**Symptoms > 3 months**
- **Consider Non-Urgent Arthroscopic Partial Meniscectomy**

**Symptoms < 3 months**
- **Optimal Non-Operative Treatment & Re-Assess**
  - e.g. provide information, physiotherapy, exercise, analgesia, steroid injection

**Integrated Assessment**
- **History**
  - Symptoms, Duration

- **Examination**
  - Signs

- **Imaging**
  - Per imaging protocol: X-ray and/or MRI

- **Meniscal Tear (+/- osteoarthritis)**

- **No Meniscal Tear**
  - [Alternative Treatment Pathways]

**Common Clinical Presentations**
1. **Locked Knee**
   - Assessment: Arthroscopic meniscal surgery indicated
   - **Urgent Arthroscopic Meniscal Surgery**

2. **Advanced Structural OA**
   - Assessment: Arthroscopic meniscal surgery usually not appropriate
   - **No Arthroscopic Meniscal Surgery**

3. **Acute Injury with Meniscal Target (MRI)**
   - Assessment: Meniscal preservation may be appropriate
   - **Consider Arthroscopic Meniscal Repair (if suitable candidate)**

4. **Meniscal Target (MRI) & Corresponding Symptoms / Signs**
   - Assessment: Arthroscopic meniscal surgery may be beneficial after a trial of non-surgical treatment
   - **Consider Non-Urgent Arthroscopic Partial Meniscectomy**

5. **Possible Meniscal Target (MRI) & Corresponding Symptoms / Signs**
   - Assessment: Further non-surgical treatment is first line
   - (Arthroscopic meniscal surgery may be indicated in selected cases if symptoms do not improve)
   - **Optimal Non-Operative Treatment & Re-Assess**

**RECOMMENDATION**
- **Provide information, physiotherapy, exercise, analgesia, steroid injection**
Definitions and terminology:

Degenerative meniscus and meniscal tears
- A degenerative meniscus develops progressively with degradation of meniscal tissue and this may be revealed by intra-meniscal high signal on MRI imaging.
- A meniscal tear is a defect or split in the meniscocapsular complex, which can occur in a degenerative or non-degenerative meniscus.
- Degenerative meniscal lesions (high signal or tear) are frequent in the general population and are often incidental findings on knee MRI. There may or may not be a memorable history of knee injury.

Approach to imaging (secondary care imaging protocol)
1. Plain radiographs (weight-bearing AP and lateral +/- Rosenberg +/- skyline view) are the first line investigation when OA is suspected.
2. In patients where OA is not suspected, MRI is the first line investigation*.
3. If plain radiographs do not demonstrate advanced osteoarthritis (Kellgren-Lawrence-L 4) and meniscal symptoms predominate, then MRI imaging is indicated.

*In certain cases, when clinical findings are conclusive (e.g. locked knee), clinicians may apply their own judgement on the need for MRI imaging.

Classification of structural osteoarthritis (OA)
- Early or No Structural OA: Kellgren-Lawrence Grade 0 or 1 on plain radiographs and/or Normal MRI, or MRI with possible chondral signal change and no chondral loss.
- Mild to Moderate Structural OA: Kellgren-Lawrence Grade 2 or 3 on plain radiographs and/or Partial thickness chondral loss on MRI.
- Advanced to End-stage Structural OA: Kellgren-Lawrence Grade 4 on plain radiographs and/or significant areas of full thickness chondral loss on MRI*.

*Excluding cases of contained full thickness cartilage / osteochondral defects.

Classification of symptoms and signs
MENISCAL: Strongly Suggestive of a Treatable Meniscal Lesion
- Locked knee: sudden onset, complete mechanical block to flexion or extension of the knee, detected on clinical examination and which does not resolve despite adequate analgesia.
- Locking: An intermittent block to normal range of movement of the knee (commonly a block to extension) with an associated unlocking movement. Knee returns to near normal after unlocking.
- Catching: the sensation of something intermittently out of place in the knee and interfering with joint movement.
- Tender, palpable meniscal tissue: the finding on clinical examination of a discrete, tender lump, close to the joint line.

POSSIBLY MENISCAL: Potentially Suggestive of a Treatable Meniscal Lesion
- Episodic sharp knee pain: sharp, intermittent knee pain, occurring with sudden onset.
- Intermittent knee swelling: symptom of periodic swelling of the knee, lasting for hours to days, that has occurred over a period of weeks or months.
- Knee effusion: a clinically detectable intra-articular fluid collection of the knee joint.
- Activity avoidance: the active avoidance of specific, potentially provoking, movements or activity e.g. twisting.
- Squatting pain: knee pain that is exacerbated by deep flexion when weight bearing (may be reported by the patient or elicited during clinical examination).
- Clicking +/- pain: Clicking: a clicking noise or sensation when moving the knee. Painful clicking: a clicking noise or sensation when moving the knee that is associated with pain.
- Meniscal provocation tests: e.g. McMurray’s, Apley’s, Thessaly.
- Joint line point tenderness: point tenderness on the joint line, detected on clinical examination.
- Posteroomedial joint line tenderness: tenderness on deep palpation of the joint line, from mid medial collateral ligament posteriorly, corresponding to the location of the commonest posteroomedial degenerative meniscal lesion.

ARTHROTIC: Osteoarthritic Symptoms and Signs
- Inactivity pain and stiffness: the temporary, subjective sensation of stiffness on initiation of movement, often with pain, after periods of immobility (e.g. sleeping, prolonged sitting).
- Crepitus: crunching, grating or creaking detected clinically on active movement of the knee.
- Bony enlargement: abnormal shape of the normal knee bony contour visible on inspection or detected on clinical examination.
- Bony tenderness: tenderness on clinical palpation of the bone adjacent to the joint.
- Aching pain: constant knee pain during and after activity.

Classification of meniscal lesions
TARGET (Treatable Lesion: meniscal surgery may be indicated based on appearance)
- "Bucket-handle" tear: a longitudinal tear or peripheral separation involving MORE than 25% of meniscus length (either displaced or undisplaced).
- Displaced meniscal tear: a meniscal lesion with meniscal fragments displaced from their usual anatomical position.
- Meniscal root failure: a complete tear or avulsion of the meniscal root.

POSSIBLE TARGET (Indeterminate Lesion: meniscal surgery may be indicated based on appearance)
- Undisplaced meniscal tears:
  - Radial tear:
    - Radial flap tear: a vertical and oblique meniscal tear lesion (parrot beak type).
    - Complete radial split tear: a radial meniscal tear lesion that extends to the meniscocapsular junction.
    - Partial radial split tear: a radial tear that does not extend to meniscocapsular junction.
  - Horizontal tear +/- cyst:
    - Horizontal cleavage tear and meniscal cyst: a horizontal meniscal cleavage lesion that is associated with a meniscal cyst.
    - Horizontal cleavage tear in isolation: meniscal horizontal cleavage lesion without an associated cyst.
- Complex meniscal lesion: a meniscal lesion with more than 1 plane of tear in continuity.
- Short longitudinal tear: a longitudinal meniscal tear lesion involving LESS than 25% of the overall meniscus length.

NO TARGET (Unlikely Treatable: meniscal surgery not indicated based on appearance)
- Contour abnormality: a meniscus with an abnormal edge contour and very minor tear only.
- Isolated meniscal extrusion: extension of the meniscus beyond the tibial margins without any associated meniscal tear.
- No tear.
Clinical Case Examples:

Case 1
Onset: 1 week ago, twisting injury
Symptoms/Signs: Locked Knee
Imaging: Bucket handle meniscal tear

Case 2
Onset: 6 months ago, no injury
Symptoms/Signs: Arthritic
Imaging: Advanced structure OA +/- Meniscal tear

Case 3
Onset: 1 week ago, twisting injury
Symptoms/Signs: Meniscal
Imaging: Longitudinal tear in repairable zone of meniscus.

Case 4
Onset: 1 month ago
Symptoms/Signs: Meniscal
Imaging: Displaced parrot beak tear. Moderate OA.

Case 5
Onset: 4 months ago
Symptoms/Signs: Meniscal
Imaging: Displaced parrot beak tear. Moderate OA.

Case 6
Onset: 6 months ago
Symptoms/Signs: Possibly meniscal
Imaging: Complex posterior horn tear.

RECOMMENDATION

Urgent Arthroscopic Meniscal Surgery

No Arthroscopic Meniscal Surgery

Consider Arthroscopic Meniscal Repair (if suitable candidate)

Optimal Non-Operative Treatment & Re-Assess

Consider Non-Urgent Arthroscopic Partial Meniscectomy

Optimal Non-Operative Treatment & Re-Assess