

# smHArtfix™

For **mild** to **moderate** Osteoarthritis<sup>1</sup>



## Science Behind smHArtfix

Hyaluronic acid in smHArtfix products:

- based on clinically proven molecular weight to be efficient in counteracting osteoarthritis symptoms<sup>2</sup>
- **has dedicated concentration for its clinical use**, which has a significant effect on elasticity and viscosity parameters of the product<sup>3,4,5</sup>
- is clinically **effective in pain reduction**<sup>6,7,8</sup>
- has more prolonged clinical effects of **pain relief** after HA intra-articular injection than corticosteroids injections<sup>9,10</sup>
- has **bacterial fermentation** origin

# Viscosupplementation with smHArtfix Multi

smHArtfix Multi can provide patient with long-term pain relief.<sup>6,7</sup>

## 3 intra-articular injections, administered at weekly intervals -

### Product Information

- HA content: 44mg in 2ml (2.2%)
- Molecular weight: above 1.2 MDa
- Viscosity: 150-380 [Pa·s]
- Osmolarity: 270-400 mOsm/kg
- Needle size: 21G

# Viscosupplementation with smHArtfix One

SmHArtfix ONE enables long-lasting pain relief.<sup>8</sup>

## Single intra-articular injection

### Product Information

- HA content: 120mg in 4.8ml (2.5%)
- Molecular weight: above 1.5 MDa
- Viscosity: 300-650 [Pa·s]
- Osmolarity: 270-400 mOsm/kg
- Needle size: 19G

## smHArtfix Order Information

Packed in a pre-filled glass syringe within a blister and an outer carton. smHArtfix ONE and smHArtfix MULTI are sterilised using aseptic processing techniques. The final product in the carton is terminally sterilized using ethylene oxide ensuring that the outer surface of the syringe is sterile.

### Description

### Part Number

smHArtfix One 4.8ml

110047748

smHArtfix Multi 2ml

110047750



### References

1. SmHArtfix IFU for 110047750 and 110047748
2. Yen-Zung WU *et al.* Molecular Weight of Hyaluronic Acid Has Major Influence on Its Efficacy and Safety for Viscosupplementation in Hip Osteoarthritis: A Systematic Review and Meta-Analysis. Published online 2021 Jun 10. doi: 10.1177/19476035211021903 PMID: PMC8808882 PMID: 34109828
3. KOBAYASHI *et al.* Viscoelasticity of hyaluronic acid with different molecular weights. *Biorheology*. 1994;31:235-44.
4. BARBUCCI *et al.* Synthesis, chemical and rheological characterization of new hyaluronic acid-based hydrogels. *J Biomater Sci Polym Ed*. 2000;11:383-99
5. David Rebenda *et al.* On the Dependence of Rheology of Hyaluronic Acid Solutions and Frictional Behavior of Articular Cartilage. Published online 2020 Jun 11. doi: 10.3390/ma13112659 PMID: PMC7321645 PMID: 32545213
6. Brandt *et al.* Efficacy and safety of intraarticular sodium hyaluronate in knee osteoarthritis. Orthovisc Study Group. *Clin Orthop Relat Res*. 2001;385:130-43] \*Orthovisc®
7. Li *et al.* Arthroscopic debridement of the osteoarthritic knee combined with hyaluronic acid (Orthovisc®) treatment: a case series and review of the literature. *J Orthop Surg*. 2008;3:43.] \*Orthovisc®
8. Balsalobre *et al.* Effect of a monoshot injection of a high-density hyaluronic acid gel in patients with primary knee osteoarthritis. Preliminary results of the "No-Dolar" study. *J Bone Marrow Res*. 2018;6:1] \*Pronolis® HD MonoShot 2.5%
9. Salvatore Bisicchia and Cosimo Tudisco; Hyaluronic acid vs corticosteroids in symptomatic knee osteoarthritis: a mini-review of the literature. Published online 2017 Oct 25. doi: 10.11138/ccbm/2017.14.1.182 PMID: PMC5726206 PMID: 29263730
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