prognostic factors (18%). Most use US to confirm clinical enthesitis when a spondyloarthropathy (SpA) is suspected and half consider that a positive enthesal Doppler signal supports more aggressive management. 76% perform real-time guided injections for the following disorders/sites: Baker's cyst, subacromial-subdeltoid bursa, tibionavicular joint, anterior coxofemoral joint, retrocalcaneal bursa and extensor wrist tenosynovitis.

Abstract AB1190 – Table 1

	% (Likert 4 +5)
To detect articular or periarticular inflammation when there is a clinical doubt	94
To detect enthesopathy, tendinosis or tendon ruptures when there is a clinical doubt	79
To detect crystal deposits when microcrystalline arthropathy is suspected	48
To detect bone erosions when radiology is obscure	39
To assess skin fibrosis	35
To assess palpable nodules or masses	34
To detect temporal artery vasculitis when it is clinically suspected	20
To detect salivary gland involvement in patients with xerostomy	17
To detect arteriosclerosis in chronic inflammatory patients	13
To assess interstitial lung disease	2

Conclusions: Rheumatologist- ultrasonographers in Spain use ultrasonography in a wide spectrum of diseases and clinical contexts mainly to facilitate diagnosis and improve treatment of rheumatic patients.

Disclosure of Interest: None declared

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AB1191 VITAMIN D AND CD34+ CELLS AS BIOMARKERS OF SUBCLINICAL ATHEROSCLEROSIS AND MYOCARDIAL DYSFUNCTION IN INFLAMMATORY JOINT DISEASES

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Background: increased cardiovascular (CV) risk in inflammatory joint diseases (IJD) such as rheumatoid (RA) or psoriatic arthritis (PsA) is linked to an impaired vascular homeostasis. Chronic inflammation and immune dysregulation prompt endothelial damage and impair reparative mechanisms. Among them, circulating CD34 +bone marrow-derived progenitors are known to participate in endothelial turnover and improve myocardial neovascularization and ventricular remodelling, likely delaying CV disease development. Among factors related to CD34 +cells mobilisation, a role for vitamin D has emerged in other scenarios. Whether impaired CD34 +cells or vitamin D levels underlie endothelial and myocardial dysfunction in IJD patients remains unknown.

Objectives: to evaluate the associations between CD34 +cells and vitamin D levels with markers of subclinical atherosclerosis and myocardial functionality in IJD patients.

Methods: CD34 +cells counts were assessed by flow cytometry in peripheral blood samples from 41 RA (2010 EULAR/ACR criteria) and 35 PsA (CASPAR criteria) patients recruited at onset and 58 matched healthy controls (HC). Vitamin D levels were quantified in serum by HPLC. PWV and cIMT were evaluated as markers of subclinical atherosclerosis, whereas myocardial dysfunction was assessed by speckle-tracking echocardiography (STE).

Results: vitamin D was decreased in RA (23.68±6.42) and PsA (23.53±4.84) compared to HC (31.75±5.05 ng/ml, both p<0.001). Vitamin D was negatively associated with cIMT in HC (r=-0.308, p=0.026) and in PsA patients with low disease activity (DAS28 <2.9, n=11) (r=-0.636, p=0.035), but not in their high disease activity or RA counterparts. CD34 +cells were decreased in RA compared to HC (1.58±0.58 vs 2.35±1.14 cells/ul, p=0.002). CD34 +cells frequency was associated with total- and LDL-cholesterol levels in HC (r=-0.295, p=0.031 and r=-0.354, p=0.011, respectively) but not in IJD. CD34 +cells negatively paralleled DAS28 in PsA (r=-0.338, p=0.047) and RA (r=-0.303, p=0.057). Multivariate regression analyses revealed that vitamin D levels (B=0.019, p=0.009) and DAS28 (B=-0.152, p=0.050) were independently associated with CD34 +counts in PsA, whereas vitamin D (B=0.010, p=0.028) and duration of the symptoms (B=0.016, p=0.010) did in RA. CD34 +cells counts were correlated with GCS (r=-0.291, p=0.068) and GLS (r=-0.301, p=0.057) in RA.

Conclusions: vitamin D was negatively associated with cIMT and risk factors in HC and PsA patients with low disease activity, but not in those with active disease or RA. Vitamin D was an independent predictor of CD34 +cell depletion in IJD.

CD34 +cells, negatively associated with risk factors in HC, were altered in RA in relation to disease activity and the duration of symptoms. CD34 +cells were associated with myocardial dysfunction in RA.

Disclosure of Interest: None declared

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AB1192 DIAGNOSTIC YIELD OF MUSCLE BIOPSIES PERFORMED OVER A 10 YEAR PERIOD

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Background: Patients with suspected inflammatory myopathy (IM) are often referred to Rheumatology, where the diagnostic process may include a biopsy of skeletal muscle. A new service was set up in 2007 at Sunderland Royal Hospital, whereby a trained consultant performs open muscle biopsies of vastus lateralis muscle under local anaesthetic within the Rheumatology outpatient department. Samples are sent to a histology laboratory at another hospital site for analysis, which can include electron microscopy. Referrals most commonly come from other consultant Rheumatologists within the team.

Objectives: To evaluate the diagnostic yield amongst muscle biopsies performed over a 10 year period. To review the correlation between final clinical diagnosis and investigation results. To identify any complications caused by the biopsy procedure.

Methods: Retrospective analysis of medical notes of all patients who were referred for muscle biopsy within the Rheumatology department during 2007 – 2017.

Results: The mean patient age was 51 years; 28 patients were female. All procedures were performed or directly supervised by one trained rheumatology consultant. 45 patients were referred for muscle biopsy. 41 patients had elevated creatinine kinase. 2 were unable to tolerate the procedure. 3 samples were either too small for analysis or did not contain skeletal muscle. A total of 40 muscle samples were reviewed.

16 muscle biopsy samples showed histological features of IM (3 polymyositis, 3 dermatomyositis, 6 inclusion body myositis and 4 undifferentiated CTD). 15 samples showed other diagnoses including genetic, neurological and storage disorders. In 9 samples no definite diagnosis could be made on biopsy, despite this 3 patients were diagnosed with IM based on clinical features and other investigations.

Of the 19 patients with a final diagnosis of inflammatory myopathy (clinical and histological), 15 had positive ANA, 3 had negative ANA (1 of which had positive Ro antibodies).

EMG/NCS performed prior to muscle biopsy had a high positive predictive value: all 7 with an IM pattern on EMG had a histological diagnosis of IM. 2 patients with normal EMG had eventual diagnosis of IM.

Complication rates were low. 3 patients had subsequent numbness around the biopsy site and 1 required a compression dressing for increased bleeding during the procedure.

Conclusions: Muscle biopsy was successful in achieving a diagnosis in 64% of all patients referred. Out of biopsies taken, 40% of biopsies performed showed IM. 37.5% showed other diagnoses. The total diagnostic yield is therefore calculated as 77.5%. It appears to be a useful diagnostic investigation in patients with suspected myopathies and helps with correct diagnosis and appropriate treatment. Muscle biopsy is relatively safe and can be performed in the outpatient setting. Despite delays in the transfer of 3 specimens, histological analysis was still possible, suggesting that having an off-site histopathology laboratory does not adversely affect outcomes. Further review could focus on the increasing use of MRI scanning in the diagnostic evaluation of these patients, which may in some cases prevent the need for open biopsy.

Disclosure of Interest: None declared

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AB1193 AN IMMUNE REFERENCE ATLAS FROM BIRTH TO ADULTHOOD IDENTIFIES KEY DEVELOPMENTAL MILESTONES

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Background: A developmental atlas of the immune system is key to understanding its normal maturation process and identifying the disease-associated cell subsets. The absence of a holistic developmental immune normogram is a critical unmet need.