## Isolated Limb Perfusion Can Deter Amputation Indication in Initially Non-Salvageable Sarcomas

## Jan Lesensky, Ana Cecilia Belzarena Genovese

INTRODUCTION: Soft tissue sarcomas pose a significant therapeutic challenge due to their aggressive nature and limited treatment options. Isolated limb perfusion (ILP) emerges as a promising modality against this malignancy, offering a localized approach to deliver high doses of chemotherapy directly to the affected limb while minimizing systemic toxicity.

METHODS: A retrospective observational study was conducted on patients who underwent ILP for a soft tissue sarcoma that was deemed not amenable for limb salvage between June/2019 and June/2023. Demographic information along with tumor characteristics, oncologic outcome, volume change and necrosis were recorded.

RESULTS: Thirty-four patients were included in the study. There were 12 females and 22 males, mean age was 55.2 (range 13-85, SD 17.2). Most common sarcomas were in the lower extremity (61.8%). Most frequent diagnoses were undifferentiated pleomorphic sarcoma (17.6%) and myxoid liposarcoma (17.6%). Two patients had a leak, and one had a vascular occlusion. Twenty-six patients completed ILP and surgery, of those, 22 had successful resection, and 4 underwent amputation. Five tumors increased in size, the remaining had a mean volume reduction of 42.3%. Average tumor necrosis was 56.3%. Most common side effects were edema (20.1%), hyperesthesia (8.8%) and hyperpigmentation (5.9%).

DISCUSSION AND CONCLUSION: Isolated limb perfusion can help avoid an amputation in deemed unresectable soft tissues sarcomas. Most patients who underwent ILP had tumor volume reduction and increased necrosis, which can facilitate resection and decrease the risk of local recurrences with minimal local adverse effects.