

# **CT Chest/Abdomen**

Updated 03/09/25

Reviewed 05/14/25

Indications - pain, weight loss, fever, abscess, cancer staging or follow-up, trauma, etc.

## **GENERAL SCAN NOTES**

Move the patient's arms over his/her head if possible. Remove any metal from the imaging field of view.

Topogram - lung apices to iliac crests (obtained during end inspiration).

Craniocaudal scan coverage - lung apices to iliac crests (obtained during end inspiration).

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

Scan parameters are the same as routine CAP protocol.

For **16 slice scanners** or if the patient has **difficulty holding his/her breath**, scan the chest by itself then scan the abdomen/pelvis as a separate acquisition.

IV Contrast: 100 mL Omnipaque-300, inject at 2.5 mL/sec.

**70 secs scan delay** for most indications.

**90 secs scan delay** for renal indications like pyelonephritis, renal abscess, renal infarct or renal vein thrombosis.

Do not do delayed/excretory phase unless asked to do so.

Oral Contrast: per protocol.

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.

# CT Chest/Abdomen

## SIEMENS PARAMETERS & RECONS

|               | Scan Mode | kV  | mAs | Care Dose | Care kV & Lvl | Pitch | Acq | Coll | Rot Time | Scan Time |
|---------------|-----------|-----|-----|-----------|---------------|-------|-----|------|----------|-----------|
| Sensation 16  | spiral    | 120 | 200 | on        | NA            | 0.80  | 16  | 1.5  | 0.5      | 20.8      |
| Go Up 32      | spiral    | 130 | 100 | on        | on 145        | 0.80  | 32  | 0.7  | 0.8      | 35.7      |
| Sensation 64  | spiral    | 120 | 200 | on        | NA            | 1.20  | 64  | 0.6  | 0.5      | 17.4      |
| Definition 64 | spiral    | 120 | 210 | on        | off           | 0.80  | 64  | 0.6  | 0.5      | 26.0      |
| Go Top 64     | spiral    | 120 | 112 | on        | on 145        | 0.80  | 64  | 0.6  | 0.33     | 8.6       |
| Drive 128     | spiral    | 120 | 147 | on        | on            | 0.60  | 128 | 0.6  | 0.5      | 17.4      |
| Force 192     | spiral    | 120 | 147 | on        | on            | 0.60  | 192 | 0.6  | 0.5      | 11.6      |

| Name of Series       | Thick                 | Interval              | Kernel      | Window      | IR Lvl | Recon Anatomy | Recon Direction |
|----------------------|-----------------------|-----------------------|-------------|-------------|--------|---------------|-----------------|
| AX SOFT CHEST/ABD    | 5.0                   | 5.0                   | Br40 / B41f | mediastinum | 3      | chest/abd     | head/feet       |
| AX SOFT CHEST/ABD 3s | 3.0                   | 3.0                   | Br40 / B41f | mediastinum | 3      | chest/abd     | head/feet       |
| COR SOFT CHEST/ABD   | 5.0                   | 5.0                   | Br40 / B41f | mediastinum | 3      | chest/abd     | front/back      |
| SAG SOFT CHEST/ABD   | 5.0                   | 5.0                   | Br40 / B41f | mediastinum | 3      | chest/abd     | left/right      |
| AX LUNG              | 3.0                   | 3.0                   | Br57 / B70f | lung        | 3      | chest         | head/feet       |
| AX THINS CHEST       | 1.0<br>2.0 (16 slice) | 1.0<br>2.0 (16 slice) | Br40 / B41f | mediastinum | 3      | chest         | head/feet       |
| AX MIPS CHEST        | 8.0                   | 3.0                   | Br40 / B41f | lung        | 3      | chest         | head/feet       |

Send the above recons on the pre contrast scan (if without only) or on the post contrast scan (if IV given).

Send only the following recon on the pre contrast scan (if without and with).

|                       |     |     |             |             |   |           |           |
|-----------------------|-----|-----|-------------|-------------|---|-----------|-----------|
| AX SOFT PRE CHEST/ABD | 5.0 | 5.0 | Br40 / B41f | mediastinum | 3 | chest/abd | head/feet |
|-----------------------|-----|-----|-------------|-------------|---|-----------|-----------|

# CT Chest/Abdomen

## GE PARAMETERS & RECONS

|             | 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   | large      | 120 | 100-440  | 11.57       | on       | 5           | 20        | 1.375 | 27.50 | 0.5      | NA       | NA   | 10.9      |
| Opt 540     | helical   | large      | 120 | 100-440  | 11.57       | on       | 5           | 20        | 1.375 | 27.50 | 0.5      | NA       | NA   | 10.9      |
| LS VCT 64   | helical   | large body | 120 | 100-650  | 11.57       | on       | 5           | 40        | 1.375 | 55.00 | 0.5      | 50       | 50   | 5.5       |
| Disc VCT 64 | helical   | large body | 120 | 100-650  | 11.57       | on       | 5           | 40        | 1.375 | 55.00 | 0.5      | NA       | NA   | 5.5       |

| Name of Series           | Thickness  | Interval   | Recon Algorithm | Window Width/Level | Recon Anatomy    | Recon Direction  |
|--------------------------|------------|------------|-----------------|--------------------|------------------|------------------|
| <b>AX SOFT CHEST/ABD</b> | <b>5.0</b> | <b>5.0</b> | <b>std full</b> | <b>400/40</b>      | <b>chest/abd</b> | <b>head/feet</b> |

**This must be the first recon for the prescribed Noise Index to be valid.**

|                               |            |            |                 |               |                  |                  |
|-------------------------------|------------|------------|-----------------|---------------|------------------|------------------|
| <b>AX SOFT CHEST/ABD 2.5s</b> | <b>2.5</b> | <b>2.5</b> | <b>std full</b> | <b>400/40</b> | <b>chest/abd</b> | <b>head/feet</b> |
| COR SOFT CHEST/ABD            | 5.0        | 5.0        | std full        | 400/40        | chest/abd        | front/back       |
| SAG SOFT CHEST/ABD            | 5.0        | 5.0        | std full        | 400/40        | chest/abd        | left/right       |
| AX LUNG                       | 2.5        | 2.5        | lung            | 1600/-600     | chest            | head/feet        |
| AX THINS CHEST                | 1.25       | 1.0        | std full        | 400/40        | chest            | head/feet        |
| AX MIPS CHEST                 | 8.0        | 3.0        | std full        | 400/40        | chest            | head/feet        |

Send the above recons on the pre contrast scan (if without only) or on the post contrast scan (if IV given).

Send only the following recon on the pre contrast scan (if without and with).

|                       |     |     |          |        |           |           |
|-----------------------|-----|-----|----------|--------|-----------|-----------|
| AX SOFT PRE CHEST/ABD | 5.0 | 5.0 | std full | 400/40 | chest/abd | head/feet |
|-----------------------|-----|-----|----------|--------|-----------|-----------|

# **CT Chest/Abdomen**

## **PHILIPS PARAMETERS & RECONS**

|              | Scan Mode | kV  | Avg mAs | Dose Index | 3D Dose | Pitch | Detect | Colli | Rot Time | Scan Time |
|--------------|-----------|-----|---------|------------|---------|-------|--------|-------|----------|-----------|
| Incisive 128 | helical   | 120 | 115     | 20         | on      | 1.00  | 64     | 0.625 | 0.75     | 11.3      |

| Name of Series       | Thick | Interval | Filter | Window      | iDose | Recon Anatomy | Recon Direction |
|----------------------|-------|----------|--------|-------------|-------|---------------|-----------------|
| AX SOFT CHEST/ABD    | 5.0   | 5.0      | B      | mediastinum | 3     | chest/abd     | head/feet       |
| AX SOFT CHEST/ABD 3s | 3.0   | 3.0      | B      | mediastinum | 3     | chest/abd     | head/feet       |
| COR SOFT CHEST/ABD   | 5.0   | 5.0      | B      | mediastinum | 3     | chest/abd     | front/back      |
| SAG SOFT CHEST/ABD   | 5.0   | 5.0      | B      | mediastinum | 3     | chest/abd     | left/right      |
| AX LUNG              | 3.0   | 3.0      | YA     | lung        | 3     | chest         | head/feet       |
| AX MIPS CHEST        | 8.0   | 3.0      | B      | lung        | 3     | chest         | head/feet       |
| AX THINS             | 1.0   | 0.8      | B      | mediastinum | 3     | chest         | head/feet       |

Send the above recons on the pre contrast scan (if without only) or on the post contrast scan (if IV given).

Send only the following recon on the pre contrast scan (if without and with).

|                       |     |     |   |             |   |           |           |
|-----------------------|-----|-----|---|-------------|---|-----------|-----------|
| AX SOFT PRE CHEST/ABD | 5.0 | 5.0 | B | mediastinum | 3 | chest/abd | head/feet |
|-----------------------|-----|-----|---|-------------|---|-----------|-----------|