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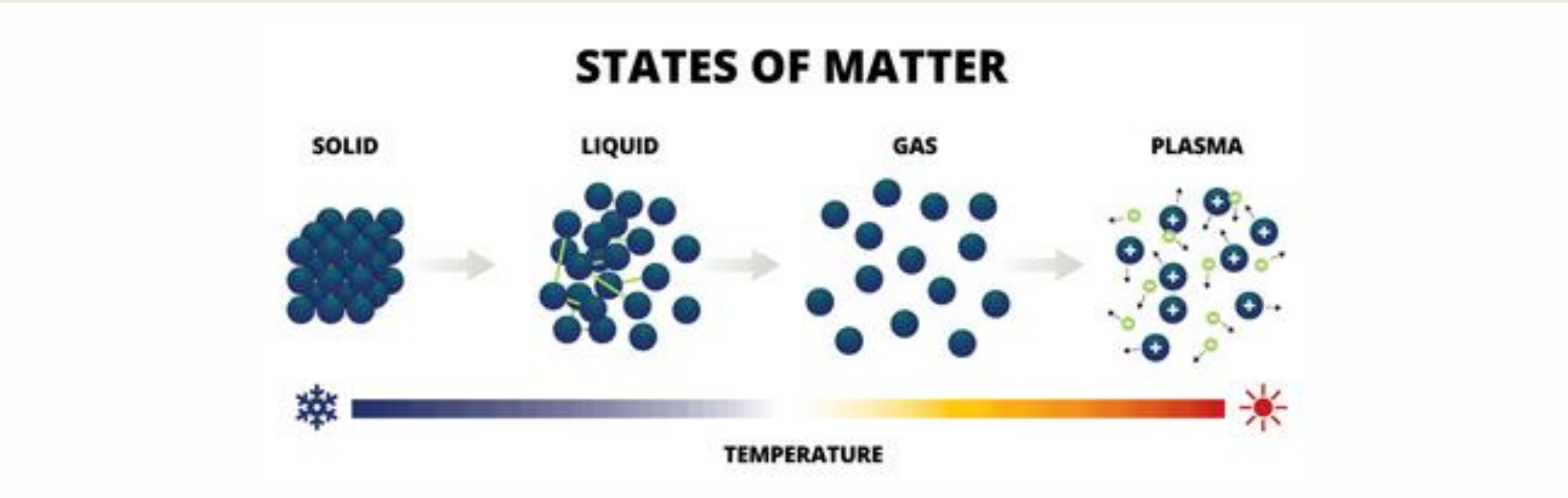
Randomized Trial of Adjunctive Cold Atmospheric Plasma for Diabetic Foot or Venous Leg Ulcers.

COSMAS

01. Introduction

Cold Atmospheric Plasma (CAP) is the fourth state of matter. It is produced when energy is added to a gas. When applied to the skin , the ionised gas:

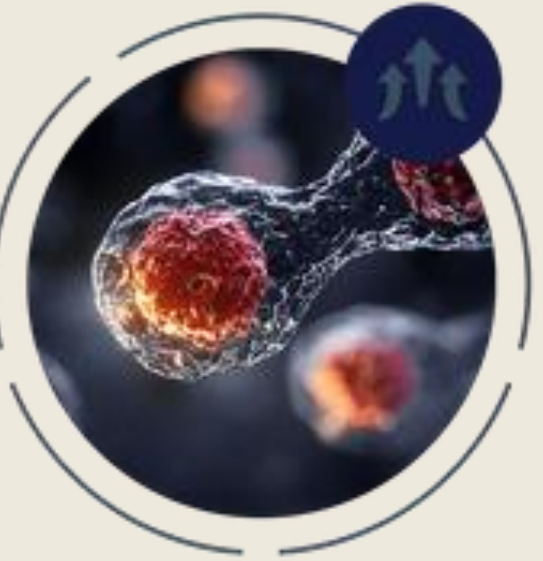
- Stimulates the release of reactive oxygen and nitrogen species
- Breaks down the bacterial biofilm, kills bacteria
- Stimulates immune cells and fibroblasts-
- Enhances tissue microcirculation



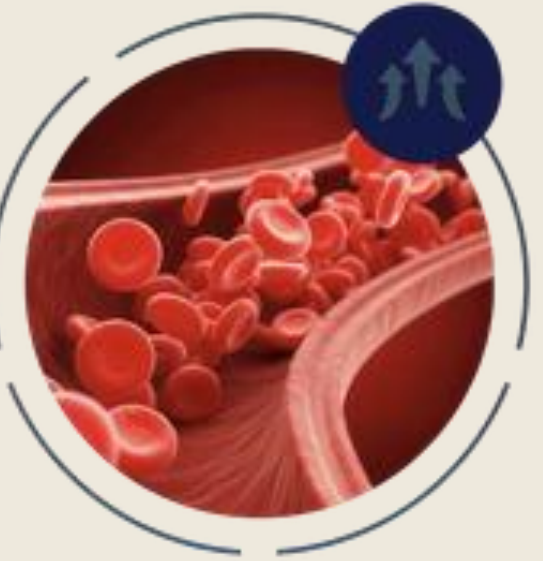
KILLS BACTERIA



INACTIVATES BIOFILM



STIMULATES CELL PROLIFERATION



IMPROVES MICROCIRCULATION

02. Objective

Primary Objectives

Does the adjunctive treatment with CAP lead to an increase in the number of ulcer-free days when compared to standard wound care (SWC) alone in patients with diabetic foot ulcers (DFU) or venous leg ulcers (VLU)?

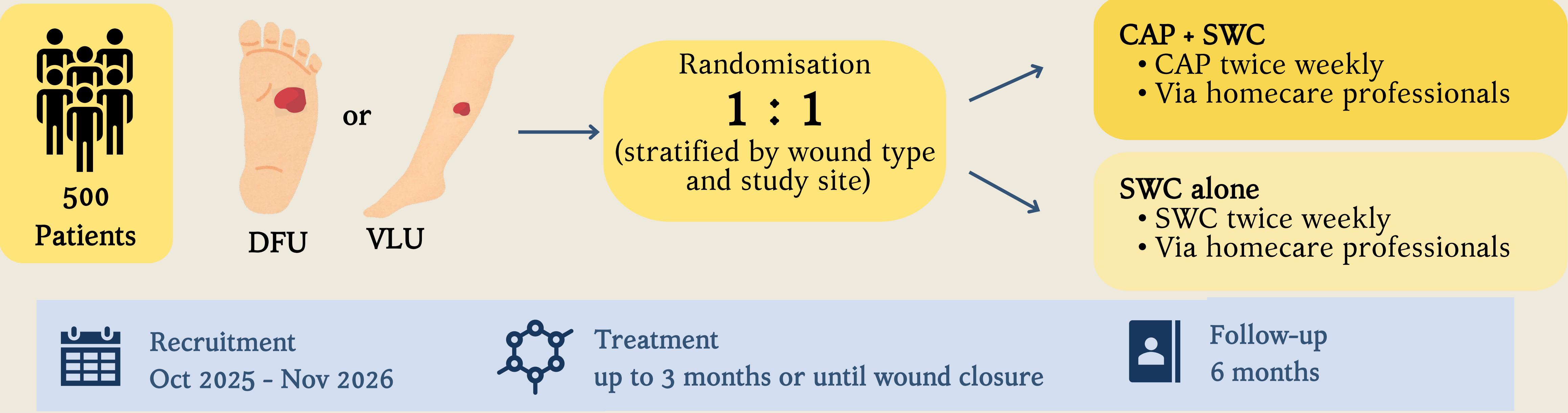
Secondary Objectives

- Wound healing rate,
- Infection,
- Presence of amputations,
- Quality of life
- Cost-effectiveness of CAP



03. Methodology

A pragmatic, multicentre, open-label, randomized controlled trial evaluating the clinical and cost-effectiveness of CAP + SWC vs SWC alone



04. Current Literature

Authors	Study Design: Wound type	Intervention Vs Control (inclusions)	Outcomes
Stratmann et al. (2020)	RCT : DFU	CAP (33) vs placebo (32)	Wound area reduction (WAR) (69.5% vs 44.8%, p=0.03) Clinical Infection 85% vs 88% (p=0.91) Bacterial load reduction 53% vs 50% (p=0.59)
Strohal et al. (2022)	RCT : DFU	CAP (38) vs SWC (39)	Wound Granulation increase CAP +35.89% vs SWC +31.86% (p<0.0001) Non-inferiority
Bakker et al. (2024)	RCT :VLU	CAP 1x (17) vs CAP 2x week (14) vs SWC (15)	% of healed wounds healed at 12weeks 53.3% vs 61.5% vs 25% (p=0.16 vs p=0.07)
Rached et al. (2023)	RCT : VLU + arterial ulcers	CAP (25) vs SWC (22)	Wound closure rate 1.64 vs 2.14 (p=0.03)

05. Conclusion

What makes COSMAS special?

