

**FC-071****Saving an extensor mechanism reconstruction after proximal tibia resection**M. Gallo¹, M. Di Salvatore¹, G. Balato², G. Colella², **F. Fazioli**¹¹ *National Institute of Cancer G. Pascale, Naples, Italy*² *Federico II University of Naples, Naples, Italy*

Introduction: The limb salvage surgery in bone tumors of the proximal tibia has encouraged the development of megaprotheses and osteochondral allograft that are used to preserve joint movement.

Despite numerous surgical options have been proposed, the reconstruction of extensor mechanism represent a challenge for the surgeon because of the poor functional outcome mostly related to unreliable surgical options. We describe a modified technique that saving the continuity of the extensor apparatus indicated for patients in which the lesion does not involve the anterior cortex of the tibia. The approach involves an appropriate oncologic resection, removing the whole proximal tibia, including the metaphyseal area, saving anterior tibial splint that includes the insertion of the patellar pretibial ligament. The loss of substance is replaced by the implant of a Stanmore hinged prosthesis. the patellar ligament is reattachment to the tibial tuberosity, and the repair is protected with a cerclage wire.

Methods: We retrospectively reviewed 8 patients (4 Male, 4 Female) with high- grade primary malignant tumours who underwent this procedure from 2012 to 2013. The mean age of the patients was 30 years (17 to 38). The mean follow-up was 1 years.

Results: Active knee extension was obtained in all patients, with an extensor lag of 0° to 15°. MSTs-ISOLS scores ranged from 67% to 90%. This technique resulted in good quadriceps function and a low incidence of complications, no patients had patellar ligament avulsion or deep infection.

Conclusions: Our experience confirms the ability of this procedure to provides good functional outcome. This may related to allows us to maintain the continuity of the extensor apparatus at its distal attachment, which is the most critical issue in extensor apparatus reconstruction.