

## **Uterine art Doppler in the work up of extreme first trimester biochemical analyte MoMs**

Extreme MoM trendings conferring increased risk for impaired placentation / placenta-related adverse obstetrical outcomes

PAPP-A levels  $< 0.40$  MoM (5th percentile) are associated with a risk increase of 2.7 fold for low birth weight, 2.4 fold for delivery for 34 w, 3.7 fold for preeclampsia, 3.3 fold for fetal loss before 24 w and 1.9 fold for fetal loss at/or after 24 w.

\*Dugoff, et al. Obstet Gynecol. 2010; 115:1052-61

\*Krantz, et al. Am J Obstet Gynecol; 191: 1452-8.

Free beta hCG MoM MoM - values  $\geq 2.5$  MoM associated with 8 fold increase in risk of placenta accreta.

\*Dreux. Prenatal Diagnosis 2012;32:1010-1012.

Inhibin A MoM MoM - values  $\geq 2.0$  MoM associated with 2.4 fold increase in risk for preterm birth ( $< 32$  w), fetal loss  $> 24$  w and preeclampsia.

\*Dugoff. Obstet Gynecol 2005;106:260-267.

First trimester free beta hCG  $\leq 1$ st percentile is associated with a 3.6 fold increase in risk of fetal loss before 24 w gestation and 2.7 fold increase in risk of low birth weight ( $< 10$ th percentile)

\*Dugoff. Obstet Gynecol. 2010;115:1052-61.

\*Krantz. AmJ Obstet Gynecol. 2004; 191:1452-8.

First trimester free beta hCG values  $\leq 0.45$  MoM are associated with an increased risk of significant pathogenic copy number variants (odds ratio 3.53) after adjusting for abnormal nuchal translucency and AMA

\*Microarray analysis: First trimester maternal serum free beta hCG and the risk of significant copy number variants. Bornstein. Prenatal Diagnosis.