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## **Long term survival of Trabecular Metal Cones (TMC) for TKA revisions with severe bony defects**

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**Background** During revision TKA with severe bony defects cones and sleeves are commonly used but long-term data are rare. Aim of this study is to present the 9-year survival analysis after implantation of TMC during revision TKA in a tertiary referral centre.

**Materials and Methods** 80 consecutive patients (44 female, average age 65,3 years) who underwent revision TKA surgery with 113 TMC (TMT©, Zimmer, USA) for tibia and/or femur were included in this retrospective study. The reasons for revision surgery were 64 (80%) aseptic and 16 (20%) septic failures. At the time of revision all knees showed large bony defects AORI Type 2a (18%), 2b (36%) and 3 (46%). Peri- and post OP complications, re-operations and re-revisions as well as pre- and post OP clinical outcome (ROM, KSS, VAS, WOMAC) were documented. Any loosening or osteolysis of the TMC were evaluated according to a modified Knee-Society Radiographic Evaluation system.

**Results** After an average FU of 6.1 years (5-9) all implanted TMC (n=113) except of two, showed no radiographic signs of loosening or osteolysis and were clinical stable. There were 2 (2.5%) periop. complications with wound healing problems and 11 (14%) post-operative complications including deep infections (n=4), periprosthetic fracture (n=2), aseptic loosening of components without TMC (n=2), instability (n=2) und one hinge dislocation (n=1). There were 5 reoperations and 8 re-revisions including 1 arthrodesis and 1 amputation. In 4 cases the well osteointegrated TMC had to be removed. The estimated 9-year Kaplan Meier survival rate for aseptic loosening was 95 %. All clinical parameters showed significant ( $p < 0,001$ ) improvement from pre- to post OP.

**Conclusions** In this study TMC showed an excellent metaphyseal fixation combined with hybrid stems for severe bony defects during revision TKA. The stable fixation could also be confirmed after an average of 6-year FU with a 9-year survival rate of 95 %.