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

### Methods:

CD34+ cells counts were assessed by flow cytometry in peripheral blood samples to evaluate the associations between CD34+ cells and vitamin D levels.

### 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.

### Conclusion:

Muscle biopsy was successful in achieving a diagnosis in 64% of all patients referred. Out of biopsies taken, 40% of biopsies performed showed IM. 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.

### DOI:


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### AB1192

**DIAGNOSTIC YIELD OF MUSCLE BIOPSYs PERFORMED OVER A 10 YEAR PERIOD**

J.M. Weightman, K.A. Manchegowda, D. Coady, Rheumatology, Sunderland Royal Hospital, Sunderland, UK

**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 inflammatory myopathy 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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