

# ONE Planner Hip / ROSA Hip\* Imaging Protocol



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## 1. Image Transmission

Only X-rays of patients receiving Zimmer Biomet implants should be transferred upon completion of the ONE Planner Hip / ROSA Hip Imaging Protocol.

### Preoperative AP and Lateral X-ray Protocol Elements

DICOM Field Name	DICOM Tag	Content
<b>REQUIRED</b>		
Referring Physician Name	0008, 0090	Orthopaedic Surgeon Name (complete surname, complete first name)
Patient Name	0010, 0010	Last First Middle
Patient Date of Birth	0010, 0030	YYYY/MM/DD
Acquisition date	0008, 0022	YYYY/MM/DD
Protocol Name	0018, 1020	For Left Hip, specify: ZBHIPL For Right Hip, specify: ZBHIPR (Either Protocol Name or Study Description)
Study Description	0008, 1030	For Left Hip, specify: ZBHIPL For Right Hip, specify: ZBHIPR (Either Protocol Name or Study Description)
Imager Pixel Spacing	0018, 1164	X-ray pixel spacing lower than 0.5 mm
Institution Name	0008, 0080	
Institution Address	0008, 0081	
<b>RECOMMENDED</b>		
Photometric Interpretation	0028, 0004	MONOCHROME2, where the background is black and the bone is white
Laterality	0020, 0060	
Gender	0010, 0040	M or F
Rescale Slope	0028, 1053	
Rescale Intercept	0028, 1052	
Samples Per Pixel	0028, 0002	
Distance Source to Detector	0018, 1110	
Image Type	0008, 0008	To determine if the X-ray was derived or not
Window Center	0028, 1050	
Window Width	0028, 1051	

## 2. Preoperative Bilateral AP Hip X-ray Acquisition Guidelines

**Patient Position:** (Figure 1: Preoperative Bilateral AP X-ray Side and Top View)

- Patient is supine (in cases where the patient cannot lay on the table, a weight-bearing AP can be taken instead)
- Patient is centered on the x-ray table or upright bucky
- Place the heels 8 to 10 inches (20 to 25 cm) apart
- Rotate the feet internally 15° to 20°
- Ensure arms are out of the region of interest

**Technical Factors:** (Figure 1: Preoperative Bilateral AP X-ray Side and Top View)

- AP projection
- Direct central ray in line with the pubic symphysis (about 3-4 inches (8-10 cm) below ASIS)

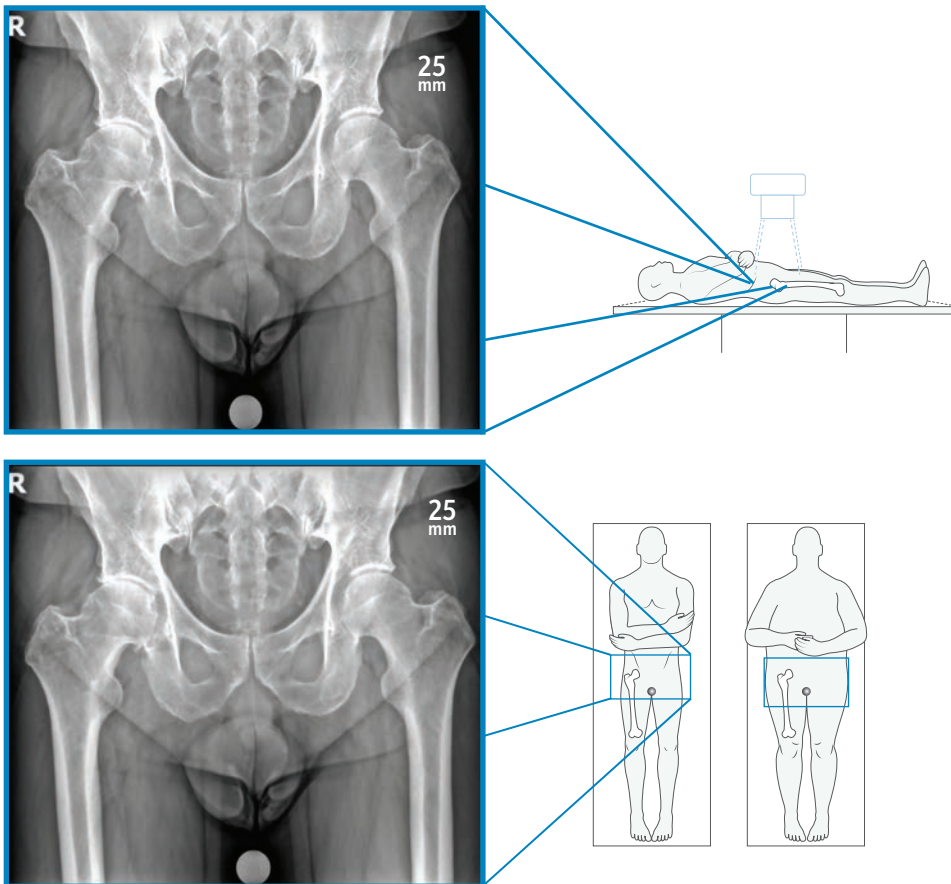


Figure 1: Preoperative Bilateral AP X-ray Side and Top View

**Collimation:** (Figure 2: Preoperative Bilateral AP X-ray Example)

- Bilateral visualization of the following: greater trochanter, proximal femur, and acetabulum

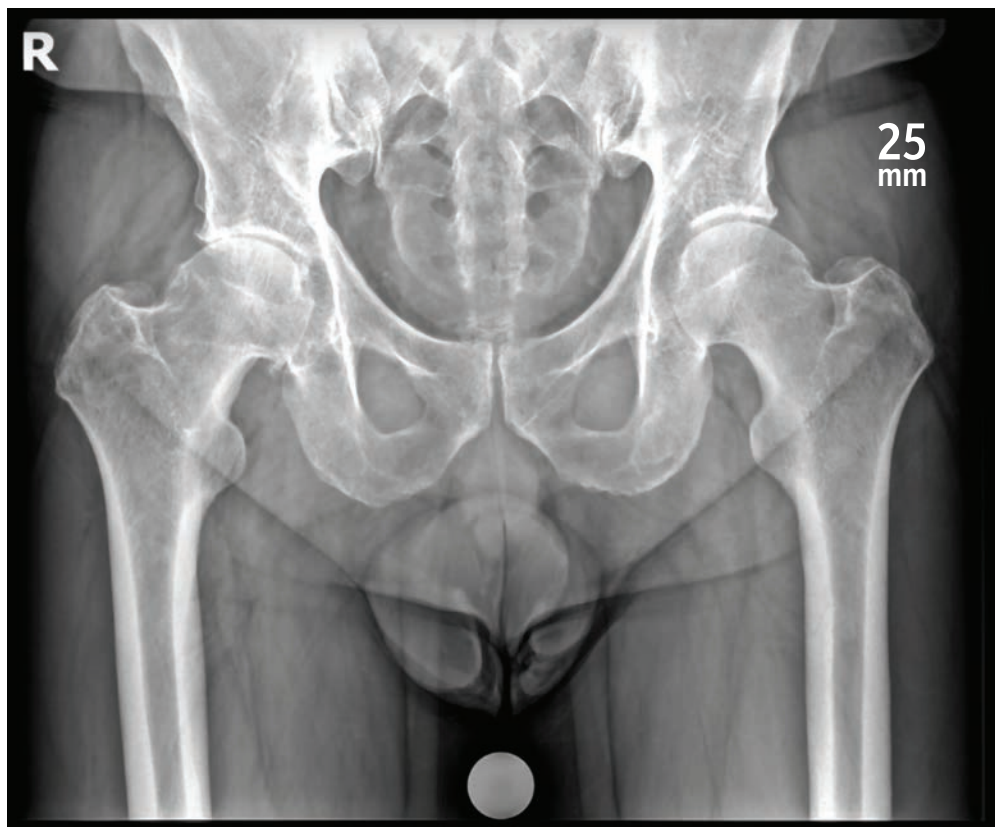


Figure 2: Preoperative Bilateral AP X-ray Example

### 3. Preoperative Unilateral AP Hip X-ray Acquisition Guidelines

When unable to obtain low pelvis due to patient body habitus, a preoperative unilateral AP X-ray of operative side can be obtained.

**Patient Position:** (Figure 3: Preoperative Unilateral AP X-ray Top View)

- Patient is supine (in cases where the patient cannot lay on the table, a weight-bearing AP can be taken instead)
- Operative hip is centered on table or upright bucky
- Place the heels 8 to 10 inches (20 to 25 cm) apart
- Rotate the feet internally 15° to 20°
- Ensure arms are out of the region of interest

**Technical Factors:** (Figure 3: Preoperative Unilateral AP X-ray Top View)

- AP projection
- Direct central ray in line with the pubic symphysis (about 3-4 inches (8-10 cm) below ASIS and 1-2 inches medial)

**Collimation:**

- Operative side: Image contains the greater trochanter, proximal femur and acetabulum

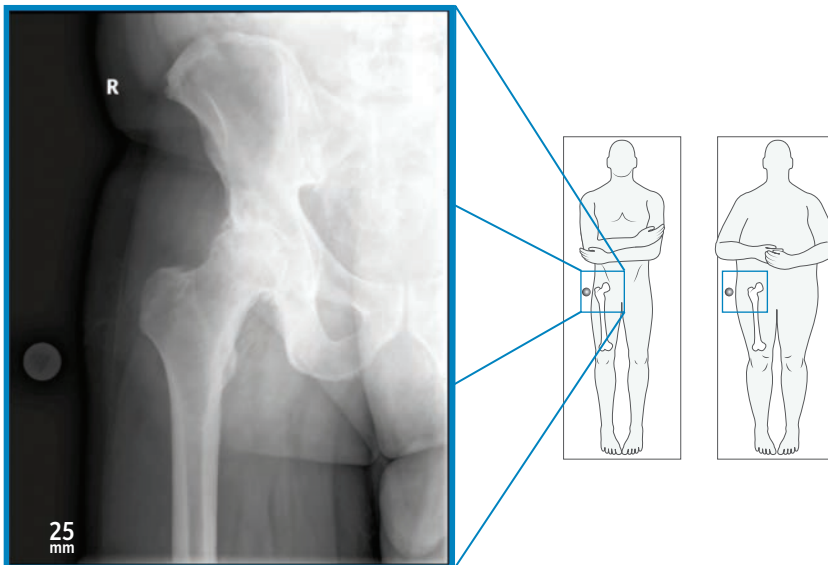


Figure 3: Preoperative Unilateral AP X-ray Top View

## 4. Spherical Marker Guidelines

The ONE Planner Hip / ROSA Hip Imaging Protocol is best performed with a spherical marker. The use of a spherical marker aids in the templating process. When using a spherical marker, entire marker must be present on image and the spherical marker size must be communicated to Zimmer Biomet. Please see Spherical Marker Suggestions PDF for additional guidelines and considerations.

### Marker Placement Guidelines:

- Add the marker after positioning the patient per the preoperative bilateral AP hip or unilateral AP hip X-ray acquisition guidelines
- Bilateral AP Hip: Marker should be placed medially at highest point between the patient's legs at depth that is equal to that of the greater trochanter and **elevated off the table** (Figure 4: Preoperative AP X-ray Marker Placement)
- Unilateral AP Hip: Palpate the prominence of the greater trochanter. Marker should be placed lateral to the prominence, at a depth that is equal to that of the greater trochanter and **elevated off the table** (Figure 4: Preoperative AP X-ray Marker Placement)

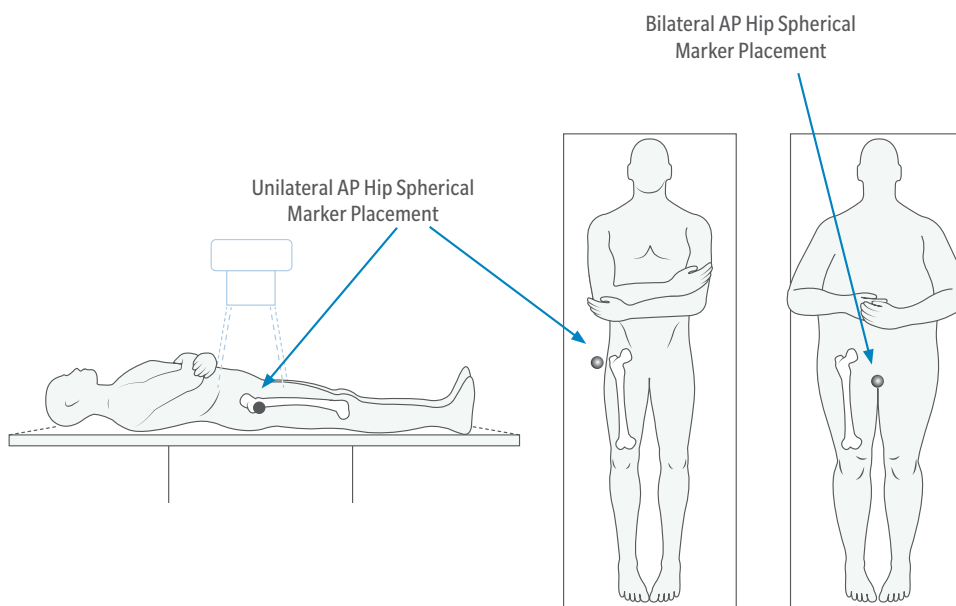


Figure 4: Preoperative AP X-ray Marker Placement



## 5. Preoperative Lateral Sitting and Standing Hip X-ray Acquisition Guidelines

Preoperative lateral X-rays for ONE Planner Hip / ROSA Hip are optional and dependent on surgeon preference. To determine the pelvic tilt, both a sitting and standing lateral X-ray are required (spherical marker is **not** to be used on lateral images).

### Patient Sitting Position: (Figure 5: Preoperative Lateral Sitting X-ray)

- The lateral X-ray will be taken with the patient's left side against the image receptor, regardless of the operative side
- Patient will be seated and knees bent 90°
- Ensure arms are out of the region of interest

**Technical Factors:** Direct central ray in line with the pubic symphysis (about 3-4 inches (8-10 cm) below ASIS)

**Collimation:** Image contains the greater trochanter, proximal femur, entire acetabulum, L5, and entire sacrum/coccyx

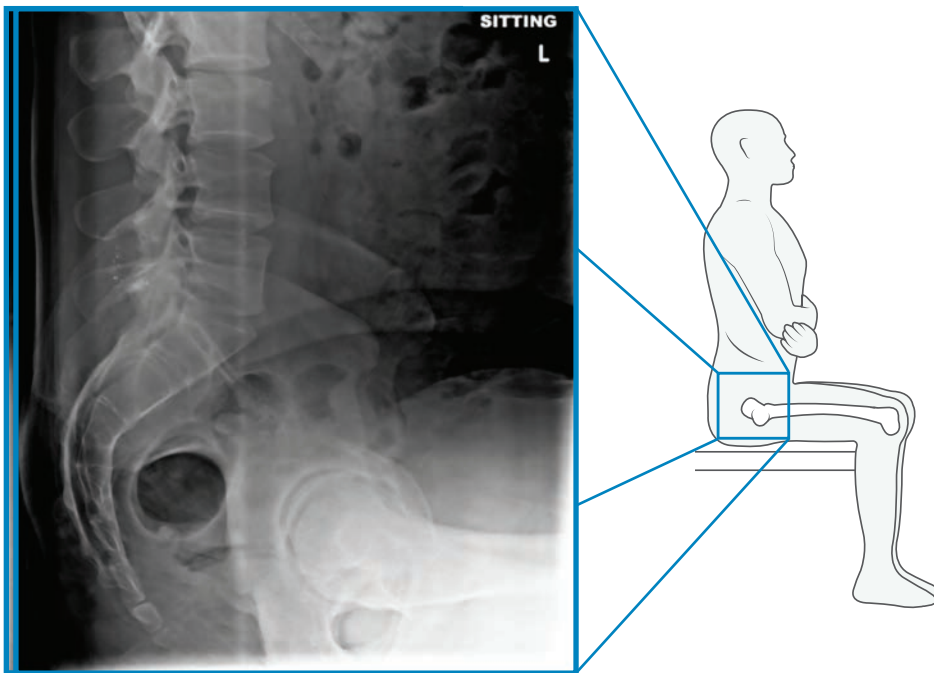


Figure 5: Preoperative Lateral Sitting X-ray

**Patient Standing Position:** (Figure 6: Preoperative Lateral Standing X-ray)

- The lateral X-ray will be taken with the patient's left side against the image receptor, regardless of the operative side
- Patient will be standing straight
- Ensure arms are out of the region of interest

**Technical Factors:**

- Direct central ray in line with the pubic symphysis (about 3-4 inches (8-10 cm) below ASIS)

**Collimation:**

- Image contains the greater trochanter, proximal femur, entire acetabulum, L5, and entire sacrum/coccyx

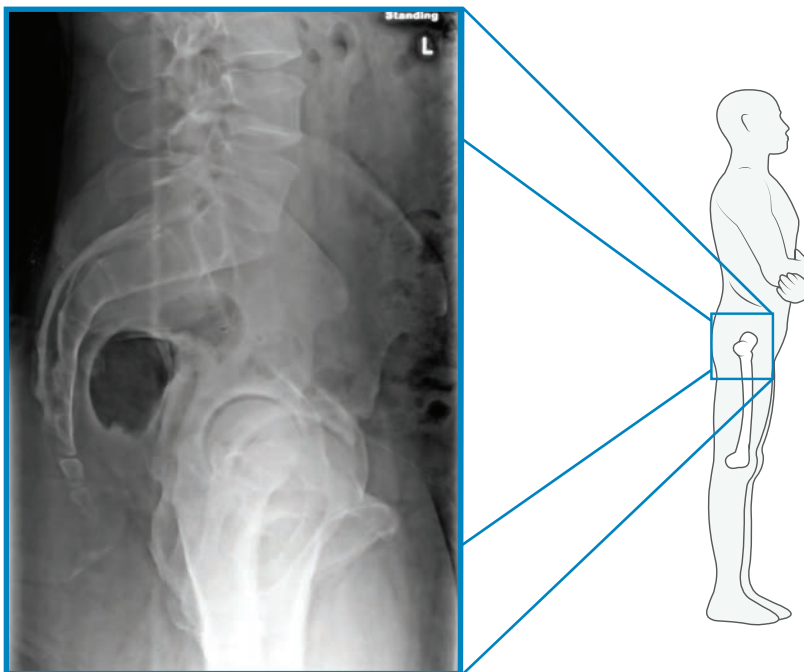


Figure 6: Preoperative Lateral Standing X-ray

## 6. Additional X-ray Rejection Criteria

### X-ray Rejections Criteria

- Annotations present in the region of interest on either side

\*Pending 510(k) clearance, not available in the US.

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