

Laparoscopic postchemotherapy residual mass resection as an alternative to template-based PC-RPLND

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Background

- Patients with residual tumour after chemotherapy for metastasized testicular germ cell tumour are treated with retroperitoneal lymph node dissection (PC-RPLND).
- There is debate concerning the anatomical extent of PC-RPLND.
- Currently, template-based open RPLND (O-RPLND) is the standard approach.

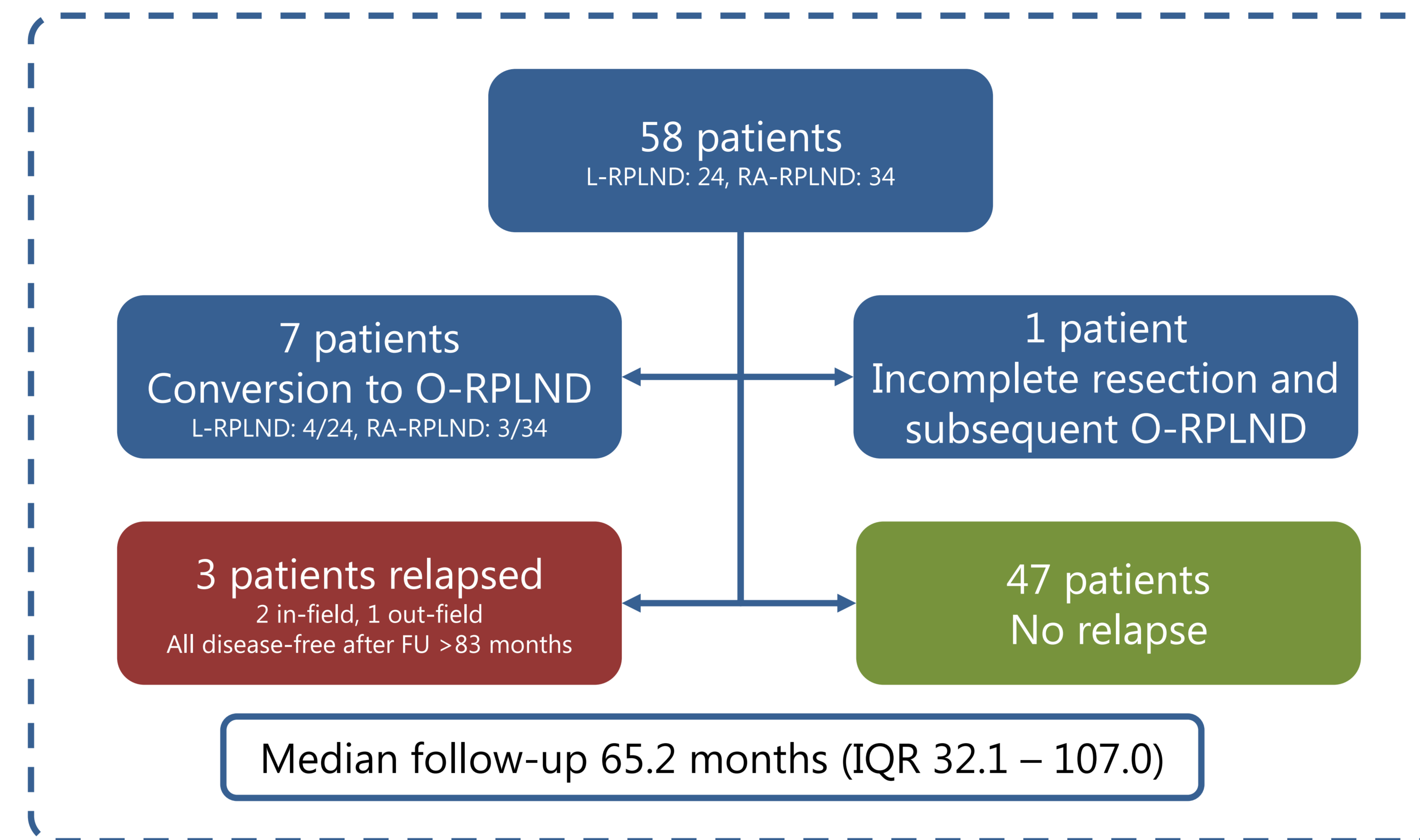
We hypothesize that oncological control can be achieved by laparoscopic mass resection instead of template-based RPLND.

Objective

To report the long-term results of laparoscopic and robot-assisted residual mass resection

Methods

- Retrospective chart analysis of all patients that were treated with laparoscopic (L-RPLND) or robot-assisted (RA-RPLND) residual mass resection at 2 tertiary referral centers in the years 2002-2016.
- Surgery consisted of resection of the residual mass only, taking into account the original location of the tumour.



Baseline characteristics

Median age, years (IQR)	29.3 (23.5-33.8)
IGCCCG risk category, n (%)	
- Good	47 (81.0%)
- Intermediate	8 (13.8%)
- Poor	3 (5.2%)
Median tumour size pre-chemo, cm (IQR)	2.6 (1.5-3.2)
Median tumour size pre-RPLND, cm (IQR)	2.0 (1.5-2.9)

Operative results

Type procedure, n (%)	
- Laparoscopic	24 (41.4)
- Robot-assisted	34 (58.6)
Median operative time, mins (IQR)	135 (100-187)
Bloodloss, n (%)	
- <100 ml	49 (84.5)
- >100 ml	9 (15.5)
Median hospital stay, days (IQR)	2 (1-3)
Retroperitoneal histology, n (%)	
- Teratoma	33 (56.9)
- Necrosis/fibrosis	20 (34.5)
- Viable cancer	5 (8.6)
Postoperative complication Clavien-Dindo Grade ≥ 2, n (%)	2 (3.4)
- Grade 3a: Chylous ascites requiring drain placement	1 (1.7)
- Grade 3b: Chylous ascites requiring open surgery	1 (1.7)

Results

Seven conversions to O-RPLND due to;

- Technical difficulty: 3 patients
- Vascular injury: 3 patients
- Debris leakage: 1 patient

Two patients (3.4%) had in-field relapse;

- One patient: RA-RPLND with teratoma on retroperitoneal histology. Relapse after 12 months, which was treated with redo RA-RPLND, showing teratoma.
- One patient: L-RPLND with necrosis/fibrosis on retroperitoneal histology. Relapse after 3 months, which was treated with salvage chemotherapy and full-template O-RPLND, showing necrosis/fibrosis.

One patient had out-field relapse after 14 years, which was treated with O-RPLND.

Two patients died;

- One patient due to brain metastases diagnosed 2 weeks after surgery
- One patient due to acute lymphatic leukemia

Conclusion

In our series of 58 patients treated with laparoscopic residual mass resection, 2 patients (3.4%) developed an in-field relapse. Disease-specific survival was 98.3%.

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