

Executive Summary

Publication	Innovation in total knee arthroplasty. Fully ceramic components without metal. (in German) Klemens Trieb, MD, sen. prof. JATROS Orthopädie & Traumatologie, 24 March 2016 https://ch.universimed.com/fachthemen/6918 (online access)
Study	-
Implant	BPK-S Integration Ceramic (PETER BREHM GmbH; BIOLOX® delta ceramic, CeramTec GmbH)
Patients	-
Follow-up	-
Methods	The review article provides an overview of initial study results with the completely metal-free fully ceramic knee system. It discusses basic design features and presents the preliminary 1-year results of two prospective studies.
Results	Short-term study results show no radiologic signs of loosening, osteolysis, or implant loosening. No implant-related complications occurred. The ceramic knee system exhibits excellent biologic behavior. Any risk of release of metal ions is eliminated, and pathologic reactions are not to be expected. The ceramic knee system has proven reliable in clinical practice over the short term.
Key Points	The only one of its kind in the world, the innovative ceramic knee implant system is an integral part of the BPK-S Integration knee family (from resurfacing implants to a total hinged knee). The ceramic knee system is the anti-allergy addition to the proven BPK-S Integration primary knee system, a logical and well thought out modular system that includes a comprehensive range of revision implants. The design and geometry of the ceramic knee system are identical to those of the cobalt-chrome knee system of the BPK-S Integration family. The identical surgical technique as used with the cobalt-chrome system ensures reliable and precise implantation. Even in the case of special indications, such as metal allergy, the surgical procedures remain unchanged so that the time and cost of surgery are less than with custom solutions. According to the author, the ceramic knee system should also be considered for patients requiring a two-stage septic implant replacement who have been treated

	with a temporary cement spacer. Studies have shown that the bone cement can result in particulate wear from zirconium dioxide (radiologic contrast agent). Even intensive lavage is unable to reliably remove this contamination of the knee joint. The hard particles can lead to third body wear that will reduce the longevity of the implant. The wear characteristics of ceramics make the material resistant to third body wear.
--	--