

Qasim Akram and Rizwan Rajak spoke with EMJ, sharing details about their career and research. Akram shares why he chose to specialise in musculoskeletal ultrasound, and Rajak shares insights on challenges and successes he has encountered in treating early inflammatory arthritis.



Qasim Akram

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What sparked your initial interest in rheumatology, and has led you to pursue a career in this specialty?

I fell in love with rheumatology as a specialty during one of my first rotations as a foundation Year 1 doctor in 2007. I loved the multisystem nature of the disease presentations, and the problem solving and diagnostic challenges each of them presented. There was a nice mix of both acute and chronic cases, from inflammatory arthritis to vasculitis and systemic lupus erythematosus. I was lucky enough to work with some incredible people, who really inspired me. They loved their jobs, and I could see the fantastic relationship physicians had with their patients. Around this time, the anti-TNF biologic era was also starting to revolutionise treatment for many inflammatory musculoskeletal diseases, meaning better patient outcomes were possible, leading to great job satisfaction.

Having dual trained in general (internal) medicine, are there any benefits from this that you find filter into your practice?

Now, with the shape of training, everyone is mandated to dual train in internal medicine. However, whilst I was training, this was optional. I decided to take the hard road and dual train to have a Certificate of Completion of Training (CCT) in both general internal medicine and rheumatology. Rheumatic diseases are usually multisystem in nature, and I think this advanced grounding in general internal medicine gives you a wider knowledge and experience of managing patients in cardiology, respiratory, and gastroenterology.

I think it also creates better relationship with general physicians, meaning better links to the general medicine wards and acute medicine. Why did you choose to specialise in musculoskeletal ultrasound, and why do you think every modern rheumatologist should train using ultrasound?

I am very hands-on as a clinician, and enjoyed cardiology and gastroenterology as specialties during my core medical training years. They had lots of procedural aspects, and I felt that rheumatology was missing something like this.

I saw how ultrasound was being used by radiologists to diagnose and manage rheumatic disease, through guided injections, and felt that it would be a very powerful tool in the hands of a clinician. Using ultrasound as a clinician is very widespread in Europe, and I am very envious of this.

Most medical specialties have excellent diagnostic capacity that they carry out themselves, and I think rheumatologists in the UK are trailing behind by not learning this skill. I really think it should be part of the curriculum, and more should

be done to develop ultrasound training centres across the country.

You currently co-lead an early inflammatory arthritis (EIA) 'one-stop shop' ultrasound Clinic, and a giant cell arteritis (GCA) 'fast-track' ultrasound clinic. Could you please outline some of the benefits to patients these initiatives are producing under your watchful eye?

The EIA one-stop shop means that anyone presenting with a suspected diagnosis of EIA is seen within a few weeks. Patients are seen by a clinician. and following initial assessment, have an ultrasound scan done by a Consultant on the same day, allowing them to get an early diagnosis. Treatment decisions are made there and then, meaning better disease outcomes, less disability and impairment of mobility, and normal life can resume. We see patients with EIA aged 18 years and above. It also means there are fewer appointments, leading to improved waiting lists and patient flow.

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The GCA fast-track ultrasound clinic means those presenting with GCA, an irreversible sight-losing vasculitis, are seen and assessed using ultrasound within a few days of presenting, meaning accurate treatment can be started very early. This model has been shown to reduce blindness and overall morbidity with the disease.

How has your book, entitled 'Ultrasound in Rheumatology: A Practical Guide to Diagnosis' been received since its publication in 2021?

Generally, the book has had an excellent response. It's always difficult to produce a book like this in a short space of time, especially during the height of the COVID-19 pandemic, whilst being on the front lines.

The book was written with a busy clinician who is starting on their journey towards ultrasound in mind. It is very practical and hands-on, giving a brief overview of some basic anatomy, followed by the relevant sonoanatomy, and the correct probe position to produce these images.

From a sales point of view, the book has sold several hard copies, but mainly electronic versions, which makes sense, as people can scan whilst looking at their tablet device. We have received excellent feedback globally, and it has now been translated to Chinese.

What are the main lessons you learnt from the ultrasound fellowship in 2016, which you completed under the guidance of Esperanza Naredo?

This was an incredible experience, and one which I will never forget. I started learning to train in ultrasound in 2012, but was finding training specific to rheumatology difficult in the UK; the lack of trainers and training centres meaning that opportunities were limited.

I decided to pursue a specialised ultrasound fellowship and trained under a global expert, Naredo. I was unique in being one of the first rheumatologists in the UK to do something like this. It enabled me to train with the best, fast-track my advanced ultrasound competencies, and achieve international European Alliance of Associations for Rheumatology (EULAR) accreditation.

This fellowship allowed me to carry out a research project learning basic methodologies when carrying out research, especially in relation to ultrasound, and I presented my work at an international EULAR conference.

I was also able to compare healthcare in a country outside of the UK, and see how they utilised ultrasound in rheumatology, giving me some ideas of how to integrate it into my practice as a National Health Service (NHS) Consultant in the future.

As a lead of an Ultrasound Fellowship Programme for specialty trainees, what qualities do you attempt to instil, and believe are integral to the next generation of rheumatologists?

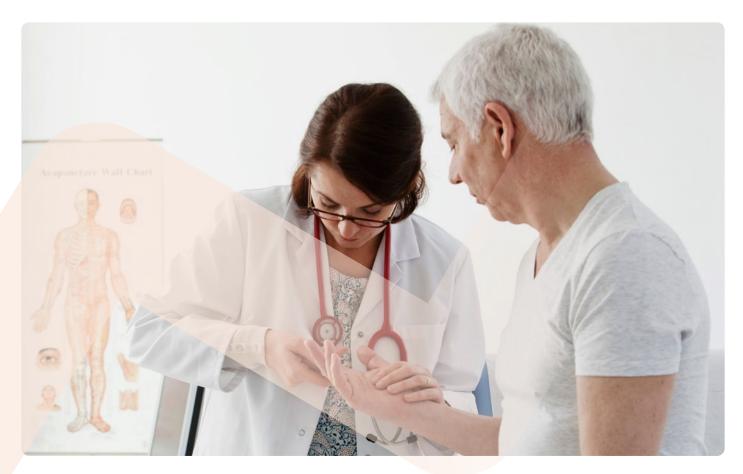
I am very passionate about teaching and training the next generation of physicians, as I believe that ultrasound is a fundamental requirement for all rheumatology trainees. I am a EULAR Level 2 Instructor, and have learned many lessons along the way with my great teachers, including Naredo.

Although there is limited time in my NHS job plan, I have created a structured ultrasound training programme for specialty trainees at Stepping Hill Hospital, Stockport, UK, who are usually on rotation for 1 year. Trainees learn to perform ultrasound in specialised clinics, such as the EIA one-stop, general ultrasound clinics, and the GCA fast-track clinic, and get lots of supervised, hands-on scanning experience. Throughout the year, I complement this practical learning with tutorials on the basics of ultrasound in rheumatology, and mentor them towards formal accreditation. Trainees will also do an audit, QIP or research, with a view to publication, relating to ultrasound under my supervision.

Have you found your experience with ultrasound has benefitted you in terms of career opportunities? Is this something you would recommend to young rheumatologists?

Absolutely; I think this experience makes you a better rheumatologist. It is an extension of clinical examination, and allows you to directly visualise and understand the patient's disease process. There is also a better relationship with patient, as you can explain what is happening whilst performing ultrasound, increasing patient satisfaction with consultation.

I think having this skill makes you far more employable, especially if you can utilise onestop shop models in both EIA and GCA ultrasound clinics. There are also several exciting teaching and research opportunities. In the future, there may also be more applications in other aspects of rheumatology, such as lupus or scleroderma.



What has led you to set up your own Rheumatology Ultrasound Course in zManchester? Why do you think this is important? What feedback did you receive, and are there any plans for further courses?

There are several reasons why I set up the Rheumatology Ultrasound Course in Manchester. I feel there is a huge unmet need in this area. There is a huge interest in people wanting to learn to scan, from rheumatologists to allied healthcare professionals who value learning this invaluable skill for their day-to-day practice. There is also a real lack of highquality Consultant-led ultrasound training courses, especially in rheumatology, that involve learning to scan on real-life patients with real-life pathology. For many people, training is also becoming increasingly difficult in a stretched and demanding NHS environment.

We offer something very different on our course. We have a varied faculty, including very experienced radiologists who specialise in rheumatology, and rheumatologists who specialise in ultrasound. All of our tutors have completed a form of a fellowship in musculoskeletal ultrasound, and we ensure that the groups are small, so there is lots of time scanning, and lots of pathology to practice on.

Q10 Are there any innovations in the field of rheumatology that you are particularly excited to see translated into practice?

There are certainly a few innovations that I am really excited about. I believe these can really revolutionise the day-to-day care of patients with rheumatological diseases. First, I have a seen a few excellent smartphone apps, that allow patients to use carefully designed patient-reported outcome measures, which can be

used to communicate symptoms with the clinician. This can be very important in terms of triaging patients based on urgency, reduce number of outpatient visits, and, as a result, improve the burden on the healthcare system. This can also allow a better, productive clinical encounter. It allows patients better control of their illness through the app, with easy-to-access information based on their disease, treatment, any questions/queries, and what to do in the event of a specific issue. Within the app, a virtual assistant would be very helpful to reduce the healthcare burden.

I am also excited about the potential of artificial intelligence technology in rheumatology, which can be useful in imaging modalities, and can provide accurate and early detection of disease. Prediction of disease progression can help tailor and customise treatments, which can ultimately improve disease outcomes.

