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# Periprosthetic joint infection after tumor endoprosthesis reconstruction 

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Introduction: In the last decades limb-saving surgery with prosthesis reconstruction has become the dominating treatment in musculoskeletal tumor surgery. Despite the excellent life quality and functional results, periprosthetic joint infection remains a devastating complication.
The aim of our study was to analyze the results of our treatment of infection after tumor prosthesis implantation.
Material and Method: Between 2004 and 2014 twenty-six patients were treated in our department because of septic complication after tumor prosthesis implantation. In 6 cases the humerus, in 14 cases the femur and in 6 patients the tibia was affected. The average size of the resected bone was 10 cm , the most common tumor type was osteosarcoma (10 cases) followed by chondrosarcoma (7 cases) and Ewing sarcoma (2 cases). Average age of the patients was 38 years, the follow-up time was 60 months. Average time between primary surgery and the onset of the septic complication was 12 months. The infection was treated by one or two-stage revision in 19 cases, in 5 cases debridement was performed. 3 patients had amputation due to uncontrolled infection.
Results: Nineteen patients were free of any sign of infection at the time of the follow-up. Three patients had ongoing periprosthetic infection, while 4 patients died by the time of the follow-up. No significant correlation was observed between the outcome of the septic complication and the type of treatment, the type of infective organism, the time span between primary surgery and the onset of the infection, the site or size of the tumor. Conclusion: Based on our study, no special risk factor could be identified for periprosthetic joint infection after tumor prosthesis reconstruction. Regardless of the examined factors, the risk for septic complication and the recurrence of infection is higher after tumor prosthesis implantation than in osteoarthritic cases.

