Table B2. Summary of recommendations—adult knee disorders

Patient presentation	Recommendations
Adult patients with nontraumatic knee pain of b4 wk of duration • Symptoms frequently arise from soft tissues not seen on radiographs • Physical examination should include lower back, pelvis, hip, foot, and ankle as pain may be referred	Radiographs not initially indicated [C]
General indications for knee radiographs include: • History of noninvestigated trauma (with signs from the OKR—see below) • Complex history • Significant unexplained effusion with no previous films • Loss of mobility in undiagnosed condition. • Acute/subacute onset • Intermittent locking • Unrelieved by 4 wk of conservative care • Palpable enlarging mass	When radiographs are indicated or unless otherwise specified [C] • Standing AP views for joint space integrity • Consider recumbent AP views if osseous detail is important • Lateral view • Tunnel (intercondylar) view Special investigations [C] • US useful to visualize superficial soft tissue structures (tendons, collateral ligament bursae) • MRI best for internal derangements and can often prevent unnecessary knee arthroscopy
Specific clinical diagnoses 1. Osteoarthritis (OA) The clinical criteria for OA of the knee are: History: • AgeN 50 y • Morning joint stiffness b 30 min Physical examination: • Crepitation • Bony tenderness • Bony enlargement • No palpable warmth Other characteristics include: long-standing pain, no extra-articular symptoms; aggravated by weight bearing, climbing stairs, exercise; nonresponsive to NSAID or corticosteroid medication; relieved with rest; deformity or fixed contracture, joint effusion; insidious onset.	Radiographs indicated if unrelieved by 4 wk of conservative care [B] AP, lateral, and intercondylar views if radiographs are indicated Additional views: 45° (oblique) views if signs and symptoms do not correlate with standard views Special investigations [B] US or MRI indicated if significant effusion and/or loss of joint space
2. Inflammatory arthritis (seronegative and seropositive) Diagnosis of inflammatory arthritis of the knee is primarily based on history and physical examination: • Unrelenting morning stiffnessb 30 min • Pain at rest • Pain or stiffness better with light activity (during remission) • Polyarticular involvement, especially the hands • Palpable warmth • Joint effusion • Decreased ROM • Fever/chills or other systemic symptoms • Responsive to NSAID or corticosteroid medication • Flexion and adduction contracture in long-standing arthritis • See also hip section for RA diagnostic criteria	Radiographs indicated [D] Consider bilateral AP standing views Special investigations [C] • US and MRI may aid in staging and as indicator of disease progression • Knee aspiration if positive for effusion
3. Bursitis/tendinitis/strain/tendinosis Clinical features:	Radiographs not routinely indicated unless [D] • Unrelieved by 4 wk of conservative care

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Table B2 (continued)

Patient presentation	Recommendations
• Related to or aggravated by activity • Relieved or diminished symptoms at rest • Point tenderness • Localized swelling (extra-articular)	• Suspected avulsion fracture • Underlying arthropathy Special investigations [D] • MRI • Puncture of a popliteal cyst and corticosteroid injection can be done under US guidance.
4. Anterior knee pain Clinical features: • Insidious onset • Aggravated with steps/incline/rising from chair • Stiffness with rest or gliding • Pseudolocking or giving way • Tender patellar facets • Positive apprehension tests • Crepitation • Abnormal Q angle Clinical tests for the diagnosis of chondromalacia patella have low sensitivity, specificity, predictive values, and accuracy compared with tests for arthroscopy.	Radiographs indicated if [C] • Unrelieved by 4 wk of conservative care • Suspected fracture • Underlying arthropathy Additional views: • Tangential patellar views to evaluate for chondromalacia, patellar tilt or subluxation • Stress radiographs to evaluate for patellofemoral instability (stress view: valgus and internal rotation at 45° of knee flexion)[91] Special investigations [C] • High-field MRI for chondromalacia and synovial plicae • Contrast CT arthrography if MRI unavailable
5. Internal joint derangement Clinical features: History • Acute or subacute onset • Mechanism of injury • Intermittent locking and/or giving way • Crepitation, snapping, and popping • Worse with activity • Improved with rest (The accuracy of the clinical history in patients with suspected torn ligament or meniscus is unknown.) Physical examination: • Joint line tenderness • Swelling and joint effusion • Loss of ROM Meniscal tear: joint line tenderness, McMuray, and Ege's test (weight-bearing McMurray test) Ligamentous tear: Lachman maneuver, pivot test, and the Anterior Drawer Test	Radiographs indicated if unrelieved by 4 wk of conservative care [B] Standard AP, lateral views if necessary after 4 wk Additional views: tunnel, standing lateral, standing oblique Special investigations [C] If diagnosis not well established from Hx, examination and radiographs or in the absence of clinical improvement • MRI is gold standard for internal knee derangements such as meniscal and ligamentous injuries • Spiral CT arthrography if MRI unavailable
Adult with acute knee injury but negative findings for the OKR indicates that a fracture is very unlikely. Consider radiographs only of patients excluded from the OKR: • b18 YOA • Pregnancy • Isolated skin injury • Referred with outside films • 7 d since injury • Multiple injuries • Altered level of consciousness • Paraplegic	Radiographs not routinely indicated [B] Patient should be advised to return for follow-up if their pain has not improved in 7 d
Adult with acute knee injury and positive findings for the OKR Radiographs indicated in the presence of one or more of the OKR criteria [A] Radiographs required only in the presence of postinjury knee pain and any one of the following findings: • ≥55 YOA • Isolated tenderness at the head of the fibula or patella • Inability to flex knee N90° • Inability to walk 4 weight-bearing steps both immediately and at presentation	AP supine and lateral views Additional views: bilateral obliques, tunnel, and tangential views Special investigations [C] • Valgus stress radiographs under general anesthesia • MRI is the modality of choice for initial investigation of knee trauma.

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Patient presentation	Recommendations
Radiographs should also be obtained in the presence of obvious deformity or mass.	• CT, US, and angiogram may be needed for additional information.