<u>**CT Protocol**</u>

A. <u>**Adult OMI Protocol**</u>
   a. Performed on decedents about age 8 and older
   b. Full body adult CT acquired in three acquisitions over three body planes
   c. Head/Neck/Upper extremity protocol
      i. Arms crossed over abdomen
      ii. If unable to break rigor mortis, see Protocol B.
      iii. Scan above skull vertex to below finger tips- one acquisition
      iv. Protocol Scan Parameters

kVp	120
mAs	300
Scan length	600-800 mm
Scan FOV	500-699 mm
Pitch	0.567
Collimation	16 x 0.75
Rotation Time	1.0 s
Matrix	512 x 512

      v. Reconstructions
         1. Upper extremity reconstructions- axial
            a. 3 x 3 mm soft tissue = 190 images
            b. 3 x 3 mm bone = 190 images
            c. 1 x 0.5 mm soft tissue = 1200 images
            d. 1 x 0.5 mm bone = 1200 images
         2. Head/neck reconstructions- axial
            a. 3 x 3 mm soft tissue = 120 images
            b. 3 x 3 mm bone = 120 images
            c. 1 x 0.5 mm soft tissue = 670 images
            d. 1 x 0.5 mm bone = 670 images
            e. 2 x 1 brain = 50 images

   d. Torso protocol
      i. Break rigor, lifting arms above head and out of field of view for scan
      ii. Scan above clavicles through ischial tuberocities- one acquisition
      iii. Protocol Scan Parameters

kVp	120
mAs	300
Scan length	600-800 mm
Scan FOV	350-699 mm
Pitch	0.817
Collimation	16 x 0.75
Rotation Time	1.0 s
Matrix	512 x 512

      iv. Reconstructions
         1. Torso reconstructions- axial
            a. 3 x 3 mm soft tissue = 270 images
            b. 3 x 3 mm bone = 270 images
            c. 1 x 0.5 mm soft tissue = 1600 images

d. 1 x 0.5 mm bone = 1600 images

e. 1 x 0.5 mm Lung = 600 images

e. Lower extremities protocol
   i. Overlap scan at ischial tuberocities and scan through toes- one acquisition
   ii. Attempt to separate lower extremities during scan to avoid superimposition
   iii. Protocol Scan Parameters

kVp	120
mAs	200
Scan length	800-1000 mm
Scan FOV	500 mm
Pitch	0.942
Collimation	16 x 0.75
Rotation Time	1.0 s
Matrix	512 x 512

   iv. Reconstructions
      1. Lower extremities reconstructions- axial
         a. 3 x 3 mm soft tissue = 320 images
         b. 3 x 3 mm bone = 320 images
         c. 1 x 0.5 mm soft tissue = 1900 images
         d. 1 x 0.5 mm bone = 1900 images

B. **Decomposed Adult OMI Protocol**
   a. Performed on decedents about age 8 and older
   b. Full body adult CT acquired in three acquisitions over three body planes
   c. Performed with decedent sealed in body bag – arms remain at sides of body
   d. Head/Neck
      i. Scan above skull vertex to carina
      ii. Protocol Scan Parameters

kVp	120
mAs	300
Scan length	300 mm
Scan FOV	290 mm
Pitch	0.567
Collimation	16 x 0.75
Rotation Time	1.0 s
Matrix	512 x 512

      iii. Reconstructions
         1. Head/neck reconstructions- axial
            a. 3 x 3 mm soft tissue = 120 images
            b. 3 x 3 mm bone = 120 images
            c. 1 x 0.5 mm soft tissue = 670 images
            d. 1 x 0.5 mm bone = 670 images
            e. 2 x 1 brain = 50 images

   e. Torso protocol
      i. Scan above shoulders through ischial tuberocities- one acquisition

ii. Ensure upper extremities completely imaged
iii. Protocol Scan Parameters

kVp	120
mAs	300
Scan length	800-1000 mm
Scan FOV	699 mm
Pitch	0.817
Collimation	16 x 0.75
Rotation Time	1.0 s
Matrix	512 x 512

iv. Reconstructions
    1. Upper extremity/Torso reconstructions- axial
        a. 3 x 3 mm soft tissue = 300 images
        b. 3 x 3 mm bone = 300 images
        c. 1 x 0.5 mm soft tissue = 1800 images
        d. 1 x 0.5 mm bone = 1800 images
        e. 1 x 0.5 mm Lung = 600 images

f. Lower extremities protocol
   i. Overlap scan at ischial tuberocities and scan through toes- one acquisition
   ii. Attempt to separate lower extremities during scan to avoid superimposition
   iii. Protocol Scan Parameters

kVp	120
mAs	200
Scan length	800-1000 mm
Scan FOV	500 mm
Pitch	0.942
Collimation	16 x 0.75
Rotation Time	1.0 s
Matrix	512 x 512

iv. Reconstructions
    1. Lower extremities reconstructions- axial
        a. 3 x 3 mm soft tissue = 320 images
        b. 3 x 3 mm bone = 320 images
        c. 1 x 0.5 mm soft tissue = 1900 images
        d. 1 x 0.5 mm bone = 1900 images

C. **Pediatric OMI Protocol**
a. Performed in one acquisition if decedent is less than 36 inches long
   i. Scan above skull vertex through toes- one acquisition
   ii. Ensure upper and lower extremities completely images
   iii. Protocol Scan Parameters

kVp	120
mAs	200
Scan length	400 mm
Scan FOV	180 mm
Pitch	0.938

Collimation	16 x 0.75
Rotation Time	0.50 s
Matrix	512 x 512

    iv. Reconstructions
- 1. Whole body reconstructions- axial
  - a. 3 x 3 mm soft tissue = 150 images
  - b. 3 x 3 mm bone = 150 images
  - c. 1 x 0.5 mm soft tissue = 1200 images
  - d. 1 x 0.5 mm bone = 1200 images
  - e. 1 x 0.5 mm Lung = 250 images
  - f. 2 x 0.5 mm brain = 40 images

b. Performed in two acquisitions if decedent is over 36 inches long
- i. Upper extremities
  - 1. Scan above skull vertex through ischial tuberocities- one acquisition
  - 2. Ensure upper extremities completely imaged
  - 3. Protocol Scan Parameters

kVp	120
mAs	200
Scan length	600-800 mm
Scan FOV	180 mm
Pitch	0.938
Collimation	16 x 0.75
Rotation Time	0.50 s
Matrix	512 x 512

- 4. Reconstructions
  - a. Skull through ischial tuberocities reconstruction- axial
    - i. 3 x 3 mm soft tissue = 150 images
    - ii. 3 x 3 mm bone = 150 images
    - iii. 1 x 0.5 mm soft tissue = 1600 images
    - iv. 1 x 0.5 mm bone = 1600 images
    - v. 1 x 0.5 mm Lung = 350 images
    - vi. 2 x 0.5 mm brain = 40 images

- ii. Lower extremities
  - 1. Overlap scan at ischial tuberocities and scan through toes- one acquisition
  - 2. Attempt to separate lower extremities during scan to avoid superimposition
  - 3. Protocol Scan Parameters

kVp	120
mAs	125
Scan length	400-600 mm
Scan FOV	300 mm
Pitch	0.942
Collimation	16 x 0.75
Rotation Time	1.0 s
Matrix	512 x 512

4. Reconstructions
    a. Lower extremities reconstructions- axial
        i.   3 x 3 mm soft tissue = 125 images
        ii. 3 x 3 mm bone = 125 images
        iii. 1 x 0.5 mm soft tissue = 1200 images
        iv. 1 x 0.5 mm bone = 1200 images

D. **Partial OMI Protocol**
    a. One of the OMI protocols in part
    b. The complete body is not captured