The thumb is responsible for approximately 40-50% of all hand function. A loss of that digit may cause profound functional disability, psychological stress, and impairment to the patient’s livelihood and quality of life.

This 30-year-old woman without any significant past medical or surgical history, accidentally amputated her right thumb at the metacarpophalangeal joint while using a table saw. She was immediately brought to the emergency department with the amputated digit and was taken urgently to the operating room for attempted replant. Unfortunately, this was unsuccessful and the patient was discharged from the hospital on oral antibiotics and referred for soft tissue coverage and secondary reconstruction. She was seen in the outpatient clinic one week after injury.

At initial assessment, the wound measured 2 x 3 cm with adequate vascularized subcutaneous tissue coverage of the thumb’s proximal phalanx. Due to the level of the amputation, additional bony reconstruction was indicated to restore thumb length. Prior to staged bone length restorative procedures, the decision was made to first obtain stable soft tissue coverage using PriMatrix® Ag Dermal Repair Scaffold. PriMatrix Ag was chosen in this case due to the contaminated nature of the wound, though no signs of overt infection were noted.

The wound was debrided in the OR and PriMatrix Ag was applied and secured with a bolster dressing of cotton balls soaked in mineral oil wrapped in xeroform gauze.

One week after PriMatrix Ag application, engraftment was observed and the bolster was discontinued. Daily dressing changes of non-adherent dressing, hydrogel wound dressing and dry gauze were managed by the patient. She was seen weekly in the clinic initially, and then every other week.

The initial plan was to skin graft the wound 2-3 weeks after PriMatrix Ag application, but two weeks after application, evidence of epithelialization was noted at the wound margins, and the decision was made to continue with dressing care until complete wound closure. Complete closure of the wound was achieved by six weeks without any skin grafting.

Two months after PriMatrix Ag application, definitive reconstruction of the digit was undertaken. Complete reconstruction required four additional procedures, all of which required incision through the tissue generated with the PriMatrix Ag graft. All incisions healed without complication and the regenerated tissue was noted to have handling characteristics comparable to the surrounding uninjured skin.

**Conclusion:**
PriMatrix Ag was successfully used to close this amputation wound site within two months, allowing for definitive reconstruction of the severed digit and facilitating the restoration of function to the dominant hand in a patient who failed replantation.
PriMatrix® and PriMatrix® Ag Ordering Information

<table>
<thead>
<tr>
<th>Size</th>
<th>Integra PriMatrix</th>
<th>Integra PriMatrix Ag</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Solid</td>
<td>Fenestrated</td>
</tr>
<tr>
<td>8 x 8 cm</td>
<td>607-001-880</td>
<td>607-004-880</td>
</tr>
<tr>
<td>8 x 12 cm</td>
<td>607-001-812</td>
<td>-</td>
</tr>
<tr>
<td>10 x 12 cm</td>
<td>607-001-112</td>
<td>-</td>
</tr>
<tr>
<td>20 x 25 cm</td>
<td>607-001-225</td>
<td>-</td>
</tr>
</tbody>
</table>

PriMatrix® Ag is intended for the management of wounds that include:
- Partial and full thickness wounds
- Pressure, diabetic, and venous ulcers
- Second-degree burns
- Surgical wounds-donor site wounds, post-Mohs surgery, post-laser surgery, pediculic, wound dehiscence
- Trauma wounds - abrasions, lacerations and skin tears
- Tunnelled/undermined wounds
- Draining wounds

Contraindications
- PriMatrix® Ag Antimicrobial should not be used for patients with a known history of hypersensitivity to silver, collagen, or bovine products
- PriMatrix® Ag is not indicated for use in third-degree burns.

Warnings and Precautions
- Do not expose to chemicals or substances other than sterile, room temperature 0.9% saline.
- Excessive heat can damage collagen. Do not hydrate in 0.9% saline warmed above room temperature. If, when hydrated, the product shrinks in size, DO NOT use the product as it may be damaged.
- PriMatrix® Ag Antimicrobial should be used with caution in regions where an infection exists or is suspected. Treat any existing infection appropriately.
- PriMatrix® Ag Antimicrobial is for single use only. Do not re-sterilize as this may damage PriMatrix® Ag Antimicrobial.
- Do not use product if past the date of expiration indicated on the product label.
- PriMatrix® Ag Antimicrobial is available in meshed, fenestrated, and solid forms. Meshing of meshed and fenestrated PriMatrix® Ag Antimicrobial is not recommended.
- Silver-containing compounds are known to cause a condition known as argyria, a silver induced darkening of the skin. Frequent or prolonged use of PriMatrix® Ag Antimicrobial may result in skin discoloration.

Potential Complications
The following complications are possible. If any of these conditions occur, the device should be removed: infection; chronic inflammation; allergic reaction; excessive redness, pain, swelling, or blistering.

References

Availability of these products might vary from a given country or region to another, as a result of specific local regulatory approval or clearance requirements for sale in such country or region.

- Non contractual document. The manufacturer reserves the right, without prior notice, to modify the products in order to improve their quality.
- Warning: Applicable laws restrict these products to sale by or on the order of a physician.
- Consult product labels and inserts for all indications, contraindications, warnings, precautions, and instructions for use.

For more information or to place an order, please contact:

United States, Canada, Asia, Pacific, Latin America
USA 800-654-2873 • 888-980-7742 fax
International +1 609-936-5400 • +1 609-750-4259 fax
integrallife.com

PriMatrix, Integra and the Integra logo are registered trademarks of Integra LifeSciences Corporation or its subsidiaries in the United States and/or other countries.
©2019 Integra LifeSciences Corporation. All rights reserved. Printed in USA.