Purpose: To provide computed tomography staff with the required protocol for performing a Parathyroid 4 D soft tissue neck CT without and with contrast.

Scope: All adults patients 18 years and older.

Procedure:
Clinical Indication: Localize parathyroid adenomas
Patient Preparation: None
Orientation: Head first
Breathing: Normal breathing
Oral Contrast: None
IV Contrast: Per Weight: 1ml/lb or 2ml/kg not to exceed 75 injected @ 4ml/sec
Coverage: Angle of mandible through the carina
Anatomic Reference: Sternal notch
Scan Delay: Fixed delay 25 seconds and 80 seconds

Without contrast – Hyoid bone to the clavicular head.

Scan Mode	Thickness Speed Pitch	Table Interval	SFOV	kVp	Auto mA/ Noise Index	Prep Time (sec)	Recon Type
VCT 0.4 sec Helical Full	0.625 20.62 0.516:1	0.625	Large Body	120	400 8	N	Standard
LS 16 0.5 sec Helical Full	0.625 5.62 0.562:1	0.625	Large Body	120	400 8	N	Standard
AS 64 .5	.6	.6	360	120	400	N	Standard

Arterial contrast – Angle of the mandible to the carina

Scan Mode	Thickness Speed Pitch	Table Interval	SFOV	kVp	Auto mA/ Noise Index	Prep Time (sec)	Recon Type
VCT 0.4 sec Helical Full	0.625 20.62 0.516:1	0.625	Large Body	120	600 8	25	Standard
LS 16 0.5 sec Helical Full	0.625 5.62 0.562:1	0.625	Large Body	120	400 8	25	Standard
AS 64 .5	.6	.6	360	120	400	25	Standard

Venous contrast – – Angle of the mandible to the carina

Scan Mode	Thickness Speed Pitch	Table Interval	SFOV	kVp	Auto mA/ Noise Index	Prep Time (sec)	Recon Type
VCT 0.4 sec Helical Full	0.625 20.62 0.516:1	0.625	Large Body	120	600 8	55*	Standard
LS 16 0.5 sec Helical Full	0.625 5.62 0.562:1	0.625	Large Body	120	400 8	55*	Standard
AS 64 .5	.6	.6	360	120	400	55*	Standard

Algorithm: Recon 1-Standard 1.25mm at 20cm DFOV

Reformat: 2.5mm Axial, Sagittal and Coronal in standard on contrast phases only.
Network: Recon 1, Sagittal and Coronals to PACS; Exam to AWSERV

Note: *= 80 seconds scan delay is calculated by add time of arterial phase with 25 seconds. Subtract sum from 80 and that will be your delay for the venous phase.
The arterial and venous phases must be in separate series. To accomplish this both series must be reconstructed using different series number.