

## **Complication in prosthetic reconstructions with Mutars modular prostheses: the experience of two Centers.**

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**Background:** Modular tumor prostheses are well established today for the reconstruction after resection of malignant bone tumors. Although the complication rate is constantly decreasing, the need for revision surgery is still significantly higher than in primary joint arthroplasty.

**Purpose:** Evaluate the experience of two Institutions on Mutars prostheses for bone tumors to assess the incidence and mode of failures.

**Methods:** Between 2000 and 2015, 143 Mutars modular tumor prostheses were implanted: 49 upper limb and 94 lower limb reconstructions, 111 primary implants and 32 revision implants. Causes of endoprosthetic failure were classified according to Henderson et al. in 5 types. Functional results and implant survival were analyzed.

**Results:** At last follow up, 72.7% of patients (104/143) had retained their implant. The overall failure rate was 27.3% (39/143): 5 Type 1 failures, 7 Type 2 failures, 3 Type 3 failures, 13 Type 4 and 11 Type 5 failures. The overall implant survival to all five types of failure was 63% and 43% at 5 and 10 years but considering only the major cause of failure (as reported in most paper in the literature) the overall implant survival was 75% at 5 years and 51% at 10 years. There is no difference in implant survival to infection between standard and silver-coated prostheses. About functional results, mean MSTS score was 24.3.

**Conclusion:** The overall implant survival at long term and functional results were satisfactory. The most common cause of failure was infection. Silver coated prostheses seems not significantly prevent infection