

## LONG-TERM FOLLOW-UP IN TUMORAL ARTHROPLASTY

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G. Iacobescu<sup>1,2</sup>, R. Ene<sup>1,2</sup>, A. Cursaru<sup>1,2</sup>, D. Anghelescu<sup>1</sup>, C. Cîrstoiu<sup>1,2</sup>

<sup>1</sup>University Emergency Hospital, Bucharest, Romania

<sup>2</sup>"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

**Introduction.** Efficient management of a segmental resection or major osteolysis in the distal femur secondary to a tumor formation remains a controversial problem. Available options include the use of a modular or customized megaprosthesis implant. Modularity allows versatility for reconstruction and avoids the delay required to make a customized implant.

**Hypothesis and type of study.** Performing a clinical and radiological retrospective study that aims to evaluate long-term efficiency in the use of megaprotheses in segmental distal femur resections. Elaboration of patient selection criteria for modular prosthesis.

**Materials and methods.** We followed retrospectively 33 patients for 5 years from the time of the first surgery.

We evaluated the implant stability, the late complications rate, and the long-term functional recovery of patients with distal femoral tumors who underwent segmental resections and subsequently reconstructive arthroplasty.

**Results.** Thirty of the 33 patients maintained a mobile knee joint. An intermediate staging was performed at 30 months, which determined tumor recurrence in 2 patients, aseptic degradation of the components in 3 of them, and septic degradation in two of the evaluated cases. Because a tumoral recurrence occurred on the 45<sup>th</sup> month, the need for amputation of the prosthetic limb was imposed. The degradation of the polyethylene component (in 5 cases) was observed in the 5-year assessment.

The functional results were excellent with the Musculoskeletal Tumor Society Score of 88% and a Toronto Extremity Severity Scale Score of 94%.

**Conclusions.** Patients with distal femoral bone tumors undergoing modular reconstruction prosthetic arthroplasty have excellent functional results with retaining the affected limb and knee mobility. There was a close correlation between correctly applying the selection criteria for patients undergoing prosthesis intervention and functional recovery results.

**Keywords:** megaprotheses, distal femoral tumor, reconstructive arthroplasty