

## Accepted Manuscript

Improving stress shielding following total hip arthroplasty by using a femoral stem made of  $\beta$  type Ti-33.6Nb-4Sn with a Young's modulus gradation

Go Yamako, Dennis Janssen, Shuji Hanada, Thomas Anijs, Kiyohide Ochiai, Koji Totoribe, Etsuo Chosa, Nico Verdonshot

PII: S0021-9290(17)30429-3

DOI: <http://dx.doi.org/10.1016/j.jbiomech.2017.08.017>

Reference: BM 8343

To appear in: *Journal of Biomechanics*

Accepted Date: 14 August 2017



Please cite this article as: G. Yamako, D. Janssen, S. Hanada, T. Anijs, K. Ochiai, K. Totoribe, E. Chosa, N. Verdonshot, Improving stress shielding following total hip arthroplasty by using a femoral stem made of  $\beta$  type Ti-33.6Nb-4Sn with a Young's modulus gradation, *Journal of Biomechanics* (2017), doi: <http://dx.doi.org/10.1016/j.jbiomech.2017.08.017>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Original Article

**Improving stress shielding following total hip arthroplasty by using a femoral stem  
made of  $\beta$  type Ti-33.6Nb-4Sn with a Young's modulus gradation**

Go Yamako <sup>1\*</sup>, Dennis Janssen <sup>2</sup>, Shuji Hanada <sup>3</sup>, Thomas Anijs <sup>2</sup>, Kiyohide Ochiai <sup>4</sup>, Koji Totoribe, Etsuo Chosa <sup>5</sup>, Nico Verdonschot <sup>2,6</sup>

1. Organization for Promotion of Tenure Track, University of Miyazaki, Miyazaki, Japan
2. Radboud University Medical Center, Radboud Institute for Health Sciences, Nijmegen, The Netherlands
3. Institute for Materials Research, Tohoku University, Sendai, Japan
4. Mizuho Corporation, Tokyo, Japan
5. Department of Medicine of Sensory and Motor Organs, Division of Orthopedic Surgery, Faculty of Medicine, University of Miyazaki, Miyazaki, Japan
6. University of Twente, Laboratory for Biomechanical Engineering, Faculty of Engineering Technology, Enschede, The Netherlands

**\*Corresponding Author:** Go Yamako, PhD

Organization for Promotion of Tenure Track, University of Miyazaki

1-1 Gakuen Kibana-dai-Nishi, Miyazaki, 889-2192, Japan

Tel/Fax: +81-985-58-7332

E-mail address: g.yamako@cc.miyazaki-u.ac.jp

Word count: 3996 words

Download English Version:

<https://daneshyari.com/en/article/7237162>

Download Persian Version:

<https://daneshyari.com/article/7237162>

[Daneshyari.com](https://daneshyari.com)