Imaging Protocol – CT Pedi CTA_CTV ABD / PEL

PROTOCOL REVIEW 2025 01/dtf
Approval Imaging Council January 2025

CTDI: 0-4yr: ≤ 15mGy 5-16: ≤30mGy

PT Prep:

- IV contrast at discretion of the Radiologist
    - 2cc per kg of 300 mg iodine / non-ionic (use Omni 350 if over 50 lbs), not to exceed 100 ml unless determined by the Radiologist.

PT Positioning:

- Both arms should be raised above the head for optimal image quality.
- If patient cannot raise one arm, one arm down is preferrable over both arms down
- If both arms cannot be raised, this information should be documented in tech notes for the Radiologist.

Set Up: Supine, AP Scout from above diaphragm through the symphysis pubis (iliac crest for ABD only)

DFOV: Appropriate for patient's body habitus.

Scan Parameters:

- Non-Contrast (if requested)
- Arterial Phase (CTA)
    - Bolus Tracking / Smart Prep scan trigger is set at 140 HU in the descending aorta at the level of the scan start.
- Venous Phase (CTV) – if ordered
    - Scan 1 minute into contrast bolus using angio flow rate

PACS SERIES

1. **SCOUT**
2. **ST AX**
3. **LUNG AX**
4. **MIP COR 1x1**
5. **MIP SAG 1x1**
6. **DOSE REPORT**

Acquisition Parameters

Scan Type	HELICAL	HELICAL	HELICAL	HELICAL	HELICAL
Pt Weight (lbs)	1-20.9#	20.9-49.6#	49.6-89.1#	89.1-199.1#	199.1-500#
Pitch and Speed (mm/rot)	0.984:1 (140.63 mm/s)	0.992:1 (283.48mm/s)	0.992:1 (226.79 mm/s)	0.992:1 (79.38 mm/s)	0.992:1 (79.38 mm/s)
Detector Coverage	40	80	80	80	80
Slice thick (mm)	1.25	1.25	1.25	1.25	1.25
Speed	0.28	0.28	0.35	1.00	1.00
Noise Index	10.6	13.2	16	17.4	21.6
Scan FOV	PED BODY	SM BODY	MED BODY	LG BODY	LG BODY
Smart mA Range *ODM	10-525*	10-600*	10-550*	10-550*	10-600*
kVp *kV Assist*	80	100*	120*	120*	120

Reconstruction Parameters

RECON 1(Soft Tissue)	
Algorithm	STND
ASIR	50%
Recon Type	Helical Full
Slice Thickness	1.25
Increment	1.25
RECON 2 (Lung)	
Algorithm	Lung
ASIR	50%
Recon Type	Helical Full
Slice Thickness	1.25
Increment	1.25
RECON 3 (thins for Reformats)	
Algorithm	STND
ASIR	50%
Recon Type	Helical Plus
Slice Thickness	0.625mm
Increment	0.3125mm