

MEMO

To: Obstetrical Care Providers, Medical Genetics MDs & Counsellors, BCW MAP US Reporting MDs, Sonographers and Clerical staff

RE: **Pilot Early Anatomical Screening Clinic at BCW Ultrasound**

From: Dr Chantal Mayer, Medical lead BCW Ultrasound

Date: **May 10, 2024**

Starting May 15, BCW Ultrasound department will be accepting referral for a new pilot clinic: Early Anatomy Screening at GA 13+0-15+0 weeks, for specific populations:

- A. Pregnant people referred through Medical Genetics due to increased risk for fetal congenital differences, as per criteria below.**
- B. Pregnant people with pre-pregnancy BMI>35, due to increased risk of fetal heart views not well seen at routine detail examination.**

Background:

Early comprehensive fetal anatomic screening (ECFAS) offers the potential for earlier detection of major congenital differences, as well as stress reduction in high-risk patients whose fetuses do not appear to have major anomalies (1).

Pregnant people with elevated body mass index (BMI) are at increased risk for fetal anomalies while obesity is also associated with decreased likelihood of completing the routine fetal anatomic details due to limited windows. This can lead to requiring multiple ultrasounds examination to complete anatomical screening, which is time and resource consuming and may lead to significant patient anxiety (2,3).

While there are currently no additional ultrasound examination resources available at BCW to offer this service widely, a pilot clinic is proposed. The main objective of the pilot project is to provide this service to a selected population while assessing the feasibility and acceptability of offering early anatomic assessment for these indications at our site.

Who is eligible?

- Patient is able and willing to travel to BCW hospital for both an early anatomical detail scan at 13-15+0 weeks GA and a follow up anatomical detail ultrasound at 20- 22 weeks GA.
- Patient is aware that both trans-abdominal and endovaginal scanning approaches may be utilized to complete the examination.
- Patient had a dating scan in the current pregnancy.
- Patient is aware that as a pilot clinic:
 - There is limited availability for these examinations and that BCW US may not be able to accommodate all requests that meet criteria (some referrals may be declined due to limited capacity)
 - There is uncertainty about completion rate for various anatomical detail views for the first trimester detail exam and an objective of the pilot is to evaluate completion rate and build expertise.
 - That due to technical and fetal development factors, some anomalies may be missed on first trimester details but diagnosed later in gestation.
 - That the early anatomical assessment does not replace the standard anatomical detail scan and that follow up examination is required at 19-21 weeks GA
 - That there is no consultation attached to the ultrasound examination. Unexpected findings may require subsequent referral to the FDS clinic, review with MG or other.

There are 2 pathways for referral to the Pilot First trimester Anatomical Screening Clinic:

A. Referral through Medical Genetics:

Those patients have planned follow up with Medical Genetics following the examination:

- i. Previous pregnancy affected with anencephaly, spina bifida, omphalocele, gastroschisis, bladder anomaly, limb reduction defect, lethal skeletal dysplasia, holoprosencephaly, bilateral renal agenesis, unexplained cystic hygroma or hydrops or critical congenital heart defect.
- ii. Previous pregnancy affected with multiple congenital anomalies with no genetic etiology identified in previous pregnancy (or patient declines invasive testing in current pregnancy).
- iii. Patients with first tier NIPT (i.e., low a priori risk) with a high-risk result for T13, T18, T21, Triploidy, or Monosomy X
- iv. NIPT failed due to an atypical finding outside the scope of the test or failed for fetal sex and/or for sex chromosome aneuploidy.
- v. Early pregnancy teratogenic exposure (select cases)

To facilitate multidisciplinary care, patients with an abnormality identified on an outside nuchal translucency scan will continue to be seen as part of the FDS clinic at this time.

B. Patients with BMI>35:

These can be directly referred to the BCW ultrasound department by their primary care provider.

What will the ultrasound examination look like?

- One hour early anatomical screening details exams will be booked at **13-15+0 weeks GA**, however patients should be prepared to spend up to 2h at BCW Hospital.
- Both endovaginally and transabdominal approaches will be used
- Patient should be well hydrated and have a comfortably full bladder on arrival.

What are the goals of this pilot clinic?

Information regarding indication for examination, length of the examination, and rate of completion of anatomical details at the early and follow up detail scan will be collected. This will help us assess the feasibility and impact of the clinic. Patient participants will also be invited to provide feedback regarding their experience through a short survey.

How to refer patients to the pilot clinic?

A. For patients meeting Medical Genetics criteria:

Please send referral to MG; MG will book examination and follow up visit.

C. For patient with BMI >35:

Please send regular referral to BCW US department specifying “**PILOT Early Anatomical Screening for BMI>35**” in addition to:

- Part 1 of prenatal with documentation of BMI
- Dating ultrasound

References:

1. Nevo O, Brown R, Glanc P, Lim K. No. 352-Technical Update: The Role of Early Comprehensive Fetal Anatomy Ultrasound Examination. Journal of Obstetrics and Gynaecology Canada. 2017;39(12):1203-11.
2. Romary L, Sinkovskaya E, Ali S, Cunningham TD, Marwitz S, Heeze A, et al. The Role of Early Gestation Ultrasound in the Assessment of Fetal Anatomy in Maternal Obesity. J Ultrasound Med. 2017;36(6):1161-8.
3. Majeed A, Abuhamad A, Romary L and Sinkovskaya E. Can Ultrasound in Early Gestation Improve Visualization of Fetal Cardiac Structures in Obese Pregnant Women? J Ultrasound Med 2019; 38:2057–2063