

# CT Peds Maxillofacial/Orbits

Updated 04/06/25

Reviewed 05/15/25

Indications - pain, trauma, fracture, mass, infection.

**NEVER perform a multiphase or without and with exam on a pediatric patient unless approved by a rad.**

## GENERAL SCAN NOTES

Remove any metal from the imaging field of view.

Topogram:

Maxillofacial - top of frontal sinuses through the bottom of mandible.

Orbits - Top of frontal sinuses through the bottom of maxilla.

Craniocaudal scan coverage:

Maxillofacial - top of frontal sinuses through the bottom of mandible.

Orbits - Top of frontal sinuses through the bottom of maxilla.

Adjust FOV (field of view) on topogram to smallest without cropping anatomy.

IV Contrast: Weight-based Omnipaque-300, inject at 2 mL/sec, 22-gauge or larger, 45 secs scan delay.

For **GE scanners**, it is essential for the 1st recon thickness on the scanner to match the 1st recon thickness in this protocol book for the prescribed Noise Index to be valid. The 1st recon should generally be the thickest recon in the protocol.

## SIEMENS PARAMETERS & RECONS

|               | Scan Mode | kV     | mAs  | Care Dose | Care kV & Lvl | Pitch | Acq | Coll | Rot Time | Scan Time |
|---------------|-----------|--------|------|-----------|---------------|-------|-----|------|----------|-----------|
| Sensation 16  | spiral    | 120    | 74   | on        | NA            | 0.45  | 16  | 0.75 | 1.00     | 14.8      |
| Go Up 32      | spiral    | Sn 110 | 475  | on        | on 110        | 0.55  | 32  | 0.7  | 1.00     | 6.5       |
| Sensation 64  | spiral    | 120    | 65   | on        | NA            | 0.90  | 64  | 0.6  | 1.00     | 4.6       |
| Definition 64 | spiral    | 120    | 63   | on        | on            | 0.80  | 64  | 0.6  | 1.00     | 5.2       |
| Go Top 64     | spiral    | Sn 110 | 1227 | on        | on 110        | 0.55  | 64  | 0.6  | 1.00     | 3.8       |
| Drive 128     | spiral    | 120    | 44   | on        | on            | 0.80  | 128 | 0.6  | 1.00     | 2.6       |
| Force 192     | spiral    | 100    | 60   | on        | on            | 0.80  | 192 | 0.6  | 1.00     | 1.7       |

| Name of Series | Thick | Interval | Kernel      | Window     | IR Lvl | Recon Direction |
|----------------|-------|----------|-------------|------------|--------|-----------------|
| AX SOFT        | 2.0   | 2.0      | Hr40 / C30s | abdomen    | 3      | feet/head       |
| AX BONE        | 2.0   | 2.0      | Br59 / C60s | bone/sinus | 3      | feet/head       |
| COR BONE       | 2.0   | 2.0      | Br59 / C60s | bone/sinus | 3      | front/back      |
| SAG BONE       | 2.0   | 2.0      | Br59 / C60s | bone/sinus | 3      | left/right      |

Add the following recons if the indication is **soft tissue** related.

|          |     |     |             |         |   |            |
|----------|-----|-----|-------------|---------|---|------------|
| COR SOFT | 2.0 | 2.0 | Hr40 / C30s | abdomen | 3 | front/back |
| SAG SOFT | 2.0 | 2.0 | Hr40 / C30s | abdomen | 3 | left/right |

# CT Peds Maxillofacial/Orbits

## GE PARAMETERS & RECONS

For patients **0-15 years** of age:

|             | Scan Type | SFOV       | kV  | mA Range | Noise Index | Smart mA | Slice Thick | Beam Coll | Pitch | Speed | Rot Time | Dose Red | ASIR | Scan Time |
|-------------|-----------|------------|-----|----------|-------------|----------|-------------|-----------|-------|-------|----------|----------|------|-----------|
| LS 16       | helical   | head       | 120 | 100-190  | 6.00        | on       | 2.5         | 10        | 0.562 | 11.25 | 0.5      | NA       | NA   | 5.3       |
| Opt 540     | helical   | head       | 120 | 100-190  | 6.00        | on       | 2.5         | 10        | 0.562 | 11.25 | 0.5      | NA       | NA   | 5.3       |
| LS VCT 64   | helical   | small head | 120 | 100-200  | 8.49        | on       | 2.5         | 20        | 0.531 | 10.62 | 0.5      | 0        | 0    | 5.6       |
| Disc VCT 64 | helical   | small head | 120 | 100-200  | 8.49        | on       | 2.5         | 20        | 0.531 | 10.62 | 0.5      | NA       | NA   | 5.6       |

For patients **15-18 years** of age:

|             |         |            |     |         |       |    |     |    |       |       |     |    |    |     |
|-------------|---------|------------|-----|---------|-------|----|-----|----|-------|-------|-----|----|----|-----|
| LS 16       | helical | head       | 120 | 100-220 | 11.31 | on | 2.5 | 10 | 0.562 | 11.25 | 0.5 | NA | NA | 5.3 |
| Opt 540     | helical | head       | 120 | 100-220 | 11.31 | on | 2.5 | 10 | 0.562 | 11.25 | 0.5 | NA | NA | 5.3 |
| LS VCT 64   | helical | small head | 120 | 100-220 | 11.31 | on | 2.5 | 20 | 0.531 | 10.62 | 0.5 | 0  | 0  | 5.6 |
| Disc VCT 64 | helical | small head | 120 | 100-220 | 11.31 | on | 2.5 | 20 | 0.531 | 10.62 | 0.5 | NA | NA | 5.6 |

| Name of Series | Thickness  | Interval   | Recon Algorithm | Window Width/Level | Recon Direction  |
|----------------|------------|------------|-----------------|--------------------|------------------|
| <b>AX SOFT</b> | <b>2.5</b> | <b>2.5</b> | <b>std full</b> | <b>400/40</b>      | <b>feet/head</b> |
| AX BONE        | 2.5        | 2.5        | bone full       | 2500/480           | feet/head        |
| COR BONE       | 2.5        | 2.5        | bone full       | 2500/480           | front/back       |
| SAG BONE       | 2.5        | 2.5        | bone full       | 2500/480           | left/right       |

**Must be first recon.**

Add the following recons if the indication is **soft tissue** related.

|          |     |     |          |        |            |
|----------|-----|-----|----------|--------|------------|
| COR SOFT | 2.5 | 2.5 | std full | 400/40 | front/back |
| SAG SOFT | 2.5 | 2.5 | std full | 400/40 | left/right |

## PHILIPS PARAMETERS & RECONS

|              | Scan Mode | kV  | Avg mAs | Dose Index | 3D Dose | Pitch | Detect | Colli | Rot Time | Scan Time |
|--------------|-----------|-----|---------|------------|---------|-------|--------|-------|----------|-----------|
| Incisive 128 | helical   | 120 | 208     | 35         | on      | 0.40  | 64     | 0.625 | 0.5      | 3.8       |

## RECONS

| Name of Series | Thick | Interval | Filter | Window | iDose | Recon Direction |
|----------------|-------|----------|--------|--------|-------|-----------------|
| AX SOFT        | 2.0   | 2.0      | UB     | brain  | 1     | feet/head       |
| AX BONE        | 2.0   | 2.0      | YB     | bone   | 1     | feet/head       |
| COR BONE       | 2.0   | 2.0      | YB     | bone   | 1     | front/back      |
| SAG BONE       | 2.0   | 2.0      | YB     | bone   | 1     | left/right      |

Add the following recons if the indication is **soft tissue** related.

|          |     |     |    |       |   |            |
|----------|-----|-----|----|-------|---|------------|
| COR SOFT | 2.0 | 2.0 | UB | brain | 1 | front/back |
| SAG SOFT | 2.0 | 2.0 | UB | brain | 1 | left/right |