Chest superDimension

Siemens 16 Slice

Application Examples: 3D map for pulmonary nodule biopsy

Oral Contrast	No
IV Contrast / Volume	No

Breath Hold	Inspiration

Technical Factors

Scan Type	Spiral
Detector Collimator	Acq 16 x 0.6 mm
kV / mAs / Rotation Time (seconds)	110kV / 135 mAs / 0.6
Care Dose 4D	On
Pitch	1.2
Typical CTDIvol	10.82 mGy

Topogram: AP, 512 mm

Chest	Width / Increment	Kernel	Window	Series Description	Networking
Recon 1	1.0 x 0.8	B31s	Mediastinum	AXIAL	PACS

Patient Position: Patient lying supine with arms above head and lower legs supported.

Scan Range: Start 1cm above apices and scan entire lung volume. The number of images should not exceed 690.

Recons: Adjust FoV to fit body contour.

Reformations: None.

iLogic INREACH   CT Recommendations

General Scan Recommendations

Patient Condition:	Supine, immobile, maximum inspiration breath hold
Scanner Type:	Multi-slice, 4 detector or greater (16 detector or greater preferred)
Scan Type:	Chest, Lung, or Pulmonary Embolism (PE)
Scan Area:	Entire chest
Scan Duration:	Within breath hold duration of patient
Image Noise:	Minimize noise standard deviation

Reconstruction Recommendations

3D Map generation has been optimized for use with the reconstruction parameters listed in the table below. The ability to generate 3D Maps and 3D Map quality have not been qualified with other reconstruction parameters. It is strongly recommended that the parameters listed below be used.

Image Resolution:	512 x 512
Field of View:	At least 1cm of trachea and entire lung volume
Overlap:	20% - 50% *Overlap % = (Thickness – Interval) /Thickness*
Maximum Images:	690

Manufacturer-Specific Recommendations:

Manufacturer	Thickness (mm)	Interval (mm)	Kernel and Filter	
GE	1.25	1.0	Kernel: Filter:	Standard Body
Philips	1.0	0.8	Kernel: Enhancement:	C 0
Siemens	1.0	0.8	Kernel:	B31f
Toshiba	1.0	0.8	Kernel:	FC05

Non-3D Map Recommendations

If a 3D Map is not desired or the reconstruction parameters listed above cannot be achieved, the superDimension inReach® System will load CT scans reconstructed within the following parameter ranges:

Scan Thickness:	0.5 to 5.0 mm
Overlap:	No gaps
Minimum Interval:	0.5 mm
Image Resolution:	256, 512, 768, or 1024
Minimum Images:	50

Maximum Images:	Resolution	Maximum Images
	256 x 256	2,500
	512 x 512	690
	768 x 768	300
	1024 x 1024	150

iLogic CT Recommendations

Slice Interval Ranges

The following table lists, for common Slice Thicknesses, Slice Intervals between 20% and 50% overlap:

Slice Thickness	Minimum Slice Interval (at 50% Overlap)	Maximum Slice Interval (at 20% Overlap)
1.0 mm	0.5 mm	0.8 mm
1.25 mm	0.625 mm	1.0 mm
1.5 mm	0.75 mm	1.2 mm
2.0 mm	1.0 mm	1.6 mm
2.5 mm	1.25 mm	2.0 mm
3.0 mm	1.5 mm	2.4 mm
4.0 mm	2.0 mm	3.2 mm
5.0 mm	2.5 mm	4.0 mm