BioCUE®

Blood and Bone Marrow Aspirate (BBMA) Concentration System
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Designed to process a mixture of autologous whole blood and bone marrow aspirate, the BioCUE® BBMA Concentration System represents an evolution in this technique. The system includes all the components to ASPIRATE blood and bone marrow, easily PROCESS the disposable system, and produce an autologous PRP output* to HYDRATE the surgeon’s choice of autograft and/or allograft.

**PRP Output* Concentrations**

- 77.5% recovery of nucleated cells
- 71% recovery of available platelets
- 7.2x concentration of available platelets
- 7.9x concentration of available nucleated cells

**Technique Matters**

When aspirating bone marrow with the BMA needle provided with the BioCUE® System, keep these best practices in mind:

The 6 holes at the distal tip allow for more efficient collection of aspirate from different angles within the bone inside the cortical wall.

While maintaining a 1:5 ratio of ACD-A to BMA in the aspirating syringe, add a little extra anticoagulant to flush the BMA needle with ACD-A as well.
The role of whole blood and bone marrow bone remodeling

Whole blood and bone marrow contain many components which play a key role in bone formation. Cells are able to proliferate and differentiate into a number of different hard and soft tissues. Growth factors and signaling proteins from platelets stimulate the osteoprogenitor cells, as part of the bone remodeling process.²

Platelet-rich plasma (PRP) prepared from a mixture of whole blood and bone marrow may contain higher levels of plasma free hemoglobin than platelet-rich plasma (PRP) prepared from whole blood.

Images adapted from reference 4.
The PRP output* from the BioCUE® BBMA Platelet Concentration System can be mixed with autograft and/or allograft bone prior to application to an orthopedic site.

Examples of Autograft/Allograft Bone Grafting Applications

• Proximal femur fractures
• Hip reconstruction
• Avascular necrosis
• Distal ulna/radial fractures
• Osteotomies
• Bone cysts
• Proximal humerus fractures
• Shoulder reconstruction
• Distal ulna/radial fractures
• Osteotomies
• Bone cysts
• Proximal femur fractures
• Hip reconstruction
• Avascular necrosis
• Distal femur fractures
• Proximal tibia fractures
• Knee reconstruction
• Open wedge osteotomies
• ACL bone block reconstruction
• Bone recession
• Restorative surgery
• Implant surgery
• Thoracic closure
• Spine fusion
• Supplement cages
• Distal tibia/fibula fractures
• Foot and ankle fusions
• Evans/Cotton Osteotomy
• Bone cysts
• Charcot
• Supplement allograft wedges
• Proximal humerus fractures
• Shoulder reconstruction

*The platelet-rich plasma (PRP) prepared by this device has not been evaluated for any clinical indications. The safety and effectiveness of this device for in vivo indications for use, such as bone healing and hemostasis, have not been established.

References

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