Does DERMABOND® PRINEO® Skin Closure System reduce hospital costs, hospital length of stay, and wound complication rate in Cesarean section compared to standard of care?

Retrospective, observational study using the Premier® Perspective Hospital Database

CONCLUSION
In a retrospective study, C-section closure with DERMABOND PRINEO System was associated with lower total hospital costs, shorter hospital stay, and fewer wound complications compared to skin staples with wound dressings.[1]

METHODS
• Retrospective, observational study of Premier® Perspective data from over 700 US hospitals between January 2012 and March 2017**
• Patients >18 years old who had either DERMABOND PRINEO System or skin staples with wound dressing for C-section closure
• Study groups propensity score matched according to patient demographics, admission and hospital/provider characteristics, obstetric history, comorbidities, and other variables

STATISTICAL ANALYSIS METHODS
• Groups propensity score matched using preferential within-cluster,[†] variable-ratio (1:3/weighted,‡ caliper=0.2 ) matching to balance groups and minimize bias
• After matching, multivariable regression analyses controlled for selected characteristics that still differed between groups

Primary Endpoints: Total hospital costs, hospital length of stay
Exploratory Endpoints: Wound complications, 30-, 60-, and 90-day all-cause readmissions

DERMABOND PRINEO System Group
n=2,133
C-section Wound Closure

Skin Staples with Wound Dressing Group
n=2,133
C-section Wound Closure

*Due to the non-randomized nature of this study, causality cannot be established for the observed relationships. Other unmeasurable variables, such as provider skill and overall patient health, may lead to residual confounding after adjusted analyses.
†Patients first matched to similar (based on propensity score) patients within the same hospital. If an adequate match was unattainable, a match from a different hospital was used if it met the matching criteria (caliper).
‡Each DERMABOND PRINEO System patient was matched with up to 3 SoC patients; after which, a simple frequency weighting scheme was applied to account for the variable-ratio matching.
** Based on US data
**RESULTS**

**Total Hospital Costs**
C-section closure with DERMABOND® PRINEO® Skin Closure System was associated with lower total hospital costs compared to skin staples.

**DERMABOND PRINEO System** patients saved an average of $434 in hospital costs

\[ P=0.025 \]

\( P \) values <0.05 denote statistical significance.

**Hospital Length of Stay**
Patients in the DERMABOND PRINEO System group had a shorter hospital length of stay compared to skin staples.

**DERMABOND PRINEO System** patients experienced a 5% reduction in length of stay

\[ P=0.007 \]

\( P \) values <0.05 denote statistical significance.

**Average in-patient daily cost in Canada is $1145**

In addition to DERMABOND PRINEO System’s clinical benefits, no postsurgical dressings may mean easier self-care and greater self-confidence for patients.

**Wound Infections and Wound Complications**
Following C-section, patients in the DERMABOND PRINEO System group had fewer wound infections and wound complications compared to skin staples.

**DERMABOND PRINEO System** provides a flexible microbial barrier with 99% protection in vitro for 72 hours against organisms commonly responsible for SSIs.

**Wound Infection Rate**

<table>
<thead>
<tr>
<th></th>
<th>DERMABOND PRINEO System</th>
<th>Skin staples with wound dressing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wound Infection Rate</td>
<td>0.7%</td>
<td>1.6%</td>
</tr>
<tr>
<td>( P=0.011 )</td>
<td>( P ) values &lt;0.05 denote statistical significance.</td>
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**Wound Complication Rate**

<table>
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<th>DERMABOND PRINEO System</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Wound Complication Rate</td>
<td>0.6%</td>
<td>1.3%</td>
</tr>
<tr>
<td>( P=0.036 )</td>
<td>( P ) values &lt;0.05 denote statistical significance.</td>
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</tr>
</tbody>
</table>

**DERMABOND PRINEO System patients experienced fewer wound infections**

**DERMABOND PRINEO System patients also encountered fewer wound complications**

\*Based on US data

**Due to the non-randomized nature of this study, causality cannot be established for the observed relationships. Other unmeasurable variables, such as provider skill and overall patient health, may lead to residual confounding after adjusted analyses. No statements are intended to imply efficacy or safety results – this was an economic study.**

\†Staphylococcus epidermidis, Escherichia coli, Staphylococcus aureus, Pseudomonas aeruginosa, and Enterococcus faecium.

**References:**

**For complete indications, contraindications, warnings, precautions, and adverse reactions, please reference full package insert.**