



Clinical Protocol

## Neonatal Head

Coronal and sagittal planes with following minimum images:

### **CORONAL**

1. Anterior-most view including orbits
2. Frontal horns
3. Frontal horns at level of third ventricle where choroid seen in roof of third ventricle
4. Atria and occipital horns of lateral ventricles
5. Posterior brain tissue

### **SAGITTAL**

1. True sagittal midline view
  2. Oblique parasagittal image of caudothalamic groove
  3. Lateral ventricles including frontal, temporal and occipital horns
  4. Images of brain tissue lateral to the ventricles (to include Sylvian fissure)
- Caudothalamic groove view obtained by starting in true sagittal plane and slightly rotating heel of transducer laterally.
  - Choroid plexus should be seen coursing in anterior direction cephalad to thalamus, tapering to point in depression between thalamus and caudate nucleus.
  - Choroid should always be seen to taper in region; any echogenic material in caudothalamic groove should be considered possible bleed.
  - Remainder of lateral ventricles imaged with transducer in parasagittal plane.

Refer to AIUM practice guidelines for additional views if necessary.



Clinical Protocol

## Neonatal Spine

1. Baby prone, knees tucked up under chest. Can put rolled towel under abdomen to better splay spinous processes.
2. Use high frequency, linear array transducer (minimum 8 MHz). Ideally large footprint to offer more length of image field. Panorama function useful to demonstrate relationship of anatomy/pathology.
3. Number vertebral bodies from above and below.
4. Images to save:
  - Trans T12 - S2 posterior bony arches;
  - Trans cord, conus, and nerve roots;
  - Long distal cord with conus and labeled vertebral numbers;  
Normal conus position no lower than top of L3 in term infant or bottom L3 in pre-term infant
  - Long at “dimple;”
  - Cine clip to document normal or abnormal motion of cord or nerve roots; and
  - Appropriate documentation of any pathology identified.



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## Neonatal/Pediatric Hip

Ideally between 6 weeks and 6 months of age.

Images to save:

- Coronal with % coverage,
- Coronal with alpha/beta angles,
- Trans abduction,
- Trans adduction, and
- Stress view.

Due to presence of physiologic laxity, hip sonography not performed on patients younger than 3 to 4 weeks unless clinical findings indicative of dislocation or significant instability.



Clinical Protocol

## Pediatric Intussusception

1. Use warm gel and high frequency linear transducer.
2. Begin at cecum in right lower quadrant of abdomen and gradually move proximally toward right upper quadrant while aligning transducer in transverse orientation to colon.
3. If target sign of intussusception seen, long and trans images with color Doppler.
4. Continue across abdomen along course of transverse colon. Scan down left side of abdomen to LLQ (bladder in view).
5. Check for free fluid in pelvis.



Clinical Protocol

## Pediatric Pyloric Stenosis

1. Feed baby Pedialyte to distend stomach.
2. Trans and long images of pylorus for measurement.
3. Cine clip of Pedialyte passing through pyloric channel into duodenum.

Scan for minimum of 15 minutes to rule out pylorospasm