**Thyroid**

Normal = 1 - 1.5cm (Transverse), 2 - 3cm (longitudinal)

**CARDIAC**

**HOCM**

* LV hypertrophy - wall thickness > 15mm
* Septal-to-posterior wall thickness ratio 1:3

**PULMONARY**

**Pneumonia**

* Hepatization of normal lung tissue
* Lack of A lines
* Dynamic air bronchograms
* Pleural consolidation/Blines

**ABDOMEN**

**Pyloric stenosis**

* Diameter > 3mm
* Length > 14 mm

**Intussusception**

* Ileocecal most common, RUQ/RLQ
* Large bowel usually > 3cm, small bowel usually < 2cm
* Target sign (transverse)
* Pseudo-kidney sign (longitudinal)
* Limited peristalsis if obstructed.

**PEDIATRIC ULTRASOUND QUICK REFERENCE**

**Gallbladder** Normal measurements vary with age

|  |  |  |  |
| --- | --- | --- | --- |
| Age (y) | Length (cm) | Diameter (cm) | Anterior wall thickness (mm) |
| 0-1 | 1.3 – 3.4 | 0.5 – 1.2 | 1.0 – 3.0 |
| 2-5 | 2.9 – 5.2 | 1.4 – 2.3 | -- |
| 6-8 | 4.4 – 7.4 | 1.0 – 2.4 | 2.0 – 3.0 |
| 9-11 | 3.4 – 6.5 | 1.2 – 3.2 | 1.0 – 3.0 |
| 12-16 | 3.8 – 8.0 | 1.3 – 2.8  | 1.0 – 3.0  |

**Portal Vein (normal)**

< 10 years = 8.5mm ± 2.7

10 – 20 years = 10mm ± 2

**Spleen**

|  |  |
| --- | --- |
| Age | Spleen length (cm) |
| 0-3 m | ≤ 6 |
| 3-6 m | ≤ 6.5 |
| 6-12 m | ≤ 7 |
| 1-2 y | ≤ 8 |
| 2-4 y | ≤ 9 |
| 4-6 y | ≤9.5 |
| 6-8 y | ≤ 10 |
| 8-10 y  | ≤ 11 |
| 12-15 y | ≤12 |
| 15-20 y | ≤ 12 (F), ≤13 (M) |

**Appendicitis**

Normal < 6 mm & compressible. Distended > 6 mm.

Blind ended, tubular, non-compressible structure.

Adjacent fluid

Appendicolith

Color flow “Ring of Fire”

**RENAL**

**Bladder**

Volume = (H x W x D) x 0.625 mL

Volume by age = (age in years + 2) x 30mL

**Kidneys**

Normal length

Younger than 1 = renal length (cm) = 4.98 + 0.155 x age in months

Older than 1 = renal length (cm) = 6.79 + 0.22 x age in years

**MSK**

**Hip effusion**

Level of femoral neck to anterior joint capsule.

Effusion > 5 mm on affected side, > 2mm difference from asymptomatic side.

**Ocular ONSD**