

## 11283 - Does the Use of Wound Vacuum Assisted Closure (VAC) Therapy Increase the Risk of Local Recurrence After Sarcoma Excision?

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### Background

The resection of musculoskeletal tumors can result in large soft tissue defects that cannot be closed primarily. Wound VAC therapy has proven to be effective in the management of soft tissue loss for temporary wound coverage and to prepare wounds for secondary reconstructive procedures. The literature to date regarding the use of VAC therapy following sarcoma excision has focused on brachytherapy or wound breakdown postoperatively. The use of VAC therapy on tumor beds with unknown margin status is currently listed as a contraindication in the manufacturer's clinical guidelines, due to a theoretical risk of tumor spread or local recurrence. However, there is currently no evidence in the literature to support this stance.

### Questions/Purposes

The aim of this study was to determine if there is any increased risk of local recurrence after wound VAC use on a sarcoma excision bed with unknown margins at our institution.

### Methods

We retrospectively reviewed the charts of all patients treated by a single surgeon between 2006 and 2015 who had a wound VAC placed in the operating room immediately following wide excision of a soft tissue sarcoma. Fourteen patients were identified. Their electronic medical records were reviewed for histologic diagnosis and location, margin status, length of VAC use, length of follow up, and evidence of local recurrence.

### Results

The study group included 11 men and 3 women with diagnoses of pleomorphic sarcoma (6), liposarcoma (3), myxofibrosarcoma (2), fibrosarcoma (1), synovial sarcoma (1), and epithelioid sarcoma (1). Treatment included immediate VAC placement for an average of 20.2 days, followed by wound coverage. Margins were negative in 10 cases, and within 1 mm in 4 cases. Those cases with close margins were treated with tumor bed re-excision at the time of definitive closure, which consisted of local flap coverage in 3 cases and split thickness skin graft coverage in the remaining cases. Patients were followed for an average of 30.3 months, ranging from 2.5 to 84.4 months. There was no evidence of local recurrence in any patient.

### Conclusions

Wound VAC therapy aids in the management of large soft tissue defects while awaiting margin status and eventual wound coverage. This appears to be a safe option for the management of soft tissue wounds following sarcoma excision.

### Level of Evidence

Level IV, therapeutic study.