

CT Knee

Updated
5/4/2024

Indications - trauma, fracture, dislocation, pain, bone tumor, soft tissue mass, infection, abscess, soft tissue gas, osteomyelitis, pre/post surgical evaluation.

Bill under CT Knee charges.

GENERAL SCAN NOTES

Remove any metal from the imaging field of view.

Topogram - distal femur to proximal tibia/fibula (through prosthesis if present).

Craniocaudal scan coverage - distal femur to proximal tibia/fibula (through prosthesis if present).

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

IV Contrast: 100 mL Omnipaque-300, inject at 2.5 mL/sec, 60 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 | 140 | on | NA | 0.55 | 16 | 0.75 | 1.0 | 22.7 |
| Go Up 32 | spiral | Sn 110 | 366 | on | on 75 | 0.40 | 32 | 0.7 | 1.0 | 16.7 |
| Sensation 64 | spiral | 120 | 140 | on | NA | 0.90 | 64 | 0.6 | 1.0 | 8.7 |
| Definition 64 | spiral | 120 | 100 | on | off | 0.80 | 64 | 0.6 | 1.0 | 9.8 |
| Go Top 64 | spiral | Sn 110 | 898 | on | on | 0.40 | 64 | 0.6 | 1.0 | 9.8 |
| Drive 128 | spiral | 120 | 70 | on | off | 0.80 | 128 | 0.6 | 1.0 | 4.9 |
| Force 192 | spiral | 120 | 70 | on | off | 0.80 | 192 | 0.6 | 1.0 | 3.3 |

| Name of Series | Thick | Interval | Kernel | Window | IR Lvl | Recon Direction |
|----------------|-------|----------|-------------|------------|--------|-----------------|
| AX BONE | 3.0 | 3.0 | Br59 / B60f | bone/osteo | 3 | head/feet |
| COR BONE | 3.0 | 3.0 | Br59 / B60f | bone/osteo | 3 | front/back |
| SAG BONE | 3.0 | 3.0 | Br59 / B60f | bone/osteo | 3 | left/right |
| AX SOFT | 3.0 | 3.0 | Br40 / B31f | abdomen | 3 | 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 | 3.0 | 3.0 | Br40 / B31f | abdomen | 3 | head/feet |
|-------------|-----|-----|-------------|---------|---|-----------|

Add the following recons for **arthrograms**:

| | | | | | | |
|----------|-----|-----|-------------|---------|---|------------|
| COR SOFT | 3.0 | 3.0 | Br40 / B31f | abdomen | 3 | front/back |
| SAG SOFT | 3.0 | 3.0 | Br40 / B31f | abdomen | 3 | left/right |

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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 | 12.50 | on | 2.5 | 10 | 0.938 | 9.37 | 0.5 | NA | NA | 8.0 |
| Opt 540 | helical | large | 120 | 100-440 | 12.50 | on | 2.5 | 10 | 0.938 | 9.37 | 0.5 | NA | NA | 8.0 |
| LS VCT 64 | helical | large body | 120 | 100-450 | 16.00 | on | 2.5 | 40 | 0.984 | 39.37 | 0.5 | 20 | 20 | 1.9 |
| Disc VCT 64 | helical | large body | 120 | 100-450 | 16.00 | on | 2.5 | 40 | 0.984 | 39.37 | 0.5 | 20 | 20 | 1.9 |

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

Must be first recon.

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 | 2.5 | 2.5 | std full | 400/40 | head/feet |
|-------------|-----|-----|----------|--------|-----------|

Add the following recons for **arthrograms**:

| | | | | | |
|----------|-----|-----|----------|--------|------------|
| 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 | 32 | 20 | off | 0.80 | 64 | 0.625 | 1.00 | 4.7 |

| Name of Series | Thick | Interval | Filter | Window | iDose | Recon Direction |
|----------------|-------|----------|--------|---------|-------|-----------------|
| AX BONE | 3.0 | 3.0 | YB | bone | 3 | head/feet |
| COR BONE | 3.0 | 3.0 | YB | bone | 3 | front/back |
| SAG BONE | 3.0 | 3.0 | YB | bone | 3 | left/right |
| AX SOFT | 3.0 | 3.0 | B | abdomen | 3 | head/feet |

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

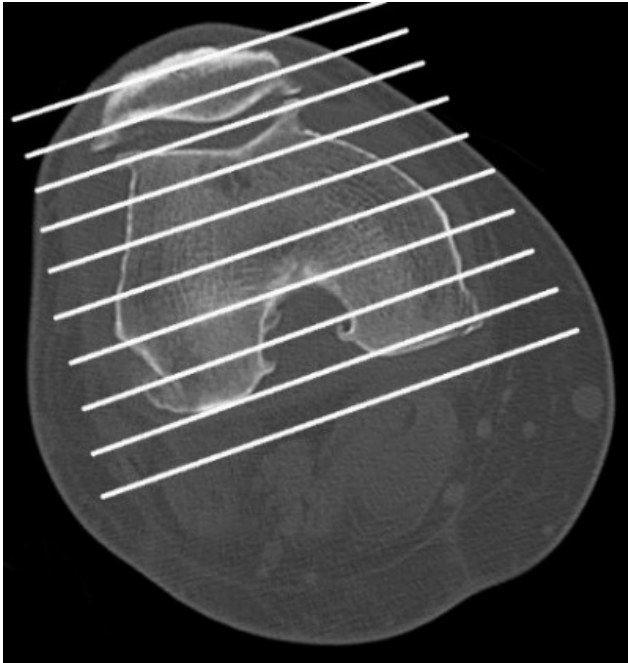
Send only the following recon on the pre contrast scan (if without and with).

| | | | | | | |
|-------------|-----|-----|---|---------|---|-----------|
| AX SOFT PRE | 3.0 | 3.0 | B | abdomen | 3 | head/feet |
|-------------|-----|-----|---|---------|---|-----------|

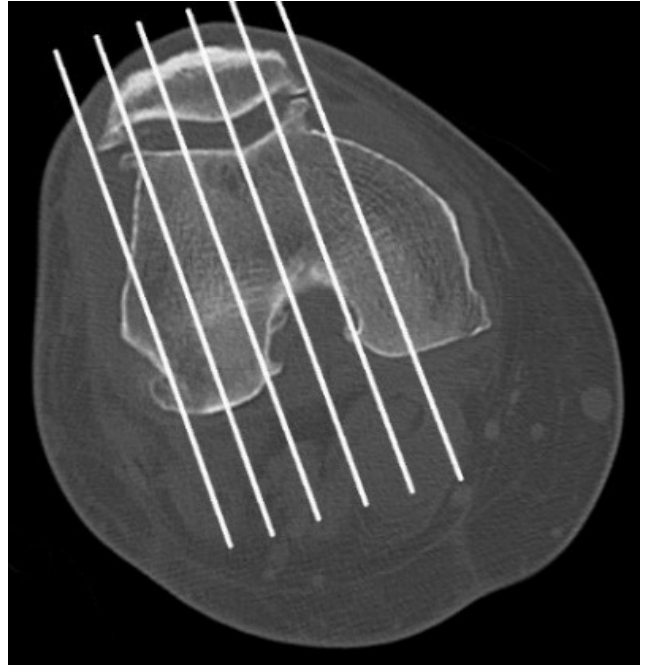
Add the following recons for **arthrograms**:

| | | | | | | |
|----------|-----|-----|---|---------|---|------------|
| COR SOFT | 3.0 | 3.0 | B | abdomen | 3 | front/back |
| SAG SOFT | 3.0 | 3.0 | B | abdomen | 3 | left/right |

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Coronal Plane



Sagittal Plane