Pediatric CF center

Imaging Protocol Phantom Scan - Siemens SOMATOM go.Top

Protocol inspiratory scan		
Acquisition	**Comment**	**Value**
Tube voltage (kV)	Peak voltage	Care kV
Tube current (mA)	mA = mAs / rotation time	Modulation
Tube load (mAs)	mAs = tube current · rotation time	Modulation
Pitch (-)	Feed per rotation / total collimation	Approx. 1
Rotation time (s)		0.4
Slice collimation (mm)	Width of single detector row	0.625
Total collimation (mm)	Total beam width	40
Exposure control	Use of automatic exposure control	Allowed to turn off if needed to reach target CTDIvol
Target $CTDI_{vol}$ (mGy)	Value for standard sized 5 year old reference patient	**1.0**
CTDI phantom size (cm)	16 (small/head) or 32 (large/body)	32
Comments	• Scan with the specified target CTDIvol value for a 5 year old patient. If needed, you are allowed to turn off the automated exposure control. • Instead of adapting to the lung dimensions, adapt to the phantom dimensions. At least 2.5 cm of air should be visible around the phantom. For a 20 cm diameter phantom this means a reconstruction field-of-view of 25 cm.	
Reconstruction 1	**For visual scoring**	
Field-of-View (-)		Adapt to phantom dimensions
Kernel / Filter (-)	IR if available.	Bl57
Slice thickness (mm)		1.0
Increment (mm)		0.5
Reconstruction 2	**For automated analysis**	
Field-of-View (-)		Adapt to phantom dimensions
Kernel / Filter (-)	No IR. Use conventional technique (FBP).	Qr54
Slice thickness (mm)		1.0
Increment (mm)		0.5
Reconstruction 3	**For iterative reconstruction (IR) assessment**	
Field-of-View (-)		Adapt to phantom dimensions
Kernel / Filter (-)	IR if available.	Qr54
Slice thickness (mm)		1.0
Increment (mm)		0.5
Reconstruction 4	**For patient size specific dose estimate (SSDE)**	
Field-of-View (-)	Maximum reconstruction diameter available.	500 mm
Kernel / Filter (-)	No IR. Use conventional technique (FBP).	Qr54
Slice thickness (mm)		3.0
Increment (mm)		3.0

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Reconstruction 1	**For visual scoring**	
Field-of-View (-)		Adapt to phantom dimensions
Kernel / Filter (-)	IR if available.	Bl57
Slice thickness (mm)		1.0
Increment (mm)		0.5
Reconstruction 2	**For automated analysis**	
Field-of-View (-)		Adapt to phantom dimensions
Kernel / Filter (-)	No IR. Use conventional technique (FBP).	Qr54
Slice thickness (mm)		1.0
Increment (mm)		0.5
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