# RHEUMATOLOGY REFERRAL INFORMATION

## Rheumatology and Connective Tissue Diseases Specialist Clinic – Referral Guidelines

| *Disorders* | *Conditions* | *Specialists* |
|---|---|---|
| **Inflammatory Disorders** | • Rheumatoid Arthritis (RA)<br>• Reactive arthritis<br>• Post viral arthritis<br>• Palindromic inflammatory arthritis<br>• Giant Cell Arthritis (GCA)<br>• Polymyalgia Rheumatica (PMR)<br>• Suspected inflammatory condition | • Dr Carlos El-Haddad<br>• A/Prof Kathy Gibson<br>• Dr Geraldine Hassett<br>• Dr Victoria Johnson<br>• Dr David Martens<br>• Dr David Massasso<br>• Dr Michael Oliffe |
| **Crystal Arthropathy** | • Gout<br>• CPPD | • Dr David Martens<br>• Dr Carlos El-Haddad<br>• Dr Victoria Johnson<br>• Dr David Massasso<br>• Dr Michael Oliffe |
| **Connective Tissue Disease (CTD)** | • Systemic Lupus Erythematosus (SLE)<br>• Scleroderma (SCL)<br>• Polymyositis<br>• Dermatomyositis<br>• Polymyalgia Rheumatica (PMR)<br>• Sjogren's Syndrome<br>• Vasculitis<br>• Sarcoid | • Dr Geraldine Hassett<br>• Dr Victoria Johnson<br>• Dr Michael Oliffe |
| **Spondyloarthropathy** | • Psoriatic Arthritis (PsA)<br>• Ankylosing Spondylitis<br>• Enteropathic Arthritis (IBD) | • Dr David Massasso<br>• Dr Michael Oliffe |
| **Osteoporosis and Bone Health** | • Osteoporosis<br>• Osteoporosis re-fracture prevention clinic (ORP) | • Dr Carlos El-Haddad |
| **Early Osteoarthritis** | • Early Knee Osteoarthritis | • Dr Victoria Johnson |
| **Paediatric Rheumatology** | • All Rheumatology conditions for children <18 years of age | • Dr Damien McKay<br>• Dr Davinder Singh-Grewal |

# RHEUMATOLOGY REFERRAL INFORMATION

## Rheumatology and Connective Tissue Diseases Specialist Clinic – Mandatory Referral Content

For your patient's referral to be triaged, all referrals must contain the following information:

**Patient Demographic:**

- Full name
- Date of birth
- Postal Address and Contact Number
- Medicare Number
- Referring GP Name, GP Address and Provider Number
- Interpreter Requirements

**Clinical Content:**

- Reason for referral
- Duration of symptoms
- **Examination findings** as **per referral guidelines**
- Current and previously tried management and medications
- Past medical history
- A complete list of all current medications
- **Diagnostics as per referral guidelines**

**PLEASE SEND US THE REFERRAL VIA:**

- **FAX:** 02 8738 3561
- **EMAIL:** SWSLHD-LiverpoolRheumatology@health.nsw.gov.au
- **Drop your referral into Rheumatology**, Lift B, Level 1, Clinic 112

**Contact Us**: To discuss complex and urgent referrals, contact the Rheumatology Registrar On-Call through the Liverpool Hospital Switchboard: (02) 8738 3000

**General Rheumatology Clinic Enquires:** Phone: (02) 8738 4088

# RHEUMATOLOGY REFERRAL GUIDELINES

## RHEUMATOID ARTHRITIS

**Clinical Features**

- Polyarticular, small joints of hands and feet
- Morning stiffness >30minutes most days
- Improves with activity
- +/- Family history
- +/- Constitutional symptoms

**Initial GP Diagnostics**

- Basic Blood Tests → FBC, EUC, LFT
- Inflammatory Markers → CRP, ESR
- RF, anti-CCP
- X-Rays → Hands, Wrists, Feet

**Examination Findings**

- Joints: MCPs, PIPs, MTPs, wrists, ankles
- Pain on palpation
- Swelling, effusions

**Initial GP Management**

- Consider NSAIDs for symptom relief

Commencement of disease modifying anti-rheumatic medications should only be performed following an assessment by a rheumatologist

### WHEN TO REFER TO LIVERPOOL RHEUMATOLOGY

**Urgent Referral**

- High burden of disease
  - High inflammatory markers
  - Large number of swollen joints (>10)

**Routine Referral**

- All patients with an inflammatory arthritis require specialist assessment and management

# RHEUMATOLOGY REFERRAL GUIDELINES

## SPONDYLARTHROPATHY AND PSORIATIC ARTHRITIS

**Clinical Features**

- Can be mono, oligo (<4) or polyarticular,
- Small and large joints
- Symmetrical or asymmetrical
- Inflammatory back pain (morning pain and stiffness that improves with activity)

**Initial GP Diagnostics**

- Basic Blood Tests → FBC, EUC, LFT
- Inflammatory Markers → CRP, ESR
- RF, anti-CCP, HLA-B27
- X-Rays → Sacroiliac Joints, Lumbar Spine, Hands, Wrists, Feet

**Examination Findings**

- Joints: small joints and large joints, spine
- Associated features
  - Psoriasis, IBD, dactylitis, uveitis (acute or a history of)

**Initial GP Management**

- Consider NSAIDs for symptom relief

Commencement of disease modifying anti-rheumatic medications should only be performed following an assessment by a rheumatologist

### WHEN TO REFER TO LIVERPOOL RHEUMATOLOGY

**Urgent Referral**

- High burden of disease
  - High inflammatory markers
  - Large number of swollen joints (>10)

**Routine Referral**

- All patients with an inflammatory arthritis require specialist assessment and management

# RHEUMATOLOGY REFERRAL GUIDELINES

## CONNECTIVE TISSUE DISEASES

**Clinical and Examination Features**

**Systemic Lupus Erythematosus (SLE)**

- Inflammatory arthritis,
- Raynaud's, rashes, mouth ulcers
- Nephritis,
- Serositis (chest, abdomen),
- Anaemia, lymphopenia,
- CNS and PNS involvement,
- Myositis
- Sicca symptoms (dry eye, dry mouth)
- Alopecia
- Fevers, weight loss
- High risk – Asian / Hispanic / Black ethnicity

**Scleroderma**

- Raynaud's, sclerodactyly (skin tightening), telangiectasia, dysphagia, ILD, arthritis

**Sjogren's Syndrome**

- Predominance of sicca symptoms
- Can present like SLE (see above)

**Mixed Connective Tissue Disease**

- A combination of features consistent with SLE, Scleroderma
- Must have Raynaud's Phenomenon, arthritis and/or myositis

**Initial GP Diagnostics**

- **For all patients**
    1. Check blood pressure
    2. Urine Analysis*
- Basic Blood Tests → FBC, EUC, LFT, CK
- Inflammatory Markers → ESR, CRP
- Serology
    - ANA, ENA, dsDNA, C3/C4, ANCA
- Urine Studies
    - MSU, Protein, Creatinine,
    - Protein: Creatinine Ratio

* Lupus Nephritis can be rapidly progressive and requires urgent assessment
* Scleroderma renal crisis presents with malignant hypertension and is a medical emergency. Patients should be referred urgently to Liverpool ED.

### WHEN TO REFER TO LIVERPOOL RHEUMATOLOGY

**EMERGENCY**

- Acute connective tissue diseases should be referred immediately to ED and the Rheumatology Registrar should be contacted (through Liverpool switch board, **8738 3000**)
    - Constitutional symptoms, elevated BP, positive urine analysis, acute dyspnea or abdominal pain

**Urgent Referral**

- Autoimmune conditions need careful diagnostic work up prior to initiation of therapy.
- **Major organ involvement** (heart, lung, renal, CNS/PNS) requires urgent review. The Rheumatology Registrar should be contacted to help expedite the review

**Routine Referral**

- A positive ANA in the absence of clinical features is unlikely to represent a significant autoimmune disease
- Patients with positive serology and symptoms suggestive of an autoimmune condition should be referred for a specialist opinion

# RHEUMATOLOGY REFERRAL GUIDELINES

## VASCULITIS

**Clinical and Examination Features**

**ANCA Associated Vasculitis**

- Inflammatory arthritis,
- Rashes → Palpable Purpura, Cutaneous ulceration of the lower limbs
- Nephritis
- ENT Manifestations → Rhinitis, Sinusitis, Epistaxis, Nasal Polyps
- Lung → dyspnea, persistent dry cough, haemoptysis
- Ocular inflammation
- CNS and PNS involvement → mononeuritis multiplex, nerve infarctions, hearing loss
- Myositis
- Fevers, weight loss

**Other**

- Medium Vessel Vasculitis (Polyarteritis Nodosa)
  - Acute abdominal pain in the absence of examination findings
  - Arthritis
  - Cutaneous ulcerations of the lower limbs
  - Testicular pain
  - CNS / PNS involvement
- Cryoglobulinaemic Vasculitis
  - Palpable purpura
  - Nephritis
  - Mononeuritis Multiplex
  - Abdominal Pain

**Initial GP Diagnostics**

- **For all patients**
  1. Check blood pressure
  2. Urine Analysis*
- Basic Blood Tests → FBC, EUC, LFT, CK
- Inflammatory Markers → ESR, CRP
- Serology
  - ANA, ENA, dsDNA, C3/C4, ANCA
  - Hepatitis B (if PAN suspected)
- Urine Studies
  - MSU, Protein, Creatinine,
  - Protein: Creatinine Ratio

* Glomerulonephritis can be rapidly progressive and requires urgent assessment

### WHEN TO REFER TO LIVERPOOL RHEUMATOLOGY

**EMERGENCY**

- All cases of suspected acute vasculitis should be referred immediately to ED and the Rheumatology Registrar should be contacted (through Liverpool switch board, **8738 3000**)
  - Constitutional symptoms,
  - Elevated BP with a positive urine analysis
  - Acute dyspnea +/- haemoptysis
  - Acute abdominal pain
  - Acute, new ulcerations and/or palpable purpura

# RHEUMATOLOGY REFERRAL GUIDELINES

## GIANT CELL ARTHRITIS AND POLYMYALGIA RHEUMATICA

**Clinical and Examination Features**

**Polymyalgia Rheumatica**

- Shoulder and Hip girdle pain and stiffness
- Prominent early morning stiffness
  - Hip and shoulder girdle
  - Can also involve lower back
- Aged >50 years
- ESR > 50

**Giant Cell Arteritis (GCA)**

- Headaches (temporal, orbital)
- Scalp tenderness
- Visual Loss (**emergency**)
- Jaw claudication (pain that progresses with chewing)
- Constitutional symptoms
- +/- PMR
- Aged >50 years
- ESR > 50

**Initial GP Diagnostics**

- Basic Bloods → FBC, EUC, LFT
- Inflammatory Markers → **ESR**, CRP

**Initial GP Management Options**

**Polymyalgia Rheumatica**

- Therapeutic trial of prednisolone
  - Dose: 15 – 20mg
- Immediate resolution of symptoms is expected once prednisolone is initiated

**Giant Cell Arteritis (GCA)**

- Symptoms of GCA should be considered a **medical emergency**.
- Patients should be referred to ED immediately
- Do not start prednisolone without discussion with the Rheumatology Registrar on-call

### WHEN TO REFER TO LIVERPOOL RHEUMATOLOGY

**EMERGENCY**

- All cases of suspected GCA should be referred immediately to ED and the Rheumatology Registrar should be contacted (through Liverpool switch board, **8738 3000**)
  - **Visual Loss, Visual Disturbance**
  - Constitutional symptoms,
  - Headaches, scalp tenderness, jaw claudication

**Routine Referral**

- Symptoms of PMR do not resolve with prednisolone commencement
- Flare of PMR with prednisolone dose reduction. This may necessitate the commencement of a disease modifying agent

# RHEUMATOLOGY REFERRAL GUIDELINES

## EARLY OSTEOARTHRITIS CLINIC

**The Charter of the Early Osteoarthritis Clinic**

Early Osteoarthritis Clinic will aim to provide novel, individualized, stepped-care multi-disciplinary management for patients with early to moderate knee and hip osteoarthritis with a treat-to- target approach. In order to prevent symptom and functional regression, which has been largely reported across multiple OACCP clinics across NSW, this clinic will promote behavioural change strategies using a "Healthy Coaching Theory" to help implement and sustain the lifestyle changes championed by this clinic.

Unlike the current OACCP model which is targeted individuals who are awaiting joint replacement surgery and thus would be considered to have end-stage joint disease, the Liverpool Osteoarthritis Clinic will aim to enroll a younger population with early to moderate knee osteoarthritis.

### WHO CAN BE REFERRED TO THE LIVERPOOL EARLY OSTEOARTHRITIS CLINIC?

**There are two specific phenotypes that will be accepted for enrolment in this clinic as outlined below;**

***"Mechanical" Phenotype***

Men and women between the ages of 45 – 65 years of age **and**;

Suffer from Knee Pain or Stiffness on 2 or more days of the week **and**;

Have had knee symptoms for <5 years **and;**

Kellgren-Lawrence Grade ≤2 on weight-bearing knee x-rays

***"Post-Traumatic" Phenotype***

Men and women between the ages of 30 – 45years of age **and**;

Suffer from Knee Pain or Stiffness on 2 or more days of the week **and**;

Have a history of knee injury resulting in injury to either;
- Anterior Cruciate Ligament **and/or**
- Meniscal Tears

Patients will be accepted regardless of radiographic status

### REFERRAL REQUIREMENTS FOR THE LIVERPOOL EARLY OSTEOARTHRITIS CLINIC

1. If your patient fulfils the above criteria for the "mechanical phenotype", then please organise **weight-bearing bilateral knee x-rays.** We will determine the Kellgren and Lawrence Grade
2. Refer your patient, with a documented history, examination and x-rays to The Liverpool Early Osteoarthritis Clinic

# RHEUMATOLOGY REFERRAL GUIDELINES

## OSTEOPOROSIS RE-FRACTURE PREVENTION (ORP) CLINIC

**The Charter of the Osteoporosis Re-Fracture Prevention Clinic**

The ORP Clinic was designed as a model of care to provide co-ordinated, multi-disciplinary care to improve outcomes for people with minimal trauma fractures. The goal is to reduce refracture rates and the subsequent morbidity and mortality that refractures cause. This is performed through a combination of education regarding exercise and dietary modifications, initiation of appropriate treatments.

### WHO CAN BE REFERRED TO THE OSTEOPOROSIS RE-FRACTURE PREVENTION CLINIC?

Patients age>50 who:

1) **have sustained a minimal trauma fracture** (if the fracture risk is high, e.g. #NOF, please commence therapy prior to our clinic review – i.e. do not delay therapy)
2) **have osteoporosis seeking specialist care** (Examples: where there is uncertainty about investigation/management, fractures despite anti-resorptive therapy)
3) **are at high risk of developing osteoporosis**, e.g. long term prednisolone

*For patients aged less than 50, we recommend initially referring to an endocrinologist.*

### REFERRAL REQUIREMENTS FOR THE OSTEOPOROSIS RE-FRACTURE PREVENTION CLINIC

Please perform the following and attach them to the referral form:

- Basic Blood Tests → FBC, EUC, LFT, CMP, Vitamin D, TFT
- A recent Bone Mineral Density Scan (DEXA) (ideally performed in the last 12 months)
- X-Rays of fracture (if applicable)

**If an urgent referral is required; please contact Dr Carlos El-Haddad to discuss your patient's case (8738 4088)**

# RHEUMATOLOGY REFERRAL GUIDELINES

## THE CRYSTAL ARTHROPATHY CLINIC

**Clinical Features**

- Can be mono, oligo (<4) or polyarticular
  - 95% of first presentations is Podagra (1st MTP)
- Small and large joints
- Symmetrical or asymmetrical
- Can have "pseudo-septic" presentation
  - Fevers, tachycardia, hypotension
  - High CRP

**Differentials for a Monoarthritis**

- **Septic Arthritis** must always be excluded in a patient with a new monoarthritis
- **Septis arthritis and gout can co-exist in a joint**
  - An urgent aspirate must be performed and referral to ED
- Crystal arthritis (gout, CPPD)
- Haemarthrosis

**Examination Findings**

- Monosodium Urate Gout
  - Classic joints: 1st MTP, Ankle, Knee
- CPPD
  - Classic joints: knee, wrist
- Pain on palpation
- Swelling, effusions
- Can have "pseudo-septic" presentation
  - Fevers, tachycardia, hypotension
- Tophus Deposition
  - Toes, fingers, helix of ears

**Initial GP Diagnostics**

- **Joint Aspirate**
  - Culture, cell count, light microscopy for crystal detection
- Basic Blood Tests → FBC, EUC, LFT
- Inflammatory Markers → CRP, ESR
- Uric Acid level
- X-Rays
  - Joints affected
  - Feet (to check for erosive changes which may suggest chronic changes)

### SUGGESTED INITIAL GP MANAGEMENT

1. Treatment of a Gout flare (if septic arthritis has been excluded)
   a. NSAIDs (if no contra-indications) **or** Prednisolone **or** Colchicine (if normal renal function)
   b. **DO NOT STOP ALLOPURINOL** during an acute flare
2. When to initiate urate lowering therapy (ULT)
   a. >2 attacks in 12 months **or**
   b. Tophi is present on examination **or**
   c. Erosions are present on x-rays
3. How to monitor urate lowering therapy
   a. **Uric Acid targets**:
      i. Erosive Gout or Tophi Present = Aim <0.30
      ii. Non-Erosive, No Tophi Present = Aim <0.36
   b. Measure uric acid levels every 4 weeks and adjust dose as per uric acid level until target achieved
   c. To prevent flare during ULT commencement start low dose colchicine 500mcg daily for 6 months

### WHEN TO REFER TO LIVERPOOL CRYSTAL ARTHRITIS CLINIC

- Re-current flares despite ULT commencement
- High burden of gout (high inflammatory markers, multiple joints involved, large amount of tophi present)
- Complexity in commencing ULT (multiple co-morbidities, poor renal function etc)
- Unable to achieve uric acid targets listed above despite ULT
- Uncertainty regarding the overall diagnosis of crystal arthritis

# RHEUMATOLOGY MANAGEMENT GUIDELINES FOR GP'S

## BACK AND NECK PAIN

**Clinical Features**

- Chronic Lower Back Pain (pain >6 months)
- Radicular Symptoms

**Red Flags for Back Pain**

- Constitutional symptoms
- Motor weakness
- A history of smoking with acute, new back pain
- Bladder or bowel dysfunction
- Night pain
- History of osteoporosis with acute midline
- Morning pain and stiffness >30minutes

**Initial GP Diagnostics**

Are there localised symptoms or is there referred pain?

**Imaging**

- X-Rays are not indicated for most cases of back pain. Indications would include for exclusion of new osteoporotic fracture, investigation of inflammatory back pain.
- MRI scanning is not required for assessment of chronic lower back pain. An MRI scan should only be considered if there are features of a radiculopathy.

**Examination Findings**

- A complete and comprehensive neurological examination is required
  - Power assessment, reflexes, sensory examination
  - PR exam if necessary
- Lower back and neck examination
  - Midline palpation (? pain)
  - Range of motion → flexion, extension, lateral flexion, rotation

**Suggested GP Management**

- Simple analgesia or NSAIDs (if no contraindications present)
  - Avoid narcotic analgesia
- All patients should be referred to a community **physiotherapist** for back and core strengthening and stretching exercises
- Recommend water-based activities such as hydrotherapy
- **Weight loss** is essential if over-weight or obese
- If a radiculopathy is present, discussion with interventional radiologists could be considered for a corticosteroid injection

## WHEN TO REFER TO LIVERPOOL RHEUMATOLOGY

**EMERGENCY**

- Patients with acute neurological signs or "red flags" should prompt an early assessment and patients should be referred to ED for a **Neurosurgical Review**

**Routine Referral**

- Features of inflammatory lower back disease → Refer to our Spondylarthropathy Clinic
- New vertebral fractures consistent with osteoporosis → Refer to our ORP Clinic

***Referrals for chronic lower back pain are no longer accepted as per our new referral guidelines for Liverpool Hospital Rheumatology.*** If a patient fails physiotherapy and a medical review is required, please consider referring to a community-based rheumatologist.

# RHEUMATOLOGY MANAGEMENT GUIDELINES FOR GP'S

## FIBROMYALGIA

**Clinical Features**

- History of non-specific myalgias and joint pains without evidence of effusion or swelling
- No evidence of prolonged early morning stiffness
- History of trauma, anxiety, depression
- Sleep disturbance
- Pronounced fatigue and lethargy

**Examination Findings**

- Tenderness to pressure in non-articular sites, tender points
- Abnormal pain behaviours
- Absence of joint swelling, effusions

**Initial GP Diagnostics**

- Basic bloods → FBC, EUC, LFT, CRP, CK

**Exclusion of Medical Causes:**

- Hypothyroidism
- Depression
- Statin induced myopathy

### GP MANAGEMENT OF FIBROMYALGIA

- Explore psychosocial issues (anxiety, depression, trauma, PTSD)
  - Consider referral to a clinical psychologist for CBT
- Graded exercise program
  - Consider referral to a physiotherapist, exercise physiologist
  - Consider water-based exercises such as hydrotherapy
- Referral to a Chronic Pain Specialist or alternatively, the Chronic Pain Team at Liverpool Hospital
- Avoid narcotic analgesia

Management of Fibromyalgia requires a multi-disciplinary approach to pain management which includes exercise and psychological support. This is best done in a community setting or with a dedicated pain specialist.

***Referrals for fibromyalgia are no longer accepted as per our new referral guidelines for Liverpool Hospital Rheumatology.***

# RHEUMATOLOGY MANAGEMENT GUIDELINES FOR GP'S

## SOFT TISSUE RHEUMATISM (MUSCULOSKELETAL)

**Musculoskeletal Conditions**

- Rotator Cuff Disorders
- Adhesive Capsulitis (Frozen Shoulder)
- Epicondylitis (Elbow pain)
- Greater Trochanteric Bursitis (lateral hip pain)
- Carpal Tunnel Syndrome
- Plantar Fasciitis

**Clinical Features**

- Trauma, Injury
- Occupation
- Pain and referral pattern
- Pain reoccurs with activity

**Examination Findings**

- Reduced range of motion
- Pain on palpation
- Localised swelling
- Joint crepitus

**Initial GP Diagnostics**

- Ultrasound if concerns for bursitis
- X-rays of the region of concern
- Nerve conduction studies if concerns for nerve entrapment

Musculoskeletal conditions are a clinical diagnosis and investigations should only be performed to exclude sinister pathologies such as fractures etc.

### GP MANAGEMENT

1. Physiotherapy referral
    a. All musculoskeletal conditions are best managed and treated by a physiotherapist and do not require a medical review.
    b. All patients should be reviewed by a physiotherapist in the first instance
2. Consider short course of NSAIDs (if no contraindications present)
3. Consider local corticosteroid injection

***Referrals for primary musculoskeletal conditions are no longer accepted as per our new referral guidelines for Liverpool Hospital Rheumatology.***

# RHEUMATOLOGY MANAGEMENT GUIDELINES FOR GP'S

## OSTEOARTHRITIS

**Clinical Features**

- Joint pain with weight-bearing and activities, improved by rest
- Morning stiffness <30minutes most mornings
- Nocturnal pain
- Added features;
    - Clicking, locking, grinding or collapse
- No features consistent with an inflammatory arthritis

**Examination Findings**

- Boney swelling
- An absence of a joint effusion
- Reduced range of motion
- Painful range of motion
- Joint crepitus may be present
- Malialignment (knee, fingers)
- +/- Fixed-flexion deformities
- Pain on palpation on medial or lateral joint line (knee)

**Initial GP Diagnostics**

Osteoarthritis does not require routine or serial imaging, including both X-Rays and MRI.

Osteoarthritis is a clinical diagnosis. Imaging should only be performed to exclude other pathologies such as fractures, inflammatory arthritis, malignancy.

**Referrals for Osteoarthritis**

1. See Referral Guideline for the **Liverpool Early Osteoarthritis Clinic** to assess if your patient is appropriate

***Referrals for osteoarthritis that do not meet the criteria for the Early Osteoarthritis Clinic are no longer accepted as per our new referral guidelines for Liverpool Hospital Rheumatology.***

2. If significant, refractory pain despite the recommendations below and/or there is loss of structural integrity (recurrent collapsing or locking) then referral consider a referral to an **orthopaedic surgeon**

## GP MANAGEMENT OF OSTEOARTHRITIS

Management of osteoarthritis requires a multi-disciplinary approach

1. Weight loss of >10% is recommended in all patients with osteoarthritis who are over-weight or obese
    a. Exercise physiology referral for a graded exercise program
    b. Dietician referral if appropriate
2. Muscle strengthening
    a. Physiotherapy referral
    b. Water based exercises such as hydrotherapy
3. If aberrant pain behaviours such as catastrophising of pain, anxiety or depression co-exists then consider psychology referral for cognitive behaviour therapy (CBT)
4. Simple analgesia such as panadol
    a. Avoid narcotic analgesics
5. Adjuncts such as Voltaren Gel, Omega-3 supplementation, Vitamin D supplementation (if deficient)
6. If malalignment (knee) present then consider a physiotherapy referral for bracing assessment
7. For management of osteoarthritis flare
    a. Short course of oral NSAIDs may be appropriate
    b. If an effusion is present then consider an ultrasound guided corticosteroid injection