

Figure S1. Individualized clinical management pathway for the patient. i) Initial diagnosis: MRI detection of a left femoral mass, confirmed as high-grade osteosarcoma via biopsy. ii) Multidisciplinary discussion: A plan was made for neoadjuvant chemotherapy combined with limb-sparing surgery, alongside an alternative protocol of TACE combined with iodine-125 seed implantation. iii) Patient decision: The patient declined surgery and chose the TACE protocol (MAP chemotherapy + embolization microspheres) with iodine-125 seed implantation. iv) Treatment planning: A strategy for iodine-125 seed implantation was developed using a TPS. v) Postoperative follow-up: Follow-up included imaging evaluations, pain assessments using the NRS and monitoring of biochemical markers (ALP and LDH). TACE, transarterial chemoembolization; MAP, methotrexate, doxorubicin and cisplatin; TPS, treatment planning system; NRS, numeric rating scale; ALP, alkaline phosphatase; LDH, lactate dehydrogenase.

