

# Clinical Advantages of Trabecular Metal™ Technology Demonstrated In New Studies

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## Zimmer's Innovative Biomaterial Benefits Patients of Total Knee Replacement

SAN DIEGO, Feb. 17, 2011 /PRNewswire/ -- Zimmer Holdings, Inc. (NYSE: ZMH; SIX: ZMH), a leader in musculoskeletal care, today announced that results from two clinical studies reinforce the clinical advantages of the Company's proprietary *Trabecular Metal*™ Technology. The studies, conducted by researchers at Osaka City University in Osaka, Japan, continued investigations into the osteoconductive properties of *Trabecular Metal* Material in total knee arthroplasty.

It is well established that a decrease in bone density may compromise the long-term success of primary total knee replacements and may increase the difficulty and expense of revision reconstruction. Stress-shielding can also exacerbate patients' osteolytic response to bearing surface particles, potentially further reducing bone density and quality around the implant.

Published in *The Journal of Bone & Joint Surgery (JBJS)* and *The Journal of Arthroplasty (JOA)*, the studies found significant reductions in bone loss adjacent to *NexGen*® LPS-Flex monoblock knee implants made with Zimmer's *Trabecular Metal* Technology compared to cemented cobalt-chromium tibial components. The studies also noted a significant relative increase in bone mineral density (BMD) after total knee arthroplasty in patients with *Trabecular Metal NexGen* LPS-Flex monoblock knee implants.

"Clinical studies over the last decade continue to report ongoing impressive results for *Trabecular Metal* monoblock technology, and quantitative CT studies have shown bone preservation and prevention of stress shielding around certain *Trabecular Metal* monoblock implant designs," said Jeff McCaulley, President, Zimmer Reconstructive. "These new studies offer insight into the long-term impact of porous *Trabecular Metal* Material with the *NexGen* LPS-Flex system in maintaining bone quality while providing fixation for the long term."

*Trabecular Metal* Material is a structural biomaterial whose cellular architecture resembles cancellous bone and approximates its physical and structural properties more closely than other prosthetic

materials. The unique, highly porous trabecular architecture supports more normal bone formation and bone in-growth, which has the potential to lead to decreased stress-shielding.

For more information about *Trabecular Metal* Technology and the clinical study results, visit the Zimmer booth at the 2011 AAOS annual meeting, or go to [www.zimmer.com](http://www.zimmer.com).

## **About the Company**

Founded in 1927 and headquartered in Warsaw, Indiana, Zimmer designs, develops, manufactures and markets orthopaedic reconstructive, spinal and trauma devices, dental implants, and related surgical products. Zimmer has operations in more than 25 countries around the world and sells products in more than 100 countries. Zimmer's 2010 sales were approximately \$4.2 billion. The Company is supported by the efforts of more than 8,000 employees worldwide.

## **Zimmer Safe Harbor Statement**

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