

FETAL ECHOCARDIOGRAPHY INDICATIONS

Minnesota Perinatal Physicians

Maternal pregestational diabetes with HgbA1c < 8.5% (no lower limit for HgbA1c)
Di/Di twins with known monozygosity
DM diagnosed in the 1st trimester and HgbA1c < 8.5%
Assisted reproduction technology (IVF only)
Markers of aneuploidy and no genetic screening (no echo needed for isolated CPC, EIF or pyelectasis)
AMA > 40 and declined genetic screening
Abnormal serum screening for aneuploidy (NOT AFP ONLY) (1st or 2nd trimester)
Maternal medications known or suspected of causing cardiac defects (ie. ACE inhibitor, retinoic acid, NSAIDs in 3rd trimester)
CHD in second degree relative of fetus
Fetal abnormality of the umbilical cord (ie. single umbilical artery, umbilical artery aneurysm)
Fetal intra-abdominal venous anomaly (ie. umbilical vein varix, persistent right umbilical vein)
Maternal BMI ≥ 40
Suspected fetal arrhythmia – if confirmed, refer to pediatric cardiology
NT > 95th percentile

Pediatric cardiology

Maternal pregestational diabetes with HgbA1c ≥ 8.5%
DM diagnosed in the 1st trimester and HgbA1c ≥ 8.5%
Maternal phenylketonuria (uncontrolled)
Maternal autoantibodies (SSA/SSB)
Maternal 1st trimester rubella infection
Maternal infection with suspicion of fetal myocarditis
CHD in 1st degree relative of fetus (maternal, paternal, or sibling with CHD)
1st or 2nd degree relative with disorder with Mendelian inheritance/familial inherited disorders (ie. 22q11 deletion) with CHD association
Fetal cardiac abnormality suspected on obstetrical ultrasound
Fetal major extracardiac abnormality on obstetrical ultrasound (including gastroschisis and bilateral or non-isolated unilateral cleft lip)
Fetal karyotype abnormality confirmed by diagnostic testing or suspected based on NIPT and ultrasound
Fetal heart block or tachyarrhythmia confirmed by MPP
Monochorionic twins
Fetal hydrops or effusions
Fetal NT ≥ 3.5 mm

Early Fetal Cardiac Screening (14w0d-16w6d) with pediatric cardiology

Fetal NT ≥ 3.5 mm
Maternal autoantibodies (SSA/SSB) SCHEDULE AT 16 weeks
Monochorionic twins SCHEDULE AT 16 weeks
Fetal hydrops or effusions
Parent or first degree sibling with chromosomal abnormality associated with CHD (ie. 22q11 deletion)
Fetal karyotype abnormality confirmed by diagnostic testing or suspected based on NIPT and ultrasound
Fetal cardiac abnormality suspected on MPP ultrasound

Early Fetal Cardiac Screening (14w0d-16w6d) with pediatric cardiology may be considered

CHD in prior sibling if parents request early screening

Parent AND prior sibling with CHD

Fetal cardiac abnormality suspected on obstetrical ultrasound

Fetal major extracardiac abnormality on obstetrical ultrasound

Parent with highest risk cardiac disease (ie. heterotaxy, AVSD, or aortic stenosis)

References:

Donofrio MT, Moon-Grady AJ, Hornberger LK, Copel JA, Sklansky MS, Abuhamad A, et al. on behalf of the American Heart Association Adults With Congenital Heart Disease Joint Committee of the Council on Cardiovascular and Stroke Nursing. Diagnosis and treatment of fetal cardiac disease: a scientific statement from the American Heart Association. *Circulation*. 2014; 129:xxx-xxx.

American Institute of Ultrasound in Medicine. AIUM practice guideline for the performance of fetal echocardiography . *J Ultrasound Med* 2013; 32: 1067–1082. doi:10.7863/ultra.32.6.1067

Heart Association Adults With Congenital Heart Disease Joint Committee of the Council on Cardiovascular and Stroke Nursing. Diagnosis and treatment of fetal cardiac disease: a scientific statement from the American Heart Association. *Circulation*. 2014; 129:xxx-xxx.

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7.11.2019