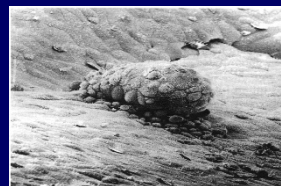
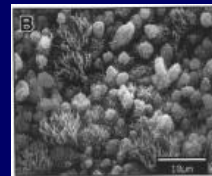


Support of the Luteal phase: What is the evidence?

Zeev Shoham, M.D.

IVF Unit, Kaplan Medical Center Rehovot, Israel

Cross communication



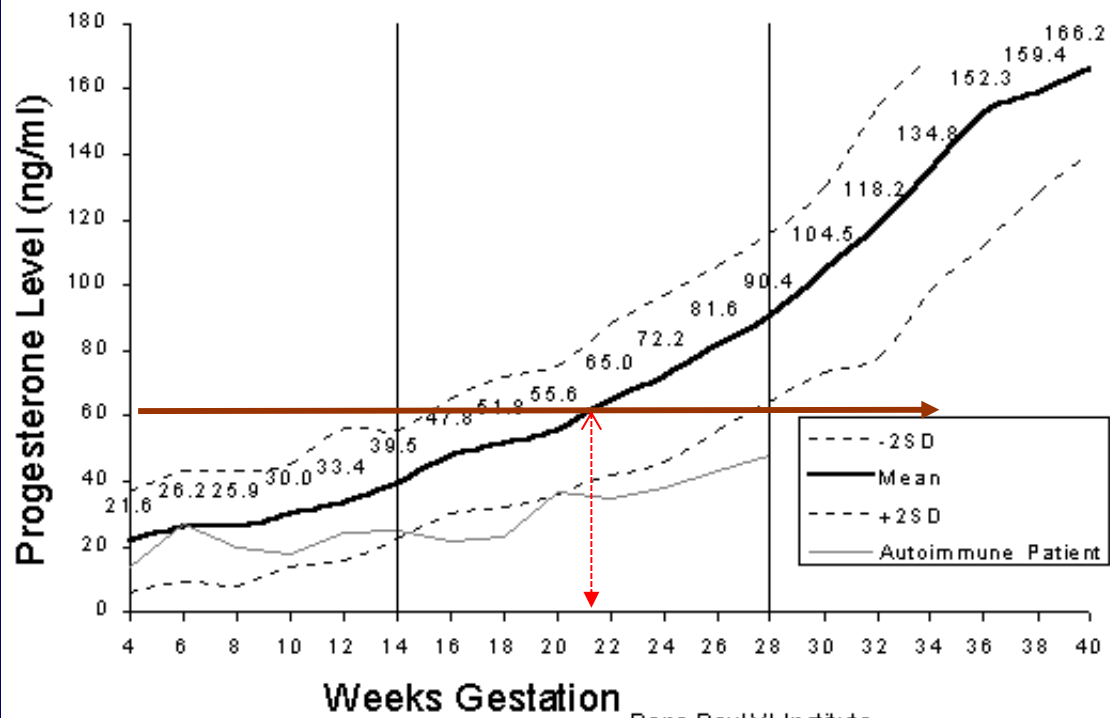
Optimizing the endometrium for implantation

The normal and stimulated luteal phase.

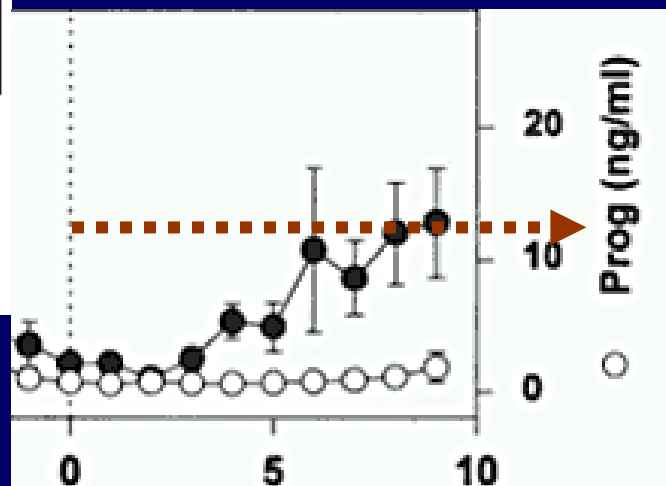
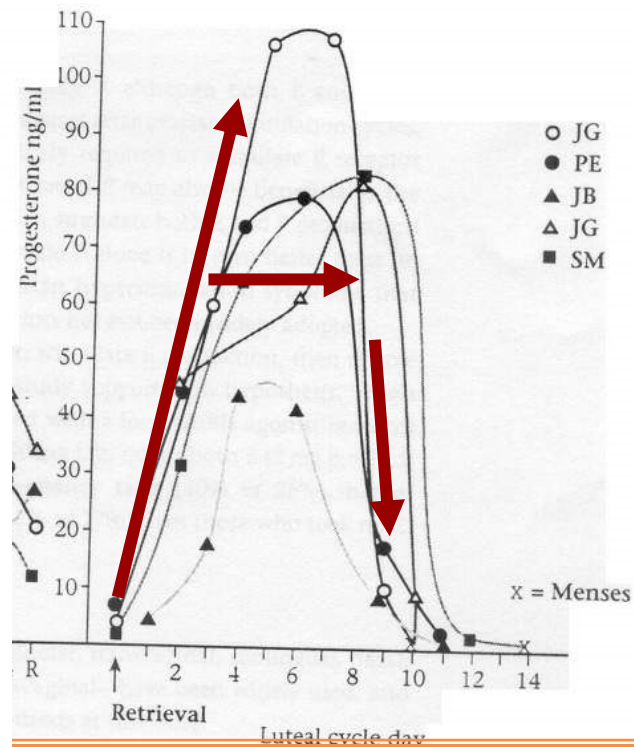
What can we add to the current protocol? (GnRH agonist)

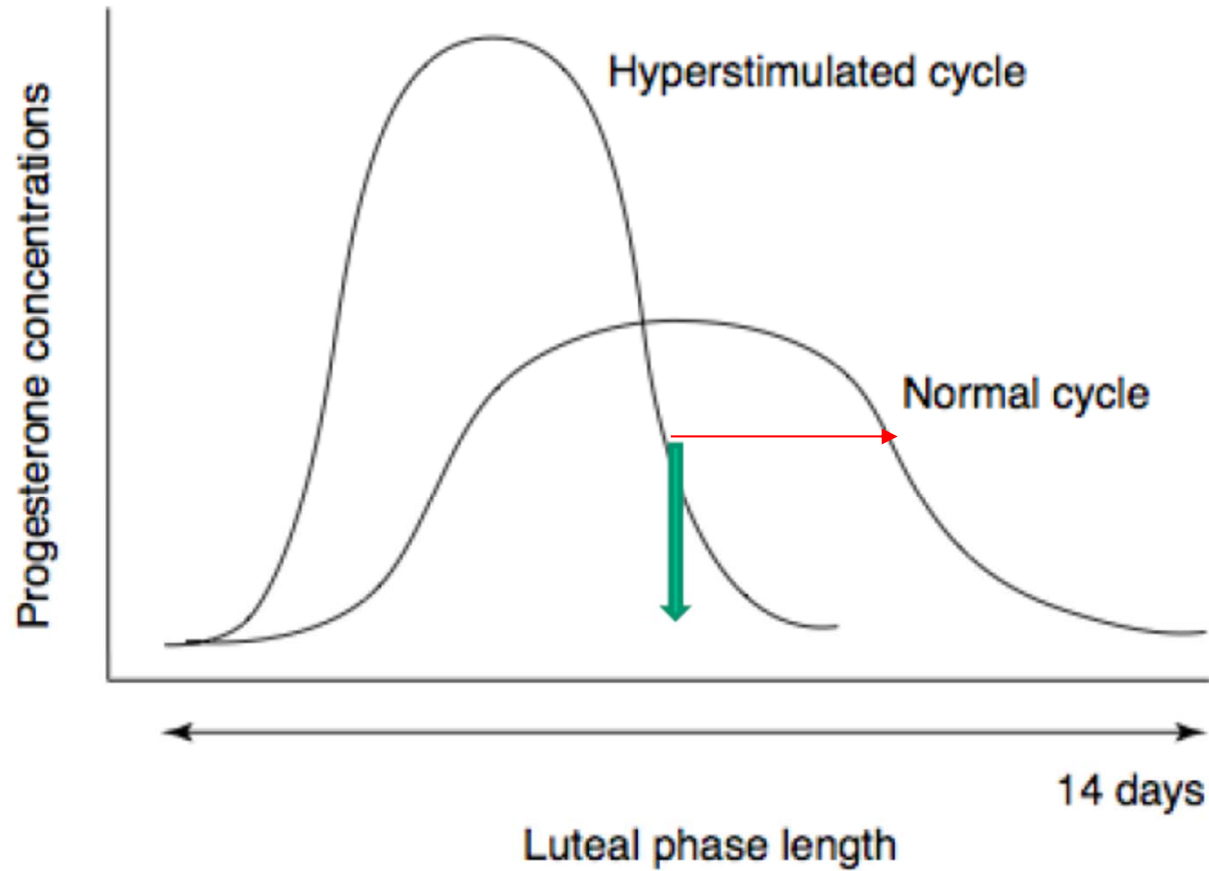
When to start when to stop? (World survey)

Progesterone Levels in Pregnancy



Pope Paul VI Institute
National Reproductive Hormone Laboratory





TRENDS in Endocrinology & Metabolism

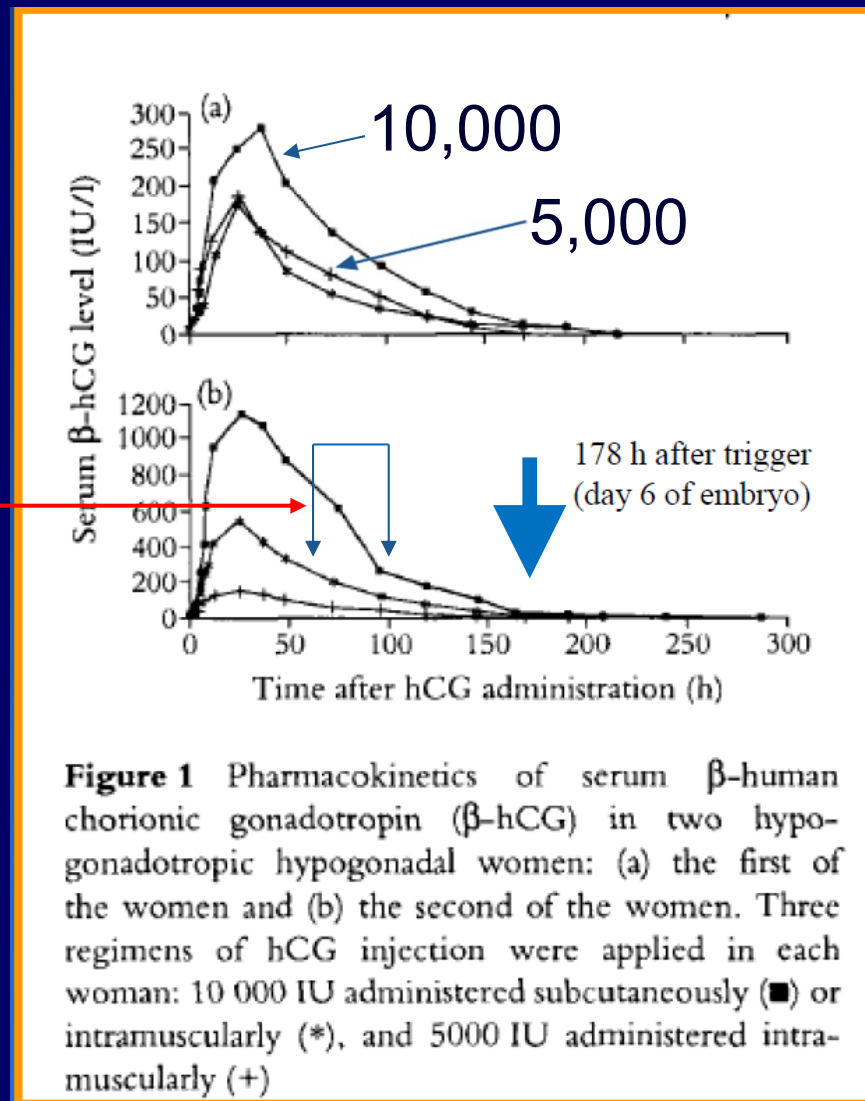
Adapted from Jones-1996 by Fauser and Devroey-2003

Timing of Luteal Support in ART Cycles

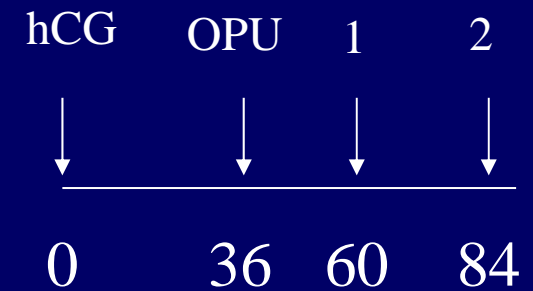
- At the time of hCG admin.
- At the time OPU
- One day post OPU
- At the time of ET
- 6 days post OPU



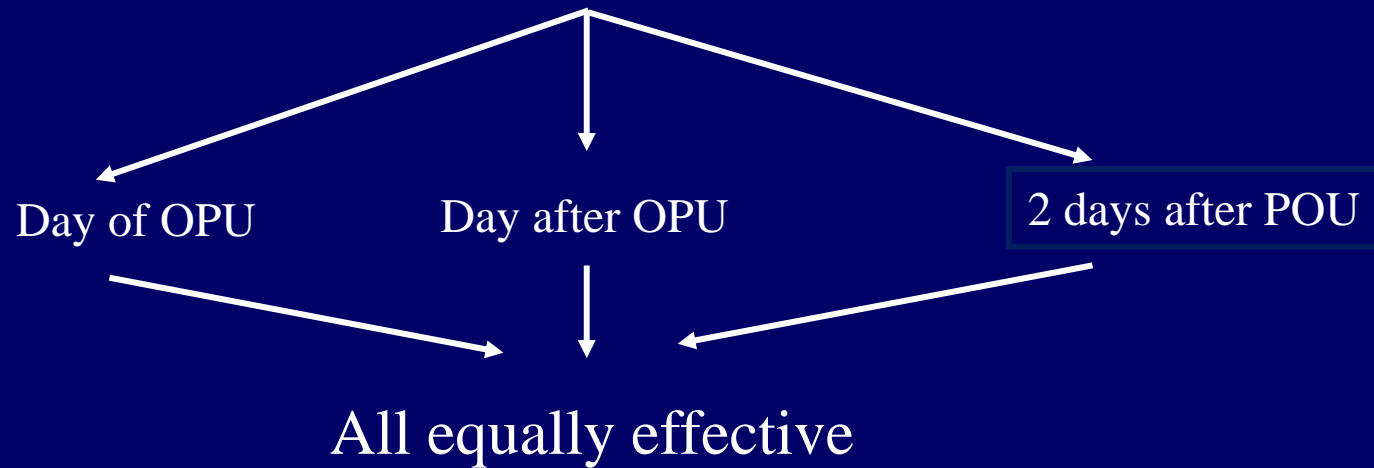
Pharmacokinetics of hCG administration



Time to start P support

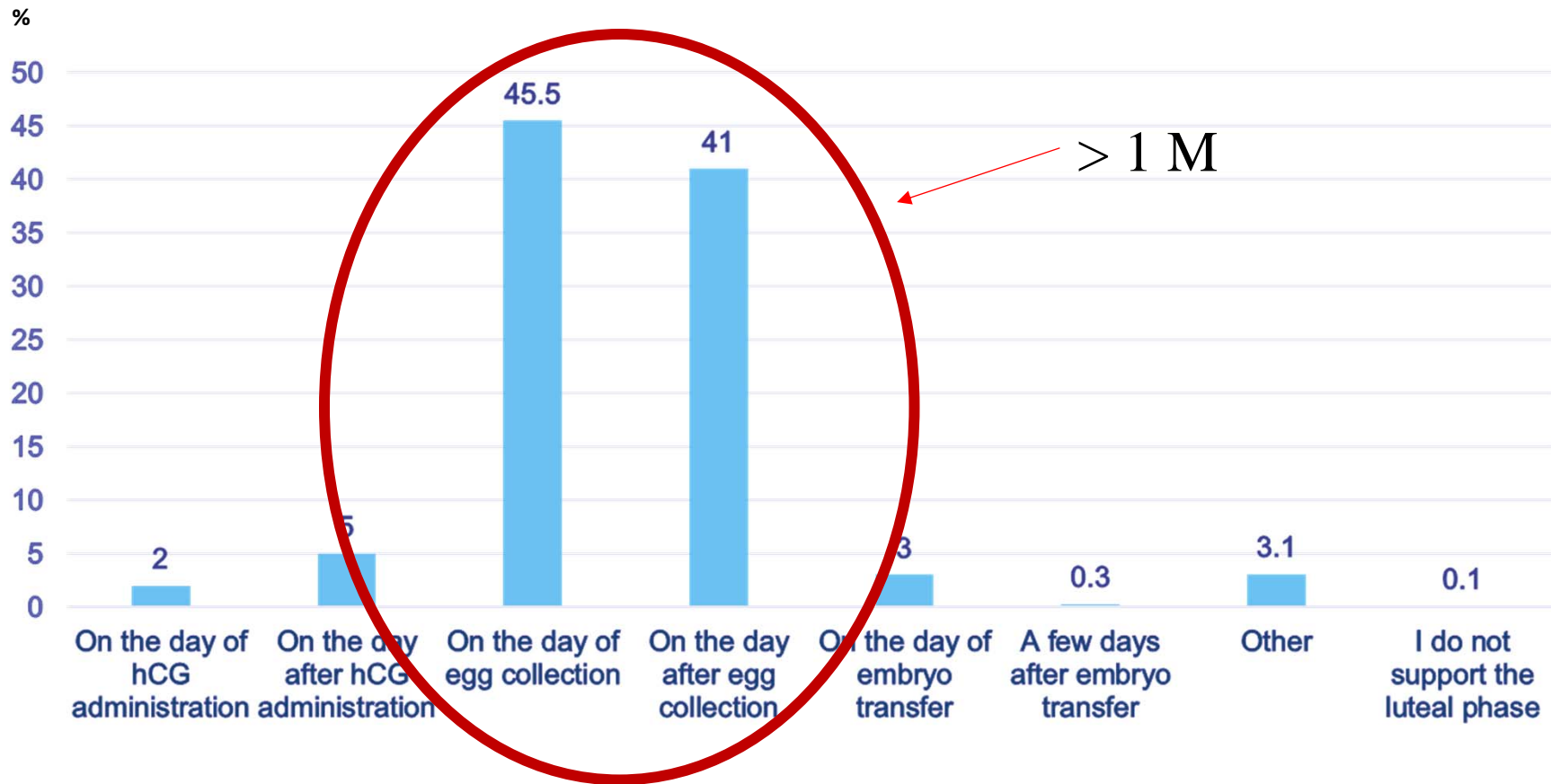


When to start the LPS?



Initiating LPS on the day of or day after oocyte retrieval,
has now become a routine practice in ART

If you support the luteal phase, when do you start the regimen you use?



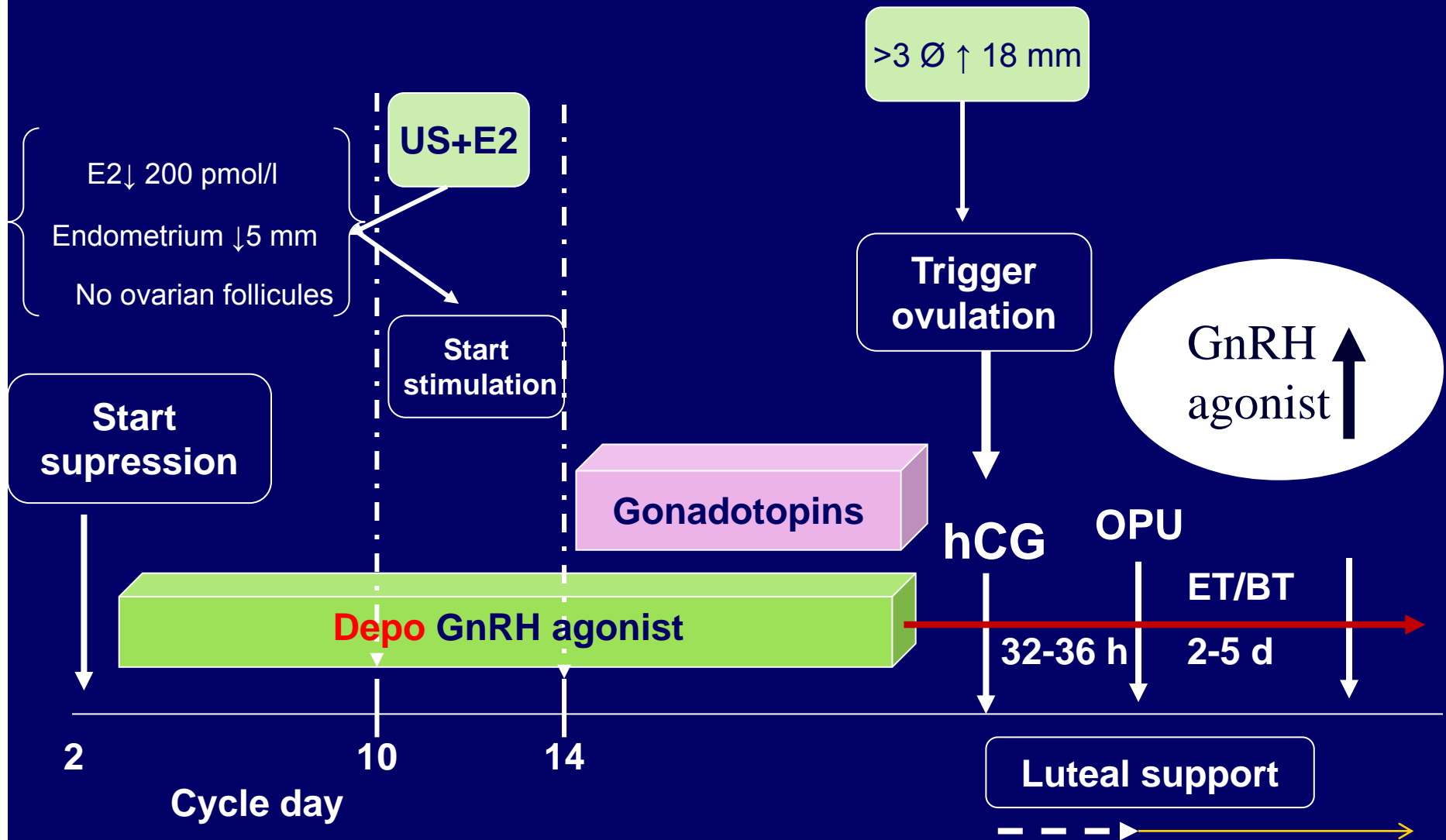
Elements of luteal support

Estrogen

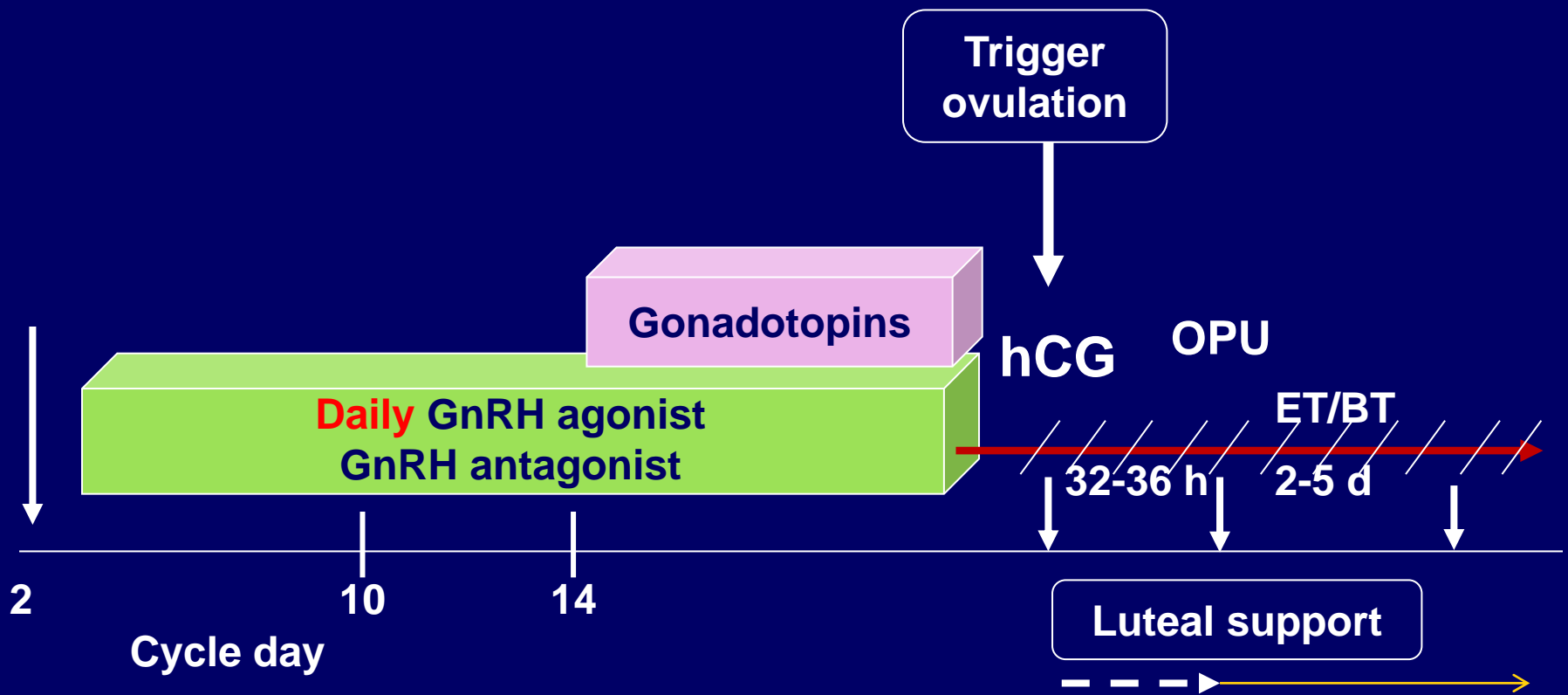
Progesterone

GnRH agonist

GnRH agonist long protocol (Follicular phase)

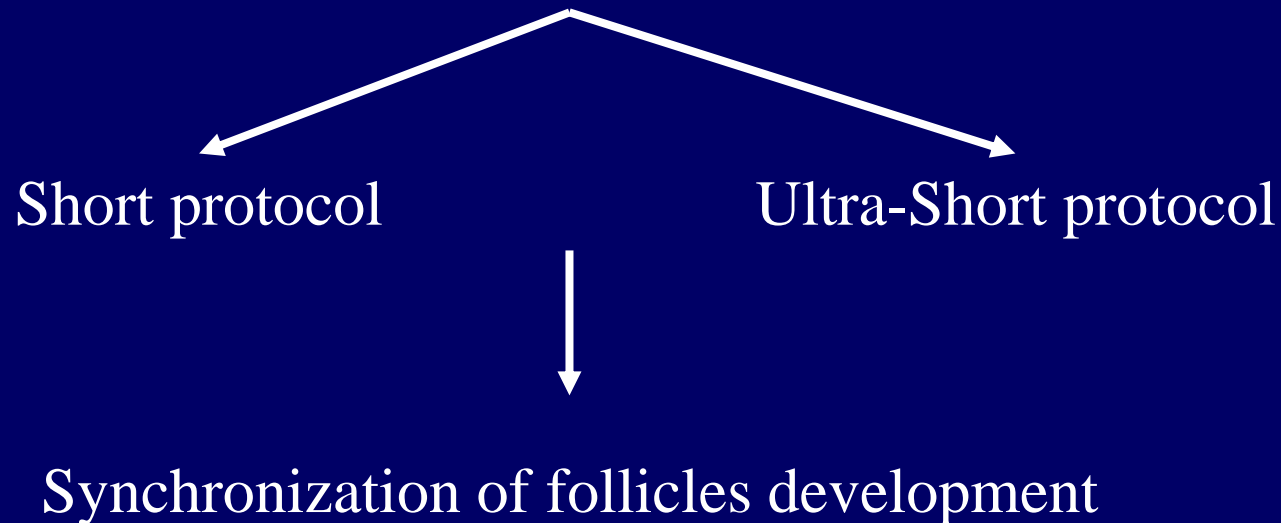


GnRH agonist long protocol (Follicular phase)



Common knowledge

The high pregnancy rate of the GnRH-a long protocol compare with:

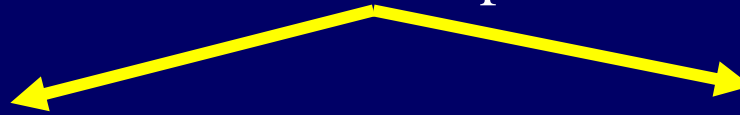


High level of GnRH agonist at the time of implantation and embryo development

Cultured Murine embryos



GnRH receptor



Placenta secretes decapeptide

Present in the developing embryos.

Cultured Murine embryos

GnRH-agonist



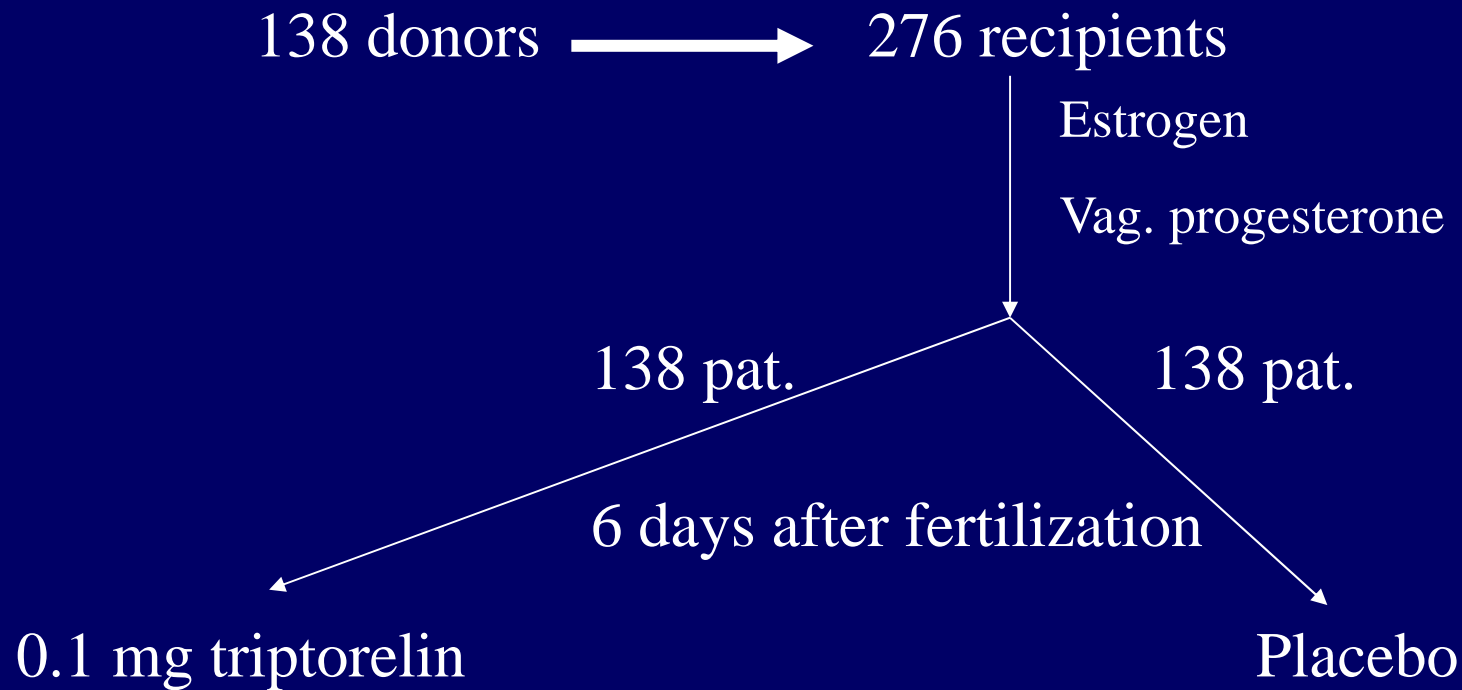
GnRH-antagonist

Blastocyst

GnRH agonist - Enhanced embryonic development.

Raga et al. Endocrinology 1999;140:3705

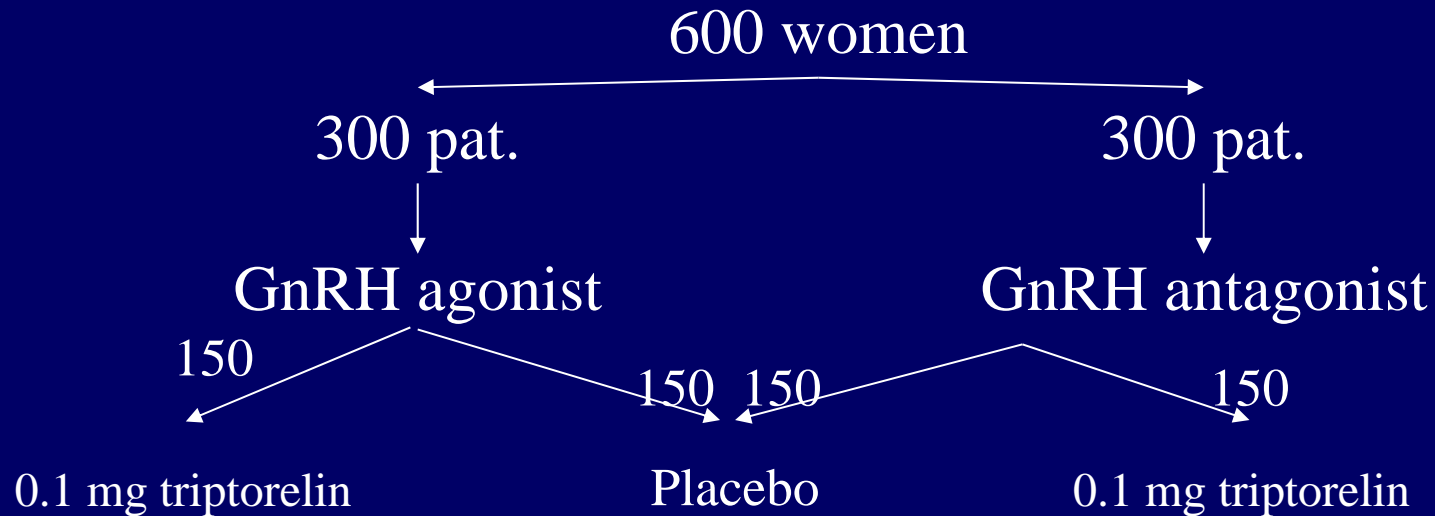
Oocyte donation program



Group	E.T.	Gestational sacs	Implantation rate	p
GnRH -a	331	122	36.9	<.05
Control	335	84	25.1	

Tesarik et al. Hum Reprod 2004;19:1176

IVF program - prospective randomized study



Group	Clinical PR	Group	Clinical PR
GnRH - agonist	29.8%	GnRH - Antagonist	27.1%
Placebo	18.2%	Placebo	17.4%
p	<0.05		<0.05

Tesarik et al. Hum Reprod 2006;21:2572

Conclusions

It is recommended to add GnRH agonist at the time of implantation.