AVON LOCAL MEDICAL COMMITTEE

Specific Indications for requesting Radiological imaging by Physiotherapists employed by General Practice or PCN in BNSSG.

INDICATIONS FOR XRAY

NICE recommend Osteoarthritis can be diagnosed without X-ray in people > 45 years with activity related joint pain with or without morning stiffness lasting < 30 minutes in the absence of signs and symptoms indicating possible alternative pathology - eg trauma, infection, inflammatory arthropathy, etc.

Spine

Lumbar Spine X-Ray MAY be indicated:

- Trauma
- ? Crush fracture – osteoporosis with sudden increase in pain
- Previous surgery – instrumentation, fusion
- ? Fracture – Ankylosing spondylitis
- Patients with pacemakers (New pacemakers are MRI compliant, so refer need to check with the department)
- Pre-operative surgery – orthopaedics
- ? Spondylolysis/spondylolisthesis
- Flexion and extension views for instability – laterals only and by specialist request
- Scoliosis/kyphosis (significant spinal deformity)- refer to spinal deformity clinic if required.

Lumbar Spine X-Ray is NOT routinely indicated:

- Low back pain in adults
- Sciatica
- ?Degenerative changes
- ?Metastases with no proven primary
- ?Changes in/Diagnosis of Ankylosing Spondylitis
- ALL rheumatology patients with the exceptions listed above
- Chiropractor referrals
- Known osteoporosis

If a pelvis and L-spine X-ray is requested

Only a pelvis will be obtained if L-Spine is not justified as per indications above
Lumbar spine imaging of children and patient up to 17 years of age is available by specialist request.

Cervical Spine X-Ray MAY be indicated to evaluate symptoms:

- Trauma
- ? Crush fracture – osteoporosis with sudden increase in pain
- Previous surgery – instrumentation, fusion
- ? Fracture – Ankylosing spondylitis
- Patients with pacemakers (due to being unsuitable for MRI)

- Pre-operative surgery – either C-spine surgery or pre-anaesthetic in rheumatoid arthritis
- Flexion and extension views for instability – by specialist request
- Scoliosis/kyphosis – orthopaedic or rheumatology surgical cases + ? crush fracture
- Neck pain with red flags

Cervical Spine X-Ray is NOT routinely indicated:

- Uncomplicated neck pain +/- radiculopathy less than 6/52 duration (see pathway)
- ?degenerative changes
- ?metastases with no proven primary
- ?changes in/diagnosis of ankylosing spondylitis
- Chiropractor referrals
- Cord compression
- Cervical spinal stenosis
- Investigation of possible vertebra-basilar insufficiency

Red Flags suggestive of cancer/infection/inflammation:

- Malaise/fever/weight loss
- Progressive increase in pain
- Sleep disturbance
- History of inflammatory condition e.g. arthritis, cancer, immunosuppression or chronic
- infection
- Lymphadenopathy
- Red flags suggestive of cord compression
- Insidious onset
- Gait disturbance
- Clumsy or weak hands
- Loss of sexual/bladder/bowel function
- UMN neurological signs for cord compression above cauda equina (typically at the level of L1)
- LMN signs – Cauda equina syndrome

Shoulder

- If red flags present*
- After trauma to exclude fractures - dependent on MOI, ROM restriction/loss of function, bony tenderness.
- X-rays are not initially indicated, as degenerative changes in the acromio-clavicular joints and rotator cuff are common and may be unrelated to the patient's symptoms.
- X-ray if there is no improvement after 6 months of conservative management (MSK Physiotherapy and one corticosteroid injection- therefore meeting BNSSG CCG criteria) and considering referral into MATS.
- If the following conditions are suspected clinically:

o Calcific tendinopathy – to confirm.
o Frozen shoulder – to exclude glenohumeral OA and malignancy.
o Glenohumeral and ACJ OA – AP and axial.
o Subacromial pain – if failure of conservative treatment for 6 months.

Elbow, Hand and Wrist

- After trauma to exclude fracture - in presence of focal bony tenderness and loss of function.
- If locking, restricted movement or effusion and suspected loose body.
- If diagnosis of OA clinically suspected.
- If red flags present* / suspicion of serious pathology.
- If not improving after 3 months of conservative measures
- Suspicion of AVN such as Kienbock's
- Suspicion of carpal instability

Knee

- After trauma to exclude fractures (including stress fractures) - Ottawa knee rules.
- If locking, restricted movement or effusion present and suspecting loose body.
- Weight bearing films needed to image degenerate joints – (see NICE guidelines above re: diagnosis of osteoarthritis).
- Post-operatively if implants used or painful prosthesis (should not be seen in MATS).
- If red flags present* / suspicion of serious pathology.
- In knee pain/dysfunction not responding to conservative measures for 3 months.
- Any patient over 45 yrs with knee pain should have X-rays before considering further investigations such as MRI in order to exclude degenerate changes in the absence of any other clear cause for symptoms. eg Trauma. Consider alternative views eg Rosenberg and Skyline if standard views are normal – see appendix.
- If referring via MATS for possible TKR ensure patient has had x-ray within last 6 months – preferably weight bearing views.

Hip

- Hip pain but full movement – not routinely indicated, unless symptoms and signs persist or complex history, eg chance of avascular necrosis/PMH of cancer.
- Hip pain with limited movement – X-ray if intervention such as THR considered. Weight bearing films recommended- within last 6 months. If meets BNSSG CCG criteria and referring into MATS
- If red flags present*/ serious pathology suspected.
- After trauma to exclude fractures (including stress fractures).
- Painful prosthesis (should not be seen in MATS).
- Hip pain not responding to conservative measures for 3 months.

Foot and Ankle

Weight bearing recommended unless unable to weight bear, eg acute trauma

- After trauma to exclude fracture – Ottawa ankle rules- includes ankle and foot.

- Arthropathy – to determine cause e.g suspected charcot arthropathy.
- If red flags present*/ serious pathology suspected.
- Painful Prosthesis (should not be seen in MATS).
- To exclude stress fracture.
- In foot/ankle pain/dysfunction not responding to conservative measures for 3 months.

INDICATIONS FOR MRI
MRI is investigation of choice in the following circumstances

Spine
- If red flags present*/ serious pathology suspected.
- Following a robust physiotherapy and escape pain programmes.
- In patients with radicular pain or stenotic symptoms of longer than six week duration, if invasive treatment is being considered.
- In presence of Upper Motor Neurone signs.
- Suspected brachial plexus lesion.
- Consider in patients with persistent spinal pain due to known specific cause i.e.
- spondylolisthesis where conservative management has failed and a surgical opinion is being sought.
- Rarely to reassure an anxious patient, e.g. in cases where anxiety or concern prevent the patient from accepting a self-management philosophy.

Shoulder
- Recurrent traumatic instability (MRI arthrogram)
- Not to be requested in primary care if over the age of 40, refer to orthopaedics.
- Uncertainty of diagnosis/ red flags
- If suspecting brachial plexus syndrome request MRI cervical spine and brachial plexus
- For rotator cuff pathology, ultrasound scan is the preferred choice

Hip
MRI is recommended if XR normal or diagnosis unclear following XR
- Suspected AVN
- To exclude stress # if indicated / XR normal
- Red flag / possible serious pathology
- Suspected tendon rupture (usually glut med / min)
- Pain not responding to conservative management or diagnosis unclear'

Knee
- Acute knee pain following injury in previously asymptomatic joint
- Chronic pain / dysfunction in young patients (<45) when meniscal / ligamentous /AVN / OCD suspected.
- Chronic pain in older patients (>45 as above) is often due to degenerate changes and MRI should only be performed if XR is normal.
- History of instability

Ankle
- Suspected tendon rupture

- Ligamentous laxity with instability symptoms if surgical referral being considered
- Suspected osteochondral injury of talus
- Suspected AVN

INDICATIONS FOR ULTRASOUND

Shoulder

- In the setting of acute trauma in a patient under 65yrs, with a suspected rotator cuff tear, an ultrasound scan is reasonable.
- Patients with a clinically frozen shoulder (reduced external rotation/capsular pattern) should not have an ultrasound scan as a first line. MSK physiotherapy referral should be considered +/- an XR and glenohumeral joint injection.
- Patients with RC related pain/sub acromial pain do not need imaging as a first line (even if there is a possibility of a cuff tear). MSK Physiotherapy for a minimum of 6 months +/- a sub-acromial bursal injection is recommended before imaging (compliant with BNSSG CCG policy for Subacromial pain). If this fails then consider MATS referral.

Foot/Ankle

- Forefoot / metatarsal pain (possible Morton's neuroma or bursitis etc)
- First line investigation for some lumps and bumps i.e. ganglion cysts but sometimes MRI required.
- Chronic Achilles tendinosis does not require imaging from primary care and should be treated initially with conservative treatment. If this fails then clinical referral is advised.
- Ultrasound is reserved for potential acute high grade traumatic ruptures.

Soft Tissue Swelling

- Benign swelling such as common ganglions do not routinely require further investigation (such as dorsal wrist ganglion). However, atypical swelling/soft tissue lumps may require further investigation e.g. ultrasound.

Peripheral Neuropathy

- Only request if patient has symptoms in the feet & lower limbs suggesting generalised peripheral neuropathy.
- Please do not select the option for other peripheral nerve lesion or when symptoms are only in the upper limbs.
- Please include relevant motor, reflex and sensory signs in the upper and lower limbs to allow interpretation of the electrophysiological findings.

Brachial Plexus Syndrome (Parsonage-Turner syndrome)

Request NCS/EMG as well as MRI scan as previously listed to exclude alternative causes of acute brachial plexus syndromes. Blood tests should also be considered and requested (via the GP if appropriate).

Common Peroneal Nerve Lesion

Only request when diagnosis is unclear or an indication of the stage of recovery is required.

RED FLAGS

These are signs of suspected serious pathology and can include any of the following:

- Presentation age (1st episode) < 20 or > 55.
- Trauma
- Non mechanical pain (constant) – more applicable to spinal pathology
- Past history of carcinoma, steroids, HIV.
- Unwell, unexplained weight loss.
- Widespread and progressive neurological symptoms and signs.
- Structural deformity.
- Thoracic pain.
- Possible infection