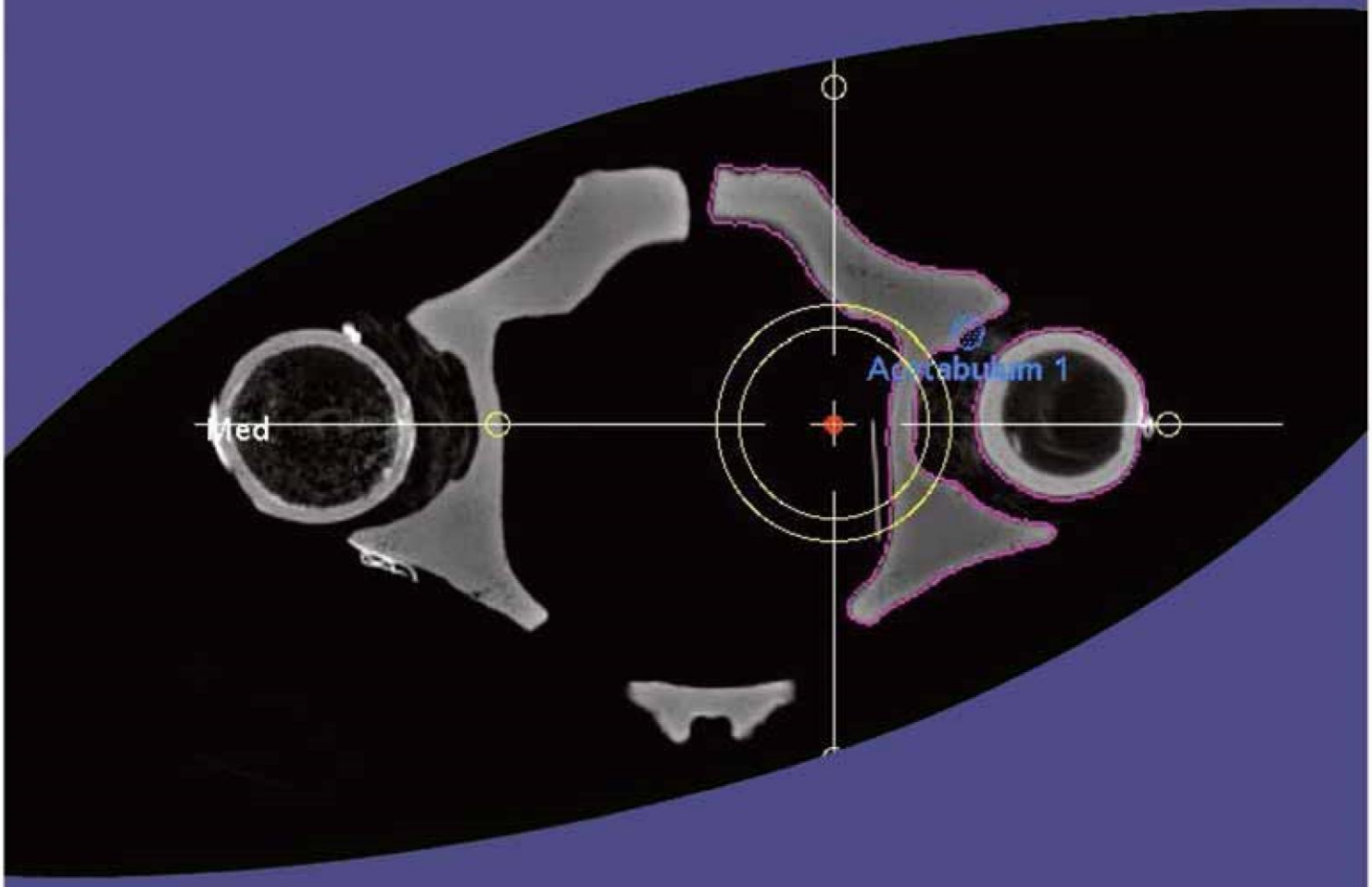
# Mako™ THA

stryker

## CT Scanning Protocol



## 1. PATIENT SETUP AND CONFIGURATION

- Scan patient in supine position feet first, anytime before MAKOplasty® THA procedure (up to 8 weeks in advance).
- Position patient to minimize pelvic obliquity through the following measures:
  - Align both ankles and both knees
  - Ensure patient is in true supine position by palpating the anterior superior iliac spines and comparing relative height above the CT scanner bed
  - Align longitudinal axis of the body with longitudinal axis of CT scanning bed

## 2. IMAGING REQUIREMENTS

Two regions:

- Continuous scan with regions (using one series or topogram with two groups)

Pelvis + Proximal Femur

- 0.5 - 1mm interval spacing throughout the scan. No gap / no overlap
- Axial slices (1:1 pitch) using helical (spiral) scanning
- FOV: Scan includes the entire bi-lateral pelvis (Medial/Lateral/Anterior/Posterior/Superior) and at least 180mm below the lesser trochanter on the femur
- Table not included in the scan
- Complete Scanning and Data reconstruction in bone
- 512 x 512 matrix: Image must be a square
- kV: 120 - 140
- mA: 200 - 250

Knee

- 2.0 - 5.0mm interval spacing throughout the scan
- Axial slices (1:1 pitch) using helical (spiral) scanning
- FOV: Scan includes bilateral knee - joint lines between femur and tibia and 10cm proximal to joint line on femur
- Complete scanning and data reconstruction in bone
- 512 x 512 matrix: Image must be a square
- kV: 120 – 140

### RECONSTRUCTION RECOMMENDATIONS

- Axial Bone and Axial ST 1 x 1
- Coronal and Sagittal Bone 1 x 1.5

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- mA: 200 - 250

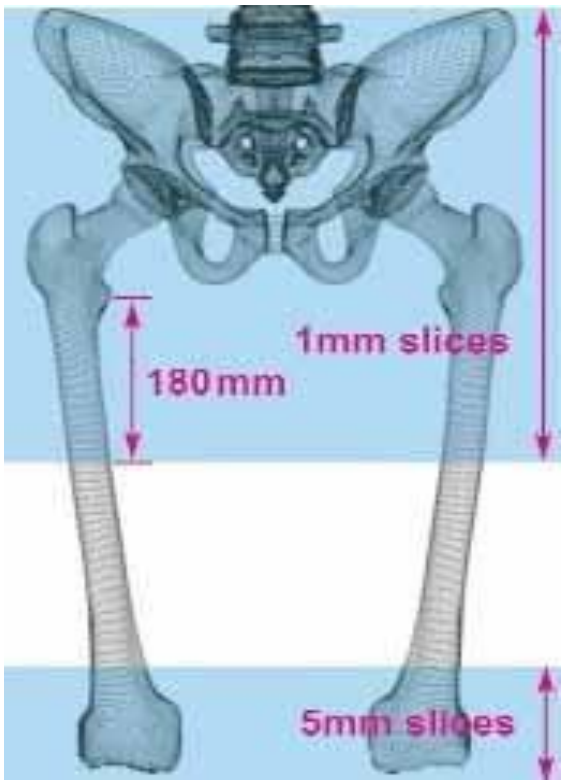


*Figure 1. Scan Location and Characteristics*

FOV should not exceed 500 mm

| Slice Interval Spacing, mm | Distance mm | Number of Slices |
|---|---|---|
| 0.500 | 180 | 360 |
| 0.625 | 180 | 288 |
| 0.750 | 180 | 240 |
| 0.875 | 180 | 206 |
| 1.000 | 180 | 180 |

## 3. POSITIONING THE PATIENT

*During the scan, the pelvis and leg must remain motionless.*

Imaging Artifacts

- Ensuring the patient is comfortable and relaxed is an important factor for achieving a motionless scan
- If metallic components are present in the pelvis or proximal femur, it may not be possible to obtain an image of significant quality to support a RIO® THA procedure
- Move metallic component away from scan region, if possible or use a metal suppression scan protocol

## 4. POST SCAN EXAMINATION

Scan Region

The physician and CT technologist should verify the following:

- Patient's orientation is correct
- Regions of interest in protocol are visible in dataset
- Image slice thickness resulted as required by the protocol
- Bone images in scan image are not degraded by metal-induced artifacts

## 5. DATASET TRANSFER

Archive all rendered images onto a single CD in DICOM 3 compatible format.

Include:

- Patient Name: (First and Last)
- Surgeon Name (Last)
- Operative Side (L,R or Bi)
- Gender (M or F)
- Date of Surgery xx/xx/xxxx





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