

# Impact of VERSAJET<sup>®</sup> II Hydrosurgery System use on unplanned hospital readmissions for surgical site infections (SSIs) in a retrospective analysis of patients with lower extremity wounds

James CV, Patel M, Ilonzo N, et al. Hydrosurgical debridement use associated with decreased surgical site-related readmissions: a retrospective analysis. *Wounds*. 2021 Mar 28. [Epub ahead of print].

Available at: [Wounds](#)

## Key points

Compared with sharp debridement with or without pulse irrigation, use of the VERSAJET II System:

**Significantly reduced the incidence of readmissions due to SSIs** (p=0.0033)

**69%**

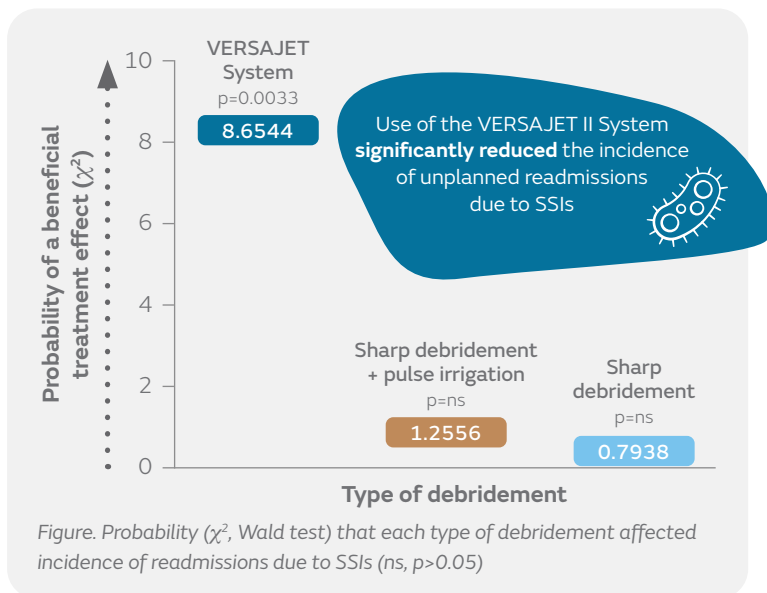
**Reduced the odds of readmission with an SSI after debridement**

## Overview

- An independent, retrospective review of patients who underwent debridement of lower extremity wounds (Jan 2016 to Jun 2018) at the vascular surgery service of a tertiary care wound program at Mount Sinai Hospital, USA
- Differences in the incidences of unplanned readmissions for post-operative SSIs were analysed for three debridement methods
- Chart review was undertaken for 289 patients; 190 had undergone one of three mechanical debridement methods in the operating theatre:
  - VERSAJET II System (n=41)
  - Sharp debridement (with scalpel/scissors; n=132)
  - Sharp debridement and pulse irrigation (n=17)

## Results

- Of the 190 patients who underwent debridement, 40 (21%) had an unplanned readmission due to a wound-related complication within 30 days of discharge
- Use of the VERSAJET II System had a significant beneficial effect on unplanned readmissions due to SSIs compared with sharp debridement, with or without pulse irrigation (p=0.0033; Figure)
- Use of the VERSAJET II System helped to reduce the odds of unplanned readmission due to SSIs by 69% (OR: 0.31; 95% CI: 0.142, 0.677) compared with sharp debridement with or without pulse irrigation
  - Odds of readmission were also reduced using sharp debridement with pulse irrigation (48%; OR: 0.515; 95% CI: 0.161, 1.644), but not with sharp debridement alone (OR: 1.378; 95% CI: 0.681, 2.791)



## Conclusions

Use of the VERSAJET II System to debride lower extremity wounds helped to significantly reduce the incidence of unplanned readmissions due to SSIs compared with sharp debridement, with or without pulse irrigation. The authors suggest this may be due to superior debridement of wounds with irregular contours and that fewer readmissions may help to reduce wound care costs.

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