

Primary Trabecular Metal™ Knee

Brochure



ZIMMER BIOMET
Your progress. Our promise.®

Trabecular Metal Material

- 20 years of clinical results
- 350 peer reviewed papers, posters, and abstracts documenting its effectiveness in a variety of applications¹
- Well over 2 Million Trabecular Metal Material devices implanted

Trabecular Metal Material is a porous biomaterial made from elemental Tantalum with structural, functional, and physiological properties similar to cancellous bone.²⁻⁴

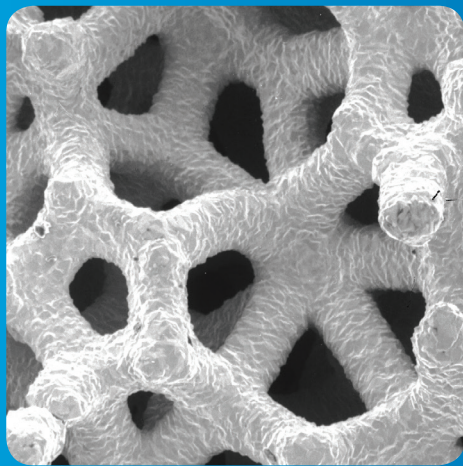
Made from Elemental Tantalum:

- Commercially pure
- Element 73
- Biocompatible⁵
- Corrosion resistant

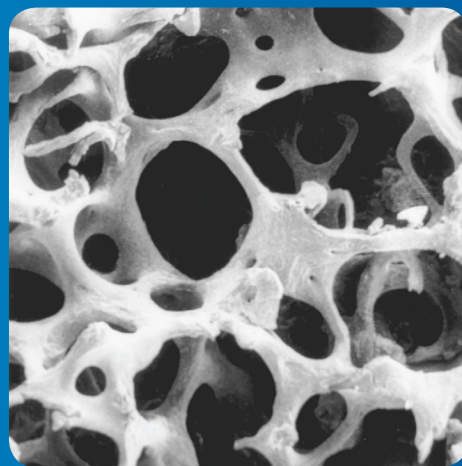
Trabecular structure up to 80 percent porous with a 100 percent open-interconnected cell structure designed to support bony in-growth and vascularization.⁴

- High coefficient of friction against bone. Coefficient of Friction = .98
- 440 micron average pore inner diameter for bone ingrowth and vascularization

Trabecular Metal Implants appear to maintain the tibial bone mineral density in a parallel fashion to the nonoperative limb and better than historical controls.⁶



Trabecular Metal Material



Human Bone Cell

Persona[®] TM Femur



- 2 mm increments
- Fits standard and narrow
- Designed for maximum porous coverage – 25% increase vs. NexGen Knee¹⁰

NexGen TM Patella

- Direct compression molded polyethylene
- No locking mechanism needed
- Polyethylene material with an excellent track record
- At seven years and 115 knees, no revisions for aseptic loosening were reported⁷

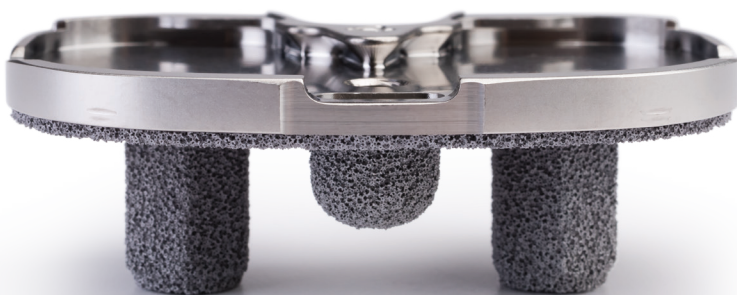


NexGen[®] TM Monoblock Tibia



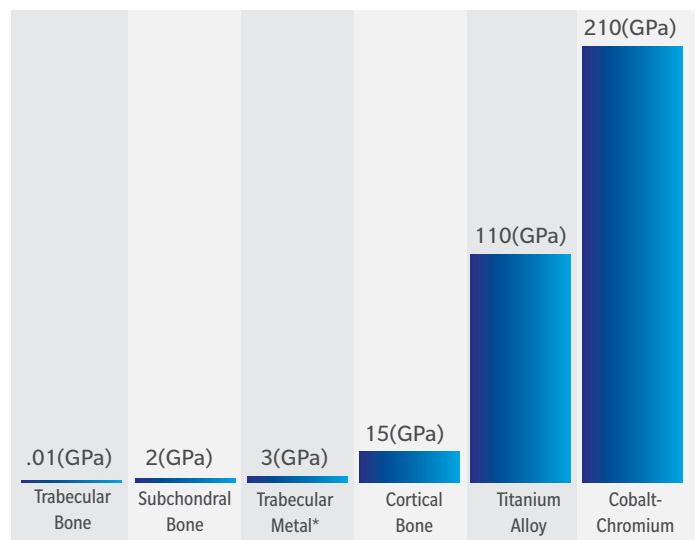
- Polyethylene direct compression molded interface eliminates potential for backside wear
- Modulus of Trabecular Metal/polyethylene construct similar to bone
- First implanted in June 1999....18 years!
- 100% survivorship at seven years postop with revision for aseptic loosening in 1143 knees⁸

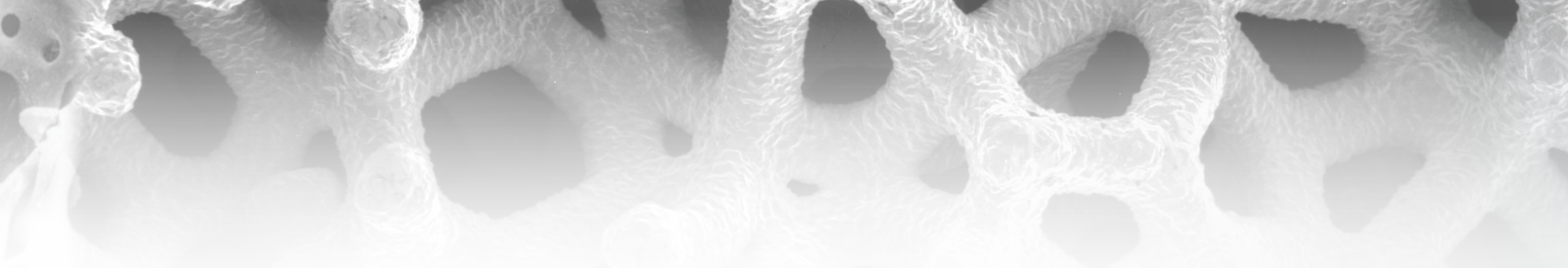
NexGen TM Modular Tibia



- Compatible with NexGen CR-Flex or LPS-Flex Fixed Bearings
- Conventional and Prolong[®] Polyethylene Bearings available
- First Implanted in 2007....10 years!
- 100% survivorship at two year follow-up for loosening on 47 patients⁹

Elastic Modulus (GPa)





Persona CR Femur



Persona PS Femur



Persona CR Femur



Persona PS Femur



NexGen CR
Monoblock Tibia



NexGen LPS
Monoblock Tibia



NexGen CR-Flex
Bearing



NexGen LPS-Flex
Bearing



NexGen Modular Tibia



NexGen TM Patella



Primary TM CR
Monoblock
Construct



Primary TM PS
Monoblock
Construct



Primary TM CR
Modular
Construct



Primary TM PS
Modular
Construct

References

1. Trabecular Metal Publications Matrix on file with Zimmer Biomet TM Regulatory 2017.
2. Bobyn, *et al.*, Characterization of a New Porous Tantalum Biomaterial for Reconstructive Orthopaedics. 66th Annual AAOS 1999.
3. Zhang, *et al.*, Interfacial Frictional Behavior: Cancellous Bone, Cortical Bone, and a Novel Porous Tantalum Biomaterial. *Journal of Musculoskeletal Research*. 3:4, 245-251, 1999.
4. Karageorgiou and Kaplan. Porosity of Biomaterial Scaffolds and Osteogenesis. *Biomaterials*. 26: 5474-91, 2005.
5. Black. Biological performance of tantalum. *Clin Mater*. 16:167-173, 1994.
6. Harrison, *et al.*, Evaluation of Tibial Bone Density Surrounding Tantalum Tibial Implants in TKA. *CORR* January 2010.
7. Kwong, *et al.* Cementless total knee replacement fixation. *JBJS*. 96-B:11; 2014.
8. Niemelainen, *et al.* Total Knee Arthroplasty with an Uncemented TM Tibial Component Registry-Based Analysis. *Journal of Arthroplasty*. 29: 57-60, 2014.
9. Fricka, *et al.* To Cement or Not? Two-Year Results of a Prospective, Randomized Study Comparing Cemented Vs. Cementless Total Knee Arthroplasty (TKA). *Journal of Arthroplasty*. 30:9, 2015.
10. Persona Design History File Z10011A on file at Zimmer Biomet.

*Applies to monolithic TM

All content herein is protected by copyright, trademarks and other intellectual property rights, as applicable, owned by or licensed to Zimmer Biomet or its affiliates unless otherwise indicated, and must not be redistributed, duplicated or disclosed, in whole or in part, without the express written consent of Zimmer Biomet. This material is intended for health care professionals. Distribution to any other recipient is prohibited. For product information, including indications, contraindications, warnings, precautions, potential adverse effects and patient counseling information, see the package insert and zimmerbiomet.com. Not for distribution in France.

Check for country product clearances and reference product specific instructions for use.

©2018 Zimmer Biomet



1577.1-GLBL-en-REV0118

Legal Manufacturer

Zimmer, Inc.
1800 West Center Street
Warsaw, Indiana 46580
USA

Zimmer Trabecular Metal
Technology, Inc.
10 Pomeroy Road
Parsippany, New Jersey 07054
USA

zimmerbiomet.com