GE Discovery CT 750 HD 64-slice

ABBREVIATIONS

BMI	Body Mass Index = weight in pounds x 703 ÷ [(height in inches) x (height in inches)]
HU	Hounsfield Units
ISD	Interscan Delay
MPA	Main Pulmonary Artery
ROI	Region of Interest
WL	Window Level
WW	Window Width

CHEST ROUTINE W/ or W/O CONTRAST MEDIUM

Patient preparation: N.A.

Positioning: Feet first
Supine position
Arms up

Chronologic prescription and scanning range

#	Scanning range	Breath hold	Direction
0 Topogram	Shoulders to diaphragm	Inspiration	Craniocaudal (↓)
1 Chest sequence	Shoulders to diaphragm	Inspiration	Craniocaudal (↓)

Scanning parameters

#	mAs	kV	Collimation	Pitch	Rotation	Scan time	Comment
0 Topogram	10	120					
1 Chest sequence	Auto/Smart	100	64 x 0.6	0.9	0.4 sec	~5 sec	

Reconstruction parameters

#	Type/Orientation	Slice thickness	Interval	Filter	WW	WL	Field of view	Comment
1a	Axial	2.5 mm	2.5 mm	Standard	400	40	Chest wall	
1b	Axial	1 mm	1 mm	Lung	1500	-700	Chest wall	
1c	MPR sagittal	2 mm	2 mm	Lung	3500	500	Chest wall	
1d	MPR coronal	2 mm	2 mm	Lung	1500	-700	Chest wall	
1e	MIP axial	7 mm	2 mm	Lung	1500	-700	Chest wall	

Contrast medium injection parameters

Contrast	350 mg iodine/cc concentration
Scan time	~5 sec
Injection duration	25 sec
Bolus timing	40 sec fixed delay
Saline flushing	40 mL post contrast at contrast injection rate

Body weight	Flow rate	Volume
<121 lbs (<55 kg)	2.2 mL/sec	55 mL
121-143 lbs (55-65 kg)	2.6 mL/sec	65 mL
143-187 lbs (65-85 kg)	3.0 mL/sec	75 mL
187-209 lbs (85-95 kg)	3.4 mL/sec	85 mL
>209 lbs (>95 kg)	3.8 mL/sec	95 mL

Injection rate: ~1mL/kg body weight in 25 sec
*Alternative (if above not possible): 85 mL @ 2.5 mL/s with fixed delay of 40 sec

Responsible: A. Yen
Last changed: 9/15/09

HRCT

Patient preparation: N.A.

Positioning: Feet first
Supine and prone positions
Arms up

Chronologic prescription and scanning range

#	Scanning range	Breath hold	Direction
0 Supine topogram	Shoulders to diaphragm	Inspiration	Craniocaudal (↓)
1 Supine sequence	Same	Inspiration	Craniocaudal (↓)
2 Supine sequence	Aortic arch, carina, & above diaphragm	End forced expiration	Craniocaudal (↓)
3 Prone topogram	Shoulders to diaphragm	Inspiration	Craniocaudal (↓)
4 Prone sequence	Same	Inspiration	Craniocaudal (↓)

Scanning parameters

#	mAs	kV	Collimation	Feed	Rotation	Scan time	Comment
0 Supine topogram	10	120					
1 Supine sequence	Auto/Smart	120	2 x 1	20 mm	0.5 sec		
2 Supine sequence	Auto/Smart	120	2 x 1	N.A.	0.5 sec		
3 Prone topogram	10	120					
4 Prone sequence	Auto/Smart	120	2 x 1	20 mm	0.5 sec		

*for obese patients (BMI ≥ 30 or weight >330 lbs): use 140 kV

Reconstruction parameters

#	Type/Orientation	Slice thickness	Filter	WW	WL	Field of view	Comment
1	Axial	1 mm	Lung	1500	-700	Pleura	
2	Axial	1 mm	Lung	1500	-700	Pleura	
4	Axial	1 mm	Lung	1500	-700	Pleura	

Responsible: A. Yen
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PULMONARY EMBOLISM NON-GATED

Patient preparation: N.A.

Positioning: Feet first
Supine position
Arms up

Chronologic prescription and scanning range

#	Scanning range	Delay	Breath hold	Direction
0 Topogram	Shoulders to diaphragm		Inspiration	Craniocaudal (↓)
1 Premonitoring	See bolus timing or SmartPrep below			
2 Monitoring				
3 Chest sequence	Shoulders to diaphragm		Inspiration	Craniocaudal (↓)

Scanning parameters

#	mAs	kV	Collimation	Pitch	Rotation	Scan time	Comment
0 Topogram	10	120					
3 Chest sequence	Auto/Smart	100	64 x 0.6	0.9	0.4 sec	~5 sec	

Reconstruction parameters

#	Type/Orientation	Slice thickness	Interval	Filter	WW	WL	Field of view	Comment
3a	Axial	2.5 mm	2.5 mm	Standard	400	40	Chest wall	
3b	Axial	1 mm	1 mm	Lung	1500	-700	Chest wall	
3c	MPR sagittal	2 mm	2 mm	Lung	3500	500	Chest wall	
3d	MPR coronal	2 mm	2 mm	Lung	1500	-700	Chest wall	

Contrast medium injection parameters

Contrast	350 mg iodine/cc concentration
Scan time	~5 sec
Injection duration	16 sec
Bolus timing	Test bolus at 60 mA with monitoring delay 5 sec & ISD 1.5; ROI over MPA; add 5 sec to peak time
or SmartPrep	SmartPrep 40 mA; ROI over MPA; monitoring delay 5 sec; ISD 1; trigger at 100 HU; 6-8 sec diagnostic delay
Saline flushing	40 mL post contrast at contrast injection rate

Non-pregnant patients

Body weight	Flow rate	Volume
<121 lbs (<55 kg)	4.0 mL/sec	65 mL
121-143 lbs (55-65 kg)	4.5 mL/sec	75 mL
143-187 lbs (65-85 kg)	5.0 mL/sec	80 mL
187-209 lbs (85-95 kg)	5.5 mL/sec	90 mL
>209 lbs (>95 kg)	6.0 mL/sec	100 mL

Injection rate: ~1.1mL/kg body weight in 16 sec

Pregnant patients

Body weight	Flow rate	Volume
<121 lbs (<55 kg)	4.5 mL/sec	75 mL
121-143 lbs (55-65 kg)	5.0 mL/sec	80 mL
143-187 lbs (65-85 kg)	5.5 mL/sec	90 mL
187-209 lbs (85-95 kg)	6.0 mL/sec	100 mL
>209 lbs (>95 kg)	6.5 mL/sec	110 mL

Injection rate: ~1.2mL/kg body weight in 16 sec

Responsible: A. Yen
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