

# Comparison of *in vitro* maturation and *in vitro* fertilization for polycystic ovary syndrome patients—reply letter

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We thank for comments from Wu *et al.* (1) on our research (2) comparison between in vitro maturation (IVM) and in vitro fertilization (IVF) for polycystic ovary syndrome (PCOS).

Reviewer Wu *et al.* (1) said that we demonstrated that IVM might be a suitable option for PCOS in terms of cost and successful pregnancy rate. Whereas, the study had no results about cost comparison between IVM and IVF. We found this was a careless conclusion, and we suggest to correct discussion part of abstract to "Our study suggests that IVM had similar clinical effects compared to IVF in patients with PCOS".

Secondly, they said we performed the sensitivity analysis only by removing Shavit *et al.*'s 2014 study (3) and only reported I<sup>2</sup> value. Actually, we conducted sensitivity analysis by removing all the included articles one by one and only reported the biggest change one. According to his advice, we can change the sensitivity analysis to "We performed a sensitivity analysis by removing Shavit *et al.*'s 2014 study (3), and I<sup>2</sup> changed from 48% to 39% and RR changed from 0.93 to 0.95, which indicated that the results of included articles were robust".

Thirdly, they indicated that we made a mistake of live birth rate heterogeneity analysis. We do appreciate the advice, and we want to correct the heterogeneity analysis of live birth rate into "For live birth rate, seven studies with 1,234 patients were selected. Meta-analysis showed that, compared with the IVM group, the IVF group had a higher live birth rate (RR =0.82, 95% CI: 0.70–0.94, P=0.007, fixed-effects model), with insignificant heterogeneity ( $I^2$ =26%)."

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*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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## References

- Wu J, Ge L, Chen Q. Comment on "Comparison of in vitro maturation and in vitro fertilization for polycystic ovary syndrome patients: a systematic review and meta-analysis". Ann Transl Med 2022. doi: 10.21037/atm-22-323.
- Xu Y, Qiao J. Comparison of in vitro maturation and in vitro fertilization for polycystic ovary syndrome patients: a systematic review and meta-analysis. Ann Transl Med 2021;9:1235.
- Shavit T, Ellenbogen A, Michaeli M, et al. In-vitro maturation of oocytes vs in-vitro fertilization with a gonadotropin-releasing hormone antagonist for women with polycystic ovarian syndrome: can superiority be defined? Eur J Obstet Gynecol Reprod Biol 2014;179:46-50.