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## PP-132

## Long term not-site related complications for biological reconstructions in children

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**Introduction:** Biological reconstructions have excellent functional results in children (6-12 years) and represent a reliable alternative to megaprostheses for limb salvage in musculoskeletal tumours. Though some long-term complications (limb length discrepancy and/or deformity) are reported in Literature. No one directly reported scoliosis with related potential complications. The aim of the study is to analyze these complications in children.

**Methods:** A Literature review was performed looking for related complications. An analysis of the case series of a reference centre for musculoskeletal pathology was conducted. Age at diagnosis, follow up (local recurrence, survival), survival of the reconstruction, not-site related complications (type, time, solution adopted) were evaluated.

**Results:** 50 children (6-12 ys) have been surgically treated in an Italian reference centre (period 2008-2013). 20 biological reconstructions (allograft, allograft+free fibula, free fibula alone, allograft prosthetic composite) have been performed for benign or malignant musculoskeletal tumours (age range 6-12, mean age 9.5 ys). Two non healing at bone-allograft interface, 1 allograft fracture (treated with a new diaphyseal allograft plate and screws), 6 varus-valgus limb deformity (3 of them treated surgically: 1 minimally invasive plate and 2 external fixator corrections), 4 limb lenght discrepancy with secondary scoliosis were observed. No infection were reported. Follow up range 24-72 months. No local recurrence or death of disease at last follow up evaluation. 1 child died for other causes.

**Conclusion:** Long-term site related complications of biological reconstruction are well described in Literature and should always be considered before and after surgery. Even though these complications can be considered acceptable compared to the ones of other reconstruction techniques (infection, number of surgeries, prostheses breakage or loosening,...) they should be thoroughly discussed with the parents and the little patient. Scoliosis and other non-site related complications should be considered and managed as well. An international consensus for reconstructive techniques would be desirable.