Validity of ultrasound estimated fetal weight and abdominal circumference for assessment of IUGR from 35 weeks of gestation

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Question
How well do we predict the presence or absence of IUGR (<p10) by biometry scan from 35 weeks of gestation?

Prenatal Data
- Dutch Birth Organisation Annature and allied Ultrasound Centre Focus Breda
- Retrospective cohort 864 scans in low and medium risk singletons
- AC<p10 according to Dutch reference curve of Verburg 2008
- EFW<p10: according to Hadlock 4 / Yudkin curve 1987

Postnatal Data
Birthweight<p10 according to Dutch reference curves:
- Perined 2006: all boys / girls
- Hoftiezer 2017: healthy boys / girls

Results
- EFW: sensitivity 24-29%, specificity 99-100%
- AC: sensitivity 16-19%, specificity 99-100%

Conclusions
- Single ultrasound biometry in the third trimester of pregnancy is insufficient to detect the major part (76%) of babies with low birthweight
- The false positive rate is very low (0.5%)
- EFW predicts low birthweight better than AC
- The detection rate depends on the prenatal and postnatal reference curves used