

Post Trigger Labs Can Be Interpreted Similarly in Oral Progestin Suppressed IVF Protocol

Loughran PJ¹, Gilgannon LT¹, Zhou DP², Fox KA³, Gosschalk JE³, Goodman LR¹

¹Virginia Fertility and IVF, University of Virginia Department of Obstetrics & Gynecology, Charlottesville, VA

²Pacific Northwest Fertility, Seattle, WA

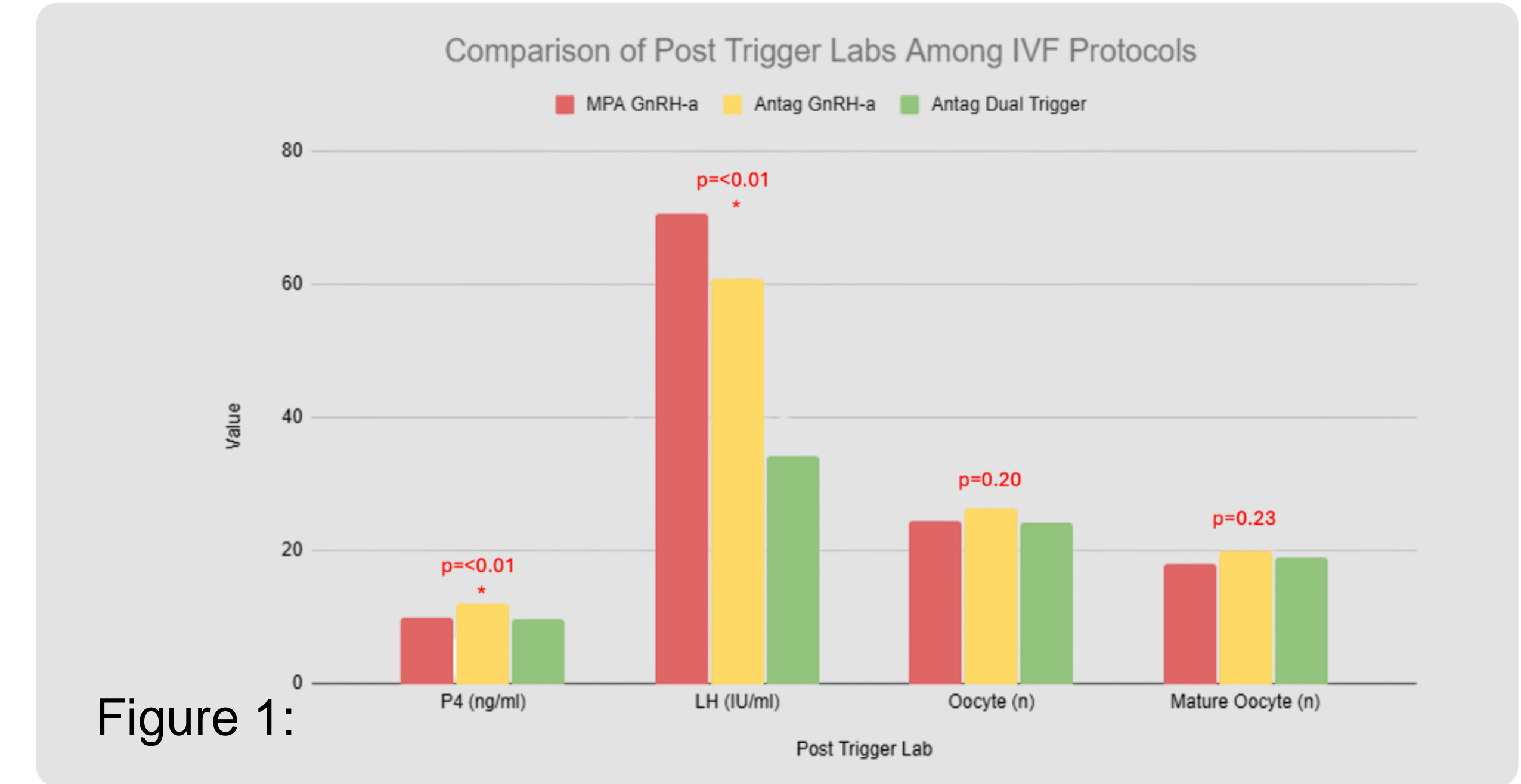
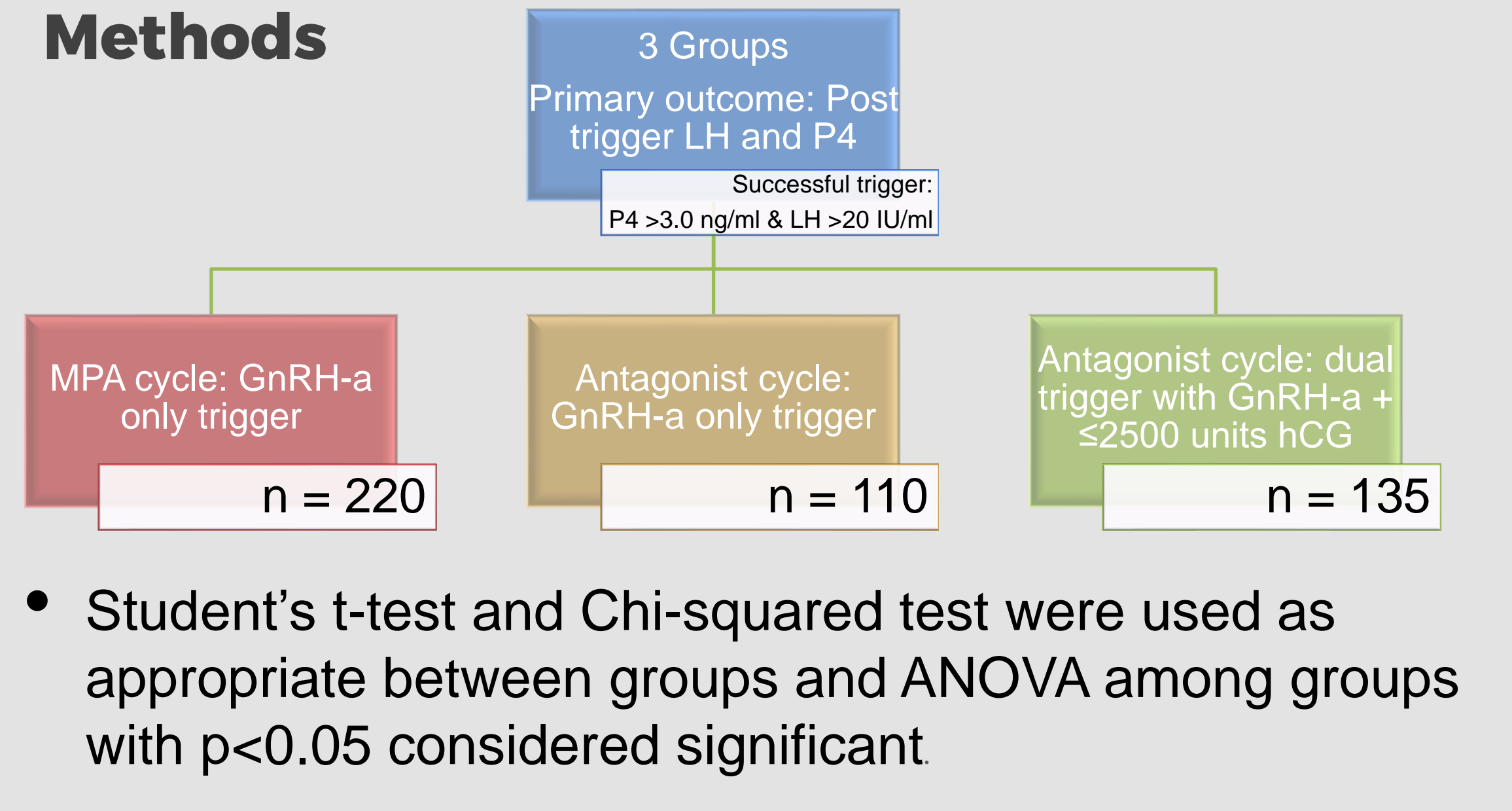
³Department of Obstetrics and Gynecology, Swedish Medical Center, WA



Background

- Progestin-suppressed IVF cycles are gaining popularity secondary to efficacy, improved logistics and patient satisfaction.¹
- Using progestin to prevent ovulation affects progesterone (P4) levels during stimulation, but it is unknown if post-trigger labs (LH and P4) are affected by use of a progestin during stimulation.

Methods



Objective

The goal of this prospective cohort study was to compare post GnRH-agonist trigger LH and progesterone levels in patients undergoing oral progestin vs. GnRH antagonist IVF stimulation cycles

Methods

- Two academic-affiliated private centers
- 465 patients aged 18-44yo undergoing autologous medroxyprogesterone acetate (MPA) and antagonist IVF cycles between January 2021- August 2024

Results

- Patients that underwent GnRH-a only trigger cycles had higher AMH values, as expected.
- Significant differences were identified in the LH and P4 levels between among groups, but all were above the threshold of confirmed trigger success
- Oocytes retrieved, mature oocytes (M2) and usable euploid blastocysts were similar between groups (figure 1)
- One patient in the dual trigger group failed and needed to be triggered again

Table 1	MPA GnRH-a only (n = 220)	Antag GnRH-a only (n = 110)	Antag Dual Trigger (n = 135)	p-value
Age (years)	33.3 ± 4.5	33.4 ± 4.5	31.6 ± 5.3	0.001
AMH (ng/ml)	6.2 ± 5.1	8.1 ± 6.2	4.7 ± 2.6	<0.01
E2 (pg/ml)	5276 ± 2146	5025 ± 1647	5013 ± 2092	0.39
LH (IU/ml)	70.6 ± 33.6	60.8 ± 31.7	34.2 ± 20.6	<0.01
P4 (ng/ml)	10.0 ± 4.6	12.1 ± 5.9	9.7 ± 3.6	<0.01
Oocyte (n)	24.5 ± 11.8	26.4 ± 10.9	24.2 ± 7.3	0.20
MII (n)	18.1 ± 8.7	19.9 ± 8.4	18.9 ± 6.7	0.23
2PN (n)	13.5 ± 8.1	16.0 ± 7.8	14.3 ± 5.9	0.03
Blastocysts (n)	7.4 ± 5.3	9.9 ± 5.7	8.9 ± 5.2	0.01
Euploid blastocysts (n)	3.7 ± 2.9	4.7 ± 3.3	3.9 ± 2.9	0.09

Conclusions

- Traditional post trigger thresholds (LH and P4) can be used to ensure adequate response in the MPA protocol
- GnRH-a only triggers are effective in MPA cycles
- Sharing nuances can be helpful to other practices looking to implement the MPA protocol

References

- Welp AM, Williams CD, Smith LP, Purcell S, Goodman LR. Oral medroxyprogesterone acetate for the use of ovulation suppression in in vitro fertilization: a cohort trial. *Fertil Steril.* 2024 May;121(5):806-813.

