

NEONATAL HIP ULTRASOUND PROTOCOL FOR DEVELOPMENTAL DYSPLASIA *PRELIMINARY SCREENING EXAM ONLY*

BILLING CODES: UEXTL or UEXTR, if bilateral use UEXTB

PATIENT PREP: None

PATIENT AGE: Ideal time to perform exam is between the ages of 4 weeks and 6-7 months.

****Exams are usually done in the NICU, where there are strict disinfection guidelines. All personnel entering the NICU must use good hand washing technique along with use of disinfecting gel.**

****Upon arrival to the neonatal unit, you must wash your hands and arms up to your elbow. At UW Montlake, the hand washing station is located in the hall to the left of the elevators. Also, be sure to sign the staff/visitor log that is hanging near the hand washing station.**

****If the patient is in isolation, then the sonographer should wear a blue plastic gown. Please let the RN know that you are coming up or that you have arrived before starting the exam.**

****Thoroughly clean the transducer and machine with Oxivir wipes between each patient.**

****Individual gel packs must be used to minimize any spread of infection.**

GENERAL INFORMATION

PATIENT POSITION

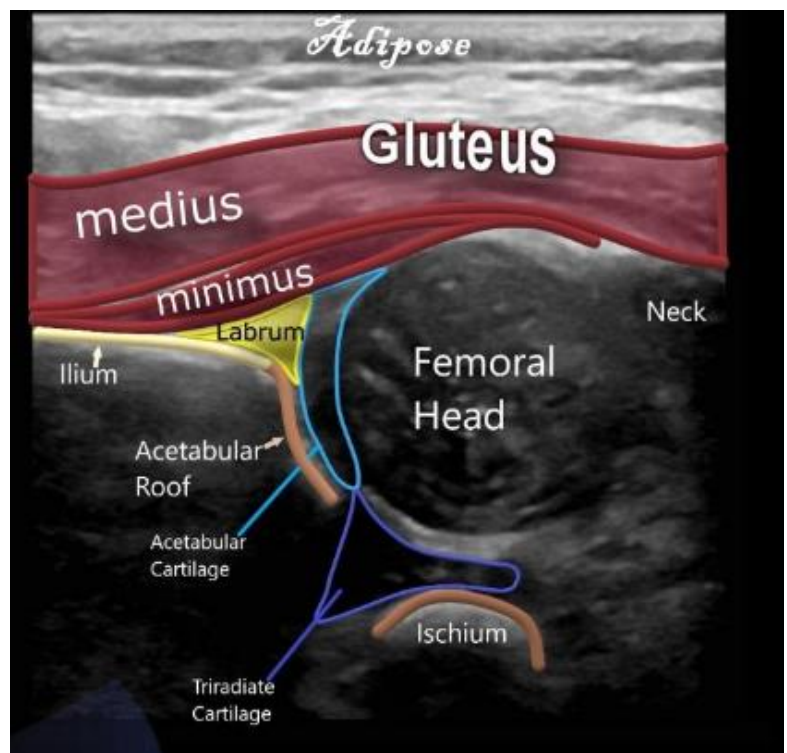
Lie the baby supine with feet facing you, or in decubitus position, with a pillow/towel rolled up at the back to give them support.

TRANSDUCER SELECTION

Scanning is to be performed with L12 or L18 Linear probe


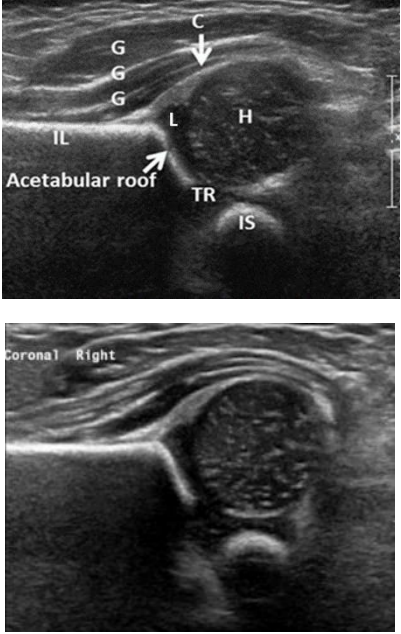
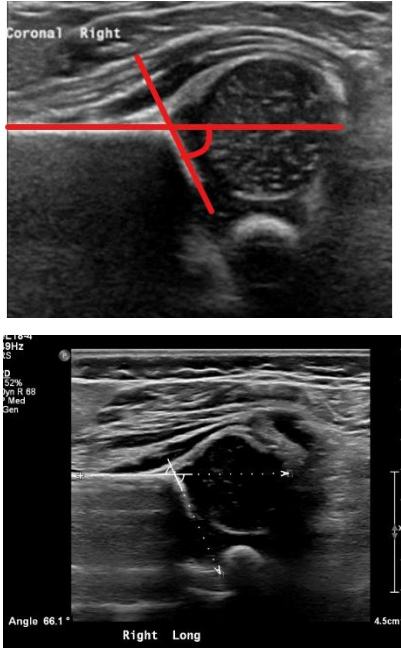
COMMON INDICATIONS

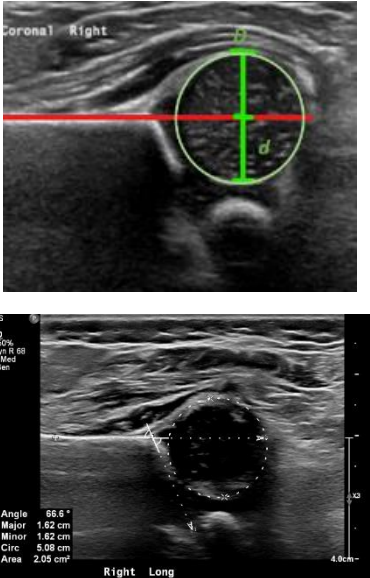


- Clicking hip
- Asymmetrical creases
- Family history congenital hip dysplasia/dislocation
- Breech lie during the pregnancy
- Pregnancies with oligohydramnios
- Limited abduction
- Deformities of the foot




<https://sonographic tendencies.com/2016/12/11/neonatal-hip-ultrasound>

IMAGES TO OBTAIN

BILATERAL - RT & LT	LANDMARKS	EXAMPLE
<p>1. CORONAL</p> <p>Hip held at 90 degrees</p> 	<p>IMAGE SHOWING-</p> <p>Femoral head, Ilium, Ischium, Acetabular roof.</p> <p>Ilium should be completely horizontal.</p>	
<p>2. CORONAL</p> <p>Hip at 90 degrees</p>	<p>USING SAME IMAGE – add alpha angle measurements</p> <ul style="list-style-type: none"> • Draw the baseline along the CENTER of ilium and completely through the femoral head. • Draw the roof line: along the acetabular roof intersecting the baseline. • Use calc package to calculate alpha angle 	

<p>3. CORONAL</p> <p>Hip at 90 degrees</p>	<p>USING SAME IMAGE –</p> <p>add femoral head percent coverage measurements</p> <ul style="list-style-type: none"> • Diameter of head measured 90 degrees to baseline (D) • Distance to baseline from posterior margin of femoral head (d) • Percent coverage = d/D 	<p>Normal coverage (d) is greater than 50% of femoral diameter (D)</p> 
<p>4. CORONAL</p> <p>Hip at 90 degrees</p>	<p>REPEAT IMAGES 1-3 WITH NEW IMAGE</p>	<p>REPEAT IMAGES 1-3 WITH NEW IMAGE</p>
<p>5. TRANSVERSE – WITHOUT STRESS</p> <p>Hold hip and knee at 90-degree flexed position</p> 	<p>IMAGE SHOWING-</p> <p>Femoral head, ischium, labrum, femoral metaphysis, femoral shaft</p>	

<p>6. TRANSVERSE – WITH STRESS</p> <p>Hip and knee at 90-degree flexed position <i>NOTE: If the patient is currently receiving treatment for hip dysplasia, or if a patient is being imaged for the first time and has less than a 25% femoral head coverage, DO NOT do stress views.</i></p>	<p>IMAGE OF SAME POSITION AS ABOVE WITH STRESS –</p> <p>Femoral head, ischium, labrum, femoral metaphysis, femoral shaft.</p>	<p>Apply gentle and repetitive pressure towards the acetabulum.</p> 
<p>7. TRANSVERSE CINE CLIP- WITH STRESS</p> <p>Hip and knee at 90-degree flexed position</p>	<p>CINE CLIP OF SAME POSITION AS ABOVE WITH STRESS –</p> <p>Femoral head, ischium, labrum, femoral metaphysis, femoral shaft</p>	<p>CINE CLIP WITH STRESS</p>

ULTRASOUND CRITERIA TO INCLUDE IN REPORT

MACRO FOR REPORT

This is a preliminary hip dysplasia screening only.

Premature: Yes/No

Right hip:

Alpha angle: ____ degrees

Bony coverage of FCE >50%: Yes/No. If no, __ %.

Left hip:

Alpha angle: ____ degrees

Bony coverage of FCE >50%: Yes/No. If no, __ %.

REFERENCES:

<https://radiologykey.com/the-musculoskeletal-system/>

<https://ultrasoundpaedia.com/paediatric-hip-normal/>

<https://sonographictendencies.com/2016/12/11/neonatal-hip-ultrasound/>

NEONATAL HIP PROTOCOL HISTORY

	Date	Changes made	By whom
Created	1/15/2023	Created	Manjiri Dighe Renee Betit Fitzgerald Christina Ozuna
Reviewed	2/23/2023	No changes	Protocol review team
Added	10/15/2024	UEXTB code for bilateral	Renee Betit Fitzgerald