

# Cellular and Acellular Tissue-Based Products vs Standard of Care on Diabetic Foot Ulcer Healing: A Meta-Analysis

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## Introduction

Patients with diabetes are at an increasing risk of developing chronic adverse events due to diabetes-associated complications. Diabetic foot ulcers (DFUs) occur in about 15% of all diabetic patients.

## Methods

We conducted a meta-analysis to compare the complete wound healing rates of patients receiving cellular and acellular tissue-based products (CTPs) grafts with standard of care (SOC) and with SOC alone.

## Results

A total of 21 randomized-controlled trials (RCTs) involving 2,255 DFU patients were included in the meta-analysis. The results indicated that the complete healing rate for CTP plus SOC patients was higher than for patients receiving SOC only. The mean effect size (OR) is 2.945 (95% CI: 2.193-3.956). Patients in the CTP plus SOC group were almost 3 times (2.945) more likely to achieve 100% wound closure than those treated with SOC only at the endpoint of the studies.

## Conclusion

Meta-regression analysis of the moderators indicated that two of the three moderators, average age and average wound size (baseline), displayed a non-significant relationship to effect size while the third moderator, sample size, demonstrated a negative relationship with the effect at the statistical significance level ( $p < 0.05$ ).

