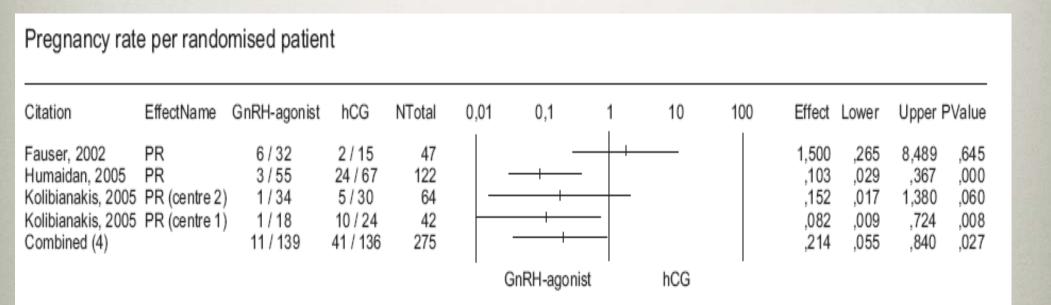
GnRH-Agonist triggering Meta-analysis and current evidence

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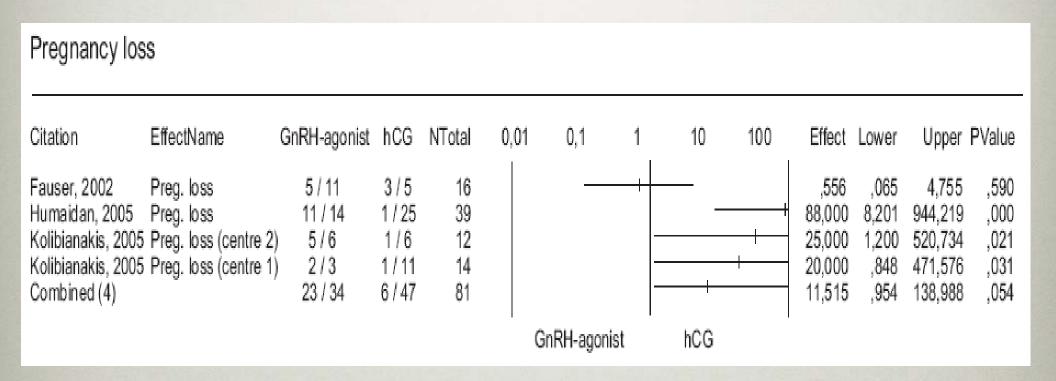
Madrid 2010, ESHRE Campus

Pregnancy rate per patient Conventional Luteal Support (Past)



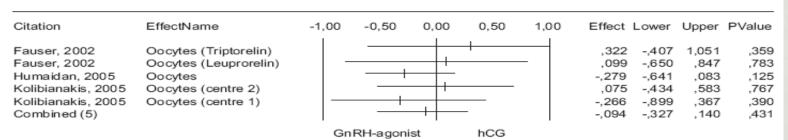
GnRH agonist for triggering final oocyte maturation in the GnRH antagonist ovarian hyperstimulation protocol: asystematic review and meta-analysis

Pregnancy Loss per patient (Past)



Embryological parameters (Past)

No. of oocytes retrieved



Proportion MII oocytes

Citation	EffectName	-2,00	-1,00	0,00	1,00	2,00	Effect	Lower	Upper	PValue
Fauser, 2002 Fauser, 2002 Humaidan, 2005 Kolibianakis, 2005 Kolibianakis, 2005 Combined (5)	Prop. MII (Triptorelin) Prop. MII (Leuprorelin) Prop. MII Prop. MII (centre 2) Prop. MII (centre 1)			- - -	 	_	-,778 -,057 ,793 -,325 ,084 -,034	-,842 -,661	-,024 ,691 1,302 ,192 ,829 ,516	,032 ,873 ,002 ,204 ,814 ,902
		Gnl	RH-agon	ist	hCG					

Fertilization rate

Citation	EffectName	-1,00	-0,50	0,00	0,50	1,00	Effect	Lower	Upper	PValue
Fauser, 2002 Fauser, 2002 Humaidan, 2005 Kolibianakis, 2005 Kolibianakis, 2005 Combined (5)	FR (Triptorelin) FR (Leuprorelin) FR FR (centre 2) FR (centre 1)				 		,194 ,283 ,218 -,033 ,081 ,150	-,470 -,143 -,550 -,573	,919 1,035 ,579 ,484 ,736 ,385	,578 ,433 ,231 ,899 ,799 ,212
		Gn	RH-agoni	st	hCG					

Pregnancy rate in Fresh IVF with ET Modified Luteal Support (Present)

	Agonist trig	gering	HCG trigg	gering	Risk Difference		Risk Difference
Study or Subgroup	Events	Total	Events	Total	Weight M-H, Fixed, 95% CI		M-H, Fixed, 95% CI
Babayof, 2006	1	15	2	13	5.9%	-0.09 [-0.32, 0.15]	-
Humaidan, 2006	5	13	8	15	5.9%	-0.15 [-0.51, 0.22]	
Pirard, 2006	2	12	1	6	3.4%	0.00 [-0.37, 0.37]	
Engmann, 2008	16	33	14	32	13.7%	0.05 [-0.19, 0.29]	- - -
Humaidan, 2010	36	152	47	150	63.8%	-0.08 [-0.18, 0.02]	-
Papanikolaou, 2011	4	18	4	17	7.4%	-0.01 [-0.29, 0.27]	
Total (95% CI)		243		233	100.0%	-0.06 [-0.14, 0.02]	•
Total events	64		76				
Heterogeneity: Chi ² = 1	1.35, df = 5 (P =	1 05 0 05 1					
Test for overall effect: 2	·	-1 -0.5 0 0.5 1 Favours HCG trig Favours Agonist trig					

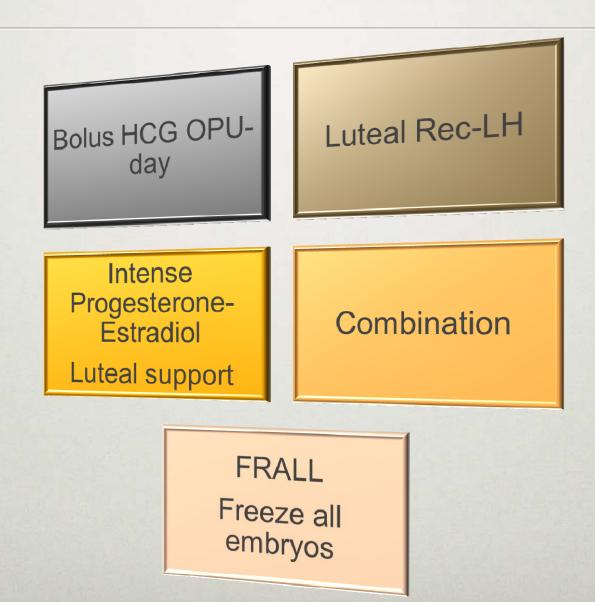
OHSS rate in Fresh IVF with ET (Present)

	Agonist trigg	jering	HCG trigg	ering	g Risk Difference		Risk Difference		
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% CI	M-H, Fixed, 95% CI		
Fauser, 2002	0	32	0	15	5.5%	0.00 [-0.09, 0.09]	+		
Humaidan, 2005	0	55	0	67	16.4%	0.00 [-0.03, 0.03]	<u>†</u>		
Kolibianakis, 2005	0	52	0	54	14.4%	0.00 [-0.04, 0.04]	+		
Pirard, 2006	0	6	0	6	1.6%	0.00 [-0.27, 0.27]			
Humaidan, 2006	0	13	0	15	3.8%	0.00 [-0.13, 0.13]			
Babayof, 2006	0	15	4	13	3.8%	-0.31 [-0.57, -0.05]			
Engmann, 2008	0	33	10	32	8.8%	-0.31 [-0.48, -0.15]			
Humaidan, 2010	0	152	3	150	41.0%	-0.02 [-0.05, 0.01]	•		
Papanikolaou, 2011	0	17	0	18	4.7%	0.00 [-0.10, 0.10]			
Total (95% CI)		375		370	100.0%	-0.05 [-0.07, -0.02]	♦		
Total events	0		17						
Heterogeneity: Chi ² = 3	85.72, df = 8 (P)	< 0.000	1); I ² = 78%						
Test for overall effect: $Z = 3.75$ (P = 0.0002) -0.5 -0.25 0 0.25 0.5 Favours experimental Favours control									
r avours experimental in avours control									

OHSS rate in Oocyte Donation IVF

	Agonist trigg	gering	HCG triggering		Risk Ratio		Risk R	atio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% CI	M-H, Fixed	I, 95% CI
Acevedo, 2006	0	30	5	30	26.2%	0.09 [0.01, 1.57]	-	
Galindo, 2009	0	106	9	106	45.2%	0.05 [0.00, 0.89]		
Melo, 2009	0	50	2	50	11.9%	0.20 [0.01, 4.06]	-	
Sismanoglu, 2009	0	44	3	44	16.7%	0.14 [0.01, 2.69]	-	_
Total (95% CI)		230		230	100.0%	0.10 [0.02, 0.40]		
Total events	0		19					
Heterogeneity: $Chi^2 = 0.48$, $df = 3 (P = 0.92)$; $I^2 = 0\%$							0.004 0.4 4	10 1000
Test for overall effect: 2	001)				Fa	0.001 0.1 1 vours experimental	10 1000 Favours control	

Strategies after Agonist Triggering



GnRHa to trigger final oocyte maturation:

a time to reconsider

- Reduced if not eliminated risk for OHSS
- Challenge is to rescue luteal phase insufficiency
 - Primary objective should be Delivery outcome
- In specific high risk patients for OHSS should become the protocol of choice

Humaidan, Papanikolaou and Tarlatzis

Human Reproduction 2009