

SURGICAL SARCOMA GUIDELINES **RETROPERITONEAL / INTRAABDOMINAL**

Introduction

Retroperitoneal/intraabdominal sarcomas are frequently diagnosed at an advanced stage. This is mainly due to the lack of specific symptoms. The most common histological types are lipo- and leiomyosarcoma.

Imaging

CT or MRI are indispensable for the diagnosis of retroperitoneal/intraabdominal sarcomas.

For planning both biopsy and definitive surgical treatment, please assess:

- contrast enhancement
- extent of the tumor
- possible involvement of neighbouring structures and organs

Biopsy

Image-guided tru-cut biopsy is considered the standard procedure and is strongly advocated preoperatively whenever possible. Ideally surgery should not be performed without preceding biopsy because of other differential diagnosis including intraperitoneal (peritoneal carcinomatosis, GIST, for example) and retroperitoneal malignancies (renal carcinoma, lymphoma, for example). The surgeon should make sure that a complete excision with negative margins is possible. Surgery without biopsy should only be done after thorough interdisciplinary discussion at the Sarcoma Board.

- If there is marked heterogeneity on imaging, take several biopsy samples.
- If the lesion is localized near hollow viscus, endoscopic ultrasound and fine needle biopsy may be helpful.
- Limited explorative laparotomy or laparoscopy with the possibility of taking biopsy under direct visualization of the tumor is an alternative, but without substantial and supporting data up to now (cave: peritoneal seeding).
- Incisional biopsy is almost never indicated.

Surgery

Achieving an adequate resection with negative margin (local R0 resection) is the most important factor for disease-free and overall survival with tumor grade. Whenever the surgeon is not sure negative margins can be achieved due to anatomical reasons, multimodal and particularly pre- and postoperative treatment strategies should be discussed in the sarcoma board and interdisciplinarily orchestrated.

- to achieve negative margins, uninvolved tissue planes / contiguously involved organs have to be removed en bloc with the tumor (eg. kidneys, intestines, major vessels, peritoneum, pancreas, spleen, abdominal wall).
- Multi-visceral resections may be often necessary; postoperative care and management must account for this, as well as (neo-)adjuvant therapy.
- R1 and R2 resections may be more frequent compared to the extremities, and an orchestrated treatment approach at the Sarcoma Board is very important.
- Patients should ideally be included in prospective trials in order to answer the questions regarding the roles for induction and adjuvant therapies.

References

1. Le Péchoux C, Musat E, Baey C, et al. Should adjuvant radiotherapy be administered in addition to front-line aggressive surgery (FAS) in patients with primary retroperitoneal sarcoma? *Annals of Oncology* 2013, 24: 832–837.
2. Liles JS, Tzeng CWD, Short JJ, Kulesza P, Heslin MJ. Retroperitoneal and Intra-Abdominal sarcoma. *Curr Probl Surg* 2009, 46: 433-504.
3. Alessandro Gronchi A, Lo Vullo S, Fiore M, et al. Aggressive Surgical Policies in a Retrospectively Reviewed Single-Institution Case Series of Retroperitoneal Soft Tissue Sarcoma Patients. *J Clin Oncol* 2008, 27:24-30.
4. Bonvalot S, Rivoire M, Castaing M, et al. Primary Retroperitoneal Sarcomas: A Multivariate Analysis of Surgical Factors Associated With Local Control. *J Clin Oncol* 2008, 27:31-37.