

Key Takeaways from Bharadwaj et al. (2025): Value of Regenerative Orthopedics from MRI Study

'Intra-articular Knee Injections and Progression of Knee Osteoarthritis'

- **Steroids Accelerate Degeneration:**
While corticosteroid injections provide short-term pain relief, they were associated with increased cartilage loss and structural joint damage on MRI.
- **Hyaluronic Acid (HA) Slows Disease Progression:**
HA injections showed significantly less structural deterioration and may even slow cartilage damage.
- **Clinical Guidelines Lag Behind Evidence:**
Current guidelines still favor corticosteroids. These findings suggest a need for updated protocols incorporating regenerative therapies backed by imaging and biologic mechanisms.
- **Palliative vs. Regenerative Strategy:**
The data highlights the limitations of symptom-focused interventions like steroids compared to regenerative options (e.g. PRP, MSCs) that promote repair.
- **HA as a Safe Bridge to Biologics:**
Given its compatibility and low risk profile, HA may be an ideal transitional therapy leading into more advanced biologic interventions.

Study Details:

- **Citation:** Bharadwaj, U. U., Lynch, J. A., Joseph, G. B., Akkaya, Z., Nevitt, M. C., Lane, N. E., McCulloch, C. E., & Link, T. M. (2025). Intra-articular Knee Injections and Progression of Knee Osteoarthritis: Data from the Osteoarthritis Initiative. *Radiology*, 315(2), e233081.
<https://doi.org/10.1148/radiol.233081>
- **Design:** Secondary analysis of 210 participants from the OAI using WOMBS MRI scoring to compare corticosteroid (n=44), HA (n=26), and matched controls (n=140) over 2 years.
- **Results:** Corticosteroids led to greater joint degeneration. HA injections preserved joint structure better and reduced cartilage loss progression.