

Supplementary

Table S1 Number of total (ipsilateral) retroperitoneal lipectomy and complete resection patients from each center

| Hospital name | CR | TRL |
|---------------|----|-----|
| PKUIH | 39 | 29 |
| AHQU | 2 | 14 |
| YCH | 4 | 1 |
| ZHFU | 19 | 9 |
| USC-KSM | 17 | 0 |
| Total | 81 | 53 |

PKUIH, Peking University International Hospital; AHQU, Affiliated Hospital of Qingdao University; YCH, Yunnan Cancer Hospital; ZHFU, Zhongshan Hospital of Fudan University, USC-KSM, University of Southern California-Keck School of Medicine; CR, complete resection; TRL, total (ipsilateral) retroperitoneal lipectomy.

Table S2 Resected organs

| Organs | CR (n=81) | TRL (n=53) |
|--------------------|-----------|------------|
| Colon | 30 (37%) | 27 (51%) |
| Diaphragm | 9 (11%) | 2 (4%) |
| Inferior Vena Cava | 1 (1%) | 0 |
| Kidney | 29 (36%) | 18 (34%) |
| Pancreas | 6 (7%) | 5 (9%) |
| Small intestine | 6 (6%) | 4 (8%) |

CR, complete resection; TRL, total (ipsilateral) retroperitoneal lipectomy.

Table S3 Postoperative morbidity

| Complication type | CR (n=81) | TRL (n=53) |
|---|-----------|------------|
| Abdominal abscess | 5 (6%) | 2 (4%) |
| Cardiac event | 7 (9%) | 2 (4%) |
| Deep vein thrombosis | 0 | 2 (4%) |
| Gastroparesis | 3 (4%) | 1 (2%) |
| Hydronephrosis | 1 (1%) | 3 (6%) |
| Ileus | 6 (7%) | 1 (2%) |
| Pancreatic leak | 3 (4%) | 3 (6%) |
| Peripheral neuropathy | 3 (4%) | 0 |
| Pneumothorax | 0 | 2 (4%) |
| Pneumoconiosis | 2 (2%) | 0 |
| Reoperation due to postoperative complication | 4 (5%) | 1 (2%) |
| Urinary leak | 2 (2%) | 1 (2%) |
| Others* | 8 (10%) | 2 (4%) |

*, cerebrovascular accident, chronic mesenteric ischemia, duodenal stenosis, femoral vein thrombosis, pneumonia (fungal), retained foreign body, stress ulcer. CR, complete resection; TRL, total (ipsilateral) retroperitoneal lipectomy.

Table S4 Frequency and impact of multifocality on retroperitoneal liposarcoma

| Author (year) | Presentation | Total no. of patients | Multifocality at initial presentation | Histologic types/subtypes | Type of resection | Impact on recurrence/survival |
|----------------------------------|--------------------|-----------------------|---------------------------------------|---------------------------|---|-------------------------------|
| Tseng <i>et al.</i> , (2014) (8) | Primary, recurrent | 247 | 84 (34%) | WDLPS, DDLPS | Complete resection, R2 resection | Worse OS |
| Keung <i>et al.</i> , (2014)* | Primary | 119 | 25 (21%) | DDLPS | Tumor intact, tumor ruptured or transected, unknown | Worse LRFS |
| Luo <i>et al.</i> , (2018) (24) | NA | 100 | 25 (25%) | RPLS | Radical resection | Worse OS |
| Luo <i>et al.</i> , (2018) (25) | Primary, recurrent | 61 | 19 (31.1%) | DDLPS | Complete resection, piecemeal | Worse PFS |

*, Keung EZ, Hornick JL, Bertagnolli MM, *et al.* Predictors of outcomes in patients with primary retroperitoneal dedifferentiated liposarcoma undergoing surgery. *J Am Coll Surg* 2014;218:206-17. WDLPS, well-differentiated liposarcoma; DDLPS, dedifferentiated liposarcoma; OS, overall survival; LRFS, local recurrence-free survival; RPLS, retroperitoneal liposarcoma; PFS, progression-free survival.