Do small fetuses shrink prior to delivery?
An analysis of near term SGA.

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**Introduction**

- Identification of SGA infants antenatally relies on accurate estimated fetal weight based on ultrasonography.
- Growth scans fail to identify over 40% of infants SGA <10<sup>th</sup> antenatally who were scanned within 2 weeks of delivery.

**Aim**

Establish the relationship between the difference in estimated fetal weight (EFW) and birthweight (BWt) in relation to the time interval between the ultrasound scan and delivery.

**Methods**

- Retrospective cohort study (October-December 2017) across two maternity units within one large inner-city London trust.
- Inclusion criteria: Delivered SGA <10<sup>th</sup> percentile (WHO criteria), growth scan ≤ 2 weeks of delivery, delivery ≥36 weeks gestation.
- Exclusion criteria: Multiple pregnancies, in-utero transfers, known fetal anomalies, late bookers.
- Data collected from hospital computer databases. EFW was calculated using Hadlock’s formula.

**Results**

- 34/62 (53.1%) cases the EFW > BWt.
- No correlation between the change in weight since growth scan (BWt-EFW) and the duration to delivery (Pearsons correlation coefficient r=0.16, p=0.22).

**Conclusion**

- EFW > BWt in over 50% of cases despite the fetus remaining in utero for up to a further 2 weeks.
- EFW calculated within 2 weeks of delivery in SGA is a very poor predictor of BW.
- No correlation between change in weight between final USS and delivery, and the number of days between these time points.

**Possible explanations include:**

1) USS near term is inaccurate due to technical reasons
2) Fetuses may either grow or shrink between scan and delivery.