

PROstep™

DMMO (distal metatarsal metaphyseal osteotomy)

Operative technique



PROstep™

DMMO (distal metatarsal metaphyseal osteotomy)

Table of contents

Introduction	3
Patient positioning and setup	4
Operative technique	5
Surgical approach	5
Osteotomy with burr	5
Postoperative management	6
Ordering information	7

Proper surgical procedures and techniques are the responsibility of the medical professional. The following guidelines are furnished for information purposes only. Each surgeon must evaluate the appropriateness of the procedures based on his or her personal medical training and experience. Prior to use of the system, the surgeon should refer to the product package insert for complete warnings, precautions, indications, contraindications and adverse effects. Package inserts are also available by contacting the manufacturer. Contact information can be found on the back of this operative technique and the package insert is available on the website listed.

Please contact your local Stryker representative for product availability.

Introduction

NOTICE

This is an instrument-only operative technique.

The PROstep Distal Metatarsal Metaphyseal Osteotomy (DMMO) is an extra-articular osteotomy, performed using a cutting burr with a diameter of 2mm and a cutting length of 12mm (57SR0212). The osteotomy is made at the metaphyseal diaphyseal junction on the lesser metatarsals and is not fixed with an implant.

This procedure is an alternative to the Weil osteotomy, which is fixed with a screw.

Since the DMMO is extra-articular and unfixed, it allows for possible benefits such as greater range of movement in the metatarsal phalangeal joint (MTPJ), less stiffness, and greater range of movement postoperatively.



57SR0212
2mm x 12mm burr

Patient positioning and setup

NOTICE

Patient positioning based on right-handed health care professional.

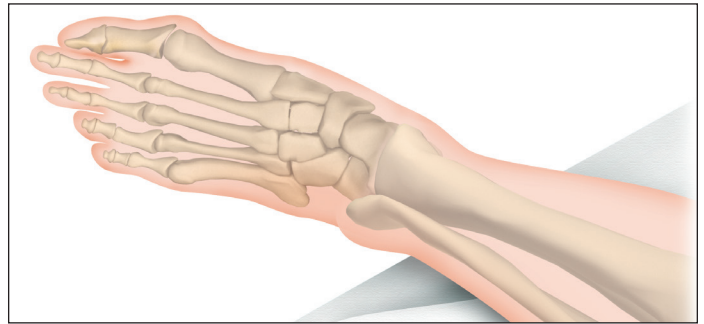
Patient positioning and equipment setup is extremely important when performing any PROstep procedure.

The patient's feet should be positioned off the end of the table, enabling ease of access for the x-ray, thereby ensuring consistent x-rays throughout the procedure.

The x-ray itself should come in from the patient's right and should be rotated to a slight oblique angle.

The PROstep Power Box can then be positioned to the patient's left.

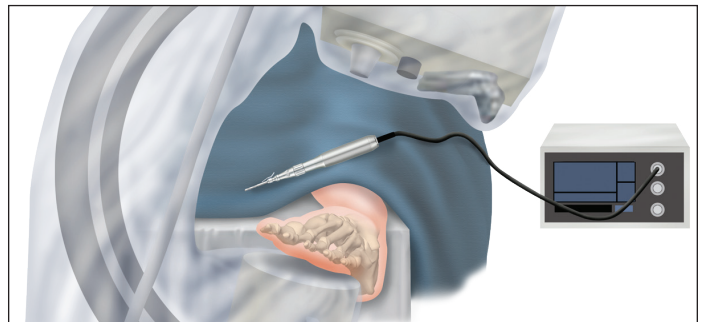
This setup enables free movement around the patient's feet, to either stand at the side or the end of the table as the operation demands. The position of the equipment is independent of whether the operative side is left or right.



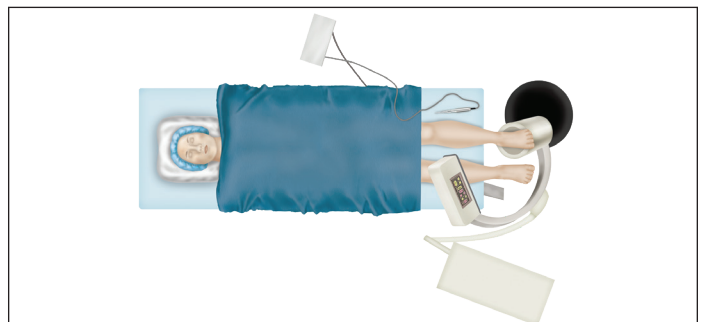
Patient positioning and setup **Figure 1**



Patient positioning and setup **Figure 2**



Patient positioning and setup **Figure 3**



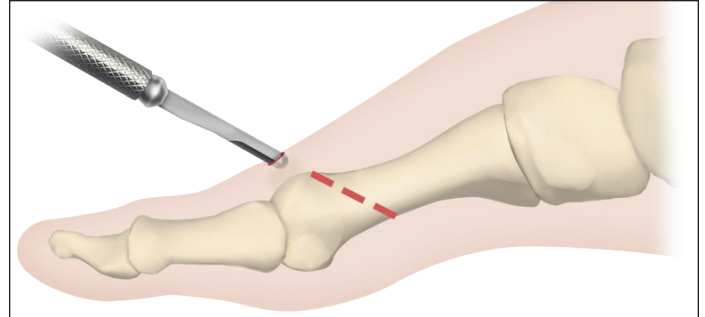
Patient positioning and setup **Figure 4**

Operative technique

Surgical approach

Standing at the end of the table, locate the MTP joint with the thumb of the non-dominant hand. The stab incision is then made proximal to the thumb, on the osteotomy side, using the blade and blade handle (5751M107).

This incision needs to go no deeper than the skin. Avoid extensive stripping of periosteum, especially on the plantar surface of the neck, as this is both unnecessary and may potentially compromise the blood supply to the head of the metatarsal.



Surgical approach and stab incision **Figure 5**



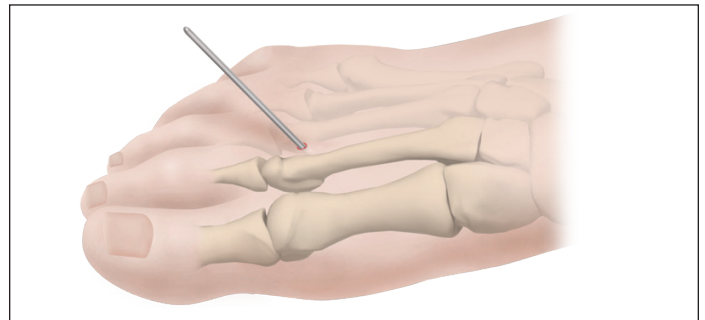
5751M107
Blade handle
(part of a set)

Osteotomy with burr

Select the 12mm burr for this osteotomy (57SR0212). The burr is inserted through the portal and placed against the right wall of the metatarsal neck. The correct position is felt at the neck of the diaphyseal – metaphyseal junction.



2mm x 12mm burr
(57SR0212)



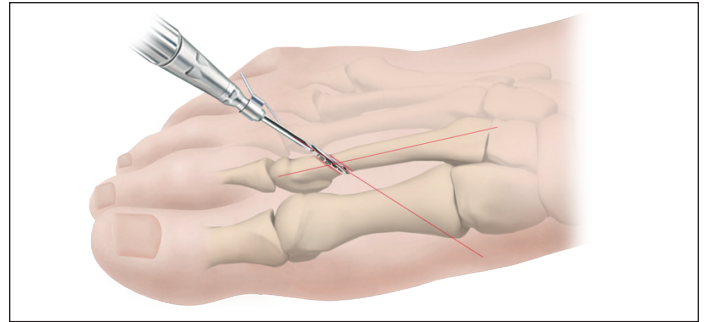
Osteotomy **Figure 6**

It is helpful to fix the relevant lesser MTPJ between the thumb and index finger of the non-dominant hand and mildly plantarflex the toe within this grasp. With experience, x-ray confirmation of burr positioning is unnecessary, but those with less experience may find it useful.



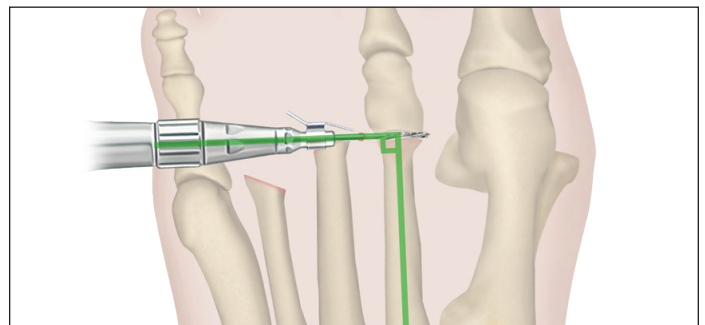
Position of the burr before osteotomy **Figure 7**

The osteotomy is created by a sawing action to form a slight channel for the burr to sit in.



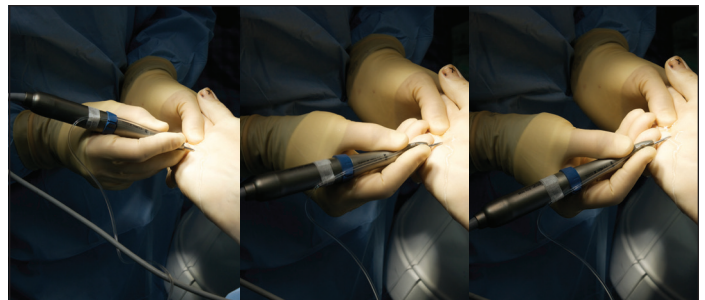
Extra-articular starting position of the burr **Figure 8**

Then, while making sure the plantar cortex is cut, the surgeon should make a supination of their dominant hand until the burr and handpiece are perpendicular to the metatarsal heads.



Supination of hand **Figure 9**

Then the burr should be lifted, slowly and under control, until the burr exits the dorsal cortex. The plane of the osteotomy should be at 45 degrees to the axis of the metatarsal.



Hand movements required to complete procedure **Figure 10**

When performed correctly, the osteotomy is extra-capsular with respect to the MTPJ. Completion of the osteotomy can be confirmed by mobility of the metatarsal head and by observing movement on x-ray views.



V-shaped osteotomy as seen on AP x-ray **Figure 11**

Postoperative management

Postoperative care is the responsibility of the medical professional.

Ordering information

Part number	Description
57SR0212	MICA Burr 2mm x 12mm
57S1MI07	MIS sterile instrument pack Blade handle Curved elevator Straight elevator Double-ended rasp Blade

Foot & Ankle

This document is intended solely for the use of healthcare professionals. A surgeon must always rely on his or her own professional clinical judgment when deciding whether to use a particular product when treating a particular patient. Stryker does not dispense medical advice and recommends that surgeons be trained in the use of any particular product before using it in surgery.

The information presented is intended to demonstrate a Stryker product. A surgeon must always refer to the package insert, product label and/or instructions for use, including the instructions for cleaning and sterilization (if applicable), before using any Stryker product. Products may not be available in all markets because product availability is subject to the regulatory and/or medical practices in individual markets. Please contact your Stryker representative if you have questions about the availability of Stryker products in your area.

The instructions for Use, Operative Techniques, Cleaning instructions, patient information leaflets and other associated labeling may be requested online at ifu.stryker.com. If saving the instructions for Use, Operative Techniques, Cleaning instructions from the above mentioned websites, please make sure you always have the most up to date versions prior to use.

Stryker Corporation or its divisions or other corporate affiliated entities own, use or have applied for the following trademarks or service marks: MICA, PROstep, Stryker. All other trademarks are trademarks of their respective owners or holders.

AP-001300C, 07-2022

Copyright © 2022 Stryker



Manufacturer:
Wright Medical
Technology Inc.
1023 Cherry Road
Memphis, TN 38117
800 238 7117
901 867 9971
stryker.com