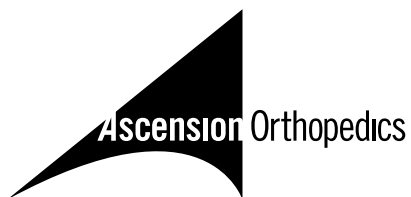


Ascension® PyroSphere® TMT

surgical technique



Design Rationale

The Ascension PyroSphere™ tarsometatarsal implant is intended for the treatment of degenerative joint disease of the midfoot. It is designed to reduce pain, restore motion in the lateral column (fourth/fifth tarsometatarsal joints) of the foot, and reproduce normal biomechanics and gait. The Ascension PyroSphere™ can be used in either or both of the fourth/fifth TMT joints.

PyroCarbon's elastic modulus is similar to cortical bone – minimizing subsidence and bone loss. Wear testing shows that PyroCarbon demonstrates up to 300 times less wear on bone than zirconia and medical grade metals.*

* Strzepa P, Klawitter J, "Ascension PyroCarbon Hemisphere Wear Testing Against Bone," Poster No. 0897, 51st Annual Meeting of Orthopedic Research Society.

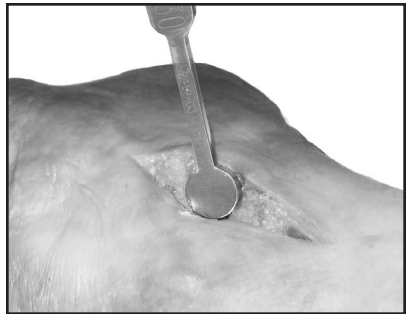
Initial Incision and Exposure

Make a longitudinal incision over the dorsolateral midfoot (fourth/fifth TMT joint). Retract extensor tendons and expose the lateral two TMT joints. Remove any osteophytes and follow with a synovectomy.

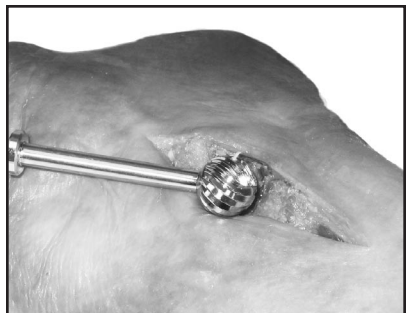


Articular Surface Preparation

After achieving adequate exposure, use the Implant Sizer Instrument to determine which size PyroSphere™ implant is appropriate. The correct size Implant Sizer Instrument should cover the opposing articular surfaces without any overhang while leaving a cortical rim of bone to support the implant.



After determining the appropriate size implant, prepare the opposing articular surfaces of each lateral TMT joint. Use a small round burr to create a pilot opening (use fluoroscopic confirmation as needed) in the opposing articular surfaces of each lateral TMT joint. Use a larger round burr to progressively burr the opposing articular surfaces to create a concave depression (cup).



Measure the prepared cup depths periodically during the burring process with the Implant Sizer Instrument. Turn the Implant Sizer Instrument 90° and insert it into the prepared cup to measure the cup's depth.

Trial

The appropriately sized Implant Sizer Instrument can be reinserted and rotated into position in the cups to insure clearance of the final implant. Use Fluoroscopic confirmation to assess correct positioning.

PyroSphere™ Implantation

Finger press the selected PyroSphere™ implant(s) into position by applying planer flexion to the metatarsal. Do not handle the PyroSphere™ with metal instruments. Use the supplied implant holder to insert the implant.

Reduce the joint and check for stability through various ranges of motion. Repair overlying soft tissues and apply a splint. A posterior splint with stirrups is suggested. Use flouroscopy to confirm implant position.

Post-Operative Care

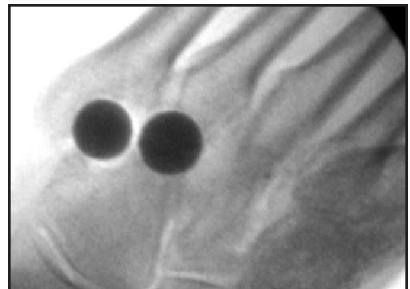
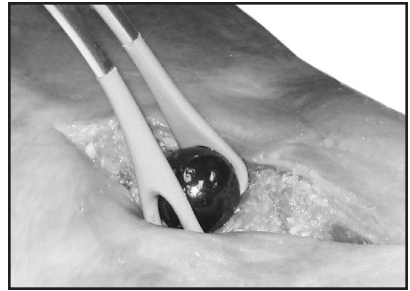
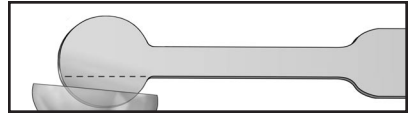
Post-operative protocol for isolated fourth or fifth tarsometatarsal arthroplasty:

2-14 days – Patient is immobilized and non-weight bearing.

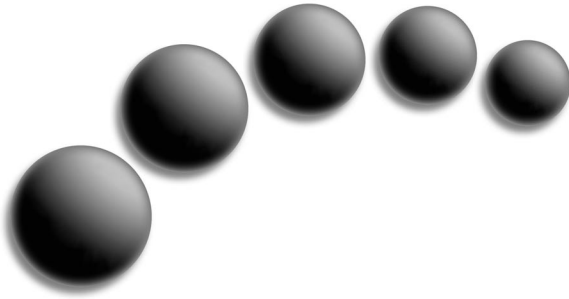
14 days – Patient may progress to full weight bearing using a removable walker boot.

6 weeks – Accommodative shoe with arch support is utilized.

Follow standard arthrodesis protocol if concomitant medial column arthrodesis is performed.



Ascension® PyroSphere™



Five sizes accommodate a range of patient anatomy

SIZE	CATALOG NUMBER
10	PCS-430-10
20	PCS-430-20
30	PCS-430-30
40	PCS-430-40
50	PCS-430-50

Easy-to-use Instrumentation

	CATALOG NUMBER
Instrument Set	INS-430-00



ASCENSION ORTHOPEDICS, INC.
8700 CAMERON ROAD, SUITE 100
AUSTIN, TEXAS 78754
512.836.5001 512.836.6933 fax
CUSTOMER SERVICE: 877.370.5001 (toll-free in U.S.)
customerservice@ascensionortho.com
www.ascensionortho.com

Caution: U.S. federal law restricts this device to sale by or on the order of a physician.

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