



Cyclone[®]

AllianceSpine

Cyclone[®] Bone Marrow Concentrate System

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The Science of BMC

Bone marrow contains mesenchymal stem cells which have the potential to differentiate into various types of tissues, including bone, tendon, cartilage and ligament. When concentrated cells are derived from bone marrow, we find infinite potential for clinical use in orthopaedic surgery, most notably to repair and regenerate bone.

A centrifuge can be used to concentrate the Bone Marrow Aspirate (BMA) and tap the healing benefits of mesenchymal stem cells. The volume of BMA needed for injection is reduced through centrifugation while at the same time maintaining the large number of concentrated cells and producing a buffycoat layer that contain cells which may have osteogenic effects.

In clinical results, the osteogenic effects positively influenced bone repair.¹⁻⁴ The resulting bone marrow concentrate may stimulate healing when injected into a fracture or a non union site.⁵

The Cyclone® Advantage

Produces Highly Concentrated Bone Marrow Cells

The **Cyclone®** Concentrating System provides consistently high yields of Bone Marrow Concentrate (BMC) using light centrifugal acceleration to isolate the buffycoat, and gentle deceleration to preserve the highly concentrated layer of cells.

Eliminates Transfer Contamination

Cyclone® ensures sterility by first collecting the patient's bone marrow in a sterile collection tube, then processing it in the centrifuge, and finally channeling the marrow into the sterile field through a closed system. This process effectively eliminates transfer contamination that can sometimes occur during manual transfer. Because the **Cyclone®** system requires only two sterile barrier entries, it results in a lower risk of infection and better surgical outcomes.

Versatile and Portable

Cyclone® takes less than 15-minutes to process from 30 – 120mL of bone marrow aspirate, and with a centrifuge that was designed for transport, can easily be moved from one operating room to another.

Indications

Intended to be used in a clinical laboratory or intraoperatively at the point of care for the safe and rapid preparation of platelet poor plasma and platelet concentrate from a small sample of blood and for a preparation of a cell concentrate from bone marrow. The safety and effectiveness of this device for in vivo indications for use has not been established.



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