Bone Graft Convenience Kit

Bone Formation Triangle
Three key elements in bone formation include scaffold, cells and signals$^{1,2}$

- **BioCUE**
  - Platelet Concentration

- **Scaffold**
  - Bonus® Synthetic
  - Bone Graft

- **Cells**
  - Bone Marrow
  - Aspirate Needle
The Structure Necessary for Bone Growth

Bonus® Synthetic Graft resorbable bone graft is used to fill bone voids and acts as an osteoconductive porous scaffold for recruited cells.

15cc of Bonus® Synthetic Graft is provided in each convenience kit and can be hydrated with bone marrow aspirate obtained using the supplied bone marrow aspiration needle. Bonus® Synthetic Graft has been shown effective as a graft substitute in metaphyseal defects, lumbar fusions, and cervical fusions.3−5

Performance

- Serves as a matrix for new bone growth with healing times comparable to autogenous bone grafts (see chart below)
- Eliminates risk of disease transmission
- Reduces need to harvest autologous bone graft

Structure

- 85% calcium carbonate, 15% hydroxyapatite
- Pores allow for fast wicking of fluids
- Architecture mimics human cancellous bone
- Pore sizes range from 26–770 micron
- 60–70% porous

Bonus® Synthetic® Graft vs. Autogenous Bone Grafting

Bonus® Synthetic* Graft is shown to be equivalent to autogenous bone graft in clinical healing patterns of metaphyseal defects.3

*Bonus® synthetic bone graft substitute is the equivalent of Pro Osteon® 500R.
BioCUE® Platelet Concentration System

Focus on Bone Marrow

Aspirated bone marrow is frequently used as a bone grafting tool. Designed to process autologous bone marrow aspirate and whole blood, the BioCUE® System represents an evolution in this technique. The system has all the components to **ASPIRATE** bone marrow and whole blood, **PROCESS** the disposable system, and produce an output to **HYDRATE** the surgeon’s choice of autograft and/or allograft.

- **Platelet Poor Plasma (PPP)**
- **Platelet Rich Plasma**
- **Red Blood Cells**

Outputs 3-6 cc of autologous PRP from BMA & whole blood

PRP contains 70% of available platelets & 74% of available white blood cells

Dual buoy design eliminates need to filter bone marrow or whole blood prior to processing
Bone Marrow Aspirate Needle

Harvesting the Patient’s Own Cells

Bone marrow aspirate contains cells which can differentiate into bone. Aspiration of bone marrow allows the surgeon access to the patient’s own population of stem cells. Bone marrow aspirate can be used to hydrate Bonus® Synthetic Graft.

Features of Bone Marrow Aspiration Needle

- Aspirate can be obtained from a variety of anatomical locations including the iliac crest, tibia and calcaneous
- Five holes placed at distal tip, allowing for efficient aspiration
- One stylet with trocar point for penetration of the cortical bone into the bone marrow cavity
- One stylet with blunt tip for easy movement of the needle within the bone marrow cavity
Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
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<tr>
<td>Foot &amp; Ankle Bone Graft Convenience Kit with BioCUE® Mini Disposable</td>
<td>800-0534</td>
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<tr>
<td>Bone Graft Convenience Kit with BioCUE® Standard Disposable</td>
<td>800-0536</td>
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References


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