For cementless total hip arthroplasty (THA), can be performed using a large variety of femoral components with a large variety of designs have been developed. The Anatomic Fiber Metal plus stem (Zimmer) is one of the an anatomically designed femoral components that can be inserted-implanted without cement. The concept of this stem was designed to achieve stable fixation through metaphyseal fit and fill. It has a configuration matching that of the medullary canal of a normal femur, and circumferential the circumference of its fiber mesh coating on the proximal one-third is coated with fiber mesh. The neck of the stem has an anteversion of twelve degrees. The press-fit and outcomes of THA performed using a press-fit femoral this stem were reported to be good for the primary osteoarthritis in selected Caucasian patients. However, there were a few reports are available on the outcomes of this stem in Japanese patients. Since the majority of the most Japanese patients with hips with hip osteoarthritis are dysplastic hips in Japanese patients. Therefore, the outcomes results of this procedure in Japanese patients might be different from those in Caucasian patients.

Therefore, we studied the outcomes of cementless total hip arthroplasty (THA) performed using the Anatomic Fiber Metal plus stem in Japanese patients and examined the possible effects of metaphyseal fit on the outcomes.

Source: Fixation of An Anatomically Designed Cementless Stem in Total Hip Arthroplasty by Shigeru Nakamura, Noriyuki Arai, Takateru Kobayashi, and Takashi Matsushita, used under CC-BY