

# Relationship Between Surgical Margins And Local Recurrence In Soft Tissue Sarcoma Treated In Hospital Pulau Pinang.

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## INTRODUCTION:

Soft tissue sarcomas (STS) are rare tumours that accounts for 1% of all malignancies. We assessed the relationship between margin and local recurrence rate associated with managing soft tissue sarcoma in our centre. Surgical margins are directly associated with local recurrence <sup>1, 2</sup>.

## METHODS:

We reviewed 48 cases of soft tissue sarcoma treated at Hospital Pulau Pinang from January 2012 to December 2016 over a period of 5 years. 35 were included in our analysis and the rest had incomplete data. Data was extracted from patient records and phone call interviews. Data analysis was done using SPSS v23.

## RESULTS:

Out of 35 cases, 18 were female and 17 were male with a mean age of 47 (6 -79) years. 23 patients had wide margin on histopathological examination. The remaining 10 had close margin, and another 2 did not have margin documented. Out of the 23 wide margins, 1 had primary amputation, and the remaining 22 had wide resection. None of the patients with wide margin had local recurrence. 10 cases had close (<2mm) or positive margin. 8 out of which had local recurrence, with 7 requiring subsequent amputation; another patient was counseled for amputation but he refused amputation and died of lung metastasis. Another 2 cases had no local recurrence despite having close margin. Analysis between margins and local recurrence is shown in table 1.

Table 1 showing crosstable of margin and recurrence

		localrecurrent		Total	
		yes	no		
margin	close	Count	8	2	10
		Expected Count	2.7	7.3	10.0
		% within margin	80.0%	20.0%	100.0%
clear		Count	1	22	23
		Expected Count	6.3	16.7	23.0
		% within margin	4.3%	95.7%	100.0%
Total		Count	9	24	33
		Expected Count	9.0	24.0	33.0
		% within margin	27.3%	72.7%	100.0%

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	20.111 <sup>a</sup>	1	.000		
Continuity Correction <sup>b</sup>	16.478	1	.000		
Likelihood Ratio	20.438	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	19.501	1	.000		
N of Valid Cases	33				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.73.  
b. Computed only for a 2x2 table

## DISCUSSIONS:

Managing soft tissue sarcoma poses great challenge to the treating surgeon. Close and positive margins are associated with local recurrence<sup>3</sup>. Local recurrence in our setting is associated with subsequent amputation. Our sample size is not big enough to assess risk of local recurrence between positive and close margin.

## CONCLUSION:

Soft tissue sarcoma surgery with adequate margin is crucial in avoiding local recurrence. Local recurrence is associated with significant risk of eventual amputation.

## REFERENCES:

1. Potter, B.K et al 2013. Impact of margin status and local recurrence on soft-tissue sarcoma outcomes. JBJS, 95(20), p.e151.
2. Daigeler, A et al 2014. Long-term outcome after local recurrence of soft tissue sarcoma: a retrospective analysis of factors predictive of survival in 135 patients with locally recurrent soft tissue sarcoma. British journal of cancer, 110(6), p.1456.