

**PP-158****Proximal humerus reconstruction after tumor resection comparative analysis of different types of implants****I. Mikailov**, P. Zasulskiy, P. Grigorev*Vreden Russian Research Institute of Traumatology and Orthopedics, St.Petersburg, Russia*

**Introduction:** Ablative surgery for tumors of the proximal humerus has a special place in oncology and orthopedics. Currently, surgery is the leading method of treatment, aimed at preserving not only the life of the patient, but also the recovery of limb function. This method allows us to extend and improve the quality of life while maintaining a satisfactory limb function.

**Purpose:** The purpose of the study was to evaluate the results of surgical reconstructions of the proximal humerus after transarticular tumor resection, compare the functional results with the results of arthroplasty of the shoulder joint in patients with extensive damage of the proximal humerus not tumor genesis.

**Material and methods:** Between 2001 and 2013, 38 proximal humeral reconstructions using unipolar endoprostheses - 26 (68%), and modular systems with inverse head -12 (32%) were performed in our clinic. The age of patients ranged from 15 to 71 years ( $38,5 \pm 3.34$ ). Male 10 (26.3%) female 28 (73.7%). (F:M = 3:1).

**Nosology:** Chondrosarcomas 5 (13.2%), GCT 10 (26.3%), osteosarcomas 3 (7.9%), Ewing's sarcoma 1 (2.6%), plasmacytoma 1 (2.6%), lymphoma of bone 1 (2.6%), hemangiendotelioma 1 (2.6%), bone metastases 10 (26.3%); benign tumors 6 (15,8%). The control group was formed from 46 patients with extensive lesions of the proximal humerus non-neoplastic genesis, operated in our clinic in the period from 2006 to 2012. The functional outcome of treatment was assessed using Musculoskeletal Tumour Society (MSTS) and NEER functional scores. Term follow-up of patients ranged from six months to seven years. Assessment of functional results was carried out in a period from six months to three years.

**The Results of the Study:** According to the results of our research in the study group, the value of functional outcome MSTS score was 87.6% using reverse prosthesis, and 67.7% when using the single-pole implants, average 77.7%. Unipolar prosthesis showed bad results, both in the control (61,3% MSTS, 60,7 NEER), and in the main (67,7% MSTS, 61,1 NEER) study groups.

**Conclusion:** We believe that today, the method of choice, for these patients is the modular shoulder prosthesis with inverse head in combination with additional means of fixation of soft tissue.