

Demystifying Blood Tests in MSK Health

Name and qualifications of tutor:

Dr Giles Hazan MBBS, BSc, MRCGP, DipMSM



Course length: 1 full day

Course Outline:

Are you mystified by myeloma screens, annoyed by ANA or exasperated by when to do an ESR?

This is a course designed for physiotherapists / allied health professionals working, who are wanting to work as autonomous practitioners with access to diagnostics in First Contact Practitioner roles or Advanced Practitioner roles.

This will be a full day course designed to provide an in-depth review of the blood tests commonly used in MSK practice, what they are and when to consider them.

Aims:

1. To improve participants knowledge of the range of blood tests undertaken, how they relate to physiological and pathological processes and when to consider using them.
2. To put this into practice using interactive case scenarios to explore how this knowledge can be incorporated into practice in a real-world setting.

Learning Objectives:

The course will cover a range of topics that will include:

- Malignancy – screening vs diagnostic tests
- Polymyalgia Rheumatica, Temporal Arteritis, Gout
- Auto-immune diseases – Rheumatoid arthritis and spondyloarthropathies
- Infections – FBC, inflammatory markers.
- Metabolic bone disease – Osteoporosis, Pagets' disease, Osteomalacia
- Chronic pain – the diagnosis of exclusion & screening for other pathologies
- Peripheral neuropathy

Uncovering the role and relevance of blood tests to include:

- Tumour markers (including PSA)
- Inflammatory markers (ESR/CRP)
- Autoimmune markers (ANA/RHF, anti-CCP, HLA-B27)
- Bone profile, Vitamin D, Myeloma screen
- FBC, U&E, LFT

And more.....

Format:

Interactive, large group teaching approach making use of short presentations using a clinical case/problem-based approach to enhance learning with opportunity for discussion and use of a delegate workbook with relevant resources contained within.

Structure

The structure of the day will be focussed on being highly clinically relevant with an emphasis on walking through a clinical reasoning process and the role of investigations in supporting this.

There will be an introduction looking into the principles of investigations including their role in aiding diagnosis, screening, monitoring and identification of risk factors before considering the key questions of significance in supporting a clinical reasoning process (i.e. what are we looking to achieve by doing this test, do you know how to interpret them and how will they change your management of the patient in front of you).

Using case studies, we will explore the differential diagnosis and then use that as a means to dive into each potential diagnosis developing an understanding of the pathophysiology of the conditions suspected and how/why there are measurable changes in certain specific blood tests.

We will briefly review the key features in the history that might point towards each diagnosis, then consider the pathophysiological changes that occur in response to each diagnosis and how and why the recognised relevant blood tests change. There will be reference to national guidelines to better understand what should be done, when and by whom.

Resources:

- Delegates will have access to a workbook that would include:
- Diagrams/summaries of relevant patho-physiological processes
- Summaries of each blood test – normal ranges and how they change dependant on diagnosis
- Case histories & sample questions
- Resources reference and further CPD
- National guidelines for management/investigations
- Reading List/Bibliography
- Signposting of online resources

Biography:

Giles currently work as a GP with an Extended Role in Musculoskeletal Medicine for Sussex MSK Partnership Central & Sussex Partnership Foundation Trust in community clinics in Brighton, Haywards Heath and Eastbourne. He works predominantly in Chronic Pain and Spinal clinics within a multidisciplinary team.

He originally trained as a doctor at UCL Medical School, gaining a degree in Psychology during this time, before training as a GP in Brighton and then developing a special interest in Musculoskeletal Medicine.

He has a keen interest in medical education having qualified as a GP trainer he now work with Versus Arthritis as a trainer on their popular Core Skills courses and for Red Whale as a tutor for their MSK & Chronic Pain Update, delivering courses and conferences nationally to support MSK education and professional development.

He was previously Vice-President of the British Institute of Musculoskeletal Medicine and now sits on the education board of the British Association of Sports and Exercise Medicine (BASEM) as lead for Musculoskeletal Medicine.

His work is underpinned and supported by my continuing work in general practice where he has a particular interest in the role of lifestyle factors such as stress, sleep, diet and exercise in the cause and treatment of chronic diseases including osteoarthritis and chronic pain.

Information for venues:

The cost for the participant will be:

£120 for MACP members

£150 for non-members

This is the cost for 2021 and will be reviewed annually.

There is one free space available to whoever organises the course locally. In addition, one further free space will be offered if more than 30 delegates book onto the course.

If a venue fee is incurred the minimum number of people required to run the course may increase. The minimum number of delegates required to qualify for an additional free place will also increase.

The course requires a minimum of 11 bookings to enable the MACP to cover expenses and will be cancelled 6 weeks prior to the commencement of the course if this number has not been reached.

If the course requires air travel (outside England) for the lecturers the prices quoted / number of bookings required will need to be adjusted to reflect the additional costs.

What the MACP Provides:

- Tutors for delivering the courses
- Pays the accommodation for the tutor(s).
- Pays tutors(s) travel.

- Administers the course, taking all bookings and sending all applicants pre- course information.
- £3 per person / day to cover refreshments (tea/coffee/biscuits etc).
- Advertising in: MACP website and social media sites, MACP newsletters.
- One copy of a flyer that you may use to circulate and advertise the course.
- A list of names of those who have booked prior to the course for registration.
- CPD certificates (online).

You will need to provide:

- A room that will seat 40 people for the main body of the lecture.
- AV equipment (data projector). Plus access to plugs as workbooks are electronic.
- Provide us with local information re directions how to get to venue, parking, local accommodation list
- Someone to work on local promotion (including SoMe) to help to ensure that at 6 weeks before the course, the minimum numbers of 11 places are booked onto the course.
- Someone on the on the day to deal with local venue organization (AV, putting up signs, providing refreshments, information about where to get lunch, registering delegates, locking up, this may also include picking up or dropping off tutors from their hotel; taking pictures on the day for SoMe)
- Refreshments as appropriate (to be reimbursed by MACP on production of original receipts – up to £3 per day per person)

Evidencing ‘Demystifying Bloods in MSK Practice’ course objectives and learning outcomes in relation to First Contact Practitioners and Advanced Practitioners in Primary Care: (Musculoskeletal) A Roadmap to Practice

Learning Outcome	Delivery Method (S)	Cross referenced MSK CCF	Essential knowledge: Specific knowledge underpinning capabilities 1 & 2	Cross referenced IFOMPT
			Domain A: Personalised Approaches	
Understand the fundamentals of blood tests	Study day – (Course) Demystifying blood tests in practice	A.2	Demonstrate advanced use of clinical reasoning to integrate scientific evidence, clinical information, the individual's perceptions and goals, and factors related to the clinical context and the individual's circumstances e.g. using clinical outcome measures such as pain, function, and	D6.S3

			quality of life to progress meaningful goals, and offering regular appointments to monitor other healthcare needs associated with MSK long-term conditions and co-morbidities.	
			Domain B: Assessment, investigation and diagnosis	
Clinical reasoning in the role of blood tests in MSK disorders	Study day – (Course) Demystifying blood tests in practice	B.3 B.4 B.5	Demonstrate comprehensive advanced knowledge of the theoretical basis of the assessment of the MSK system and interpretation of this assessment towards a clinical diagnosis.	D5.K2
<p>Review of the pathogenesis and pathophysiology around common musculoskeletal conditions including</p> <p>The course covered a range of topics including:</p> <p>Malignancy – screening vs diagnostic tests , Polymyalgia Rheumatica, Temporal Arteritis, Gout, Auto-immune diseases – Rheumatoid arthritis and spondyloarthropathies , Infections – FBC, inflammatory markers, Metabolic bone disease – Osteoporosis, Pagets' disease, Osteomalacia, Chronic pain – the diagnosis of exclusion & screening for other</p>	Study day – (Course) Demystifying blood tests in practice	B.3 B.4 B.5	Demonstrate comprehensive advanced knowledge of the relevant clinical sciences as applied to MSK conditions, such as clinical anatomy, physiology, pain science, biomechanics, and epidemiology in assessment and management.	D3.K1

pathologies, Peripheral neuropathy				
Review of the pathogenesis and pathophysiology around common musculoskeletal conditions as above	Study day – (Course) Demystifying blood tests in practice	B.3 B.4 B.5	Demonstrate comprehensive advanced knowledge of pathology and pathogenesis of mechanical dysfunction of the MSK, neurological, and vascular systems presenting to MSK first contact practitioners.	D2.K4
As above including also; Uncovering the role and relevance of blood tests to include: Tumour markers (including PSA), Inflammatory markers (ESR/CRP), Autoimmune markers (ANA/RHF, anti-CCP, HLA-B27), Bone profile, Vitamin D, Myeloma screen, FBC, U&E, LFT	Study day – (Course) Demystifying blood tests in practice	B.3 B.4 B.5	Demonstrate comprehensive advanced knowledge of assessment, diagnosis, and management of non-mechanical dysfunction of the MSK system, MSK masquerades, and complex multi-system pathology e.g. local and national guidelines, pathways, and policies for tumours and metastatic disease, fractures, autoimmune/ inflammatory diseases, infections, endocrinology, haematology, and other associated red flags.	D2.K5
Case discussion (Case 1) around identification of metabolic comorbidities	Study day – (Course) Demystifying blood tests in practice	B.3 B.4 B.5	Demonstrate comprehensive advanced knowledge of neurological, internal visceral, cardio-vascular, dental, and orthodontic dysfunctions linked with the MSK system.	D2.K6 D2.K7 D2.K8 D2.K9
Section on fundamentals on blood tests including true & false positives, sensitivity & specificity, predictive values and pre-test	Study day – (Course) Demystifying blood tests in practice	B.3 B.4 B.5	Demonstrate comprehensive advanced knowledge of the specific diagnostic and evaluative qualities of assessment tools likely	D3.K3

probabilities.			to be used within the MSK FCP role, including: reliability, validity, responsiveness, positive likelihood, negative likelihood, and diagnostic accuracy.	
Case discussions in interpreting biochemical and blood markers in the context of clinical history/examination.	Study day – (Course) Demystifying blood tests in practice	B.3 B.4 B.5	Demonstrate comprehensive advanced knowledge of appropriate medical diagnostic tests and their integration required to make a MSK clinical diagnosis e.g. able to select the appropriate investigative tests, interpret results, and inform assessment and decision making.	D5.K9
Whole course	Study day – (Course) Demystifying blood tests in practice	B.3 B.4 B.5	Demonstrate comprehensive advanced knowledge of the specific indications and contraindications (including behavioural principles) of the use of diagnostic tools including imaging, blood test, neurophysiology etc.	D4.K3
Evidence base discussed and referenced re guidelines and role for blood tests in diagnostic approach	Study day – (Course) Demystifying blood tests in practice	B.3 B.4 B.5	Demonstrate an evidence-informed approach to the advanced assessment of individuals with MSK conditions.	D1.S3
Case discussion around patient presenting with chronic pain, differential diagnosis, diagnostic framework and approach in practice.	Study day – (Course) Demystifying blood tests in practice	B.3 B.4 B.5	Demonstrate application of comprehensive advanced knowledge of the biomedical, clinical, and behavioural sciences in the assessment of individuals with MSK conditions e.g. presentation of pathological and psycho- social	D2.S1 D4.S1 D3.S1

			presentations affecting the structure, function, inflammation, and pain.	
			Domain C: Condition Management, Interventions and prevention	
Discussion within section on bone pathologies, management of osteoporosis and comorbid risk factors.	Study day – (Course) Demystifying blood tests in practice	C.6 C.7 C.12 C.13	Demonstrate comprehensive advanced knowledge of prognostic, risk, and predictive factors of relevant health problems in relation to MSK management strategies e.g. adequate vitamin D for bone health, and the effects of smoking, obesity, mental health, frailty, inactivity etc.	D3.K4