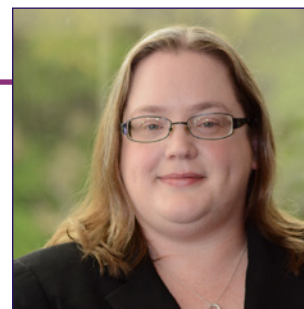


# Summary of a 3M™ Promogran™ Matrix Family Systematic Review and Meta-Analysis

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The number of complex wounds requiring treatment has been increasing.<sup>1</sup> To meet the demand, wound care dressings have evolved to target the wound environment and help remove barriers to healing.<sup>2,3</sup> 3M™ Promogran™ Matrix Family dressings are advanced wound dressings that help maintain a physiologically moist wound environment and promote the development of granulation tissue and epithelization during wound healing.<sup>4-6</sup> In order to provide a more comprehensive assessment of the efficacy of the Promogran Matrix Family, Chowdhry et al utilized a systematic review and meta-analysis of literature to assess Promogran Matrix Family efficacy in the treatment of multiple wound types compared to standard of care dressings.<sup>7</sup>

The systematic literature search was conducted using PubMed, EMBASE and QUOSA for comparative studies published between 1996 and 2020, written in English, with study populations  $\geq 10$ .<sup>7</sup> The meta-analyses utilized the random-effects model. Differences in wound closure rate, percent wound area reduction, wound area reduction, time to complete healing, days of therapy, number of dressing applications, pain, and concentrations of MMP-2, elastase, plasmin and gelatinase were examined.

## SUMMARY OF PUBLISHED RESULTS

A total of 20 comparative studies were included in the meta-analyses.<sup>7</sup> The most common wound types assessed included diabetic foot ulcers and venous leg ulcers; however, several studies were not restricted by wound type and reported on multiple wound types within the study population.<sup>7</sup>

Chowdhry et al reported that wounds treated with Promogran dressings were 3.4 times more likely to close than wounds receiving standard control dressings, and a statistically significant effect in favor of Promogran Matrix Family dressing use was found for percent wound area reduction ( $p=0.006$ ) and wound area reduction ( $p=0.017$ , **Table 1**).<sup>7</sup>

Limited reporting or inconclusive data prevented the assessment of time to complete healing, days of therapy, number of dressing applications, pain, and MMP-2, elastase, plasmin, and gelatinase concentrations.<sup>7</sup>

Adverse events were reported for 7.1% of patients receiving Promogran Matrix Family dressings compared to 17.9% of patients receiving control dressings, although serious adverse events were low for both groups (2.0% Promogran Matrix Family vs 7.9% Control).<sup>7</sup>

Table 1. Summary of meta-analyses

Subgroup analysis	Number of Studies	Odds Ratio (95% CI)	Effect Estimate of Standard Mean Differences (95% CI)	P-value
Proportion of Wounds Closed	10	3.4 (1.15, 10.1)	N/A	0.027
Percent area reduction	4	N/A	1.11 (0.32, 1.90)	0.006
Wound area reduction	2	N/A	0.61, 0.11, 1.11	0.017

CI= confidence interval; N/A= Not applicable. Adapted from Chowdhry et al.<sup>7</sup>

## DISCUSSION

Chowdhry et al performed a systematic review and meta-analysis of literature to assess Promogran Matrix Family efficacy in the treatment of multiple wound types compared to standard of care dressings.<sup>7</sup> In these analyses, Promogran Matrix Family dressing use was associated with increased wound closure rates, wound area reduction, and a decrease in adverse events compared to standard dressings.<sup>7</sup>

Limitations exist for this study including limited published large, comparative studies, inconsistencies with literature reporting patient population characteristics, and differences in data reporting between published studies used for the meta-analyses. However, the authors took steps to mitigate the study limitations by following a well-defined systematic literature search protocol, limiting the inclusion of studies with small, non-comparative populations, and using the random effects model to minimize potential population heterogeneity.<sup>7</sup>

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