Figure 1. Clinical characteristics of anti-NOR90 Ab patients.

Conclusion: In our case series anti-NOR90 Ab were associated with multiple rheumatic diseases with heterogeneity of clinical manifestations. We did not observe a further progression to SSc or presence of organ involvement or severe scleroderma, so these autoantibodies could be related with a favorable prognosis. In contrast with previous reports, a striking association with cancer has been detected in our population.

Table 1. Demographic characteristics and main diagnoses of anti-NOR90 positive patients.

Characteristics	Total Anti-NOR90: 26 patients
Sex, n	19 women/ 7 men
Age, mean (years)	58,9 IQR [46,3-72,2]
Race, n	Asian: 1; Hispanic: 7; Caucasian: 18
Smoker, n	3
Positive ANA (>1/160), n	24
Pattern, n	7 Homogeneous, 4 Nucleolar, 4 Speckled, 1 Centromere, 5 Speckled -nucleolar, 3 Homogeneous-nucleolar.
Positive ENA, n	3
	2 Anti-SSA-Ro52 and Ro60, 1 anti-RNP and anti-Sm
Systemic sclerosis autoantibodies, n	• Anti-Ku: 7 • Anti-U3RNP (Fibrilarin): 6 • Anti-RNA polymerase III: 5 • Anti Th/To: 4 • Anti-centromere: 4 (CENP B +/- CENPA) • Anti-topoisomerase I: 2 • Anti-Ro52: 3 • Anti-PM-Scl: 3
Main diagnosis, n	12 Rheumatic diseases: 2 systemic Sclerosis (2 limited/0 diffuse) 1 rheumatoid arthritis 1 LES 1 Sjögren's syndrome, 3 undifferentiated connective tissue disease 2 overlap (1 Sjögren + LES, 1 Sjögren + MCTD 1) s: 1 morphea, 1 cutaneous graft versus host disease 6: 2 solid organ cancer (bladder, kidney), 1 lung adenocarcinoma, 1 multiple myeloma, 1 acute myeloid leukemia: 1 basal cell carcinoma.
Neoplasm, n	

Abbreviations: LES: systemic lupus erythematosus; MCTD: mixed connective tissue disease

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AB0428

ULTRASOUND ASSESSED NAIL BED THICKNESS AS AN EARLY SCREENING MARKER FOR INTERSTITIAL LUNG DISEASE IN SCLERODERMA

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Background: Interstitial lung disease (ILD) is the most frequent pulmonary manifestation of scleroderma and is seen in 80% of the patients with diffuse and in 20% of the limited forms of scleroderma.¹ Even seen in early stages of the disease with varying degrees of severity, it does not correlate with the clinical manifestations.² Hence, it is difficult to select patients for ILD screening based on symptoms. Digital clubbing is a common feature of ILD and has been associated with poor prognosis.³
Objectives: To assess the ultrasound measured nail bed thickness (NBT) in cases of scleroderma as a screening marker to detect ILD and its inter-digital variation.

Methods: A prospective observational study involving 15 patients each of scleroderma with ILD, without ILD and controls visiting our clinic from August 2020 to December 2020 were included. The presence of ILD was confirmed by HRCT thorax. Patients with a history of smoking, alcohol intake or pre-existing cardio-respiratory illnesses were excluded. Ultrasound assessed NBT was calculated using Philips affiniti 70 eL18-4 probe. A total of 436 nail beds were recorded (142 of scleroderma with ILD, 144 of scleroderma without ILD and 150 of control group). 14 nails were excluded due to trauma. Statistical analysis was done using ANOVA test. Results were considered significant at p value < 0.05.
Results: On comparing nail bed thickness among scleroderma with ILD, scleroderma without ILD and control groups, the difference in NBT was statistically significant in all the three groups, except for left 1st finger (Table 1). NBT's among scleroderma patients without ILD and control group did not show significant difference between the two groups. Whereas, when scleroderma patients with ILD were compared with control group, statistical significance were found (p<0.001) in all the fingers of both the hands, except 1st and 2nd finger of left and right hand respectively. On comparing NBT's among individual fingers of right hand in patients of scleroderma with ILD and without ILD, a statistically significant difference among the two groups in 2nd (p =0.002), 4th (p=0.009) and 5th finger (p=<0.001) was noted. In left hand, same fingers had statistically significant difference (p<0.001).

Conclusion: Patients of scleroderma with ILD are predisposed for an increase in the NBT, which can be detected using ultrasound. Thus, an increased NBT may have a role in early screening for the detection of ILD in scleroderma patients. Further studies with large patient data should be done to look at ultrasound assessed NBT as it may be utilized as a marker for ILD in scleroderma, as a widely available and an inexpensive tool.

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Table 1. Nail bed thickness in patients of scleroderma with ILD, without ILD and control groups.

		Scleroderma with ILD		Scleroderma without ILD		Control		
		n=15		n=15		n=15		
	Finger	Mean	SD	Mean	SD	Mean	SD	p-value
Right	1 st	1.86	0.239	1.71	0.081	1.69	0.107	0.021
	2 nd	1.73	0.303	1.50	0.079	1.61	0.108	0.003
	3 rd	1.89	0.200	1.75	0.091	1.50	0.131	<0.001
	4 th	1.80	0.263	1.39	0.147	1.35	0.078	<0.001
	5 th	1.80	0.119	1.24	0.095	1.29	0.069	<0.001
Left	1 st	1.98	0.442	1.72	0.084	1.68	0.050	0.078
	2 nd	1.82	0.123	1.57	0.125	1.57	0.092	<0.001
	3 rd	2.05	0.309	1.76	0.078	1.42	0.109	<0.001
	4 th	1.92	0.246	1.36	0.130	1.35	0.107	<0.001
	5 th	1.81	0.158	1.15	0.368	1.23	0.103	<0.001

Figure 1. NBT measurement of right 2nd finger in scleroderma patient with ILD on ultrasound

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AB0429 BELFAST TRUST EXPERIENCE OF IDIOPATHIC INFLAMMATORY MYOPATHIES

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Background: The Idiopathic Inflammatory Myopathies (IIM) are a heterogeneous group of diseases where there is a growing field of knowledge and experience. Presentation is usually of onset of muscle weakness in combination with typical muscle biopsy findings and specific serum autoantibodies. There is a significant morbidity and mortality associated with IIM, due to its potential systemic nature, associated malignancy risk and side effects of immunosuppressive therapy¹. There is no published guideline on management of IIM, with treatment limited to best practice experience.

Objectives: Review Belfast Trust experience of Adult IIM from 2009-2020

Methods: Review of Electronic Records of 18 patients diagnosed with IIM between 2009-2020

Results: 18 patients diagnosed with IIM. Mean age at diagnosis is 64, with age range of 46-83. Mean duration of treatment is 4 years. 14 patients are in remission, 2 have active disease and 2 are deceased with cause of death unrelated to IIM.

Muscle Biopsy was performed in 17 patients. 11 patients biopsies were diagnostic and 6 were supportive. Of the patients with DM who did not have diagnostic muscle biopsies, all 3 had diagnostic skin biopsies. Of 6 patients with a negative

Table 1. Overview of diagnosis and treatment of patients with IIM.
PM - Polymyositis DM - Dermatomyositis IBM - Inclusion Body Myositis
IMNM Immune Mediated Necrotising Myositis EP - Extended Panel ILD -
Interstitial Lung Disease RA - Rheumatoid Arthritis RTx - Rituximab
IVIG - Intravenous Immunoglobulin MTx - Methotrexate AZA -
Azathioprine MMF - Mycophenolate Mofetil SLZ - Sulphasalazine HLQ -
Hydroxychloroquine

Diagnosis	ANA/Extra muscular	Failed/ Intolerance	RTx	IVIG	MTx	AZA	MMF	Ciclos- porin	SLZ/ HLQ	Prednisolone duration (months)
PM	Jo-1 Ro	AZA						X		18
PM	Jo-1	AZA	x	x				x		12
PM	Myocarditis									
PM	Negative. No EP	AZA/MMF/ RTx			x					Maint. 3mg
PM	Negative. No EP				x					22
PM	ILD									
PM	Jo-1	Mtx/MMF	x						x	Maint. 7mg
PM	ILD, Mechanic Hands									
PM	Negative. No EP					x				36
PM	Negative. No EP			x						18, reducing dose
PM	Negative. No EP		x		x					Maint. 5mg
PM	Ro ILD, Dysphagia			x						6, reducing dose
DM	MDA5, Ro	AZA	x	x				X		18
DM	Rash, ILD									
DM	Mi2	Mtx	x					X		20
DM	Rash									
DM	PM-SCL									Deceased
DM	Rash									
DM	Ro52		x							6, reducing dose
DM	Sicca									
DM	MDA5, NXP2		x			x				Maint, 12.5mg
DM-	Rash									
DM-	SAE	MTx	x	x				X		Deceased
Amyopathic IBM	Rash									
IBM	Ro/La		x	x					x	Unknown duration. Now stopped
IMNM	HMGCR					x				12
IMNM	HMGCR		x	x	x					18, reducing dose

ANA, 5 had a muscle biopsy performed (diagnostic in 4 patients and supportive in 1 patient.)

Conclusion: Extended myositis panels have only recently become available in the Belfast Trust in recent years. This has enhanced patients phenotypes and vigilance for extra-muscular complications. There is a recognised elevated risk of cancer in patients with IIM2. In our patients, with a mean disease duration of 4 years, none have developed malignancy. All of our patients had a tissue sample obtained, either muscle or skin. In the Belfast Trust, Rheumatologists perform muscle biopsies and all of the samples contributed to diagnosis. A limitation of diagnostic tests is restricted access to EMGs. We introduced a variety of DMARDs to limit exposure to steroids. 50% of our patients are in remission and off steroids. The only biologic we used was Rituximab. In contrast to other rheumatological conditions, there is no published protocol for administration of Rituximab in IIM. For patients with refractory disease, IVIG was used in the short term to allow for introduction of alternative immunosuppressants to maintain remission. This review highlights the complex nature of this group of diseases, and our experience with a variety of treatment options. We have diagnosed and treated 18 patients, and although we have experience with the medications used to treat IMM further work is needed to establish evidence based treatment.

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AB0430 CONTRIBUTION OF SCLERODERMA/MYOSITIS-RELATED ANTIBODIES DETECTED BY IMMUNOBLOT TO THE DIAGNOSIS OF SYSTEMIC AUTOIMMUNE RHEUMATIC DISEASES IN 134 PATIENTS FROM A SINGLE REFERRAL CENTER

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Background: Immunoblot assays are increasingly used in clinical practice as part of the diagnostic armamentarium of systemic autoimmune rheumatic diseases (SARDs).

Objectives: To assess the contribution of an extended scleroderma/myositis-related antibodies (Ab) determination by immunoblot to the diagnosis of patients with SARDs.

Methods: We reviewed all medical records of patients with positive scleroderma/myositis-related Ab line blot determinations (Euroimmune AG, Lübeck, Germany) in our center from November 2017 to September 2020. These assays were requested due to high suspicion of SARDs in patients presenting with non-specific symptoms.

Results: 134 patients (37men/97women; mean age 59.6 ± 14.8 years) were positive for at least 1 Ab, 25 of them were positive for 2 Abs. Main clinical features at the time of immunoblot requests were: arthralgia/arthritis (n=88), Raynaud's phenomenon (n=59), rash (n=27), sicca syndrome (n=14.9%), myopathy (n=18). During follow-up, 28 patients were diagnosed with undifferentiated connective tissue disease (UCTD), 26 scleroderma, 23 overlap myositis, 18 interstitial pneumonia with autoimmune features (IPAF), 8 other inflammatory diseases, 8 Sjögren's syndrome, 7 systemic lupus erythematosus, 5 dermatomyositis, 1 necrotizing myositis. In 10 patients the diagnosis of SARD was finally ruled out (Figure 1). Interstitial lung disease (ILD) was present in 50 patients, being particularly frequent in those with anti-PL12, anti-PL7 and anti-MDA5 Abs. Cancer was detected in 9 (6.7%) patients, 6 of them were anti-Ro52 + (Table 1).

Conclusion: Immunoblot assays are of great help in the diagnosis of patients with high clinical suspicion of SARDs. While some Abs, such as anti-Ro52, anti-Ku and anti-PMScl75/100, remain to be nonspecific, other Abs including anti-PL12, anti-PL7 or anti-MDA5 are particularly helpful in detecting SARDs patients with associated ILD.