

EP08.13 Creating new reference values using percentile for fetal growth in Japan.

Subcommittee for the Diagnosis of Fetal Growth Restriction, Japanese Society of Ultrasonics in Medicine

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EFW JAPAN

Introduction

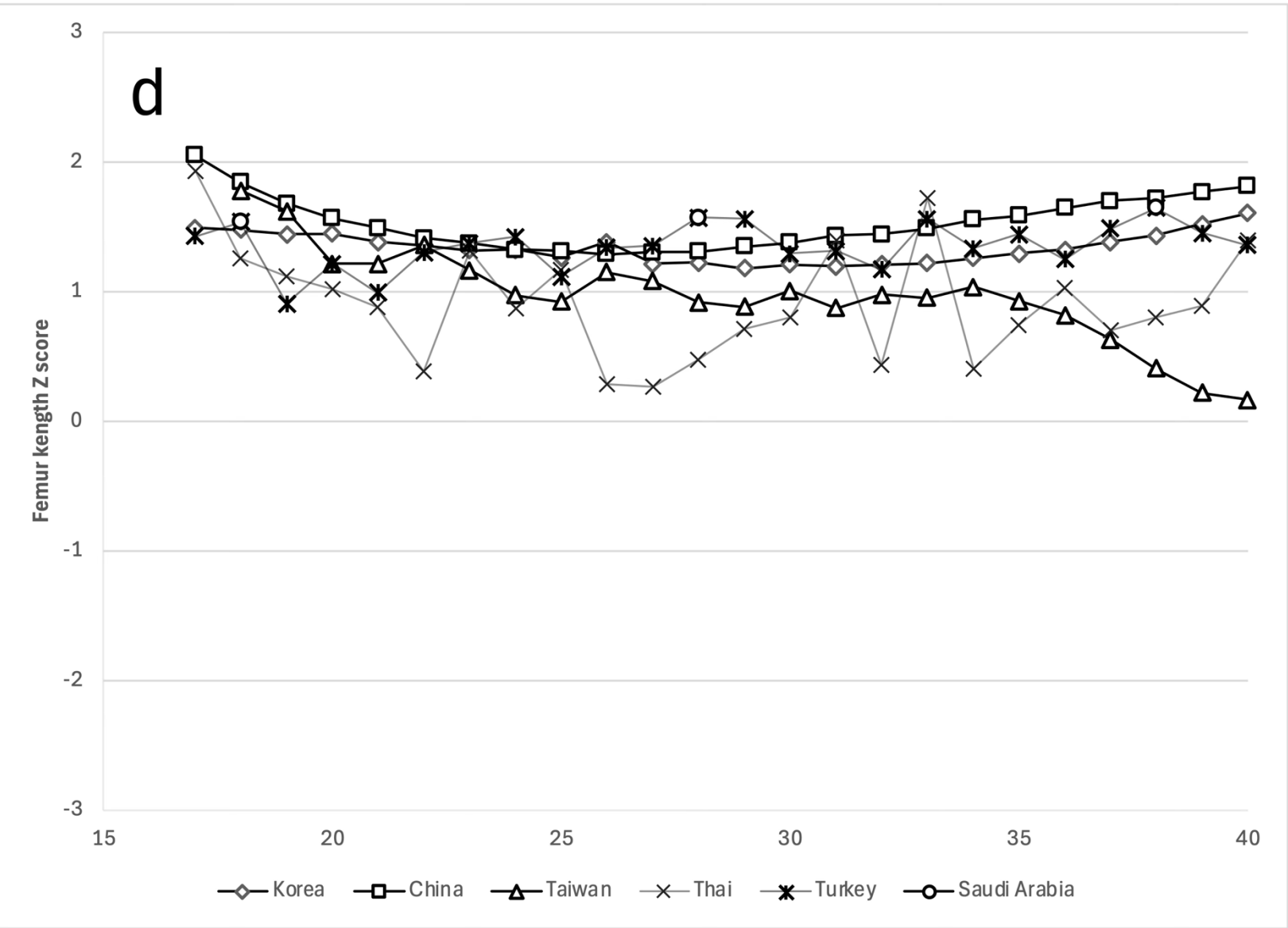
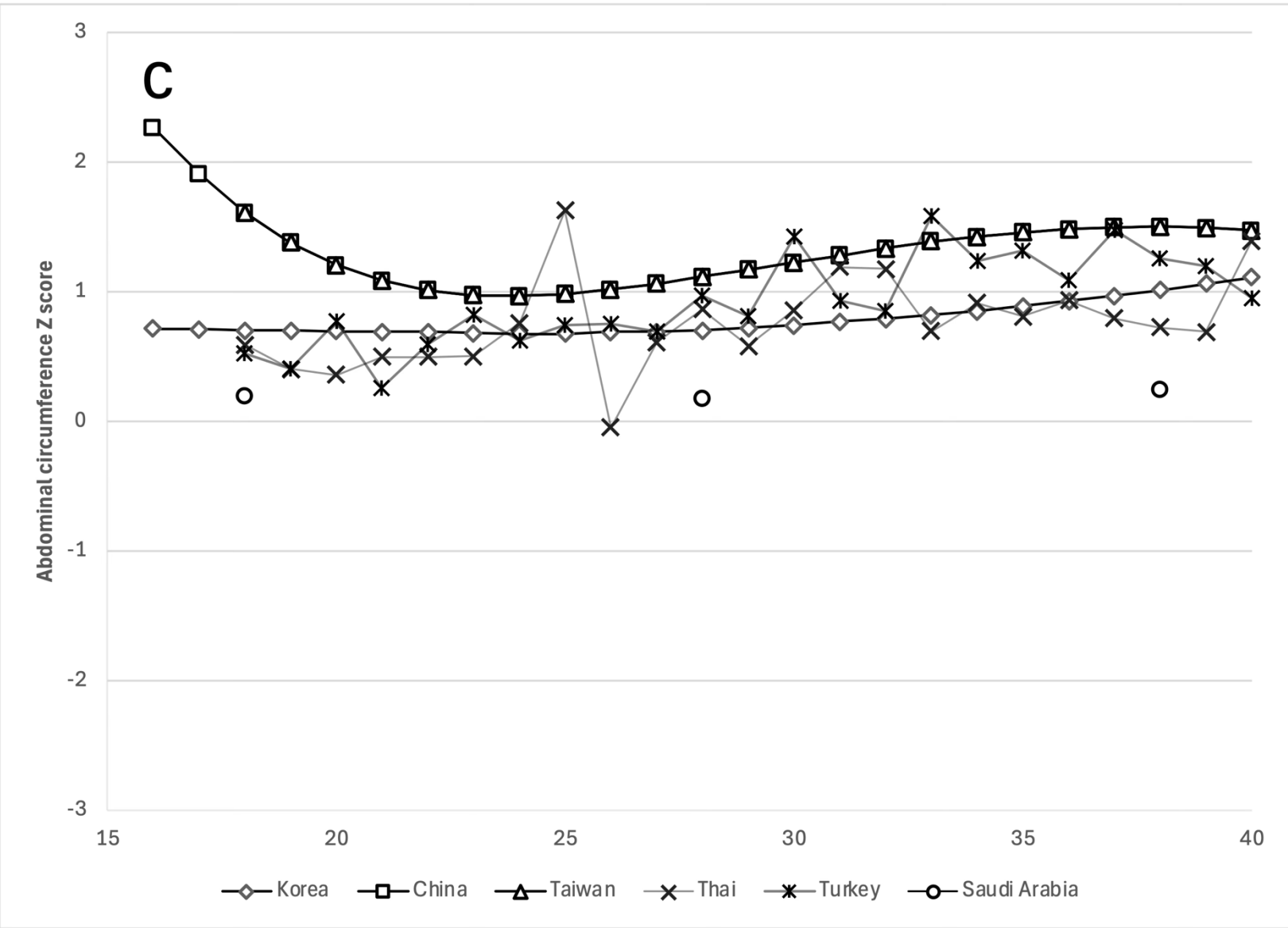
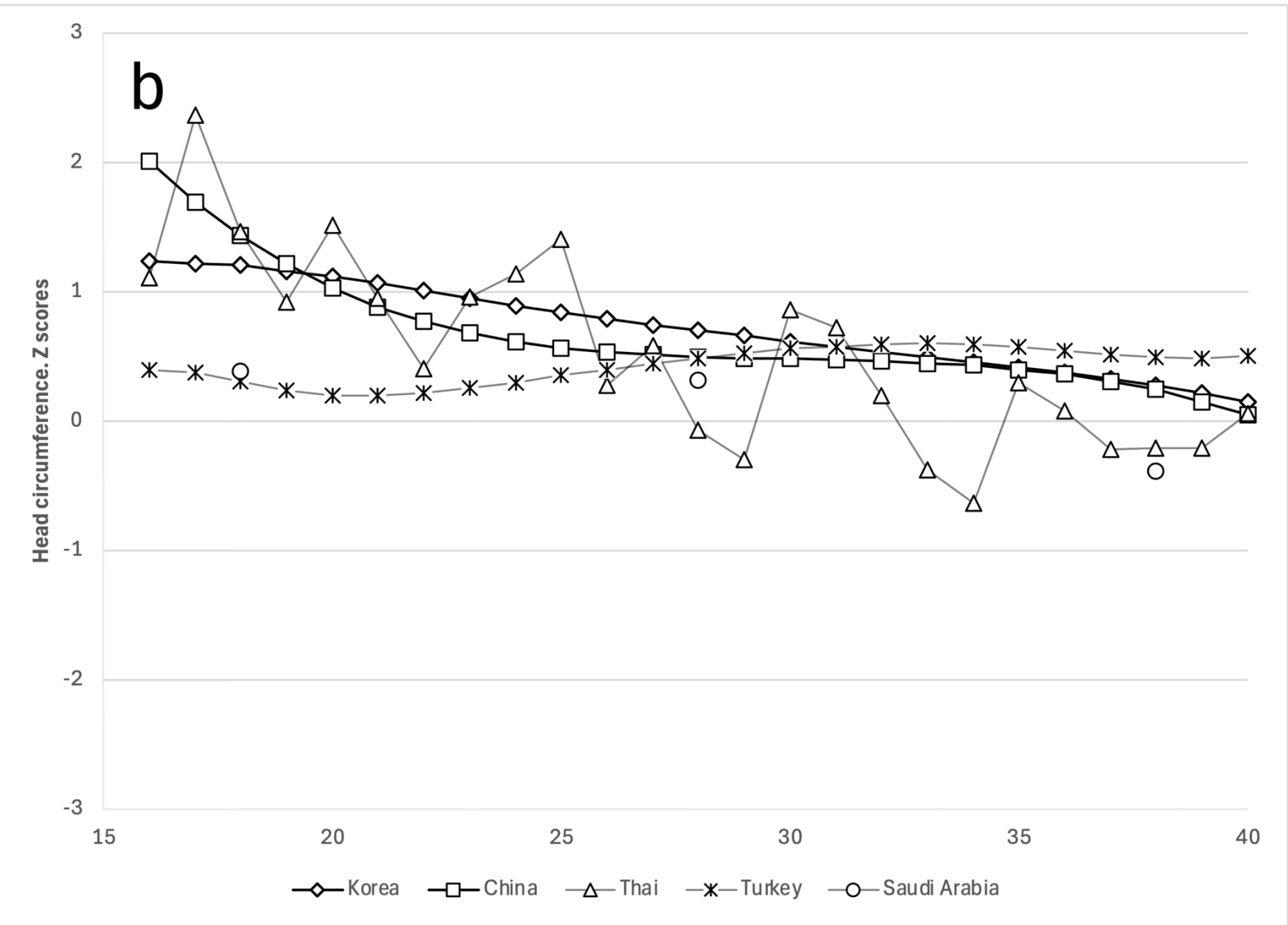
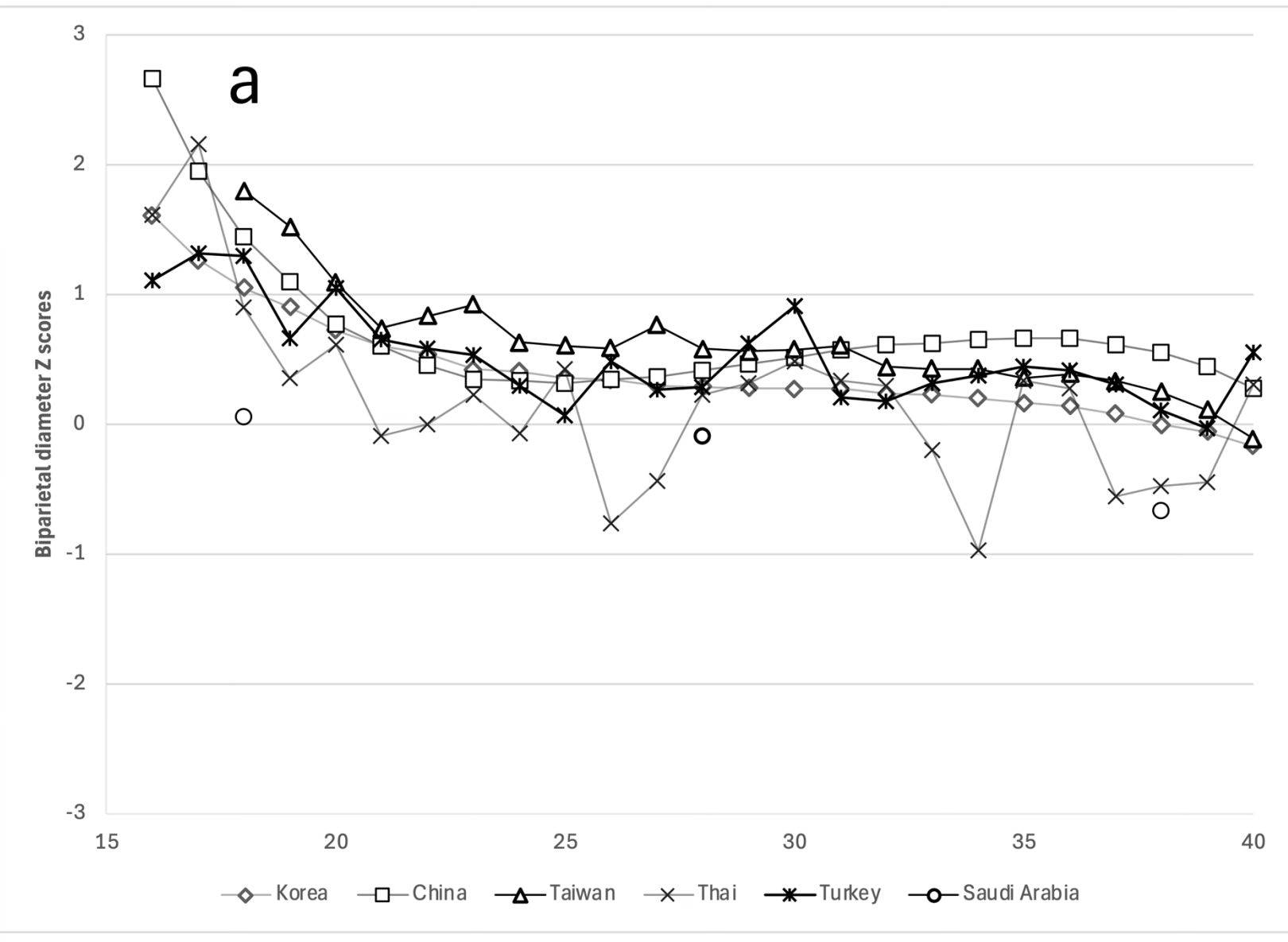
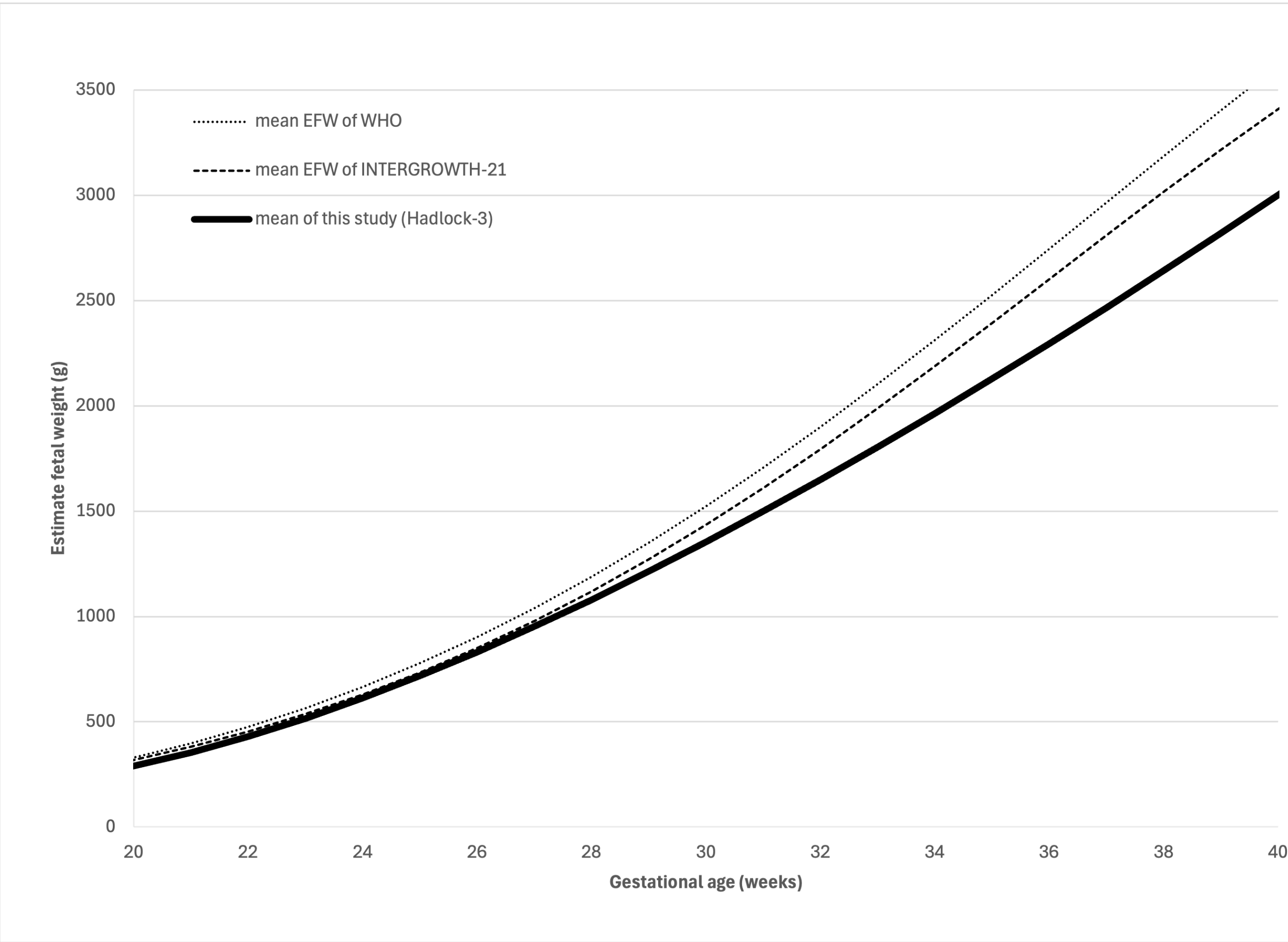
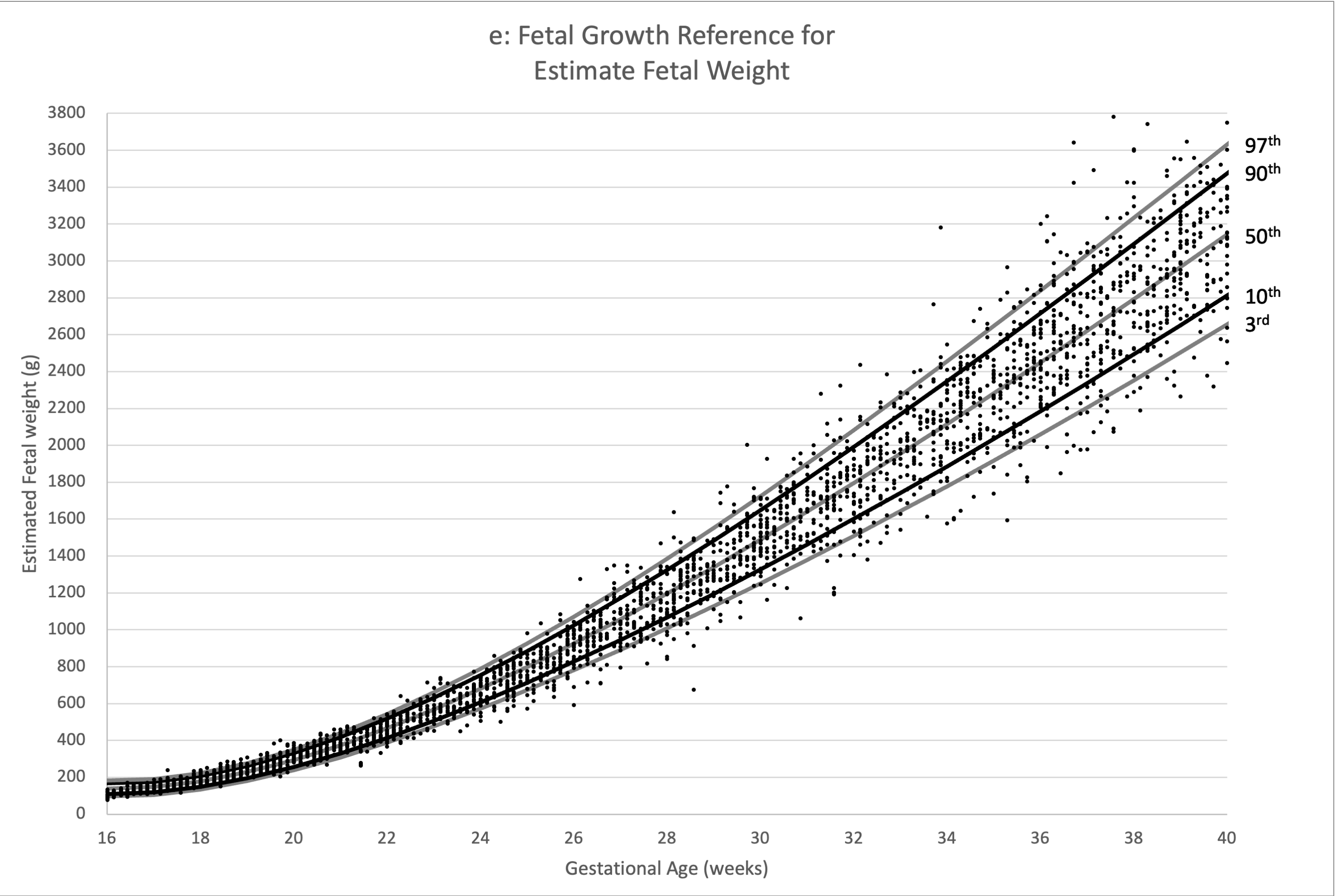
Given the decline in birthweights over the past 30 years in Japan and advancements in ultrasound technology, this study aimed to establish new reference values for ultrasound fetal biometry in Japan and to compare them with international and Asian studies.

Methods

We conducted a cross-sectional prospective study involving singleton pregnancies who received prenatal checkups at obstetric facilities across Japan. Ultrasound measurements-biparietal diameter (BPD), head circumference (HC), abdominal circumference (AC), and femur length (FL)-were recorded. Estimated fetal weight (EFW) was calculated using both the Shinozuka formula, commonly used in Japan, and the Hadlock-3 formula. Using the collected data, we developed gestational-age-specific reference values for BPD, HC, AC, FL, and EFW by applying best-fitted fractional polynomial regression, and compared them with existing international standards and reference values from other Asian countries.

Results

The mean EFW calculated by the Hadlock formula in this study tended to be smaller than that reported in other international studies, and BPD, HC, AC, and FL were also generally smaller than those observed in other Asian references.



Conclusion

Fetal biometry values in the Japanese population are smaller not only than international standards but also compared with those from other Asian countries.