: clinical characteristics and results of surgical management. <i>Obstet Gynecol</i> 1994;84: 321-322.	Publication type
Ozyurek ES, Yoldemir T, Kalkan U. Surgical challenges in the treatment of perimenopausal and postmenopausal endometriosis. <i>Climacteric</i> 2018;21: 385-390.	Narrative review
Shakiba K, Bena JF, McGill KM, Minger J, Falcone T. Surgical treatment of endometriosis: a 7-year follow-up on the requirement for further surgery. <i>Obstet Gynecol</i> 2008;111: 1285-1292.	not about surgery for women with endometriosis in menopause
Vercellini P, Viganò P, Buggio L, Makieva S, Scarfone G, Cribiu FM, Parazzini F, Somigliana E. Perimenopausal management of ovarian endometriosis and associated cancer risk: When is medical or surgical treatment indicated? <i>Best Pract Res Clin Obstet Gynaecol</i> 2018;51: 151-168.	Does not address the PICO Question - risk of malignancy in endometriomas

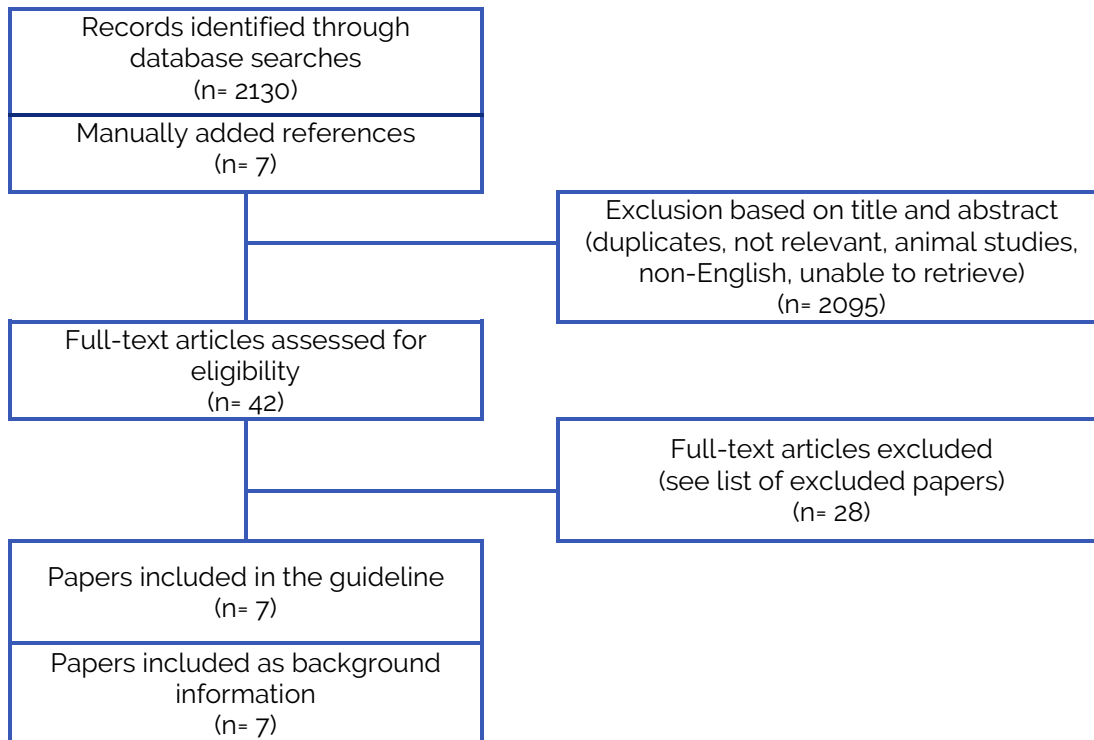


QUESTION VI.3 IS HORMONE TREATMENT EFFECTIVE AND SAFE FOR RELIEF OF MENOPAUSAL SYMPTOMS IN WOMEN WITH A HISTORY OF ENDOMETRIOSIS?

Search strings

DATABASE	Search string
PUBMED	See question VI.3 (identical search term, different selection of papers)
COCHRANE	See question VI.3 (identical search term, different selection of papers)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Garg, N., et al., Hormone Replacement Therapy Prescription after Premature Surgical Menopause. <i>J Minim Invasive Gynecol</i> , 2020. 27(7): p. 1618-1623.	Not relevant
Haney AF, Wild RA. Options for hormone therapy in women who have had a hysterectomy. <i>Menopause</i> 2007;14: 592-597; quiz 598-599.	Narrative review with limited information on endometriosis
Hickman TN, Namnoum AB, Hinton EL, Zacur HA, Rock JA. Timing of estrogen replacement therapy following hysterectomy with oophorectomy for endometriosis. <i>Obstet Gynecol</i> 1998;91: 673-677.	Relevant outcomes are not assessed
Jang, J.H., et al., Hormone Therapy Use After Premature Surgical Menopause Based on Prescription Records: A Population-Based Study. <i>J Obstet Gynaecol Can</i> , 2020. 42(12): p. 1511-1517.	Not relevant
Kiilholma P, Tuimala R, Kivinen S, Korhonen M, Hagman E. Comparison of the gonadotropin-releasing hormone agonist goserelin acetate alone versus goserelin combined with estrogen-progestogen add-back therapy in the treatment of endometriosis. <i>Fertil Steril</i> 1995;64: 903-908.	Women with endometriosis, not postmenopausal women.
Kiilholma P, Tuimala R, Kivinen S, Korhonen M, Hagman E. Comparison of the gonadotropin-releasing hormone agonist goserelin acetate alone versus goserelin combined with estrogen-progestogen add-back therapy in the treatment of endometriosis. <i>Fertil Steril</i> 1995;64: 903-908.	Women with endometriosis, not postmenopausal women.
Lee DY, Lee JY, Seo JW, Yoon BK, Choi D. Gonadotropin-releasing hormone agonist with add-back treatment is as effective and tolerable as dienogest in preventing pain recurrence after laparoscopic surgery for endometriosis. <i>Arch Gynecol Obstet</i> 2016;294: 1257-1263.	Relevant patients are not included and relevant outcomes are not assessed
Lee DY, Park HG, Yoon BK, Choi D. Effects of different add-back regimens on hypoestrogenic problems by postoperative gonadotropin-releasing hormone agonist treatment in endometriosis. <i>Obstet Gynecol Sci</i> 2016;59: 32-38.	Relevant patients are not included.
Lindsay PC, Shaw RW, Bennink HJ, Kicovic P. The effect of add-back treatment with tibolone (Livial) on patients treated with the gonadotropin-releasing hormone agonist triptorelin (Decapeptyl). <i>Fertil Steril</i> 1996;65: 342-348.	Women with endometriosis, not postmenopausal women.
MacLennan AH. HRT in difficult circumstances: are there any absolute contraindications? <i>Climacteric</i> 2011;14: 409-417.	Narrative review with limited information on endometriosis
Mitwally MF, Gottlieb L, Casper RF. Prevention of bone loss and hypoestrogenic symptoms by estrogen and interrupted progestogen add-back in long-term GnRH-agonist down-regulated patients with endometriosis and premenstrual syndrome. <i>Menopause</i> 2002;9: 236-241.	Women with endometriosis, not postmenopausal women.
Rattanachaiyanont M, Tanmahasamut P, Angsuwatthana S, Techatraisak K, Inthawiwat S, Leerisiri P. Hormonal replacement therapy in surgical menopause with underlying endometriosis. <i>J Med Assoc Thai</i> 2003;86: 702-707.	Not relevant
Remorgida V, Abbamonte LH, Ragni N, Fulcheri E, Ferrero S. Letrozole and desogestrel-only contraceptive pill for the treatment of stage IV endometriosis. <i>Aust N Z J Obstet Gynaecol</i> 2007;47: 222-225.	Women with endometriosis, not postmenopausal women.
Roberts AL, Lashen H. Tibolone as a hormone replacement in women with endometriosis after bilateral oophorectomy. <i>Int J Gynaecol Obstet</i> 2010;111: 183.	Case report
Rozenberg S, Antoine C, Vandromme J, Fastrez M. Should we abstain from treating women with endometriosis using menopausal hormone therapy, for fear of an increased ovarian cancer risk? <i>Climacteric</i> 2015;18: 448-452.	Publication type
Shin SY, Min JA, Yoon BK, Bae DS, Choi DS. The incidence and characteristics of uterine bleeding during postoperative GnRH agonist treatment combined with tibolone add-back therapy in endometriosis patients of reproductive age. <i>Eur J Obstet Gynecol Reprod Biol</i> 2007;133: 90-94.	Women with endometriosis, not postmenopausal women.
Soliman NF, Hillard TC. Hormone replacement therapy in women with past history of endometriosis. <i>Climacteric</i> 2006;9: 325-335.	narrative review
Surrey ES, Gambone JC, Lu JK, Judd HL. The effects of combining norethindrone with a gonadotropin-releasing hormone agonist in the treatment of symptomatic endometriosis. <i>Fertil Steril</i> 1990;53: 620-626.	Women with endometriosis, not postmenopausal women.
Surrey ES, Judd HL. Reduction of vasomotor symptoms and bone mineral density loss with combined norethindrone and long-acting gonadotropin-releasing hormone agonist therapy of symptomatic endometriosis: a prospective randomized trial. <i>J Clin Endocrinol Metab</i> 1992;75: 558-563.	Women with endometriosis, not postmenopausal women.
Surrey ES. Add-back therapy and gonadotropin-releasing hormone agonists in the treatment of patients with endometriosis: can a consensus be reached? Add-Back Consensus Working Group. <i>Fertil Steril</i> 1999;71: 420-424.	Women with endometriosis, not postmenopausal women.



<p>Taipale K, Leminen A, Rasanen P, Heikkila A, Tapper AM, Sintonen H, Roine RP. Costs and health-related quality of life effects of hysterectomy in patients with benign uterine disorders. <i>Acta Obstet Gynecol Scand</i> 2009;88: 1402-1410.</p>	<p>Relevant patients are not included</p>
<p>Tan DA, Almaria MJG. Postmenopausal endometriosis: drawing a clearer clinical picture. <i>Climacteric</i> 2018;21: 249-255.</p>	<p>narrative review</p>
<p>Taskin O, Yalcinoglu AI, Kucuk S, Uryan I, Buhur A, Burak F. Effectiveness of tibolone on hypoestrogenic symptoms induced by goserelin treatment in patients with endometriosis. <i>Fertil Steril</i> 1997;67: 40-45.</p>	<p>Women with endometriosis, not postmenopausal women.</p>
<p>Taylor M, Bowen-Simpkins P, Barrington J. Complications of unopposed oestrogen following radical surgery for endometriosis. <i>J Obstet Gynaecol</i> 1999;19: 647-648.</p>	<p>Case report</p>
<p>Vercellini P, Viganò P, Buggio L, Makieva S, Scarfone G, Cribiu FM, Parazzini F, Somigliana E. Perimenopausal management of ovarian endometriosis and associated cancer risk: When is medical or surgical treatment indicated? <i>Best Pract Res Clin Obstet Gynaecol</i> 2018;51: 151-168.</p>	<p>narrative review</p>
<p>Wu D, Hu M, Hong L, Hong S, Ding W, Min J, Fang G, Guo W. Clinical efficacy of add-back therapy in treatment of endometriosis: a meta-analysis. <i>Arch Gynecol Obstet</i> 2014;290: 513-523.</p>	<p>Women with endometriosis, not postmenopausal women.</p>
<p>Yildiz, S., et al., The pain symptoms and mass recurrence rates after ovarian cystectomy or uni/bilateral oophorectomy procedures in patients over 40 years old with endometriosis. <i>Ginekol Pol</i>, 2020. 91(6): p. 295-300.</p>	<p>Does not address postmenopausal endometriosis</p>
<p>Zanello M, Borghese G, Manzara F, Degli Esposti E, Moro E, Raimondo D, Abdullahi LO, Arena A, Terzano P, Meriggiola MC et al. Hormonal Replacement Therapy in Menopausal Women with History of Endometriosis: A Review of Literature. <i>Medicina (Kaunas)</i> 2019;55.</p>	<p>narrative review</p>



QUESTION VI.4 ARE WOMEN WITH ENDOMETRIOSIS AT HIGHER RISK OF EXPERIENCING MENOPAUSE-RELATED MAJOR HEALTH CONCERNS?

NARRATIVE QUESTION

Search strings : not applicable

This question is a narrative question. The section was prepared based on expert opinion and selected papers from the literature searches performed in this section (QUESTIONS VI.2 and VI.3).

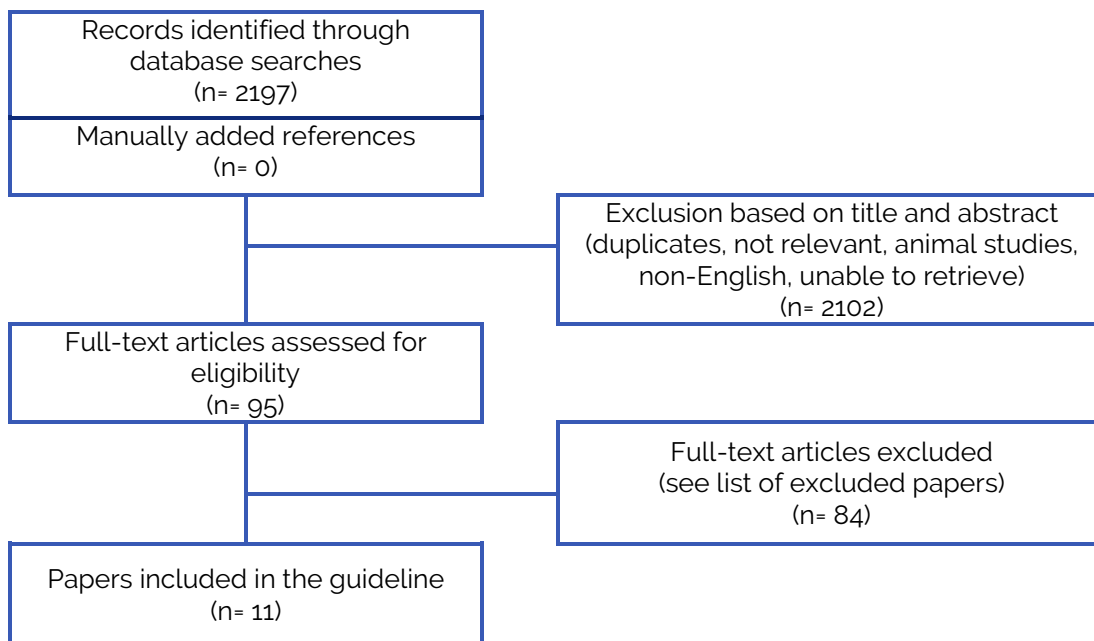


QUESTION VII.1 HOW RELIABLE IS IMAGING FOR DIAGNOSING EXTRAPELVIC ENDOMETRIOSIS?

Search strings

DATABASE	Search string
PUBMED	((("Endometriosis"[Title] OR "endometriotic"[Title]) AND ("extragenital"[Title] OR "extrapelvic"[Title] OR "cerebral"[Title] OR "umbilical"[Title] OR "inguinal"[Title] OR "scar"[Title] OR "diaphragm"[Title] OR "thoracic"[Title] OR "eyelid"[Title] OR "polypoid"[Title] OR "external genital"[Title] OR "diaphragmatic"[Title] OR "gastrointestinal"[Title] OR "ileal"[Title] OR "appendix"[Title] OR "sciatic nerve"[Title] OR "abdominal wall"[Title] OR "urinary tract"[Title] OR "renal"[Title] OR "bladder"[Title] OR "ureteral"[Title])) OR ("extragenital endometriosis" OR "extrapelvic endometriosis" OR "cerebral endometriosis" OR "umbilical endometriosis" OR "inguinal endometriosis" OR "scar endometriosis" OR "diaphragm endometriosis" OR "thoracic endometriosis" OR "eyelid endometriosis" OR "polypoid endometriosis" OR "external genital endometriosis" OR "diaphragmatic endometriosis" OR "gastrointestinal endometriosis" OR "ileal endometriosis" OR "appendiceal endometriosis" OR "abdominal wall endometriosis" OR "urinary tract endometriosis" OR "bladder endometriosis" OR "renal endometriosis" OR "nerve endometriosis" OR "ureteral endometriosis"))
COCHRANE	("extragenital endometriosis" OR "extrapelvic endometriosis" OR "cerebral endometriosis" OR "umbilical endometriosis" OR "inguinal endometriosis" OR "scar endometriosis" OR "diaphragm endometriosis" OR "thoracic endometriosis" OR "eyelid endometriosis" OR "polypoid endometriosis" OR "external genital endometriosis" OR "diaphragmatic endometriosis" OR "gastrointestinal endometriosis" OR "ileal endometriosis" OR "appendiceal endometriosis" OR "abdominal wall endometriosis" OR "urinary tract endometriosis" OR "bladder endometriosis" OR "renal endometriosis" OR "nerve endometriosis" OR "ureteral endometriosis")

Flowchart





List of excluded papers

Reference	Exclusion criterium
Abrao MS, Dias JA, Jr., Rodini GP, Podgaec S, Bassi MA, Averbach M. Endometriosis at several sites, cyclic bowel symptoms, and the likelihood of the appendix being affected. <i>Fertil Steril</i> 2010;94: 1099-1101.	More recent/relevant data available
Bagan P, Berna P, Assouad J, Hupertan V, Le Pimpec Barthes F, Riquet M. Value of cancer antigen 125 for diagnosis of pleural endometriosis in females with recurrent pneumothorax. <i>Eur Respir J</i> 2008;31: 140-142.	Imaging diagnosis is not included
Balleyguier C, Chapron C, Chopin N, Helenon O, Menu Y. Abdominal wall and surgical scar endometriosis: results of magnetic resonance imaging. <i>Gynecol Obstet Invest</i> 2003;55: 220-224.	Limited number of cases presented
Bobbio A, Canny E, Mansuet Lupo A, Lococo F, Legras A, Magdeleinat P, Regnard JF, Gompel A, Damotte D, Alifano M. Thoracic Endometriosis Syndrome Other Than Pneumothorax: Clinical and Pathological Findings. <i>Ann Thorac Surg</i> 2017;104: 1865-1871.	Does not focus on diagnosis
Boesgaard-Kjer D, Boesgaard-Kjer D, Kjer JJ. Primary umbilical endometriosis (PUE). <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;209: 44-45.	Limited number of cases presented
Busard MP, Mijatovic V, van Kuijk C, Hompes PG, van Waesberghe JH. Appearance of abdominal wall endometriosis on MR imaging. <i>Eur Radiol</i> 2010;20: 1267-1276.	Limited number of cases presented
Candiani GB, Vercellini P, Fedele L, Vendola N, Carinelli S, Scaglione V. Inguinal endometriosis: pathogenetic and clinical implications. <i>Obstet Gynecol</i> 1991;78: 191-194.	Limited number of cases
Channabasavaiah AD, Joseph JV. Thoracic endometriosis: revisiting the association between clinical presentation and thoracic pathology based on thoracoscopic findings in 110 patients. <i>Medicine (Baltimore)</i> 2010;89: 183-188.	Does not focus on diagnosis
Chowdhury, T.S., et al., Scar Endometriosis - A Rare Entity: Case Series. <i>Mymensingh Med J</i> , 2020. 29(3): p. 730-733.	Recent large review available
Costa, J., et al., Abdominal wall endometriosis: experience of the General Surgery Service of the Antônio Pedro University Hospital of the Universidade Federal Fluminense. <i>Rev Col Bras Cir</i> , 2020. 47: p. e20202544.	Recent large review available
Daye SS, Barone JE, Lincer RM, Blabey RC, Smego DR. Pfannenstiel syndrome. <i>Am Surg</i> 1993;59: 459-460.	Limited number of cases presented
Dessy LA, Buccheri EM, Chiummariello S, Gagliardi DN, Onesti MG. Umbilical endometriosis, our experience. <i>In Vivo</i> 2008;22: 811-815.	Limited number of cases presented
Dong Y, Braden B, Klinger C, Ripolles T, Dietrich CF. Ultrasound findings in extragenital endometriosis. <i>J Ultrason</i> 2018;18: 247-254.	Imaging diagnosis is not included
Douglas C, Rotimi O. Extragenital endometriosis--a clinicopathological review of a Glasgow hospital experience with case illustrations. <i>J Obstet Gynaecol</i> 2004;24: 804-808.	Imaging diagnosis is not included
Emre A, Akbulut S, Bozdog Z, Yilmaz M, Kanlioz M, Emre R, Sahin N. Routine histopathologic examination of appendectomy specimens: retrospective analysis of 1255 patients. <i>Int Surg</i> 2013;98: 354-362.	More recent/relevant data available
Ezembu, N., et al., Thoracic endometriosis syndrome in Nigeria: a single-centre experience. <i>Interact Cardiovasc Thorac Surg</i> , 2020.	Recent large review available
Fournel L, Bobbio A, Robin E, Canny-Hamelin E, Alifano M, Regnard JF. Clinical presentation and treatment of catamenial pneumothorax and endometriosis-related pneumothorax. <i>Expert Rev Respir Med</i> 2018;12: 1031-1036.	Does not focus on diagnosis
Francica G. Reliable clinical and sonographic findings in the diagnosis of abdominal wall endometriosis near cesarean section scar. <i>World J Radiol</i> 2012;4: 135-140.	Limited number of cases presented
Fukuoka M, Kurihara M, Haga T, Ebana H, Kataoka H, Mizobuchi T, Tatsumi K. Clinical characteristics of catamenial and non-catamenial thoracic endometriosis-related pneumothorax. <i>Respirology</i> 2015;20: 1272-1276.	Does not focus on diagnosis
Genovese G, Passoni E, Veraldi S, Nazzaro G. Ultrasonographic findings in primary umbilical endometriosis. <i>An Bras Dermatol</i> 2018;93: 297-298.	Case report
Gimonet H, Laigle-Querret V, Ploteau S, Veluppillai C, Leclere B, Frampas E. Is pelvic MRI in women presenting with pelvic endometriosis suggestive of associated ileal, appendicular, or cecal involvement? <i>Abdom Radiol (NY)</i> 2016;41: 2404-2410.	More recent/relevant data available
Gon S, Barui GN, Majumdar B, Baig SJ. Endometriosis of the appendix: A diagnostic dilemma. <i>Indian J Surg</i> 2010;72: 315-317.	More recent/relevant data available
Guerriero, S., et al., Ultrasonography and Atypical Sites of Endometriosis. <i>Diagnostics (Basel)</i> , 2020. 10(6).	No additional data compared to other recent reviews
Gui B, Valentini AL, Ninivaggi V, Micco M, Zecchi V, Grimaldi PP, Cambi F, Guido M, Bonomo L. Shining light in a dark landscape: MRI evaluation of unusual localization of endometriosis. <i>Diagn Interv Radiol</i> 2017;23: 272-281.	Provided data not applicable for the topic



Gupta RK. Fine-needle aspiration cytodiagnosis of endometriosis in cesarean section scar and rectus sheath mass lesions -- a study of seven cases. <i>Diagn Cytopathol</i> 2008;36: 224-226.	Limited number of cases presented
Haga T, Kataoka H, Ebana H, Otsuji M, Seyama K, Tatsumi K, Kurihara M. Thoracic endometriosis-related pneumothorax distinguished from primary spontaneous pneumothorax in females. <i>Lung</i> 2014;192: 583-587.	Does not focus on diagnosis
Heller DS, Fitzhugh VA. Abdominal wall endometriosis: a rarely anticipated diagnosis: a 16-year experience and brief literature review. <i>J Reprod Med</i> 2014;59: 110-112.	Does not focus on diagnosis
Hensen JH, Van Breda Vriesman AC, Puylaert JB. Abdominal wall endometriosis: clinical presentation and imaging features with emphasis on sonography. <i>AJR Am J Roentgenol</i> 2006;186: 616-620.	Limited number of cases presented
Hirata, T., et al. Clinical practice guidelines for the treatment of extragenital endometriosis in Japan, 2018. <i>J Obstet Gynaecol Res</i> , 2020. 46(12): p. 2474-87.	Publication type
Hwang SM, Lee CW, Lee BS, Park JH. Clinical features of thoracic endometriosis: A single center analysis. <i>Obstet Gynecol Sci</i> 2015;58: 223-231.	Does not focus on diagnosis
Inoue T, Chida M, Inaba H, Tamura M, Kobayashi S, Sado T. Juvenile catamenial pneumothorax: institutional report and review. <i>J Cardiothorac Surg</i> 2015;10: 83.	Does not focus on diagnosis
Jamabo RS, Ogu RN. Abdominal scar endometriosis. <i>Indian J Surg</i> 2008;70: 184-187.	Does not focus on diagnosis
Jaramillo-Cardoso A, Balcacer P, Garces-Descovich A, Beker K, Roth E, Glickman J, Morteles KJ. Multimodality imaging and clinicopathologic assessment of abdominal wall endometriosis: knocking down the enigma. <i>Abdom Radiol (NY)</i> 2018.	Not relevant
Kawaguchi Y, Hanaoka J, Ohshio Y, Igarashi T, Okamoto K, Kaku R, Hayashi K, Ishida M. Diagnosis of thoracic endometriosis with immunohistochemistry. <i>J Thorac Dis</i> 2018;10: 3468-3472.	Does not focus on diagnosis
Khammash MR, Omari AK, Gasaimh GR, Bani-Hani KE. Abdominal wall endometriosis. An overlooked diagnosis. <i>Saudi Med J</i> 2003;24: 523-525.	Limited number of cases presented
Kim JY, Kwon JE, Kim HJ, Park K. Fine-needle aspiration cytology of abdominal wall endometriosis: a study of 10 cases. <i>Diagn Cytopathol</i> 2013;41: 115-119.	Limited number of cases presented
Kiss I, Pospisilova E, Kolostova K, Maly V, Stanek I, Lischke R, Schutzner J, Pawlak I, Bobek V. Circulating Endometrial Cells in Women with Spontaneous Pneumothorax. <i>Chest</i> 2019.	Imaging diagnosis is not included
Larrain D, Suarez F, Braun H, Chapochnik J, Diaz L, Rojas I. Thoracic and diaphragmatic endometriosis: Single-institution experience using novel, broadened diagnostic criteria. <i>J Turk Ger Gynecol Assoc</i> 2018;19: 116-121.	Does not focus on diagnosis
Legras A, Mansuet-Lupo A, Rousset-Jablonski C, Bobbio A, Magdeleinat P, Roche N, Regnard JF, Gompel A, Damotte D, Alifano M. Pneumothorax in women of child-bearing age: an update classification based on clinical and pathologic findings. <i>Chest</i> 2014;145: 354-360.	Does not focus on diagnosis
Li, J., et al. Multidisciplinary treatment of abdominal wall endometriosis: A case report and literature review. <i>Eur J Obstet Gynecol Reprod Biol</i> , 2020. 250: p. 9-16.	Case report
Lomoro, P., et al. Extrapelvic Sciatic Nerve Endometriosis, the Role of Magnetic Resonance Imaging: Case Report and Systematic Review. <i>J Comput Assist Tomogr</i> , 2019. 43(6): p. 976-980.	Not relevant
Luna Russo, M., et al. Considerations for the Surgical Management of Diaphragmatic Endometriosis. <i>J Minim Invasive Gynecol</i> , 2020.	Does not focus on diagnosis
Mabrouk M, Raimondo D, Mastronardi M, Raimondo I, Del Forno S, Arena A, Sutherland N, Borgia A, Mattioli G, Terzano P et al. Endometriosis of the Appendix: When to Predict and How to Manage-A Multivariate Analysis of 1935 Endometriosis Cases. <i>J Minim Invasive Gynecol</i> 2019.	Does not discuss imaging
Machairiotis N, Stylianaki A, Dryllis G, Zarogoulidis P, Kouroutou P, Tsiamis N, Katsikogiannis N, Sarika E, Courcoutsakis N, Tsiouda T et al. Extrapelvic endometriosis: a rare entity or an under diagnosed condition? <i>Diagn Pathol</i> 2013;8: 194.	narrative review
Makena, D., et al. Umbilical endometriosis: a case series. <i>J Med Case Rep</i> , 2020. 14(1): p. 142.	Limited number of cases
Mandai, M., et al. Cancers associated with extraovarian endometriosis at less common/rare sites: A nationwide survey in Japan. <i>J Obstet Gynaecol Res</i> , 2020. 46(6): p. 917-923.	Not relevant
Marcellin L, Santulli P, Bortolato S, Morin C, Millischer AE, Borghese B, Chapron C. Anterior Focal Adenomyosis and Bladder Deep Infiltrating Endometriosis: Is There a Link? <i>J Minim Invasive Gynecol</i> 2018;25: 896-901.	Pathogenesis
Marras, S., et al. Abdominal wall endometriosis: An 11-year retrospective observational cohort study. <i>Eur J Obstet Gynecol Reprod Biol X</i> , 2019. 4: p. 100096.	Recent large review available
Matalliotakis M, Goulielmos GN, Kalogiannidis I, Koumantakis G, Matalliotakis I, Arici A. Extra pelvic endometriosis: Retrospective analysis on 200 cases in two different countries. <i>Eur J Obstet Gynecol Reprod Biol</i> 2017;217: 34-37.	Imaging diagnosis is not included



Matalliotakis, M., et al., Abdominal and perineal scar endometriosis: Retrospective study on 40 cases. <i>Eur J Obstet Gynecol Reprod Biol</i> , 2020. 252: p. 225-227.	Recent large review available
Menni K, Facchetti L, Cabassa P. Extragenital endometriosis: assessment with MR imaging. A pictorial review. <i>Br J Radiol</i> 2016;89: 20150672.	Does not add information to the body of evidence (technical paper)
Miranda L, Settembre A, Capasso P, Piccolboni D, De Rosa N, Corcione F. Inguinal endometriosis or irreducible hernia? A difficult preoperative diagnosis. <i>Hernia</i> 2001;5: 47-49.	Limited number of cases
Nagama, T., et al., Heterotopic Endometriosis in the Inguinal Region: A Case Report and Literature Review. <i>Eplasty</i> , 2019. 19: p. ic19.	Case report
Nguyen, M.D., Magnetic Resonance Imaging-guided High-intensity Focused Ultrasound Ablation for Endometriosis of the Abdominal Wall. <i>Gynecol Minim Invasive Ther</i> , 2020. 9(1): p. 45-46.	Does not focus on diagnosis
Oh EM, Lee WS, Kang JM, Choi ST, Kim KK, Lee WK. A Surgeon's Perspective of Abdominal Wall Endometriosis at a Caesarean Section Incision: Nine Cases in a Single Institution. <i>Surg Res Pract</i> 2014;2014: 765372.	Limited number of cases presented
Onbas O, Kantarci M, Alper F, Kumtepe Y, Durur I, Ingec M, Gursan N, Okur A. Nodular endometriosis: dynamic MR imaging. <i>Abdom Imaging</i> 2007;32: 451-456.	Limited number of cases presented
Pathan SK, Kapila K, Haji BE, Mallik MK, Al-Ansary TA, George SS, Das DK, Francis IM. Cytomorphological spectrum in scar endometriosis: a study of eight cases. <i>Cytopathology</i> 2005;16: 94-99.	Limited number of cases presented
Pofflee S, Bode A, Mahana S. Cytodiagnosis of scar endometriosis. <i>Cytojournal</i> 2014;11: 1.	Imaging diagnosis is not included
Rezvani M, Shaaban AM, Kennedy AM. The role of multimodality imaging after cesarean delivery. <i>Ultrasound Q</i> 2015;31: 5-18.	Limited number of cases presented
Rousset P, Gregory J, Rousset-Jablonski C, Hugon-Rodin J, Regnard JF, Chapron C, Coste J, Golfier F, Revel MP. MR diagnosis of diaphragmatic endometriosis. <i>Eur Radiol</i> 2016;26: 3968-3977.	Limited number of cases
Savelli L, Manuzzi L, Di Donato N, Salvi N, Trivella G, Ceccaroni M, Seracchioli R. Endometriosis of the abdominal wall: ultrasonographic and Doppler characteristics. <i>Ultrasound Obstet Gynecol</i> 2012;39: 336-340.	Limited number of cases presented
Scarmato VJ, Levine MS, Herlinger H, Wickstrom M, Furth EE, Tureck RW. Ileal endometriosis: radiographic findings in five cases. <i>Radiology</i> 2000;214: 509-512.	More recent/relevant data available
Scioscia M. Ureteral endometriosis: correlation between ultrasonography and laparoscopy. <i>Ultrasound Obstet Gynecol</i> 2019;53: 706-708.	Publication type
Shi, S., et al., High-Intensity Focused Ultrasound in the Treatment of Abdominal Wall Endometriosis. <i>J Minim Invasive Gynecol</i> , 2020. 27(3): p. 704-711.	Does not focus on diagnosis
Shrestha B, Shrestha S, Peters P, Ura M, Windsor M, Naidoo R. Catamenial Pneumothorax, a Commonly Misdiagnosed Thoracic Condition: Multicentre Experience and Audit of a Small Case Series With Review of the Literature. <i>Heart Lung Circ</i> 2019;28: 850-857.	Does not focus on diagnosis
Solak A, Genc B, Yazal S, Sahin N, Sezer TO, Solak I. Abdominal wall endometrioma: ultrasonographic features and correlation with clinical findings. <i>Balkan Med J</i> 2013;30: 155-160.	Limited number of cases presented
Song, H., et al., Abdominal wall mass suspected of endometriosis: clinical and pathologic features. <i>Obstet Gynecol Sci</i> , 2020. 63(3): p. 357-362.	Does not focus on diagnosis
Tran-Harding K, Nair RT, Dawkins A, Ayoob A, Owen J, Deraney S, Lee JT, Stevens S, Ganesh H. Endometriosis revisited: an imaging review of the usual and unusual manifestations with pathological correlation. <i>Clin Imaging</i> 2018;52: 163-171.	Does not add information to the body of evidence (mostly histopathological studies)
Tulandi T, Sirois C, Sabban H, Cohen A, Murji A, Singh SS, Chen I, Belland L. Relationship between Catamenial Pneumothorax or Non-catamenial Pneumothorax and Endometriosis. <i>J Minim Invasive Gynecol</i> 2018;25: 480-483.	Does not focus on diagnosis
Vagholkar K, Vagholkar S. Abdominal Wall Endometrioma: A Diagnostic Enigma-A Case Report and Review of the Literature. <i>Case Rep Obstet Gynecol</i> 2019;2019: 6831545.	Case report
Vellido-Cotelo R, Munoz-Gonzalez JL, Oliver-Perez MR, de la Hera-Lazaro C, Almansa-Gonzalez C, Perez-Sagaseta C, Jimenez-Lopez JS. Endometriosis node in gynaecologic scars: a study of 17 patients and the diagnostic considerations in clinical experience in tertiary care center. <i>BMC Womens Health</i> 2015;15: 13.	Limited number of cases presented
Vercellini P, Chapron C, Fedele L, Frontino G, Zaina B, Crosignani PG. Evidence for asymmetric distribution of sciatic nerve endometriosis. <i>Obstet Gynecol</i> 2003;102: 383-387.	Does not focus on diagnosis
Vercellini P, Pisacreta A, Pesole A, Vicentini S, Stellato G, Crosignani PG. Is ureteral endometriosis an asymmetric disease? <i>Bjog</i> 2000;107: 559-561.	Limited number of cases
Viti, A., et al., Endometriosis Involving the Diaphragm: A Patient-Tailored Minimally Invasive Surgical Treatment. <i>World J Surg</i> , 2020. 44(4): p. 1099-1104.	Does not focus on diagnosis



Vyas M, Wong S, Zhang X. Intestinal metaplasia of appendiceal endometriosis is not uncommon and may mimic appendiceal mucinous neoplasm. <i>Pathol Res Pract</i> 2017;213: 39-44.	Not relevant
Wang HC, Kuo PH, Kuo SH, Luh KT. Catamenial hemoptysis from tracheobronchial endometriosis: reappraisal of diagnostic value of bronchoscopy and bronchial brush cytology. <i>Chest</i> 2000;118: 1205-1208.	Case report
Wang WY, Wei B, Cao YX, Xie X, Li CQ, Xu YJ. Abdominal wall endometriosis occurring after cesarean section: an underestimated complication. <i>Clin Exp Obstet Gynecol</i> 2016;43: 678-684.	Does not focus on diagnosis
Welch, B.T., et al., Percutaneous cryoablation of abdominal wall endometriosis: the Mayo Clinic approach. <i>Abdom Radiol (NY)</i> , 2020. 45(6): p. 1813-1817.	Does not focus on diagnosis
Wolfhagen N, Simons NE, de Jong KH, van Kesteren PJM, Simons MP. Inguinal endometriosis, a rare entity of which surgeons should be aware: clinical aspects and long-term follow-up of nine cases. <i>Hernia</i> 2018;22: 881-886.	Limited number of cases
Wozniak S, Czuczwar P, Szkodziak P, Wozniakowska E, Milart P, Paszkowski M, Paszkowski T. Elastography Improves the Accuracy of Ultrasound in the Preoperative Assessment of abdominal wall endometriosis. <i>Ultraschall Med</i> 2015;36: 623-629.	Limited number of cases presented
Xie M, Zhang X, Zhan J, Ren Y, Wang W. Potential role of strain elastography for detection of the extent of large-scar endometriosis. <i>J Ultrasound Med</i> 2013;32: 1635-1642.	Limited number of cases presented
Yang DM, Kim HC, Ryu JK, Lim JW, Kim GY. Sonographic findings of inguinal endometriosis. <i>J Ultrasound Med</i> 2010;29: 105-110.	Limited number of cases
Yildirim D, Tatar C, Dogan O, Hut A, Donmez T, Akinci M, Toptas M, Bayik RN. Post-cesarean scar endometriosis. <i>Turk J Obstet Gynecol</i> 2018;15: 33-38.	Limited number of cases presented
Zhang P, Sun Y, Zhang C, Yang Y, Zhang L, Wang N, Xu H. Cesarean scar endometriosis: presentation of 198 cases and literature review. <i>BMC Womens Health</i> 2019;19: 14.	Does not focus on diagnosis

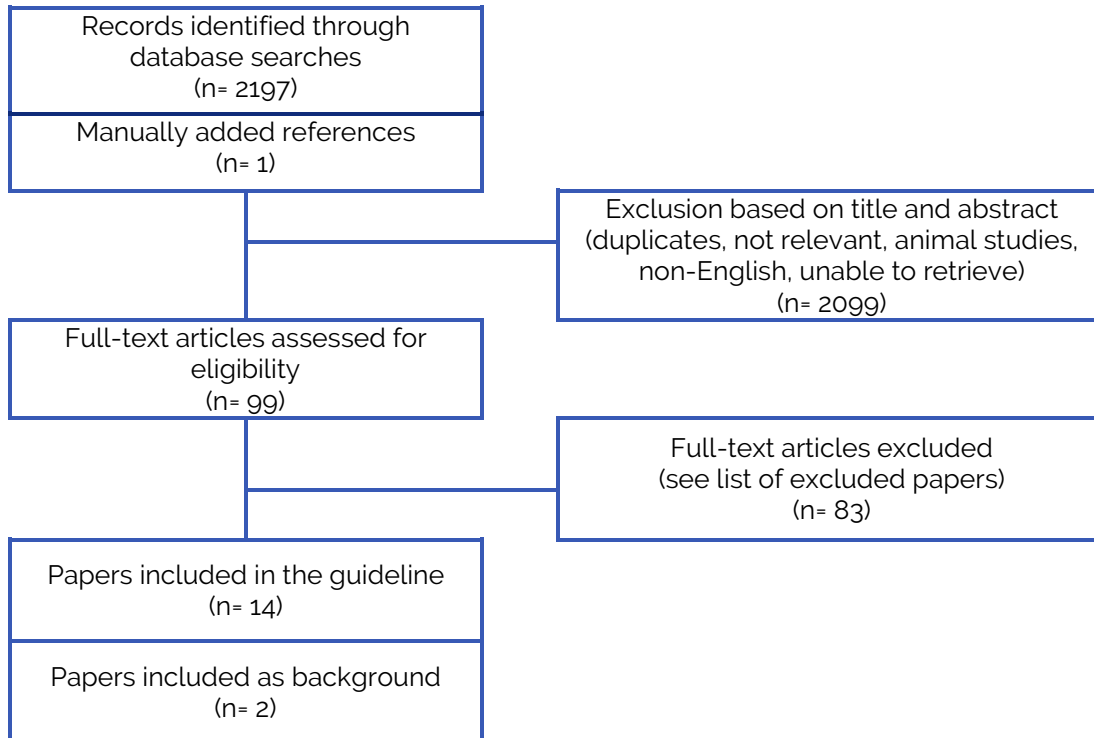


QUESTION VII.2 DOES TREATMENT FOR EXTRAPELVIC ENDOMETRIOSIS RELIEVE SYMPTOMS ?

Search strings

DATABASE	Search string
PUBMED	See question VII.1 (identical search term, different selection of papers)
COCHRANE	See question VII.1 (identical search term, different selection of papers)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Agarwal A, Fong YF. Cutaneous endometriosis. <i>Singapore Med J</i> 2008;49: 704-709.	Limited number of cases
Akbulut S, Sevinc MM, Bakir S, Cakabay B, Sezgin A. Scar endometriosis in the abdominal wall: a predictable condition for experienced surgeons. <i>Acta Chir Belg</i> 2010;110: 303-307.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Alifano M, Legras A, Rousset-Jablonski C, Bobbio A, Magdeleinat P, Damotte D, Roche N, Regnard JF. Pneumothorax recurrence after surgery in women: clinicopathologic characteristics and management. <i>Ann Thorac Surg</i> 2011;92: 322-326.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Alifano M, Roth T, Broet SC, Schussler O, Magdeleinat P, Regnard JF. Catamenial pneumothorax: a prospective study. <i>Chest</i> 2003;124: 1004-1008.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Aljehani Y. Catamenial pneumothorax. Is it time to approach differently? <i>Saudi Med J</i> 2014;35: 115-122.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Arakawa T, Hirata T, Koga K, Neriishi K, Fukuda S, Ma S, Sun H, Nagashima N, Harada M, Hirota Y et al. Clinical aspects and management of inguinal endometriosis: A case series of 20 patients. <i>J Obstet Gynaecol Res</i> 2019;45: 2029-2036.	Limited number of patients
Augoulea A, Lambrinouadaki I, Christodoulakos G. Thoracic endometriosis syndrome. <i>Respiration</i> 2008;75: 113-119.	Limited number of cases
Bektas H, Bilsel Y, Sari YS, Ersoz F, Koc O, Deniz M, Boran B, Huq GE. Abdominal wall endometrioma; a 10-year experience and brief review of the literature. <i>J Surg Res</i> 2010;164: e77-81.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Bricelj K, Srpčić M, Razem A, Snoj Z. Catamenial pneumothorax since introduction of video-assisted thoracoscopic surgery : A systematic review. <i>Wien Klin Wochenschr</i> 2017;129: 717-726.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Charatsi D, Koukoura O, Ntavela IG, Chintziou F, Gkorila G, Tsagkoulis M, Mikos T, Pistofidis G, Hajioannou J, Daponte A. Gastrointestinal and Urinary Tract Endometriosis: A Review on the Commonest Locations of Extrapelvic Endometriosis. <i>Adv Med</i> 2018;2018: 3461209.	Not extrapelvic endometriosis
Chiantera V, Dessole M, Petrillo M, Lucidi A, Frangini S, Legge F, Scambia G, Mechsner S. Laparoscopic En Bloc Right Diaphragmatic Peritonectomy for Diaphragmatic Endometriosis According to the Sugarbaker Technique. <i>J Minim Invasive Gynecol</i> 2016;23: 198-205.	Limited number of cases
Cornelis F, Petitpierre F, Lasserre AS, Tricaud E, Dallaudiere B, Stoeckle E, Le Bras Y, Bouzgarrou M, Brun JL, Grenier N. Percutaneous cryoablation of symptomatic abdominal scar endometrioma: initial reports. <i>Cardiovasc Intervent Radiol</i> 2014;37: 1575-1579.	Limited number of cases
Ding Y, Zhu J. A retrospective review of abdominal wall endometriosis in Shanghai, China. <i>Int J Gynaecol Obstet</i> 2013;121: 41-44.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Duyos I, Lopez-Carrasco A, Hernandez A, Zapardiel I, de Santiago J. Management of thoracic endometriosis: single institution experience. <i>Eur J Obstet Gynecol Reprod Biol</i> 2014;178: 56-59.	Limited number of cases
Ecker AM, Donnellan NM, Shepherd JP, Lee TT. Abdominal wall endometriosis: 12 years of experience at a large academic institution. <i>Am J Obstet Gynecol</i> 2014;211: 363.e361-365.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Fallon JM, Sancheti MS. Robotic-Assisted Surgical Treatment of Catamenial Pneumothorax. <i>Ann Thorac Surg</i> 2019.	Limited number of cases
Fedele L, Frontino G, Bianchi S, Borruto F, Ciappina N. Umbilical endometriosis: a radical excision with laparoscopic assistance. <i>Int J Surg</i> 2010;8: 109-111.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Fukuda S, Hirata T, Neriishi K, Nakazawa A, Takamura M, Izumi G, Harada M, Hirota Y, Koga K, Wada-Hiraie O et al. Thoracic endometriosis syndrome: Comparison between catamenial pneumothorax or endometriosis-related pneumothorax and catamenial hemoptysis. <i>Eur J Obstet Gynecol Reprod Biol</i> 2018;225: 118-123.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Furuta C, Yano M, Numanami H, Yamaji M, Taguchi R, Haniuda M. Nine cases of catamenial pneumothorax: a report of a single-center experience. <i>J Thorac Dis</i> 2018;10: 4801-4805.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Goel P, Devi L, Tandon R, Saha PK, Dalal A. Scar endometriosis - a series of six patients. <i>Int J Surg</i> 2011;9: 39-40.	Limited number of cases
Grigore M, Socolov D, Pavaleanu I, Scripcariu I, Grigore AM, Micu R. Abdominal wall endometriosis: an update in clinical, imagistic features, and management options. <i>Med Ultrason</i> 2017;19: 430-437.	Relevant outcomes not addressed (relief of symptoms not mentioned)



Gustofson RL, Kim N, Liu S, Stratton P. Endometriosis and the appendix: a case series and comprehensive review of the literature. <i>Fertil Steril</i> 2006;86: 298-303.	More recent/relevant data available
Haga T, Kurihara M, Kataoka H, Ebana H. Clinical-pathological findings of catamenial pneumothorax: comparison between recurrent cases and non-recurrent cases. <i>Ann Thorac Cardiovasc Surg</i> 2014;20: 202-206.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Harada M, Osuga Y, Izumi G, Takamura M, Takemura Y, Hirata T, Yoshino O, Koga K, Yano T, Taketani Y. Dienogest, a new conservative strategy for extragenital endometriosis: a pilot study. <i>Gynecol Endocrinol</i> 2011;27: 717-720.	Limited number of cases
Hirata T, Koga K, Kitade M, Fukuda S, Neriishi K, Taniguchi F, Honda R, Takazawa N, Tanaka T, Kurihara M et al. A National Survey of Umbilical Endometriosis in Japan. <i>J Minim Invasive Gynecol</i> 2019.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Honore GM. Extrapelvic endometriosis. <i>Clin Obstet Gynecol</i> 1999;42: 699-711.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Houtmeyers P, Ceelen W, Gillardin JM, Dhondt M, Pattyn P. Surgery for gastrointestinal endometriosis: indications and results. <i>Acta Chir Belg</i> 2006;106: 413-416.	More recent/relevant data available
Jubanyik KJ, Comite F. Extrapelvic endometriosis. <i>Obstet Gynecol Clin North Am</i> 1997;24: 411-440.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Kang J, Baek JH, Lee WS, Cho TH, Lee JN, Lee WK, Chung M. Clinical manifestations of abdominal wall endometriosis: a single center experience. <i>Arch Gynecol Obstet</i> 2013;287: 301-305.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Kaplanoglu M, Kaplanoglu DK, Dincer Ata C, Buyukkurt S. Obstetric Scar Endometriosis: Retrospective Study on 19 Cases and Review of the Literature. <i>Int Sch Res Notices</i> 2014;2014: 417042.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Karapolat B, Kucuk H. A Rare Cause of Abdominal Pain: Scar Endometriosis. <i>Emerg Med Int</i> 2019;2019: 2584652.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Khamechian T, Alizargar J, Mazoochi T. 5-Year data analysis of patients following abdominal wall endometrioma surgery. <i>BMC Womens Health</i> 2014;14: 151.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Khan Z, Zanfagnin V, El-Nashar SA, Famuyide AO, Daftary GS, Hopkins MR. Risk Factors, Clinical Presentation, and Outcomes for Abdominal Wall Endometriosis. <i>J Minim Invasive Gynecol</i> 2017;24: 478-484.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Kim JH, Chong GO, Lee JY, Lee YH, Hong DG, Park SY, Park JY. Laparoscopic repair of indirect inguinal hernia containing endometriosis, ovary, and fallopian tube in adult woman without genital anomalies. <i>Obstet Gynecol Sci</i> 2014;57: 557-559.	Case report
Kokuba EM, Sabino NM, Sato H, Aihara AY, Schor E, Ferreira LM. Reconstruction technique for umbilical endometriosis. <i>Int J Gynaecol Obstet</i> 2006;94: 37-40.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Korom S, Canyurt H, Missbach A, Schneiter D, Kurrer MO, Haller U, Keller PJ, Furrer M, Weder W. Catamenial pneumothorax revisited: clinical approach and systematic review of the literature. <i>J Thorac Cardiovasc Surg</i> 2004;128: 502-508.	Limited number of cases
Liang CC, Liou B, Tsai CC, Chen TC, Soong YK. Scar endometriosis. <i>Int Surg</i> 1998;83: 69-71.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Lopez Carrasco A, Hernandez Gutierrez A, Hidalgo Gutierrez PA, Rodriguez Gonzalez R, Marjuan Martin JL, Zapardiel I, de Santiago Garcia J. Ileocecal endometriosis: diagnosis and management. <i>Taiwan J Obstet Gynecol</i> 2017;56: 243-246.	Not extrapelvic endometriosis
Lopez-Soto A, Sanchez-Zapata MI, Martinez-Cendan JP, Ortiz Reina S, Bernal Manas CM, Remezal Solano M. Cutaneous endometriosis: Presentation of 33 cases and literature review. <i>Eur J Obstet Gynecol Reprod Biol</i> 2018;221: 58-63.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Luo S, Zhang C, Huang JP, Huang GH, He J. Ultrasound-guided high-intensity focused ultrasound treatment for abdominal wall endometriosis: a retrospective study. <i>Bjog</i> 2017;124 Suppl 3: 59-63.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Maillot J, Brun JL, Dubuisson V, Bazot M, Grenier N, Cornelis FH. Mid-term outcomes after percutaneous cryoablation of symptomatic abdominal wall endometriosis: comparison with surgery alone in a single institution. <i>Eur Radiol</i> 2017;27: 4298-4306.	Limited number of cases
Malutan AM, Simon I, Ciortea R, Mocan-Hognogi RF, Dudea M, Mihu D. Surgical scar endometriosis: a series of 14 patients and brief review of literature. <i>Clujul Med</i> 2017;90: 411-415.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Mehta CK, Stanifer BP, Fore-Kosterski S, Gillespie C, Yeldandi A, Meyerson S, Odell DD, DeCamp MM, Bharat A. Primary Spontaneous Pneumothorax in Menstruating Women Has High Recurrence. <i>Ann Thorac Surg</i> 2016;102: 1125-1130.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Mistrangelo M, Gilbo N, Cassoni P, Micalef S, Faletti R, Miglietta C, Brustia R, Bonnet G, Gregori G, Morino M. Surgical scar endometriosis. <i>Surg Today</i> 2014;44: 767-772.	Relevant outcomes not addressed (relief of symptoms not mentioned)



Nair SS, Nayar J. Thoracic Endometriosis Syndrome: A Veritable Pandora's Box. <i>J Clin Diagn Res</i> 2016;10: Qr04-08.	Limited number of cases
Nezhat C, Hajhosseini B, King LP. Laparoscopic management of bowel endometriosis: predictors of severe disease and recurrence. <i>Jsls</i> 2011;15: 431-438.	Not extrapelvic endometriosis
Nezhat C, Lindheim SR, Backhus L, Vu M, Vang N, Nezhat A, Nezhat C. Thoracic Endometriosis Syndrome: A Review of Diagnosis and Management. <i>Jsls</i> 2019;23.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Nezhat C, Nezhat F, Nezhat C. Surgery for endometriosis of the bowel, bladder, ureter, and diaphragm. <i>Ann N Y Acad Sci</i> 1997;828: 332-340.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Nezhat C, Nicoll LM, Bhagan L, Huang JQ, Bosev D, Hajhosseini B, Beygui RE. Endometriosis of the diaphragm: four cases treated with a combination of laparoscopy and thoracoscopy. <i>J Minim Invasive Gynecol</i> 2009;16: 573-580.	Limited number of cases
Nezhat C, Seidman DS, Nezhat F, Nezhat C. Laparoscopic surgical management of diaphragmatic endometriosis. <i>Fertil Steril</i> 1998;69: 1048-1055.	Limited number of cases
Ottolina J, De Stefano F, Vigano P, Ciriaco P, Zannini P, Candiani M. Thoracic Endometriosis Syndrome: Association With Pelvic Endometriosis and Fertility Status. <i>J Minim Invasive Gynecol</i> 2017;24: 461-465.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Ozel L, Sagioglu J, Unal A, Unal E, Gunes P, Baskent E, Aka N, Titiz MI, Tufekci EC. Abdominal wall endometriosis in the cesarean section surgical scar: a potential diagnostic pitfall. <i>J Obstet Gynaecol Res</i> 2012;38: 526-530.	Limited number of cases
Pas K, Joanna SM, Renata R, Skret A, Barnas E. Prospective study concerning 71 cases of caesarean scar endometriosis (CSE). <i>J Obstet Gynaecol</i> 2017;37: 775-778.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Pathak S, Caruana E, Chowdhry F. Should surgical treatment of catamenial pneumothorax include diaphragmatic repair? <i>Interact Cardiovasc Thorac Surg</i> 2019.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Possover M. Five-Year Follow-Up After Laparoscopic Large Nerve Resection for Deep Infiltrating Sciatic Nerve Endometriosis. <i>J Minim Invasive Gynecol</i> 2017;24: 822-826.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Ramos-Mayo AE, Gil-Galindo G. Experience of the hernia and wall department in the management of abdominal wall endometriosis for 9 years. <i>Cir Cir</i> 2019;87: 385-389.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Rani PR, Soundararaghavan S, Rajaram P. Endometriosis in abdominal scars--review of 27 cases. <i>Int J Gynaecol Obstet</i> 1991;36: 215-218.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Redwine DB. Diaphragmatic endometriosis: diagnosis, surgical management, and long-term results of treatment. <i>Fertil Steril</i> 2002;77: 288-296.	Limited number of cases
Rindos NB, Mansuria S. Diagnosis and Management of Abdominal Wall Endometriosis: A Systematic Review and Clinical Recommendations. <i>Obstet Gynecol Surv</i> 2017;72: 116-122.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Rousset-Jablonski C, Alifano M, Plu-Bureau G, Camilleri-Broet S, Rousset P, Regnard JF, Gompel A. Catamenial pneumothorax and endometriosis-related pneumothorax: clinical features and risk factors. <i>Hum Reprod</i> 2011;26: 2322-2329.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Saito A, Koga K, Osuga Y, Harada M, Takemura Y, Yoshimura K, Yano T, Kozuma S. Individualized management of umbilical endometriosis: a report of seven cases. <i>J Obstet Gynaecol Res</i> 2014;40: 40-45.	Limited number of cases
Santos Filho PVD, Santos MPD, Castro S, Melo VA. Primary umbilical endometriosis. <i>Rev Col Bras Cir</i> 2018;45: e1746.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Seydel AS, Sickel JZ, Warner ED, Sax HC. Extrapelvic endometriosis: diagnosis and treatment. <i>Am J Surg</i> 1996;171: 239.	Narrative review
Sheikh HH. Extrapelvic endometriosis--an overview and case histories. <i>Int J Fertil Womens Med</i> 1998;43: 12-17.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Shi S, Ni G, Ling L, Ding H, Zhou Y, Ding Z. High-Intensity Focused Ultrasound in the Treatment of Abdominal Wall Endometriosis. <i>J Minim Invasive Gynecol</i> 2019.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Soriano D, Schonman R, Gat I, Schiff E, Seidman DS, Carp H, Weintraub AY, Ben-Nun A, Goldenberg M. Thoracic endometriosis syndrome is strongly associated with severe pelvic endometriosis and infertility. <i>J Minim Invasive Gynecol</i> 2012;19: 742-748.	Limited number of cases
Sumathy S, Mangalakanthi J, Purushothaman K, Sharma D, Remadevi C, Sreedhar S. Symptomatology and Surgical Perspective of Scar Endometriosis: A Case Series of 16 Women. <i>J Obstet Gynaecol India</i> 2017;67: 218-223.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Tatli F, Gozeneli O, Uyanikoglu H, Uzunkoy A, Yalcin HC, Ozgonul A, Bardakci O, Incebiyik A, Guldur ME. The clinical characteristics and surgical approach of scar endometriosis: A case series of 14 women. <i>Bosn J Basic Med Sci</i> 2018;18: 275-278.	Relevant outcomes not addressed (relief of symptoms not mentioned)



Teh WT, Vollenhoven B, Harris PI. Umbilical endometriosis, a pathology that a gynecologist may encounter when inserting the Veres needle. <i>Fertil Steril</i> 2006;86: 1764.e1761-1762.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Teng CC, Yang HM, Chen KF, Yang CJ, Chen LS, Kuo CL. Abdominal wall endometriosis: an overlooked but possibly preventable complication. <i>Taiwan J Obstet Gynecol</i> 2008;47: 42-48.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Tettey M, Edwin F, Aniteye E, Seffah J, Tamatey M, Ofosu-Appiah E, Adzamli I, Frimpong-Boateng K. Thoracic endometriosis syndrome. <i>West Afr J Med</i> 2013;32: 302-306.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Ucar MG, Sanlikan F, Gocmen A. Surgical Treatment of Scar Endometriosis Following Cesarean Section, a Series of 12 Cases. <i>Indian J Surg</i> 2015;77: 682-686.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Visouli AN, Darwiche K, Mpakas A, Zarogoulidis P, Papagiannis A, Tsakiridis K, Machairiotis N, Stylianaki A, Katsikogiannis N, Courcoutsakis N et al. Catamenial pneumothorax: a rare entity? Report of 5 cases and review of the literature. <i>J Thorac Dis</i> 2012;4 Suppl 1: 17-31.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Wang Y, Wang W, Wang L, Wang J, Tang J. Ultrasound-guided high-intensity focused ultrasound treatment for abdominal wall endometriosis: preliminary results. <i>Eur J Radiol</i> 2011;79: 56-59.	Limited number of cases
Xiang Y, Lang J, Wang Y, Huang R, Lian L. Abdominal scar endometriosis: report of 28 cases. <i>Chin Med Sci J</i> 1995;10: 188-190.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Xiao-Ying Z, Hua D, Jin-Juan W, Ying-Shu G, Jiu-Mei C, Hong Y, Chun-Yi Z. Clinical analysis of high-intensity focussed ultrasound ablation for abdominal wall endometriosis: a 4-year experience at a specialty gynecological institution. <i>Int J Hyperthermia</i> 2019;36: 87-94.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Yantiss RK, Clement PB, Young RH. Neoplastic and pre-neoplastic changes in gastrointestinal endometriosis: a study of 17 cases. <i>Am J Surg Pathol</i> 2000;24: 513-524.	More recent/relevant data available
Yela DA, Trigo L, Benetti-Pinto CL. Evaluation of Cases of Abdominal Wall Endometriosis at Universidade Estadual de Campinas in a period of 10 Years. <i>Rev Bras Ginecol Obstet</i> 2017;39: 403-407.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Yoon J, Lee YS, Chang HS, Park CS. Endometriosis of the appendix. <i>Ann Surg Treat Res</i> 2014;87: 144-147.	Limited number of patients
Yuan P, Huang Y, Cheng B, Zhang J, Xin X. Induction of a local pseudo-pregnancy for the treatment of endometriosis. <i>Med Hypotheses</i> 2010;74: 56-58.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Zhang J, Liu X. Clinicopathological features of endometriosis in abdominal wall--clinical analysis of 151 cases. <i>Clin Exp Obstet Gynecol</i> 2016;43: 379-383.	Relevant outcomes not addressed (relief of symptoms not mentioned)
Zhao L, Deng Y, Wei Q, Chen J, Zhao C. Comparison of ultrasound-guided high-intensity focused ultrasound ablation and surgery for abdominal wall endometriosis. <i>Int J Hyperthermia</i> 2018;35: 528-533.	Not relevant
Zhao R, Wang XJ, Song KX, Zhu L, Li B. Mini-abdominoplasty combined with mesh used for abdominal wall endometriosis. <i>Chin Med J (Engl)</i> 2012;125: 1614-1617.	Relevant outcomes not addressed (relief of symptoms not mentioned)

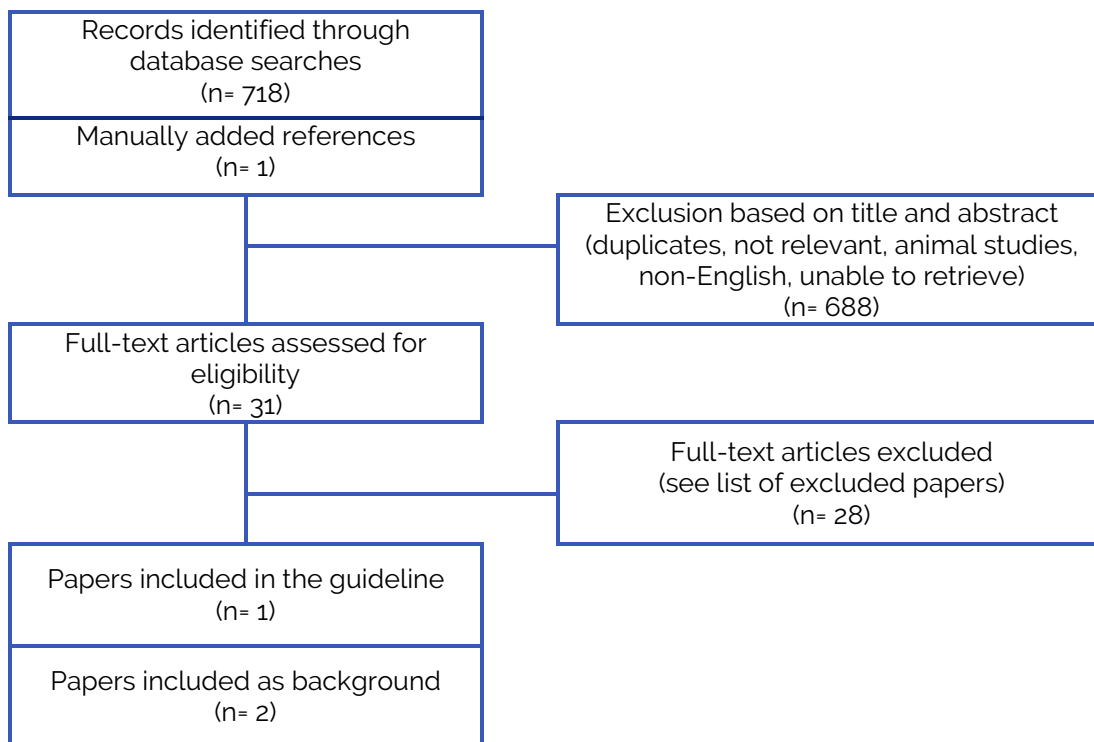


QUESTION VIII.1 IS TREATMENT BENEFICIAL FOR INCIDENTAL FINDING OF ASYMPTOMATIC ENDOMETRIOSIS?

Search strings

DATABASE	Search string
PUBMED	((("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND (asymptomatic OR "incidental finding" OR "Incidental Detection" OR "no symptoms" OR "no pain" OR "painless"))) OR ("painless endometriosis" OR "incidental endometriosis" OR "asymptomatic endometriosis")
COCHRANE	((Endometriosis OR endometriotic OR endometrioma) AND (asymptomatic OR "incidental finding" OR "Incidental Detection" OR "no symptoms" OR "no pain" OR "painless")) OR ("painless endometriosis" OR "incidental endometriosis" OR "asymptomatic endometriosis")

Flowchart





List of excluded papers

Reference	Exclusion criterium
Al-Shraim MM, Fikry A, Rahman GA, AlShumrani G. Asymptomatic incisional endometrioma presenting as abdominal wall mass: a case report. <i>Niger J Med</i> 2012;21: 108-110.	Relevant patients and interventions are not included
Arkoulis N, Chew BK. An unusual case of asymptomatic spontaneous umbilical endometriosis treated with skin-sparing excision. <i>J Surg Case Rep</i> 2015;2015.	Relevant patients and interventions are not included
Chammas MF, Jr., Kim FJ, Barbarino A, Hubert N, Feuillu B, Coissard A, Hubert J. Asymptomatic rectal and bladder endometriosis: a case for robotic-assisted surgery. <i>Can J Urol</i> 2008;15: 4097-4100.	Case report
Charatsi D, Koukoura O, Ntavela IG, Chintziou F, Gkorila G, Tsagakoulis M, Mikos T, Pistofidis G, Hajioannou J, Daponte A. Gastrointestinal and Urinary Tract Endometriosis: A Review on the Commonest Locations of Extrapelvic Endometriosis. <i>Adv Med</i> 2018;2018: 3461209.	Relevant patients and interventions are not included
Coratti, F., et al., Emergency surgery for appendectomy and incidental diagnosis of superficial peritoneal endometriosis in fertile age women. <i>Reprod Biomed Online</i> , 2020. 41(4): p. 729-733.	Not relevant
Cui, T.Y.S., T.C.L. Wong, and C.M. Lo, A rare asymptomatic retroperitoneal endometriotic cyst with mass effect on the inferior vena cava. <i>J Visc Surg</i> , 2020.	case report
Dilday, E.A., et al., An asymptomatic anterior vaginal wall endometrioma, a rare manifestation of endometriosis: A case report. <i>Case Rep Womens Health</i> , 2020. 27: p. e00210.	case report
Emre A, Akbulut S, Yilmaz M, Bozdog Z. An unusual cause of acute appendicitis: Appendiceal endometriosis. <i>Int J Surg Case Rep</i> 2013;4: 54-57.	Relevant patients and interventions are not included. There are missing data on symptoms, only issues regarding appendectomy are discussed.
Faske EJ, Mack LM, Ozcan T. Incidental finding of decidualized vesical endometriosis in an asymptomatic obstetrical patient. <i>J Ultrasound Med</i> 2012;31: 809-811.	Relevant patients and interventions are not included
Garcia-Velasco JA, Mahutte NG, Corona J, Zuniga V, Giles J, Arici A, Pellicer A. Removal of endometriomas before in vitro fertilization does not improve fertility outcomes: a matched, case-control study. <i>Fertil Steril</i> 2004;81: 1194-1197.	Relevant patients and interventions are not included. There are missing data on symptoms, only infertility issues are discussed.
Granese R, Cucinella G, Barresi V, Navarra G, Candiani M, Triolo O. Isolated endometriosis on the rectus abdominis muscle in women without a history of abdominal surgery: a rare and intriguing finding. <i>J Minim Invasive Gynecol</i> 2009;16: 798-801.	Case report
Hoe Khoo AC, Chew GK. Incidental Detection of Endometriosis with (18)F-Fluorodeoxyglucose Positron Emission Tomography-Computed Tomography in a Patient with Cervical Intraepithelial Neoplasia and Adenomyosis. <i>Indian J Nucl Med</i> 2019;34: 162-163.	Relevant patients and interventions are not included
Keramidarlis D, Gourgiosis S, Koutela A, Mpairamidis E, Oikonomou C, Villias C, Rigas A. Rare Case of Hepatic Endometriosis as an Incidental Finding: Difficult Diagnosis of a Diagnostic Dilemma. <i>Ann Hepatol</i> 2018;17: 884-887.	Case presentation with a limited literature review, relevant interventions are not included
Laohapensang K. Abdominal incisional endometrioma following cesarean section: a case report. <i>J Med Assoc Thai</i> 1999;82: 1257-1259.	Relevant patients and interventions are not included
Nelson P. Endometriosis presenting as a vaginal mass. <i>BMJ Case Rep</i> 2018;2018.	Relevant patients and interventions are not included
Noor, M., A. Chen, and R.S. Gonzalez, Clinicopathologic findings in gynecologic proliferations of the appendix. <i>Hum Pathol</i> , 2019. 92: p. 101-106.	Not relevant
Rossmannith WG. Minimal endometriosis: a therapeutic dilemma? <i>Gynecol Endocrinol</i> 2009;25: 762-764.	Case presentation with a short SR of the available data. Data from 2009
Sima RM, Radosa JC, Zamfir R, Ionescu CA, Carp D, Iordache, II, Stanescu AD, Ples L. Novel diagnosis of mesenteric endometrioma: Case report. <i>Medicine (Baltimore)</i> 2019;98: e16432.	Relevant patients and interventions are not included



Singh M, Mandal S, Majumdar K. Sex cord tumor with annular tubules: an incidental finding in an endometriotic cyst--the first known cooccurrence. <i>Biomed Res Int</i> 2014;2014: 970243.	Relevant patients and interventions are not included
Swank HA, Eshuis EJ, Ubbink DT, Bemelman WA. Is routine histopathological examination of appendectomy specimens useful? A systematic review of the literature. <i>Colorectal Dis</i> 2011;13: 1214-1221.	Only general data regarding appendectomy are provided
Teh WT, Vollenhoven B, Harris PI. Umbilical endometriosis, a pathology that a gynecologist may encounter when inserting the Veres needle. <i>Fertil Steril</i> 2006;86: 1764.e1761-1762.	Two cases of umbilical endometriosis / limited literature review
Terada T. Endometriosis of the Vermiform Appendix Presenting as a Tumor. <i>Gastroenterology Res</i> 2009;2: 353-355.	Case presentation with a limited literature review, relevant interventions are not included
Tica VI, Tomescu CL, Tomescu A, Micu L, Zaher M, Bafani S, Beghim M, Serbanescu L, Tica I. Asymptomatic abdominal wall endometrioma 15 years after cesarean section. <i>Rom J Morphol Embryol</i> 2006;47: 301-304.	case report
Vaidya S, Vaidya SA. Patterns of Lesions in Hysterectomy Specimens in a Tertiary Care Hospital. <i>JNMA J Nepal Med Assoc</i> 2015;53: 18-23.	Relevant patients and interventions are not included
Wimberger P, Grubling N, Riehn A, Furch M, Klengel J, Goeckenjan M. Endometriosis - A Chameleon: Patients' Perception of Clinical Symptoms, Treatment Strategies and Their Impact on Symptoms. <i>Geburtshilfe Frauenheilkd</i> 2014;74: 940-946.	Low percentage of patients completed the questionnaires; Attrition bias expected -high drop out rate
Yohannes N, Watkins JC, Weeks AG, Osmundson SS, Shi C, Kovach AE. Low-grade Appendiceal Mucinous Neoplasm and Endometriosis: Incidental Coincident Pathologies at Cesarean Section. <i>Int J Gynecol Pathol</i> 2019.	Case presentation with a short SR of the available data.
Yoon J, Lee YS, Chang HS, Park CS. Endometriosis of the appendix. <i>Ann Surg Treat Res</i> 2014;87: 144-147.	Case presentation (5 cases) with limited number of cases
Zouari-Zaoui L, Soyer P, Merlin A, Boudiaf M, Nemeth J, Rymer R. Multidetector row helical computed tomography enteroclysis findings in ileal endometriosis. <i>Clin Imaging</i> 2008;32: 396-399.	Deals with ileal DE

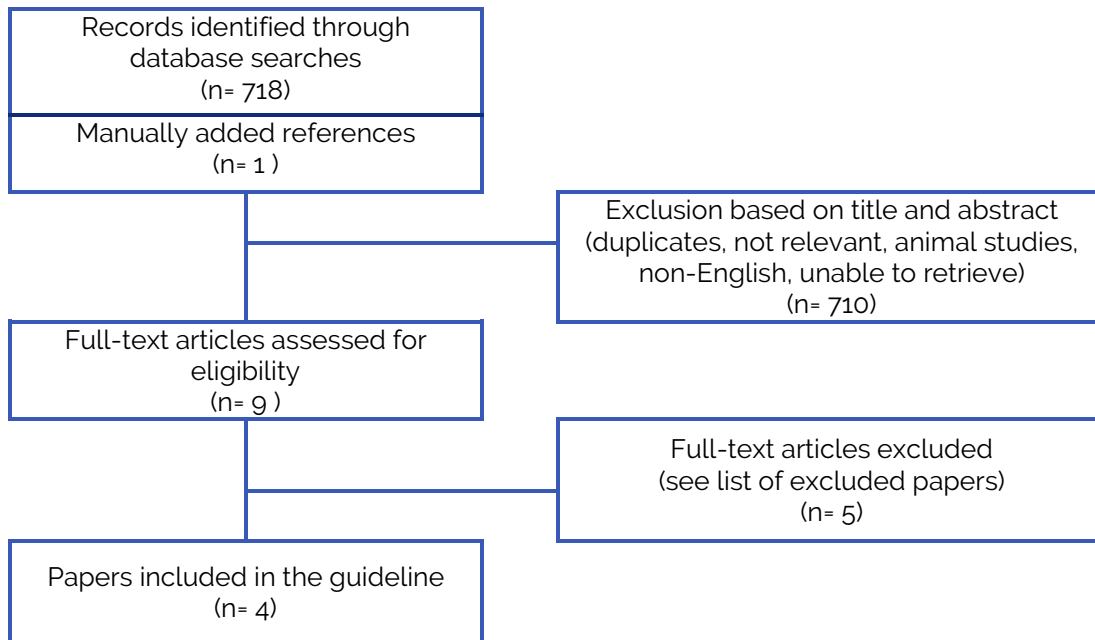


QUESTION VIII.2 IS LONG TERM MONITORING OF WOMEN WITH ASYMPTOMATIC ENDOMETRIOSIS BENEFICIAL IN PREVENTING ADVERSE OUTCOMES?

Search strings

DATABASE	Search string
PUBMED	See question VIII.1 (identical search term, different selection of papers)
COCHRANE	See question VIII.1 (identical search term, different selection of papers)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Reid S, Condous G. Is there a role for ultrasound surveillance for asymptomatic women with advanced endometriotic disease? <i>Australas J Ultrasound Med</i> 2014;17: 135.	Publication type / opinion
Sauter JL, Butnor KJ. Pathological findings in spontaneous pneumothorax specimens: does the incidence of unexpected clinically significant findings justify routine histological examination? <i>Histopathology</i> 2015;66: 675-684.	case report
Schlesinger C, Silverberg SG. Tamoxifen-associated polyps (basalomas) arising in multiple endometriotic foci: A case report and review of the literature. <i>Gynecol Oncol</i> 1999;73: 305-311.	Provides insufficient data regarding the asymptomatic endometriosis
Son JH, Yoon S, Kim S, Kong TW, Paek J, Chang SJ, Ryu HS. Clinicopathologic characteristics of ovarian clear cell carcinoma in the background of endometrioma: a surveillance strategy for an early detection of malignant transformation in patients with asymptomatic endometrioma. <i>Obstet Gynecol Sci</i> 2019;62: 27-34.	Provides insufficient data regarding the asymptomatic endometriosis
Vyas M, Wong S, Zhang X. Intestinal metaplasia of appendiceal endometriosis is not uncommon and may mimic appendiceal mucinous neoplasm. <i>Pathol Res Pract</i> 2017;213: 39-44.	Provides insufficient data regarding the asymptomatic endometriosis

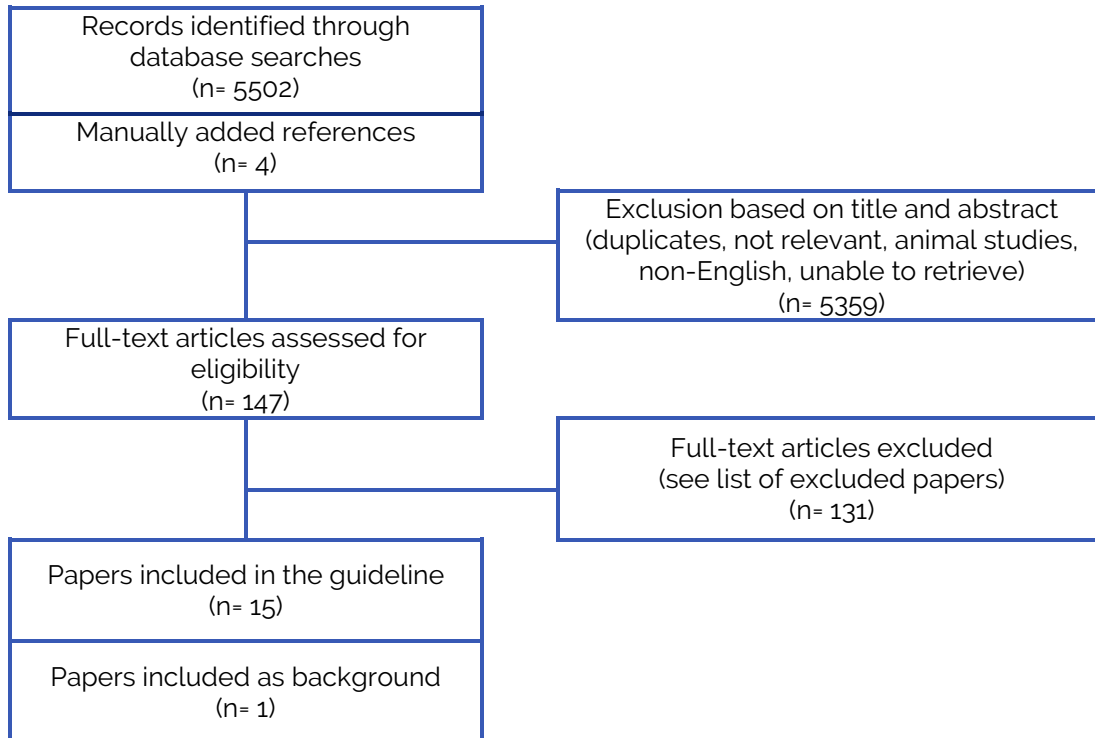


QUESTION IX.1 IS THERE A ROLE FOR PRIMARY PREVENTION OF ENDOMETRIOSIS?

Search strings

DATABASE	Search string
PUBMED	See question IV.1 (identical search term, different selection of papers)
COCHRANE	See question IV.1 (identical search term, different selection of papers)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Aarestrup, J., et al. Birth weight, childhood body mass index and height and risks of endometriosis and adenomyosis. <i>Ann Hum Biol</i> , 2020. 47(2): p. 173-180.	Recent reviews on the topic are included
Andolf E, Thorsell M, Kallen K. Caesarean section and risk for endometriosis: a prospective cohort study of Swedish registries. <i>Bjog</i> 2013;120: 1061-1065.	Included in review Bravi 2014
Ansariniya H, Hadinedoushan H, Javaheri A, Zare F. Vitamin C and E supplementation effects on secretory and molecular aspects of vascular endothelial growth factor derived from peritoneal fluids of patients with endometriosis. <i>J Obstet Gynaecol</i> 2019;39: 1137-1142.	More recent/relevant data available
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Ottolina, J., et al., Early-life factors, in-utero exposures and endometriosis risk: a meta-analysis. <i>Reprod Biomed Online</i> , 2020. 41(2): p. 279-289.	Not relevant
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Rier SE, Martin DC, Bowman RE, Becker JL. Immuno-responsiveness in endometriosis: implications of estrogenic toxicants. <i>Environ Health Perspect</i> 1995;103 Suppl 7: 151-156.	More recent/relevant data available
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Santanam N, Song M, Rong R, Murphy AA, Parthasarathy S. Atherosclerosis, oxidation and endometriosis. <i>Free Radic Res</i> 2002;36: 1315-1321.	Not relevant
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Shigeshi N, Kvaskoff M, Kirtley S, Feng Q, Fang H, Knight JC, Missmer SA, Rahmioglu N, Zondervan KT, Becker CM. The association between endometriosis and autoimmune diseases: a systematic review and meta-analysis. <i>Hum Reprod Update</i> 2019;25: 486-503.	Included in another chapter of the guideline
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Thylan S. Endometriosis and moderate alcohol use. <i>Am J Public Health</i> 1995;85: 1021-1022.	Publication type
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Trabert B, Peters U, De Roos AJ, Scholes D, Holt VL. Diet and risk of endometriosis in a population-based case-control study. <i>Br J Nutr</i> 2011;105: 459-467.	Included in review Parazzini 2013
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Upson K, Sathyanarayana S, De Roos AJ, Koch HM, Scholes D, Holt VL. A population-based case-control study of urinary bisphenol A concentrations and risk of endometriosis. <i>Hum Reprod</i> 2014;29: 2457-2464.	More recent/relevant data available
Upson K, Sathyanarayana S, De Roos AJ, Thompson ML, Scholes D, Dills R, Holt VL. Phthalates and risk of endometriosis. <i>Environ Res</i> 2013;126: 91-97.	More recent/relevant data available
van Aken M, Oosterman J, van Rijn T, Ferdek M, Ruijt G, Kozicz T, Braat D, Peeters A, Nap A. Hair cortisol and the relationship with chronic pain and quality of life in endometriosis patients. <i>Psychoneuroendocrinology</i> 2018;89: 216-222.	Recent reviews on the topic are included
Van Langendonck A, Casanas-Roux F, Donnez J. Oxidative stress and peritoneal endometriosis. <i>Fertil Steril</i> 2002;77: 861-870.	Not relevant
Vassiliadis S, Athanassakis I. A "conditionally essential" nutrient, L-carnitine, as a primary suspect in endometriosis. <i>Fertil Steril</i> 2011;95: 2759-2760.	More recent/relevant data available
Vigano P, Parazzini F, Somigliana E, Vercellini P. Endometriosis: epidemiology and aetiological factors. <i>Best Pract Res Clin Obstet Gynaecol</i> 2004;18: 177-200.	More recent/relevant data available
Vitale SG, Capriglione S, Peterlunger I, La Rosa VL, Vitagliano A, Noventa M, Valenti G, Sapia F, Angioli R, Lopez S et al. The Role of Oxidative Stress and Membrane Transport	Not relevant



Systems during Endometriosis: A Fresh Look at a Busy Corner. <i>Oxid Med Cell Longev</i> 2018;2018: 7924021.	
Vitonis AF, Baer HJ, Hankinson SE, Laufer MR, Missmer SA. A prospective study of body size during childhood and early adulthood and the incidence of endometriosis. <i>Hum Reprod</i> 2010;25: 1325-1334.	More recent/relevant data available
Vitonis AF, Hankinson SE, Hornstein MD, Missmer SA. Adult physical activity and endometriosis risk. <i>Epidemiology</i> 2010;21: 16-23.	Included in review Parazzini 2017
Wei M, Chen X, Zhao Y, Cao B, Zhao W. Effects of Prenatal Environmental Exposures on the Development of Endometriosis in Female Offspring. <i>Reprod Sci</i> 2016;23: 1129-1138.	Not relevant
Wei, Z., et al., NAT2 gene polymorphisms and endometriosis risk: A PRISMA-compliant meta-analysis. <i>PLoS One</i> , 2019. 14(12): p. e0227043.	Not a relevant addition to the presented data
Weuve J, Hauser R, Calafat AM, Missmer SA, Wise LA. Association of exposure to phthalates with endometriosis and uterine leiomyomata: findings from NHANES, 1999-2004. <i>Environ Health Perspect</i> 2010;118: 825-832.	More recent/relevant data available
Yamamoto A, Harris HR, Vitonis AF, Chavarro JE, Missmer SA. A prospective cohort study of meat and fish consumption and endometriosis risk. <i>Am J Obstet Gynecol</i> 2018;219: 178.e171-178.e110.	More recent/relevant data available
Yasui T, Hayashi K, Nagai K, Mizunuma H, Kubota T, Lee JS, Suzuki S. Risk profiles for endometriosis in Japanese women: results from a repeated survey of self-reports. <i>J Epidemiol</i> 2015;25: 194-203.	More recent/relevant data available
Yi KW, Shin JH, Park MS, Kim T, Kim SH, Hur JY. Association of body mass index with severity of endometriosis in Korean women. <i>Int J Gynaecol Obstet</i> 2009;105: 39-42.	Recent reviews on the topic are included
Youseflu, S., et al., Dietary Phytoestrogen Intake and The Risk of Endometriosis in Iranian Women: A Case-Control Study. <i>Int J Fertil Steril</i> , 2020. 13(4): p. 296-300.	Recent reviews on the topic are included
Zhang T, De Carolis C, Man GCW, Wang CC. The link between immunity, autoimmunity and endometriosis: a literature update. <i>Autoimmun Rev</i> 2018;17: 945-955.	Pathogenesis

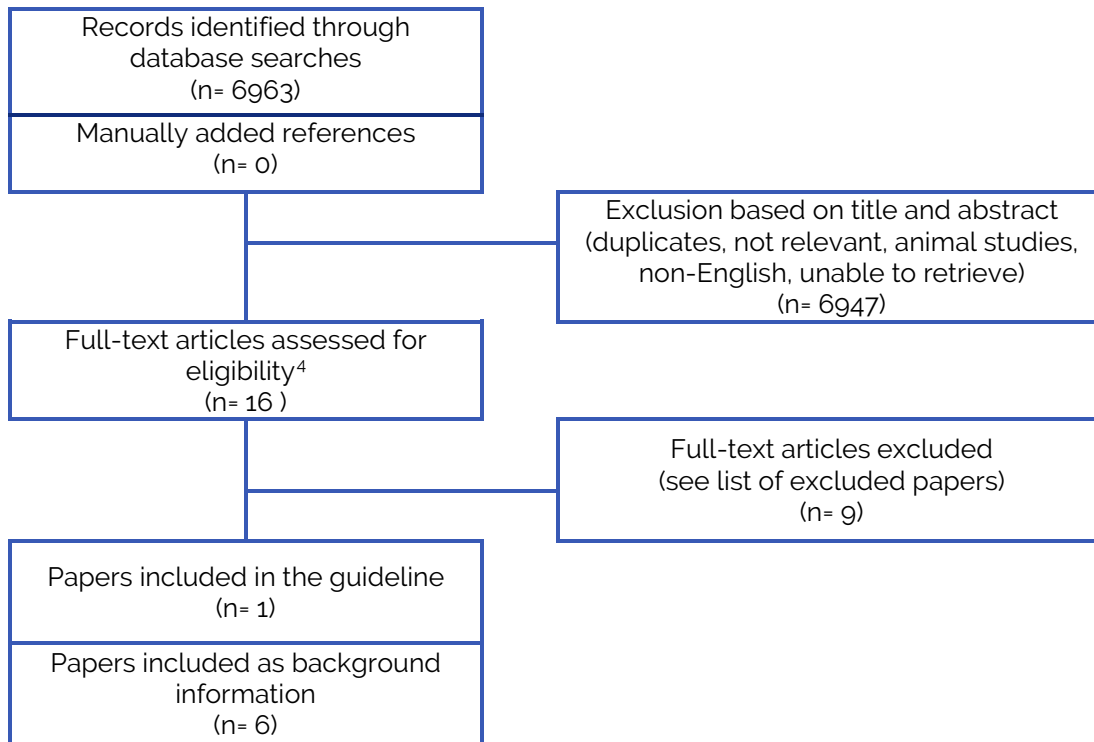


QUESTION X.1.A ARE ENDOMETRIOSIS PATIENTS AT INCREASED RISK OF CANCER?

Search strings

DATABASE	Search string
PUBMED	("Endometriosis"[ti] OR "endometriotic"[ti] OR "endometrioma"[ti]) AND ("Neoplasms"[Mesh] OR Cancer OR tumor OR neoplasm OR malignancy OR neoplasms)
COCHRANE	("Endometriosis" OR "endometriotic" OR "endometrioma") AND (Cancer OR tumor OR neoplasm OR malignancy OR neoplasms)

Flowchart



⁴ Studies selected for assessment where those published after the review of Kvaskoff 2020



List of excluded papers

Reference	Exclusion criterium
Bas-Esteve, E., et al., Endometriosis and ovarian cancer: Their association and relationship. <i>Eur J Obstet Gynecol Reprod Biol X</i> , 2019. 3: p. 100053.	More recent review available
Hermens, M., et al., Incidence of endometrioid and clear-cell ovarian cancer in histological proven endometriosis: the ENOCA population-based cohort study. <i>Am J Obstet Gynecol</i> , 2020. 223(1): p. 107.e1-107.e11.	Does not add further information in addition to the review by Kvaskoff 2020
Johnatty, S.E., et al., Co-existence of leiomyomas, adenomyosis and endometriosis in women with endometrial cancer. <i>Sci Rep</i> , 2020. 10(1): p. 3621.	Not relevant
Kalaitzopoulos, D.R., et al., Association between endometriosis and gynecological cancers: a critical review of the literature. <i>Arch Gynecol Obstet</i> , 2020. 301(2): p. 355-367.	Does not add further information in addition to the review by Kvaskoff 2020
Mandai, M., et al., Cancers associated with extraovarian endometriosis at less common/rare sites: A nationwide survey in Japan. <i>J Obstet Gynaecol Res</i> , 2020. 46(6): p. 917-923.	Extrapelvic endometriosis and risk of cancer
Poon, C. and R. Rome, Malignant extra-ovarian endometriosis: A case series of ten patients and review of the literature. <i>Aust N Z J Obstet Gynaecol</i> , 2020. 60(4): p. 585-591.	Extrapelvic endometriosis and risk of cancer
Udomsinklul, P., S. Triratanachart, and S. Oranratanaphan, Risk factors for endometriotic-cyst associated ovarian cancer: a case controlled study. <i>Taiwanese journal of obstetrics & gynecology</i> , 2020.	Not relevant
Yarmolinsky, J., et al., Appraising the role of previously reported risk factors in epithelial ovarian cancer risk: a Mendelian randomization analysis. <i>PLoS medicine</i> , 2019. 16(8): p. e1002893.	Not relevant
Zhang, Y. and P. Qu, Factors associated with ovarian endometriosis malignancy and its recurrence in Chinese women. <i>J Obstet Gynaecol</i> , 2019. 39(8): p. 1148-1153.	Not relevant



QUESTION X.1B WHAT INFORMATION COULD CLINICIANS PROVIDE TO WOMEN WITH ENDOMETRIOSIS REGARDING THEIR RISK OF DEVELOPING CANCER?

NARRATIVE QUESTION

Search strings : not applicable

This question is a narrative question. The section was prepared based on expert opinion and selected papers from the literature searches performed in this section (question X.1a).



QUESTION X.1c ARE SOMATIC MUTATIONS IN DEEP ENDOMETRIOSIS OF PATIENTS WITHOUT CANCER PREDICTIVE FOR OVARIAN CANCER DEVELOPMENT AND/OR PROGRESSION?

NARRATIVE QUESTION

Search strings : not applicable

This question is a narrative question. The section was prepared based on expert opinion and selected papers from the literature searches performed in this section (question X.1a).

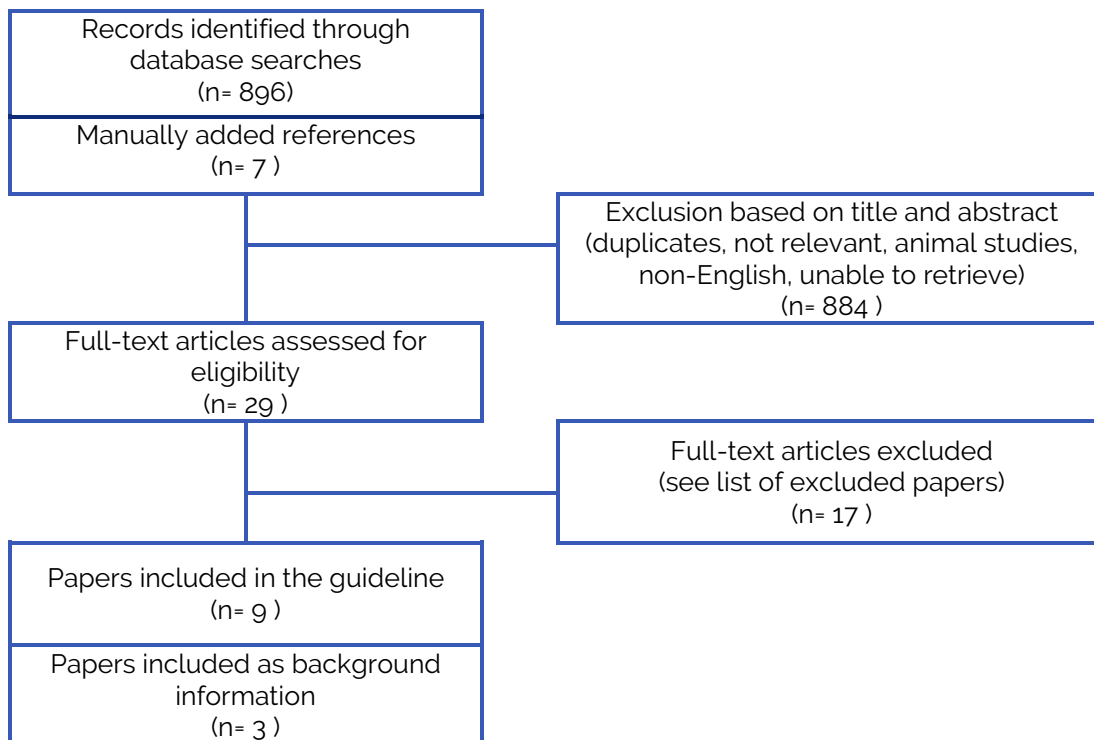


QUESTION X.1D DOES THE USE OF HORMONE TREATMENTS INCREASE THE RISK OF CANCER?

Search strings

DATABASE	Search string
PUBMED	("Endometriosis"[ti] OR "endometriotic"[ti] OR "endometrioma"[ti]) AND ("medical treatment" OR "hormonal treatment" OR "Gonadotropin-Releasing Hormone Agonist" OR "Gonadotropin-Releasing Hormone"[Mesh] OR "GnRH agonists" OR GnRHa OR "luteinizing hormone releasing hormone agonist" OR "LHRH agonist" OR "Gonadotrophin releasing hormone agonist" OR Leuprorelin OR "Leuprolide"[Mesh] OR leuprolide OR "leuprolide acetate" OR buserelin OR goserelin OR "Goserelin"[Mesh] OR Zoladex OR Nafarelin OR "Nafarelin"[Mesh] OR diphereline OR Triptorelin OR tryptorelin OR "Gonadotrophin releasing hormone antagonist" OR "GnRH antagonist" OR Cetrorelix OR Cetrotide OR Ganirelix OR Orgalutran OR Gestrinone OR "Gestrinone"[Mesh] OR "levonorgestrel-releasing intrauterine system" OR "levonorgestrel-releasing intrauterine device" OR Progestin OR "Progestins"[Mesh] OR Progesterone OR Progestagen OR Norethisterone OR Norethindrone OR "Norethindrone"[Mesh] OR "medroxy progesterone acetate" OR "medroxyprogesterone acetate" OR "Medroxyprogesterone Acetate"[Mesh] OR dydrogesterone OR "Dydrogesterone"[Mesh] OR dienogest OR Levonorgestrel OR "Levonorgestrel"[Mesh] OR Mirena Coil OR Norgestrel OR "Norgestrel"[Mesh] OR desogestrel OR "Desogestrel"[Mesh] OR cyproterone acetate OR "Cyproterone Acetate"[Mesh] OR "Aromatase Inhibitors"[Mesh] OR "aromatase inhibitor" OR Anastrozole OR letrozole OR exemestane OR "Contraceptives, Oral, Combined"[Mesh] OR Contraceptive OR "Contraceptive Agents"[Mesh] OR "Contraceptives, Oral"[Mesh]) AND ("Neoplasms"[Mesh] OR Cancer OR tumor OR neoplasm OR malignancy OR neoplasms) OR (("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND ("medical treatment" OR "hormonal treatment" OR "Gonadotropin-Releasing Hormone Agonist" OR "Gonadotropin-Releasing Hormone"[Mesh] OR "GnRH agonists" OR GnRHa OR "luteinizing hormone releasing hormone agonist" OR "LHRH agonist" OR "Gonadotrophin releasing hormone agonist" OR Leuprorelin OR "Leuprolide"[Mesh] OR leuprolide OR "leuprolide acetate" OR buserelin OR goserelin OR "Goserelin"[Mesh] OR Zoladex OR Nafarelin OR "Nafarelin"[Mesh] OR diphereline OR Triptorelin OR tryptorelin OR "Gonadotrophin releasing hormone antagonist" OR "GnRH antagonist" OR Cetrorelix OR Cetrotide OR Ganirelix OR Orgalutran OR Gestrinone OR "Gestrinone"[Mesh] OR "levonorgestrel-releasing intrauterine system" OR "levonorgestrel-releasing intrauterine device" OR Progestin OR "Progestins"[Mesh] OR Progesterone OR Progestagen OR Norethisterone OR Norethindrone OR "Norethindrone"[Mesh] OR "medroxy progesterone acetate" OR "medroxyprogesterone acetate" OR "Medroxyprogesterone Acetate"[Mesh] OR dydrogesterone OR "Dydrogesterone"[Mesh] OR dienogest OR Levonorgestrel OR "Levonorgestrel"[Mesh] OR Mirena Coil OR Norgestrel OR "Norgestrel"[Mesh] OR desogestrel OR "Desogestrel"[Mesh] OR cyproterone acetate OR "Cyproterone Acetate"[Mesh] OR "Aromatase Inhibitors"[Mesh] OR "aromatase inhibitor" OR Anastrozole OR letrozole OR exemestane OR "Contraceptives, Oral, Combined"[Mesh] OR Contraceptive OR "Contraceptive Agents"[Mesh] OR "Contraceptives, Oral"[Mesh]) AND (Cancer[ti] OR tumor[ti] OR neoplasm[ti] OR malignancy[ti] OR neoplasms[ti]))
COCHRANE	("Endometriosis" OR "endometriotic" OR "endometrioma") AND ("medical treatment" OR "hormonal treatment" OR "Gonadotropin-Releasing Hormone Agonist" OR "Gonadotropin-Releasing Hormone" OR "GnRH agonists" OR GnRHa OR "luteinizing hormone releasing hormone agonist" OR "LHRH agonist" OR "Gonadotrophin releasing hormone agonist" OR Leuprorelin OR "Leuprolide" OR leuprolide OR "leuprolide acetate" OR buserelin OR goserelin OR "Goserelin" OR Zoladex OR Nafarelin OR "Nafarelin" OR diphereline OR Triptorelin OR tryptorelin OR "Gonadotrophin releasing hormone antagonist" OR "GnRH antagonist" OR Cetrorelix OR Cetrotide OR Ganirelix OR Orgalutran OR Gestrinone OR "Gestrinone" OR "levonorgestrel-releasing intrauterine system" OR "levonorgestrel-releasing intrauterine device" OR Progestin OR "Progestins" OR Progesterone OR Progestagen OR Norethisterone OR Norethindrone OR "Norethindrone" OR "medroxy progesterone acetate" OR "medroxyprogesterone acetate" OR dydrogesterone OR dienogest OR Levonorgestrel OR Mirena Coil OR Norgestrel OR desogestrel OR cyproterone acetate OR "aromatase inhibitor" OR Anastrozole OR letrozole OR exemestane OR Contraceptive OR "Contraceptives") AND (Cancer OR tumor OR neoplasm OR malignancy OR neoplasms)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Campagnoli C, Ambroggio S, Lotano MR, Peris C. Progestogen use in women approaching the menopause and breast cancer risk. <i>Maturitas</i> 2009;62: 338-342.	Not relevant
Canda MT, Demir N, Sezer O, Doganay L. Successful treatment of advanced endometriosis with extremely high CA 125 and moderately elevated CA 15-3 levels. <i>Clin Exp Obstet Gynecol</i> 2008;35: 231-232.	Case report
Cottreau CM, Ness RB, Modugno F, Allen GO, Goodman MT. Endometriosis and its treatment with danazol or lupron in relation to ovarian cancer. <i>Clin Cancer Res</i> 2003;9: 5142-5144.	Does not focus on relevant hormonal treatments
Greer JB, Modugno F, Allen GO, Ness RB. Androgenic progestins in oral contraceptives and the risk of epithelial ovarian cancer. <i>Obstet Gynecol</i> 2005;105: 731-740.	Information available from reviews
Honda, M., et al., Significant risk factors for malignant transformation of ovarian endometrioma during dienogest treatment: a case report and retrospective study. <i>J Med Case Rep</i> , 2019. 13(1): p. 314.	Case report
Huang, T., et al., Reproductive and Hormonal Factors and Risk of Ovarian Cancer by Tumor Dominance: Results from the Ovarian Cancer Cohort Consortium (OC3). <i>Cancer Epidemiol Biomarkers Prev</i> , 2020. 29(1): p. 200-207.	Does not add to the body of evidence
Kim JJ, Kurita T, Bulun SE. Progesterone action in endometrial cancer, endometriosis, uterine fibroids, and breast cancer. <i>Endocr Rev</i> 2013;34: 130-162.	Not relevant
Lyttle B, Bernardi L, Pavone ME. Ovarian cancer in endometriosis: clinical and molecular aspects. <i>Minerva Ginecol</i> 2014;66: 155-164.	Not relevant (clinical and molecular aspects)
Modugno F, Ness RB, Allen GO, Schildkraut JM, Davis FG, Goodman MT. Oral contraceptive use, reproductive history, and risk of epithelial ovarian cancer in women with and without endometriosis. <i>Am J Obstet Gynecol</i> 2004;191: 733-740.	Information available from reviews
Noel JC, Anaf V, Fayt I, Wespes E. Ureteral mullerian carcinosarcoma (mixed mullerian tumor) associated with endometriosis occurring in a patient with a concentrated soy isoflavones supplementation. <i>Arch Gynecol Obstet</i> 2006;274: 389-392.	Does not focus on relevant hormonal treatments
Pokieser W, Schmerker R, Kisser M, Peters-Engl C, Muhlbauer H, Ulrich W. Clear cell carcinoma arising in endometriosis of the rectum following progestin therapy. <i>Pathol Res Pract</i> 2002;198: 121-124.	Case report
Purdie DM, Bain CJ, Siskind V, Russell P, Hacker NF, Ward BG, Quinn MA, Green AC. Hormone replacement therapy and risk of epithelial ovarian cancer. <i>Br J Cancer</i> 1999;81: 559-563.	Not on endometriosis
Rozenberg S, Antoine C, Vandromme J, Fastrez M. Should we abstain from treating women with endometriosis using menopausal hormone therapy, for fear of an increased ovarian cancer risk? <i>Climacteric</i> 2015;18: 448-452.	Does not address the key question
Stewart LM, Holman CD, Aboagye-Sarfo P, Finn JC, Preen DB, Hart R. In vitro fertilization, endometriosis, nulliparity and ovarian cancer risk. <i>Gynecol Oncol</i> 2013;128: 260-264.	More appropriate studies available
Takai Y, Tsutsumi O, Momoeda M, Osuga Y, Sadatsuki M, Kaibara M, Taketani Y. Non-functioning pituitary tumour after long-term treatment with gonadotrophin-releasing hormone agonists in a patient with vaginal agenesis who underwent neovaginoplasty and cauterization of endometriosis under laparoscopy. <i>Hum Reprod</i> 1999;14: 2661-2664.	Case report
Taniguchi F, Higaki H, Azuma Y, Deura I, Iwabe T, Harada T, Terakawa N. Gonadotropin-releasing hormone analogues reduce the proliferation of endometrial stromal cells but not endometriotic cells. <i>Gynecol Obstet Invest</i> 2013;75: 9-15.	Does not address the key question
Weideman M. Danazol linked to ovarian cancer. <i>Lancet Oncol</i> 2002;3: 261.	Does not focus on relevant hormonal treatments
Yoshino O, Minamisaka T, Ono Y, Tsuda S, Samejima A, Shima T, Nakashima A, Koga K, Osuga Y, Saito S. Three cases of clear-cell adenocarcinoma arising from endometrioma during hormonal treatments. <i>J Obstet Gynaecol Res</i> 2018;44: 1850-1858.	Case report
Yucel N, Baskent E, Karamustafaoglu Balci B, Goynumer G. The levonorgestrel-releasing intrauterine system is associated with a reduction in dysmenorrhoea and dyspareunia, a decrease in CA 125 levels, and an increase in quality of life in women with suspected endometriosis. <i>Aust N Z J Obstet Gynaecol</i> 2018;58: 560-563.	Does not address the key question
Zanetta GM, Webb MJ, Li H, Keeney GL. Hyperestrogenism: a relevant risk factor for the development of cancer from endometriosis. <i>Gynecol Oncol</i> 2000;79: 18-22.	Not relevant

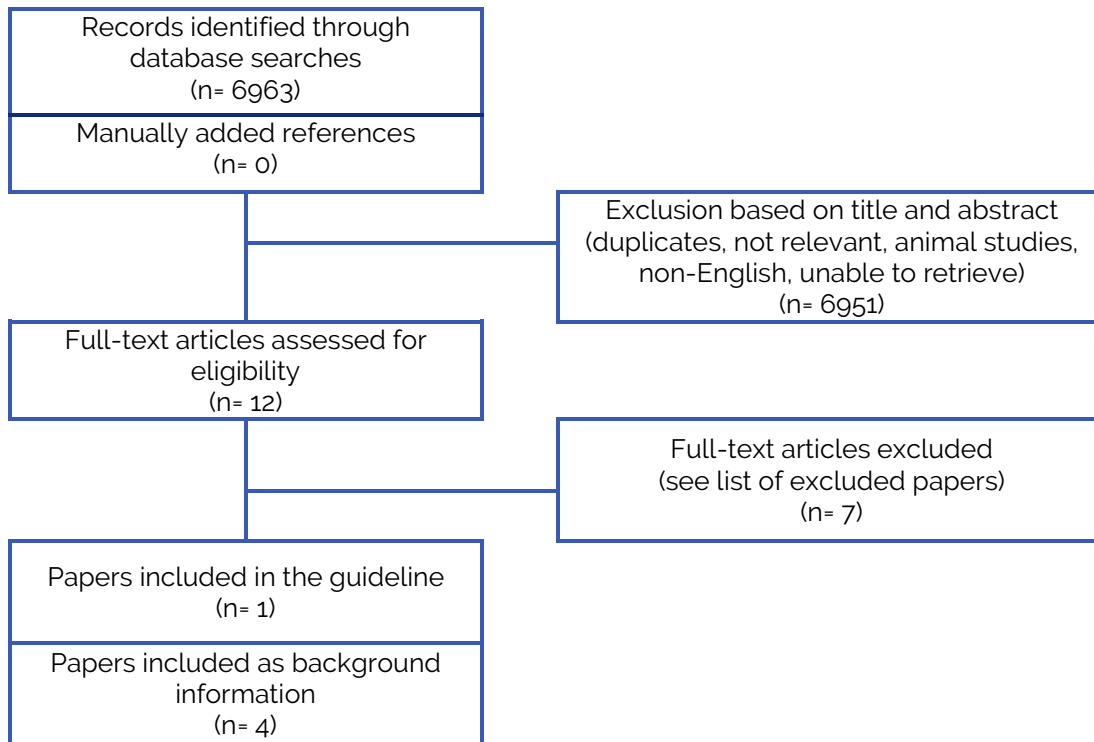


QUESTION X.2 SHOULD WOMEN WITH ENDOMETRIOSIS BE MONITORED FOR DETECTION OF MALIGNANCY?

Search strings

DATABASE	Search string
PUBMED	See question X.1a (identical search term, different selection of papers)
COCHRANE	See question X.1a (identical search term, different selection of papers)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Lee, Y.J., et al., Comparison of Risk of Ovarian Malignancy Algorithm and cancer antigen 125 to discriminate between benign ovarian tumor and early-stage ovarian cancer according to imaging tumor subtypes. <i>Oncol Lett</i> , 2020. 20(1): p. 931-938.	Not relevant
Murakami, K., et al., Endometriosis-associated ovarian cancer occurs early during follow-up of endometrial cysts. <i>Int J Clin Oncol</i> , 2020. 25(1): p. 51-58.	Not monitoring for detection of malignancy
Ñíguez Sevilla, I., et al., Prognostic importance of atypical endometriosis with architectural hyperplasia versus cytologic atypia in endometriosis-associated ovarian cancer. <i>J Gynecol Oncol</i> , 2019. 30(4): p. e63.	Subpopulation for screening
Nishio, N., et al., Longitudinal changes in magnetic resonance imaging of malignant and borderline tumors associated with ovarian endometriotic cyst comparing with endometriotic cysts without arising malignancy. <i>European journal of radiology</i> , 2018. 105: p. 175-181.	Subpopulation for screening
Robinson, K.A., et al., Understanding malignant transformation of endometriosis: imaging features with pathologic correlation. <i>Abdom Radiol (NY)</i> , 2020. 45(6): p. 1762-1775.	Subpopulation for screening
Shin, K.H., et al., Clinical Usefulness of Cancer Antigen (CA) 125, Human Epididymis 4, and CA72-4 Levels and Risk of Ovarian Malignancy Algorithm Values for Diagnosing Ovarian Tumors in Korean Patients With and Without Endometriosis. <i>Ann Lab Med</i> , 2020. 40(1): p. 40-47.	Not relevant
Virgilio, B.A., et al., Endometrioid borderline ovarian tumor arising from endometriotic cyst: short-term change of sonographic appearance. <i>Ultrasound Obstet Gynecol</i> , 2020. 55(5): p. 692-694.	Not monitoring for detection of malignancy

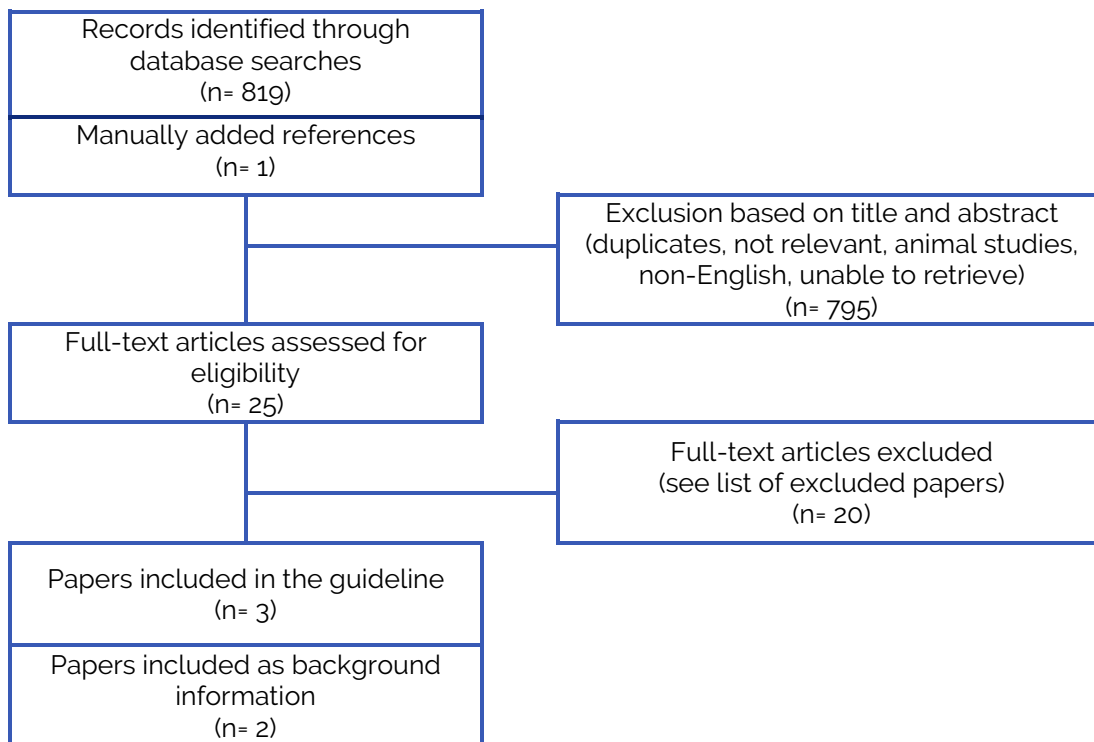


QUESTION X.3 DOES SURGERY FOR ENDOMETRIOSIS CHANGE THE FUTURE RISK OF CANCER?

Search strings

DATABASE	Search string
PUBMED	("Endometriosis"[Mesh] OR "Endometriosis" OR "endometriotic" OR "endometrioma") AND ("surgical treatment" OR "surgery" [Subheading] OR surgery OR surgical OR "Laparoscopy"[Mesh] OR laparoscopy OR laparoscopic OR Hysterectomy OR "Hysterectomy"[Mesh] OR Oophorectomy OR "Salpingo-oophorectomy"[Mesh] OR "Ovariectomy"[Mesh]) AND (Cancer[ti] OR tumor[ti] OR neoplasms[ti] OR malignancy[ti] OR neoplasms[ti])
COCHRANE	("Endometriosis" OR "endometriotic" OR "endometrioma") AND ("surgical treatment" OR surgery OR surgical OR laparoscopy OR laparoscopic OR Hysterectomy OR Oophorectomy OR "Salpingo-oophorectomy" OR "Ovariectomy") AND (Cancer OR tumor OR neoplasm OR malignancy OR neoplasms)

Flowchart





List of excluded papers

Reference	Exclusion criterium
Alio L, Angioni S, Arena S, Bartiromo L, Bergamini V, Berlanda N, Bonanni V, Bonin C, Buggio L, Candiani M et al. Endometriosis: seeking optimal management in women approaching menopause. <i>Climacteric</i> 2019: 1-10.	Does not address the PICO question
Bertelsen L, Møllekjær L, Frederiksen K, Kjaer SK, Brinton LA, Sakoda LC, van Valkengoed I, Olsen JH. Risk for breast cancer among women with endometriosis. <i>Int J Cancer</i> 2007;120: 1372-1375.	Outcome is breast cancer
Borgfeldt C, Andolf E. Cancer risk after hospital discharge diagnosis of benign ovarian cysts and endometriosis. <i>Acta Obstet Gynecol Scand</i> 2004;83: 395-400.	Does not address the PICO question
Chao, X., et al., Malignant risk of pelvic mass after hysterectomy for adenomyosis or endometriosis. <i>Medicine (Baltimore)</i> , 2020. 99(15): p. e19712.	Intervention is hysterectomy
Dixon-Suen SC, Webb PM, Wilson LF, Tulesky K, Stewart LM, Jordan SJ. The Association between hysterectomy and ovarian cancer risk: A population-based record-linkage study. <i>J Natl Cancer Inst</i> 2019.	Intervention is hysterectomy
Guenego A, Mesrine S, Dartois L, Leenhardt L, Clavel-Chapelon F, Kvaskoff M, Boutron-Ruault MC, Bonnet F. Relation between hysterectomy, oophorectomy and the risk of incident differentiated thyroid cancer: The E3N cohort. <i>Clin Endocrinol (Oxf)</i> 2019;90: 360-368.	Outcome is thyroid cancer risk
Guo SW. Endometriosis and ovarian cancer: potential benefits and harms of screening and risk-reducing surgery. <i>Fertil Steril</i> 2015;104: 813-830.	Proper review, but relevant studies were separately included in the guideline
Hart RJ, Hickey M, Maouris P, Buckett W. Excisional surgery versus ablative surgery for ovarian endometriomata. <i>Cochrane Database of Systematic Reviews</i> 2008.	Outcome is not cancer
Madsen C, Baandrup L, Dehlendorff C, Kjaer S. Tubal ligation and salpingectomy and the risk of epithelial ovarian cancer and borderline ovarian tumors: a nationwide case-control study. <i>Acta obstetrica ET gynecologica scandinavica</i> 2015;94: 86-94.	Intervention is tubal ligation and salpingectomy
Mahnert N, Morgan D, Campbell D, Johnston C, As-Sanie S. Unexpected gynecologic malignancy diagnosed after hysterectomy performed for benign indications. <i>Obstet Gynecol</i> 2015;125: 397-405.	looks at unexpected malignancy in those who underwent hysterectomy
Mallen A, Soong TR, Townsend MK, Wenham RM, Crum CP, Tworoger SS. Surgical prevention strategies in ovarian cancer. <i>Gynecol Oncol</i> 2018;151: 166-175.	Not specific for endometriosis
Nichols HB, Visvanathan K, Newcomb PA, Hampton JM, Egan KM, Titus-Ernstoff L, Trentham-Dietz A. Bilateral oophorectomy in relation to risk of postmenopausal breast cancer: confounding by nonmalignant indications for surgery? <i>Am J Epidemiol</i> 2011;173: 1111-1120.	Outcome is breast cancer risk
Saavalainen L, Lassus H, But A, Tiitinen A, Harkki P, Gissler M, Pukkala E, Heikinheimo O. A cohort study of 49 933 women with surgically verified endometriosis: Increased incidence of breast cancer below the age of 40. <i>Acta Obstet Gynecol Scand</i> 2019.	Outcome is breast cancer
Schairer C, Persson I, Falkeborn M, Naessen T, Troisi R, Brinton LA. Breast cancer risk associated with gynecologic surgery and indications for such surgery. <i>Int J Cancer</i> 1997;70: 150-154.	Outcome is breast cancer risk
Soliman NF, Evans AJ. Malignancy arising in residual endometriosis following hysterectomy and hormone replacement therapy. <i>J Br Menopause Soc</i> 2004;10: 123-124.	Intervention is hysterectomy
Taniguchi F, Harada T, Kobayashi H, Hayashi K, Momoeda M, Terakawa N. Clinical characteristics of patients in Japan with ovarian cancer presumably arising from ovarian endometrioma. <i>Gynecol Obstet Invest</i> 2014;77: 104-110.	Does not address the PICO question
Vercellini P, Vigano P, Buggio L, Makieva S, Scarfone G, Cribiu FM, Parazzini F, Somigliana E. Perimenopausal management of ovarian endometriosis and associated cancer risk: When is medical or surgical treatment indicated? <i>Best Pract Res Clin Obstet Gynaecol</i> 2018;51: 151-168.	Does not address the PICO question
Vitonis AF, Titus-Ernstoff L, Cramer DW. Assessing ovarian cancer risk when considering elective oophorectomy at the time of hysterectomy. <i>Obstet Gynecol</i> 2011;117: 1042-1050.	Intervention is hysterectomy
Wang C, Liang Z, Liu X, Zhang Q, Li S. The Association between Endometriosis, Tubal Ligation, Hysterectomy and Epithelial Ovarian Cancer: Meta-Analyses. <i>Int J Environ Res Public Health</i> 2016;13.	Doesn't look at surgery for endometriosis
Women who have undergone endometriosis surgery have a reduced risk of ovarian cancer. <i>Nurs Stand</i> 2013;27: 14.	Not an original study