PROTOCOL REVIEW
2025 02/dtf
Approval Imaging Council

IMAGING PROTOCOL – CT DCN PEDIATRIC CTA NECK SIEMENS EDGE+ 128

CTDI: 0-4yr: ≤ 15mGy 5-16: ≤25mGy

Setup: Supine, LAT scout, no gantry angle.

PT Positioning:

- **Supine, AP and Lateral scout, no gantry angle**
- **Scout should extend through the aortic arch for smart prep/bolus tracking**
- **Retract shoulders as much as possible & tilt the patient's head so that a line connecting the lateral canthus of the eye and the EAC is perpendicular to the CT tabletop.**

DFOV: Preferred 15cm

Scan Parameters:

- **Scan from top of the sella to below the aortic arch *(to include Circle of Willis and most of arch*)**
- **Contrast:**
  - **2cc per kg of 350 mg (*OMNI 300 if >50 lbs{22.6kg}*), not to exceed 100 ml unless ok by RAD**
  - **Bolus Tracking in ascending aorta, start scanning upon entry of contrast at the level of the aortic arch or trigger at 60 HU - 80 HU by patient weight.**

PACS SERIES

1. SCOUT & Patient Protocol (Dose Report)
2. ST AXL 1 x 1
3. BONE AXL 1 x 1
4. MIP COR 1 X 1
5. MIP SAG 1 X 1
6. MIP LAO 1 x 1
7. MIP RAO 1 x 1

Acquisition Parameters

0-40 lbs		40-110lb		110lb +/Adult	
Scan Type	Spiral	Scan Type	Spiral	Scan Type	Spiral
Pitch	1.4	Pitch	1.4	Pitch	1.2
Detector Configuration	128 x 0.6	Detector Configuration	128 x 0.6	Detector Configuration	128 x 0.6
Slice Thickness	1	Slice Thickness	1	Slice Thickness	1
Rotation Time	0.28	Rotation Time	0.28	Rotation Time	0.28
Care Dose	on	Care Dose	on	Care Dose	on
Care kV	on	Care kV	on	Care kV	on
Bolus tracking	60 HU	Bolus tracking	60 HU	Bolus tracking	80 HU
Monitoring Delay	7	Monitoring Delay	7	Monitoring Delay	7
Variable scan Delay	4	Variable scan Delay	4	Variable scan Delay	5
Dose Optimization	9	Dose Optimization	9	Dose Optimization	9
Quality Ref mAs	156	Quality Ref mAs	156	Quality Ref mAs	84
Ref kV	80	Ref kV	80	Ref kV	120

Reconstruction Parameters

Recon 1 ST Axial	
Kernel	**Br38**
ADMIRE	**3**
Window	**Soft Tissue 400 40**
Slice Thickness	**1 x 1**
Recon 2 Bone Axial	
Kernel	**Br59**
ADMIRE	**3**
Window	**Shoulder 2000 x 400**
Slice Thickness	**1 x 1**
Recon 3 MIP Coronal	**Recon 4 MIP Sagittal**
Kernel: Bv38	**Kernel: Bv38**
ADMIRE: 3	**ADMIRE: 3**
Window: CT Angio 700 80	**Window: CT Angio 700 80**
Slice Thickness 1 x 1	**Slice Thickness 1 x 1**
LAO and RAO 45 ° to see carotid split	
Recon 5 LAO MIP	**Recon 6 RAO MIP**
Kernel: Bv38	**Kernel: Bv38**
ADMIRE: 3	**ADMIRE: 3**
Window: CT Angio 700 80	**Window: CT Angio 700 80**
Slice Thickness: 1 x 1	**Slice Thickness: 1 x 1**