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*Commentary*

# Short commentary on IVC leiomyosarcoma

**Jyoutishman Saikia*, Suryanarayana Deo, Sunil Kuma**

Department of Surgical oncology, All India Institute of Medical Sciences, New Delhi, India

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**ABSTRACT**

**LIS departments engage in a wide range of research activities. Within a single department, many methodologies may be represented, which can be a barrier to discussion between researchers. This problem can be addressed by recognizing that all researchers share many 'tools of the mind', and by adopting the kind of 'meta' approach that has led to successful information literacy programmers.**

**Keywords:** Library and information sciences, Phenomenologists, Scientific instruments

## DESCRIPTION

Primary Leiomyosarcomas (LMS) of the Inferior Vena Cava (IVC) are rare vascular tumors with aggressive behavior accounting for 2% of all LMS [1]. Most tumors (50-60%) arise within Kieffer's level II of the IVC, the segment below hepatic veins to the level of renal veins [2-4]. Being retroperitoneal in this location, patients usually present after a considerable delay from onset of disease (around 6-20 months), as usual symptoms like pain abdomen and extremity edema tend to develop only after the tumor has grown considerably [5]. The cornerstone for diagnosis remains with good quality imaging, frequently a Contrast-Enhanced CT scan (CECT scan) with or without a tissue diagnosis. The gold-standard treatment for IVC LMS is surgery. This frequently employs a midline laparotomy with standard kocherization, liver mobilization to achieve microscopically tumor-free resection. While, achieving this could occasionally require additional organ resections like the kidneys and part of the liver, disease involving Kieffer level III (hepatic vein level and caudal to it) would be much challenging. In those situations, cardiac bypass procedures may be needed along with additional reconstructive procedures. Many authors prefer not to repair a Kieffer segment II defect with the pretext that a repair might cause more harm than good, which includes graft thrombosis, hepatic and renal morbidities [6]. Additionally, the development of adequate collaterals during the long disease course makes reconstruction unnecessary in some cases. Those who consider repairing the IVC defect, dacron, or PTFE grafts were most frequently chosen conduits. Graft-related complications were few but can range from problems associated with prolonged operating time, embolic phenomenon, cardiac failure, fistula, and long-term anticoagulation. In situations where the disease appears to be locally extensive and primary resection may be unlikely to achieve a complete resection, neoadjuvant treatment may be an option. As cases of LMS in most studies are fewer, experiences with such treatments remain limited. In studies with Neoadjuvant Chemotherapy (NACT) objective response rates of up to 30.9% have been observed with doxorubicin plus ifosfamide being the most frequently employed by authors [7]. To overcome patient limitations, the STASS-2 study, trans-continental participation, has been designed to include high-grade retroperitoneal liposarcoma and LMS for NACT and is expected to bring answers to commonly faced clinical scenarios [8]. The role of neoadjuvant radiotherapy faced similar restraints related to patient recruitment with some benefits seen using Intraoperative Radiotherapy (IORT). In parallel to this, the initial results of EORTC 62092 (the STRASS study) could not identify a benefit of NART. Patients with a high disease burden run the risk of recurrence and adjuvant treatment is necessary. With the best available evidence, a 10-years RFS and suggested OS benefit of 6-10% and 4% respectively as reported from the SMAC (Sarcoma Meta-Analysis Collaboration) meta-analysis, doxorubicin-based chemotherapy has established itself in adjuvant settings [9]. Patients with tumors of high-grade, large size, and positive surgical margins recur frequently and hence reported to benefit from adjuvant radiotherapy (Scandinavian sarcoma group) [10]. Although histology-specific studies remain difficult to achieve, adjuvant RT remains a regularly used modality for patients associated with such factors of higher recurrences. Surgery remains the only curative treatment and contributor to the highest survival outcomes. As IVC LMS expands locally to involve adjacent structures, surgery can be challenging, and achieving an oncologically margin-free resection frequently requires participation of multidisciplinary teams and expertise. With the application of current treatment modalities, which includes surgery and appropriate adjuvant treatment, our recent systematic review suggested a median

*Corresponding author. Saikia J, E-mail: jyoutishman@gmail.com

OS and DFS benefit of 60 months and 24 months respectively [11]. Leaving grossly residual tumors during surgery and involvement of all three segments of IVC were major factors for poor survival. With the implementation of adjuvant radiotherapy, the advantage of survival tumor-free margin over microscopic tumor at margins remains controversial and needs to be observed in future studies. In general, appropriate adjuvant treatment needs to be planned in multidisciplinary tumor board to maximize the benefit of currently available modalities.

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