



Arthritis Talks: Alternatives to Joint Replacement Surgery

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Webinar tips

- Use the **Q&A** section to ask the presenters your questions. Some of the questions will be chosen for the live question period at the end of the webinar.
- Click on the **Chat** box to connect with other participants and the Arthritis Society's chat moderator.
- If you have further issues, email arthritistalks@arthritis.ca

The screenshot shows the Arthritis Society Canada webinar interface. At the top center is the Arthritis Society Canada logo. Below the logo are two buttons: 'Q&A' and 'Chat'. At the bottom left is an 'Audio Settings' button. At the bottom right is a red 'Leave' button. A yellow callout box points to the 'Audio Settings' button with the text 'Click here to access your audio settings'. Another yellow callout box points to the 'Q&A' button with the text 'Click here to chat or to submit a question'. A third yellow callout box points to the top right corner of the interface with the text 'Click on the red icon to exit out of the Q&A or Chat'. On the right side, a 'Q&A' window is open, displaying a 'Welcome to Q&A' message and a text input field labeled 'Type your question here...'.

Overview

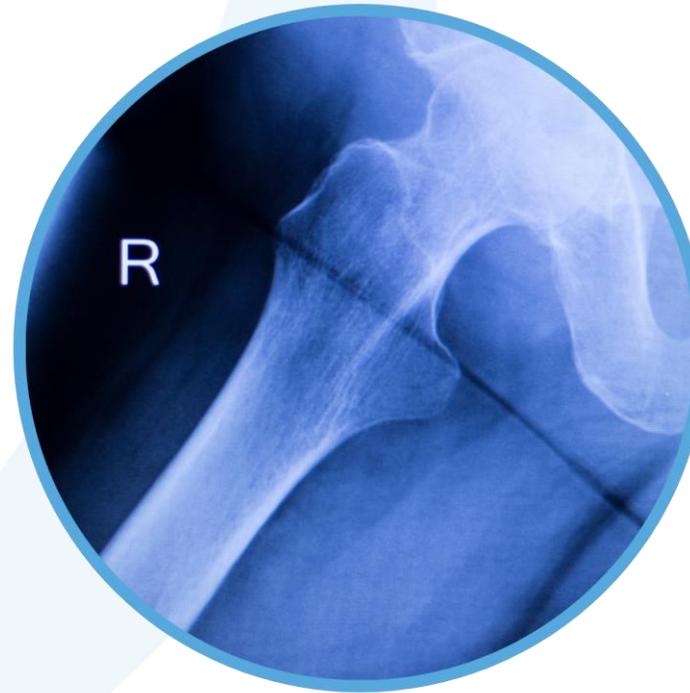
[1]

Non-operative options



[2]

Surgical options



[3]

Q&A



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How do we diagnose osteoarthritis of the joints?



How do we diagnose osteoarthritis of the joints?

History and physical



Imaging:
X-rays (sometimes MRI)

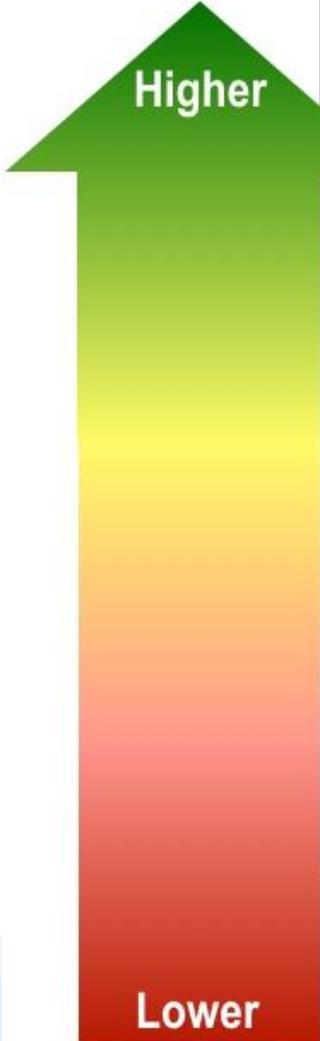




What are some non-operative options to treat joint pain?



Non-operative options to treat joint pain



Level	Example of Evidence
Level 1	Meta-analysis of Homogenous RCTs Randomized Control Trial
Level 2	Meta-analysis of Level 2 or Heterogenous Level 1 Evidence Prospective Comparative Study
Level 3	Review of Level 3 Evidence Case-control Study Retrospective Cohort Study
Level 4	Uncontrolled Cohort Studies Case Series
Level 5	Expert Opinion Case Report Personal Observation
Foundational Evidence	Animal Research <i>In Vitro</i> Research Ideas, Speculation

Injections and evidence

Grades of Recommendation for Summaries or Reviews of Orthopaedic Surgical Studies and a Proposed Subscale Designed to Differentiate Evidence for Indications Receiving a Grade of Recommendation of C^a

Grades of Recommendation	Description
A	Good evidence (level 1 studies with consistent findings) for or against recommending an intervention
B	Fair evidence (level 2 or 3 studies with consistent findings) for or against recommending an intervention
C	Conflicting or poor-quality evidence (level 4 or 5 studies) not allowing a recommendation for or against an intervention
I	Insufficient evidence to make a recommendation

Proposed Subscale	Description
C _f	Representing literature “for,” or in support of, a surgical intervention
C _u	Representing literature “against,” or not in support of, a surgical intervention
C _e	Representing conflicting literature, some of which is in support of a surgical intervention and some of which is not in support of a surgical intervention



Intervention	Hip OA ¹	Knee OA ²
Corticosteroids	A - Effective at reducing pain and improving function for up to three months	A - Short-term, moderate pain relief and the restoration of function and offer a cost-effective treatment option
Hyaluronic Acid (HA)	Cf - Potential to provide improvements in pain and functional outcomes for up to 6 months	A - Improved pain relief and the restoration of function compared with placebo with mild to moderate knee osteoarthritis
Plate-Rich Plasma (PRP)	Cf - Potential to provide improvements in pain and functional outcomes up to one year	Cf - Improved pain relief and the restoration of function compared with placebo with mild to moderate knee osteoarthritis
Cellular-Based Therapies - Bone marrow aspirate concentrate (BMAC) and multipotent stem cells	I – Insufficient evidence	I – Insufficient evidence
Combination Therapies	I - Insufficient evidence to support the use of combination therapy in the treatment of hip osteoarthritis	B - Intra-articular injections of combined HA and corticosteroids I - Insufficient evidence to support other combinations of intra-articular injection therapy.

1. Degen RM, et al. Arthroscopy Association of Canada Position Statement on Intra-articular Injections for Hip Osteoarthritis. OJSM. 2022;10(2):23259671211066966.

2022;10(2):23259671211066966.

2. Arthroscopy Association of Canada,. Arthroscopy Association of Canada position statement on intra-articular injections for knee osteoarthritis. OJSM. 2019;7(7):2325967119860110.



How do you determine whether you need joint-preserving surgery?



**None to mild osteoarthritis,
NOT severe osteoarthritis**



- ▼ Failure of non-operative interventions after a sustained trial of 3-6 months
- ▼ Decreased quality of life
- ▼ Impaired function and pain

Concept of joint preservation surgery



- ▼ Minimally invasive procedures to repair damaged joints
- ▼ Preserve your own joint as long as possible without a joint replacement
- ▼ Return the patient to function and active living

Example of hip joint preservation surgery starting with work up

- ▼ History (Groin pain)
- ▼ Imaging (FAI/tear)
- ▼ Diagnostic injection (relief)
- ▼ Physical exam (FADIR)
 - ▼ Standing
 - ▼ Gait, alignment
 - ▼ Seated
 - ▼ Modified straight leg raise, neurovascular, strength
 - ▼ Supine
 - ▼ ROM
 - ▼ Provocative testing:
 - ▼ Log roll, FADIR, FABER, resisted sit up/ adduction
 - ▼ Lateral decubitus
 - ▼ Palpation, abductor strength/contractures
 - ▼ Prone
 - ▼ Hip contractures, version, lumbar spine palpation

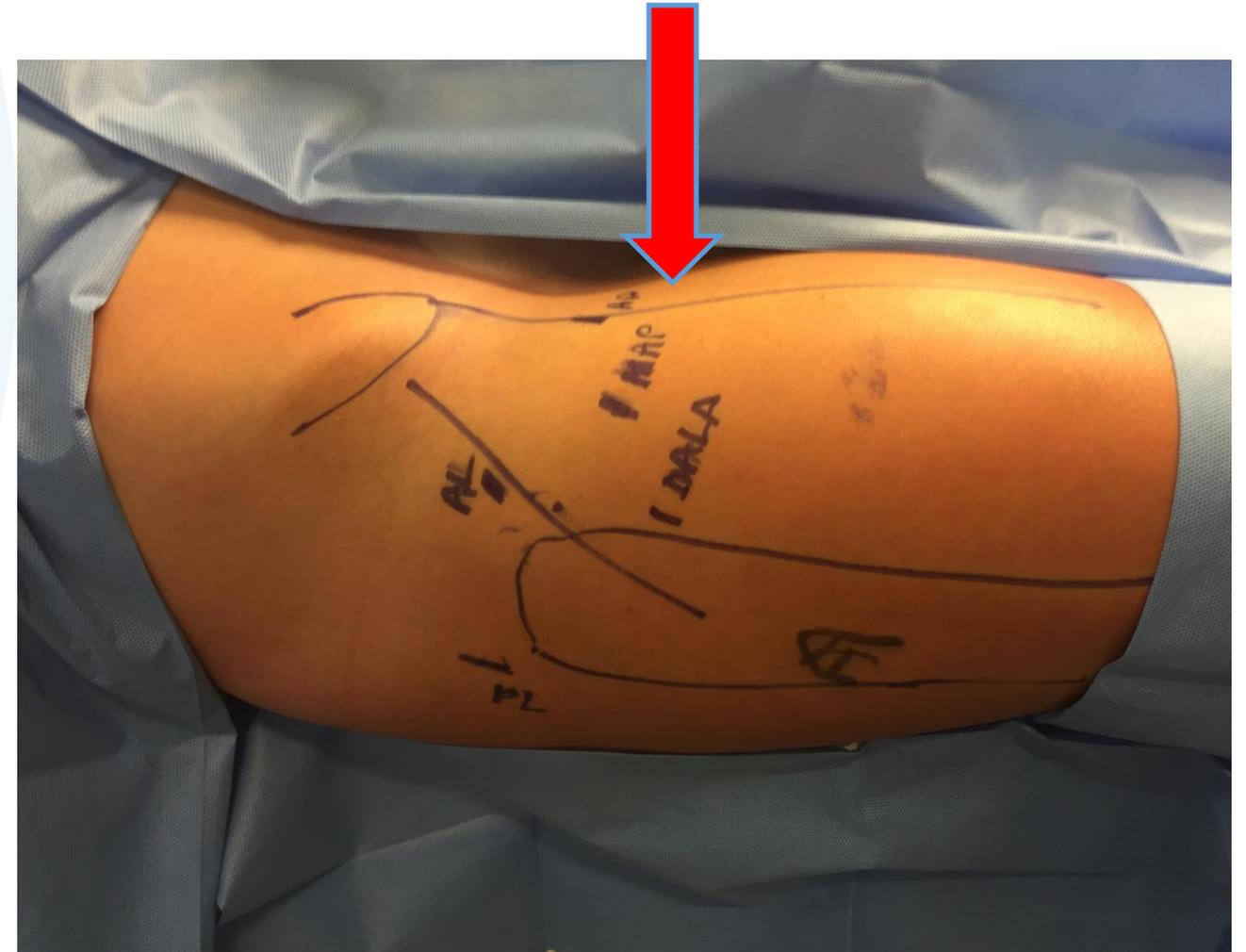


Q

What can joint preservation surgery look like?



Hip arthroscopy positioning and landmarks

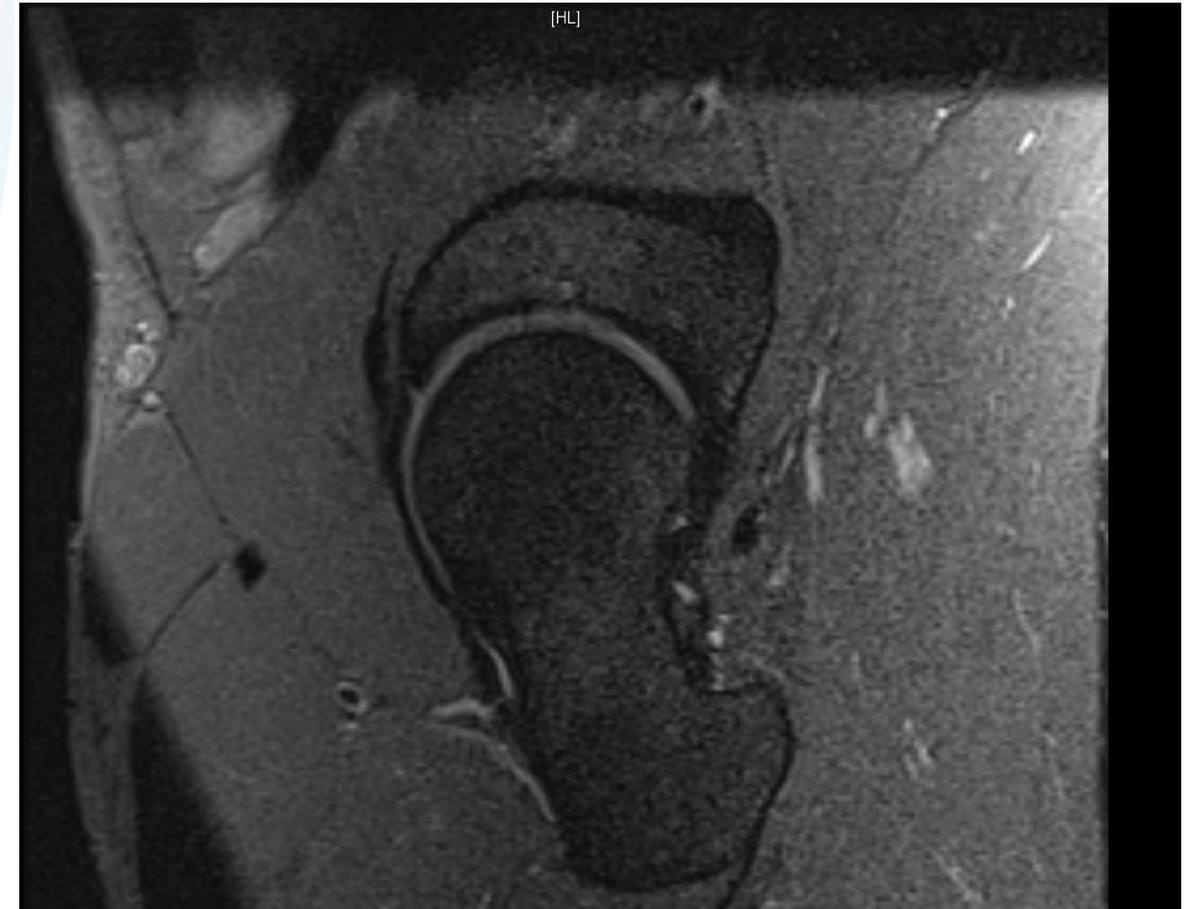


Case example

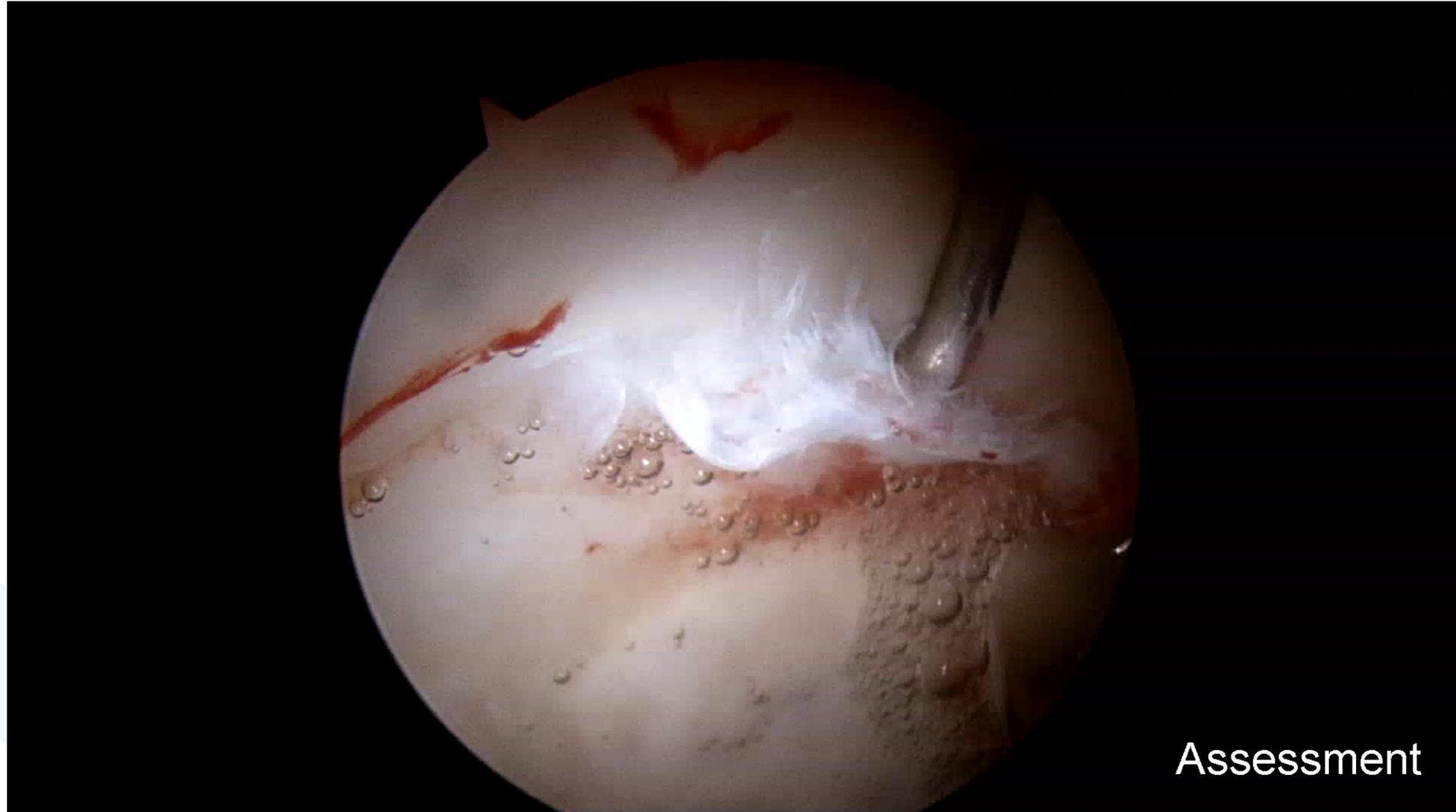
▼ X-ray (Frog lateral)



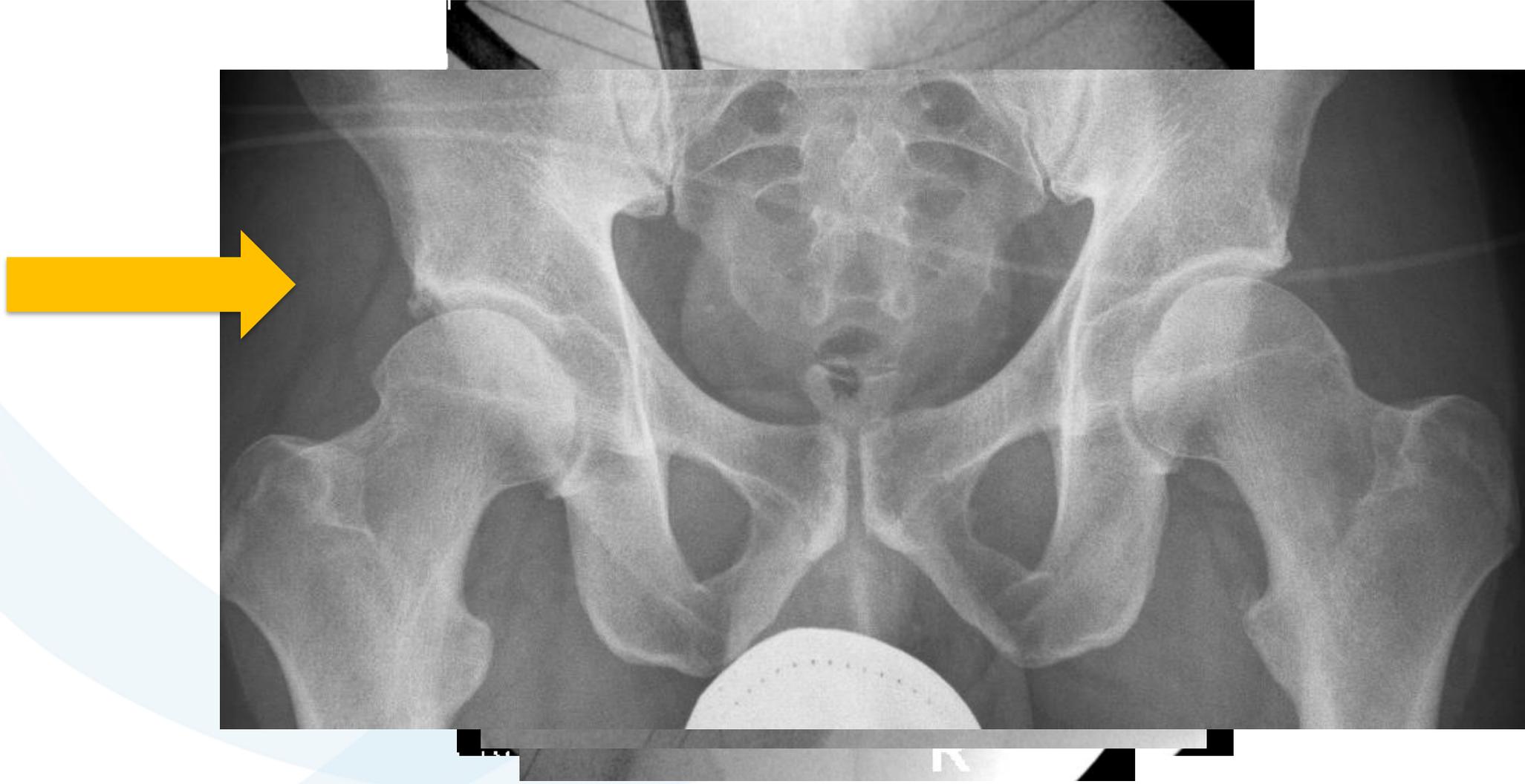
▼ MRI



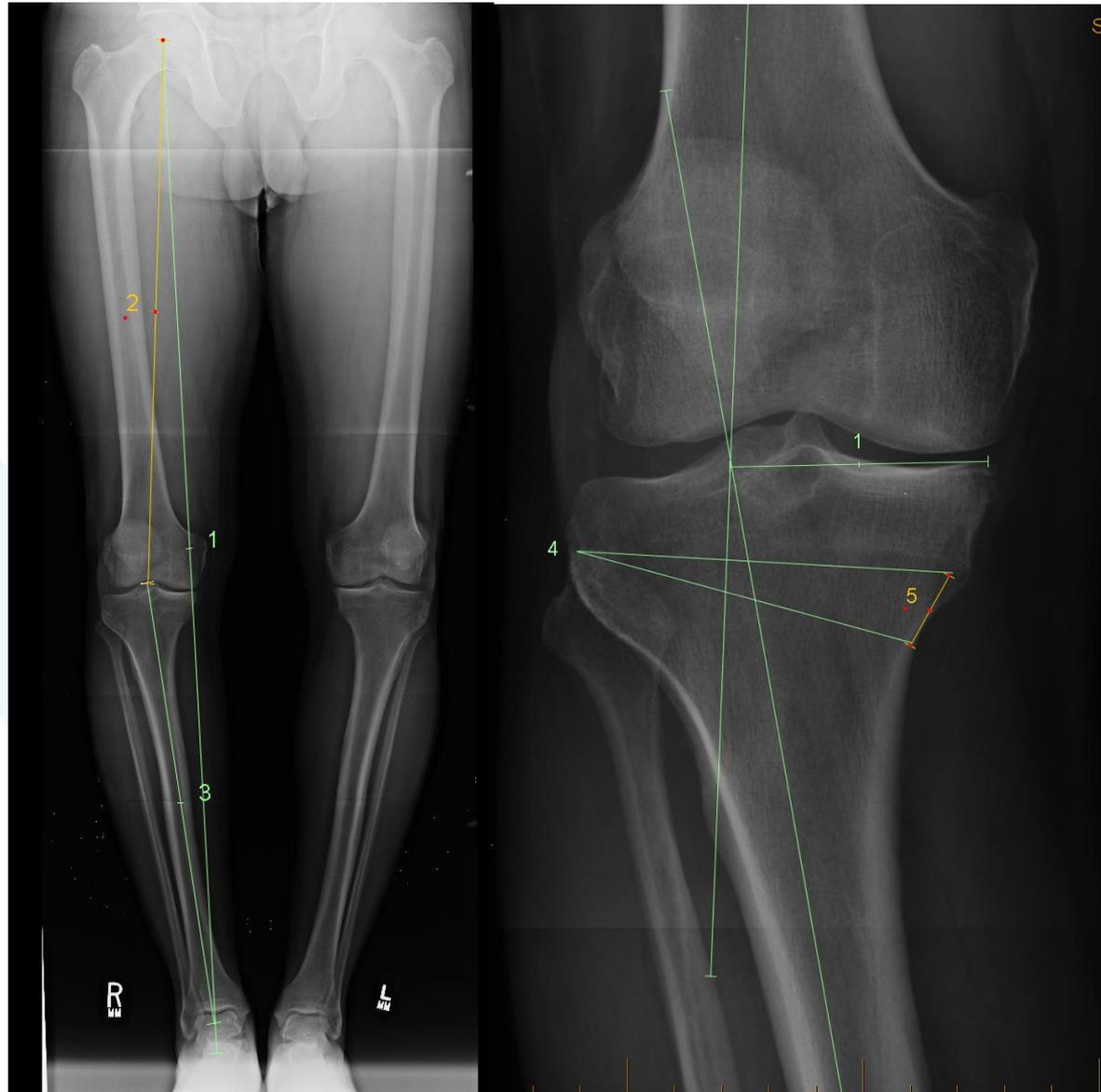
Hip arthroscopic FAI surgery



Bony correction



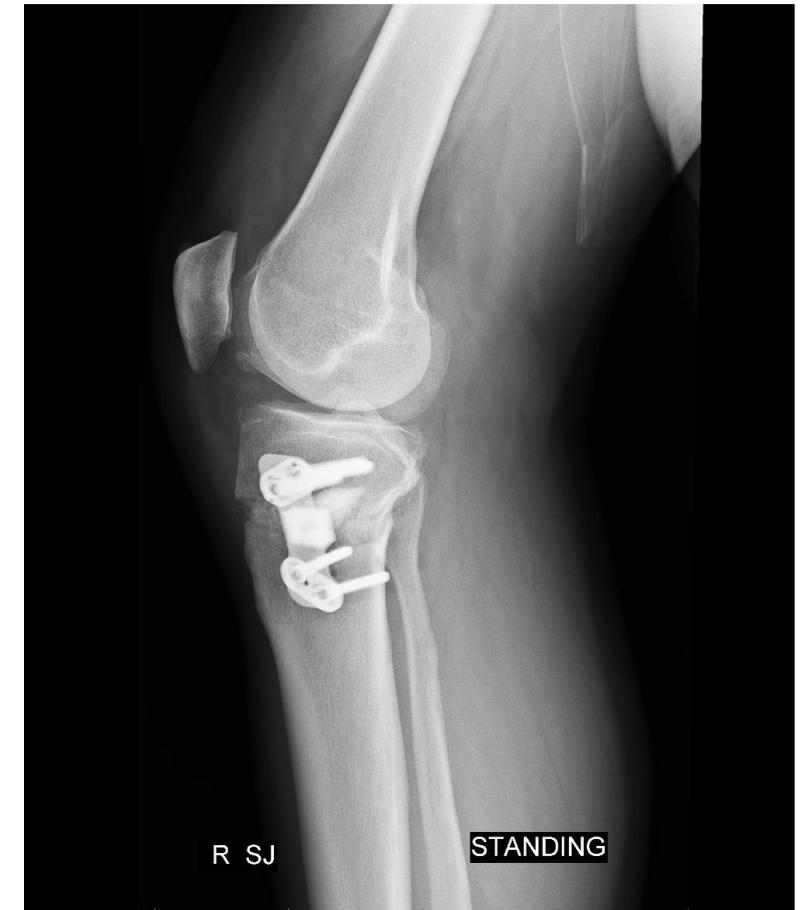
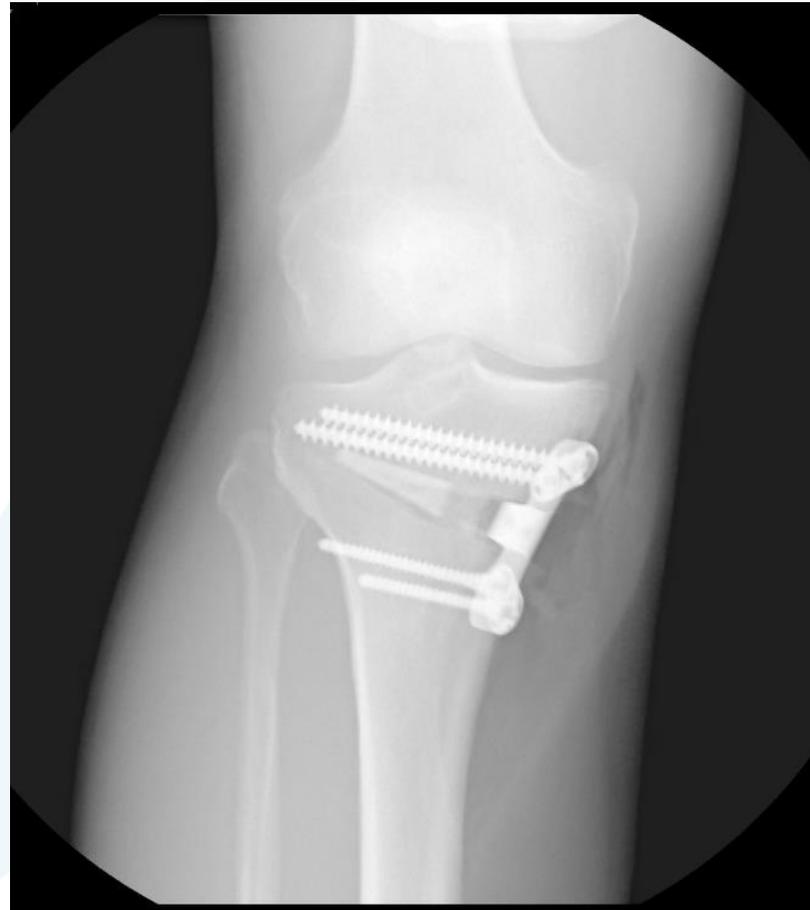
Knee: High tibial osteotomy



- ▼ Osteoarthritis resulting in degradation of the menisci or articular cartilage
 - Results in misalignment of the knee
- ▼ High tibial osteotomy can re-align the knee to offload the arthritis areas and preserve the rest of the joint

High tibial osteotomy

- ▼ The knee is wedged open to redistribute weight bearing
- ▼ Not a permanent solution, but can significantly reduce pain and delay need for knee arthroplasty/replacement



Q

Are these same options available for joints less commonly affected by arthritis, such as shoulders, elbows, wrists, ankles, etc.?



Treatment options for most joints (mild osteoarthritis)

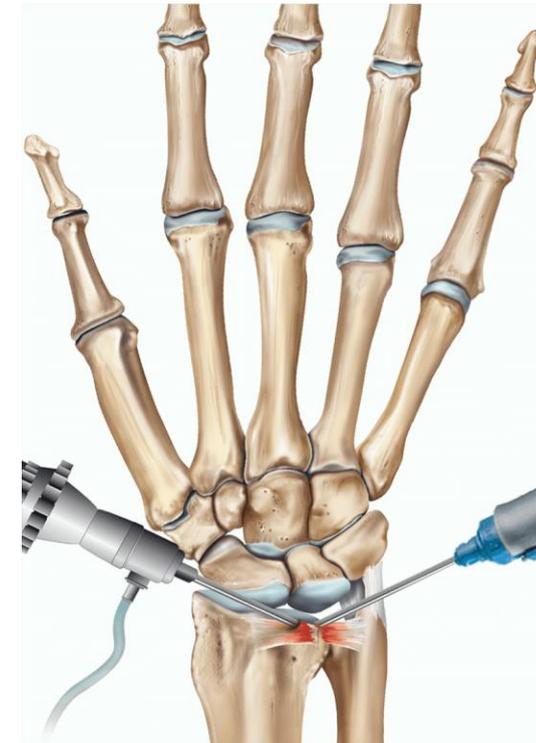
Non-operative

- *Am Fam Physician.* 2003;67(4):745-750



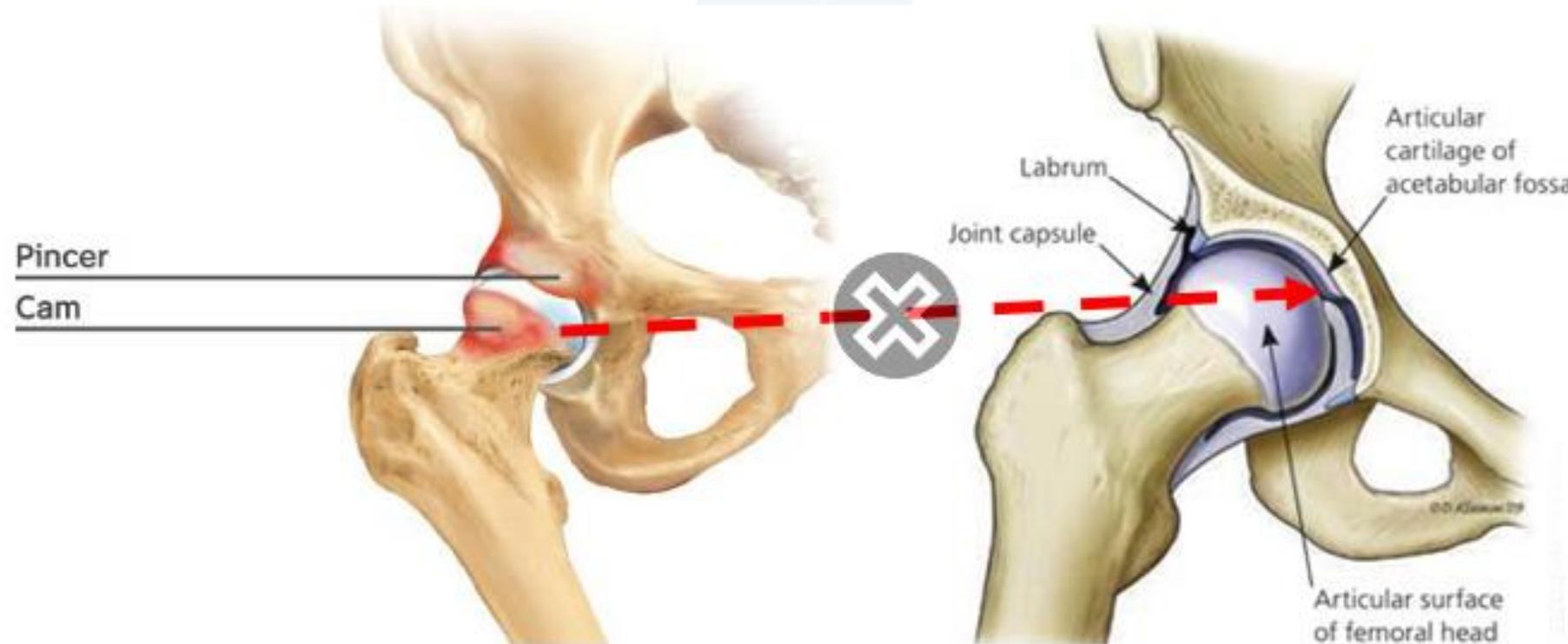
Operative

- healthdirect.gov.au



How we treat the development of chondral injuries: REPAIR RCT Study

- Autologous MatRix-Induced ChondrogenEsis ComPared with Microfracture for Focal Articular CaRtilage Damage of the Hip (REPAIR): A Pilot Randomized Controlled Trial

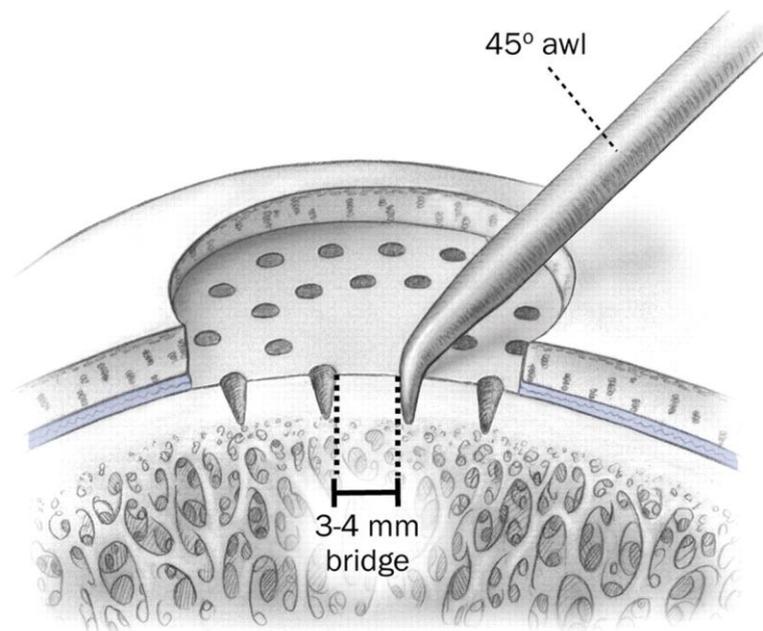


The Future: REPAIR Trial

Microfracture vs. AMIC

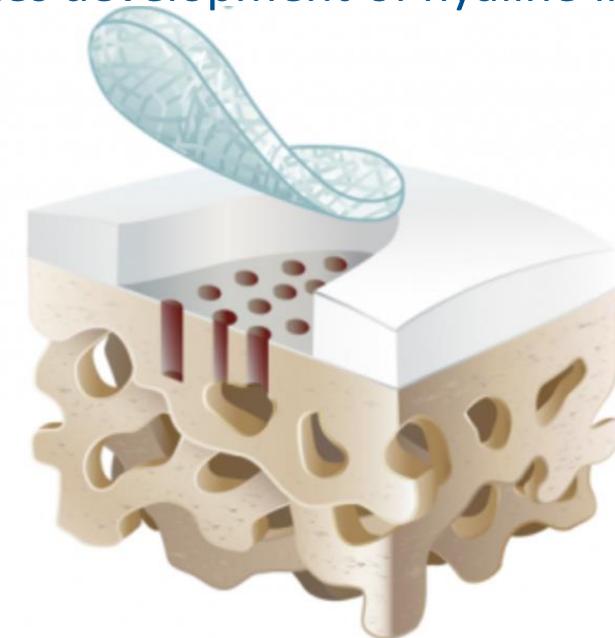
▼ Microfracture

- ▼ Multiple small perforations to release mesenchymal stem cells to promote a clot and the formation of fibrocartilage to restore cartilage

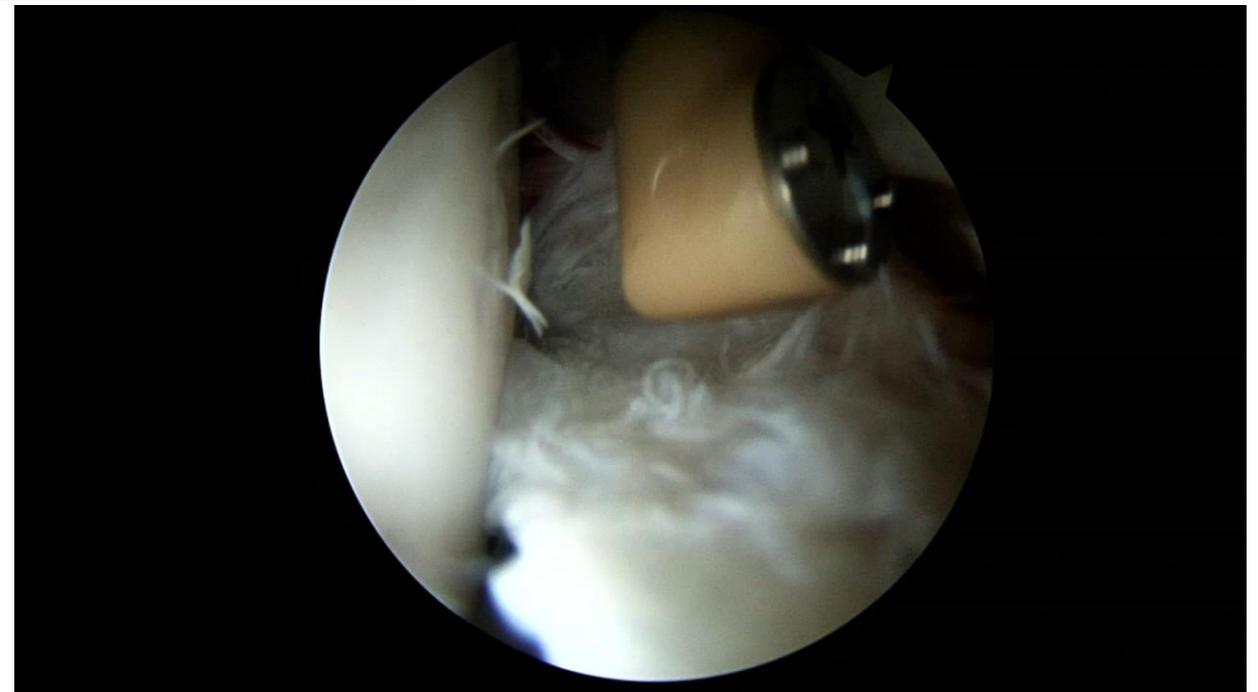
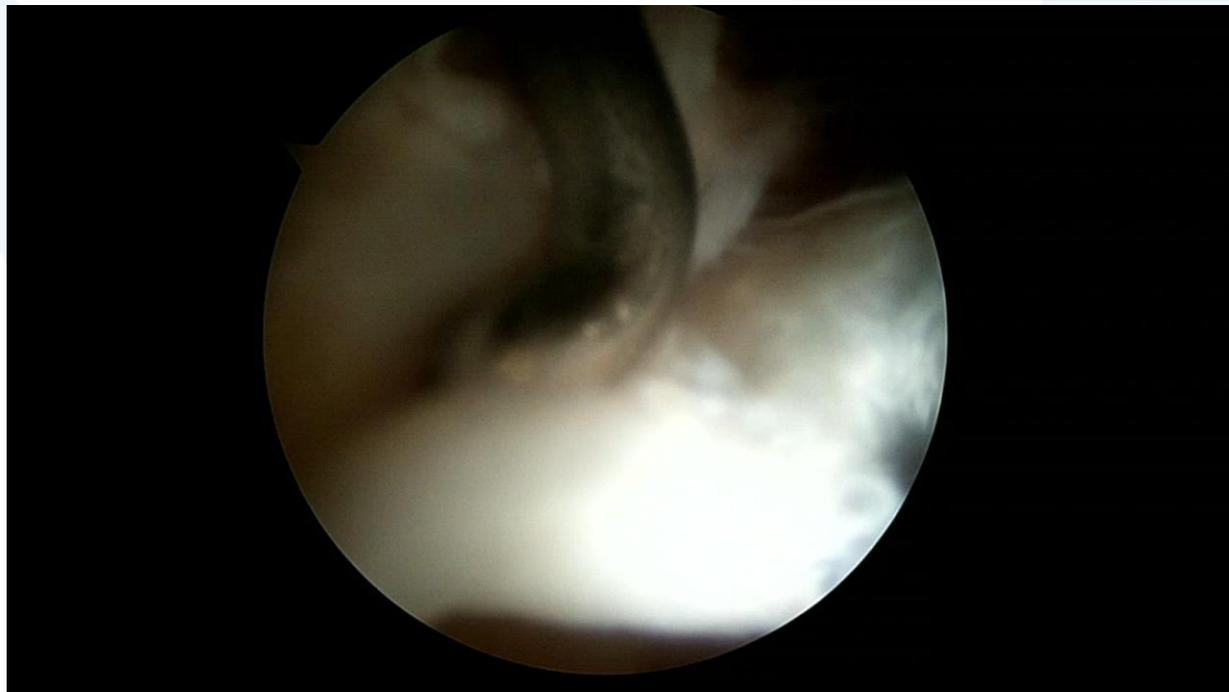


▼ AMIC (autologous matrix-induced chondrogenesis)

- ▼ Placement of a collagen matrix over microfracture site to:
 - ▼ Keep clot localized to one spot
 - ▼ Promotes development of hyaline-like tissue



Can we stop hip osteoarthritis?



Next steps: natural history

Can we stop the development of hip osteoarthritis?



Any final thoughts or recommendations?



Questions



Tell us what you think...



Upcoming Events

Mar



Arthritis Talks: Managing Inflammatory Arthritis
featuring Dr. David Robinson

6 p.m. ET

Learn about:

- Different types of inflammatory arthritis
- Treatment options
- What's on the horizon for inflammatory arthritis treatment and care

Register at:

Visit arthritis.ca/arthritis Talks or click the link in your email inbox

