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.

