

# Transformative Impact of Vaporox on Complex Wound Healing: Pyoderma Gangrenosum

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The Next Generation of Advanced Wound Care

## Introduction:

Pyoderma gangrenosum (PG) is a rare, painful, and often treatment-resistant condition that results in chronic, ulcerative wounds. Its rapid progression and frequent misdiagnosis make timely, effective intervention critical to avoid severe tissue damage, infection, and extended hospitalization. Traditional therapies often fall short, highlighting the urgent need for innovative approaches. Vaporox (Vaporox Inc., Denver, CO) —delivers alternating cycles of hydrating vapor and concentrated oxygen to support tissue healing. In addition to promoting recovery, Vaporox appears to offer immediate analgesic effects, providing meaningful relief for patients suffering from significant wound-related pain. For complex wounds like PG, therapies that accelerate healing while easing discomfort can play a transformative role in care.

## Conclusion:

Vaporox improved tissue oxygenation, reduced wound size, and showed no signs of infection across complex cases. Imaging data suggest benefits are linked to nitric oxide activity, angiogenesis, and reduced inflammation—supporting its role in managing hard-to-heal wounds.

## Methods

- Case Series of 2 patients with chronic lower extremity PG wounds
- Received 2 Vaporox sessions per week
- Used Mimosa (NIRS) and thermography pre- and post-treatment
- Monitored: Wound size, granulation tissue formation, tissue oxygenation
- Follow-up: up to 12 Weeks

## Discussion

- Vaporox shows strong potential as an adjunctive therapy
- Significant healing and analgesic effects reported
- Supports broader clinical adoption in PG wound protocols

## Results:

- Pain reduction in both patients within first Vaporox treatment
- Wound surface area decreased over the study period
- Patients A and B saw a 1.58x and 1.37x increase in oxygenation from baseline, respectively
- Evidence of nitric oxide activity, increased angiogenesis, and decreased inflammation

## 3-year-old Full Thickness Pyoderma/Chronic Venous Ulcer, Ongoing



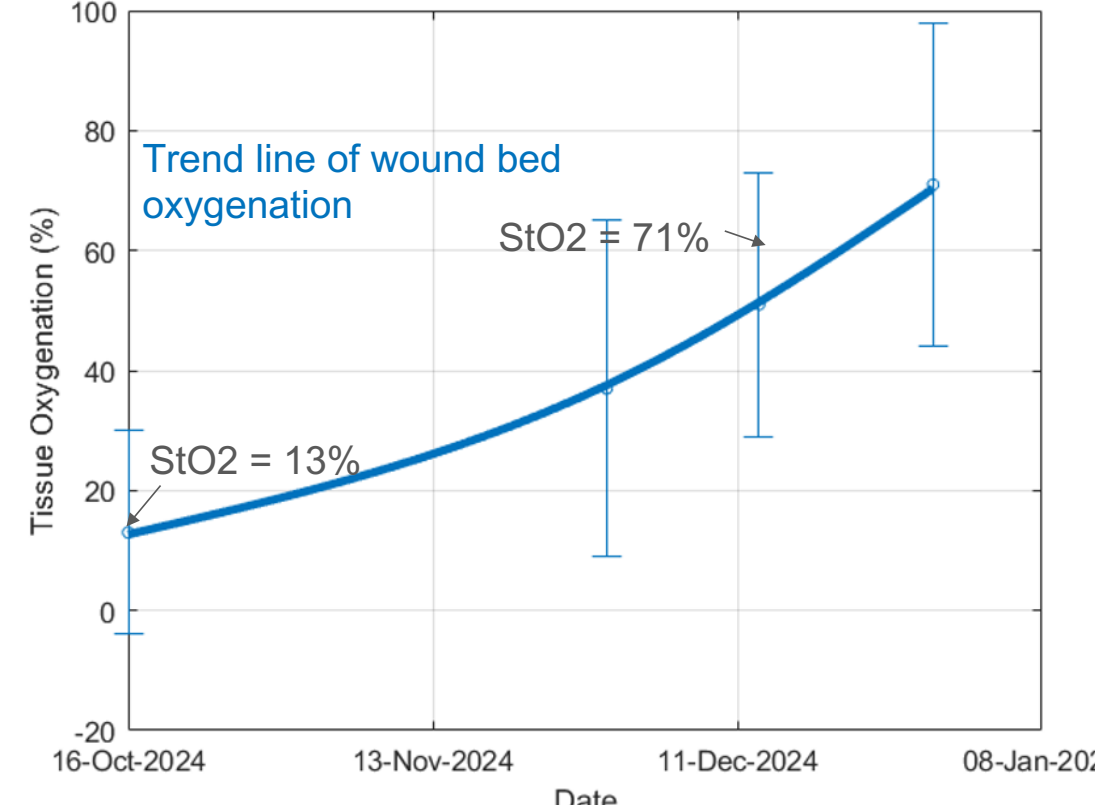
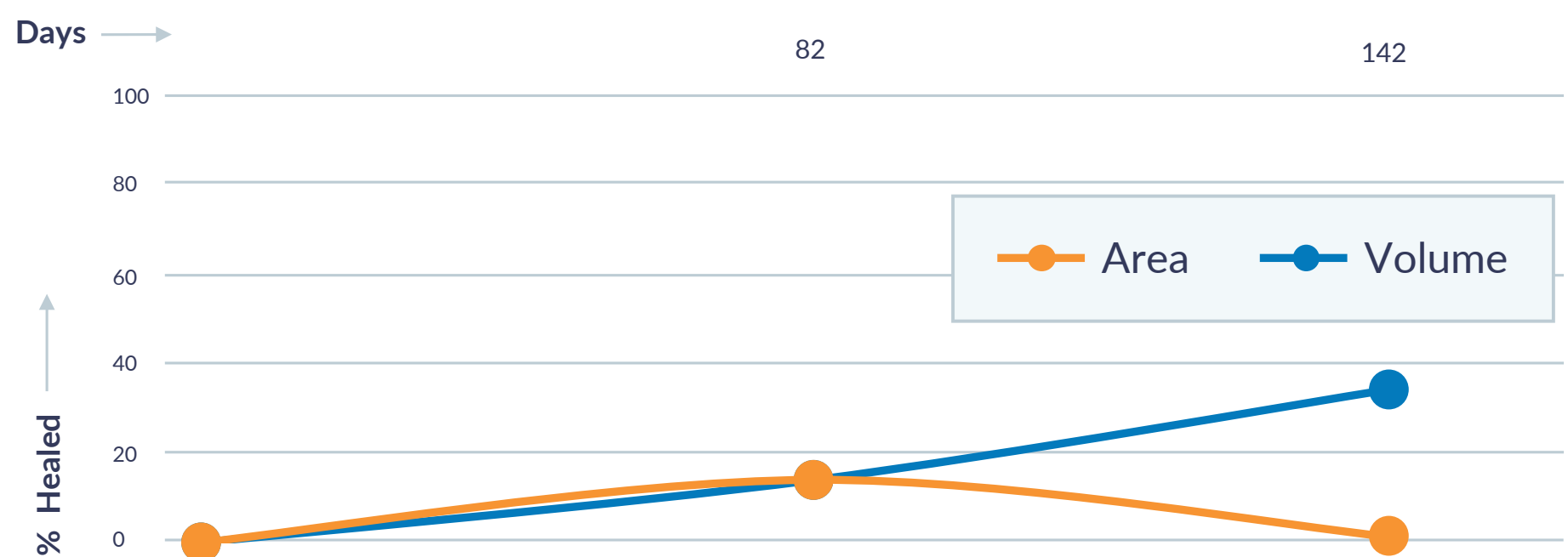
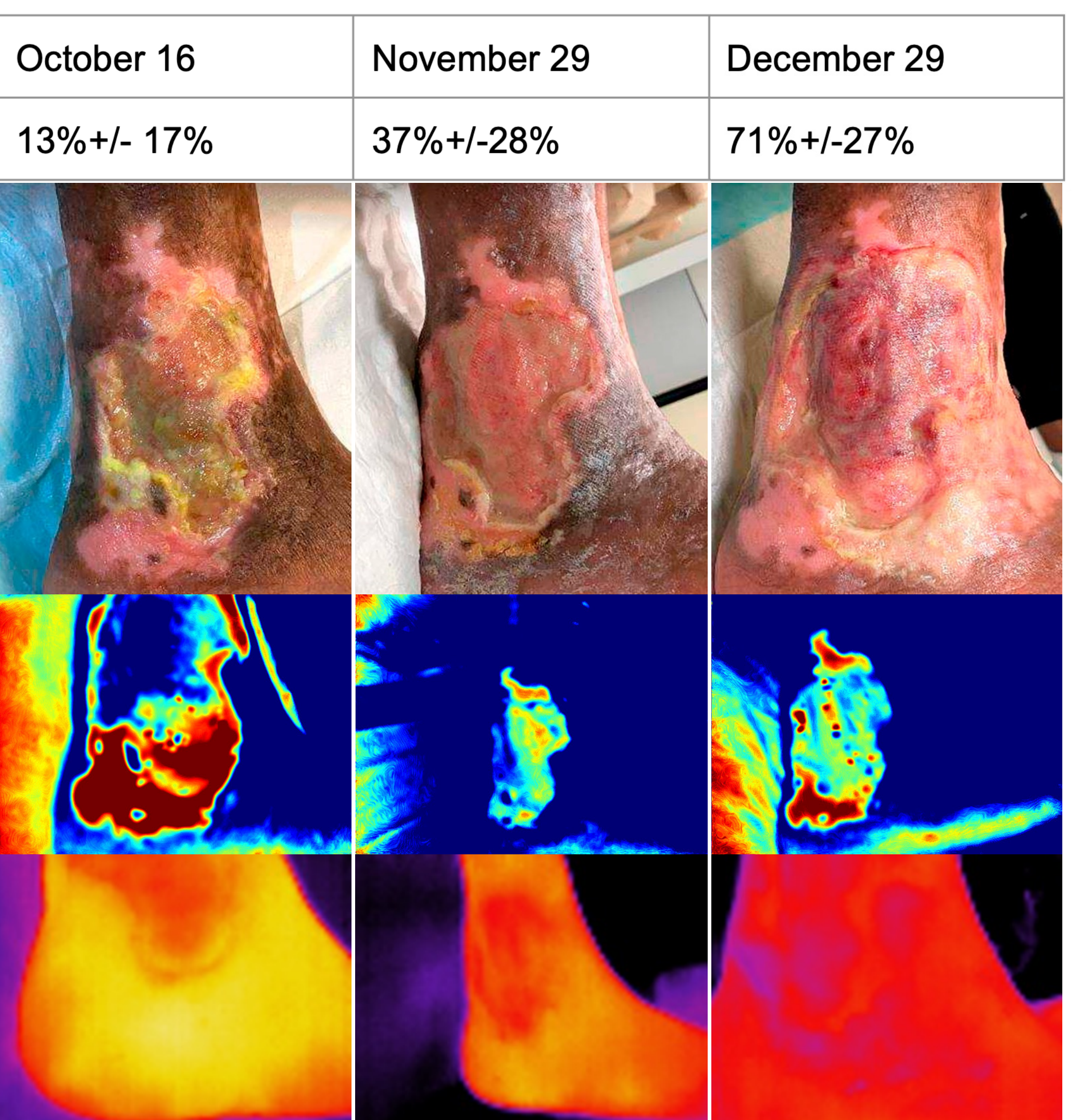
### Background

**Patient A Information**

- Age: 65
- Male

### Comorbidities

- Anxiety
- Depression
- PVD
- Fibromyalgia
- Neuropathy
- Varicose Veins
- Rheumatoid Arthritis
- Pulmonary Disease

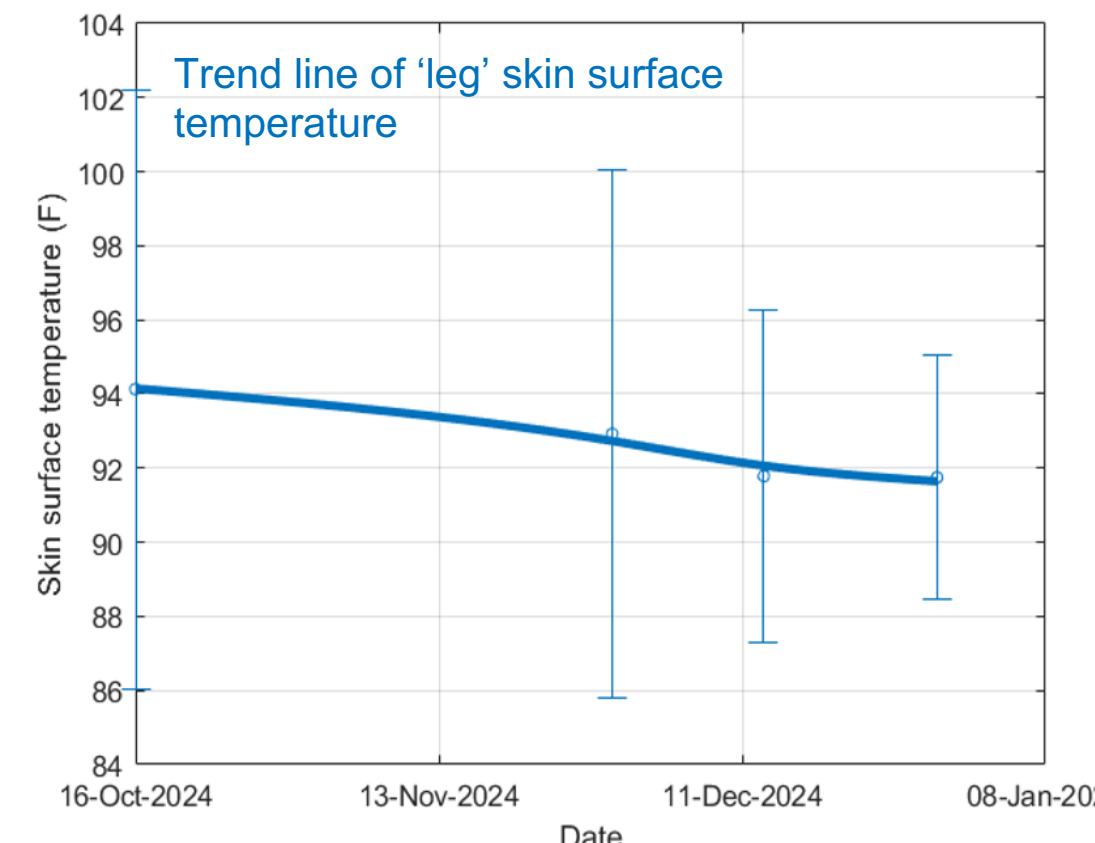


**Change in Baseline Tissue Oximetry (StO<sub>2</sub>)**  
58% increase in mean wound bed StO<sub>2</sub> in 10-weeks of VHT treatment.

**10% Change** | Meaningful change from baseline in tissue oximetry (StO<sub>2</sub>). This could represent a change from previous visit or post procedure or a treatment.

**General Guide:**

- >50% Viable skin tissue
- 40~49% Clinical vigilance
- <39% Ischemic/compromised



**Temperature as it Relates to Oxygenation and Wound Healing**  
A decrease in temperature paired with rising oxygenation and healing suggests:

- Nitric oxide activity
- Increased angiogenesis
- Reduction of inflammation

## 1.5-year-old Full Thickness Venous Leg Ulcer/PG, Ongoing



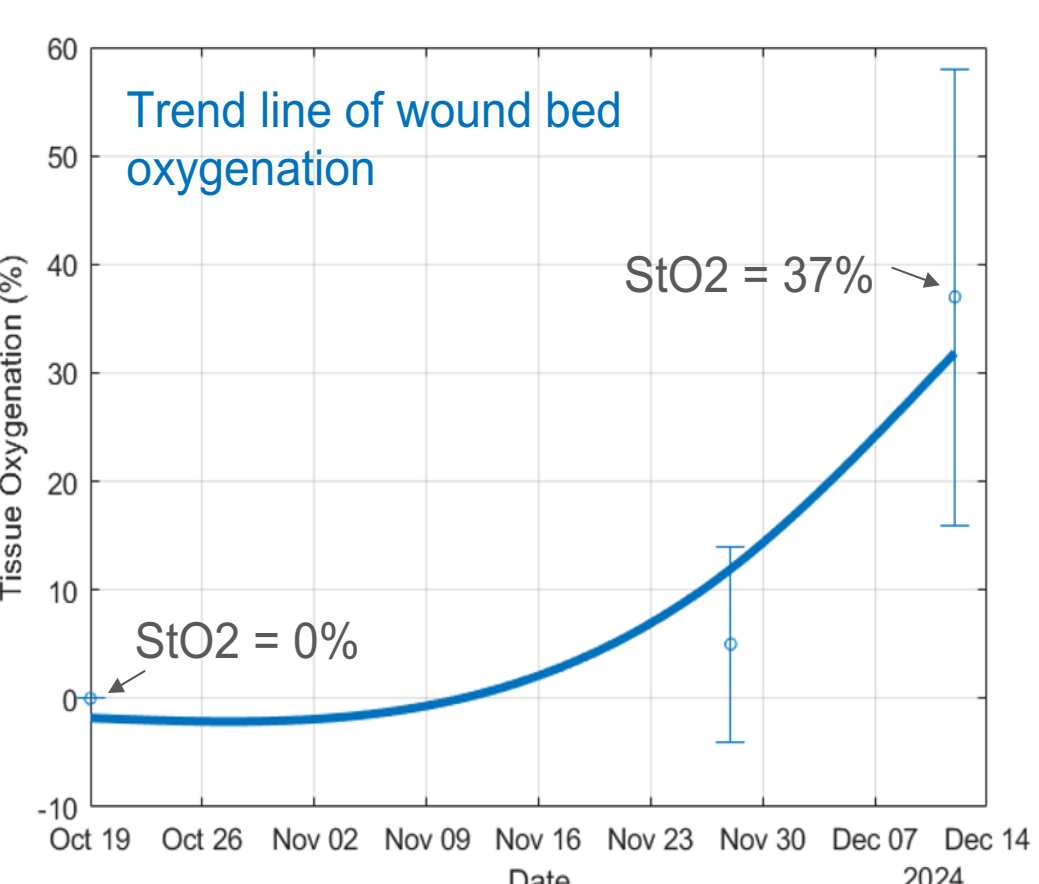
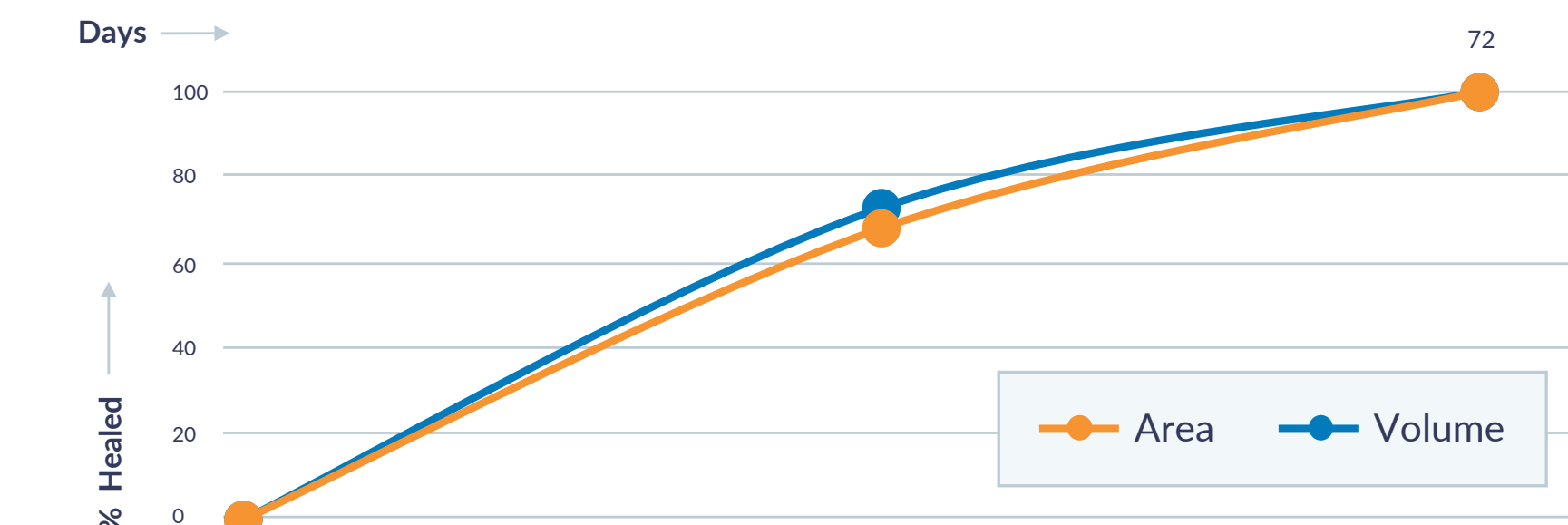
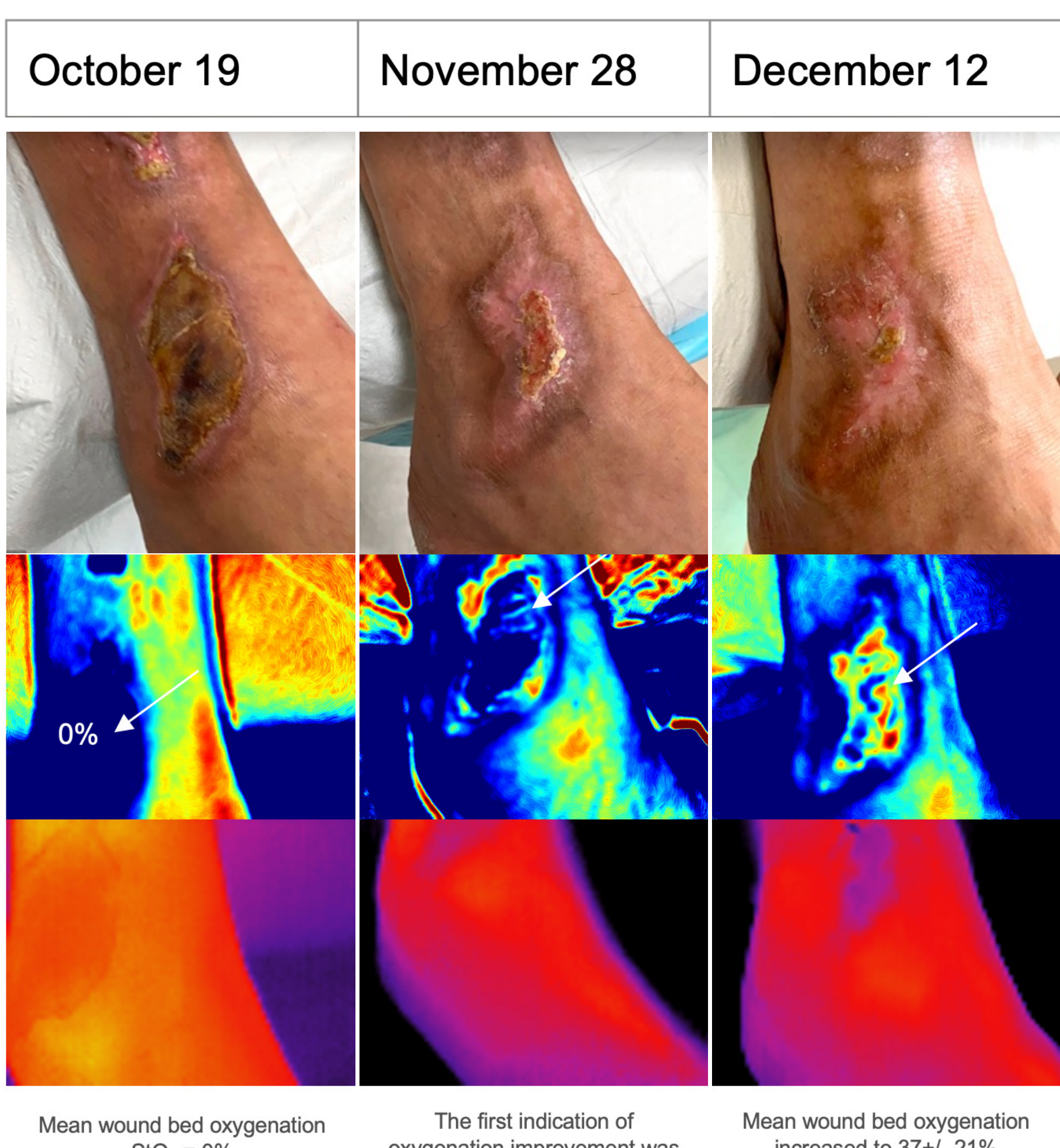
### Background

**Patient B Information**

- Age: 66
- Female

### Comorbidities

- Anemia
- Kidney Disease
- Hypertension
- Poor Circulation

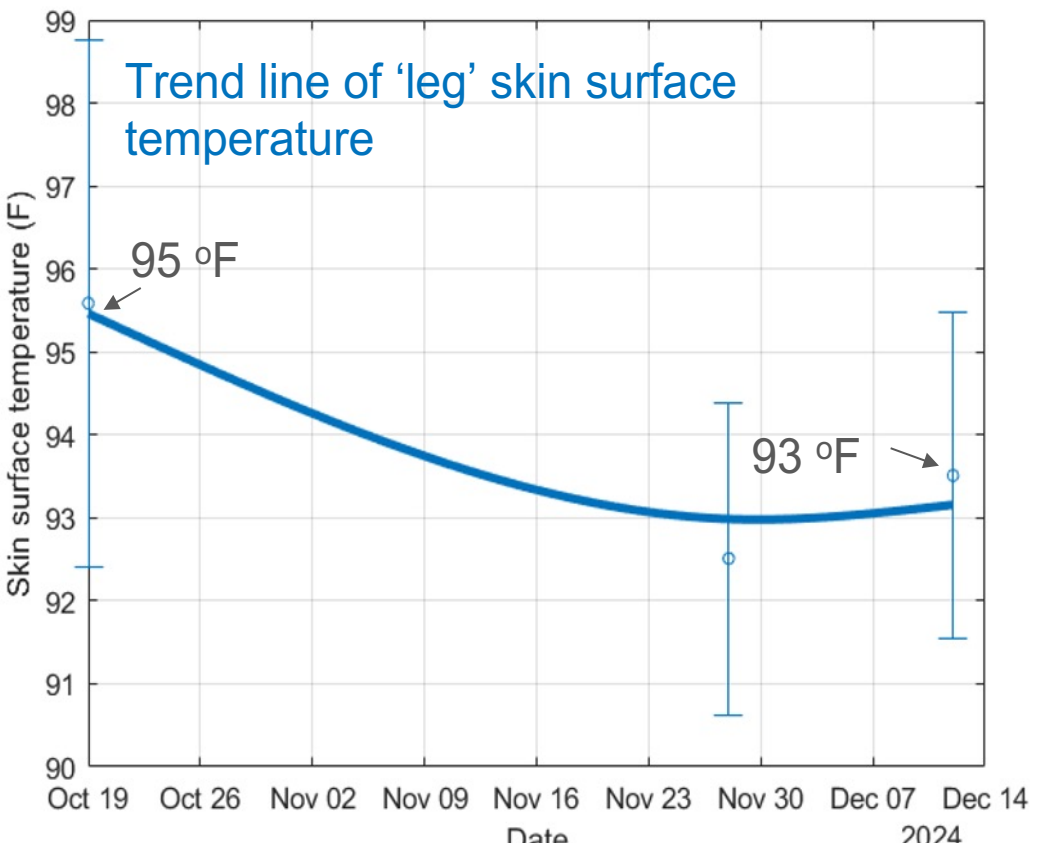


**Change in Baseline Tissue Oximetry (StO<sub>2</sub>)**  
37% increase in mean wound bed StO<sub>2</sub> in 8-weeks of VHT treatment.

**10% Change** | Meaningful change from baseline in tissue oximetry (StO<sub>2</sub>). This could represent a change from previous visit or post procedure or a treatment.

**General Guide:**

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