# GnRH Agonist Only Triggers are as Effective As Dual Triggers in the Progestin Suppressed IVF Protocol

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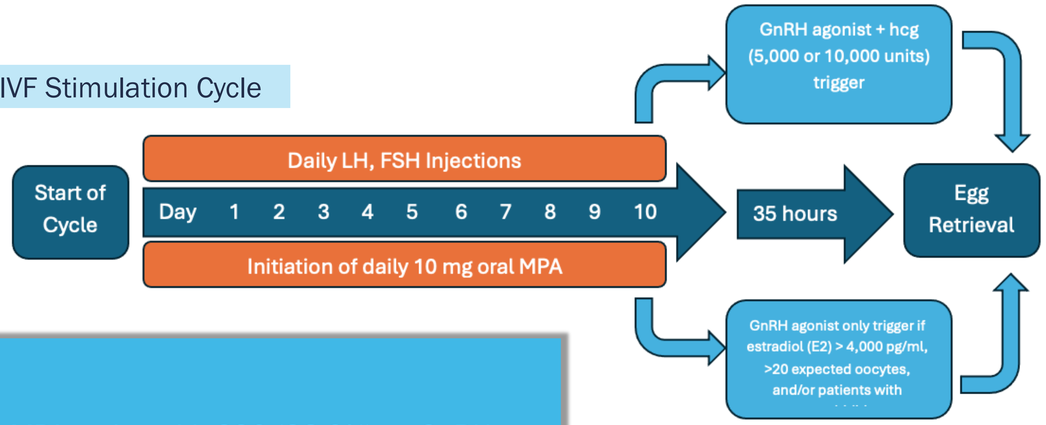
## BACKGROUND

- Use of gonadotropin-releasing hormone agonist (GnRH-a) trigger alone to cause final oocyte maturation has decreased the incidence of OHSS
- It is postulated that dual trigger with GnRH-a and hCG in GnRH antagonist protocols improves IVF yield [1]
- Recently oral progestins have gained popularity for ovarian suppression during IVF given efficacy, cost-effectiveness, and increased convenience.
- It has yet to be established if a dual trigger is superior to GnRH-a only in this protocol
- The goal of this study was to determine if dual trigger in the freeze-all progestin-suppressed IVF protocol results in improved outcomes

## METHODS

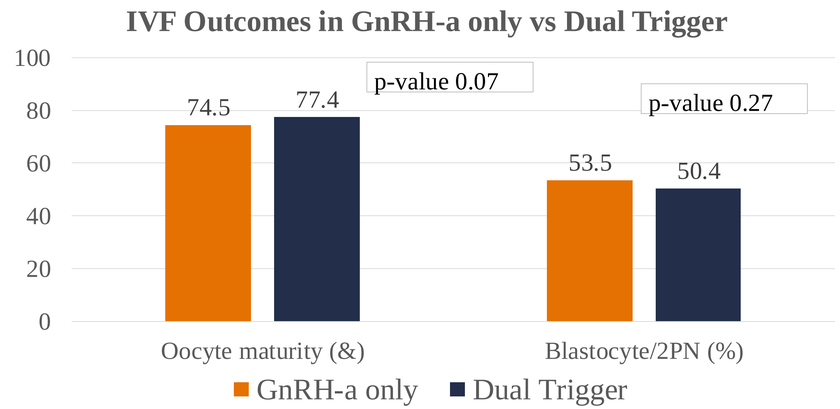
- Data collected prospectively at a single academic affiliated private practice
- Patients aged 18-44 undergoing autologous medroxyprogesterone acetate IVF cycles between January 2021 – August 2024.
- Patients who received GnRH-a only triggers were compared to those that received dual triggers with both GnRH-a and hCG
- Primary outcomes were percentage of oocyte maturity and blastocytes/2PN
- Student's t-test and Chi-squared test were used as appropriate between groups with p<0.05 considered significant

Figure 1: MPA IVF Stimulation Cycle




## RESULTS

- Total of 787 MPA cycles with 220 (28.0%) as GnRH-a only triggers.
- Patients who underwent GnRH-a only trigger were younger (33.3 +/- 4.5 years vs. 36.1 +/- 4.3 years; p <0.01) and had higher AMH values (6.2 +/- 5.1 vs. 1.9 +/- 1.8 ng/ml; p <0.01).
- Number of oocytes retrieved and blastocysts created were higher in GnRH-a only cycles, but percent oocyte maturity and blastocyst/2PN were similar between groups (Table 1)




| Table 1 | GnRH-a only (n=220) | Dual Trigger (n=567) | P-value |
|---|---|---|---|
| E2 (pg/ml) | 5276 ± 2146 | 2109 ± 1046 | <0.01 |
| Oocyte (n) | 24.5 ± 11.8 | 10.6 ± 7.0 | <0.01 |
| MII (n) | 18.1 ± 8.7 | 8.0 ± 5.5 | <0.01 |
| 2PN (n) | 13.5 ± 8.1 | 6.2 ± 4.7 | <0.01 |
| Blastocysts (n) | 7.4 ± 5.3 | 3.4 ± 3.1 | <0.01 |
| Euploid blastocysts (n) | 3.7 ± 2.9 | 1.7 ± 2.1 | <0.01 |
| Oocyte maturity (%) | 74.5 ± 13.5% | 77.4 ± 20.0% | 0.07 |
| Blastocyte rate/2PN (%) | 53.5 ± 23.6% | 50.4 ± 30.9% | 0.27 |

## CONCLUSIONS

- Dual trigger GnRH-a and hCG during the progestin protocol did not improve IVF outcomes compared to a trigger with GnRH-a alone.
- This reassuring data should enable providers to be more liberal in the elimination of hCG as part of the trigger to decrease the risk of OHSS in the progestin suppressed protocol

References
1. Hsia, LH, Lee, TH, Lin, YH, Huang, YY, Chang, HJ, & Liu, YL. (2023). Dual trigger improves the pregnancy rate in fresh in vitro fertilization (IVF) cycles compared with the human chorionic gonadotropin (hCG) trigger: a systematic review and meta-analysis of randomized trials. *Journal of Assisted Reproduction and Genetics*, *40*(9), 2063–2077.
2. Welp, A. M., Williams, C. D., Smith, L. P., Purcell, S., & Goodman, L. R. (2024). Oral medroxyprogesterone acetate for the use of ovulation suppression in in vitro fertilization: a cohort trial. *Fertility and sterility*, *121*(5), 806–813.