**NEW GUIDELNES FOR FGR DIAGNOSIS AND SURVEILLANCE**

Recently, SMFM updated the recommendations for diagnosis and surveillance of suspected growth restricted fetuses. (Society for Maternal-Fetal Medicine (SMFM) Consult Series #52: Diagnosis and Management of Fetal Growth Restriction: Juliana Gevaerd Martins, MD; Joseph R. Biggio MD, MS; and Alfred Abuhamad, MD published May 2020)

**Diagnosis**: In a meta-analysis published in 2017, **an AC of less than the 10th percentile predicted SGA as well as sonographic EFW less than the 10th percentile**, with comparable sensitivity and specificity. Other studies also support AC as an equivalent, if not more sensitive, predictor of FGR. FGR is now diagnosed at any EFW percentile if AC is less than 10th percentile. \*\*After careful evaluation of available data, we will be using EFW percentile to stratify our approach to additional surveillance when FGR is diagnosed by AC <10th percentile.

**Mechanism:** Early onset FGR is that which occurs prior to 32 weeks. This diagnosis warrants targeted US since up to 20% of case are associated with fetal structural or chromosomal abnormalities the earlier the onset, the higher the likelihood of structural and/or genetic differences). Prenatal diagnostic testing (amniocentesis) with chromosomal microarray should be offered at the time of diagnosis in all FGR cases complicated by early onset, anomalies and/or polyhydramnios. Pregnant people with early-onset FGR are also at increased risk for the development of hypertensive disorders of pregnancy and should be closely monitored for this. Suboptimal perfusion of the parental side of the placental circulation is the most common cause of FGR and accounts for 30% to 40% of all cases. Of fetuses diagnosed with FGR, approximately 18% to 22% will be neonates who are constitutionally small but healthy with a normal outcome. Pregnant people with unexplained FGR who elect diagnostic testing with amniocentesis should have PCR for CMV; however, serum screening for CMV, toxoplasmosis, rubella, and herpes is no longer recommended in the absence of other risk factors.

* **NST/BPP:**  All fetal surveillance should include NST at least weekly. It is reasonable to initiate testing at diagnosis if after viability, or at viability or a gestational age at which an abnormal finding would trigger intervention. A Cochrane review concluded that available evidence from randomized controlled trials does not support the sole use of BPP (Lalor JG, Fawole B, Alfirevic Z, Devane D. Biophysical profile for fetal assessment in high risk pregnancies. Cochrane Database Syst Rev 2008:Cd000038).

**Doppler**: Umbilical Artery Doppler (UAD) should be used liberally: however, Doppler interrogation of other vessels such as the ductus venosus, middle cerebral artery, or uterine artery is not recommended. The cord can be sampled anywhere but free loop close to the fetal insertion is recommended where end diastolic flow is typically slightly lower than that on the placental side. All doppler measurements should be taken when there is no fetal breathing or hiccupping occurring.

**Delivery**: Patients should receive antenatal corticosteroids for fetal lung maturity and magnesium sulfate for neonatal neuroprophylaxis as age appropriate. Delivery timing is based on degree of FGR and EFW, UAD and other fetal surveillance results, and associated maternal (such as HTN) and fetal co-morbidities (chromosome or structural differences). Individualization is particularly important in those case where absent or reverse EDF is appreciated and cesarean section should be used liberally in this population as well.