EPISURF

TALUS OSTEOTOMY GUIDE (TOG)

SURGICAL TECHNIQUE

TABLE OF CONTENTS

TALUS OSTEOTOMY GUIDE OVERVIEW 3

CT AND MRI PROTOCOLS 4

FINAL DESIGN 5

TALUS OSTEOTOMY GUIDE -
SURGICAL PROCEDURE 6-9

TALUS OSTEOTOMY GUIDE OVERVIEW

Episurf's Talus Osteotomy Guide (TOG) is uniquely designed to perfectly fit the patient´s distal tibia. This unique placement facilitates the osteotomy of the medial malleolus in preparation of the implantation of the Episealer Talus, or any other surgery where access to the talus bone is required. The guide has two features:

- **Saw guide** facilitates the detachment of the medial malleolus.
- **Drill holes** give a perfect placement of the fixation holes to re-fixate the medial malleolus to the tibia.

Each TOG is designed to fit the patient's distal tibial anatomy and the sawblade used. Therefore it is important to inform Episurf about the sawblade dimensions and drill diameter to be used during the surgery. Prior to the surgery, the Osteotomy Depth Meter (ODM) is used to verify that the actual sawblade working length corresponds to the length the TOG was designed for.

The Talus Osteotomy Guide is an optional device. It can be ordered as a stand-alone product or in combination with the Episealer Talus implant for medial positions.

Name	Article Number
Talus Osteotomy Guide	48115
Osteotomy Depth Meter	48215

CT AND MRI PROTOCOLS

The Talus Osteotomy Guide (TOG) is designed based on MRI or CT data. Episurf has developed specific protocols, which need to be installed on a scanner in your radiology department. These protocols are available from your local Episurf representative who will partner with your radiology team to get your scanner validated for the correct sequences. To run the Episurf MRI or CT protocols, no special equipment is needed. For MRI, the scanner must have a magnetic field strength of at least 1.5 T.

MRI sequences

The individualised TOG is designed using the data from the MRI to accurately reconstruct the patient´s unique anatomy. Four different conventional sequences are used, together with a 3D sequence. The 3D sequence shall be a SPGR (Spoiled Gradient Echo) fat-saturated sequence with **1 mm thick** slices with a **resolution of 0.5 x 0.5 mm.**

CT sequences

As an alternative to MRI, a CT scan can be used to a create the virtual reconstruction of the patient´s unique anatomy and the design of the TOG.

How to set up the protocol

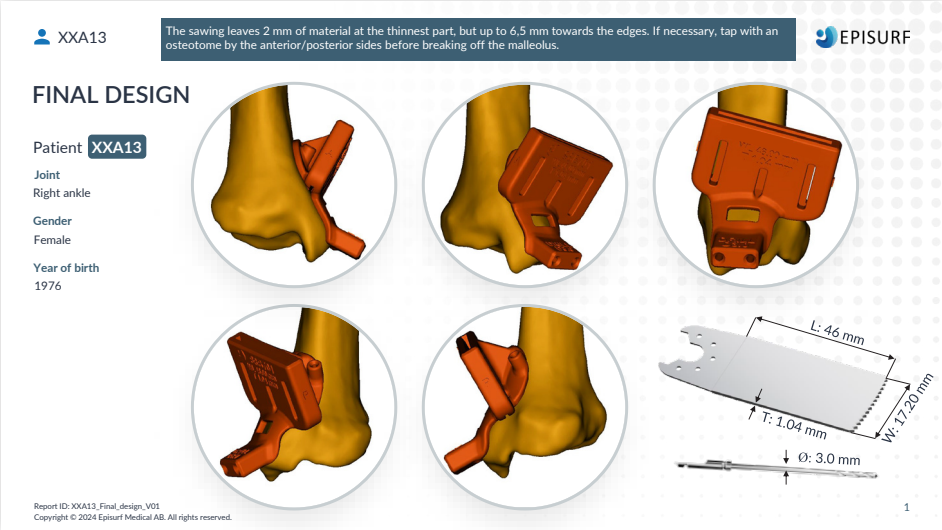
Working with your local Episurf representative, the protocol is put in place in **4 simple steps:**

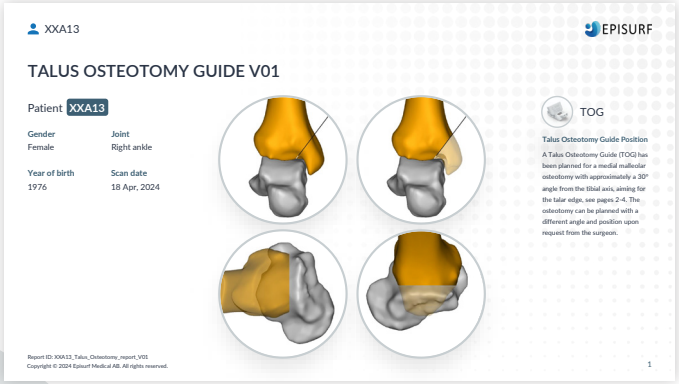
1. **Specify the scanner:** state which scanner you are using, so the correct protocol can be provided.
2. **Install the protocol:** once the Episurf representative has sent your radiology department the specific protocol, the specific settings can be simply loaded on your scanner. Your Episurf representative will be available to help you.
3. **Run a test scan:** once the protocol has been correctly set-up on the scanner, a test scan (of any human ankle) will need to be performed. This is to ensure that the correct quality images are produced. This is mandatory for MRI but optional for CT.
4. **Complete the set-up:** Episurf will confirm with you that the test scan is satisfactory. You are now ready to start scanning patients.

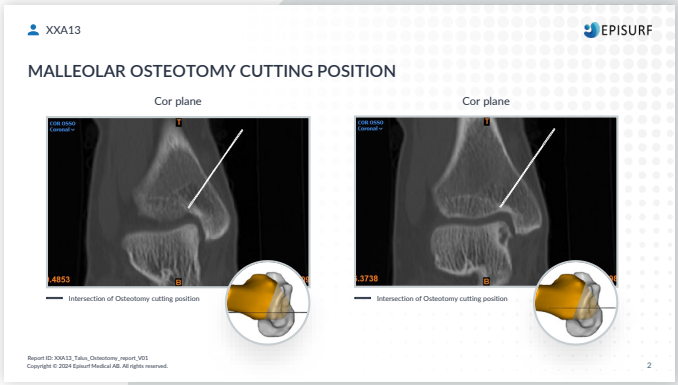
FINAL DESIGN

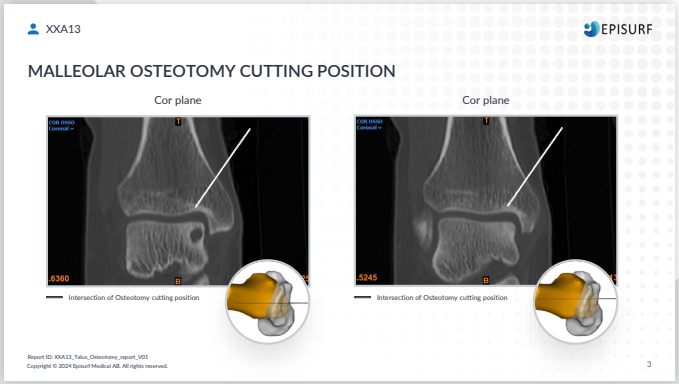
The patient's CT and/or MR images are used to create a detailed virtual model of the talus and the distal tibia. The 3D visualisation is included in a report together with a suggestion of the design and the position of the TOG. This can be fine-tuned by working with Episurf if adjustment of the design or position is desired.

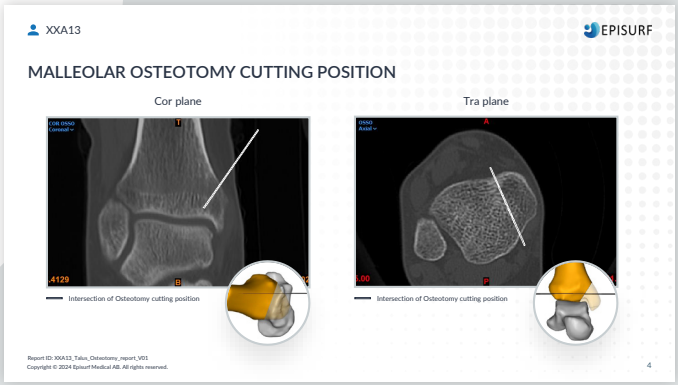
If a TOG is ordered, a Final Design document with be provided togehter with the TOG. The Final Design document is used at the surgery to shows appropriate position of the TOG.











1 CHECKING THE SAWBLADE LENGTH

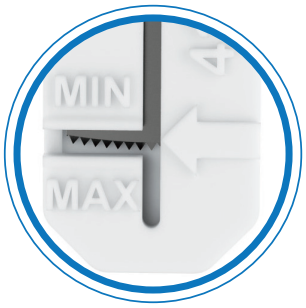
Connect the sawblade to the power tool.

Insert the sawblade into the Osteotomy Depth Meter (ODM) until the power tool stops against the ODM. Verify that the tip of the sawblade is visible within the MIN/MAX markings.

⚠ **WARNING!**
Only use the Talus Osteotomy Guide (TOG) with the specified sawblade dimensions. If another sawblade is used, the TOG must not be used. If the sawblade is too short or too long, the TOG must not be used.

Too short

Too long



OK

2 PLACING THE TALUS OSTEOTOMY GUIDE (TOG)

Make an incision long enough to fully expose the operative field. The complete base of the TOG must be visible through the incision.

Liberate the tibia carefully from its connective tissue both anteriorly and posteriorly. Make sure not to damage any posterior tendons. The periosteum must stay intact.

Place the TOG in its unique position on the tibia. Use the window on the TOG to verify a proper anatomical fit without gaps.

⚠ **WARNING!**
Make sure not to damage posterior tendons.
Make sure the TOG is placed without gaps against the tibial surface. The periosteum must stay intact.

3 SECURING THE TOG

Attach and secure the TOG to the bone by inserting two 2 mm surgical pins in the pin holes on the proximal side of the TOG.

Make sure the TOG does not move during fixation.

⚠ **WARNING!**
Make sure the TOG is securely fastened to the bone.

4 CREATING THE FIXATION HOLES

Make sure to use the same drill diameter as specified on the TOG. Attach the designated drill to the power tool. Use the distal guiding holes on the TOG to drill the fixation holes for refixation of the bone fragment after the procedure.

PRECAUTION
Make sure to use the same drill diameter as specified on the TOG.

5 SAWING

Attach the sawblade to the power tool. Insert the sawblade into the TOG and start sawing.
Make sure to keep surrounding tendons away from the sawing field.

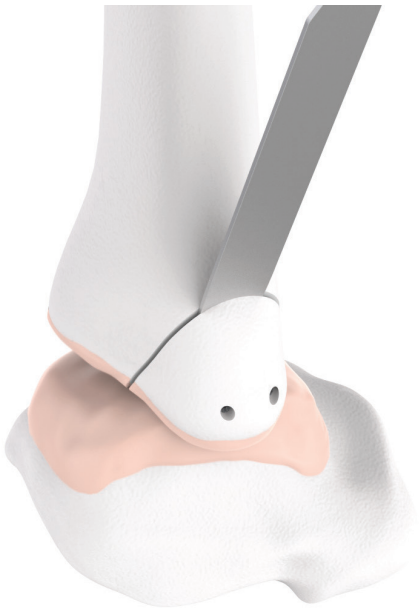
The TOG will guide the sawing and controls the depth of the cut. Continue sawing until the saw bottoms on the top of the TOG.

⚠ **WARNING!**
Make sure to use the same sawblade as specified when placing the order.

6 REMOVING THE TOG

Remove the surgical pins and the TOG from the surgical field.

7 BREAKING OFF THE BONE FRAGMENT



Perform the final break-off using an osteotome.

8 FINAL RESULT

After the desired procedure has been performed, the fixation holes shall be used for re-fixation of the medial malleolus to tibia.

NOTES

NOTES

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