Malignant peripheral nerve sheath tumors (MPNST) account for 10% of soft tissue sarcomas. Main treatment for MPNSTs is radical and complete surgical excision with adjuvant radiotherapy or chemotherapy. In this case, we observe the postoperative rehabilitation process of an elite athlete with vastus medialis muscle resection and local radiotherapy treatment due to malignant peripheral nerve sheath tumor in the left thigh. The patient returned to play in competitive sports after six months of treatments and rehabilitation. Despite muscle resection due to malignancies, with a proper rehabilitation progress athletes can return to play successfully.