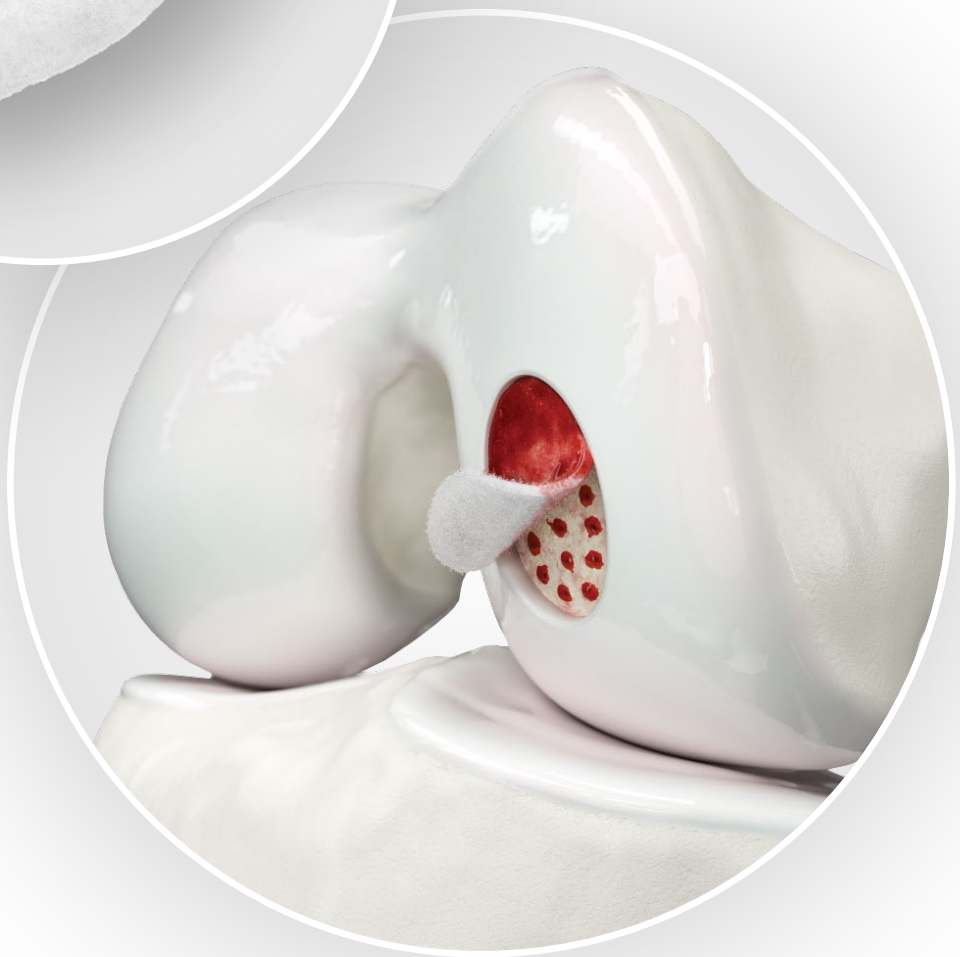
ANIKA

Hyalofast®

Chondral and osteochondral knee lesions

Surgical Technique Guide





Chondral & Osteochondral Knee Lesions

Arthroscopic Implantation

INTRODUCTION

Articular cartilage injuries of the knee, particularly chondral and osteochondral lesions, present a significant clinical challenge due to the cartilaginous tissue's limited intrinsic healing capacity. Among the various treatment strategies developed to treat these defects is **Hyalofast®**, a biodegradable hyaluronic acid-based scaffold. Hyalofast can be used in combination with bone marrow aspirate concentrate (BMAC) or with bone marrow stimulation techniques such as microfracture, microdrilling or abrasion arthroplasty. These approaches aim to enhance the biological environment of the defect site with autologous mesenchymal stem cells and growth factors.

NOTE: This guide outlines the arthroscopic technique for the implantation of Hyalofast in the treatment of focal chondral and osteochondral knee lesions. However, Hyalofast may also be applied using a mini-open approach, depending on lesion accessibility, surgeon preference, and patient-specific factors.

POSITION THE PATIENT FOR ARTHROSCOPIC ACCESS

1



Patient Positioning

Position the patient for knee arthroscopy.

2



Tourniquet Application

Apply a tourniquet at the proximal thigh to minimise intraoperative bleeding and maintain a clear visual field.

3



Portal Placement

Establish anterolateral and anteromedial arthroscopic portals to access the knee joint.

4



Procedure Sequencing

Complete all other surgical planned procedures prior to the implantation of Hyalofast.

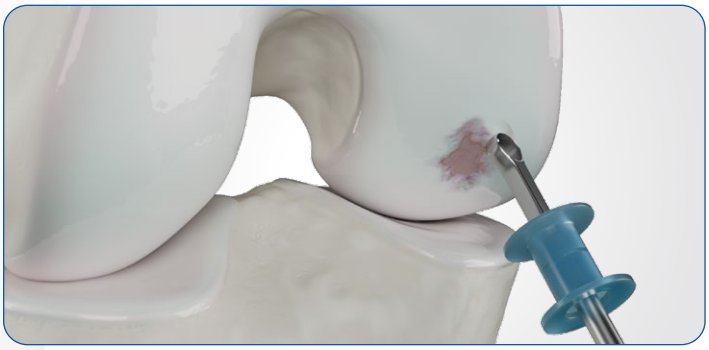
NOTE: Hyalofast implantation should be the final step of the surgical procedure, as it should be performed in a dry environment to ensure optimal adherence and placement.

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SURGICAL TECHNIQUE GUIDE

PREPARE AND MEASURE THE DEFECT



DEFECT CLEANING

Debride the chondral lesion to subchondral bone to remove any loose, fibrillated, or delaminated cartilage.



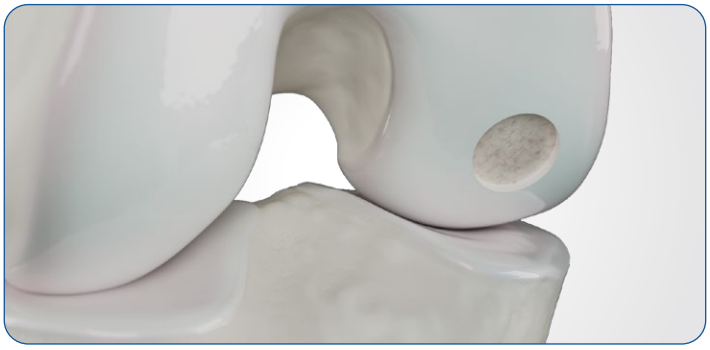
DEFECT CONTAINMENT

Establish a stable and well-defined border with vertical margins around the defect to ensure proper containment of Hyalofast.



DEFECT MEASUREMENT

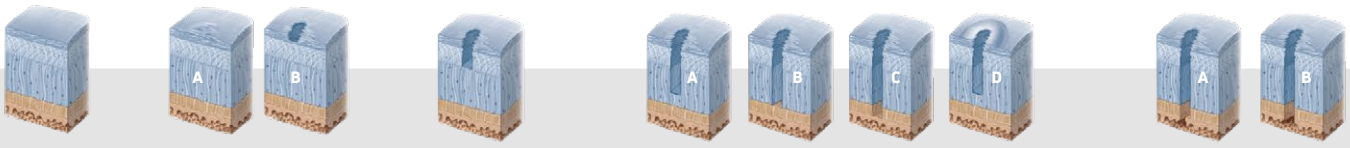
After achieving a well-contained defect, measure its dimensions using a calibrated probe or sterile template to determine the appropriate Hyalofast implant size.



CLASSIFICATION

Assess the extent of chondral or osteochondral damage using the ICRS classification system. This assessment should be performed after all damaged tissue has been debrided, as only then can the true ICRS grade be accurately determined.

ICRS CLASSIFICATION SYSTEM



ICRS GRADE 0
NORMAL

ICRS GRADE 1
NEARLY NORMAL
Superficial lesions. Soft indentation (**A**) and/or superficial fissures and cracks (**B**)

ICRS GRADE 2
ABNORMAL
Lesions extending down to <50% of cartilage depth

ICRS GRADE 3
SEVERELY ABNORMAL
Cartilage defects extending down >50% of cartilage depth (**A**) as well as down to calcified layer (**B**) and down to but not through the subchondral bone (**C**). Blisters are included in this grade (**D**)

ICRS GRADE 4
SEVERELY ABNORMAL
Osteochondral defect

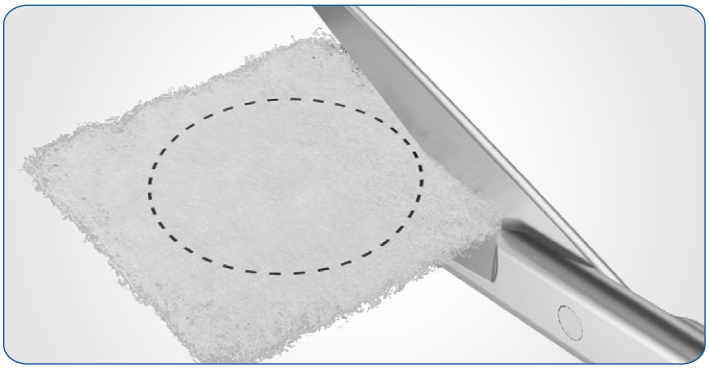
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PREPARE HYALOFAST



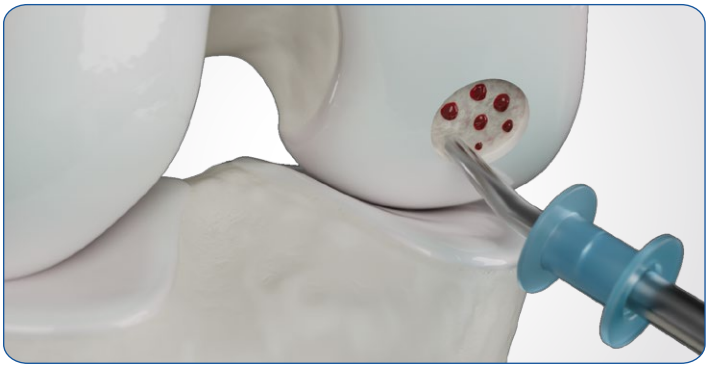
CUTTING AND SHAPING

Using sterile scissors trim Hyalofast to match the shape and size of the prepared defect.

NOTE: Precise cutting is not critical due to Hyalofast's conformability.

BIOLOGIC AUGMENTATION

Bone Marrow Stimulation or BMAC (Bone Marrow Aspirate Concentrate)



BONE MARROW STIMULATION AND HYALOFAST

Perform bone marrow stimulation (BMS) at the base of the defect. BMS methods include microfracture or abrasion arthroplasty.



BMAC HARVESTING AND HYALOFAST

Harvest sufficient autologous bone marrow aspirate from the patient, typically from the iliac crest, as per the instructions for use of the harvesting device. Process the aspirate according to the device-specific instructions to obtain the BMAC for Hyalofast application.

LOAD BMAC ONTO HYALOFAST

Apply the BMAC directly onto Hyalofast positioned in the product tray or in any sterile container available.

FLUID MANAGEMENT AND DEFECT DRYING



Turn off the fluid management system. Drain the knee joint of any residual fluid. Thoroughly dry the surface of the defect, before inserting Hyalofast.

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IMPLANT HYALOFAST

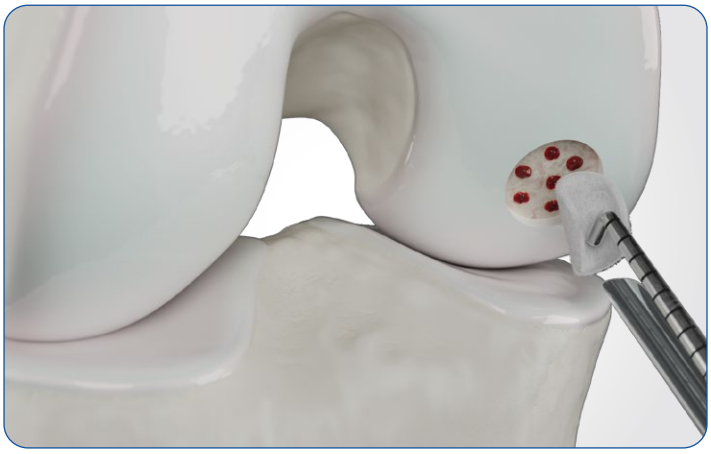
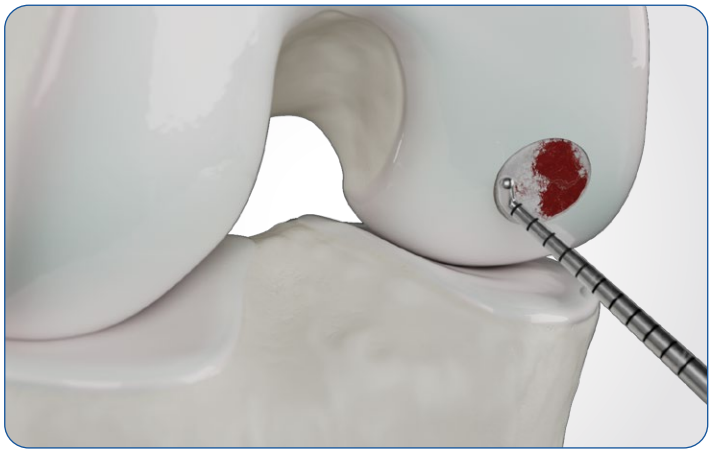
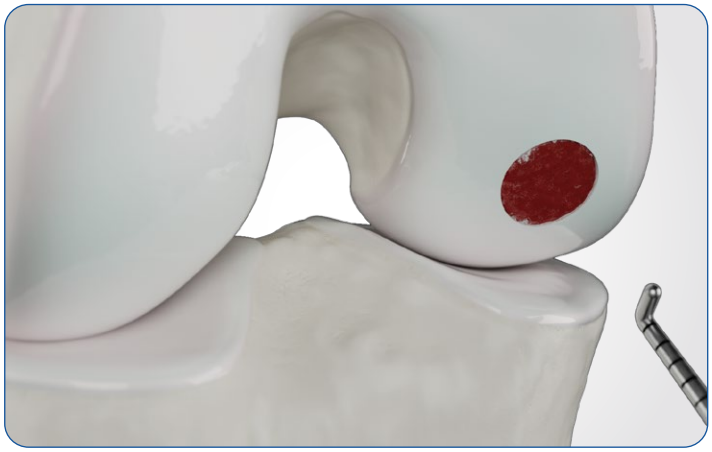


Image depicting Hyalofast implantation as part of a bone marrow stimulation procedure. The surgical technique follows the same steps when performed with BMAC.





Gently deliver the Hyalofast into the joint space and position it in the prepared defect using the preferred instruments and delivery technique. Position Hyalofast accurately within the defect margins, gently moulding into place.

IMPORTANT

Ensure Hyalofast is seated just below the level of the surrounding cartilage.

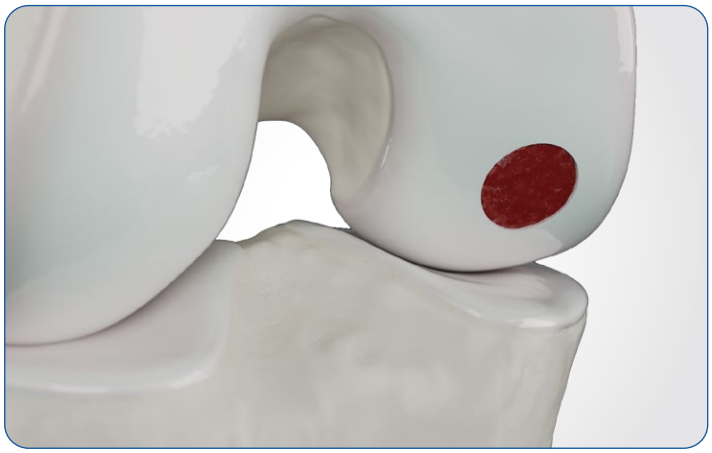
ORIENTATION

Hyalofast is non-directional; either surface may face the defect.

FINAL POSITIONING

Use the preferred instrument to make final adjustments, ensuring Hyalofast:

- Sits below the level of the surrounding cartilage
- Is fully contained within the defect margins
- Does not overlap onto adjacent healthy cartilage



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APPLICATION TIPS





- Side-by-side placement: For large or irregularly shaped defects.
- Stacking: For deeper defects requiring volume fill.
- Thinning: Hyalofast can be pulled apart or halved; fibers may be packed into the defect as needed.
- Osteochondral defects
  - <5 mm in depth - Hyalofast can be stacked to fill the defect.
  - ≥5 mm in depth - bone graft, e.g. bone chips mixed with fibrin glue should be used to reconstruct the bone bed, followed by the application of Hyalofast to fill the defect.



Fixation Considerations

For small, well-contained defects, no additional fixation is typically required. If enhanced stability is needed, fibrin glue may be applied around the Hyalofast margins. Remove any excess fibrin glue. Ensure final construct does not protrude above the level of the surrounding cartilage.

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MOBILISE THE JOINT POST-IMPLANTATION

After the placement of Hyalofast, mobilise the joint through flexion and extension under arthroscopic visualisation to confirm Hyalofast adherence and stability.

NOTE: Do not reintroduce arthroscopic fluid into the joint. Confirm that Hyalofast remains securely positioned throughout the full range of motion before proceeding with standard closure of the surgical incisions.

Indications

Hyalofast is CE-marked as a biodegradable support for the entrapment of mesenchymal stem cells for the repair of chondral and osteochondral lesions.

It acts as a support for bone marrow aspirate or as a chondroprotective coverage, which favors in situ residence of mesenchymal stem cells after their mobilisation due to bone marrow stimulation procedures.

For complete product information including indications, contraindications, warnings, precautions, possible complications and product storage, please refer to the product IFU.
https://www.anikaifu.com

Part #	Description
144714F	Hyalofast® 2x2
144722F	Hyalofast® 5x5

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