

# 45**b** screw

Surgical technique

MINIMALLY INVASIVE  
CHEVRON & AKIN

# Surgical technique

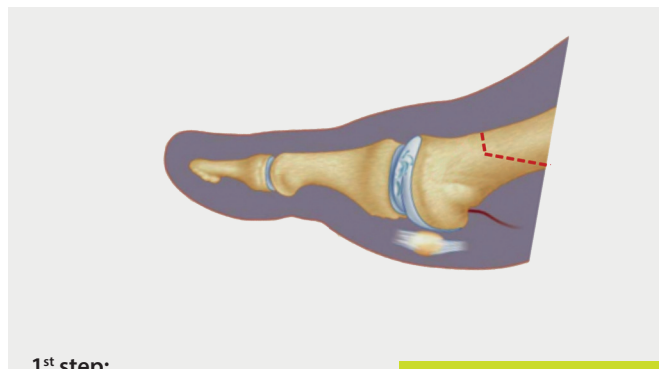
## 45b screw

### INDICATION

Hallux valgus

### PATIENT PREPARATION AND SET UP

- Dorsal decubitus, foot outside the surgical field in order to allow space for an image intensifier
- Unsystematic tourniquet
- Extremity field

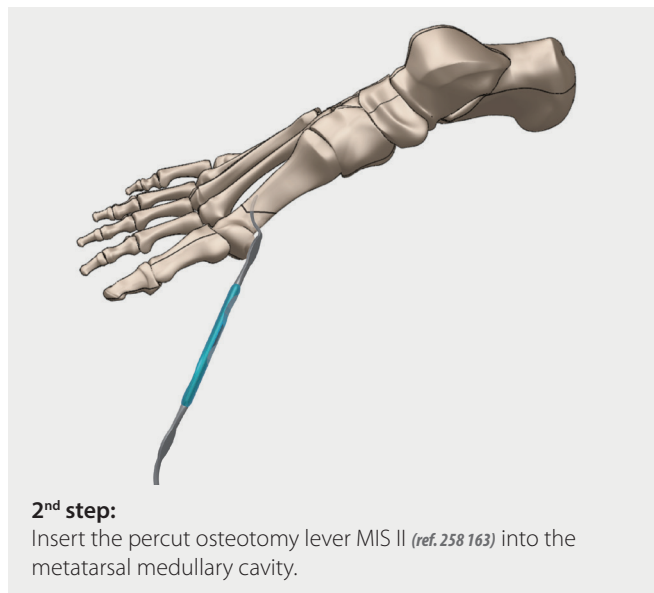


#### 1<sup>st</sup> step:

- Incise skin using Beaver at the entry point of burr,
- Insert the burr (*ref. 264 425*) and carry out the percutaneous chevron type metaphyseal metatarsal osteotomy while monitoring with the image intensifier.

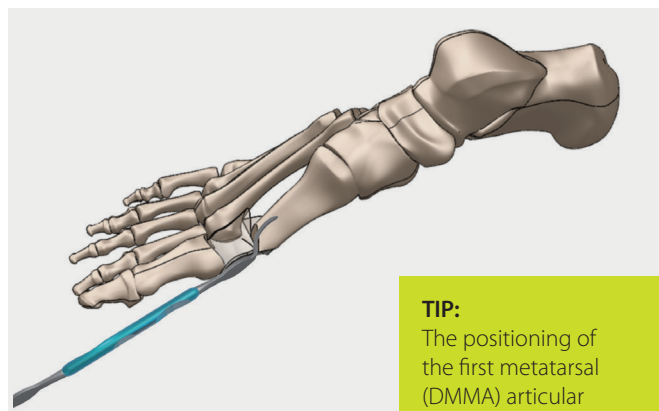
#### TIP:

Chevron-shaped lines, side view; the positioning and the length of the lines vary according to planning.



#### 2<sup>nd</sup> step:

Insert the percut osteotomy lever MIS II (*ref. 258 163*) into the metatarsal medullary cavity.

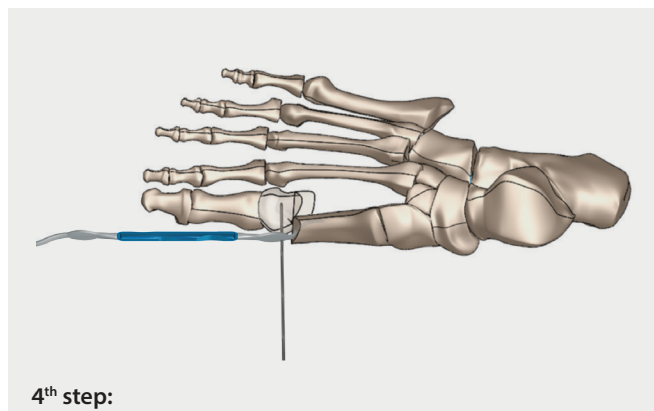


#### 3<sup>rd</sup> step:

Perform the lateral translation of the distal part of the osteotomy using a leverage effect.

#### TIP:

The positioning of the first metatarsal (DMMA) articular surface can be modified by ligamentotaxis if necessary by transforming hallux into varus.

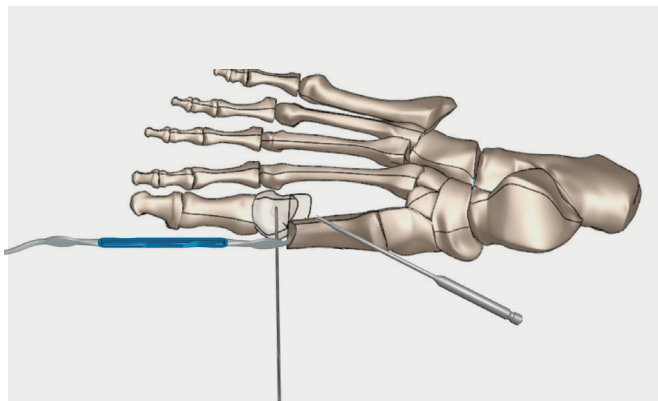


#### 4<sup>th</sup> step:

If the position of the head of the 1<sup>st</sup> metatarsal is satisfactory, it is possible to insert a temporary 15/10th mm k-wire (*ref. 269 057*) into the 2<sup>nd</sup> metatarsal head to stabilise the reduction.

#### TIP:

At this step, check the dorsoplantar positioning of the head of M1.

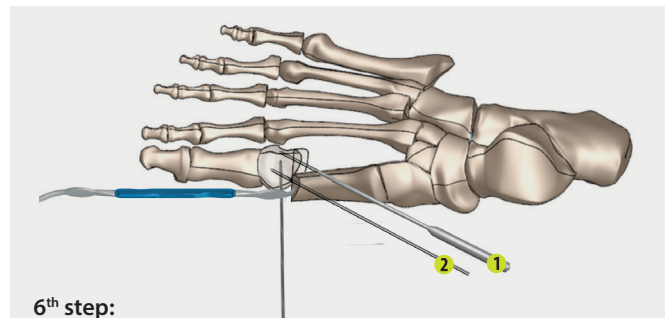


**5<sup>th</sup> step:**

In case of hard bone, insert the cannulated drill bit (ref. 267 809) towards the metatarsal head. Drill the first cortical.

**TIP:**

For large movements, the drill bit can be pushed all the way to the 2<sup>nd</sup> cortex.



**6<sup>th</sup> step:**

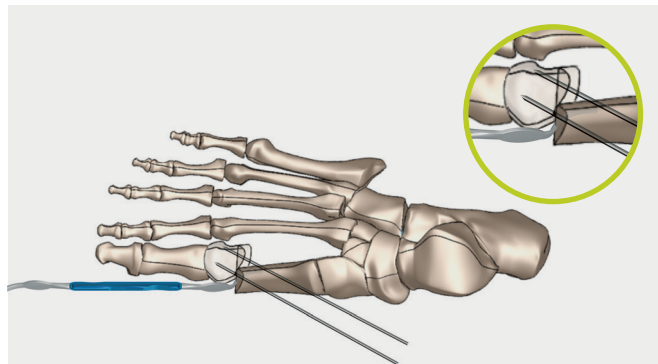
- In case of hard bone, insert the cannulated drill bit (ref. 267 809) towards the metatarsal head. Drill the first cortical. ①

**6<sup>th</sup> step bis:**

- Repeat step 6 to put the 2<sup>nd</sup> distal screw in place. It will prevent rotation of the head. ②

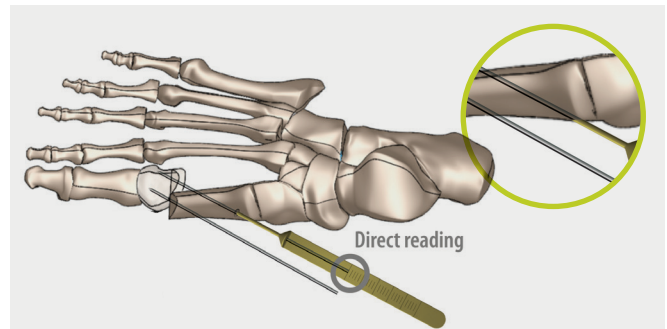
**TIP:**

Before placing the 2<sup>nd</sup> k-wire, perform a check of the translation, and the position of the head to avoid it rotating.



**7<sup>th</sup> step:**

Withdraw the temporary k-wire (ref. 269 057) from the head of M1 then withdraw the translator.

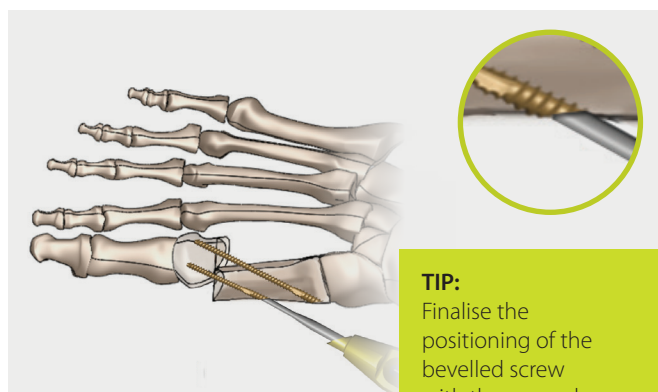


**8<sup>th</sup> step:**

Read directly the length of the screw on the measurer (ref. 267 811) to insert the proximal screw.

**TIP:**

The marker on the screwdriver makes it possible to determine the orientation of the bevel of the screw head.



**9<sup>th</sup> step:**

Position the distal screw.

**10<sup>th</sup> step :**

Withdraw the pin. The image amplifier can be used to check the position of the screw.

**TIP:**

Finalise the positioning of the bevelled screw with the manual screwdriver in order to optimise bone anchoring without risk of causing subcutaneous discomfort.

**11<sup>th</sup> step :**

Resect the medial angle of the proximal fragment of the osteotomy using the burr.

**TIP:**

If the fragment is bulky, an osteotomy can be performed and it can be withdrawn or placed below the osteotomy site.

**REMARK:**

In some cases an exostosectomy of the metatarsal head, a percutaneous lateral arthrolysis and/or an Akin type phalangeal osteotomy is performed to complete the correction.

Monitor using the image intensifier and dress.

**Postoperative follow-up:**

- Partial load: 15 days
- Dressing changed at day 15

## IMPLANTS REFERENCES

Ref.	Designation
270 681	bePOD bevelled cannulated 45B screw Ø3 LG16 mm
270 682	bePOD bevelled cannulated 45B screw Ø3 LG18 mm
270 683	bePOD bevelled cannulated 45B screw Ø3 LG20 mm
270 684	bePOD bevelled cannulated 45B screw Ø3 LG22 mm
270 685	bePOD bevelled cannulated 45B screw Ø3 LG24 mm
270 686	bePOD bevelled cannulated 45B screw Ø3 LG26 mm
270 687	bePOD bevelled cannulated 45B screw Ø3 LG28 mm
270 688	bePOD bevelled cannulated 45B screw Ø3 LG30 mm
267 823	bePOD bevelled cannulated 45B screw Ø3 LG32 mm
267 824	bePOD bevelled cannulated 45B screw Ø3 LG34 mm
267 825	bePOD bevelled cannulated 45B screw Ø3 LG36 mm
267 826	bePOD bevelled cannulated 45B screw Ø3 LG38 mm

Ref.	Designation
267 827	bePOD bevelled cannulated 45B screw Ø3 LG40 mm
267 828	bePOD bevelled cannulated 45B screw Ø3 LG42 mm
267 829	bePOD bevelled cannulated 45B screw Ø3 LG44 mm
267 830	bePOD bevelled cannulated 45B screw Ø3 LG46 mm
267 831	bePOD bevelled cannulated 45B screw Ø3 LG48 mm
267 832	bePOD bevelled cannulated 45B screw Ø3 LG50 mm
270 689	bePOD bevelled cannulated 45B screw Ø3 LG52 mm
270 690	bePOD bevelled cannulated 45B screw Ø3 LG54 mm
270 691	bePOD bevelled cannulated 45B screw Ø3 LG56 mm
270 692	bePOD bevelled cannulated 45B screw Ø3 LG58 mm
270 693	bePOD bevelled cannulated 45B screw Ø3 LG60 mm

## INSTRUMENTATION



267 807 - Motor screwdriver



267 808 - Manual screwdriver



267 809 - Drill



267 811 - Measurer

254 920 - K-wire D1 L130

269 057 - K-wire D1,5 L150

## INSTRUMENTATION MIS 2 - OPTIONAL



258 163 - Percut osteotomy lever MIS II



**FR, FH ORTHO SAS**

**USA, FH ORTHO INC.**

**UK, FH ORTHO LTD**

**PL, FH ORTHO POLSKA**



**FR, FH INDUSTRIE**