Annex 2: Summary of findings tables

EXPLANATIONS

GRADE Working Group grades of evidence
High quality: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate quality: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low quality: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low quality: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

CI: Confidence Interval; **RR:** Risk Ratio; **OR:** Odds ratio

SUMMARY OF FINDINGS TABLES 1 – 51

1 Pre-treatment with oestradiol compared to no intervention in GnRH antagonist cycles

Patient or population: women undergoing OS for IVF/ICSI
Intervention: pre-treatment with oestradiol in GnRH antagonist cycles
Comparison: no intervention

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no intervention	Risk with pre-treatment with oestradiol				
Cumulative LBR						Not reported
LBR/ongoing PR (Farquhar, et al., 2017)	299 per 1,000	**252 per 1,000** (185 to 333)	**OR 0.79** (0.53 to 1.17)	502 (2 RCTs)	⨁⨁◯◯ LOW [a,b,c]	
OHSS (Shahrokh Tehrani Nejad, et al., 2018)	0 per 1,000	**0 per 1,000** (0 to 0)	not estimable	133 (1 RCT)	⨁◯◯◯ VERY LOW [b,d,e]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. High risk of bias associated with poor reporting of methods in one or more primary studies.
b. Small number of events.
c. The pooled effect included the line of no effect
d. Serious risk of bias because of 24% of patients lost to follow-up in the study group.
e. Serious inconsistency because only 1 RCT.

2a Pre-treatment with progesterone compared to placebo or no intervention in GnRH agonist cycles

Patient or population: women undergoing OS for IVF/ICSI
Intervention: pre-treatment with progesterone in GnRH agonist cycles
Comparison: placebo or no intervention

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with placebo or no intervention	Risk with pre-treatment with progesterone				
Cumulative LBR						Not reported
LBR/ ongoing PR *(GnRH agonist cycles)* (Farquhar, et al., 2017)	170 per 1,000	**216 per 1,000** (124 to 351)	**OR 1.35** (0.69 to 2.65)	222 (2 RCTs)	⊕⊕◯◯ LOW [a,b,c]	
LBR/ ongoing PR *(GnRH antagonist cycles)* (Farquhar, et al., 2017)	292 per 1,000	**216 per 1,000** (69 to 511)	**OR 0.67** (0.18 to 2.54)	47 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c,d]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. High risk of bias associated with poor reporting of methods in the primary studies.
b. Small number of events
c. The pooled effect included the line of no effect
d. Serious inconsistency because only 1 RCT

2b Pre-treatment with progesterone compared to placebo or no treatment in GnRH antagonist cycles

Patient or population: women undergoing OS for IVF/ICSI
Intervention: pre-treatment with progesterone in GnRH antagonist cycles
Comparison: placebo or no treatment

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with placebo or no treatment	Risk with pre-treatment with progesterone				
Cumulative LBR						Not reported
LBR/ongoing PR (Farquhar, et al., 2017)	292 per 1,000	**216 per 1,000** (69 to 511)	**OR 0.67** (0.18 to 2.54)	47 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c,d]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. High risk of bias associated with poor reporting of methods in one or more of the primary studies.
b. Serious inconsistency because only 1 RCT.
c. Very small number of events.
d. Wide confidence interval, which crosses the line of no effect and appreciable benefit or harm.

3a Pre-treatment with combined contraceptives compared to no intervention in GnRH antagonist cycles

Patient or population: women undergoing OS for IVF/ICSI
Intervention: pre-treatment with combined contraceptives in GnRH antagonist cycles
Comparison: no intervention

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no intervention	Risk with pre-treatment with COCP				
Cumulative LBR						Not reported
LBR/ongoing PR (Farquhar, et al., 2017)	270 per 1,000	**215 per 1,000** (177 to 260)	**OR 0.74** (0.58 to 0.95)	1335 (6 RCTs)	⊕⊕⊕◯ MODERATE [a]	
OHSS (Farquhar, et al., 2017)	16 per 1,000	**16 per 1,000** (4 to 52)	**OR 0.98** (0.28 to 3.40)	642 (2 RCTs)	⊕⊕◯◯ LOW [a,b,c]	
OHSS (Shahrokh Tehrani Nejad, et al., 2018)	0 per 1,000	**0 per 1,000** (0 to 0)	not estimable	123 (1 RCT)	⊕◯◯◯ VERY LOW [b,d,e]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to poor reporting of sequence generation and allocation concealment.
b. Small number of events.
c. The pooled effect included the line of no effect
d. Serious risk of bias due to 24% lost to follow-up in the study group
e. Serious inconsistency because only 1 RCT

3b Pre-treatment with combined contraceptives compared to no pre-treatment in poor responders

Patient or population: poor responder women undergoing OS for IVF/ICSI
Intervention: pre-treatment with combined contraceptives
Comparison: no pre-treatment

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no pre-treatment	Risk with pre-treatment with combined contraceptives				
Cumulative LBR						Not reported
Live birth rate (Farquhar, et al., 2017)	200 per 1,000	**0 per 1,000** (0 to 0)	not estimable	80 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of performance bias
b. Serious inconsistency because only 1 RCT
c. Small number of events

4a Pre-treatment with GnRH antagonist compared to no pre-treatment in GnRH antagonist protocols

Patient or population: women undergoing OS for IVF/ICSI
Intervention: pre-treatment with GnRH antagonist
Comparison: no pre-treatment

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no pre-treatment	Risk with pre-treatment with GnRH antagonist				
Cumulative LBR						Not reported
Ongoing PR (Blockeel, et al., 2011)	333 per 1,000	**0 per 1,000** (0 to 0)	not estimable	69 (1 RCT)	⊕⊕◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious inconsistency because only 1 RCT
b. Small number of events

4b Pre-treatment with GnRH antagonist compared to no pre-treatment in GnRH antagonist protocols in poor responders

Patient or population: poor responder women undergoing OS for IVF/ICSI
Intervention: pre-treatment with GnRH antagonist
Comparison: no pre-treatment

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no pre-treatment	Risk with pre-treatment with GnRH antagonist				
Cumulative LBR						Not reported
Live birth rate (DiLuigi, et al., 2011)	250 per 1,000	**0 per 1,000** (0 to 0)	not estimable	54 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Clinical PR (Maged, et al., 2015)	100 per 1,000	**0 per 1,000** (0 to 0)	not estimable	160 (1 RCT)	⊕◯◯◯ VERY LOW [b,c,d]	
Clinical PR (Aflatoonian, et al., 2017)	33 per 1,000	**0 per 1,000** (0 to 0)	not estimable	60 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to poor reporting of methodology
b. Serious inconsistency because only 1 RCT
c. Small number of events
d. Serious risk of performance bias

5 GnRH antagonist compared to long GnRH agonist for LH suppression in high responders

Patient or population: high responder women undergoing OS for IVF/ICSI
Intervention: GnRH antagonist protocol
Comparison: long GnRH agonist protocol

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with long GnRH agonist	Risk with GnRH antagonist				
Cumulative LBR						Not reported
Live birth rate (Lambalk, et al., 2017)	387 per 1,000	**348 per 1,000** (267 to 460)	**RR 0.90** (0.69 to 1.19)	363 (3 RCTs)	⊕⊕◯◯ LOW [a,b]	
OHSS (Lambalk, et al., 2017)	124 per 1,000	**66 per 1,000** (37 to 118)	**RR 0.53** (0.30 to 0.95)	1294 (9 RCTs)	⊕⊕◯◯ LOW [c,d]	
OHSS (Trenkic, et al., 2016)	156 per 1,000	**0 per 1,000** (0 to 0)	not estimable	90 (1 RCT)	⊕◯◯◯ VERY LOW [b,e,f]	
Moderate/severe OHSS (Shin, et al., 2018)	273 per 1,000	**0 per 1,000** (0 to 0)	not estimable	22 (1 RCT)	⊕◯◯◯ VERY LOW [b,f,g]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. The pooled effect included the line of no effect
b. Small number of events
c. Serious risk of bias due to poor reporting of methodology in primary studies
d. Small number of events, wide confidence intervals
e. Serious risk of performance and detection bias
f. Serious inconsistency because only 1 RCT
g. Risk of performance bias.

6 Reduced-dose gonadotropin compared to conventional gonadotropin dose in high responders

Patient or population: high responder women undergoing OS for IVF/ICSI
Intervention: reduced-dose gonadotropin
Comparison: conventional gonadotropin dose

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with conventional gonadotropin dose	Risk with reduced-dose gonadotropin				
Cumulative LBR (Oudshoorn, et al., 2017)	695 per 1,000	**663 per 1,000** (591 to 744)	**RR 0.953** (0.850 to 1.070)	521 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Severe OHSS (Oudshoorn, et al., 2017)	11 per 1,000	**0 per 1,000** (0 to 0)	not estimable	519 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,d]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of performance bias
b. Serious inconsistency because only 1 RCT
c. The pooled effect included the line of no effect
d. Small event rate

7 GnRH antagonist compared to long GnRH agonist for LH suppression in normal responders

Patient or population: normal responder women undergoing OS for IVF/ICSI
Intervention: GnRH antagonist protocol
Comparison: long GnRH agonist protocol

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with long GnRH agonist	Risk with GnRH antagonist				
Cumulative LBR						Not reported
Live birth rate (Lambalk, et al., 2017)	241 per 1,000	**219 per 1,000** (190 to 251)	**RR 0.91** (0.79 to 1.04)	2590 (10 RCTs)	⊕⊕◯◯ LOW [a,b]	
OHSS (Lambalk, et al., 2017)	62 per 1,000	**39 per 1,000** (31 to 50)	**RR 0.63** (0.50 to 0.81)	5598 (22 RCTs)	⊕⊕⊕◯ MODERATE [a]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to poor reporting of methodology
b. The pooled effect included both the line of no effect and appreciable benefit or harm

8 Letrozole in stimulation protocol for IVF/ICSI in normal responders

Patient or population: normal responder women undergoing OS for IVF/ICSI
Intervention: letrozole addition to gonadotropins
Comparison: gonadotropins alone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no letrozole	Risk with letrozole				
Cumulative LBR						Not reported
Ongoing PR (Verpoest, et al., 2006)	200 per 1,000	**0 per 1,000** (0 to 0)	not estimable	20 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Clinical pregnancy rate (Mukherjee, et al., 2012)	327 per 1,000	**0 per 1,000** (0 to 0)	not estimable	94 (1 RCT)	⊕◯◯◯ VERY LOW [b,c,d]	
OHSS (Mukherjee, et al., 2012)	135 per 1,000	**0 per 1,000** (0 to 0)	not estimable	94 (1 RCT)	⊕◯◯◯ VERY LOW [b,c,d]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of performance bias
b. Serious inconsistency because only 1 RCT
c. Small number of events
d. Serious risk of bias due to incomplete reporting of methodology

9a Reduced FSH dose compared to conventional gonadotropin dose in normal responders

Patient or population: normal responder women undergoing OS for IVF/ICSI
Intervention: reduced gonadotropin dose
Comparison: conventional gonadotropin dose

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with normal FSH dose	Risk with reduced FSH dose				
Cumulative LBR						Not reported
OHSS (Sterrenburg, et al., 2011)	0 per 1,000	**0 per 1,000** (0 to 0)	**OR 0.58** (0.18 to 1.90)	(5 RCTs)	⨁⨁◯◯ LOW [a,b]	
Clinical pregnancy rate (Sterrenburg, et al., 2011)	0 per 1,000	**0 per 1,000** (0 to 0)	**OR 0.95** (0.69 to 1.30)	(5 RCTs)	⨁⨁◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to poor reporting of methodology
b. The pooled effect included both the line of no effect and appreciable benefit or harm

9b Late-start FSH compared to conventional start gonadotropin in normal responders

Patient or population: normal responder women undergoing OS for IVF/ICSI
Intervention: late-start gonadotropin
Comparison: conventional start gonadotropin

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with conventional start FSH	Risk with late-start FSH				
Cumulative LBR						Not reported
Ongoing PR (Baart, et al., 2007)	171 per 1,000	**0 per 1,000** (0 to 0)	not estimable	104 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	
Ongoing PR (Blockeel, et al., 2011)	278 per 1,000	**0 per 1,000** (0 to 0)	not estimable	76 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	
Ongoing PR (Hohmann, et al., 2003)	167 per 1,000	**0 per 1,000** (0 to 0)	not estimable	97 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of performance bias
b. Serious inconsistency because only one RCT
c. Low number of events

10a GnRH antagonist compared to long GnRH agonist for LH suppression in low responders

Patient or population: low responder women undergoing OS for IVF/ICSI
Intervention: GnRH antagonist
Comparison: long GnRH agonist

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with long GnRH agonist	Risk with GnRH antagonist				
Cumulative LBR						Not reported
Live birth rate (Lambalk, et al., 2017)	238 per 1,000	**212 per 1,000** (133 to 336)	**RR 0.89** (0.56 to 1.41)	544 (3 RCTs)	⊕⊕◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to poor reporting of methodology in primary studies
b. The pooled effect included both the line of no effect and appreciable benefit or harm

10b GnRH antagonist compared to short GnRH agonist for LH suppression in low responders

Patient or population: low responder women undergoing OS for IVF/ICSI
Intervention: GnRH antagonist
Comparison: short GnRH agonist

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with short GnRH agonist	Risk with GnRH antagonist				
Cumulative LBR						Not reported
Clinical pregnancy rate (Xiao, et al., 2013)	148 per 1,000	**187 per 1,000** (132 to 258)	**OR 1.33** (0.88 to 2.01)	735 (7 RCTs)	⊕⊕◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to poor reporting of methodology in primary studies
b. The pooled effect included both the line of no effect and appreciable benefit or harm

11a Clomiphene citrate compared to FSH for ovarian stimulation in low responders

Patient or population: low responder women undergoing OS for IVF/ICSI
Intervention: clomiphene citrate
Comparison: FSH

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with FSH	Risk with clomiphene citrate				
Cumulative LBR						Not reported
Live birth rate (Ragni, et al., 2012)	48 per 1,000	**35 per 1,000** (11 to 106)	**RR 0.72** (0.23 to 2.21)	291 (1 RCT)	⊕⊕◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious inconsistency because only 1 RCT
b. Very small number of events, wide confidence interval

11b Clomiphene citrate in stimulation protocols for low responders

Patient or population: low responder women undergoing OS for IVF/ICSI
Intervention: clomiphene citrate addition to gonadotropins
Comparison: no clomiphene citrate

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no clomiphene citrate	Risk with clomiphene citrate				
Cumulative LBR						Not reported
Live birth rate (Bechtejew, et al., 2017)	131 per 1,000	**115 per 1,000** (81 to 164)	**RR 0.88** (0.62 to 1.26)	874 (3 RCTs)	⊕⊕◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to poor reporting of methodology in primary studies
b. The pooled effect included both the line of no effect and appreciable benefit or harm

12 Letrozole in stimulation protocols for low responders

Patient or population: low responder women undergoing OS for IVF/ICSI
Intervention: letrozole addition to gonadotropins
Comparison: gonadotropins alone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no letrozole	Risk with letrozole				
Cumulative LBR						Not reported
Clinical pregnancy rate (Bechtejew, et al., 2017)	152 per 1,000	**143 per 1,000** (65 to 309)	**RR 0.94** (0.43 to 2.03)	155 (2 RCTs)	⊕⊕◯◯ LOW [a,b]	
Clinical pregnancy rate (Ebrahimi, et al., 2017)	114 per 1,000	**0 per 1,000** (0 to 0)	not estimable	70 (1 RCT)	⊕⊕◯◯ LOW [c,d]	
Clinical pregnancy rate (Eftekhar, et al., 2014)	88 per 1,000	**0 per 1,000** (0 to 0)	not estimable	167 (1 RCT)	⊕◯◯◯ VERY LOW [c,d,e]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. The pooled effect included both the line of no effect and appreciable benefit or harm
b. Very low number of events, wide confidence intervals
c. Serious inconsistency because only 1 RCT
d. Low number of events
e. Serious risk of performance and attrition bias

13 150 IU compared to 300/450 IU for low responder women

Patient or population: low responder women undergoing OS for IVF/ICSI
Intervention: 150IU dose gonadotropins
Comparison: 300/450IU dose gonadotropins

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with 300/450IU	Risk with 150IU				
Cumulative LBR						Not reported
LBR/ongoing PR (Lensen, et al., 2017)	109 per 1,000	**80 per 1,000** (38 to 162)	**OR 0.71** (0.32 to 1.58)	286 (2 RCTs)	⊕⊕◯◯ LOW [a,b]	
OHSS (Lensen, et al., 2017)	0 per 1,000	**0 per 1,000** (0 to 0)	not estimable	286 (2 RCTs)	⊕⊕◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **OR:** Odds ratio

a. Serious risk of bias due to incomplete reporting of methodology in individual studies
b. The pooled effect included both the line of no effect and appreciable benefit or harm

14a 300 IU compared to 400/450 IU for low responder women

Patient or population: low responder women undergoing OS for IVF/ICSI
Intervention: 300IU dose gonadotropins
Comparison: 400/450IU dose gonadotropins

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with 400/450IU	Risk with 300IU				
Cumulative LBR						Not reported
Ongoing PR (Lensen, et al., 2017)	161 per 1,000	**129 per 1,000** (35 to 380)	**OR 0.77** (0.19 to 3.19)	62 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
OHSS (Lensen, et al., 2017)	0 per 1,000	**0 per 1,000** (0 to 0)	not estimable	62 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to incomplete reporting of methodology
b. Serious inconsistency because only 1 RCT
c. The pooled effect included both the line of no effect and appreciable benefit or harm

14b 450IU compared to 600IU for low responder women

Patient or population: low responder women undergoing OS for IVF/ICSI
Intervention: 450IU dose gonadotropins
Comparison: 600IU dose gonadotropins

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with 600IU	Risk with 450IU				
Cumulative LBR						Not reported
Live birth rate (Lensen, et al., 2017)	108 per 1,000	**139 per 1,000** (79 to 234)	**OR 1.33** (0.71 to 2.52)	356 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
OHSS (Lensen, et al., 2017)	0 per 1,000	**0 per 1,000** (0 to 0)	**OR 7.23** (0.14 to 364.29)	356 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to incomplete reporting of methodology
b. Serious inconsistency because only 1 RCT
c. The pooled effect included both the line of no effect and appreciable benefit or harm

15 Modified natural cycle compared to standard stimulation protocol in poor responders

Patient or population: low responder women undergoing OS for IVF/ICSI
Intervention: modified natural cycle
Comparison: standard stimulation protocol

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with standard stimulation protocol	Risk with modified natural cycle				
Cumulative LBR						Not reported
Pregnancy rate (Morgia, et al., 2004)	69 per 1,000	**0 per 1,000** (0 to 0)	not estimable	215 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to poor reporting of methodology
b. Serious inconsistency because only 1 RCT
c. Small number of events

16a Long versus short GnRH agonist protocol for LH surge suppression

Patient or population: women undergoing OS for IVF/ICSI
Intervention: long GnRH agonist protocol
Comparison: short GnRH agonist protocol

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with short GnRH agonist protocol	Risk with long GnRH agonist protocol				
Cumulative LBR						Not reported
Live birth rate (Siristatidis, et al., 2015)	134 per 1,000	**199 per 1,000** (116 to 320)	**OR 1.60** (0.85 to 3.03)	295 (4 RCTs)	⊕⊕◯◯ LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. High risk of bias associated with poor reporting of methods in the primary studies.
b. Small number of events.
c. The pooled effect included both the line of no effect and appreciable benefit or harm

16b Long GnRH agonist protocol compared to ultrashort GnRH agonist protocol for LH surge suppression

Patient or population: women undergoing OS for IVF/ICSI
Intervention: long GnRH agonist protocol
Comparison: ultrashort GnRH agonist protocol

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with ultrashort GnRH agonist protocol	Risk with Long GnRH agonist protocol				
Cumulative LBR						Not reported
LBR/ongoing PR (Siristatidis, et al., 2015)	122 per 1,000	**198 per 1,000** (91 to 376)	**OR 1.78** (0.72 to 4.36)	150 (1 RCT)	⊕⊕◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious inconsistency because only 1 RCT.
b. 1 RCT, very small number of patients.

16c Short GnRH agonist protocol compared to ultrashort GnRH agonist protocol for LH surge suppression

Patient or population: women undergoing OS for IVF/ICSI
Intervention: short GnRH agonist protocol
Comparison: ultrashort GnRH agonist protocol

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with ultrashort GnRH agonist protocol	Risk with short GnRH agonist protocol				
Cumulative LBR						Not reported
Clinical PR (Siristatidis, et al., 2015)	195 per 1,000	**244 per 1,000** (102 to 480)	**OR 1.33** (0.47 to 3.81)	82 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious inconsistency because only 1 RCT.
b. Very low number of events.
c. Wide confidence interval, which crosses the line of no effect.

17a Long GnRH agonist compared to GnRH antagonist protocol for LH surge suppression

Patient or population: women undergoing OS for IVF/ICSI
Intervention: long GnRH agonist protocol
Comparison: GnRH antagonist protocol

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with GnRH antagonist protocol	Risk with long GnRH agonist protocol				
Cumulative LBR (Al-Inany, et al., 2016)						Not reported
Cumulative LBR (Toftager, et al., 2017)	341 per 1,000	**371 per 1,000** (313 to 434)	**OR 1.14** (0.88 to 1.48)	1050 (1 RCT)	⊕⊕◯◯ LOW [a,b]	
Live birth rate (Al-Inany, et al., 2016)	286 per 1,000	**290 per 1,000** (254 to 330)	**OR 1.02** (0.85 to 1.23)	2303 (12 RCTs)	⊕⊕⊕◯ MODERATE [a]	
Live birth rate (Toftager, et al., 2016)	222 per 1,000	**0 per 1,000** (0 to 0)	not estimable	1023 (1 RCT)	⊕⊕◯◯ LOW [b,c]	
OHSS (Al-Inany, et al., 2016)	114 per 1,000	**73 per 1,000** (62 to 85)	**OR 0.61** (0.51 to 0.72)	7944 (36 RCTs)	⊕⊕⊕◯ MODERATE [d]	
Moderate/severe OHSS (Al-Inany, et al., 2016)	71 per 1,000	**39 per 1,000** (30 to 50)	**OR 0.53** (0.40 to 0.69)	5141 (20 RCTs)	⊕⊕◯◯ LOW [d,e]	
Severe OHSS (Toftager, et al., 2016)	51 per 1,000	**0 per 1,000** (0 to 0)	not estimable	1023 (1 RCT)	⊕⊕◯◯ LOW [b,f]	
Moderate OHSS (Toftager, et al., 2016)	102 per 1,000	**0 per 1,000** (0 to 0)	not estimable	1023 (1 RCT)	⊕⊕◯◯ LOW [b,f]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. The confidence interval crosses the line of no effect.
b. Serious inconsistency because only 1 RCT
c. Wide confidence intervals, sample size not met
d. Very wide confidence intervals, small number of events.
e. Most domains of the risk of bias were assessed as either 'unclear' or 'high'.
f. Small number of events, sample size not met

17b Short GnRH agonist compared to GnRH antagonist protocol for LH surge suppression

Patient or population: women undergoing OS for IVF/ICSI
Intervention: short GnRH agonist protocol
Comparison: GnRH antagonist protocol

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with GnRH antagonist	Risk with short GnRH agonist protocol				
Cumulative LBR						Not reported
Live birth rate (Gordts, et al., 2012)	188 per 1,000	**0 per 1,000** (0 to 0)	not estimable	160 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Clinical pregnancy rate (Maldonado, et al., 2013)	521 per 1,000	**0 per 1,000** (0 to 0)	not estimable	96 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to poor reporting of methodology
b. Serious inconsistency because only 1 RCT
c. Very small number of events.

18 rFSH compared to hMG for ovarian stimulation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: rFSH
Comparison: hMG

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with hMG	Risk with rFSH				
Cumulative LBR						Not reported
LBR/ongoing PR (van Wely, et al., 2011)	255 per 1,000	**223 per 1,000** (198 to 253)	**OR 0.84** (0.72 to 0.99)	3197 (11 RCTs)	⊕⊕⊕⊕ HIGH	
Cumulative LBR (Devroey, et al., 2012)	401 per 1,000	**0 per 1,000** (0 to 0)	not estimable	749 (1 RCT)	⊕⊕⊕◯ MODERATE [a]	
Live birth rate (Parsanezhad, et al., 2017)	400 per 1,000	**0 per 1,000** (0 to 0)	not estimable	80 (1 RCT)	⊕⊕◯◯ LOW [a,b]	
OHSS (van Wely, et al., 2011)	10 per 1,000	**10 per 1,000** (6 to 18)	**OR 1.00** (0.58 to 1.71)	4197 (11 RCTs)	⊕⊕⊕◯ MODERATE [c]	
OHSS (Devroey, et al., 2012)	27 per 1,000	**0 per 1,000** (0 to 0)	not estimable	749 (1 RCT)	⊕⊕◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious inconsistency because only 1 RCT
b. Small number of events
c. The pooled effect crosses the line of no effect.

19 p-FSH compared to rFSH for ovarian stimulation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: p-FSH
Comparison: rFSH

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with rFSH	Risk with p-FSH				
Cumulative LBR						Not reported
LBR/ongoing PR (van Wely, et al., 2011)	207 per 1,000	**248 per 1,000** (201 to 300)	**OR 1.26** (0.96 to 1.64)	1430 (5 RCTs)	⊕⊕◯◯ LOW [a,b]	
OHSS (van Wely, et al., 2011)	28 per 1,000	**49 per 1,000** (25 to 95)	**OR 1.79** (0.89 to 3.62)	1490 (6 RCTs)	⊕⊕◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. High risk of bias associated with poor reporting of methods in one or more primary studies.
b. The pooled effect crosses the line of no effect.

20 hp-FSH compared to rFSH for ovarian stimulation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: hp-FSH
Comparison: rFSH

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with rFSH	Risk with hp-FSH				
Cumulative LBR						Not reported
LBR/ongoing PR (van Wely, et al., 2011)	266 per 1,000	**272 per 1,000** (238 to 307)	**OR 1.03** (0.86 to 1.22)	2712 (13 RCTs)	⊕⊕◯◯ LOW [a,b]	
Live birth rate (Murber, et al., 2011)	313 per 1,000	**0 per 1,000** (0 to 0)	not estimable	67 (1 RCT)	⊕⊕◯◯ LOW [c,d]	
Live birth rate (Parsanezhad, et al., 2017)	400 per 1,000	**0 per 1,000** (0 to 0)	not estimable	80 (1 RCT)	⊕⊕◯◯ LOW [c,d]	
Live birth rate (Selman, et al., 2013)	0 per 1,000	**0 per 1,000** (0 to 0)	not estimable	(1 RCT)	⊕◯◯◯ VERY LOW [c,d,e]	
OHSS (van Wely, et al., 2011)	27 per 1,000	**30 per 1,000** (19 to 46)	**OR 1.11** (0.70 to 1.75)	3053 (16 RCTs)	⊕⊕◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. High risk of bias associated with poor reporting of methods in one or more primary studies.
b. The pooled effect included the line of no effect and appreciable benefit or harm.
c. Serious inconsistency because only 1 RCT
d. Small number of events
e. Serious risk of bias due to poor reporting of methodology

21 hp-FSH compared to hMG for ovarian stimulation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: hp-FSH
Comparison: hMG

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with hMG	Risk with hp-FSH				
Cumulative LBR						Not reported
Clinical PR (Duijkers, et al., 1993)	100 per 1,000	**0 per 1,000** (0 to 0)	not estimable	20 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Clinical PR (Parsanezhad, et al., 2017)	450 per 1,000	**0 per 1,000** (0 to 0)	not estimable	80 (1 RCT)	⊕⊕◯◯ LOW [b,c]	
Clinical PR (Westergaard, et al., 1996)	360 per 1,000	**0 per 1,000** (0 to 0)	not estimable	218 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to poor reporting of methodology
b. Serious inconsistency because only 1 RCT
c. Small number of events

22 hMG compared to rFSH+rLH for ovarian stimulation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: hMG
Comparison: rFSH+rLH

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with rFSH+rLH	Risk with hMG				
Cumulative live birth rate						Not reported
OHSS (Pacchiarotti, et al., 2010)	132 per 1,000	**0 per 1,000** (0 to 0)	not estimable	111 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Pregnancy rate (Pacchiarotti, et al., 2010)	283 per 1,000	**0 per 1,000** (0 to 0)	not estimable	111 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of attrition and detection bias.
b. Serious inconsistency because only 1 RCT
c. Small number of events

23 Substitution of gonadotropins by Letrozole for ovarian stimulation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: substitution of gonadotropins by letrozole
Comparison: conventional gonadotropin stimulation

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with conventional gonadotropin stimulation	Risk with letrozole substitution				
Cumulative LBR						Not reported
Ongoing PR (Yasa, et al., 2013)	200 per 1,000	**0 per 1,000** (0 to 0)	not estimable	50 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Clinical PR (Ebrahimi, et al., 2017)	114 per 1,000	**0 per 1,000** (0 to 0)	not estimable	70 (1 RCT)	⊕⊕◯◯ LOW [b,c]	
Clinical PR (Verpoest, et al., 2006)	200 per 1,000	**0 per 1,000** (0 to 0)	not estimable	20 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to incomplete reporting of methodology
b. Serious inconsistency because only 1 RCT.
c. Small number of events

24 Long-acting rFSH compared to daily rFSH for ovarian stimulation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: long-acting rFSH
Comparison: daily rFSH

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with daily rFSH	Risk with long-acting rFSH				
Cumulative LBR						Not reported
Live birth rate (Griesinger, et al., 2016)	296 per 1,000	**-591 per 1,000** (-1,478 to 325)	**Difference -2.0** (-5.0 to 1.1)	3295 (3 RCTs)	⊕⊕⊕◯ MODERATE [a]	
OHSS (Griesinger, et al., 2016)	41 per 1,000	**53 per 1,000** (34 to 81)	**OR 1.29** (0.81 to 2.05)	3295 (3 RCTs)	⊕⊕⊕◯ MODERATE [a]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. The pooled effect included the line of no effect

25 Metformin for adjuvant therapy in ovarian stimulation for PCOS patients

Patient or population: PCOS women undergoing OS for IVF/ICSI
Intervention: metformin
Comparison: placebo/no intervention

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with placebo/no metformin	Risk with metformin				
Cumulative LBR						Not reported
Live birth rate (Tso, et al., 2014)	309 per 1,000	**383 per 1,000** (266 to 518)	**OR 1.39** (0.81 to 2.40)	551 (5 RCTs)	⊕⊕◯◯ LOW [a,b]	
Live birth rate (Jacob, et al., 2016)	516 per 1,000	**0 per 1,000** (0 to 0)	not estimable	122 (1 RCT)	⊕⊕◯◯ LOW [c,d]	
Live birth rate (Abdalmageed, et al., 2018)	176 per 1,000	**0 per 1,000** (0 to 0)	not estimable	102 (1 RCT)	⊕⊕◯◯ LOW [c,e]	
OHSS (Tso, et al., 2014)	217 per 1,000	**74 per 1,000** (48 to 120)	**OR 0.29** (0.18 to 0.49)	798 (8 RCTs)	⊕⊕⊕◯ MODERATE [e]	
OHSS moderate/severe (Jacob, et al., 2016)	118 per 1,000	**156 per 1,000** (68 to 319)	**OR 1.376** (0.542 to 3.491)	153 (1 RCT)	⊕⊕◯◯ LOW [c,d]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Substantial unexplainable statistical heterogeneity of results (I=52%).
b. The pooled effect included the line of no effect.
c. Serious inconsistency because only 1 RCT.
d. Very small number of patients, small number of events.
e. Low number of events

26a Growth hormone for adjuvant therapy in ovarian stimulation, routine use

Patient or population: women undergoing OS for IVF/ICSI
Intervention: growth hormone
Comparison: no intervention

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no intervention	Risk with growth hormone				
Cumulative LBR						Not reported
Live birth rate (Duffy, et al., 2010)	146 per 1,000	**185 per 1,000** (64 to 432)	**OR 1.32** (0.40 to 4.43)	80 (2 RCTs)	⊕⊕⊕◯ MODERATE [a,b]	
Adverse events (Duffy, et al., 2010)	195 per 1,000	**131 per 1,000** (42 to 343)	**OR 0.62** (0.18 to 2.15)	80 (2 RCTs)	⊕⊕⊕◯ MODERATE [a,b]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. sequence generation and allocation concealment unclear
b. Small number of events.

26b Growth hormone for adjuvant therapy in ovarian stimulation in low responders

Patient or population: low responder women undergoing OS for IVF/ICSI
Intervention: growth hormone
Comparison: no intervention

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no intervention	Risk with growth hormone				
Cumulative LBR						Not reported
Live birth rate (Li, et al., 2017)	158 per 1,000	**273 per 1,000** (197 to 379)	**RR 1.73** (1.25 to 2.40)	562 (9 RCTs)	⨁⨁◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Small number of events.
b. Serious risk of bias because of poor reporting of methodology.

27 Testosterone for adjuvant therapy before ovarian stimulation.

Patient or population: women undergoing OS for IVF/ICSI
Intervention: adjuvant testosterone
Comparison: no intervention

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no intervention	Risk with testosterone				
Cumulative LBR						Not reported
LBR/ongoing PR (Nagels, et al., 2015)	92 per 1,000	**208 per 1,000** (116 to 344)	**OR 2.6** (1.3 to 5.2)	345 (4 RCTs)	⨁⨁⨁◯ MODERATE [a]	
Live birth rate (Bosdou, et al., 2016)	83 per 1,000	**0 per 1,000** (0 to 0)	not estimable	50 (1 RCT)	⨁⨁◯◯ LOW [b,c]	
Live birth rate *2 weeks treatment* (Kim, et al., 2014)	67 per 1,000	**0 per 1,000** (0 to 0)	not estimable	60 (1 RCT)	⨁⨁◯◯ LOW [b,c]	
Live birth rate *3 weeks treatment* (Kim, et al., 2014)	67 per 1,000	**0 per 1,000** (0 to 0)	not estimable	60 (1 RCT)	⨁⨁◯◯ LOW [b,c]	
Live birth rate *4 weeks treatment* (Kim, et al., 2014)	67 per 1,000	**0 per 1,000** (0 to 0)	not estimable	60 (1 RCT)	⨁⨁◯◯ LOW [b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Large confidence intervals, small number of patients.
b. Serious inconsistency because only 1 RCT
c. Small number of patients, very small number of events.

28 Dehydroepiandrosterone (DHEA) for adjuvant therapy in ovarian stimulation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: adjuvant DHEA
Comparison: no DHEA

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no DHEA	Risk with DHEA				
Cumulative LBR						Not reported
LBR/ongoing PR (Nagels, et al., 2015)	128 per 1,000	**209 per 1,000** (155 to 277)	**OR 1.81** (1.25 to 2.62)	878 (8 RCTs)	⊕⊕⊕◯ MODERATE [a]	
Live birth (Narkwichean, et al., 2017)	320 per 1,000	**237 per 1,000** (70 to 794)	**RR 0.74** (0.22 to 2.48)	52 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Large confidence intervals, small number of events.
b. Risk of performance bias.
c. Serious inconsistency because only 1 RCT.

29 Aspirin for adjuvant therapy in ovarian stimulation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: adjuvant aspirin
Comparison: no intervention

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no intervention	Risk with aspirin				
Cumulative LBR						Not reported
Live birth rate (Siristatidis, et al., 2016)	225 per 1,000	**205 per 1,000** (162 to 259)	**RR 0.91** (0.72 to 1.15)	1053 (3 RCTs)	⊕⊕⊕◯ MODERATE [a]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. The confidence interval crosses the line of no effect, small number of events

30 Ultrasound and oestradiol measurements for monitoring during ovarian stimulation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: ultrasound and oestradiol measurements
Comparison: ultrasound alone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with USS alone	Risk with USS+E2				
Cumulative LBR						Not reported
OHSS (Kwan, et al., 2014)	36 per 1,000	**37 per 1,000** (18 to 76)	**OR 1.03** (0.48 to 2.20)	781 (6 RCTs)	⨁⨁◯◯ LOW [a,b]	
Clinical pregnancy rate (Kwan, et al., 2014)	361 per 1,000	**383 per 1,000** (308 to 465)	**OR 1.10** (0.79 to 1.54)	617 (4 RCTs)	⨁⨁◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to incomplete reporting of methodology in primary studies.
b. Wide confidence intervals and the pooled effect included the line of no effect.

31 Ultrasound and hormone panel for monitoring during ovarian stimulation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: ultrasound and hormone panel
Comparison: ultrasound alone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with USS alone	Risk with USS+hormone panel				
Cumulative LBR						Not reported
OHSS (Golan, et al., 1994)	70 per 1,000	**0 per 1,000** (0 to 0)	not estimable	114 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	
OHSS (Wiser, et al., 2012)	0 per 1,000	**0 per 1,000** (0 to 0)	not estimable	63 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	
Pregnancy rate (Golan, et al., 1994)	246 per 1,000	**0 per 1,000** (0 to 0)	not estimable	114 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	
Clinical PR (Wiser, et al., 2012)	576 per 1,000	**0 per 1,000** (0 to 0)	not estimable	63 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to incomplete reporting of methodology
b. Serious inconsistency because only 1 RCT
c. Small number of patients, small number of events

32 Early compared to late hCG administration for final oocyte maturation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: early hCG administration
Comparison: late hCG administration

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with late hCG	Risk with early hCG				
Cumulative LBR						Not reported
Live birth rate (Chen, et al., 2014)	272 per 1,000	**310 per 1,000** (125 to 770)	**RR 1.14** (0.46 to 2.83)	354 (3 RCTs)	⊕◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of selection and performance bias
b. Significant heterogeneity I^2=65%
c. The pooled effect included the line of no effect

33 Recombinant hCG compared to urinary hCG for final oocyte maturation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: recombinant hCG
Comparison: urinary hCG

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with urinary hCG	Risk with recombinant hCG				
Cumulative LBR						Not reported
LBR/ongoing PR (Youssef, et al., 2016)	366 per 1,000	**399 per 1,000** (339 to 462)	**OR 1.15** (0.89 to 1.49)	1136 (7 RCTs)	⊕⊕⊕◯ MODERATE [a]	
Moderate/severe OHSS (Youssef, et al., 2016)	10 per 1,000	**17 per 1,000** (4 to 77)	**OR 1.76** (0.37 to 8.45)	417 (3 RCTs)	⊕⊕◯◯ LOW [b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. The pooled effect included both the line of no effect and appreciable benefit or harm.
b. Very wide confidence intervals, small number of events.

34a 5.000 IU compared to 10.000 IU urinary hCG for final oocyte maturation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: 5.000 IU urinary hCG
Comparison: 10.000 IU urinary hCG

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with 10.000 IU uhCG	Risk with 5.000 IU uhCG				
Cumulative LBR						Not reported
Severe OHSS (Kolibianakis, et al., 2007)	36 per 1,000	**0 per 1,000** (0 to 0)	not estimable	54 (1 RCT)	⊕⊕◯◯ LOW [a,b]	
OHSS (Shaltout, et al., 2006)	83 per 1,000	**0 per 1,000** (0 to 0)	not estimable	98 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Ongoing PR (Kolibianakis, et al., 2007)	250 per 1,000	**0 per 1,000** (0 to 0)	not estimable	54 (1 RCT)	⊕⊕◯◯ LOW [a,b]	
Pregnancy rate (Shaltout, et al., 2006)	354 per 1,000	**0 per 1,000** (0 to 0)	not estimable	98 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious inconsistency because only 1 RCT
b. Small number of patients, small number of events
c. Serious risk of bias due to incomplete reporting of methodology

34b 250 µg compared to 500 µg recombinant hCG for final oocyte maturation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: 250 µg recombinant hCG
Comparison: 500 µg recombinant hCG

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with 500 µg recombinant hCG	Risk with 250 µg				
Cumulative LBR						Not reported
OHSS (Madani, et al., 2013)	100 per 1,000	**0 per 1,000** (0 to 0)	not estimable	120 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Clinical pregnancy rate (Madani, et al., 2013)	345 per 1,000	**0 per 1,000** (0 to 0)	not estimable	100 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Possible risk of performance bias due to incomplete reporting of methodology
b. Serious inconsistency because only 1 RCT
c. Small number of patients, small number of events

35 Recombinant LH compared to urinary hCG for final oocyte maturation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: recombinant LH
Comparison: urinary hCG

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with urinary hCG	Risk with recombinant LH				
Cumulative LBR						Not reported
LBR/ongoing PR (Youssef, et al., 2016)	191 per 1,000	**184 per 1,000** (108 to 297)	**OR 0.95** (0.51 to 1.78)	289 (2 RCTs)	⊕◯◯◯ VERY LOW [a,b,c,d]	
Moderate OHSS (Youssef, et al., 2016)	121 per 1,000	**102 per 1,000** (52 to 189)	**OR 0.83** (0.40 to 1.70)	289 (2 RCTs)	⊕◯◯◯ VERY LOW [a,b,c,d]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. One of the two RCT's did not provide information about methods of randomization, allocation concealment or blinding.
b. The pooled effect included both the line of no effect and appreciable benefit or harm.
c. Small number of events.
d. Very wide confidence intervals.

36 GnRH agonist with conventional luteal support compared to hCG for final oocyte maturation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: GnRH agonist without adjusted LPS
Comparison: hCG

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with hCG	Risk with GnRH agonist				
Cumulative LBR						Not reported
Clinical PR (Griesinger, et al., 2006)	301 per 1,000	**83 per 1,000** (21 to 266)	**OR 0.21** (0.05 to 0.84)	275 (3 RCTs)	⊕◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Two of the trials (Humaidan et al., 2005; Kolibianakis et al., 2005) included were prematurely discontinued because of the comparatively lower pregnancy rate observed after GnRH agonist treatment
b. Serious risk of bias due to incomplete reporting of methodology
c. Small number of events, large confidence intervals

37 GnRH agonist with modified luteal support compared to hCG for final oocyte maturation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: GnRH agonist with modified LPS
Comparison: hCG

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with hCG	Risk with GnRH agonist				
Cumulative LBR						Not reported
OHSS (Youssef, et al., 2014)	8 per 1,000	**6 per 1,000** (1 to 27)	**OR 0.79** (0.18 to 3.47)	777 (6 RCTs)	⊕◯◯◯ VERY LOW [a,b,c]	
Live birth rate (Humaidan, et al., 2010)	313 per 1,000	**0 per 1,000** (0 to 0)	not estimable	302 (1 RCT)	⊕⊕◯◯ LOW [d,e]	
Live birth rate (Papanikolaou, et al., 2011)	222 per 1,000	**0 per 1,000** (0 to 0)	not estimable	35 (1 RCT)	⊕◯◯◯ VERY LOW [d,e,f]	
Ongoing PR (Humaidan, et al., 2013)	255 per 1,000	**0 per 1,000** (0 to 0)	not estimable	266 (1 RCT)	⊕⊕◯◯ LOW [e,f]	
Clinical pregnancy rate (Humaidan, et al., 2006)	462 per 1,000	**0 per 1,000** (0 to 0)	not estimable	28 (1 RCT)	⊕◯◯◯ VERY LOW [d,e,f]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. All studies are at high risk of bias in 1 or more domains. None clearly reported blinded outcome assessment.
b. Substantial heterogeneity: I^2=66%
c. The pooled effect included both the line of no effect and appreciable benefit or harm.
d. Serious risk of bias due to incomplete reporting of methodology
e. Serious inconsistency because only 1 RCT
f. Small number of events.

38 Dual trigger compared to hCG for final oocyte maturation

Patient or population: women undergoing OS for IVF/ICSI
Intervention: dual trigger
Comparison: hCG

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with hCG	Risk with dual trigger				
Cumulative LBR						Not reported
Pregnancy rate (Ding, et al., 2017)	307 per 1,000	**475 per 1,000** (359 to 632)	**RR 1.55** (1.17 to 2.06)	320 (2 RCTs)	⊕⊕◯◯ LOW [a,b]	
Ongoing PR (Eftekhar, et al., 2017)	215 per 1,000	**0 per 1,000** (0 to 0)	not estimable	192 (1 RCT)	⊕◯◯◯ VERY LOW [c,d,e]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to incomplete reporting of methodology in the primary studies
b. Small number of events
c. Serious risk of bias due to incomplete reporting of methodology
d. Serious inconsistency because only 1 RCT
e. Small number of events, sample size not reached.

39 Progesterone compared to placebo or no intervention for luteal phase support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: progesterone
Comparison: placebo or no intervention

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with placebo/no intervention	Risk with progesterone				
Cumulative LBR						Not reported
Live birth/ongoing PR (van der Linden, et al., 2015)	101 per 1,000	**165 per 1,000** (109 to 243)	**OR 1.77** (1.09 to 2.86)	642 (5 RCTs)	⊕◯◯◯ VERY LOW [a,b,c]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Inadequate reporting of study methods. Risk of bias unclear in most domains of most studies.
b. Very small number of events.
c. Effect estimate with very wide confidence intervals.

40 Low-dose compared to high dose vaginal progesterone for luteal support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: low dose vaginal progesterone
Comparison: high dose vaginal progesterone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with high dose	Risk with low dose				
Cumulative LBR						Not reported
Live birth/ongoing PR (van der Linden, et al., 2015)	325 per 1,000	**318 per 1,000** (288 to 348)	**OR 0.97** (0.84 to 1.11)	3720 (5 RCTs)	⊕⊕◯◯ LOW [a,b]	
Live birth rate (Aslih, et al., 2017)	250 per 1,000	**0 per 1,000** (0 to 0)	not estimable	71 (1 RCT)	⊕◯◯◯ VERY LOW [a,c,d]	
Live birth rate (Michnova, et al., 2017)	528 per 1,000	**0 per 1,000** (0 to 0)	not estimable	100 (1 RCT)	⊕◯◯◯ VERY LOW [a,c,d]	
OHSS (van der Linden, et al., 2015)	70 per 1,000	**64 per 1,000** (41 to 99)	**OR 0.91** (0.57 to 1.46)	1251 (2 RCTs)	⊕⊕◯◯ LOW [a,b]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to incomplete reporting of methodology.
b. The pooled effect crosses the line of no effect.
c. Serious inconsistency because only 1 RCT
d. Small number of patients, required sample size not reached

41a Subcutaneous compared to vaginal progesterone for luteal support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: subcutaneous progesterone
Comparison: vaginal progesterone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with vaginal progesterone	Risk with subcutaneous				
Cumulative LBR						Not reported
Live birth (Doblinger, et al., 2016)	376 per 1,000	**349 per 1,000** (301 to 400)	**OR 0.889** (0.714 to 1.106)	1435 (2 RCTs)	⊕⊕⊕◯ MODERATE [a]	
OHSS (Doblinger, et al., 2016)	36 per 1,000	**37 per 1,000** (22 to 63)	**OR 1.04** (0.60 to 1.81)	1435 (2 RCTs)	⊕⊕⊕◯ MODERATE [a]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. The pooled effect included the line of no effect.

41b Vaginal/rectal compared to oral progesterone for luteal support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: vaginal/rectal progesterone
Comparison: oral progesterone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with oral progesterone	Risk with vaginal/rectal				
Cumulative LBR						Not reported
Live birth/ongoing PR (van der Linden, et al., 2015)	217 per 1,000	**248 per 1,000** (187 to 319)	**OR 1.19** (0.83 to 1.69)	857 (4 RCTs)	⊕⊕◯◯ LOW [a,b]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to poor reporting of methodology.
b. The pooled effect crosses the line of no effect.

41c Intramuscular compared to vaginal/rectal progesterone for luteal support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: intramuscular progesterone
Comparison: vaginal/rectal progesterone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with vaginal/rectal progesterone	Risk with intramuscular				
Cumulative LBR						Not reported
Live birth/ongoing PR (van der Linden, et al., 2015)	306 per 1,000	**353 per 1,000** (312 to 398)	**OR 1.24** (1.03 to 1.50)	2039 (7 RCTs)	⊕⊕◯◯ LOW [a,b]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to poor reporting of methodology.
b. Significant heterogeneity of results: I^2=71%

41d Intramuscular compared to oral progesterone for luteal support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: intramuscular progesterone
Comparison: oral progesterone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with oral progesterone	Risk with intramuscular				
Cumulative LBR						Not reported
Live birth/ongoing PR (van der Linden, et al., 2015)	200 per 1,000	**151 per 1,000** (34 to 478)	**OR 0.71** (0.14 to 3.66)	40 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c,d]	
OHSS (van der Linden, et al., 2015)	50 per 1,000	**50 per 1,000** (3 to 475)	**OR 1.00** (0.06 to 17.18)	40 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c,d]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to poor reporting of methodology.
b. Serious inconsistency because only 1 RCT.
c. Small number of patients, small event rate.
d. The pooled effect crosses the line of no effect.

42a Progesterone LPS started on the day of OR compared to day after OR

Patient or population: women undergoing OS for IVF/ICSI
Intervention: progesterone LPS started on the day of OR
Comparison: progesterone LPS started on the day after OR

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with progesterone LPS started on the day after OR	Risk with progesterone LPS started on the day of OR				
Cumulative LBR						Not reported
Live birth rate (Gao, et al., 2018)	457 per 1,000	**0 per 1,000** (0 to 0)	not estimable	197 (1 RCT)	⊕⊕◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious inconsistency because only 1 RCT.
b. Small number of patients, small number of events

42b Progesterone LPS started on the evening of OR compared to evening of ET

Patient or population: women undergoing OS for IVF/ICSI
Intervention: progesterone LPS started on the evening of OR
Comparison: progesterone LPS started on the evening of ET

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with progesterone LPS started on evening of ET	Risk with progesterone LPS started on the evening of OR				
Cumulative LBR						Not reported
Live birth rate (Mochtar, et al., 2006)	205 per 1,000	**199 per 1,000** (123 to 319)	**RR 0.97** (0.60 to 1.56)	255 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Clinical PR (Baruffi, et al., 2003)	288 per 1,000	**0 per 1,000** (0 to 0)	not estimable	103 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Clinical PR (Fanchin, et al., 2001)	293 per 1,000	**0 per 1,000** (0 to 0)	not estimable	84 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to incomplete reporting of methodology
b. Serious inconsistency because only 1 RCT.
c. Small number of patients, small number of events

42c Progesterone LPS started before OR compared to after OR

Patient or population: women undergoing OS for IVF/ICSI
Intervention: progesterone LPS started before OR
Comparison: progesterone LPS started after OR

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with progesterone LPS started after OR	Risk with progesterone LPS started before OR				
Cumulative LBR						Not reported
Live birth rate (Mochtar, et al., 2006)	211 per 1,000	**198 per 1,000** (122 to 321)	**RR 0.94** (0.58 to 1.52)	258 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Clinical PR (Sohn, et al., 1999)	246 per 1,000	**0 per 1,000** (0 to 0)	not estimable	282 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to incomplete reporting of methodology
b. Serious inconsistency because only 1 RCT.
c. Small number of patients, small number of events

43 Progesterone LPS until pregnancy test compared to Progesterone LPS until week 6/7

Patient or population: women undergoing OS for IVF/ICSI
Intervention: Progesterone LPS until pregnancy test
Comparison: Progesterone LPS until week 6/7

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with Progesterone LPS until week 6/7	Risk with Progesterone LPS until pregnancy test				
Cumulative LBR						Not reported
Live birth rate (Liu, et al., 2012)	815 per 1,000	**774 per 1,000** (701 to 856)	**RR 0.95** (0.86 to 1.05)	369 (2 RCTs)	⊕⊕◯◯ LOW [a,b]	
Ongoing pregnancy rate (Liu, et al., 2012)(Liu 2015)	885 per 1,000	**858 per 1,000** (796 to 929)	**RR 0.97** (0.90 to 1.05)	1166 (6 RCTs)	⊕◯◯◯ VERY LOW [a,b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to incomplete reporting of methodology in the primary studies
b. The pooled effect includes the line of no effect.
c. Serious heterogeneity between trials: I^2=73%

44a Dydrogesterone compared to progesterone for luteal phase support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: dydrogesterone
Comparison: progesterone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with progesterone	Risk with dydrogesterone				
Cumulative LBR						Not reported
Live birth/ongoing PR (Barbosa, et al., 2018)	237 per 1,000	**256 per 1,000** (218 to 299)	**RR 1.08** (0.92 to 1.26)	3386 (8 RCTs)	⊕⊕⊕◯ MODERATE [a]	
Live birth rate (Griesinger, et al., 2018)	325 per 1,000	**0 per 1,000** (0 to 0)	not estimable	983 (1 RCT)	⊕⊕◯◯ LOW [b,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Very wide confidence intervals, the pooled effect included both the line of no effect and appreciable benefit or harm.
b. Risk of performance bias
c. Serious inconsistency because only 1 RCT

44b Dydrogesterone compared to placebo for luteal support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: dydrogesterone
Comparison: placebo

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with placebo	Risk with dydrogesterone				
Cumulative LBR						Not reported
Ongoing pregnancy (Kupferminc, et al., 1990)	216 per 1,000	**0 per 1,000** (0 to 0)	not estimable	105 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

*The risk in the intervention group (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Unknown risk of bias due to poor reporting of methodology.
b. Serious inconsistency because only 1 RCT.
c. Small number of patients, small event rate.

45 Progesterone compared to progesterone and oestradiol for luteal phase support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: progesterone
Comparison: progesterone + oestradiol

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with progesterone+oestradiol	Risk with progesterone				
Cumulative LBR						Not reported
Live birth/ongoing PR (van der Linden, et al., 2015)	375 per 1,000	**402 per 1,000** (353 to 453)	**OR 1.12** (0.91 to 1.38)	1651 (9 RCTs)	⊕⊕⊕◯ MODERATE [a]	
Ongoing PR (Ismail Madkour, et al., 2016)	364 per 1,000	**0 per 1,000** (0 to 0)	not estimable	220 (1 RCT)	⊕⊕◯◯ LOW [b,c]	
OHSS (van der Linden, et al., 2015)	39 per 1,000	**23 per 1,000** (8 to 63)	**OR 0.58** (0.20 to 1.68)	461 (2 RCTs)	⊕⊕◯◯ LOW [a,d,e]	

*The risk in the intervention group (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Very wide confidence intervals, the pooled effect included both the line of no effect and appreciable benefit or harm.
b. Risk of performance bias
c. Serious inconsistency because only 1 RCT
d. Inadequate reporting of study methods. Risk of bias unclear in most domains of most studies.
e. Small number of events

46a hCG compared to no intervention for luteal phase support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: hCG
Comparison: no intervention

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with no intervention	Risk with hCG				
Cumulative LBR						Not reported
Live birth/ongoing PR (van der Linden, et al., 2015)	119 per 1,000	**191 per 1,000** (127 to 278)	**OR 1.76** (1.08 to 2.86)	527 (3 RCTs)	⊕⊕◯◯ LOW [a,b,c]	
OHSS (van der Linden, et al., 2015)	41 per 1,000	**155 per 1,000** (76 to 292)	**OR 4.28** (1.91 to 9.60)	387 (1 RCT)	⊕◯◯◯ VERY LOW [a,c,d]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Inadequate reporting of study methods. Risk of bias unclear in most domains of most studies.
b. Effect estimate with wide confidence intervals.
c. Very small number of events.
d. Serious inconsistency because only 1 RCT.

46b hCG compared to progesterone for luteal phase support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: hCG
Comparison: progesterone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with progesterone	Risk with hCG				
Cumulative LBR						Not reported
Live birth/ongoing PR (van der Linden, et al., 2015)	249 per 1,000	**234 per 1,000** (152 to 342)	**OR 0.92** (0.54 to 1.57)	434 (4 RCTs)	⊕⊕◯◯ LOW [a,b,c]	
OHSS (van der Linden, et al., 2015)	68 per 1,000	**40 per 1,000** (23 to 68)	**OR 0.57** (0.32 to 1.00)	615 (4 RCTs)	⊕⊕◯◯ LOW [a,c,d]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Inadequate reporting of study methods. Risk of bias unclear in most domains of most studies.
b. Effect estimate with wide confidence intervals, the pooled effect included the line of no effect
c. Low event rate
d. Effect estimate with wide confidence intervals.

46c hCG compared to progesterone and oestradiol for luteal phase support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: hCG
Comparison: progesterone and oestradiol

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with progesterone+oestradiol	Risk with hCG				
Cumulative LBR						Not reported
Clinical PR (Smitz, et al., 1988)	320 per 1,000	**317 per 1,000** (160 to 614)	**RR 0.99** (0.50 to 1.92)	91 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c,d]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Inadequate reporting of study methods. Risk of bias unclear in most domains of most studies.
b. Serious inconsistency because only 1 RCT.
c. Small number of events.
d. Effect estimate with wide confidence intervals.

47 Progesterone with GnRH agonist bolus compared to progesterone for luteal phase support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: progesterone with GnRH agonist bolus
Comparison: progesterone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with progesterone	Risk with progesterone+GnRHa				
Cumulative LBR						Not reported
Live birth/ongoing PR (van der Linden, et al., 2015)	289 per 1,000	**193 per 1,000** (137 to 261)	**OR 0.59** (0.39 to 0.87)	1536 (5 RCTs)	⊕⊕◯◯ LOW [a,b]	
OHSS (van der Linden, et al., 2015)	53 per 1,000	**53 per 1,000** (18 to 143)	**OR 1.00** (0.33 to 3.01)	195 (1 RCT)	⊕◯◯◯ VERY LOW [c,d,e]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Evidence of significant heterogeneity (I^2=59%)
b. Effect estimate with very wide confidence intervals.
c. Lack of detail to make a judgement of risk of bias
d. Serious inconsistency because only 1 RCT.
e. Small number of patients, low event rate

48 Progesterone with repeated GnRH agonist doses compared to progesterone for luteal phase support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: progesterone with repeated doses of GnRH agonist
Comparison: progesterone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with progesterone	Risk with progesterone+repeated GnRHa				
Cumulative LBR						Not reported
Live birth/ongoing PR (van der Linden, et al., 2015)	256 per 1,000	**180 per 1,000** (126 to 252)	**OR 0.64** (0.42 to 0.98)	1325 (5 RCTs)	⊕⊕◯◯ LOW [a,b,c]	
OHSS (van der Linden, et al., 2015)	53 per 1,000	**53 per 1,000** (18 to 143)	**OR 1.00** (0.33 to 3.01)	179 (1 RCT)	⊕◯◯◯ VERY LOW [d,e,f]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Evidence of significant heterogeneity (I^2=60%)
b. Effect estimate with wide confidence intervals.
c. Small number of events.
d. Lack of detail to make a judgement of risk of bias
e. Serious inconsistency because only 1 RCT.
f. Small number of patients, low event rate

49 LH compared to progesterone for luteal phase support

Patient or population: women undergoing OS for IVF/ICSI
Intervention: LH
Comparison: progesterone

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with progesterone	Risk with LH				
Cumulative LBR						Not reported
Live birth rate (Papanikolaou, et al., 2011)	235 per 1,000	**0 per 1,000** (0 to 0)	not estimable	35 (1 RCT)	⊕⊕◯◯ LOW [a,b]	
OHSS (Papanikolaou, et al., 2011)	0 per 1,000	**0 per 1,000** (0 to 0)	not estimable	35 (1 RCT)	⊕⊕◯◯ LOW [a,b]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious inconsistency because only 1 RCT.
b. Small number of patients, small event rate.

50a GnRH agonist compared to hCG for final oocyte maturation in high responders

Patient or population: high responder women undergoing OS for IVF/ICSI
Intervention: GnRH agonist
Comparison: hCG

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with hCG	Risk with GnRH agonist				
Cumulative LBR						Not reported
Moderate/severe OHSS (Youssef, et al., 2014)	107 per 1,000	**11 per 1,000** (2 to 59)	**OR 0.09** (0.02 to 0.52)	212 (3 RCTs)	⊕⊕◯◯ LOW [a,b]	
Live birth rate (Babayof, et al., 2006)	154 per 1,000	**0 per 1,000** (0 to 0)	not estimable	28 (1 RCT)	⊕⊕◯◯ LOW [c,d]	
Ongoing PR (Engmann, et al., 2008)	483 per 1,000	**0 per 1,000** (0 to 0)	not estimable	59 (1 RCT)	⊕◯◯◯ VERY LOW [c,d,e]	
Ongoing PR (Humaidan, et al., 2013)	259 per 1,000	**282 per 1,000** (155 to 512)	**RR 1.09** (0.60 to 1.98)	118 (1 RCT)	⊕◯◯◯ VERY LOW [c,d,e]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to incomplete reporting of methodology in the primary studies
b. Small number of events
c. Serious inconsistency because only 1 RCT
d. Small number of patients, small number of events
e. Serious risk of bias due to incomplete reporting of methodology

50b Fresh transfer compared to freeze-all for prevention of OHSS in high responders

Patient or population: high responder women undergoing OS for IVF/ICSI
Intervention: fresh transfer
Comparison: freeze-all

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with freeze-all	Risk with fresh transfer				
Cumulative LBR						Not reported
Live birth rate (Aflatoonian, et al., 2018)	273 per 1,000	**277 per 1,000** (176 to 403)	**OR 1.02** (0.57 to 1.80)	240 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Live birth rate (Karacan, et al., 2017)	417 per 1,000	**0 per 1,000** (0 to 0)	not estimable	122 (1 observational study)	⊕◯◯◯ VERY LOW [a,b,d]	
moderate OHSS (Aflatoonian, et al., 2018)	58 per 1,000	**0 per 1,000** (0 to 0)	not estimable	240 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
moderate/severe OHSS (Karacan, et al., 2017)	0 per 1,000	**0 per 1,000** (0 to 0)	not estimable	122 (1 observational study)	⊕◯◯◯ VERY LOW [a,b,d]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Risk of selection and/or performance bias
b. Serious inconsistency because only 1 study
c. Small number of events
d. Small number of patients, small number of events

51 GnRH agonist compared to hCG non-10.000 IU for final oocyte maturation in high responders

Patient or population: high responder women undergoing OS for IVF/ICSI
Intervention: GnRH agonist
Comparison: hCG non-10.000 IU

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with hCG non-10.000 IU	Risk with GnRH agonist				
Cumulative LBR						Not reported
OHSS (Humaidan, et al., 2013)	34 per 1,000	**0 per 1,000** (0 to 0)	not estimable	118 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Ongoing PR (Humaidan, et al., 2013)	259 per 1,000	**282 per 1,000** (155 to 512)	**RR 1.09** (0.60 to 1.98)	118 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Serious risk of bias due to incomplete reporting of methodology
b. Serious inconsistency because only 1 RCT
c. Small number of patients, small number of events

52a Freeze-all protocol compared to fresh transfer for prevention of OHSS

Patient or population: women undergoing OS for IVF/ICSI
Intervention: Freeze-all protocol
Comparison: fresh transfer

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with fresh transfer	Risk with Freeze-all protocol				
Cumulative LBR						Not reported
Live birth rate (Wong, et al., 2017)	579 per 1,000	**600 per 1,000** (556 to 643)	**OR 1.09** (0.91 to 1.31)	1892 (4 RCTs)	⊕⊕⊕◯ MODERATE [a]	
Live birth rate (Shi, et al., 2018)	502 per 1,000	**487 per 1,000** (447 to 532)	**Rate ratio 0.97** (0.89 to 1.06)	2157 (1 RCT)	⊕⊕◯◯ LOW [a,b,c]	
Live birth rate (Vuong, et al., 2018)	315 per 1,000	**337 per 1,000** (277 to 412)	**RR 1.07** (0.88 to 1.31)	782 (1 RCT)	⊕⊕◯◯ LOW [a,b,c]	
OHSS (Wong, et al., 2017)	70 per 1,000	**18 per 1,000** (11 to 28)	**OR 0.24** (0.15 to 0.38)	1633 (2 RCTs)	⊕⊕◯◯ LOW [d,e]	
OHSS (Shi, et al., 2018)	20 per 1,000	**7 per 1,000** (3 to 15)	**Rate ratio 0.32** (0.14 to 0.74)	2157 (1 RCT)	⊕⊕◯◯ LOW [b,c,e]	
OHSS (Vuong, et al., 2018)	10 per 1,000	**8 per 1,000** (2 to 34)	**RR 0.75** (0.17 to 3.33)	782 (1 RCT)	⊕⊕◯◯ LOW [b,c,e]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. The confidence interval included the line of no effect.
b. Possible risk of performance bias.
c. Serious inconsistency because only 1 RCT.
d. Data not reported per cycle
e. Small number of events

52b Freeze-all protocol compared to intra-venous albumin for prevention of OHSS

Patient or population: women undergoing OS for IVF/ICSI
Intervention: Freeze-all protocol
Comparison: intra-venous albumin

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with albumin	Risk with Freeze-all				
Cumulative LBR						Not reported
Moderate/severe OHSS (D'Angelo and Amso, 2007)	308 per 1,000	**703 per 1,000** (185 to 962)	**OR 5.33** (0.51 to 56.24)	26 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c]	
Clinical PR (D'Angelo and Amso, 2007)	0 per 1,000	**0 per 1,000** (0 to 0)	**OR 0.06** (0.00 to 1.17)	26 (1 RCT)	⊕⊕◯◯ LOW [a,b,d]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

a. Study was not blinded
b. Serious inconsistency because only 1 RCT
c. Very wide confidence interval that included the line of no effect
d. Very wide confidence interval

REFERENCES

Abdalmageed OS, Farghaly TA, Abdelaleem AA, Abdelmagied AE, Ali MK, Abbas AM. Impact of Metformin on IVF Outcomes in Overweight and Obese Women With Polycystic Ovary Syndrome: A Randomized Double-Blind Controlled Trial. *Reproductive sciences (Thousand Oaks, Calif)* 2018: 1933719118765985.

Aflatoonian A, Hosseinisadat A, Baradaran R, Farid Mojtahedi M. Pregnancy outcome of "delayed start" GnRH antagonist protocol versus GnRH antagonist protocol in poor responders: A clinical trial study. *International journal of reproductive biomedicine (Yazd, Iran)* 2017;15: 231-238.

Aflatoonian A, Mansoori-Torshizi M, Farid Mojtahedi M, Aflatoonian B, Khalili MA, Amir-Arjmand MH, Soleimani M, Aflatoonian N, Oskouian H, Tabibnejad N *et al.* Fresh versus frozen embryo transfer after gonadotropin-releasing hormone agonist trigger in gonadotropin-releasing hormone antagonist cycles among high responder women: A randomized, multi-center study. *International journal of reproductive biomedicine (Yazd, Iran)* 2018;16: 9-18.

Al-Inany HG, Youssef MA, Ayeleke RO, Brown J, Lam WS, Broekmans FJ. Gonadotrophin-releasing hormone antagonists for assisted reproductive technology. *The Cochrane database of systematic reviews* 2016;4: Cd001750.

Aslih N, Ellenbogen A, Shavit T, Michaeli M, Yakobi D, Shalom-Paz E. Can we alter pregnancy outcome by adjusting progesterone treatment at mid-luteal phase: a randomized controlled trial. *Gynecological endocrinology : the official journal of the International Society of Gynecological Endocrinology* 2017;33: 602-606.

Baart EB, Martini E, Eijkemans MJ, Van Opstal D, Beckers NG, Verhoeff A, Macklon NS, Fauser BC. Milder ovarian stimulation for in-vitro fertilization reduces aneuploidy in the human preimplantation embryo: a randomized controlled trial. *Human reproduction (Oxford, England)* 2007;22: 980-988.

Babayof R, Margalioth EJ, Huleihel M, Amash A, Zylber-Haran E, Gal M, Brooks B, Mimoni T, Eldar-Geva T. Serum inhibin A, VEGF and TNFalpha levels after triggering oocyte maturation with GnRH agonist compared with HCG in women with polycystic ovaries undergoing IVF treatment: a prospective randomized trial. *Human reproduction (Oxford, England)* 2006;21: 1260-1265.

Barbosa MWP, Valadares NPB, Barbosa ACP, Amaral AS, Iglesias JR, Nastri CO, Martins WP, Nakagawa HM. Oral dydrogesterone vs. vaginal progesterone capsules for luteal-phase support in women undergoing embryo transfer: a systematic review and meta-analysis. *JBRA assisted reproduction* 2018;22: 148-156.

Baruffi R, Mauri AL, Petersen CG, Felipe V, Franco JG, Jr. Effects of vaginal progesterone administration starting on the day of oocyte retrieval on pregnancy rates. *Journal of assisted reproduction and genetics* 2003;20: 517-520.

Bechtejew TN, Nadai MN, Nastri CO, Martins WP. Clomiphene citrate and letrozole to reduce follicle-stimulating hormone consumption during ovarian stimulation: systematic review and meta-analysis. *Ultrasound in obstetrics & gynecology : the official journal of the International Society of Ultrasound in Obstetrics and Gynecology* 2017;50: 315-323.

Blockeel C, Riva A, De Vos M, Haentjens P, Devroey P. Administration of a gonadotropin-releasing hormone antagonist during the 3 days before the initiation of the in vitro fertilization/intracytoplasmic sperm injection treatment cycle: impact on ovarian stimulation. A pilot study. *Fertility and sterility* 2011;95: 1714-1719.e1711-1712.

Blockeel C, Sterrenburg MD, Broekmans FJ, Eijkemans MJ, Smitz J, Devroey P, Fauser BC. Follicular phase endocrine characteristics during ovarian stimulation and GnRH antagonist cotreatment for IVF: RCT comparing recFSH initiated on cycle day 2 or 5. *The Journal of clinical endocrinology and metabolism* 2011;96: 1122-1128.

Bosdou JK, Venetis CA, Dafopoulos K, Zepiridis L, Chatzimeletiou K, Anifandis G, Mitsoli A, Makedos A, Messinis IE, Tarlatzis BC *et al.* Transdermal testosterone pretreatment in poor responders undergoing ICSI: a randomized clinical trial. *Human reproduction (Oxford, England)* 2016;31: 977-985.

Chen Y, Zhang Y, Hu M, Liu X, Qi H. Timing of human chorionic gonadotropin (hCG) hormone administration in IVF/ICSI protocols using GnRH agonist or antagonists: a systematic review and meta-analysis. *Gynecological endocrinology : the official journal of the International Society of Gynecological Endocrinology* 2014;30: 431-437.

D'Angelo A, Amso N. Embryo freezing for preventing ovarian hyperstimulation syndrome. *The Cochrane database of systematic reviews* 2007: Cd002806.
Devroey P, Pellicer A, Nyboe Andersen A, Arce JC. A randomized assessor-blind trial comparing highly purified hMG and recombinant FSH in a GnRH antagonist cycle with compulsory single-blastocyst transfer. *Fertility and sterility* 2012;97: 561-571.
DiLuigi A, Engmann L, Schmidt D, Benadiva C, Nulsen J. A randomized trial of microdose leuprolide acetate protocol versus luteal phase ganirelix protocol in predicted poor responders *Fertility and sterility*. 2011, pp. 2531-2533.
Ding N, Liu X, Jian Q, Liang Z, Wang F. Dual trigger of final oocyte maturation with a combination of GnRH agonist and hCG versus a hCG alone trigger in GnRH antagonist cycle for in vitro fertilization: A Systematic Review and Meta-analysis. *European journal of obstetrics, gynecology, and reproductive biology* 2017;218: 92-98.
Doblinger J, Cometti B, Trevisan S, Griesinger G. Subcutaneous Progesterone Is Effective and Safe for Luteal Phase Support in IVF: An Individual Patient Data Meta-Analysis of the Phase III Trials. *PloS one* 2016;11: e0151388.
Duffy JM, Ahmad G, Mohiyiddeen L, Nardo LG, Watson A. Growth hormone for in vitro fertilization. *The Cochrane database of systematic reviews* 2010: Cd000099.
Duijkers IJ, Vemer HM, Hollanders JM, Willemsen WN, Bastiaans LA, Hamilton CJ, Thomas CM, Borm GF. Different follicle stimulating hormone/luteinizing hormone ratios for ovarian stimulation. *Human reproduction (Oxford, England)* 1993;8: 1387-1391.
Ebrahimi M, Akbari-Asbagh F, Ghalandar-Attar M. Letrozole+ GnRH antagonist stimulation protocol in poor ovarian responders undergoing intracytoplasmic sperm injection cycles: An RCT. *International journal of reproductive biomedicine (Yazd, Iran)* 2017;15: 101-108.
Eftekhar M, Mohammadian F, Davar R, Pourmasumi S. Comparison of pregnancy outcome after letrozole versus clomiphene treatment for mild ovarian stimulation protocol in poor responders. *Iranian journal of reproductive medicine* 2014;12: 725-730.
Eftekhar M, Mojtahedi MF, Miraj S, Omid M. Final follicular maturation by administration of GnRH agonist plus HCG versus HCG in normal responders in ART cycles: An RCT. *International journal of reproductive biomedicine (Yazd, Iran)* 2017;15: 429-434.
Engmann L, DiLuigi A, Schmidt D, Nulsen J, Maier D, Benadiva C. The use of gonadotropin-releasing hormone (GnRH) agonist to induce oocyte maturation after cotreatment with GnRH antagonist in high-risk patients undergoing in vitro fertilization prevents the risk of ovarian hyperstimulation syndrome: a prospective randomized controlled study. *Fertility and sterility* 2008;89: 84-91.
Fanchin R, Righini C, de Ziegler D, Olivennes F, Ledee N, Frydman R. Effects of vaginal progesterone administration on uterine contractility at the time of embryo transfer. *Fertility and sterility* 2001;75: 1136-1140.
Farquhar C, Rombauts L, Kremer JA, Lethaby A, Ayeleke RO. Oral contraceptive pill, progestogen or oestrogen pretreatment for ovarian stimulation protocols for women undergoing assisted reproductive techniques. *The Cochrane database of systematic reviews* 2017;5: Cd006109.
Gao J, Gu F, Miao BY, Chen MH, Zhou CQ, Xu YW. Effect of the initiation of progesterone supplementation in in vitro fertilization-embryo transfer outcomes: a prospective randomized controlled trial. *Fertility and sterility* 2018;109: 97-103.
Golan A, Herman A, Soffer Y, Bukovsky I, Ron-El R. Ultrasonic control without hormone determination for ovulation induction in in-vitro fertilization/embryo transfer with gonadotrophin-releasing hormone analogue and human menopausal gonadotrophin. *Human reproduction (Oxford, England)* 1994;9: 1631-1633.
Gordts S, Van Turnhout C, Campo R, Puttemans P, Valkenburg M, Gordts S. A prospective randomised study comparing a GnRH-antagonist versus a GnRH-agonist short protocol for ovarian stimulation in patients referred for IVF. *Facts, views & vision in ObGyn* 2012;4: 82-87.
Griesinger G, Blockeel C, G TS, Patki A, Dhorepatil B, Yang DZ, Chen ZJ, Kahler E, Pexman-Fieth C, Tournaye H. Oral dydrogesterone versus intravaginal micronized progesterone gel for luteal phase support in IVF: a randomized clinical trial. *Human reproduction (Oxford, England)* 2018;33: 2212-2221.

Griesinger G, Boostanfar R, Gordon K, Gates D, McCrary Sisk C, Stegmann BJ. Corifollitropin alfa versus recombinant follicle-stimulating hormone: an individual patient data meta-analysis. *Reproductive biomedicine online* 2016;33: 56-60.
Griesinger G, Diedrich K, Devroey P, Kolibianakis EM. GnRH agonist for triggering final oocyte maturation in the GnRH antagonist ovarian hyperstimulation protocol: a systematic review and meta-analysis. *Human reproduction update* 2006;12: 159-168.
Hohmann F, Macklon N, Fauser B. A randomized comparison of two ovarian stimulation protocols with gonadotropin-releasing hormone (GnRH) antagonist cotreatment for in vitro fertilization commencing recombinant follicle-stimulating hormone on cycle day 2 or 5 with the standard long GnRH agonist protocol *The Journal of clinical endocrinology and metabolism*. 2003, pp. 166-173.
Humaidan P, Bungum L, Bungum M, Yding Andersen C. Rescue of corpus luteum function with peri-ovulatory HCG supplementation in IVF/ICSI GnRH antagonist cycles in which ovulation was triggered with a GnRH agonist: a pilot study. *Reproductive biomedicine online* 2006;13: 173-178.
Humaidan P, Ejdrup Bredkjaer H, Westergaard LG, Yding Andersen C. 1,500 IU human chorionic gonadotropin administered at oocyte retrieval rescues the luteal phase when gonadotropin-releasing hormone agonist is used for ovulation induction: a prospective, randomized, controlled study. *Fertility and sterility* 2010;93: 847-854.
Humaidan P, Polyzos NP, Alsbjerg B, Erb K, Mikkelsen AL, Elbaek HO, Papanikolaou EG, Andersen CY. GnRHa trigger and individualized luteal phase hCG support according to ovarian response to stimulation: two prospective randomized controlled multi-centre studies in IVF patients. *Human reproduction (Oxford, England)* 2013;28: 2511-2521.
Ismail Madkour WA, Noah B, Abdel Hamid AM, Zaheer H, Al-Bahr A, Shaeer M, Moawad A. Luteal phase support with estradiol and progesterone versus progesterone alone in GnRH antagonist ICSI cycles: a randomized controlled study. *Human fertility (Cambridge, England)* 2016;19: 142-149.
Jacob SL, Brewer C, Tang T, Picton HM, Barth JH, Balen AH. A short course of metformin does not reduce OHSS in a GnRH antagonist cycle for women with PCOS undergoing IVF: a randomised placebo-controlled trial. *Human reproduction (Oxford, England)* 2016;31: 2756-2764.
Karacan M, Erdem E, Usta A, Arvas A, Cebi Z, Camlibel T. Gonadotropin-releasing hormone agonist triggering with concomitant administration of low doses of human chorionic gonadotropin or a freeze-all strategy in high responders. *Saudi Med J* 2017;38: 586-591.
Kim CH, Ahn JW, Moon JW, Kim SH, Chae HD, Kang BM. Ovarian Features after 2 Weeks, 3 Weeks and 4 Weeks Transdermal Testosterone Gel Treatment and Their Associated Effect on IVF Outcomes in Poor Responders. *Development & reproduction* 2014;18: 145-152.
Kolibianakis EM, Papanikolaou EG, Tournaye H, Camus M, Van Steirteghem AC, Devroey P. Triggering final oocyte maturation using different doses of human chorionic gonadotropin: a randomized pilot study in patients with polycystic ovary syndrome treated with gonadotropin-releasing hormone antagonists and recombinant follicle-stimulating hormone. *Fertility and sterility* 2007;88: 1382-1388.
Kupferminc MJ, Lessing JB, Amit A, Yovel I, David MP, Peyser MR. A prospective randomized trial of human chorionic gonadotrophin or dydrogesterone support following in-vitro fertilization and embryo transfer. *Human reproduction (Oxford, England)* 1990;5: 271-273.
Kwan I, Bhattacharya S, Kang A, Woolner A. Monitoring of stimulated cycles in assisted reproduction (IVF and ICSI). *The Cochrane database of systematic reviews* 2014: Cd005289.
Lambalk CB, Banga FR, Huirne JA, Toftager M, Pinborg A, Homburg R, van der Veen F, van Wely M. GnRH antagonist versus long agonist protocols in IVF: a systematic review and meta-analysis accounting for patient type. *Human reproduction update* 2017;23: 560-579.
Lensen SF, Wilkinson J, Mol BWJ, La MA, Torrance H, Broekmans FJ. Individualised gonadotropin dose selection using markers of ovarian reserve for women undergoing IVF/ICSI *Cochrane Database of Systematic Reviews*. 2017. John Wiley & Sons, Ltd.
Li XL, Wang L, Lv F, Huang XM, Wang LP, Pan Y, Zhang XM. The influence of different growth hormone addition protocols to poor ovarian responders on clinical outcomes in controlled ovary stimulation cycles: A systematic review and meta-analysis. *Medicine* 2017;96: e6443.
Liu XR, Mu HQ, Shi Q, Xiao XQ, Qi HB. The optimal duration of progesterone supplementation in pregnant women after IVF/ICSI: a meta-analysis. *Reproductive biology and endocrinology : RB&E* 2012;10: 107.

Madani T, Mohammadi Yeganeh L, Ezabadi Z, Hasani F, Chehrazi M. Comparing the efficacy of urinary and recombinant hCG on oocyte/follicle ratio to trigger ovulation in women undergoing intracytoplasmic sperm injection cycles: a randomized controlled trial. *Journal of assisted reproduction and genetics* 2013;30: 239-245.
Maged A, Nada A, Abohamila F, Hashem A, Mostafa W, Elzayat A. Delayed Start Versus Conventional GnRH Antagonist Protocol in Poor Responders Pretreated With Estradiol in Luteal Phase: a Randomized Controlled Trial *Reproductive sciences (Thousand Oaks, Calif)*. 2015, pp. 1627-1631.
Maldonado LG, Franco JG, Jr., Setti AS, Iaconelli A, Jr., Borges E, Jr. Cost-effectiveness comparison between pituitary down-regulation with a gonadotropin-releasing hormone agonist short regimen on alternate days and an antagonist protocol for assisted fertilization treatments. *Fertility and sterility* 2013;99: 1615-1622.
Michnova L, Dostal J, Kudela M, Hamal P, Langova K. Vaginal use of micronized progesterone for luteal support.A randomized study comparing Utrogestan® and Crinone® 8. *Biomedical papers of the medical faculty of the university palacky, olomouc, czechoslovakia* 2017;161: 86-91.
Mochtar MH, Van Wely M, Van der Veen F. Timing luteal phase support in GnRH agonist down-regulated IVF/embryo transfer cycles. *Human reproduction (Oxford, England)* 2006;21: 905-908.
Morgia F, Sbracia M, Schimberni M, Giallonardo A, Piscitelli C, Giannini P, Aragona C. A controlled trial of natural cycle versus microdose gonadotropin-releasing hormone analog flare cycles in poor responders undergoing in vitro fertilization. *Fertility and sterility* 2004;81: 1542-1547.
Mukherjee S, Sharma S, Chakravarty BN. Letrozole in a low-cost in vitro fertilization protocol in intracytoplasmic sperm injection cycles for male factor infertility: A randomized controlled trial. *Journal of human reproductive sciences* 2012;5: 170-174.
Murber A, Fancsovits P, Ledo N, Szakacs M, Rigo J, Urbancsek J. Impact of highly purified versus recombinant follicle stimulating hormone on oocyte quality and embryo development in intracytoplasmic sperm injection cycles. *Acta biologica Hungarica* 2011;62: 255-264.
Nagels HE, Rishworth JR, Siristatidis CS, Kroon B. Androgens (dehydroepiandrosterone or testosterone) for women undergoing assisted reproduction. *The Cochrane database of systematic reviews* 2015: Cd009749.
Narkwichean A, Maalouf W, Baumgarten M, Polanski L, Raine-Fenning N, Campbell B, Jayaprakasan K. Efficacy of Dehydroepiandrosterone (DHEA) to overcome the effect of ovarian ageing (DITTO): A proof of principle double blinded randomized placebo controlled trial. *European journal of obstetrics, gynecology, and reproductive biology* 2017;218: 39-48.
Oudshoorn SC, van Tilborg TC, Eijkemans MJC, Oosterhuis GJE, Friederich J, van Hooff MHA, van Santbrink EJP, Brinkhuis EA, Smeenk JMJ, Kwee J *et al.* Individualized versus standard FSH dosing in women starting IVF/ICSI: an RCT. Part 2: The predicted hyper responder. *Human reproduction (Oxford, England)* 2017;32: 2506-2514.
Pacchiarotti A, Sbracia M, Frega A, Selman H, Rinaldi L, Pacchiarotti A. Urinary hMG (Meropur) versus recombinant FSH plus recombinant LH (Pergoveris) in IVF: a multicenter, prospective, randomized controlled trial. *Fertility and sterility* 2010;94: 2467-2469.
Papanikolaou EG, Verpoest W, Fatemi H, Tarlatzis B, Devroey P, Tournaye H. A novel method of luteal supplementation with recombinant luteinizing hormone when a gonadotropin-releasing hormone agonist is used instead of human chorionic gonadotropin for ovulation triggering: a randomized prospective proof of concept study. *Fertility and sterility* 2011;95: 1174-1177.
Parsanezhad M, Jahromi B, Rezaee S, Kooshesh L, Alaee S. The effect of four different gonadotropin protocols on oocyte and embryo quality and pregnancy outcomes in IVF/ICSI cycles; a randomized controlled trial *Iranian journal of medical sciences*. 2017, pp. 57-65.
Ragni G, Levi-Setti PE, Fadini R, Brigante C, Scarduelli C, Alagna F, Arfuso V, Mignini-Renzini M, Candiani M, Paffoni A *et al.* Clomiphene citrate versus high doses of gonadotropins for in vitro fertilisation in women with compromised ovarian reserve: a randomised controlled non-inferiority trial. *Reproductive biology and endocrinology : RB&E* 2012;10: 114.
Selman H, Pacchiarotti A, Rinaldi L, Crescenzi F, Lanzilotti G, Lofino S, El-Danasouri I. Simultaneous administration of human acidic and recombinant less acidic follicle-stimulating hormone for ovarian stimulation improves oocyte and embryo quality, and clinical outcome in patients with repeated IVF failures. *European review for medical and pharmacological sciences* 2013;17: 1814-1819.

Shahrokh Tehrani Nejad E, Bakhtiari Ghaleh F, Eslami B, Haghollahi F, Bagheri M, Masoumi M. Comparison of pre-treatment with OCPs or estradiol valerate vs. no pre-treatment prior to GnRH antagonist used for IVF cycles: An RCT. *International journal of reproductive biomedicine (Yazd, Iran)* 2018;16: 535-540.
Shaltout A, Eid M, Shohayeb A. Does triggering ovulation by 5000 IU of uhCG affect ICSI outcome? *Middle East Fertility Society Journal*. 2006, pp. 99-103.
Shi Y, Sun Y, Hao C, Zhang H, Wei D, Zhang Y, Zhu Y, Deng X, Qi X, Li H *et al.* Transfer of Fresh versus Frozen Embryos in Ovulatory Women. *The New England journal of medicine* 2018;378: 126-136.
Shin JJ, Park KE, Choi YM, Kim HO, Choi DH, Lee WS, Cho JH. Early gonadotropin-releasing hormone antagonist protocol in women with polycystic ovary syndrome: A preliminary randomized trial. *Clinical and experimental reproductive medicine* 2018;45: 135-142.
Siristatidis CS, Basios G, Pergialiotis V, Vogiatzi P. Aspirin for in vitro fertilisation. *The Cochrane database of systematic reviews* 2016;11: Cd004832.
Siristatidis CS, Gibreel A, Basios G, Maheshwari A, Bhattacharya S. Gonadotrophin-releasing hormone agonist protocols for pituitary suppression in assisted reproduction. *The Cochrane database of systematic reviews* 2015: Cd006919.
Smitz J, Devroey P, Camus M, Deschacht J, Khan I, Staessen C, Van Waesberghe L, Wisanto A, Van Steirteghem AC. The luteal phase and early pregnancy after combined GnRH-agonist/HMG treatment for superovulation in IVF or GIFT. *Human reproduction (Oxford, England)* 1988;3: 585-590.
Sohn SH, Penzias AS, Emmi AM, Dubey AK, Layman LC, Reindollar RH, DeCherney AH. Administration of progesterone before oocyte retrieval negatively affects the implantation rate. *Fertility and sterility* 1999;71: 11-14.
Sterrenburg MD, Veltman-Verhulst SM, Eijkemans MJ, Hughes EG, Macklon NS, Broekmans FJ, Fauser BC. Clinical outcomes in relation to the daily dose of recombinant follicle-stimulating hormone for ovarian stimulation in in vitro fertilization in presumed normal responders younger than 39 years: a meta-analysis. *Human reproduction update* 2011;17: 184-196.
Toftager M, Bogstad J, Bryndorf T, Lossl K, Roskaer J, Holland T, Praetorius L, Zedeler A, Nilas L, Pinborg A. Risk of severe ovarian hyperstimulation syndrome in GnRH antagonist versus GnRH agonist protocol: RCT including 1050 first IVF/ICSI cycles. *Human reproduction (Oxford, England)* 2016;31: 1253-1264.
Toftager M, Bogstad J, Lossl K, Praetorius L, Zedeler A, Bryndorf T, Nilas L, Pinborg A. Cumulative live birth rates after one ART cycle including all subsequent frozen-thaw cycles in 1050 women: secondary outcome of an RCT comparing GnRH-antagonist and GnRH-agonist protocols. *Human reproduction (Oxford, England)* 2017;32: 556-567.
Trenkic M, Popovic J, Kopitovic V, Bjelica A, Zivadinovic R, Pop-Trajkovic S. Flexible GnRH antagonist protocol vs. long GnRH agonist protocol in patients with polycystic ovary syndrome treated for IVF: comparison of clinical outcome and embryo quality. *Ginekologia polska* 2016;87: 265-270.
Tso LO, Costello MF, Albuquerque LE, Andriolo RB, Macedo CR. Metformin treatment before and during IVF or ICSI in women with polycystic ovary syndrome. *The Cochrane database of systematic reviews* 2014: Cd006105.
van der Linden M, Buckingham K, Farquhar C, Kremer JA, Metwally M. Luteal phase support for assisted reproduction cycles. *The Cochrane database of systematic reviews* 2015: Cd009154.
van Wely M, Kwan I, Burt AL, Thomas J, Vail A, Van der Veen F, Al-Inany HG. Recombinant versus urinary gonadotrophin for ovarian stimulation in assisted reproductive technology cycles. *The Cochrane database of systematic reviews* 2011: Cd005354.
Verpoest W, Kolibianakis E, Papanikolaou E, Smitz J, Steirteghem A, Devroey P. Aromatase inhibitors in ovarian stimulatio for IVF/ICSI: A pilot study *Reproductive biomedicine online*. 2006, pp. 166-172.
Vuong LN, Dang VQ, Ho TM, Huynh BG, Ha DT, Pham TD, Nguyen LK, Norman RJ, Mol BW. IVF Transfer of Fresh or Frozen Embryos in Women without Polycystic Ovaries. *New England journal of medicine* 2018;378: 137-147.
Westergaard LG, Erb K, Laursen S, Rasmussen PE, Rex S. The effect of human menopausal gonadotrophin and highly purified, urine-derived follicle stimulating hormone on the outcome of in-vitro fertilization in down-regulated normogonadotrophic women. *Human reproduction (Oxford, England)* 1996;11: 1209-1213.

Wiser A, Gonen O, Ghetler Y, Shavit T, Berkovitz A, Shulman A. Monitoring stimulated cycles during in vitro fertilization treatment with ultrasound only--preliminary results. *Gynecological endocrinology : the official journal of the International Society of Gynecological Endocrinology* 2012;28: 429-431.
Wong KM, van Wely M, Mol F, Repping S, Mastenbroek S. Fresh versus frozen embryo transfers in assisted reproduction. *The Cochrane database of systematic reviews* 2017;3: Cd011184.
Xiao J, Chang S, Chen S. The effectiveness of gonadotropin-releasing hormone antagonist in poor ovarian responders undergoing in vitro fertilization: a systematic review and meta-analysis. *Fertility and sterility* 2013;100: 1594-1601.e1591-1599.
Yasa C, Bastu E, Dural O, Celik E, Ergun B. Evaluation of low-dose letrozole addition to ovulation induction in IVF *Clinical and experimental obstetrics & gynecology*. 2013, pp. 98-100.
Youssef MA, Abou-Setta AM, Lam WS. Recombinant versus urinary human chorionic gonadotrophin for final oocyte maturation triggering in IVF and ICSI cycles. *The Cochrane database of systematic reviews* 2016;4: Cd003719.
Youssef MA, Van der Veen F, Al-Inany HG, Mochtar MH, Griesinger G, Nagi Mohesen M, Aboulfoutouh I, van Wely M. Gonadotropin-releasing hormone agonist versus HCG for oocyte triggering in antagonist-assisted reproductive technology. *The Cochrane database of systematic reviews* 2014: Cd008046.