**X-Ray Imaging Protocol**

**Position x-ray and calibration straps and 3D markers**

1. Attach one band firmly around the thigh and calf.

   - > 4 in. Knee joint
   - > 4 in.

2. Attach white x-ray markers on each strap. Ensure Zimmer Biomet logo is horizontal. Position markers at about 45° from the patient’s midline.

**Position patient and take A/P images (hip to ankle)**

3. Position x-ray source at knee level. Translation of the source is not permitted (only tilting of the source is permitted).

   - 90°

**Position patient and take LAT images (hip to ankle)**

4. Position x-ray source at knee level. Translation of the source is not permitted (only tilting of the source is permitted).

   - 20°

**Tips:**

- The x-ray tube can tilt up and down to capture the hip, knee, & ankle but it can not translate or shift in any direction.
- In standing position, capture the entire leg image from above the femoral head to below the ankle joint (in one or multiple shots).
- Prevent patient movement between any of sequential images in AP or LAT.
- No repositioning of the markers is permitted during the procedure.
- SID (Source to Image Distance) value: must be fixed during the entire study.
- Images can either be stitched or non-stitched.

**Prepare and transfer final images to Zimmer Biomet**

5. The following should be available on the DICOM tag or engraved on images:
   - SID (focal length)
   - Imager Pixel Spacing
   - Patient Gender
   - Laterality
   - Patient name or Zimmer Biomet Patient ID
   - Surgeon Name

6. Transfer DICOM Images (all non-stitched images and automatically stitched images, if possible) to Zimmer Biomet

   - Femoral head contour visible
   - Markers are entirely visible
   - Bone contour clearly visible, no stitching on these areas
   - Markers are entirely visible
   - Ankle contour is visible (both malleoli)

   ‘For more details please refer to the X-PS™ Image Acquisition protocol (1836.1-GLBL)’

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