

MAIL³⁶⁰



We'd like your views – write to: The Editor, *Bone & Joint*³⁶⁰,
22 Buckingham Street, London WC2N 6ET or email editor360@boneandjoint.org.uk

Limb salvage for bone tumours

Dear Sir,

We enjoyed reading the excellent, concise summary of limb salvage surgery, and the early emphasis and references to patient-directed outcomes, as well as surgical markers of success by Grimer and Jeys.¹

The consequences of large muscle-group resection or the loss of the motor nerves on functional outcome are well documented and will remain a problem for patients and surgeons alike. Soft-tissue rotation and free-flap augmentation remain core techniques in orthopaedic oncology. Soft-tissue attachment tubes (the tumour tube, and the trevira tube²) have been available for over ten years, helping reduce dislocation and enabling early mobilisation, but unfortunately there are few studies documenting an improvement in functional outcome and thus, potentially, quality of life. There are also limited data supporting limb salvage-specific rehabilitation but as yet unpublished data support intensive rehabilitation with work on optimising remaining function and cardiovascular fitness leading to marked improvements in quality of life.

As with all arthroplasty markets using evidence-based outcomes, it is clear the failure of endoprostheses most significantly occurs due to infection and aseptic loosening. Design is evolving, and silver coating shows early promise in reducing both infections *per se*, and the disastrous outcomes of prosthetic infection.³ At the prosthesis-bone junction the addition of trabecular metal collars and hydroxyapatite may help seal the stem from the effective joint space, but once again data are lacking, so time will tell.

Improvement in engineering ensures that modular replacement in children and adolescents mean that growing prostheses are evolving into non-invasive motor-driven devices. This undoubtedly reduces surgical morbidity for all, but can reduce time in hospital for the patient and family. This is no more keenly felt than in Australia where the tyranny of distance further impacts on the difficulties of families living in remote environments.

Progress is being made in reconstructing patients after limb salvage surgery but the big breaks continue to be made by the scientists and physicians!

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2. Gosheger G, Hillmann A, Lindner N, et al. Soft tissue reconstruction of megaprotheses using a trevira tube. *Clin Orthop Relat Res* 2001;393:264-271.
3. Harges J, von Eiff C, Streitberger A, et al. Reduction in periprosthetic infection with silver-coated megaprotheses in patients with bone sarcoma. *J Surg Oncol* 2010;101:389-395.