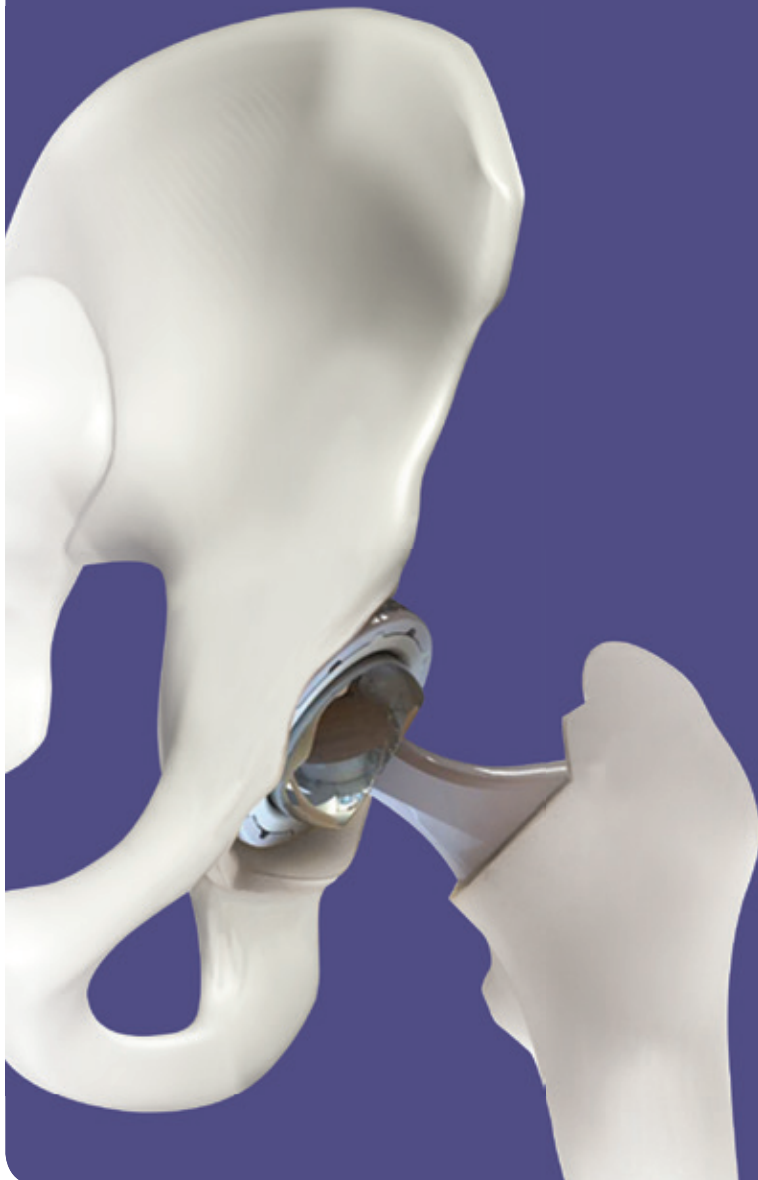


stryker®

MAKO™ THA

DIRECT ANTERIOR APPROACH FEMORAL EXPRESS

Surgical
Technique
Overview



SURGICAL STEP OVERVIEW

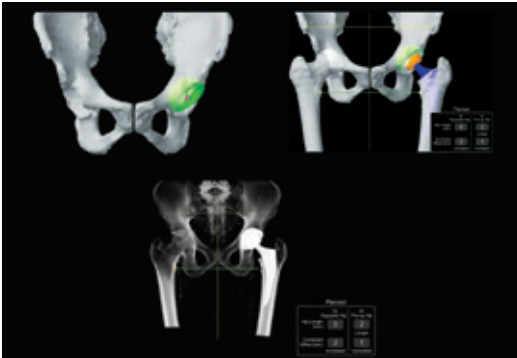


Figure 1

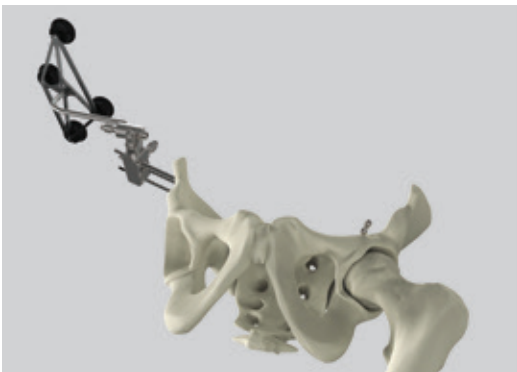


Figure 2

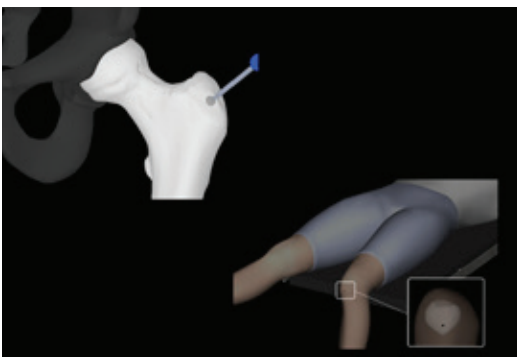


Figure 3

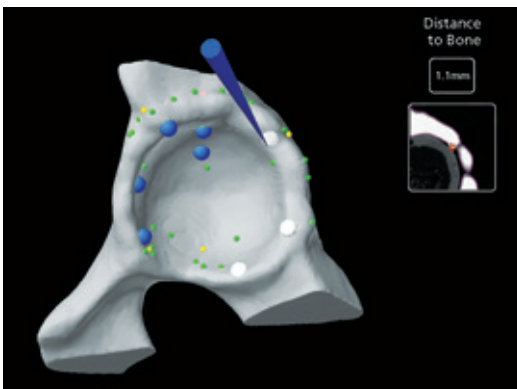


Figure 4



Note

Please refer to the applicable Mako™ THA User Guide for complete instructions.

1. Use case planning tools from the software application to confirm acetabular shell and femoral stem placement for desired leg length and offset (Figure 1).
 - 2a. Prior to draping the patient, place EKG lead on inferior pole of the patient's patella and then proceed to drape the patient. Insert the first pin for the pelvic array in the non-operative iliac crest 1-2 finger breadths from the most prominent point of the ASIS. Using the 3-pin clamp as a guide, place the second and third pin, and attach the pelvic array (Figure 2). Perform incision and insert proximal femoral and pelvic checkpoints.
 - 2b. Capture both the proximal and distal landmarks with the leg flexed at 90 degrees, ensuring that the femur remains stable between captures (Figure 3). Next, capture and verify the pelvic checkpoint. Once the checkpoints are captured, resect the femoral neck and remove the femoral head.



Note

Depending on the setup, 90 degrees of flexion may not be possible. Flex the knee as much as possible until the patella is stable.



Note

While an acetabulum first approach is shown in the following steps, the surgeon may elect to prepare the femur prior to acetabular registration.

3. Remove the labrum and register the acetabulum (Figure 4). Osteophytes should be left intact during the registration process. If osteophytes are removed or damaged, do not collect points in that area.

Tilting the operating table may facilitate array and probe visibility during the registration process for point collection inside the anterior rim and posterior points.

SURGICAL STEP OVERVIEW

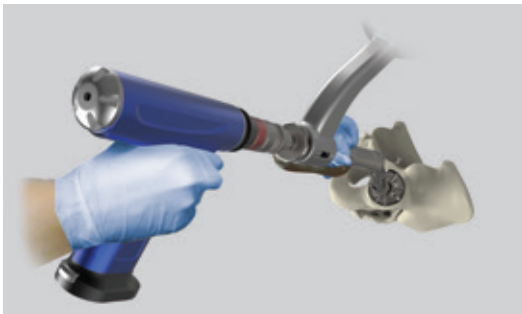


Figure 5



Figure 6



Figure 7

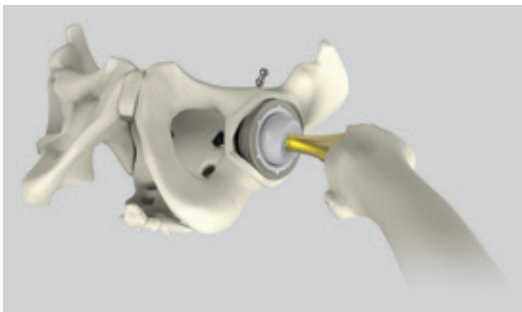


Figure 8

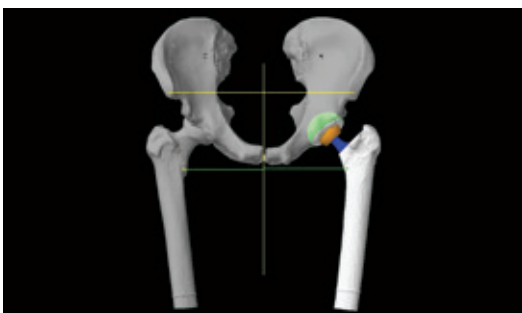


Figure 9

4. Once registration is verified, the surgeon may proceed with acetabular reaming (Figure 5).

Depending on each surgeon's individual preference, he/she may prefer to position the arm before engaging the stereotactic boundaries.

5. Attach the acetabular shell implant to the impactor shaft and position the acetabular shell. The stereotactic boundaries will engage the Mako robotic arm to assist in positioning the component (Figure 6). Verify the acetabular shell position data from the impaction values before disengaging the acetabular shell.



Note

The surgeon may prefer to position the arm before engaging the stereotactic boundaries.

The surgeon may elect to insert the appropriate acetabular liner at this point.

6. Access the femur and use the box osteotome and canal finder to open the femoral canal. Continue broaching by increasing size incrementally. Ensure that the medial portion of the broach is sitting flush with the calcar (Figure 7).
7. Insert the trial liner, trial neck, and trial femoral head, then reduce the hip (Figure 8). Confirm placement and sizes in the Reduction Results software window. Also, confirm joint stability by taking hip through a range of motion. Return the operative leg to the approximate pre-dislocation captured position and capture the proximal and distal landmarks to confirm that the planned offset and leg length have been achieved.
8. After the surgeon performs his/her trial reductions, remove the trials and implant the corresponding femoral stem and femoral head. Following implantation, the surgeon is able to check final results once the components are implanted (Figure 9). After the final check, remove all of the arrays, checkpoints, and bone pins.
9. The surgical site is then closed according to surgeon preference.

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