

EP08.58. External validation of the INTERGROWTH-21st ultrasound method for dating pregnancies in the first trimester.

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Objectives

To **standardize** the INTERGROWTH-21st method for dating pregnancies in the first trimester, using either abdominal **or vaginal** scan, and to validate it with respect to in vitro fertilization (**IVF**) dates of conception.

Methods

A cross-sectional survey was performed from a cohort of pregnancies in **Mexico City**. Inclusion criteria were IVF pregnancies, with a normal live fetus ranging 45 to 84 mm of crown-rump length (**CRL**) and **known conception dates**. The operators were blinded to IVF data, and they were standardized to **the five-key points**. All scans were performed abdominally, and **vaginally** if the patient consented. The CRL measurement was obtained from the best image, with one operator per scan. The INTERGROWTH-21st equation was adjusted to calculate the days of development by ultrasound. Statistical analysis included **Bland-Altman** agreement and **linear mixed-effects**.

Results

In a 10-year period, 259 IVF singleton pregnancies were recruited. The **bias** between methods resulted equal to **+0.2 days** (CI95% -0.2 to +0.5) with a SD of 2.9 days, and limits of 95% of agreement between -5.5 and +5.9 days. This bias was **significantly affected by the operator** ($p = 0.013$), but **not by** maternal age, body mass index, non-fresh transfer, **vaginal scan**, or poor view.

Conclusion

The INTERGROWTH-21st method for dating pregnancies in the first trimester can be successfully standardized using **either the transabdominal or transvaginal** ultrasound scan.



Figure 1. Transvaginal scan standardized to the key points on accurate measurement of the fetal crown-rump length.

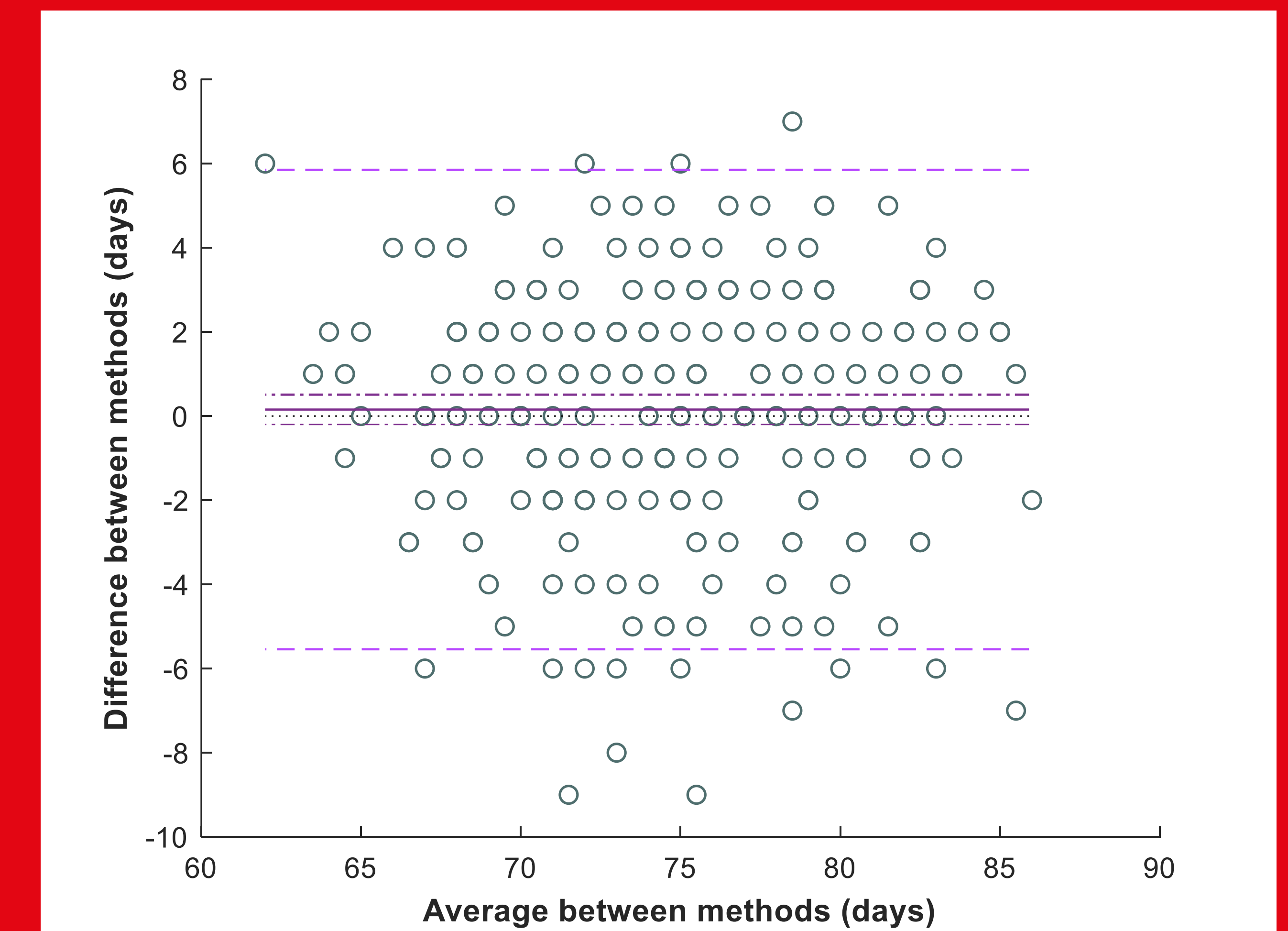


Figure 2. Bland-Altman plot of agreement between the INTERGROWTH-21st method and IVF dates of conception.