

## Treace Medical Concepts Patient Specific Instrumentation (PSI) System



## Surgical Technique Adductoplasty<sup>®</sup> using PSI

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- Utilize an oblique fluoroscopic view to locate the 2nd and 3rd TMT joints; identify and mark an incision midline and parallel with the longitudinal axis of the 3rd metatarsal shaft, approximately 6-8 cm long if using a Standard Cut Guide, or approximately 4 cm long if using a Mini-Incision Cut Guide. The neurovascular bundle may be identified and marked by palpating the dorsal foot and locating the dorsalis pedis pulse.
- 2. Carefully dissect through the skin, subcutaneous tissue, and retinaculum, taking care to avoid the neurovascular bundle and leave the ligamentous attachments between the 2<sup>nd</sup> and 3<sup>rd</sup> metatarsal bases intact. The muscle belly may be split or resected. Retract between the EDL and EDB muscle, locating and exposing the 2<sup>nd</sup> and 3<sup>rd</sup> TMT joints.
- 3. Place the Patient Specific Cut Guide on bone until it fully registers. Insert a 2.0mm x 70mm pin in one or more Cut Guide holes to temporarily secure the Cut Guide.
- 4. Assess the cut guide position clinically and fluoroscopically using an oblique x-ray view. Confirm that the joint markers (Standard Cut Guide) or pin hole arms (Mini-Incision Cut Guide) are aligned with the interval between the 2<sup>nd</sup> and 3<sup>rd</sup> metatarsals and the ICJ.
- 5. Take care to visualize the 2nd and 3rd TMT cuts by independently imaging down the medial and lateral sets of pin holes. Note: The distal arms and associated pin holes should be aligned with the longitudinal axes of the 2<sup>nd</sup> and 3<sup>rd</sup> metatarsals, and the proximal arms are oriented parallel to the axes of the metatarsals in their corrected position. (Standard Cut Guide only)
- 6. Once Cut guide positioning has been confirmed. Insert 2.0mm x 70mm pins into the remaining holes to secure the Cut Guide. Place the sawblade into the cut slots and perform the osteotomies, beginning with the distal cut slot. The sawblade should be held perpendicular to the respective dorsal surface of the Guide when cutting. Additional soft tissue retraction is required when using the Mini-Incision Cut Guide. Irrigation may be used to reduce friction.
- 7. Remove the 2mm half-pins from the Cut Guide. Utilize rongeurs along with the TriTome<sup>™</sup>, LapiTome<sup>™</sup>, and/or RazorTome<sup>™</sup> to remove the bone slices and any remaining bone fragments. Use fluoroscopy to confirm all bone fragments and articular cartilage has been removed. Thoroughly fenestrate the 2nd and 3rd TMT subchondral joint surfaces with a fluted drill bit.
- 8. Completely release the interval between the 3rd and 4th metatarsal bases with the TriTome<sup>™</sup>, RazorTome<sup>™</sup>, and/or osteotome.
- 9. Manually reduce the 2nd and 3rd TMT joints using the "up and out" technique while placing the Adductoplasty<sup>®</sup> compressor across the most lateral aspect of the 3rd TMT joint and secure with two 2mm half-pins. Maintain manual reduction while tightening the compressor to "two-finger tightness." Confirm uniform opposition of the 2nd and 3rd TMT joint surfaces clinically and radiographically. Utilize fluoroscopy to ensure full MTA correction has been achieved.
- 10. Proceed with fixation of the joint with the preferred Treace® fixation system per the respective surgical technique.



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