BioBridge®
Resorbable Chest Wall Stabilization Plate

Innovative Solutions for Challenging Thoracic Procedures
BioBridge® is a versatile, non-permanent solution for chest wall stabilization. It was specifically designed to offer strength that exceeds typical chest wall loading\(^1\) and a resorption time that outlasts typical bone healing time\(^1\).

**VERSATILE SOLUTION**

- Osteotomy stabilization
- Chest wall reconstruction
- Costochondral junction repair
- Pectus repair

**SUTURE PATTERNS**

- Simple interrupted
- Figure-of-eight
- Compression

**PLATE ATTRIBUTES**

- Sterile packed
- Non-permanent
- Customizable
Stackable

Resorbable

Flexible and Moldable

Trimmable
Costochondral Junction Repair
Fractured cartilage caused by trauma or during a thoracotomy can be challenging to repair and require extended healing time. BioBridge can be used to stabilize the fracture through reduction and compression.

Chest Wall Reconstruction
Reconstruction may be indicated due to chest wall tumors (benign and malignant), radiation necrosis, contiguous lung or breast cancer and lung/chest wall infections and trauma.

The reconstruction technique, as described in “Chest Wall Reconstruction Using Biomaterials” provides long-term chest wall stability through bone healing and/or soft tissue scarring.

A detailed overview of this technique can be found at www.acuteinnovations.com.
During a modified Ravitch procedure, BioBridge can be used as a non-permanent strut instead of using suture alone. This technique provides added support to the elevated sternum, with the goal of reducing recurrence of the pectus deformity. For precise technique information please visit www.acuteinnovations.com to download a copy of “Open Pectus Repair – BioBridge Sternal Support”.

An osteotomy or iatrogenic fracture of the ribs during thoracotomy has been associated with post thoracotomy pain. BioBridge is ideal for internal stabilization of these types of fractures, if a non-permanent solution is desired.
**SUTURE PATTERNS**

Non-absorbable sutures, like braided polyester or nylon sutures (USP sizes 0 to 5), are recommended for use with BioBridge.

**Simple Interrupted**
A simple interrupted suture can either be wrapped around the rib or through a hole drilled in the rib, as shown.

**Figure-of-eight**
A figure-of-eight suture can be used to stack the plates for increased rigidity and/or length.

**Compression**
A compression suture may be added by drilling holes off-centered from the holes on the plate.
**Plate Attributes**

BioBridge® is non-permanent, versatile, and customizable:

- Sterile and single-packed
- 110mm x 14mm x 1.8mm
- 70:30 L/DL-lactide blend
- Maintains strength and stability for up to six months\(^1\)
- Fully resorbed within 18-24 months through hydrolysis\(^1\)
- Textured for easy handling and visibility
- Can be cut or molded to match the rib curvature
- Plates can be stacked for increased rigidity and/or length

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### Bending Strength\(^{1,5,6,7}\)

<table>
<thead>
<tr>
<th>Bending Moment (N·m)</th>
<th>BioBridge</th>
<th>Cough</th>
<th>Breathing</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3.46</td>
<td>1.10</td>
<td>0.37</td>
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BioBridge was specifically designed to withstand the forces of the chest wall while providing semi-rigid fixation, thus promoting bone regeneration. A lab test has shown that the strength of the BioBridge plate exceeds biological approximations of rib loading in coughing and breathing.

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1. Data on file at Acute Innovations\(^9\).