



EFFICIENCY OF TREATMENT METHODS FOR BONE CYSTS OF THE HUMERUS IN PEDIATRIC PATIENTS

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INTRODUCTION

Aneurysmal and unicameral bone cysts (ABC and UBC) are non-cancerous bone tumors. 75% occurs in first two decades of life. Mostly discovered after pathological fracture. ABC:UBC=1:1 (~0.3/100,000). Treatment is contraversial. The most sugeries methods do not provide the quality of life return and full healing. Non-vascularized fibula allograft can be used for restoration of the humerus after wide cyst resection, healed 4-6 months.

AIM OF THE STUDY

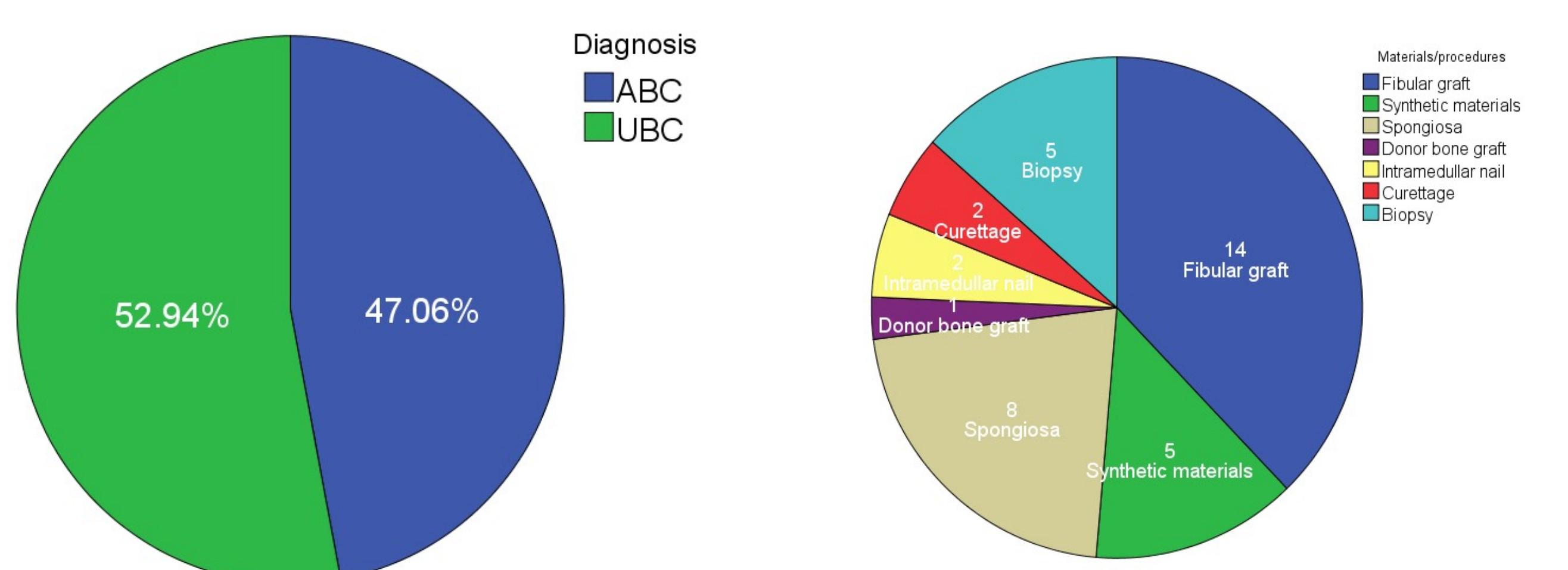
To compare: efficiency of the different treatment methods for bone cysts of the humerus in pediatric patients; bone structure of the humerus of the same patients' healthy and surgically treated hand by clinical, X-ray and MRI findings.

METHODS

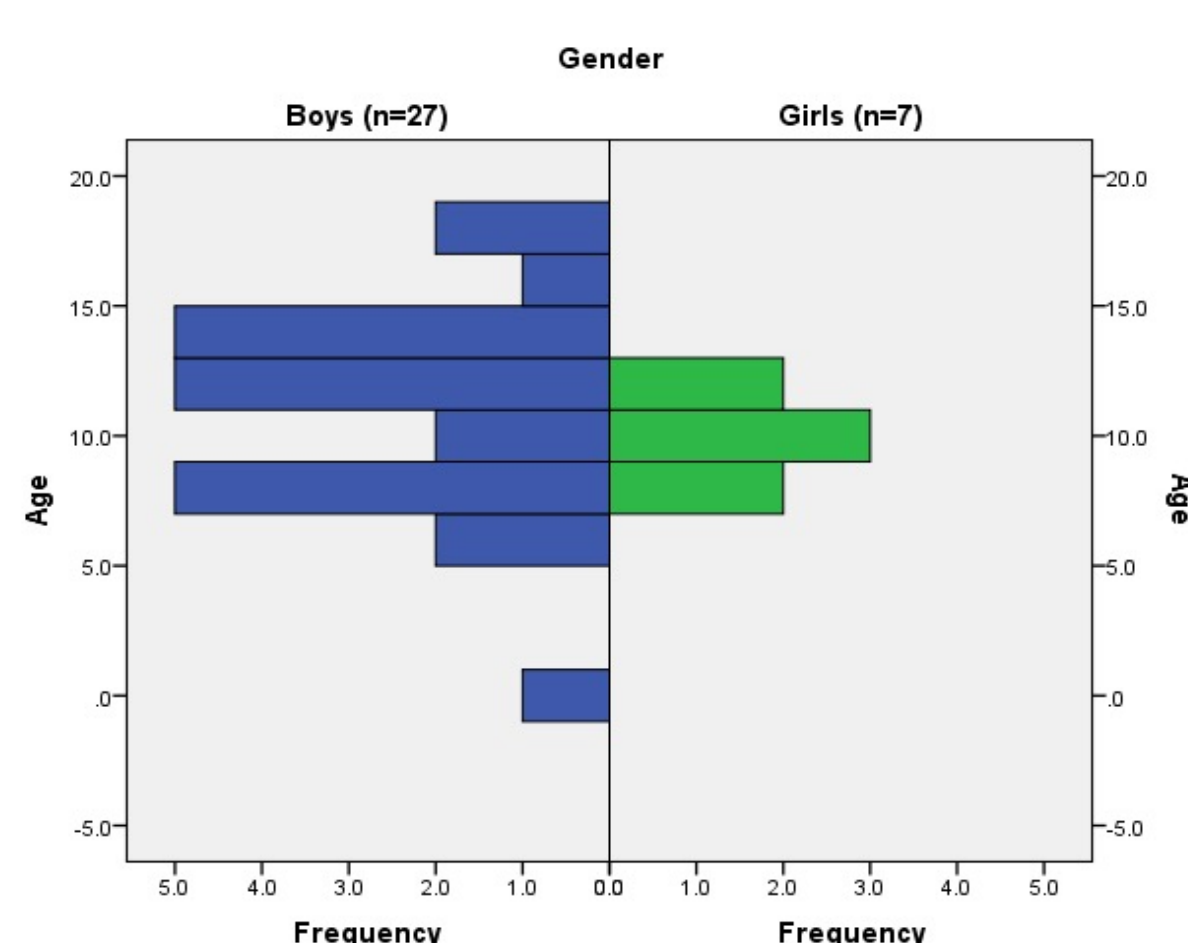
Single center retrospective study. 34 patients with ABC or UBC, yr 2000-2014. Mean age -10.24 (SD 0.54) yrs. Mean follow-up - 7.56 yrs (SD 4.75). 13 patients' clinical exam., X-rays, MRI were performed.

RESULTS

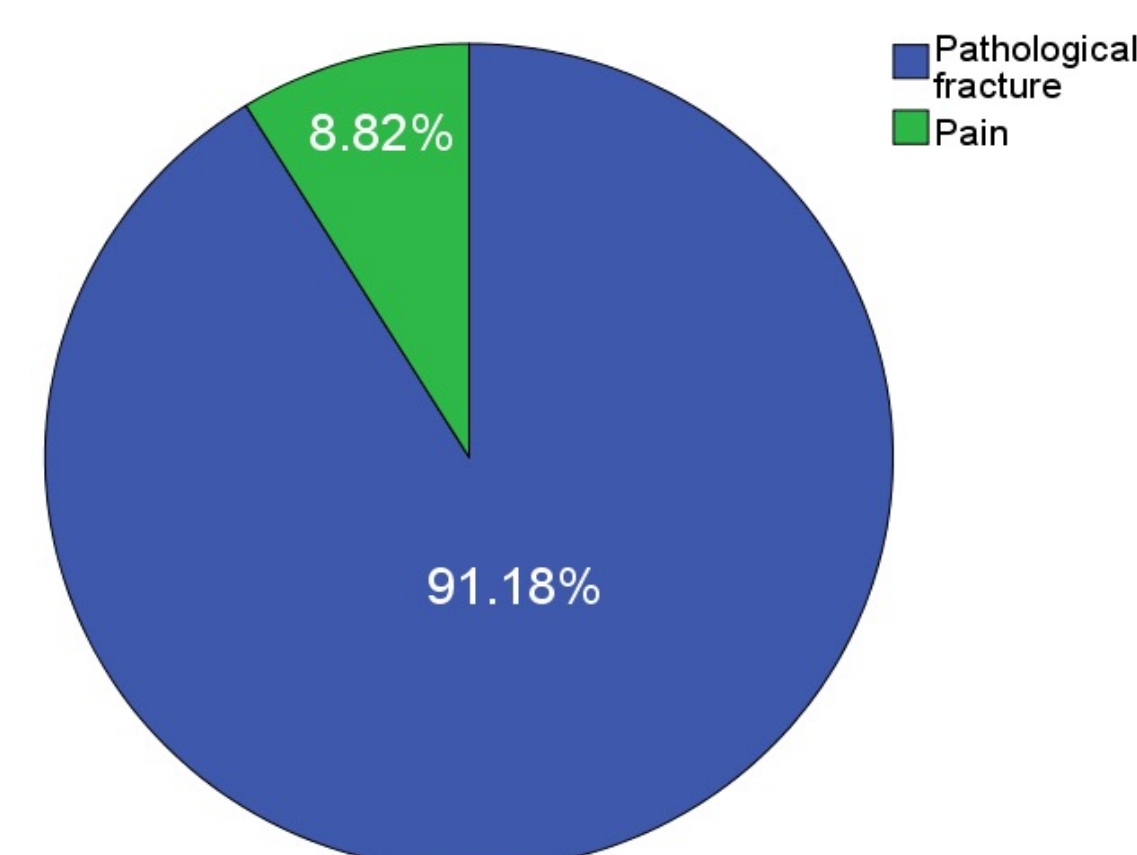
1 pic. Diagnoses and procedures (n=34)



2 pic. Age and gender

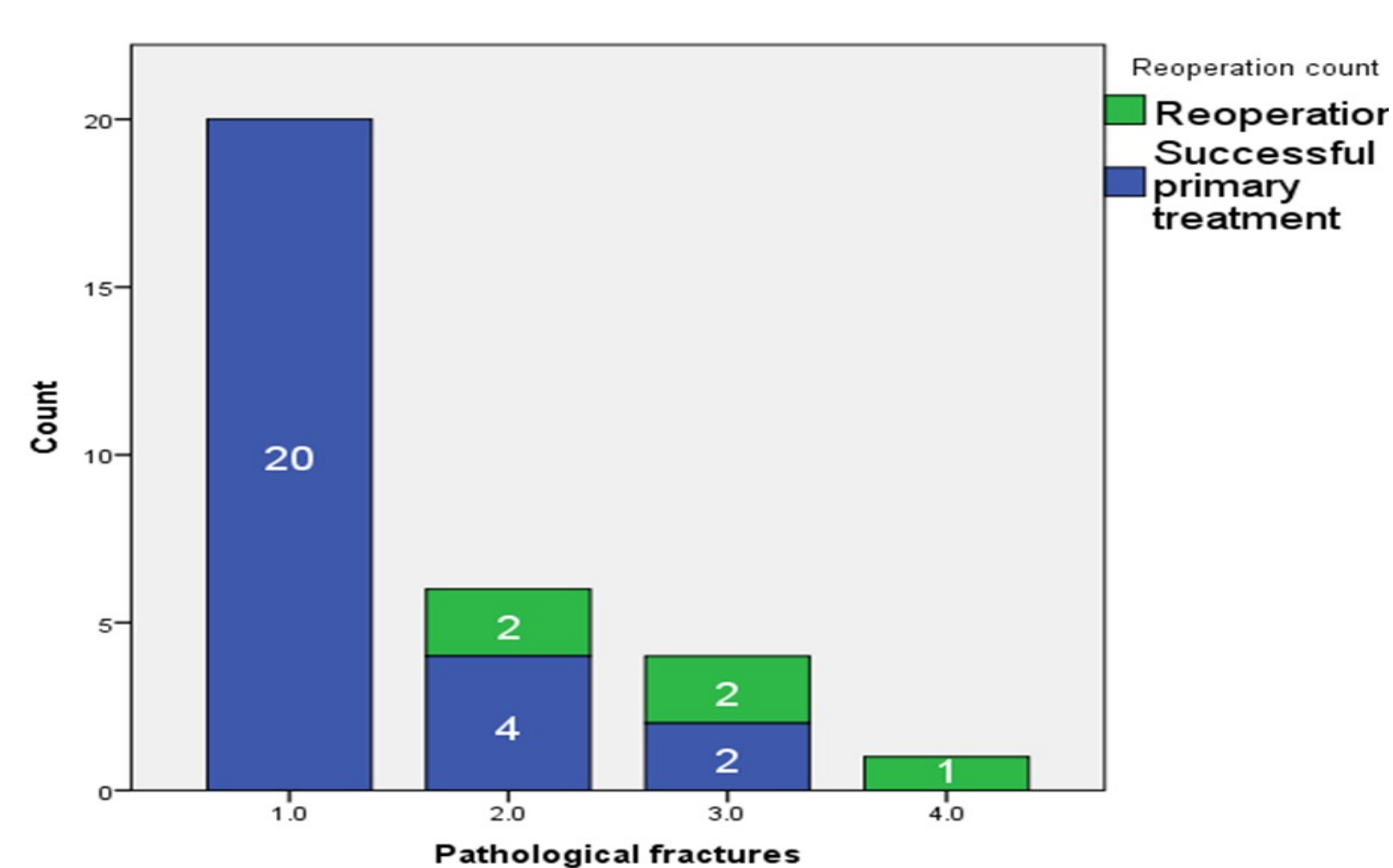


3 pic. Circumstances of diagnosis (n=34)



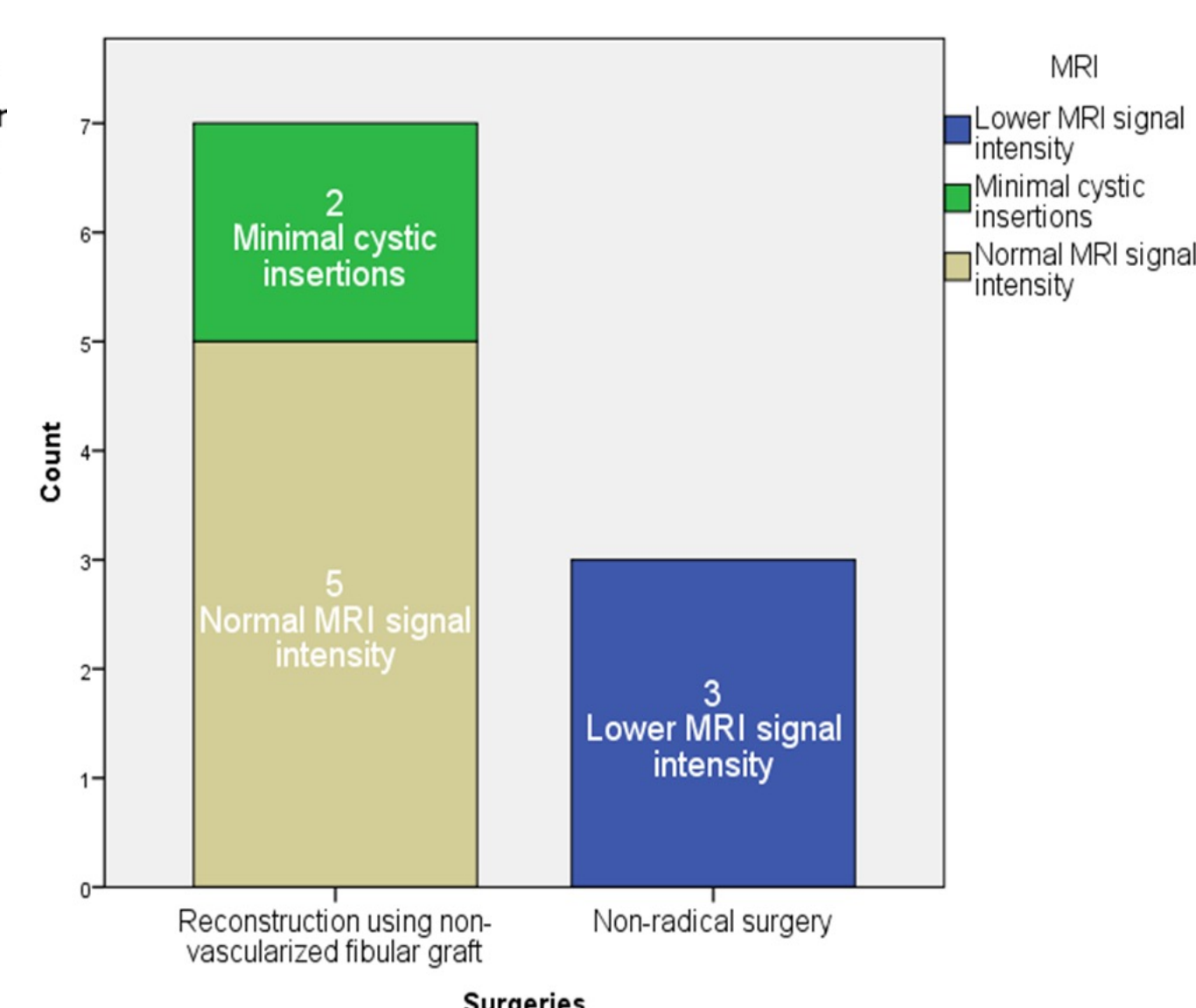
P>0.005

4 pic. Reoperation count and pathological fractures (n=31)

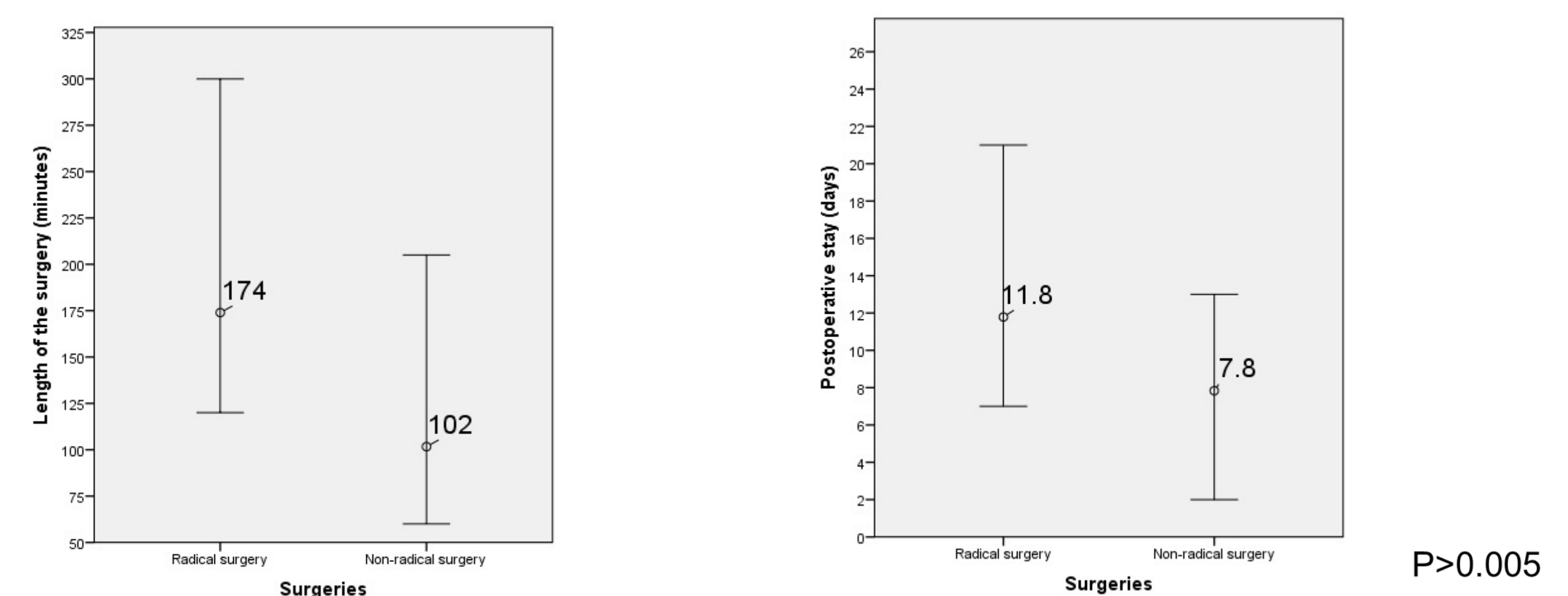


* p=0,002

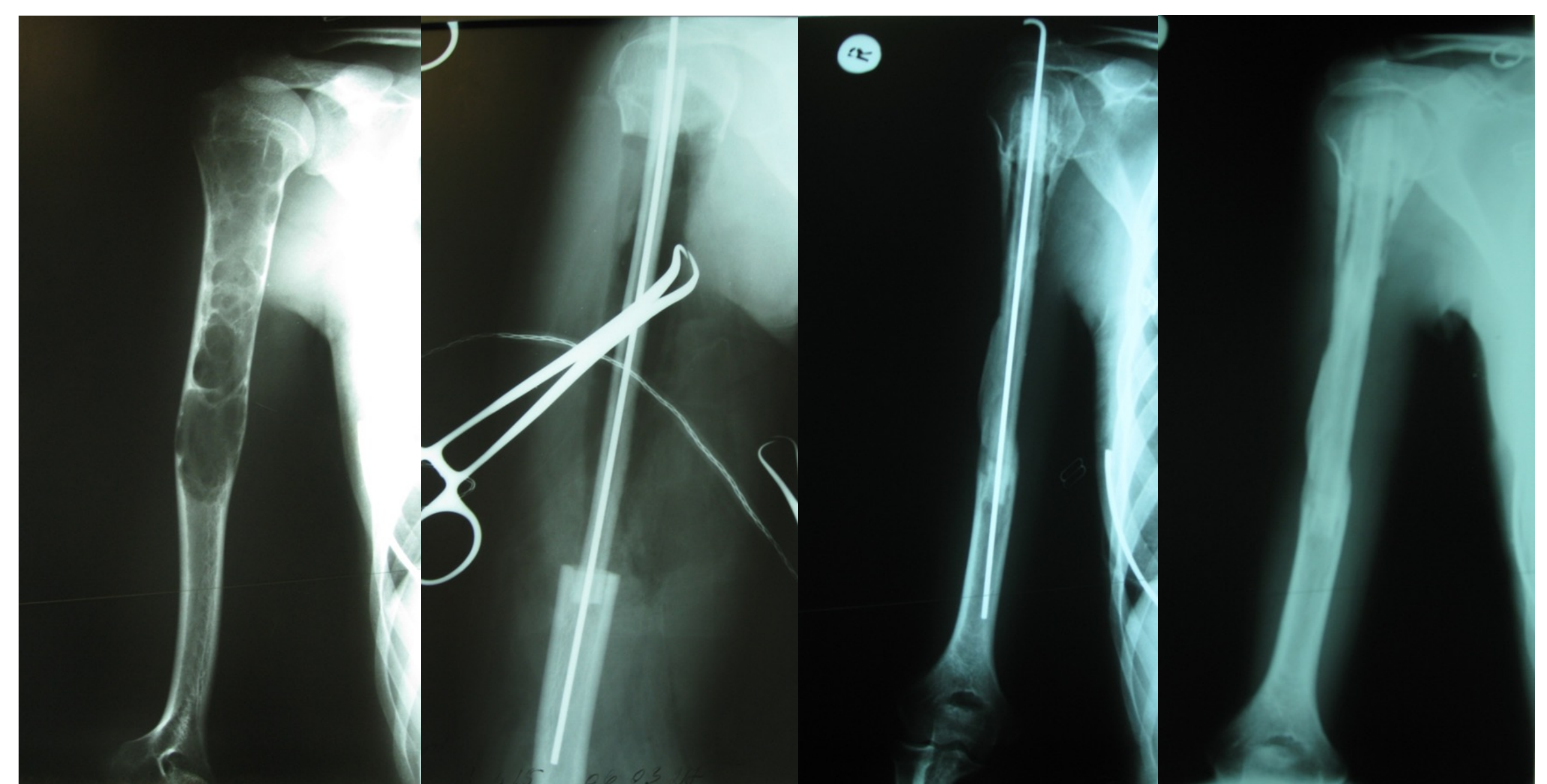
5 pic. MRI findings (n=10)



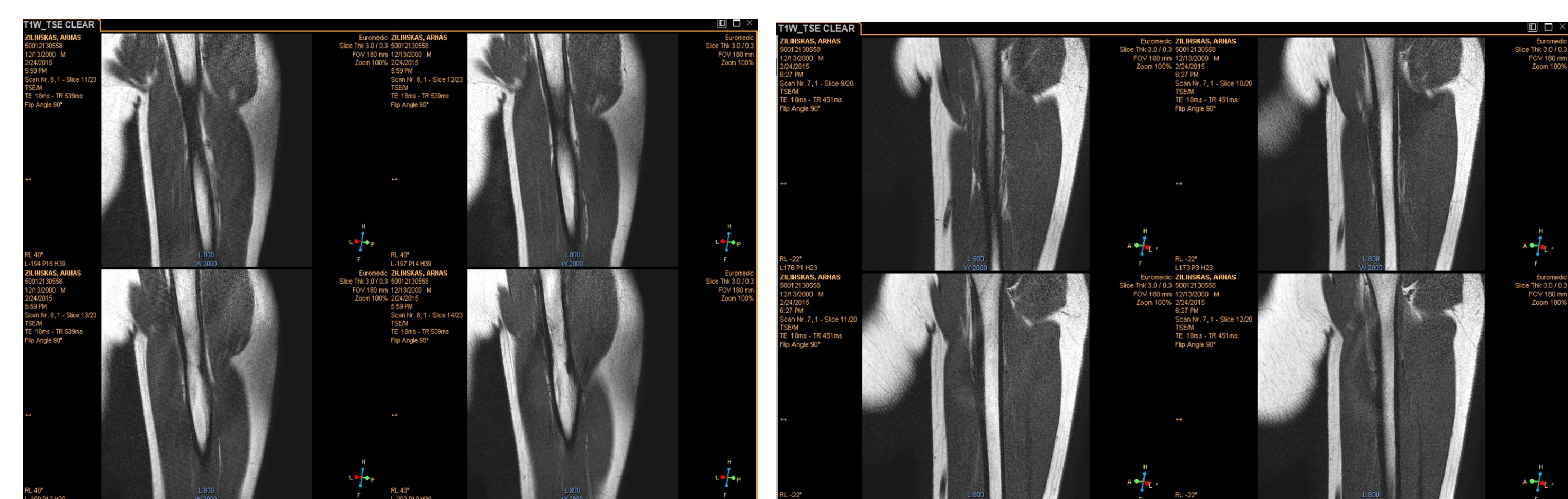
6 pic. Mean time of radical and non-radical surgeries (2h 53 min VS 1h 41 min) and postop. stay (12 VS 8 d.)



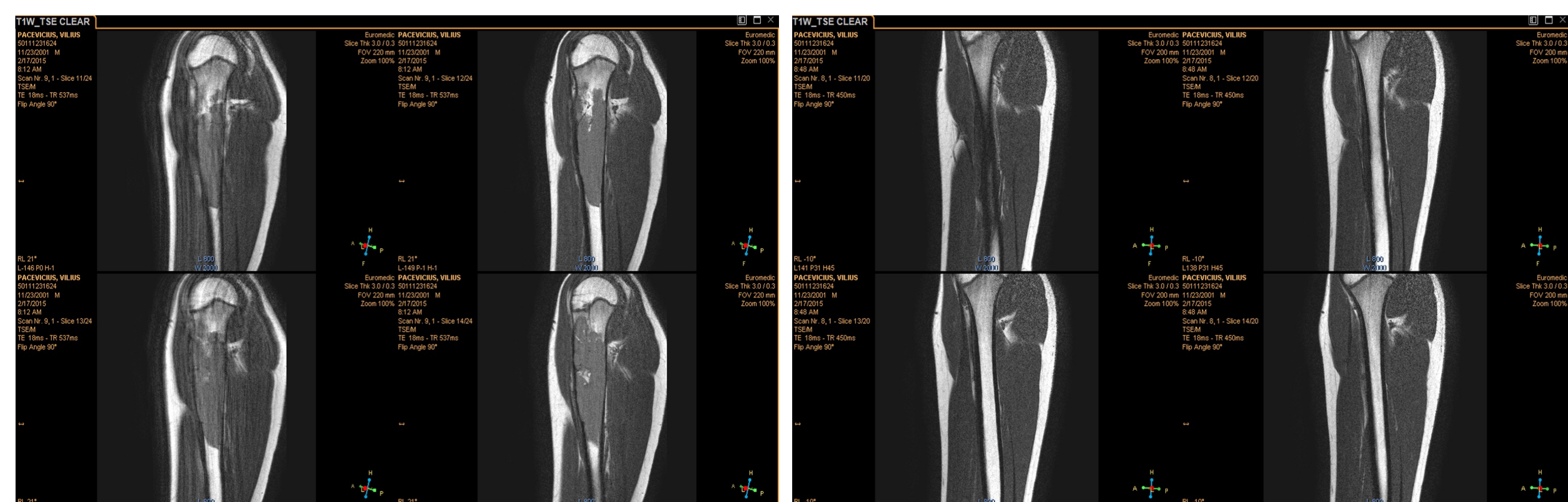
7 pic. 15 yrs girl with ABC – case report



8 pic. MRI findings after reconstruction using non-vascularized fibular allograft vs healthy humerus



9 pic. MRI findings after curettage and packing (treated humerus) vs healthy humerus



CONCLUSIONS

In 5 out of 7 patients MRIs after reconstruction of humerus using non-vascularized fibular allograft showed no difference comparing to healthy humerus. After both types of surgeries patients were satisfied with the function of their arm and health.