MATERIAL AND METHODS: From year 2014 to 2015, 14 patients with primary MBT were enrolled into this study. The eligibility criteria included histopathological proof of malignancy, no evidence of distant metastases, and suitability for limb preservation therapy. Surgery was performed about 4 weeks after completion of neoadjuvant chemotherapy. The affected bone segment was resected, irradiated extracorporeally with a dose of 50 Gy and reimplanted with appropriate fixations devices. Local control, complications and short-term survival were studied. Functional outcome was assessed by Modified Musculoskeletal Tumor Society (MSTS) scoring system.

RESULTS: There were 10 males and 4 females with a median age of 14 years. Histopathologically, 11 patients had Ewings sarcoma and 3 had osteosarcoma. Distribution of primary site was as follows: Femur eight patients, tibia 1 patient, humerus one patient, radius 2 patients, ulna 1 patient and calcaneum 1 patient. At a median follow-up was 6 months, 2 patients had local recurrence and 3 had distant metastasis. Two patients (14%) developed wound infection in the post operative period. The 6 months local recurrence free survival was 63% and mean modified score was 24.

Figure 1(a) shows Ewings Sarcoma of D/E Femur (b) tumor excision with step cut and clearing of soft tissues done (c) sent for ECRT, given 50 Gy (d) Re-implantation done with DFLP.
AIIMS AND OBJECTIVES: Extracorporeal irradiation (ECI) is relatively a rare method used in the management of malignant bone tumors (MBT). It consists of en-bloc removal of the tumor bearing bone segment, removal of the tumor from the bone, irradiation, and re-implantation back in the body. We report our preliminary experience using ECI for management of MBT.

CONCLUSION: Results of our study suggest that ECI is technically feasible in the management of MBT and provides decent local control and short-term survival rates.