

Wells Hip Comprehensive CT

Protocol Name: Hip Comprehensive CT

Protocol Epic Button: Hip Comprehensive CT

Indications CT evaluation for all Wells and Comprehensive Hip Patients

CT Pelvis and Lower Extremity Right and Left wo IV contrast

Dual energy scanner only (send base acquired data to PACS)

Patient supine, with both legs fully extended and parallel to the horizontal plane. Feet positioned shoulder-width apart, in a comfortable, natural, and unforced position. Do not put anything between the patient's legs or tie them together. Do not place a sponge or pillow beneath the knees or ankles. Do not raise/lower the CT table between scans. Do not alter the X and Y centering between scans.

Image acquisition: Single pass, scan through top of iliac crest (entire pelvis) to fibular head bilaterally (both knees), and bilateral ankles. All image data must be in the same global coordinate system. Apply smoothing and/or metal artifact. Send all scout images as well AP and Lateral.

Slice increment/thickness: Pelvis required at a slice increment and thickness of 1.25mm, knees and ankles required at a slice increment and thickness of 2.0mm. Contiguous slices required, no overlap or gaps.

Field of view: Use the smallest Field of View (FOV) possible to capture the required bone regions. Capturing all the soft tissue is not necessary. Use the same FOV for all slices.

Pixel Matrix: 512 x 512

Recommended current and voltage: 100-400mA, 120-140kV --- discuss possible LOW DOSE options as well

Number of Detector Rows: 16 minimum

| | | | | |
|----------------------|--|---|---|---|
| Special Instructions | Send soft tissue kernel volume to Tera Recon | Do not repeat CT scan, recon from 1st acquisition | Do not repeat CT scan, recon from 1st acquisition | |
| Coverage | Pelvis: Top of iliac crest to 20cm distal to the center of the femoral head (1.25mm slices). Knee: 10cm proximal to knee joint line and 10cm distal to knee joint line (2.0mm slices). Ankle: 5cm proximal to distal tibia and 1 cm distal to bottom of foot (2.0mm slices). | Top of iliac crest to below lesser trochanter | Acetabular roof to below lesser trochanter | Inferior patella to top of tibial plateau, tibial plafond |
| Algorithm | Soft Tissue and Bone | Soft Tissue and Bone | Soft Tissue and Bone | Soft Tissue |
| Primary Axial Recon | 1.25mm, Volume Pelvis, 2.0 mm for knee and ankle | 1.25mm | 1.25mm | |
| Other Recon | 1.25mm, Coronal and Sagittal Pelvis, 2.0 mm for knee and ankle | 1.25mm, Coronal and Sagittal | 1.25mm, Coronal and Sagittal | |

Must always reformat axial obliques and radials of each hip and include clockface. Radial images to be reformatted with femoral head and neck as center of rotation, provide clock and reference square. Reformat 3D images, sequences should include 3D pelvis with hips included past lesser trochanters, pelvis only without femurs, and femurs only. Cut out view to exclude iliac crest.

