

**PP-105****The use of Denosumab in Giant Cell Tumour (GCT) of bone: a review****C.L. Gaston**, K. Reddy, N. Gittoes, R.J. Grimer*Royal Orthopaedic Hospital, Birmingham, United Kingdom*

Giant cell tumour of bone (GCT) is a benign aggressive bone tumour that is primarily treated with surgery. Large tumours and those of the axial skeleton are associated with higher local recurrence rates and different adjuvants have been used in conjunction with detailed intra-lesional curettage to decrease the risk of tumour recurrence. GCTs of the skull and spine are particularly challenging to treat with traditional methods of surgery, radiation, and/or embolization often leading to patient morbidity or tumour progression.

Denosumab is a fully human monoclonal antibody to RANK ligand (RANKL) which inhibits the RANK-RANKL interaction needed for osteoclastic bone destruction. It has shown good response in patients with inoperable GCT in a phase 2 clinical trial. Denosumab may also be used to downstage Campanacci 3 tumours with large soft tissue extension to allow for less morbid surgery. However, important questions remain such as the optimal dosing schedule for Denosumab especially for inoperable tumours as well as the safety of the drug for long term use. We present our experience in the use of Denosumab particularly in the neo-adjuvant setting to surgery and bring forward issues with the drug's use to help define its role in the treatment of GCT.