

**FC-073****Polypropylene mesh use in orthopaedic oncologic reconstruction**H. Ozger¹, **B. Alpan**², M. Sungur², L. Eralp¹, N. Valiyev²¹ *Istanbul Faculty of Medicine, Istanbul University, Istanbul, Turkey*² *Acibadem Maslak Hospital, Istanbul, Turkey*

Soft tissue reconstruction following musculoskeletal tumor resection presents challenges in terms of anatomical and functional integrity. Polypropylene mesh is the gold standard in surgical repair of abdominal wall hernia, however it can also be used in a wide variety of conventional and unconventional settings in orthopedic oncologic reconstruction.

Review of our orthopedic oncology registry yielded 128 patients who underwent surgical treatment involving polypropylene mesh between 1990-2014. Twenty-three patients were excluded from outcome analysis due to insufficient follow-up. The mean age of the patient population was 34,0 (9 -73) years and the mean follow-up was 23 (1-122) months. Eighty-six patients underwent surgery for primary or recurrent sarcoma, 10 patients for bone metastasis of carcinoma, 4 patients for chordoma, 3 for desmoid tumor, 1 for multiple myeloma, 1 for revision of tumor prosthesis, 1 for insufficiency of biological reconstruction and 1 for pre-radiotherapy spacer insertion. Polypropylene mesh was used in 39 lower extremity, 30 shoulder, 29 pelvis and 10 thoracoabdominal wall reconstructive procedures. When categorized according to purpose of use, polypropylene mesh was used to provide anchorage for muscle and/or tendons in 59 patients, shoulder and hip capsule reconstruction in 42, thoracoabdominal wall hernia prevention in 14, acetabular joint surface reconstruction in 2, femoral diaphyseal bone reconstruction in 1 and diaphragm reconstruction in 1 patient.

Wound problem, which was observed in 18 (17%) patients, was the most common complication with possible link to mesh use. Twelve (11%) of these 18 patients also developed deep infection. Ten (83%) out of 12 patients with deep infection were patients who underwent pelvic tumor resection and were therefore naturally more inclined to develop wound problems. Eight (66%) out of 12 patients with deep infection were successfully treated with intravenous antibiotic, debridement and negative pressure wound treatment. One patient with articular surface reconstruction showed degenerative changes. One patient with cortical reinforcement showed solid union. No symptomatic joint dislocation or herniation was observed.

We conclude that polypropylene mesh is a mechanically and biologically reliable reconstructive tool in orthopedic oncology with a wide scope of usage depending on surgeon's creativity.