## VP40.16
### Relationship between the estimated fetal weight and adverse perinatal outcome in late onset fetal growth restriction

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**Objectives:** To evaluate the relationship between the estimated fetal weight (EFW) and adverse outcome at birth in late-onset fetal growth restriction (FGR).

**Methods:** Multicentre retrospective study which included non-anomalous singleton pregnancies complicated by late-onset FGR, as defined either by abdominal circumference (AC) or EFW below the 10th percentile for the gestation or by a reduction of the longitudinal growth of the AC by over 50 percentiles compared to second trimester anomaly scan, followed between 2014 and 2019. Surveillance findings at diagnosis were compared between fetuses with and without adverse outcomes including stillbirth, obstetric intervention due to intrapartum distress, neonatal acidemia, birthweight <3rd percentile and transfer to neonatal intensive care unit (NICU) and composite adverse perinatal outcome (CAO), which was defined by the combination of at least two adverse perinatal outcomes.

**Results:** Overall, 468 cases with full monitoring data were included, among whom CAO was recorded in 40 (8.5%). At logistic regression analysis, only the EFW percentile proved to be independently associated with CAO and the model including baseline pregnancy caracteristics and the EFW percentile was associated with an AUC of 0.89, 95%CI (0.816-0.964), p < 0.001, for CAO. A cut-off value corresponding to the 2.15th percentile was found to better discriminate between cases with and without CAO, yielding a 62.5% sensitivity, 95%CI (45.8-77.3), a 82% specificity, 95%CI (78.0-85.5), a 24.5% PPV, 95%CI (16.5-34.0) and a 95.9% NPV, 95%CI (93.3-97.7). An EFW <2.15th percentile at diagnosis was associated with a six-times higher frequency of CAO (24.5% vs. 4.1%, p < 0.01), an over four-fold higher rate of NICU admission (38.6% vs. 9.3%, p < 0.01) and with the only case of stillbirth.

**Conclusions:** Data from this retrospective study shows that an EFW below the 2.15th percentile is strongly associated with the occurrence of adverse outcomes in late-onset FGR.

## VP40.17
### Ultrasound prediction of the large-for-gestational-age fetus

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**Objectives:** To determine whether ultrasound is reliable in prediction of large-for-gestational-age (LGA) fetus at our institution and which factors improve the ultrasound accuracy.

**Methods:** Prospectively approved retrospective audit April 2018–March 2019 at John Hunter Hospital, NSW, Australia. Included: induction of labour in the presence of suspected LGA at > = 37+0 weeks in singleton pregnancies & women with other indications for induction of labour. Excluded: spontaneous labour prior to induction of labour & scan results unable to be located.

**Results:** There were 147 cases of induction of labour where LGA was suspected (4.15% of term deliveries). Average birthweight of the study group was 3,919.52g, compared to an average of 3,449.681g

for all term births. 78/147 (53.06%) of scans had an EFW error of <10% (range 0–9.99%). 69/147 (46.94%) of scans had an EFW error of >10% (range 10–35.8%). Ultrasounds were more likely to have an error rate of less than <10% in multiparous women than nulliparous women (62.35 vs. 41.93%). This was a statistically significant finding p = 0.0189. Women with class-3 obesity had lower scan accuracy rate than women with a low or normal BMI (48% vs. 53.84%) though this was not statistically significant. Women with a final scan within 2 weeks of their delivery had a scan error rate <10% of 52.63%. Women with a final scan greater than 2 weeks prior to delivery had a scan error rate <10% of 53.33%. Ultrasounds were more likely to have an error rate <10% when conducted outside the tertiary maternal-fetal medicine unit (54.4% vs. 48.5%) though this was not statistically significant.

**Conclusions:** This study shows only 53% of scans predicting LGA fetus that led to induction of labour had <10% error rate. Women having an induction of labour for LGA fetus should be counselled about these accuracy rates. Ultrasounds predicting LGA are more likely to be accurate in multiparous women. Recency of ultrasound, BMI and location of ultrasound did not seem to be important factors in predicting accuracy.

## VP40.18
### Comparing the new standard chart in Korea to Hadlock fetal growth standard, Tokyo chart, and the INTERGROWTH-21st: multicentre retrospective cohort study

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**Objectives:** In recent years, there are many movements to adjust the constitution or physiological changes of individuals using the personalised growth chart and to newly define the fetal growth curve, rather than to fit everything into one standard. However, there is no standard chart in Koreans. The purpose of this study is to analyse fetal growth patterns suitable for Koreans.

**Methods:** This is a multicentre retrospective cohort study, which was conducted on 4,590 women were delivered, from June 2015 to June 2019, in 48 referral and local hospitals in Korea. Quantile regression analysis was used to evaluate the relationship between estimated weight in grams and gestational age in weeks. We constructed reference centiles. We compared the new standard chart in Korea (NSCK) to Hadlock fetal growth standard, Tokyo chart, and the INTERGROWTH-21st.

**Results:** As a result of comparing the NSCK and Hadlock fetal growth standard, it was found that the values of 50 percentile and 10 percentile have similar values, but the value of 90 percentile of Hadlock was larger than that of the NSCK. On the other hand, it was found that the values of 90 percentile, 50 percentile, and 10 percentile of INTERGROWTH-21st are all smaller than that of the NSCK. The values of 50 percentile and 5 percentile of the NSCK were higher than that of the Tokyo chart. However, the 95 percentile value of the NSCK was smaller than that of Tokyo chart. In particular, all standard charts showed similar patterns in the early stages of pregnancy, but the differences between the charts gradually increased after the middle of pregnancy.