

Retrospective audit of abdominal and retroperitoneal sarcoma experience through regional MDM

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Introduction

Sarcoma's are a rare and diffuse group of malignant tumours arising from mesenchymal tissues. The regional sarcoma MDM run weekly through Counties Manukau District Health Board (CMDHB) has been attended by a Retroperitoneal Sarcoma Surgeon from Auckland District Health Board (ADHB) for the last 6 years. We audit the cases discussed through this meeting to evaluate the distribution of cases in terms of demographics, pathology and outcomes.

Aim

To audit the cases presented through the regional sarcoma MDM requiring input through General Surgery

Methods

All cases presented between January 2015 and December 2020 in the regional sarcoma MDM were audited. All cases requiring general surgery input were further reviewed.

Results

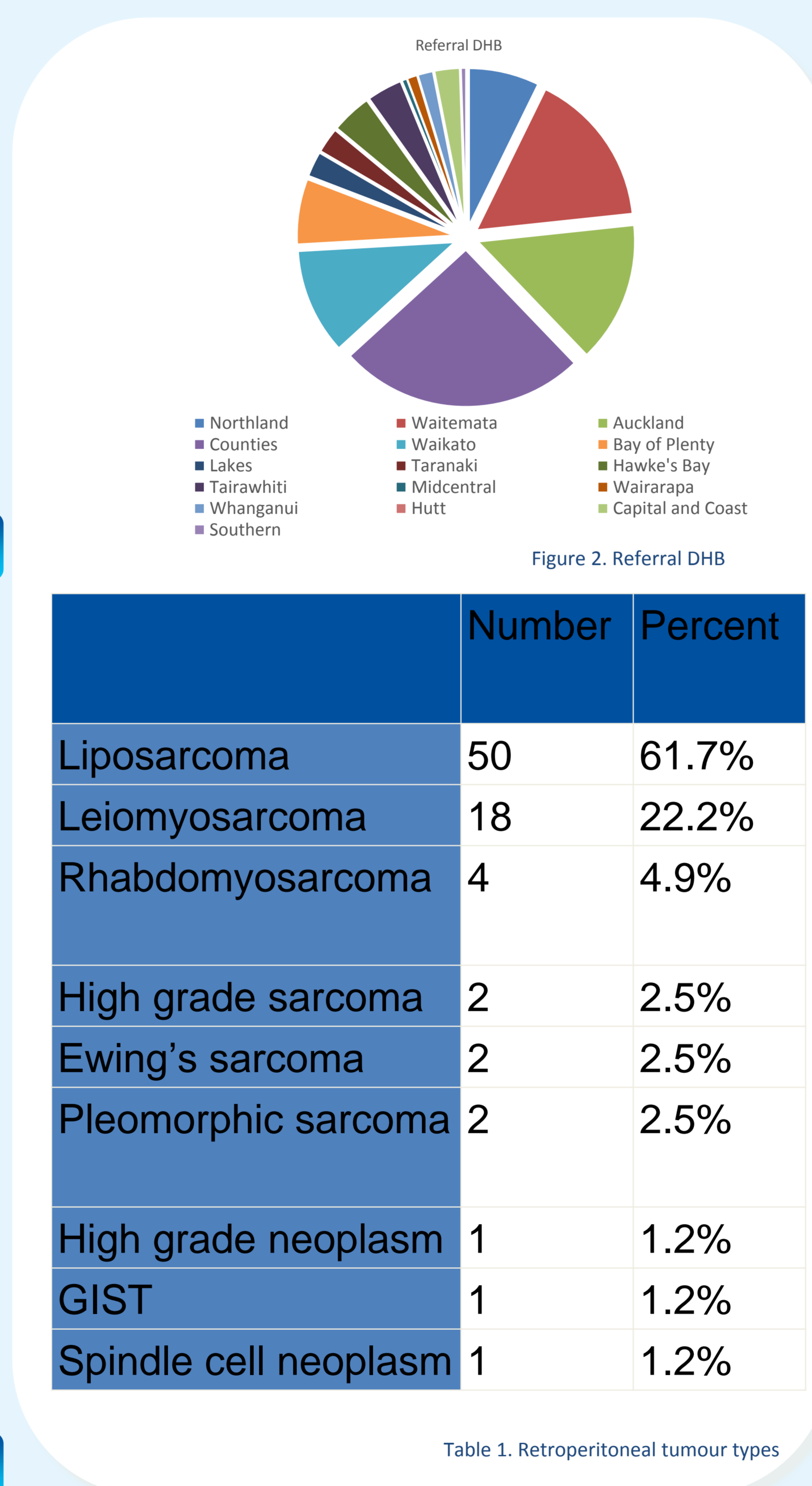
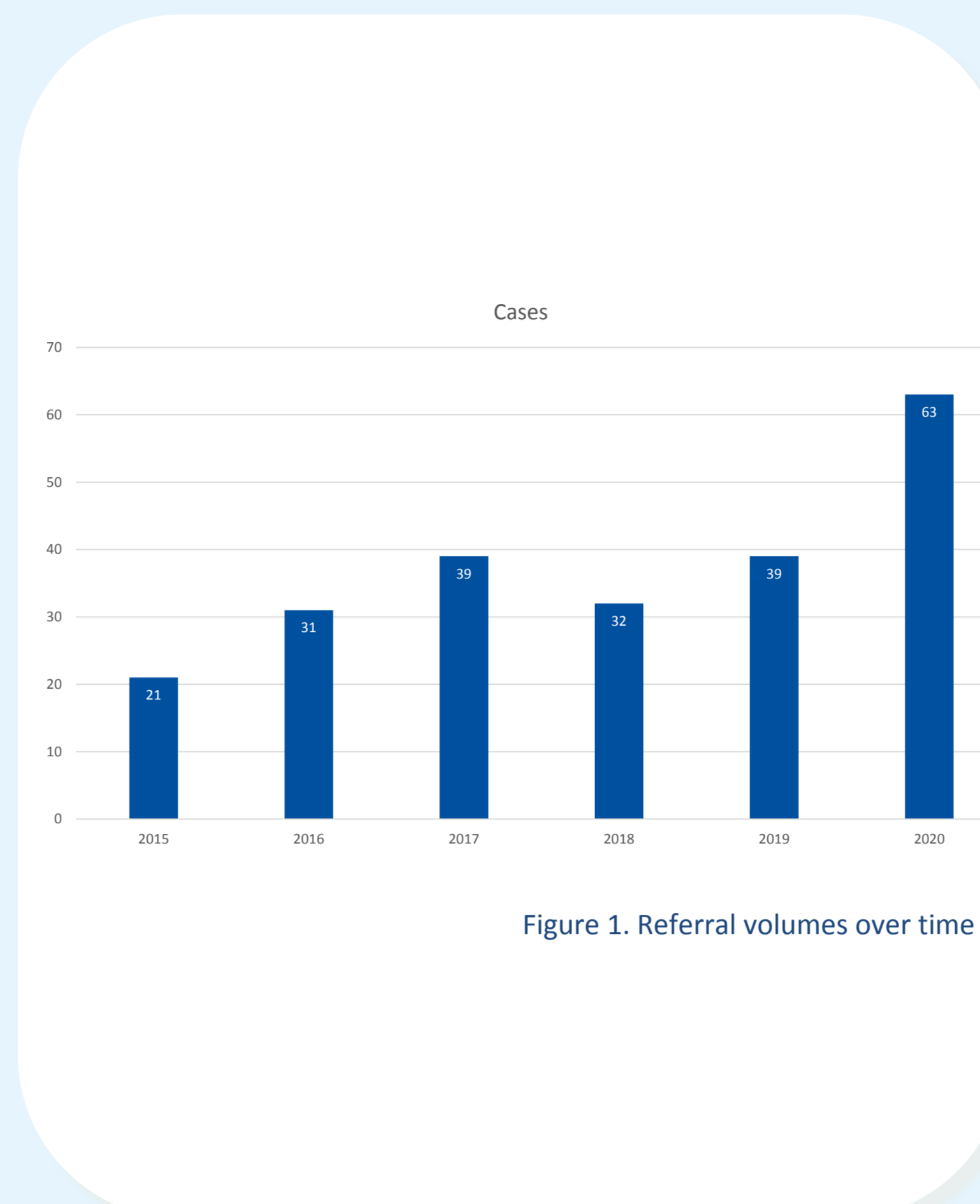
193 patients required management through General Surgery. There has been a gradual increase each year with 21 cases in 2015, 31 in 2016, 39 in 2017, 32 in 2018, 39 in 2019 and 63 in 2020 (figure 1). 55% were from the Auckland region, (WDHB, CMDHB, ADHB), however all North Island DHBs except Hutt have referred patients to the meeting this is summarised in figure 2. 47% of patients were male. Ethnicity distribution was 54% European, 22% Maori, 15% Pacific, 7% Asian, 2% other. Tumour locations were retroperitoneal 43%, intraabdominal 21%, pelvis 12.5%, Groin 13.5%, body wall 10%. Tumour types encountered were liposarcoma 38%, leiomyosarcoma 23%, other 39%.

Discussion

This audit outlines the case mix generated by the regional sarcoma MDM run through CMDHB. During the audited period there has been a significant increase in the number of cases discussed through the meeting suggesting an increasing awareness of the meeting. Additionally, cases have been referred from all but one North Island DHB, indicating that the MDM is truly functioning as a regional meeting. Approximately 55% of cases reside within the Auckland region, this is slightly higher than expected based on population distribution. Based on census data, approximately 44% of the North Island population reside in Auckland, suggesting a proportion of cases that are not being discussed through the meeting. In terms of retroperitoneal tumours specifically, the case mix of tumour types is in keeping with published case series¹. R0/R1 resection rates are reasonable and in keeping with a large case series², although other large studies have achieved rates of up to 96%¹. However this audit has a relatively small data set, including some incomplete histological data. The R2 rate was 9.1% comprising of two patients. Disease specific survival 78.8% at average follow-up of 2.5 years is comparable to published series also¹.

Conclusion

Over the audited period there has been a progressive increase in volume of cases discussed through the Sarcoma MDM. This is thought to be due to an increase in awareness of the MDM. Outcomes following resection are consistent with internationally published data¹. We encourage the pattern of increasing centralised discussion of these tumours to encourage consistency of treatment for patients.



	Number	Percent
Liposarcoma	50	61.7%
Leiomyosarcoma	18	22.2%
Rhabdomyosarcoma	4	4.9%
High grade sarcoma	2	2.5%
Ewing's sarcoma	2	2.5%
Pleomorphic sarcoma	2	2.5%
High grade neoplasm	1	1.2%
GIST	1	1.2%
Spindle cell neoplasm	1	1.2%

Table 1. Retroperitoneal tumour types

118 (54%) patients were referred for primary disease, 41 (18%) for locally recurrent disease and 65 (29%) for metastatic disease. 84 (71%) patients presenting with primary disease underwent operative management. Of these patients 24 (28.6%) had a resection prior to their MDM discussion. 60 (71.4%) had an operation following. When analysing specifically patients with retroperitoneal tumours, a total of 81 patients were referred with tumours in these locations. Of these patients 46 (56.7%) had primary tumours, 13 (16.0%) were recurrent tumours and 22 (27.1%) had metastatic disease. Tumour type is summarised in table 1, the majority of cases (61.7%) were liposarcoma, followed by leiomyosarcoma (22.2%). The remaining cases were made up of small numbers of rarer tumour types. Patients with primary retroperitoneal tumours, 40 (87.0%) were offered surgery, three patients were awaiting surgery at the time of analysis, four patients were offered surgery but declined or died prior to surgery. Therefore a total of 33 patients had received surgery at the time of analysis. 24 (75.8%) achieved R0/R1 margins, three (9.1%) had R2 resection. Two patients had their surgery abandoned, post operative pathology information was not available for three patients. Of patients with primary retroperitoneal tumours, five received chemotherapy, two (6.1%) as adjuvant and three (9.1%) as neoadjuvant. Eight received radiotherapy, two (6.1%) in adjuvant fashion, 6 (18.1%) as neoadjuvant. Outcomes for these patients were analysed, 30 day mortality rate was 3.0% reflecting a single patient who had their operation abandoned due to previously unidentified metastatic disease, mortality within the follow-up period was 21.2%, all mortality was due to tumour recurrence either locally or distant. Recurrence rate was 24.2%; 15.2% with metastatic disease, 9.1% with local recurrence. Average follow-up was 2.5 years.

References

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- Bonvalot, S., Rivoire, M., Castaing, M., Stoeckle, E., Le Cesne, A., Blay, JY., Laplanche, A. 2009. Primary Retroperitoneal Sarcomas: A Multivariate Analysis of Surgical Factors Associated with Local Control. *Journal of Clinical Oncology* 27(1): 31-37.