



Position Statement on the Radiological Investigation of Knee Osteoarthritis

Executive Summary

A detailed history and examination, followed by a standardised series of plain radiographs where indicated, remains the cornerstone methodology to the clinical diagnosis of knee osteoarthritis.

Background

Osteoarthritis, or degenerative joint disease, is a progressive clinical disorder of joints characterized by gradual diffuse loss of articular cartilage, effects on the underlying bone, and secondary compromise of joint function.

The Australian Knee Society (AKS) is a Scientific Society of Orthopaedic Surgeons whose purpose is the advancement of Orthopaedic Knee Surgery. Members are Fellows of the Australian Orthopaedic Association who demonstrate a subspecialty interest in the ongoing advancement of knee surgery through research, promotion and scientific publication.

The Australasian Musculoskeletal Imaging Group (AMSIG) is a Scientific Society of Radiologists whose purpose is to develop and support standards in the practice of musculoskeletal radiology, foster scientific research and constructively engage with other special interest groups involved in musculoskeletal medicine and surgery.

Detailed Recommendations of Appropriate Investigation

1. An accurate clinical history, and appropriate examination remain the cornerstones of the clinical diagnosis of knee osteoarthritis, typically consisting of atraumatic onset of knee pain in the middle-aged, or older, patient.
2. Generally, history and examination are sufficient to allow a presumptive diagnosis of osteoarthritis. In order to get confirmation of this diagnosis, and/or to gain further insight into the severity of the condition, we recommend initial imaging with a standard series of plain radiographs.
3. A standardised series of plain radiographs should include: a Weight Bearing Antero-Posterior View in extension of both knees, a Weight Bearing Postero-Anterior View in 30 degrees of flexion parallel to the tibial articular surface of both knees, a Skyline Patellofemoral view, and a Lateral view. Non-weight bearing radiographs may be substituted if the patient is unable to weight-bear.
4. MRI, CT (with or without contrast) and Ultrasound, have no role in the primary investigation of knee osteoarthritis.

5. Where there is an exacerbation of symptoms in an osteoarthritic knee joint which requires further investigation, there may be a role for repeating the standard series of plain radiographs. Clinical history, and further examination will determine the appropriateness of that versus the consideration of using other investigative modalities.

6. In situations where symptoms related to proven knee osteoarthritis are poorly controlled with conservative measures, specialist review or consultation, rather than GP initiated MRI examination is in general the appropriate standard of care. On occasion there may be a role for MRI investigation of such patients, however, such scenarios are not common and should remain at the discretion of the reviewing specialist or the decision made via consultation between the GP and specialist.

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