

OBSTETRICAL ULTRASOUND EARLY ANATOMY PROTOCOL (15w0d-16w6d)

UW Medicine

BILLING CODES:

UOBEA1 - Singleton Early Anatomy Second Trimester

UOBEATWIN - Twin Early Anatomy Second Trimester

UOBEATRIP - Triple Early Anatomy Second Trimester

UOBEAQUAD - Quadruplet Early Anatomy Second Trimester

PREP: No prep

****Requisitions should be read carefully to ensure the proper exam is performed.**

**** This is an Early Anatomy screening for high-risk pregnancies when specifically requested and does not replace the Detailed Anatomy screening. Patients should return after 3-4 weeks for the full anatomy screening.**

**** For early anatomy requests prior to 15w 0d gestational age, use the First Trimester Protocol.**

**** Any requests on or after 17w 0d gestational age, should use the Basic or Detailed Anatomy Protocols.**

DATING: As a routine, use the date provided by the clinician or patient's known LMP. Working EDD in EPIC should be used if more than one date is provided. Use AIUM and ACOG dating criteria if dating is unknown.

IMAGES TO OBTAIN

UTERUS:

- Transverse images – Fundus, Mid and LUS
- Sagittal images – Right, Mid and Left
- If fibroids are present, measure the 3 largest/most significant. Fibroids located in the LUS should always be included due to potential delivery complications.
- For multiples, on each uterus image, label the location of fetuses with A, B etc.

ADNEXA:

- Right and left adnexal regions

OVARIES:

- Sagittal image of right and left ovary with and without measurements
- Transverse image of right and left ovary with and without measurements

CERVICAL LENGTH AND STATUS:

- To be measured on all pregnancies less than 24 weeks gestational age. Normal cervical length is greater than 3.0 cm before 24 weeks.
- If the cervix appears shortened, funneled, or if a cervical length is specifically the requested, a transvaginal ultrasound should be performed.

PLACENTA:

- Placental position in sagittal and transverse.
- If seen, document the location of cord origin into placenta. Comment on whether it appears central, marginal, eccentric or velamentous.
- Cine of any abnormality.
- For multiples, document if there are separate or shared placentas present. Show twin peak sign between placentas if visualized.

MEMBRANE FOR MULTIPLES:

- Verify chorionicity/amnionicity
- Demonstrate membrane completely separating each fetus
- Document the thickness of membrane.
- Look for twin peak sign (diamniotic) or T-sign (monoamniotic)

FETAL POSITION:

- Document fetal position.
- For multiples, be as specific as possible and include description of fetus location in presentation section of report.

AMNIOTIC FLUID VOLUME:

- Amniotic fluid volume evaluation before 24 weeks should be done subjectively.
- For Mono di multiples being screened for TTTS, measure the MVP beginning at 16 weeks.

FETAL HEART RATE:

- Measure fetal heart rate with M-Mode

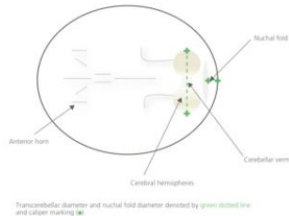
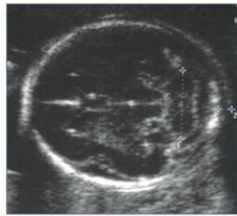
FETAL BIOMETRY: Measure each of the following at least two times:

1. **BPD** –measured on an axial plane that traverses the thalami, and cavum septum pellucidum.
2. **HC** – include in image with BPD.
3. **AC** - Transverse image through the upper abdomen at the level of the fetal stomach, umbilical vein and portal sinus.
4. **Femur**
5. **Humerus**

FETAL ANATOMY IMAGES TO OBTAIN

HEAD AND NECK:

- Integrity and shape of the cranial vault (calvarium)
- Lateral ventricles with measurements (normal < 10mm)
- Posterior Fossa (cisterna magna) with measurements (normal < 10mm)
- Cerebellum with transverse diameter, showing cerebellar vermis
- Cavum Septi Pellucidi (CSP) if visible
- Choroid Plexus
- Nuchal fold, measurement at the level of cerebellum. Normal range is < 5mm between 15-20 weeks, measure on separate image from PF measurement.



FACE:

- Fetal Profile with presence or absence of the nasal bone and chin

CHEST AND SITUS:

- With a dual screen, image demonstrating correct fetal situs. In a transverse view, show side by side images of the fetal stomach and 4-Chamber heart on the left side of the fetus' body.

DIAPHRAGM:

- Sagittal right and left diaphragm
- Sagittal R-L cine sweep.

HEART:

- 4-chamber view which includes view of entire chest.
- 4-chamber view that is zoomed in on heart.
- Cine clip of the 4-chamber view sweeping through the outflow tracks.

SPINE:

- 2D views of the cervical, thoracic, lumbar and sacral spine in longitudinal.
- 2D views of the cervical, thoracic, lumbar and sacral spine in transverse.
- Cine sweep in transverse

ABDOMEN:

- Stomach image in transverse
- Cord insertion and anterior abdominal wall showing the abdominal wall is intact on both sides of the cord insertion.

KIDNEYS:

- Longitudinal kidneys with measurements, labeled Left and Right.
- Transverse picture of kidneys at the level of renal pelvis.

BLADDER AND 3 VESSEL CORD:

- 2D transverse view of bladder.
- Document 3 vessel cord around bladder with Color Doppler.

EXTREMITIES:

- Document all long bones with proper labeling –
Femur, Tib/Fib; Humerus, Rad/Ulna
- Bilateral hands
- Bilateral feet

GENITALIA IF VISIBLE:

- Documented in all pregnancies. Especially important in multiple gestational pregnancies and when medically indicated.
- When able, check the box stating that the parents do not want to know this information so that it does not transfer to the Finalized report. Otherwise, **inform the patient to not read the report in ECare** if they do not want to know. If the box to hide the information is checked, it will not be visible to the provider either, they can call for the information if needed.

****If abnormalities are seen, include additional 2D images, Cine sweeps, 3D imaging and Color doppler images as needed.***

EARLY ANATOMY OB ULTRASOUND IMAGE LIST

IMAGE	MODE
GENERAL	
Presentation	2D
FHR	Mmode
Situs	Dual
MATERNAL	
Uterus Sag Mid	2D
Uterus Sag Right	2D
Uterus Sag Left	2D
Uterus Trans Sup	2D
Uterus Trans Mid	2D
Uterus Trans Inf	2D
Rt Adnexa Trans	2D
Rt Adnexa Sag	2D
Rt Ovary Sag w/ & w/o measurements	2D+
Rt Ovary Trans w/ & w/o measurements	2D+
Lt Adnexa Trans	2D
Lt Adnexa Sag	2D
Lt Ovary Sag w/ & w/o measurements	2D+
Lt Ovary Trans w/ & w/o measurements	2D+
Cervix	2D+
PLACENTA	
Placenta Edge / CVX Sag w/ measurement if <2cm	2D
Placenta Sag x2	2D
Placenta Trans x2	2D
Cord Origin Sag	2D
Cord Origin Trans	2D
HEAD	
BPD/HC x 3	2D+
Lateral Ventricle w/ measurement	2D+
Choroid Plexus	2D
Cavum Septum Pellucidum	2D
Cerebellum w/ measurement	2D+
Cisterna Magna w/ measurement	2D+
Vermis	2D
Head Cine S-I	Cine
Nuchal Fold w/ measurement	2D+
FACE	
Profile	2D
Nasal Bone	2D+
HEART	
4CH	2D
4CH cine showing contractility	Cine
Heart Cine showing outflow tracts.	Cine
CHEST	
Rt Diaphragm	2D
Lt Diaphragm	2D
Diaphragm Cine R-L	Cine

IMAGE	MODE
ABDOMEN	
AC x3	2D+ x3
Stomach	2D
Kidneys Trans	2D
Rt Kidney Sag w/ measurement	2D+
Lt Kidney Sag w/ measurement	2D+
Bladder	2D
3VC w/ color	Color
Cord insertion	2D
Genitalia	2D
SPINE	
Spine Sag	2D
C Spine Trans	2D
T Spine Trans	2D
L Spine Trans	2D
S Spine Trans	2D
Spine Trans cine C-S	Cine
UPPER EXTREMITIES	
HL x3	
Rt Humerus	Lt Humerus
Rt R/U	Lt R/U
Rt Hand	Lt Hand
Open Hand	
LOWER EXTREMITIES	
FL x 3	
Rt Femur	Lt Fem
Rt T/F	Lt T/F
Rt Foot	Lt Foot

EARLY ANATOMY PROTOCOL HISTORY

	Date	Changes made	By whom
Created	5/17/2022	Early Anatomy Ultrasound Protocol created to serve need of high-risk pregnancies prior to full anatomic survey.	Alyssa Stephenson-Famy, Manjiri Dighe, Shaun Bornemeier Updates recorded by Renee Betit Fitzgerald
Added	10/28/2022	Billing Codes	Renee Betit Fitzgerald
Changed	5/23/2023	Range of gestational age for exam changed from 15w0d-17w0d to 15w0d-16w6d	Manjiri Dighe
Added	4/17/2024	Image list Added stomach image	Renee Betit Fitzgerald