BIOTECK®



Collagen Membrane for Guided Cartilage Regeneration



Treatment of focal cartilaginous lesions using Steadman microfracture technique.

MeRG is a Type-1 collagen bi-layer membrane obtained from equine Achilles tendon

Biological Chamber

Lock in the mesenchymal cells *in situ*

Supercoagule Boosting regeneration

2 Membranes in 1 Better adhesion & protection

THE COLLAGEN PATCH

ELIGIBILITY

Grade III and IV focal lesions of the cartilage according to Outbridge (involvement of the subchondral bone), defect size in excess of 2 cm2, depth of defect up to 5-6 mm. Patient age: 18-55 yrs.

EXCLUSION CRITERA

Hypersensitivity to collagen, related cartilaginous defects (kissing lesions), hemophilia, systemic diseasesinfections-osteoartritis.

SURGICAL APPLICATIONS



Techniques

- **1** Mini-Arthrotomy
- 2 Arthroscopy-CO2

MeRG at work - Ouick Reference

- Debridement of chondral lesion
- 2 Dry shaping, hydration with physiological or with biological fluids for cell enrichment (PRP, Bone Marrow Concentrate) for 2-3 minutes.
- 3 Membrane is deployed on the lesion following its microperforation.
- **4** MeRG is fixated by applying fibrin glue on the edges.





PRODUCT BIBLIOGRAPHY

PRODUCT BIBLIOGRAPHY 1. Gianakos, AL, et al., Clinical application of concentrated bone marrow aspirate in orthopaedics: A systematic review. World J Orthop, 2017. 8(6): p. 491-506. 2. Bistolfi, A, et al., Regeneration of articular cartilage: scaffold used in orthopaedics: surgery. A short handbook of available products for regenerative joints surgery ClinSciRes Rep, 2017. 1(1): p. 1-7. 3. Enea, D, et al., One-step cartilage repair in the knee: Collagen-covered microfractureand autologous bone marrow concentrate. A pilot study. Knee, 2015. 22(1): p. 30-5. 4. Freymann, U, W. Petersen, and C. Kaps, Cartilage regeneration revisited: entering of new one-step procedures for chondral cartilage repair (OA Orthopaedics, 2013. June 05(1): p. 1-6. 5. Gigante, A, et al., Arthroscopic knee cartilage repair with covered microfractureand bone marrow concentrate. Arthrosc Tech, 2012. 12(1): p. 1-7-8.06. Gigante, A, et al., Use of collagen scaffold and autologous bone marrow concentrate as a one-step cartilage repair in the knee: histological results of second-look biopsies at 1 year follow-up. Int) ImmunopatholPharmacol, 2011. 24(1 Suppl2): p. 69-72.

Clinical case: MeRG in one-step knee cartilage repair

MRI follow up





12 months follow up

Microfracture

Post-op

POST OPERATIVE TREATMENT 1-6 WEEKS

Light touch down weight bearing with crutches

Continuous passive motion 0° -90°

FROM 6TH WEEK

Gradual weight bearing up to full weight bearing over the next 2 weeks

Clinical pictures are from product bibliography ref. 5&6



MeRG Product Range

BCG-mergBIOCOLLAGEN MeRG MembraneBCG-mergK/QBIOCOLLAGEN MeRG Membrane

Collagen Membrane -1 pc. 50 x 50 x 0.2 mm. Collagen Membrane -1 pc. 30 x 30 x 0.2 mm.











Bioteck S.p.A.

Headquarters:

Via E. Fermi 49 - 36057 Arcugnano (Vicenza) - Italy Tel. +39 0444 289366 - fax: +39 0444 285272 info@bioteck.com - www.bioteck.com

Production and R&D Center: Via G. Agnelli, 3 - 10020 Riva presso Chieri (Turin) - Italy

bioteck.com

