

A Multicenter Randomized Controlled Trial of Negative Pressure Wound Therapy for Preoperatively Irradiated Soft Tissue Sarcoma Wounds – Early Results



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BACKGROUND

- Negative pressure wound therapy (NPWT) has been shown to lower the incidence of wound complications in trauma and joints patients.
- However, NPWT has not yet been evaluated in the setting of orthopaedic oncology.
- The purpose of this study is to evaluate the role of NPWT for preoperatively irradiated soft tissue sarcoma wound beds.**

METHODS

- Primary outcomes include:
- Prolonged wound drainage
 - Need for prolonged dressing changes or wound packing
 - Deep infection requiring return to OR
 - Postoperative seroma
 - Prolonged postoperative use of antibiotics
- Secondary outcomes include:
- Prolonged hospitalization
 - Pain scores
 - Functional outcomes and global assessment via the PROMIS formula

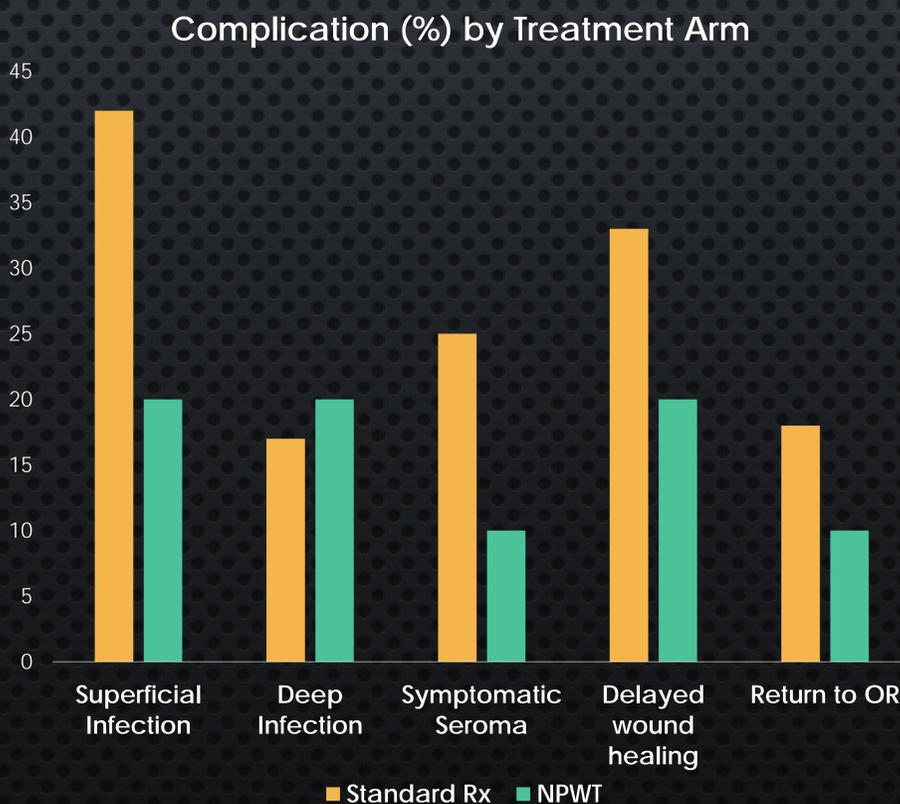
RESULTS (Cont.)

	Standard Rx	NPWT
Δ VAS Pain Score	↑ 1.75	↓ 0.5
Δ Narcotic Usage	Δ 0%	↓ 75%
6 Month MSTS Score	76.7	85.1
PROMIS Mental Health	49.0	50.2
Promis Physical Health	56.2	45.8

METHODS

Inclusion Criteria	Exclusion Criteria
Age > 18 yrs	Recurrent soft tissue sarcoma
Pelvic or LE soft tissue sarcoma necessitating radiation prior to surgery	Sarcomas where radiation is not planned preop
Patients scheduled for surgical resection	Patients scheduled for amputation
Primary closure of the surgical site	Flap coverage or skin graft
	Repeat surgery for oncologic reasons (i.e. positive margins)
	Known allergy to adhesive tape

RESULTS



DISCUSSION

- Overall incidence of wound complications is comparable to published literature.
- Although not statistically significant, pts with NPWT are more likely to have:
 - ↓ Superficial infections
 - ↓ Symptomatic seromas
 - ↓ Delayed wound healing
 - ↓ Return to the OR

While more data is needed to elicit statistical differences in outcomes between treatment arms, early results suggest there may be superiority with NPWT over standard dry dressings.