rays shows only 3.59% of patients with erosions, 38.6% were positive for Osteoarthritis (OA), and 58.6% of patients without erosions. From patients without erosions, 36% were confirmed for RA and 13.4% for OA by US; on the other hand 37% was confirmed for RA and 20% for OA by MRI. A total of 94 patients (26.1%) had a final diagnosis of seronegative RA, while (261) patients 72.5% were confirmed for Osteoarthritis,⁵ 1.4% were classified in other arthropathies.

Conclusions: According with our findings the screening by imagenology is a useful tool with low cost to make a differential diagnosis of seronegative RA and other arthropathies. In order to improve outcomes through well-defined treatments and to save high cost treatments for pathologies with more precise diagnoses.

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AB1210

ANKLE BRACHIAL INDEX FOR THE DIAGNOSIS OF SUBCLINICAL ATHEROSCLEROSIS USING CAROTID INTIMA MEDIA THICKNESS IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENT IN SANGLAH HOSPITAL

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Background: Atherosclerosis and its complications in Systemic Lupus Erythematosus (SLE) patients occurred more rapidly than the general population. Early detection of atherosclerosis is currently a challenge for clinicians. Angiography as a gold standard diagnosis of atherosclerosis is invasive, has a limitation. The surrogate marker carotid intima media thickness (CIMT) examination with B-mode ultrasonography has been used widely and validated. The limitation of this examination is operator dependence. Ankle brachial index (ABI) examination is simpler, cheaper, objective and widely available and is expected to be used for the diagnosis of subclinical atherosclerosis.

Objectives: to determine the sensitivity, specificity, positive predictive value and negative predictive values of the ABI to establish the diagnosis of subclinical atherosclerosis in SLE patients.

Methods: A cross sectional study was enrolling 56 subjects and was conducted from September 2016 to July 2017 at Sanglah Hospital, Denpasar, Bali, Indonesia. We used 2 × 2 cross table to determine the sensitivity, specificity, positive predictive value and negative predictive values of ABI to establish the diagnosis of subclinical atherosclerosis.

Results: Of the 56 samples, 48 people (85.7%) were female. The area under ROC curve was 0.708 (70.8%), p=0.041. ABI examination to diagnose subclinical atherosclerosis in patients with SLE with a cutoff value of 0.95 has a sensitivity of 70%, specificity of 76.1%, 38.9% positive predictive value, and negative predictive value of 92.1%. The best cut-off value of ABI as a diagnostic tool for subclinical atherosclerosis in SLE patients is <0.95.

Conclusions: Examination with ABI can be considered as an alternative diagnostic when CIMT is not available. The diagnostic value of ABI is reliable enough for screening and diagnostic confirmation of subclinical atherosclerosis in patients with SLE.

REFERENCES:

- Westerweel PE, Luyten RK, Koomans HA, Derksen RH, Verhaar MC. Premature atherosclerotic cardiovascular disease in systemic lupus erythematosus. *Arthritis & Rheumatism* 2007; 56(5): 1384–1396.
- Cacciapaglia F, Zardi EM, Coppolino G, Buzzulini F, Margiotta D, Arcarese L, et al. Stiffness Parameter, intima-media thickness and early atherosclerosis in systemic lupus erythematosus patients. *Lupus* 2009;18:249–256.
- Wu GC, Liu HR, Leng RX, Li XP, Li XM, Pan HF, et al. Subclinical atherosclerosis in patient with systemic lupus erythematosus: A systemic review and meta-analysis. *Autoimmun Rev* 2016;15(1):22–37.
- Manzi S. Prevalence and risk factors of carotid plaque in women with systemic lupus erythematosus. *Arthritis Rheum* 2007;42:51–60.
- Theodoridou A, Bento L, D'Cruz DP. Prevalence and associations of an abnormal ankle-brachial index in systemic lupus erythematosus: a pilot study. *Ann Rheum Dis* 2003;62:1199–1203.
- Kadarnan JT, Anggriyani N, Wiryan W. Perbandingan sensitivitas dan spesifisitas ankle brachial index dengan carotid intima-media thickness dalam mendeteksi penyakit jantung koroner signifikan. *Jurnal Kedokteran Diponegoro* 2016; 5(4):1111–1124.

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AB1211

UTILITY OF PET/CT FOR THE DIAGNOSIS AND DISEASE MANAGEMENT: A STUDY OF 88 PATIENTS FROM AN AUTOIMMUNE DISEASES HOSPITAL UNIT IN A 2-YEAR PERIOD

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Background: 18F-Fluorodeoxyglucose Positron Emission Tomography/Computed Tomography (18F-FDG PET/CT) is a non-invasive imaging technique commonly used in clinical oncology. 18 F-FDG accumulation is recognised as useful for diagnosing and monitoring the response to therapy in patients with some inflammatory disorders, but the role of the PET/TC in the management of these diseases is debated.

Objectives: The aim of this study was to investigate the role of 18F-FDG PET/CT in the diagnosis of the disease and assessing disease activity in an autoimmune diseases unit, and to evaluate if the results of this image technique imply a change in clinical management.

Methods: We retrospectively reviewed all 18F-FDG PET/CT requested since August 2015 to August 2017 by our unit. Data collected were: patient demographics, reason for PET request, PET results and change in therapy.

Results: PET/CT were performed in 88 patients and were positive in 68 (77.3%) cases. Patients (49 women/39 men) had a mean age of 58.1±15.7 years (range, 27–92 years). The clinical diagnosis at the moment of ordering the PET/CT were: sarcoidosis (n=45), large-vessel vasculitis (LVV) (n=16), immunoglobulin G4-related disease (IgG4-RD) (n=9), collagen-vascular diseases (CVD) (n=7), mesenteric panniculitis (n=4), myopathy (n=4), polymyalgia rheumatica (PMR) (n=2) and ANCA-associated vasculitis (n=1). (See table 1).

Abstract AB1211 – Table 1

	Sarcoidosis	LVV	IgG4-RD	CVD	Mesenteric panniculitis	myopathy	PMR
n	45	16	9	7	4	4	2
women	27 (60%)	13 (81.2%)	1 (11.1%)	4 (57.1%)	1 (25%)	2 (50%)	1 (50%)
age	50.9 (27–83)	72.5 (29–92)	63.7 (48–80)	53 (30–80)	60.5	66.2	72.5
PET to the diagnosis	9 (20%)	2 (12.5%)	1 (11.1%)	3 (42.9%)	3 (75%)	2 (50%)	2 (100%)
PET to disease activity	36 (80%)	14 (87.5%)	8 (88.9%)	4 (57.1%)	1 (25%)	2 (50%)	0
Positive PET/TC	36 (80%)	11 (68.7%)	6 (66.7%)	6 (85.7%)	3 (75%)	3 (75%)	2 (100%)
Change of therapy	31 (68.9%)	11 (68.7%)	6 (66.7%)	7 (100%)	2 (50%)	3 (75%)	2 (100%)

PET results supported a change in therapeutic management in 71.6% of the cases. In the group of sarcoidosis there was a change in treatment in 68.9% of cases. PET/TC revealed extrapulmonary manifestations in 57.8%. All patients with extracranial manifestations of giant cell arteritis (GCA) showed uptake in PET/TC. That result supported the clinical diagnosis, although negative temporal artery biopsy. PET was useful in the diagnosis and treatment of IgG4-RD in 66.7% of cases. PET scan did not find malignancy in inflammatory myopathies nor mesenteric panniculitis.

Conclusions: PET/TC is an increasingly utilised in our patients with inflammatory disorders as a support for the diagnosis and management. PET/TC detection extrapulmonary sarcoidosis may have therapeutic and prognostic clinical implications. PET may be useful in patients with GCA suspicion with negative biopsy and extracranial symptoms. More studies will be necessary to establish the real role of PET/TC in autoimmune and inflammatory diseases.

Disclosure of Interest: None declared

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AB1212

ANALYTICAL VALIDATION OF AN INTERFERON-INDUCIBLE GENE EXPRESSION KIT AS A POTENTIAL DIAGNOSTIC TEST FOR ANIFROLUMAB

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Background: Anifrolumab, a fully human monoclonal antibody that binds to the type I interferon receptor, is in Phase III development for moderate to severe systemic lupus erythematosus (SLE). Patients with greater interferon-inducible gene signatures (IFNGS) have enhanced response to anifrolumab treatment.¹

AstraZeneca and QIAGEN developed an *in-vitro* diagnostic test for interferon-inducible gene expression (IFIGx). Efficacy of anifrolumab will be evaluated in patients with high and low IFNGS.

Objectives: We aimed to analytically validate the IFIGx kit for use in a pivotal clinical study and potentially to support future regulatory submission.

Methods: The IFIGx kit measures expression of four interferon-inducible genes (IF127, IF114, IF114L and RSAD2) compared with three housekeeping genes. Measurements were performed on mRNA extracted from whole blood from adults with SLE. A score was generated that identified patients as "IFNGS test-high" or "IFNGS test-low." Analytical validation involved six studies measuring lot interchangeability, linearity, repeatability, reproducibility, cross contamination, and system verification.

Results: Repeatability was 100%. Reproducibility was >96%. No cross contamination was observed. Results of all studies validated the IFIGx kit (table 1).

Abstract AB1212 – Table 1

Summary of Analytical Validation of Anifrolumab IFIGx Test

Study	Description	Results
Lot interchangeability	Verification that scores and assay Ct values were robust when different lots of kit components were used Acceptance criterion was <0.58 Ct	Lot interchangeability verified Largest observed change=0.16 Ct
Linearity	Verification, using linear and quadratic regression analyses, that mRNA input concentration (10 ng/μL) is in assay's linear range	Linearity verified Change in score over the concentration range on either side of 10 ng/μL=0.0043 Ct
Repeatability	Verification of Dx result repeatability when the same operator tested 60 random samples using the same kit lot and instrument	Repeatability verified Observed repeatability=100%
Reproducibility	Verification of Dx result reproducibility when multiple operators tested 48 random samples using multiple kit lots and instruments at different sites For verification, overall rate of correct calls must be ≥95%	Reproducibility verified Overall rate=99.7% After six samples with values close to the cut-off were added for further confirmation, overall rate=96.5%
Cross contamination	Investigation of inter- and intra-run cross contamination	No cross contamination No cross contamination found in reverse transcription or PCR steps
System verification	Verification of functionality and utility of the IFIGx software and IFIGx assay package	System verification confirmed Software flags produced as expected

Ct, cycle threshold (PCR cycle at which fluorescence rises above background level); Dx, diagnostic; IFIGx, interferon-inducible gene expression; PCR, polymerase chain reaction; mRNA, messenger ribonucleic acid.

Conclusions: The IFIGx kit was shown to be a robust, reproducible diagnostic test for IFNGS. The IFIGx kit has demonstrated value in prior anifrolumab studies,¹ and will be used both for patient stratification in Phase III studies and to support anifrolumab regulatory filings.

REFERENCE:

[1] Furie, et al. *Arthritis Rheumatol.* 2017;69:376–86.

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AB1213 ULTRASONOGRAPHIC EVALUATION OF THE HIP JOINTS IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS AND PSORIATIC ARTHRITIS: ASSOCIATED WITH CLINICAL AND LABORATORY MARKERS, IMAGING AND FUNCTIONAL OUTCOMES

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Background: The hip joints are frequently involved in spondyloarthritis (SpA). Should ultrasonography (US) be additionally used for clinical assessment of disease in patients (pts) with SpA.

Objectives: to detect by US synovitis of the hip joints and to analyse the correlation between US finding and magnetic resonance imaging (MRI) and/or X-ray sacroiliitis, clinical and laboratory markers and functional status in pts with axial SpA (axSpA) and psoriatic arthritis (PsA).

Methods: 13 pts (7M/6F) with definite axSpA (7 with ankylosing spondylitis (AS) and 6 with non-radiographic nrSpA:ASAS) and 7 pts (4M/3F) with PsA (CASPAR) of similar age [median (IQR), 44^{35–55} vs 42^{34–56} years] and disease duration [7 (1–10) vs 9^{7–10} years] were enrolled. US examination (Mindray DC-N6, C5–2 MHz probe) included bilateral of the hip joints according to the EULAR US Scanning App (www.eular.org; <http://ultrasound.eular.org>). MRI of sacroiliac joints (SIJ) was performed on Signa HDxT GE, 1.5 T. The bone marrow oedema on MRI (STIR) considered as active MRI sacroiliitis (MRI-SI).¹ X-ray of SIJs (modified New York criteria), functional status (BASFI), disease activity indices (ASDAS-CRP, DAPSA), laboratory tests (CRP, ESR, HLA-B27) were assessed.

Results: History of hip involvement was present in 7/20 (35%) pts who had ≥1 tender hip joint. 9/20 pts (45%) had US – synovitis of the hip joints. All pts were divided into two groups: g1 (n=9) – US synovitis "+" (at least one hip joint), g2 (n=11) – US – synovitis "–". Pts from g1 had higher CRP and BASFI compared to g2 (table 1). Elevated CRP ≥25 mg/L and ESR ≥30 mm/h, as well as MRI- and X-ray -SI were detected more often in g1pts than g2. But other parameters did not differ between the groups (table 1). US – synovitis of the hip joints was positively correlated with CRP (r=0.489, p<0.05), MRI-SI (r=0.688, p<0.05), X-ray-SI (r=0.634, p<0.05) and BASFI (r=0.541, p<0.05).

Abstract AB1213 – Table 1. Association between the US- synovitis of the hip joints and clinical and laboratory markers, imaging and functional outcomes

Parameters	US-synovitis "+" (n=9)	US-synovitis "–" (n=11)	P*
Age, years	44 (26–49)	46 (40–57)	.294
Duration since diagnosis, years	5 (1–10)	9 (7–10)	.551
AS/nrSpA/PsA	4 (57/3 (50)/2 (28.5)	3 (39/3 (50)/5 (71)	.411
Male sex	6 (67)	5 (45)	.456
HLA-B27	6 (67)	5 (45)	.456
CRP, mg/l	38 (6.7–51)	7.7 (3–19.2)	.031
Elevated CRP≥25	6 (67)	1 (9)	.031
ESR, mm/h	30 (16–39)	11 (6–25)	.080
Elevated ESR≥30	5 (55.5)	1 (9)	.027
ASDAS-CRP	3.4 (2.1–4.5)	2.7 (1.7–4.2)	.294
DAPSA	33 (19.6–46.4)	12.4 (12.3–12.4)	.190
BASFI (0–10)	5 (4–6)	3 (1.7–4)	.015
BASFI>4	6 (67)	2 (18)	.030
MRI-SI	9 (100)	5 (45)	<0.001
X-ray SI	9 (100)	5 (45)	<0.001

Numbers are medians (IQR) and n (%); * Mann-Whitney U-test.

Conclusions: US – synovitis of the hip joints was associated with CRP, MRI- and X-ray- SI and severe functional disability in SpA pts. US evaluation of the hip joints may be used for identifying SpA pts with high risk of the disease progression at an early stage.

REFERENCE:

[1] Mandl P. et al. *Ann Rheum Dis* 2015;0:1–13.

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AB1214 BONE MINERAL DENSITY AND T-SCORE EVALUATION IN A GROUP OF PATIENTS WITH RHEUMATOID ARTHRITIS USING A NEW ULTRASOUND METHOD: ECHOS – GENODYNAMIC - A PILOT STUDY –

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Background: There is a great need of a screening programme for osteoporosis in the general population and even more amongst the rheumatologic patients, with additional risk factors. Although DXA is the gold standard for diagnosing osteoporosis, it is not appropriate for screening, because of its' limitations regarding ionising radiation, but also the massive machine, that needs dedicated spaces and specialised operators, all in all, involving high costs.

Objectives: To apply a new method that integrates ultrasonography with radiofrequency signals from an echographic scan, in order to evaluate the bone mineral