Defining the concept of US-detected 'minimal disease' is crucial to enable investigators identify a threshold (or cut-off) to *differentiate normal physiological from minimal pathological changes* at the joint level. This threshold, subsequently, will be used to evaluate the best sensitivity to detect changes in therapeutic response and assess remission, as well as facilitate diagnosis of early disease.

In order to address this important research question, the OMERACT US SIG has formed the US Minimal Disease Taskforce at the OMERACT 2016 meeting. This collaboration between 24 OMERACT ultrasound centres in 11 countries has successfully recruited more than 600 subjects into the Minimal Disease Study. US data of healthy individuals encompassing synovial hypertrophy, synovial effusion, and Doppler enhancement will be presented.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.8580

SP0136 HOW TO PERFORM US-GUIDED INTERVENTIONS + DEMO

Juhani Koski, Mikkeli Central Hospital, Internal Medicine, Mikkeli, Finland

Background: Aspiration and injection of joints and soft tissues is an indispensable skill used in everyday practice by the clinical rheumatologist. These tasks are usually conducted by palpation-guided techniques. These procedures are not always successful (1) and thus US-guided interventions have been developed.

Objectives: are to explain the effect of needle and sound beam angle on needle visualization, describe different techniques of needle insertion under US guidance, to identify different approaches to the target under US guidance and finally to discuss about the accuracy and efficacy of the ultrasound guided technique.

Methods: There are two common methods for US puncturing: semi-guided or indirect method (skin surface marking) and needle guidance under direct sonographic vision (2,3). The scanning plane is optimized for visualization of the target and penetration of the needle should be at least 0.5cm from the transducer. The movement of the needle in the soft tissue should be followed on the screen during the procedure. The needle appears as a bright echogenic line if the transducer is oriented longitudinally on the needle, and the needle tip may be followed as it reaches the target. If the ultrasound beam is transverse to the needle, the needle is seen as a bright echogenic dot. In case of no visualization of the needle several means are available: steering of the ultrasound beam against the needle (in new machines), curved or virtual convex probe, toeing-in of the probe, shaken the needle slightly and moving the probe a bit from side to side.

Results: According to the clinical and cadaveric studies the ultrasound guided technique is more accurate than the landmark guided technique in the glenohumeral, acromioclavicular, wrist, hand, hip, knee and foot joints and in the tendons of the biceps, wrist, hand, hip, knee and ankle (4). Synovial biopsies are more accurate using an ultrasound guided method (5).

Conclusion: Ultrasound is the most applicable and feasible imaging modality for routine clinical use in guiding musculoskeletal procedures. Though many studies have examined the role of imaging guidance for injection there needs to be more examination of how the use of ultrasound prior to injection can alter the pathological and anatomical diagnosis. There is a trend towards an expanded number of advanced applications of interventional musculoskeletal ultrasound which can also be performed by a rheumatologist like nerve blocks or needling of calcifications. Which ultrasound guided technique (direct or semi-guided) is the most appropriate in different anatomical areas and clinical settings remains to be studied. More studies are needed to show the accuracy and efficacy of ultrasound guided injections in different anatomical areas (4).

REFERENCES:

- [1] Jones A, et al. Importance of placement of intra-articular steroid injections. *BMJ* 1993;307:1329-1330.
- [2] Koski JM. Ultrasound guided injections in rheumatology. *J Rheumatol* 2000;7:2131-8.
- [3] Fessell DP, et al. Using sonography to reveal and aspirate joint effusions. *AJR* 2000;174:1353-62.
- [4] Kane D, Koski JM. Musculoskeletal interventional procedures: With or without imaging guidance? In *Clinical Rheumatology. Best Practice & Research Clinical Rheumatology*, 2016:736-750.
- [5] Kelly S, et al. Ultrasound-guided synovial biopsy: a safe, well-tolerated and reliable technique for obtaining high-quality synovial tissue from both large and small joints in early arthritis patients. *Ann Rheum Dis* 2015;74:611-617.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.8518

FRIDAY, 14 JUNE 2019

13:30:00 – 15:00:05

Jewels in the crown of health professionals

SP0137 CORE COMPETENCIES

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Background: To maintain and optimize the quality of care provided by health professionals in rheumatology (HPRs), adequate educational offerings are needed. Ideally, these are based on defined core competencies.

Objectives: A task force (TF) aimed to develop evidence-based recommendations for the generic core competencies of nurses, physical therapists (PTs) and occupational therapists (OTs) to serve as a basis for their postgraduate education.

Methods: The EULAR standardised operating procedures for the development of recommendations were followed. A TF including rheumatologists, nurses, PTs, OTs, patient-representatives, an educationalist, methodologists and researchers from 12 countries met twice. In the first TF meeting, 13 research questions were defined to support a systematic literature review (SLR). In the second meeting, the SLR evidence was discussed and recommendations formulated. Subsequently, level of evidence and strength of recommendation were assigned and level of agreement (LoA) determined (0-10 rating scale).

Results: Three overarching principles and 10 recommendations for the generic core competencies of HPRs were developed supported by the SLR and expert opinion. The SLR included 79 full-text papers, 20 of which addressed the competencies, knowledge, skills, attitudes or educational needs of HPRs from multiple professions. The average LoA for each recommendation ranged from 9.42 to 9.79. Consensus was reached on education and research agendas.

Conclusion: Evidence and expert opinion informed a set of recommendations providing guidance on the generic core competencies of nurses, PTs and OTs in rheumatology. Implementation of these recommendations in the postgraduate education of HPRs at the international and national level is advised, considering variation in health care systems and professional roles.

Task Force Members: L.M. Edelaar, E. Nikiphorou, G.E. Fragoulis, A. Iagnocco, C. Haines, M. Bakkers, L. Barbosa, N. Cikes, M. Ndosi, J. Primdahl, Y. Prior, P. Pchelnikova, V. Ritschl, V.S. Schäfer, H. Smucrova, I. Storvén, M. Testa, D. Wiek, T.P.M. Vliet Vlieland

REFERENCE:

- [1] Van der Heijde D, Aletaha D, Carmona L, et al. 2014 Update of the EULAR standardised operating procedures for EULAR-endorsed recommendations. *Ann Rheum Dis*. 2014;74:8-13.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.8616

SP0138 WHAT WE ARE BRILLIANT AT; OT PERSPECTIVE

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The unique contribution of occupational therapy is its focus on occupation, which may be defined as "groups of activities and tasks of everyday life, named, organized and given value and meaning by individuals and a culture. Occupation is everything people do to occupy themselves, including looking after themselves (self-care), enjoying life (leisure), and contributing to the social and economic fabric of their communities (productivity)". Occupation is further being influenced by the environment, one's social roles and one's developmental level; being client-defined; and consisting of both a performance (objective) dimension and a satisfaction (subjective) dimension (1).

Using the terminology of the International Classification of Functioning (ICF), occupational performance covers the domain of Activity and Participation in the ICF model.

In clinical practice, occupational therapists use assessment and interventions to develop, recover, or maintain the meaningful occupations of individuals, groups, or communities. Lately, occupational therapists have also been increasingly concerned with occupational injustice, which relates to conditions wherein people are deprived, excluded or denied of occupations that are meaningful to them.

Within rheumatology, the most frequently applied occupational therapy interventions are patient education concerning ergonomic principles and activity pacing, therapeutic exercise and activity programs, provision of orthoses and assistive technology, and environmental and task modifications.

In the presentation, patient cases will be used to illustrate how occupational therapists may work to enhance occupation in individual clients with a rheumatic condition, and evidence for some of the core interventions will be discussed.

REFERENCE:

- [1] Townsend EA, Polatajko HJ. Enabling occupation II: advancing an occupational therapy vision for health, well-being, & justice through occupation. Ottawa: Canadian Association of Occupational Therapists; 2007.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.8515

SP0139 WHAT WE ARE BRILLIANT AT; NURSING PERSPECTIVE

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The challenges confronting health care delivery systems worldwide are rapidly changing, and this calls for practice-defined competencies for nurses and other health care workers (Zhang, Luk, Arthur, & Wong, 2001). The definition of competency or competence in nursing has been a subject of debate (Axley, 2008; Fukada, 2018; Zhang et al., 2001). Its clarification is important and still needed to establish a foundation for realistic working behaviours, for nursing education and management.

Although there has been an extensive and valuable work in the definition of core competencies of nursing profession, which includes both autonomous and inter-dependent activities within the multidisciplinary team, little scientific research has been done to clarify the way in which nursing profession is unique.

This presentation will address the following questions:

- What are nurses (collectively) really brilliant at?
- What leads them to develop unique characteristics?
- How do they bring into care, that matches or complements other health professions to result in better quality care?

The presentation is informed by a scoping review, a survey of international nurse leaders and researchers.

REFERENCES:

- [1] Axley, L. (2008). Competency: a concept analysis. *Nurs Forum*, 43(4), 214-222. doi:10.1111/j.1744-6198.2008.00115.
- [2] Fukada, M. (2018). Nursing Competency: Definition, Structure and Development. *Yonago Acta Medica*, 61(1), 1-7.
- [3] Zhang, Z., Luk, W., Arthur, D., & Wong, T. (2001). Nursing competencies: personal characteristics contributing to effective nursing performance. *Journal of Advanced Nursing*, 33(4), 467-474.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.8476

FRIDAY, 14 JUNE 2019

15:30:00 – 17:00:00

New insights into JIA and autoinflammatory diseases

SP0140 HOT: MANAGEMENT OF JUVENILE IDIOPATHIC ARTHRITIS 2019 AND BEYOND

Michael Beresford. University of Liverpool, University of Liverpool/Alder Hey Children's NHS Foundation Trust, Liverpool, United Kingdom

Background: Improvements in our care and understanding of paediatric rheumatic disorders has undergone tremendous advances in the last decade. The transformative therapeutic armamentarium now available in targeting treatments for juvenile idiopathic arthritis (JIA) combined with a step change in addressing a holistic approach to our multi-disciplinary management of children and young people, seeks to make a real difference to the lives of the patients we care for.

Objectives: To provide an overview on best management of juvenile idiopathic arthritis, an outlook for new treatment possibilities and JIA outcome with a focus on adults.

Methods: The advances in our understanding of disease mechanisms, coupled with legislative changes across the EU and North America have led to an increase in clinical trials and evidence based new therapies for children with JIA. This progress continues to accelerate, fostered by major international collaborative efforts

in clinical and translational research, and stratified/personalised medicine. Our greater understanding of the genetic, molecular and mechanistic pathways underpinning JIA in children, in whom there is less accumulation of significant co-morbidities and organ damage, have offered new opportunities for this advancement.

Results: The shared knowledge between paediatric and adult clinical research communities and international collaboration has ensured the management of JIA has been transformed. However, we must not be complacent. Future progress will depend upon ensuring that appropriate clinical trials, using methodology and trial design appropriate for and including the insights and perspectives of children and young people care carried out in paediatric rheumatology. This is especially important with the advent of newer molecules and therapies that are relevant to our patients and clinicians treating them, and not just in meeting regulatory requirements.

Conclusion: As the management of JIA continues to evolve and develop, equitable access to the very best care and new and effective treatments and therapies is critical across the world.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.8429

FRIDAY, 14 JUNE 2019

15:30:00 – 17:00:00

Overdiagnosis and overtreatment in inflammatory arthritis

SP0141 DOES IMAGING LEAD TO OVERDIAGNOSIS AND OVERTREATMENT?

Duncan Porter. Garthnavel General Hospital, Rheumatology, Glasgow, United Kingdom

Background: The use of musculoskeletal ultrasound (MSUS) and magnetic resonance (MR) imaging is widespread in the diagnosis and management of patients with rheumatic disease. Interpreting the images, and their implication for clinical management is challenging, particularly in the community, in mild/early disease, when there is discordance between clinical and imaging findings, and in the presence of co-morbid joint disease.

Objectives: – to review the evidence about whether the use of imaging results in over-diagnosis and over-treatment

Specifically, the following issues will be addressed, using rheumatoid arthritis as the exemplar:

- To review the prevalence of 'abnormal' MSUS and MR findings in the general population
- To understand the prevalence and significance of sub-clinical joint inflammation
- To summarise the evidence from clinical trials about the risks/benefits of treating to a target of imaging (rather than clinical) remission

Methods: If clinicians are to interpret the available imaging correctly, several issues are pertinent. Firstly, it is important to understand the prevalence of erosions, synovitis and bone marrow oedema in the general population, in different joints, at different ages and in the presence of co-morbid conditions such as osteoarthritis. Secondly, in RA what are the implications of sub-clinical inflammatory changes for disease progression? Thirdly, do clinical trials support the hypothesis that 'treat to target' strategies should aim at a target of 'imaging remission' rather than clinical remission? The results of the TaSER, ARCTIC and RA-IMAGINE trials will be reviewed to identify if the systematic, routine use of imaging results in over-treatment or clinical harm. Lastly, the possibility that imaging could have a role in reducing over-treatment will be discussed.

Conclusion: It is impossible to interpret the results of imaging correctly, without knowing the clinical context. Clinicians need to understand the value and the limitations of imaging, and should not pursue a simplistic or binary approach when interpreting the results - otherwise over-diagnosis and over-treatment will be the result. To date, the evidence from RCTs in the management of RA suggest that a 'treat-to-target' approach should aim for clinical and not imaging remission.

REFERENCES:

- [1] Dale J, Stirling A, Zhang R, Purves D, Foley J, Sambrook M, et al. Targeting ultrasound remission in early rheumatoid arthritis: the results of the TaSER study, a randomised clinical trial. *Ann Rheum Dis*. 2016 Jun;75(6):1043-50
- [2] Haavardsholm EA, Aga A-B, Olsen IC, Lillegraven S, Hammer HB, Uhlig T, et al. Ultrasound in management of rheumatoid arthritis: ARCTIC randomised controlled strategy trial. *BMJ*. 2016 Aug 16;:i4205.
- [3] Møller-Bisgaard S, Hørslev-Petersen K, Ejbjerg B, Hetland ML, Ørnbjerg LM, Glinatsi D, et al. Effect of Magnetic Resonance Imaging vs