

Tibial and Femoral Opening Wedge Osteotomy System

Surgical Technique

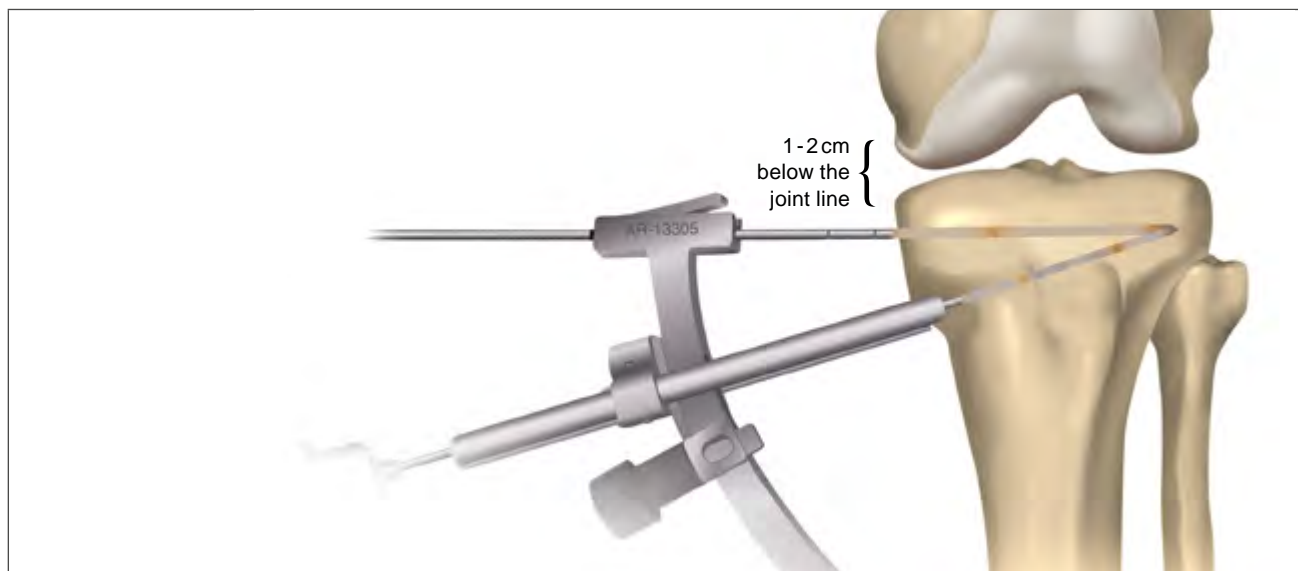


Tibial and Femoral Opening Wedge Osteotomy



Prior to the osteotomy, a diagnostic arthroscopy is performed to verify the status of the articular cartilage and menisci. Any necessary debridement and resection is carried out at this time. Focal defects in the articular surface may be addressed using the Osteochondral Autograft Transfer System (OATS).

Opening wedge osteotomy system set (AR-13305S)



Insert the 3mm osteotomy guide pin into the tibia (medial to lateral) and drill within 1 cm of the lateral cortex. Insert the osteotomy guide assembly onto the guide pin so that the laser line on the pin aligns with the back of the guide assembly (as shown above).

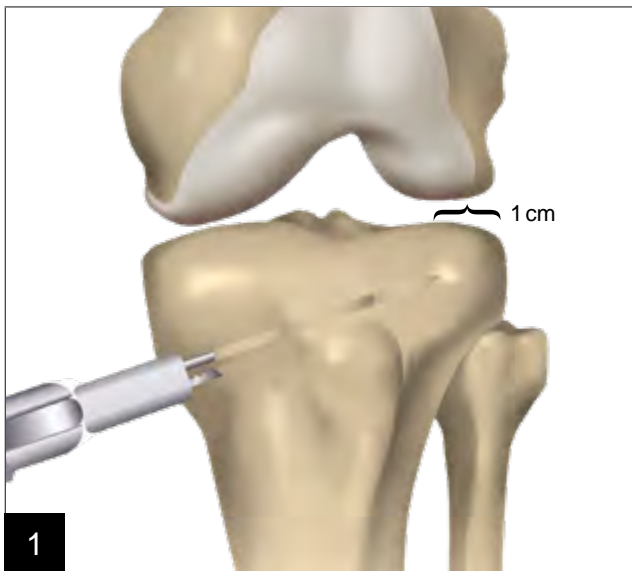
Insert the parallel guide sleeve assembly onto the osteotomy guide assembly.

The parallel guide sleeve assembly should be rotated to reproduce the existing A/P slope of the tibial plateau.

Using the adjustment knob, the angle of the guide can be adjusted so the distal pins will enter the proximal tibia above the tibial tubercle. The adjustment knob is now tightened.

Drill two 2.4mm osteotomy guide pins through the drill sleeves within 1 cm of the lateral cortex.

If the position is acceptable, the guide and the 3mm guide pin (placed transversely) must be removed.

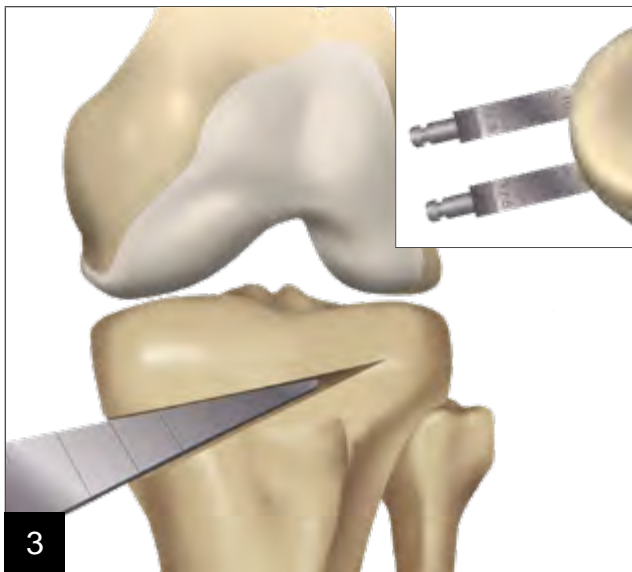


Position the cutting guide over the remaining pins. Secure it to the tibia by driving the headed pin into the central cannulation of the guide. An oscillating saw positioned against the inferior surface of the cutting guide is used to cut the tibial cortex medially, anteriorly, and posteriorly to within 1 cm of the lateral cortex.

Note: To prevent blockade of the saw blade and damage to the retractor, please avoid hitting the radiolucent retractor (AR-13311) longer and more powerfully than necessary.



Use the osteotome handle and blades, available in widths of 10, 25 and 35 mm, to complete the osteotomy. Leave the “breakaway” guide pins in place with the osteotome used inferiorly. Fluoroscopic confirmation should be checked repeatedly throughout the cutting process.



Insert the Osteotomy Jack into the cut to gently open the osteotomy. The size of correction achieved can be determined using the wedge trial for HTO or the osteotomy wedge may be inserted and driven slowly with a mallet to the predetermined correction. The mm marks may be read on the wedge tines. Remove the handle and leave the tines in place.

Bone graft may be packed in the space between the tines.

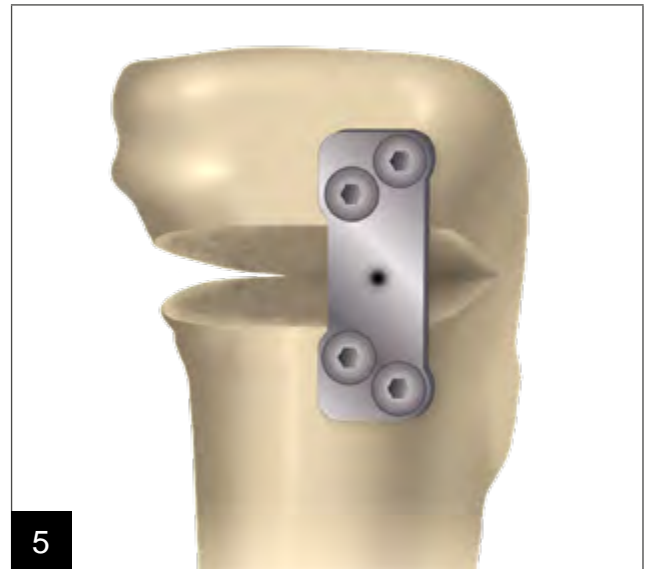


Opening wedge osteotomy plates



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Then insert the tibial opening wedge osteotomy plate between the tines. The plate routinely sits just anterior to the medial collateral ligament. Fix two stainless steel 6.5mm cancellous screws proximally.



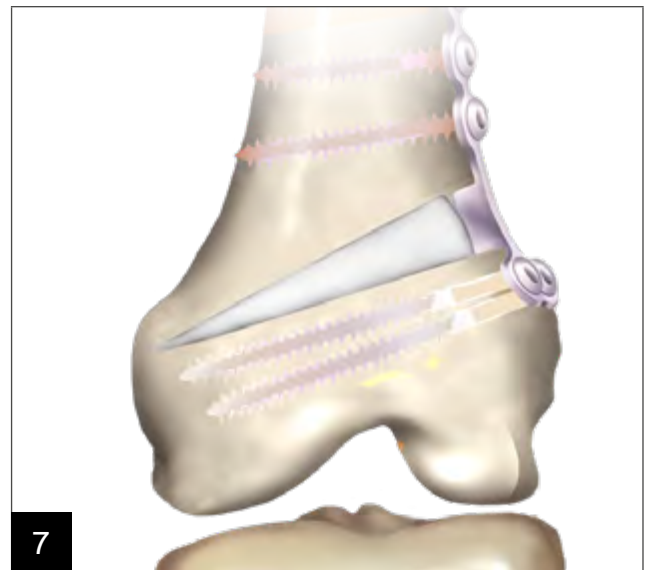
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Remove the tines and close the osteotomy down onto the plate tooth ensuring optimum bone-to-tooth contact. Fix distally with two 4.5mm cortical screws. Following plate fixation, insert allograft or autograft bone into the anterior and posterior aspect of the defect.



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Final fixation of the tibial opening wedge osteotomy. Dress the knee and place in a post-op hinged brace. Begin passive range of motion immediately with a CPM machine. Ambulation is restricted to non-weight-bearing with crutches. INNOTERE 3D wedges bone substitute is used to fill the osteotomy.



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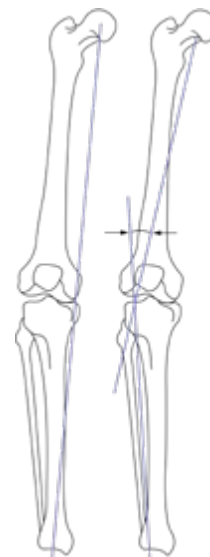
As a comparison, the distal femoral opening wedge osteotomy utilizes the same technique principles as the tibial system. Specifically designed femoral plates take into account the anatomical differences between the distal femur and proximal tibia. ACP-soaked INNOTERE 3D wedges or INNOTERE Paste-CPC can be placed into the bone void to fill the osteotomy wedge.

Using the full-length, standing A/P radiograph, a line is drawn from the center of the femoral head to the center of the tibiotalar joint.

This demonstrates the patient's mechanical axis. Another line is drawn from the center of the femoral head to a point midway in the lateral knee joint.*

A final line is drawn from the center of the tibiotalar joint to the same point in the lateral knee joint. The angle formed by the intersection of these two lines determines the degree of correction required to return the patient's mechanical axis to the point of intersection on the lateral side. Prior to final fixation, the alignment will be verified by external examination and fluoroscopy.

*This point is located at 62.5% of the width of the proximal tibia (i.e., 80 mm [width of proximal tibia] x .625 = 50 mm)



Ordering Information

Osteotomy Plates

Product Description	Item Number
Tibial opening wedge osteotomy plate, 3 mm	AR-13200-03.0
Tibial opening wedge osteotomy plate, 5 mm	AR-13200-05.0
Tibial opening wedge osteotomy plate, 7.5 mm	AR-13200-07.5
Tibial opening wedge osteotomy plate, 9 mm	AR-13200-09.0
Tibial opening wedge osteotomy plate, 10 mm	AR-13200-10.0
Tibial opening wedge osteotomy plate, 11 mm	AR-13200-11.0
Tibial opening wedge osteotomy plate, 12.5 mm	AR-13200-12.5
Tibial opening wedge osteotomy plate, 15 mm	AR-13200-15.0
Tibial opening wedge osteotomy plate, 17.5 mm	AR-13200-17.5
Tibial A/P sloped osteotomy plate, 5 mm	AR-13200PA-05.0
Tibial A/P sloped osteotomy plate, 7.5 mm	AR-13200PA-07.5
Tibial A/P sloped osteotomy plate, 9 mm	AR-13200PA-09.0
Tibial A/P sloped osteotomy plate, 10 mm	AR-13200PA-10.0
Tibial A/P sloped osteotomy plate, 11 mm	AR-13200PA-11.0
Tibial A/P sloped osteotomy plate, 12.5 mm	AR-13200PA-12.5
Tibial A/P sloped osteotomy plate, 15 mm	AR-13200PA-15.0
Tibial A/P sloped osteotomy plate, 17.5 mm	AR-13200PA-17.5
Distal tibial opening wedge osteotomy plate, 5 mm	AR-13200D-05
Distal tibial opening wedge osteotomy plate, 6 mm	AR-13200D-06
Distal tibial opening wedge osteotomy plate, 7 mm	AR-13200D-07

Distal tibial opening wedge osteotomy plate, 8 mm	AR-13200D-08
Distal tibial opening wedge osteotomy plate, 9 mm	AR-13200D-09
Distal tibial opening wedge osteotomy plate, 10 mm	AR-13200D-10
Femoral opening wedge osteotomy plate, 5 mm	AR-13100-05.0
Femoral opening wedge osteotomy plate, 7.5 mm	AR-13100-07.5
Femoral opening wedge osteotomy plate, 9 mm	AR-13100-09
Femoral opening wedge osteotomy plate, 10 mm	AR-13100-10.0
Femoral opening wedge osteotomy plate, 11 mm	AR-13100-11
Femoral opening wedge osteotomy plate, 12.5 mm	AR-13100-12.5
Femoral opening wedge osteotomy plate, 15 mm	AR-13100-15.0
Femoral opening wedge osteotomy plate, 17.5 mm	AR-13100-17.5

Recommended Bone Graft Substitute

Product Description	Item Number
INNOTERE osteotomy wedge, 7 mm x 30 mm	721TS1
INNOTERE osteotomy wedge, 10 mm x 30 mm	721TS2
INNOTERE osteotomy wedge, 12 mm x 35 mm	721TS3
INNOTERE osteotomy wedge, 15 mm x 35 mm	721TS4
INNOTERE Paste-CPC, 3 cc	111VX2

Please note that not all products advertised in this brochure/surgical technique guide may be available in all countries. Please ask the Arthrex Customer Service or your local Arthrex Representative before ordering if the desired product is available for delivery. Thank you very much.



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