The geko® W3 device
Clinical Evidence Summary

VLU/Wound healing	Microcirculatory Flow	Oedema Reduction	Pain Reduction
Venous Leg Ulcers (VLU)			
The geko device, landmark, multi-centre self-controlled RCT (hard-to-heal VLUs) showing ~2× acceleration in wound margin advance (WMA) and percentage area reduction (PAR) over 4 weeks when geko was added to standard of care (SoC). Bull et al: https://www.gekodevices.com/media/the-geko-device-venous-leg-ulcer-rct-summary/	**Microcirculatory changes in venous leg ulcers using intermittent electrostimulation** — 16 VLU patients; when NMES (geko) was active vs inactive, wound-bed microvascular flux increased by ~27% and periwound by ~34%; pulsatility increased ~170% in wound bed and ~173% periwound. Das et al: https://www.gekodevices.com/media/das-et-al-1/	**Evaluation of the geko device in non-healing venous leg ulcers.** Oedema decreased in 7 of 10 patients. Varied between 3% and 26% reduction. Harris et al: https://www.gekodevices.com/media/harris-et-al-1/	**Neuromuscular electrostimulation on lower limb wounds (geko device).** In the 8-week case series of mixed / lower limb wounds including VLUs, about 52% of patients reported pain reduction. Jones et al: https://www.gekodevices.com/media/jones-et-al/
Refractory venous leg ulcers: observational evaluation — 11 patients with non-healing VLUs saw mean weekly surface-area reductions of 4.5% (rising to 7.0% in adherent patients). Harris et al: https://www.gekodevices.com/media/harris-et-al-2/	**Neuromuscular stimulation of the common peroneal nerve increases arterial and venous velocity in patients with venous leg ulcers** Das et al: https://www.gekodevices.com/media/das-et-al-2/		
Arterial/Ischaemic Leg Ulcers			
	Microcirculatory Flux and Pulsatility in Arterial Leg Ulcers is Increased by Intermittent NMES — in 8 arterial-ulcer patients, NMES increased wound-bed flux by ~64% (P = 0.0005) and pulsatility by ~452% (P = 0.004); peri-wound flux +37% (P = 0.02), pulsatility +188% (P = 0.002). Bosanquet et al: Bosanquet microcirculatory-flux-and-pulsatility-in-arterial-leg-ulcers		

VLU/Wound healing	Microcirculatory Flow	Oedema Reduction	Pain Reduction
Mixed-Aetiology (Venous + Arterial +/– Diabetic)			
Neuromuscular electrostimulation on lower limb wounds — case series of 30 patients with non-healing wounds (VLU, mixed leg ulcer (MLU), DFU) over 8 weeks: mean wound area decreased by ~7.6 cm^2; granulation tissue increased; 2/30 (≈ 6.7%) achieved complete re-epithelialization. Jones et al. https://www.gekodevices.com/media/jones-et-al/	**Speckle study in arterial, mixed and diabetic foot ulcers using geko** — open-label; among mixed-aetiology ulcers (n=8), NMES produced increases in wound-bed flux (~38%, p=0.023) and peri-wound flux (~19%, p=0.009); pulsatility rose by ~214% in wound bed (95%CI 51-985%, p=0.017) and ~122% peri-wound (p=0.014). Health Research Authority+1	**Case study — Impact of the geko™ device, as an adjunct to standard care, on the healing of a mixed aetiology ulcer.** Results show a reduction in exudate and oedema. Stuart Elliot: https://www.gekodevices.com/media/stuart-elliott-2/	**Neuromuscular electrostimulation on lower limb wounds (geko device).** 52% of patients reported pain reduction. Jones et al: https://www.gekodevices.com/media/jones-et-al/
			Case study — management of a mixed arterial wound. Reports a reduction in pain and able to reduce use of analgesics. Nichola Dee: https://www.gekodevices.com/media/nichola-dee/
Diabetic Foot Ulcer (DFU)			
Neuromuscular Electrostimulation of the Common Peroneal Nerve Increases Microvascular Flux in the Wound bed of Diabetic Foot Ulcers — 13 patients (11 neuropathic, 2 neuro-ischaemic): showed substantial acute increases in microvascular flux and pulsatility with geko stimulation. Bosanquet et al: https://pmc.ncbi.nlm.nih.gov/articles/PMC12301529/	**Neuromuscular Electrostimulation of the Common Peroneal Nerve Increases Microvascular Flux in the Wound bed of Diabetic Foot Ulcers** — 13 patients (11 neuropathic, 2 neuro-ischaemic): showed substantial acute increases in microvascular flux and pulsatility with geko stimulation. Bosanquet et al: https://pmc.ncbi.nlm.nih.gov/articles/PMC12301529/		

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