

AI-enabled device allows novices to accurately estimate gestational age

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Novice users with no prior training in ultrasonography can accurately estimate gestational age (GA) with an artificial intelligence (AI)-enabled device for first-trimester pregnancies, according to a study [published](#) online Aug. 1 in the *Journal of the American Medical Association*.

Jeffrey S.A. Stringer, M.D., from the University of North Carolina School of Medicine in Chapel Hill, and colleagues examined GA estimation accuracy of an AI-enabled ultrasonography tool when used by novices with no prior sonography training. The prospective diagnostic accuracy study enrolled 400 individuals with viable, single, nonanomalous first-trimester pregnancies.

Credentialed sonographers established the "ground truth" GA. Novice users obtained blind sweeps of the maternal abdomen using the AI-enabled device (index test) at random follow-up visits throughout gestation, including a primary evaluation window (from 14 0/7 weeks to 27 6/7 weeks of gestation), and credentialed sonographers performed fetal biometry with a high-specification machine (study standard).

The researchers found that the AI-enabled device met criteria for equivalence to the study standard in the primary evaluation window, with a mean absolute error of 3.2 versus 3.0 days. The percentage of assessments within seven days of the "ground truth" GA was comparable (90.7 versus 92.5% for the index test and study standard, respectively). In prespecified subgroups, including those with high body mass index, performance was consistent.

"These findings have immediate implications for obstetrical care in [low-resource settings](#), advancing the World Health Organization goal of [ultrasonography](#) estimation of GA for all pregnant people," the authors write.

More information: Jeffrey S. A. Stringer et al, Diagnostic Accuracy of an Integrated AI Tool to Estimate Gestational Age From Blind Ultrasound Sweeps, *JAMA* (2024). [DOI: 10.1001/jama.2024.10770](https://doi.org/10.1001/jama.2024.10770)

Alexis C. Gimovsky et al, Enhancing Obstetric Ultrasonography With Artificial Intelligence in Resource-Limited Settings, *JAMA* (2024). [DOI:](#)

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