

+ Evidence in focus

Publication summary: Kirsner R, et al. *Wound Repair Regen* (2019)*

Smith+Nephew

Use of PICO[®] Single Use Negative Pressure Wound Therapy System (sNPWT) helps to reduce wound area, depth and volume compared with traditional negative pressure wound therapy (tNPWT) in patients with venous leg ulcers (VLUs) and diabetic foot ulcers (DFUs)

+ Plus points



Significant reductions in wound area, depth and volume with PICO sNPWT versus tNPWT ($p < 0.02$)*



More patients had complete wound closure at 12 weeks with PICO sNPWT versus tNPWT ($p = 0.002$)

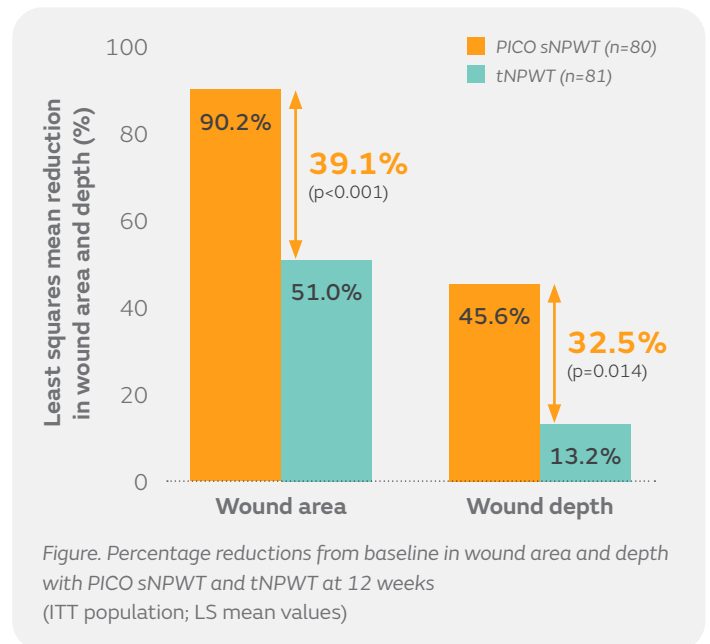
*These statistics come from two patient populations, which include outliers in the dataset

Overview

- A randomized, controlled, multicenter study conducted at 16 centers in the USA and two centers in Canada
- Comparative efficacy study evaluating PICO sNPWT or tNPWT to manage lower extremity ulcers (>4 weeks in duration)
- In total, 161 patients were included in the intention to treat (ITT) population (101 VLUs; 60 DFUs) and were randomized to receive either PICO sNPWT ($n=80$) or tNPWT ($n=81$)
 - The per protocol (PP) population (non-inferiority analysis) included 115 patients (PICO sNPWT, $n=64$; tNPWT, $n=51$)

Results

- Least squares (LS) mean reduction in wound area was significantly greater with PICO sNPWT than tNPWT in the PP population (88.7 vs 58.6%; $p=0.003$) and the ITT population ($p < 0.001$; Figure)
 - Significant LS mean reductions in wound area were also achieved with PICO sNPWT versus tNPWT in VLU (36.2%; $p=0.007$) and DFU (38.8%; $p=0.031$) subgroups
- Reductions in wound depth (Figure) and volume in the PP and ITT populations were also significantly greater with PICO sNPWT versus tNPWT ($p < 0.02$, all comparisons)
- More patients had complete wound closure at 12 weeks with PICO sNPWT than with tNPWT (45 vs 22%; $p=0.002$; ITT population)
- Overall satisfaction with PICO sNPWT was significantly greater than with tNPWT



Conclusions

In patients with VLUs and DFUs, PICO sNPWT significantly reduced wound area, depth and volume compared with tNPWT; complete closure of lower extremity ulcers at 12 weeks was more frequent with PICO sNPWT than with tNPWT.

Citation

*Kirsner R, Dove C, Reyzelman A, Vayser D, Jaimes H. A prospective, randomized, controlled clinical trial on the efficacy of a single-use negative pressure wound therapy system, compared to traditional negative pressure wound therapy in the treatment of chronic ulcers of the lower extremities. *Wound Repair Regen*. 2019;27(5):519-529. Available at: [Wound Repair and Regeneration](#)

Important Safety Information

The PICO pumps contain a MAGNET. Keep the PICO pumps at least 4 inches (10 cm) away from other medical devices at all times. As with all electrical medical equipment, failure to maintain appropriate distance may disrupt the operation of nearby medical devices. For full product and safety information, please see the Instructions for Use.