HIGH TIBIAL OSTEOTOMY APPROACH

The technique presented below is one of the surgical techniques possibilities. The choice is made according to surgeon's preferences.
Use an antero-medial approach to expose the proximal tibia metaphysis.

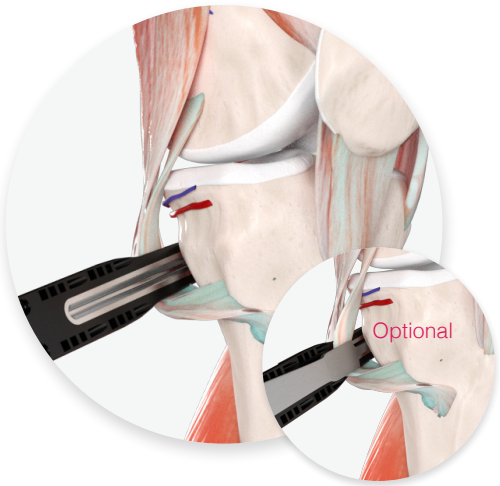
1. The patient is positioned in a supine position on the operating table. The procedure is performed under pneumatic tourniquet and a small pillow is placed under the buttock of the operated side in order to maintain the limb in neutral position.

2. An 8 cm slightly oblique vertical incision is made along the antero-medial surface, running over the joint space down to under the tibial tuberosity.

3. A single-plane incision is made through the periosteum; then the hamstring and the medial collateral ligament (MCL) are retracted posteriorly thanks to the Care + retractor.

   The wider the angular correction is, the more the hamstring and MCL should be released distally.

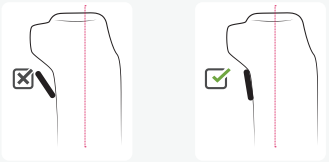
CAUTION: if the release is adequate, the opening of the osteotomy and the insertion of the bone graft can be performed with no risk of tearing the lateral cortical hinge. If it is not, forcing the graft in may tear the hinge, thus seriously jeopardizing complete bone healing. ie: pseudarthrosis.



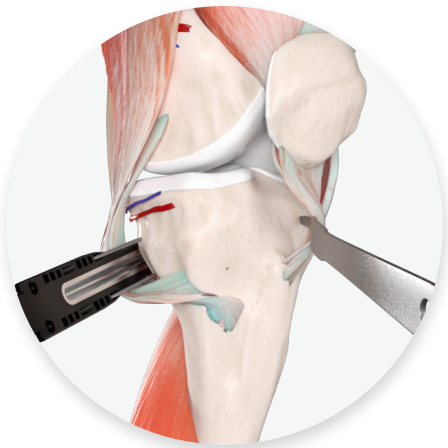
4. Position the Care+ retractor at the level of the wanted osteotomy cut in order to protect the vascular structures from the saw blade.

   Optional: If the Care+ is positionned between the hamstring and the MCL, use a smaller retractor to pull back the MCL.

CAUTION: the groove must be positioned parallel to the front plane.



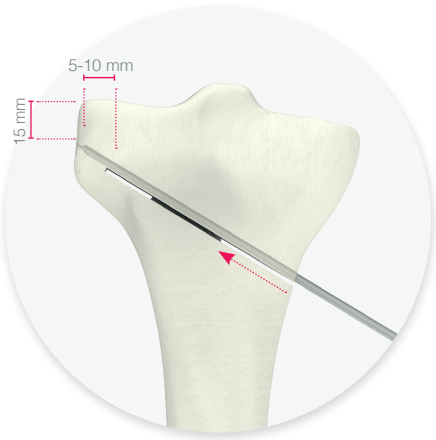
5. When its position is validated under X-ray, secure the Care+ with two divergent 2.2 mm pins.

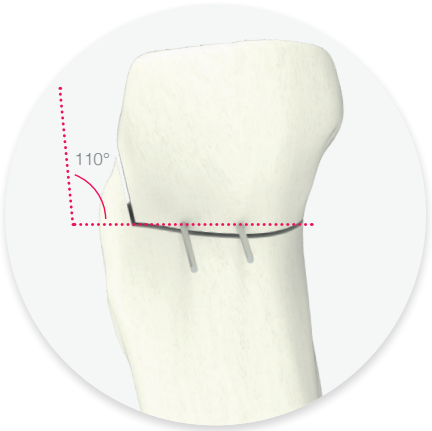


6. Clear the deepest part of the patellar tendon down to its attachment onto the tibial tuberosity, and protect it using a retractor during the osteotomy.

OPENING WEDGE HIGH TIBIAL OSTEOTOMY - BIPLANAR CUT*

** A biplanar cut must be performed with an Activmotion S plate size 2*





The osteotomy cut is perfomed in two steps:

1. **Ascending osteotomy cut:** the cut is performed by oscillating saw, alongside and below the two pins. Stop the incision 5-10 mm from the lateral cortex area.

   It is recommended to position **a third pin** in the opposite cortex to strengthen your hinge and prevents for cutting further.

2. **Transverse osteotomy cut:** perfom the anterior transverse osteotomy cut behind the tibial tuberosity at a resulting angle of around 110° to ascending cut.

   Then, remove the pins except the hinge pin.

3. Insert wedges of increasing sizes until finding the appropriate one (4-18 mm) while maintaining the lateral surface of the tibia. Once the appropriate wedge is inserted, the angular correction is maintained during osteosynthesis.

   Position the plate onto the antero-medial side so that the distal part of the plate runs parallel to the tibial tuberosity.

   Alternatively, chisels or the meary pliers can be used to increase the size of the opening *(see page 14 for more information on these techniques)*.

4. Lock the first Ø4.0 mm guide (ANC998) in the hole under the osteotomy cut, then start drilling using a Ø4.0 mm drill (ANC211) (1).

   Above the osteotomy cut, insert a Ø4.0 mm guide into the central hole (2) and drill.

   To help with stability, the two drills guides can be kept in position and a third one can be used to insert the first screw.

   Alternatively, before drilling, the plate can be temporarily maintained in position with Ø2.2 mm pins (33.0222.200) inserted through the reductors of the drill guides (ANC1009) (3).

   N.B. *to help lock the drill guide in the plate, use the hexagonal part of the screwdriver (ANC975).*

ANC975

5. The screw length can be directly read on the drill at the rear of the drill guide *(see image step 4)* or thanks to the length gauge (ANC210). When using the length gauge (ANC210) in the epiphyseal part of the bone, please add 3 mm to the markings read

   Remove the drill guides. Insert and lock two Ø4.5 mm screws (ST4.5LxxD-ST). The final tightening of the screws must be performed by hand. Proceed similarly for the remaining locking holes.

   N.B. *to ease the insertion of the screws, use the countersink (ANC120-US) to widen the first cortex previously drilled. If the insertion of the screw is difficult, remove the screw, countersink, and insert the screw again.*

ANC120-US

FINAL RESULT

The construct is complete when the metallic wedge is removed and hinge pin are removed.