

**PP-028****When do members of the European Musculoskeletal Oncology Society (EMSOS) consider the implantation of a growing prosthesis in bone sarcoma patients?****M.M. Gilg**, C. Wibmer, M. Bergovec, R. Grimer, A. Leithner*Department of Orthopaedics and Orthopaedic Surgery, Graz, Austria*

Introduction: According to literature indications for the implantation of growing prostheses are age over ten years and an expected growth deficit above 3- 4 cm. Some orthopaedic oncology centres do not recommend growing prostheses in metastatic disease. The aim of this survey was to analyse the indications leading to the implantation of growing prosthesis in bone sarcoma patients.

Methods: A ten- minute web-based survey was sent via email to 98 active, orthopaedic members of the EMSOS. Participants were asked about their experience in orthopaedic oncology and the implantation of growing prostheses. Factors reported in literature to influence the decision upon the implantation of growing prosthesis were asked in individual questions and three case scenarios.

Results: 36 members of EMSOS, from thirteen different countries, completed the survey (37%). 67 % (n=24) of participants implanted between one and fifteen growing prosthesis over the last three years, whereas 25 % (n=9) did not implant any. The mean minimum age was considered 6.6 years (range 1-10, \pm 2.3 SD). 3-5 cm of predicted growth deficit was stated as the minimum for the implantation of a growing prosthesis by 60 % (n=20) of participants. However, one third of surgeons does not use growth calculation methods. Two out of three surgeons would rather not implant a growing prosthesis in children with metastatic disease. Epiphysiodesis to guide growth is used by 43 % of participants. The answers given in the case scenarios were consistent with the individual questions.

Discussion: Compared to literature, our survey confirmed 3- 4 cm as the minimum of estimated growth deficit. The minimum age for the implantation of a growing prosthesis is approx. 6.6 years and therefore younger than reported in previous publications. One fourth of orthopaedic surgeons does not use growing prostheses at all. It remains unclear whether growing prostheses are indicated in patients with metastatic disease. A future multicentre EMSOS study on the outcome of growing prostheses could lead to further clarification.