

**PP-017****Prosthetic reconstruction of distal humerus after bone tumor resection: oncological and functional outcome****A. Daolio Primo**¹, D. Campanacci², R. Capanna², G. Scoccianti², F. Muratori², M.S. Bartoli¹, S. Bastoni¹¹ *G. Pini, Milano, Italy*² *CTO, Firenze, Italy*

Introduction: Distal humerus is an uncommon site for primary bone tumours or metastatic disease. Surgical options for reconstruction after bone resection are limited. Alongside with oncological adequacy of resection, it is capital to maintain the best possible function of elbow.

Methods: Retrospective review of prospectively collected databases in two Italian referral centres (Milan and Florence) for collection of clinical, oncological and surgical data; update of clinical follow-up for functional assessment. We included in this study 53 patients (19 males, 34 females; mean age 49); 43 underwent distal humeral replacement and 10 total humeral replacement, 18 for primary sarcoma, 29 for bone metastasis and 6 for degenerative disease/failure of other reconstruction. Mean follow-up duration was 62 months (range 12-247); we considered patients at a minimum follow-up of 12 months.

Results: For oncological patients, we considered local recurrence rate and prostheses that required surgical revision for aseptic loosening (5), for infection (1), or for neurological problem (1). Nerve palsy occurred postoperatively in 10 patients. The mean MSTS score was 26/35 (range 8-35), and the mean MEPS score was 82 (range 50-100).

Conclusion: Tumour prostheses provide a reliable reconstruction for bone defects at the distal end of humerus, with good to excellent preservation or restoration of function. As nerve preservation is crucial in order to obtain a functional limb, careful patients selection is vital with respect to local recurrence risk.