Table 1. Characteristics of 9 patients from 1 center

Patient	Age/ Sex	Tumor type	Checkpoint Inhibitor	Fulfilled EULAR/ACR Classification Criteria*	Unfulfilled Criteria	Atypical Features	Treatment
1	63 M	RCC	Nivolumab	No; 5 points	Acute phase reactants		Prednisone 40 mg; tocilizumab 162 mg q2 weeks
2	69 M	Melanoma	Ipilimumab/ nivolumab	Yes; 6 points		Sicca symptoms; ANA 1:1280, anti-SSA >8 IU	Prednisone 30 mg
3	79 M	Melanoma	Ipilimumab/ nivolumab	Yes; 7 points**		Sicca symptoms	Prednisone 20 mg
4	57 M	Melanoma	Pembrolizumab	No; 3 points	Acute phase reactants; RF 35 IU/ml; knee involvement		Prednisone 60 mg
5	60 M	Melanoma	Pembrolizumab	No; 3 points	RF 45 IU/ml; knee involvement		Prednisone 60 mg
6	66 M	Melanoma	Nivolumab	Yes; 5 points	Hand involvement		Prednisone 20 mg; MTX
7	69 F	RCC	Nivolumab	Yes; 5 points	Hand involvement		Prednisone 10 mg; tocilizumab 162 mg q2 weeks
8	66 M	RCC	Durvalumab; tremilimumab	Yes; 5 points	Hand involvement		Prednisone 20 mg
9	72 F	RCC	Avelumab	Yes; 4 points	Acute phase reactants; hand and knee involvement		Prednisone 20 mg

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THU0562 PREVALENCE, UNDERLYING FACTORS AND DAMAGE ASSOCIATED WITH CHRONIC PERSISTENT INFLAMMATION IN PATIENTS WITH FMF

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Background: Familial Mediterranean Fever (FMF) is the most frequent auto-inflammatory disease characterized by recurrent, self-limiting attacks of fever, peritonitis, pleuritis, synovitis, myalgia, and erysipelas-like erythema (ELE). Attacks has a robust inflammatory response which completely normalize when attacks subside. However, substantial number of FMF patients possess chronic persistent inflammation even in between attacks. Clinical significance of persistent inflammation and its contribution to damage accrual are yet to be determined.

Objectives: We aimed to determine the prevalence and underlying factors of chronic persistent inflammation and its association with the domains of Auto-inflammatory disease damage index (ADDI) in a large cross-sectional multicenter cohort.

Methods: All patients recruited from FMF in Central Anatolia (FiCA) cohort, which is a duplication disabled, internal and externally controlled, cross-sectional, multicenter accessible web-based cohort. Demographic data, disease characteristic, attack features (ever presented) were meticulously questioned. Genotype data (if available) and laboratory features including inflammatory markers were recorded. FMF related damage scores was assessed by auto-inflammatory disease damage index (ADDI) which is recently validated. Patients were stratified according to their antecedent acute phase responses as having persistent inflammation (PI group) or not, both groups compared in terms of disease characteristics, attack features, inflammatory comorbidities and damage domains.

Results: Study is comprised 970 adult patients (mean age 35.3±12.1, 61% female). 54 of them were excluded for their first inclusion. 15% of patients had persistent inflammation. PI group had significantly younger age of diagnosis, male dominance, homozygous M694V, more frequent attacks it the last year, more pleuritis, arthritis, myalgia and ELE and more severe disease according to ISSF than other patients (Table-1). Moreover, colchicine resistance and ADDI damage scores were remarkably higher in PI group.

In multi-variate analyzes colchicine resistance OR=2.71 [95%CI 1.38-5.35], ISSF OR=11.06 [95%CI 5.23-23.39], male gender OR= 2.38 [95%CI 1.51-3.76], homozygous M694V mutation OR= 2.31 [95%CI 1.41-3.78] and ELE OR= 1.72 [95%CI 1.04-2.857] found as independent predictors of persistent inflammation. PI group had more damage in multiple domains like joint restriction, musculoskeletal pain, proteinuria, amyloidosis, renal insufficiency and developmental delay. Same variables and persistent inflammation further analyzed in in terms of predicting the damage. Persistent inflammation found to be an independent predictor of proteinuria OR=2.02 [95%CI 1.05-3.90], amyloidosis OR=2.71 [95%CI, 1.34-5.48]), and renal insufficiency OR=4.36 [95%CI 1.84-10.32].

Conclusion: Persistent inflammation is relatively common in FMF patients particularly in those harboring M694V homozygous mutation and is associated with major complications of disease indicating poor prognosis.

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Table 1 Patients demographics and disease characteristics |

		Persistent inflammation (n=142)	Others (-) (n=784)	p
Age, years		35(12.1)	35 (12.1)	0.09
Female		74 (52.1%)	492 (62.8%)	0.017
Disease onset <20 years		128 (90.1%)	585 (74.6%)	<0.001
Age at FMF diagnosis, years		22.6 (14.2)	25.1 (13.0)	0.041
M694V/M694V*		91 (71.1%)	240 (36.8)	<0.001
Fever		116 (81.7%)	655 (83.5%)	0.708
Peritonitis		125 (88%)	723 (92.2%)	0.158
Pleuritis		84 (59.2%)	351 (44.8%)	0.001
Arthritis		93 (65.5%)	301 (38.4%)	<0.001
Myalgia		57 (40.1%)	138 (17.6%)	<0.001
Erysipelas like erythema		68 (47.9%)	170 (21.7%)	<0.001
Attack frequency in the last year		8.37 (9.9)	3.78 (5.3)	<0.001
ISSF	Mild Disease	9 (6.3%)	440 (56.1%)	<0.001
	Intermediate Disease	91 (64.1%)	325 (%41.5)	
	Severe disease	42 (29.6%)	19 (%2.4)	
Colchicine resistance		38 (26.8%)	38 (4.8%)	<0.001
ADDI		2.2 (2.5)	0.9 (1.2)	<0.001
Joint restriction		13 (9.2%)	14 (1.8%)	<0.001
Musculoskeletal pain		84 (59.2%)	364 (46.4%)	0.006
Proteinurea		27 (19%)	37 (4.7%)	<0.001
Amyloidosis		28 (19.7%)	27 (%3.4)	<0.001
Renal Insufficiency		20 (14.1)	15 (1.9%)	<0.001
Developmental delay		5 (3.5%)	9 (1.1%)	0.049
Splenomegaly		21 (14.8%)	34 (4.3%)	<0.001

ISSF: international severity scoring system for FMF. ADDI: autoinflammatory disease damage index
*n=14 missing in PI, n=132 missing in others

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THU0563 COMPARISON BETWEEN PATIENTS WITH IDIOPATHIC PULMONARY FIBROSISAND INTERSTITIAL PNEUMONIA WITH AUTOIMMUNE FEATURES: A PROSPECTIVE COHORT

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Background: The term "Interstitial Pneumonia with Autoimmune Features (IPAF)" is used to describe patients with Interstitial Lung Disease in combination to clinical, serological and/or pulmonary features that are suggestive, but insufficient to satisfy classification criteria of a specific Connective Tissue Disease (CTD). Some retrospective studies available in literature described patient cohorts with IPAF heterogenous in terms of clinical, serological, and radiographic manifestations

Objectives: To prospectively recruit a cohort of consecutive ILD patients classified as IPAF or as affected by Idiopathic Pulmonary Fibrosis (IPF); to describe their clinical, serological, and radiological features by a multidisciplinar team composed by Pulmonologists, Radiologists, and Rheumatologists, comparing IPAF and IPF patients.

Methods: In the lasts 2 years, they were enrolled 45 patients with IPAF and 143 with IPF among a total of 506 patients with Interstitial Lung Disease (ILD). All patients were evaluated clinically by both rheumatologists and pulmonologists, also by means of chest high resolution computed tomography (hrCT), pulmonary function tests (PFT), and nailfold videocapillaroscopy.

Results: In IPAF cohort the most common characteristics from the clinical, serological and morphological domain were Raynaud's phenomenon (RP) (31.1%) antinuclear antibodies positivity with titre $\geq$1/320 or any titre for centromeric or nucleolar pattern (17.7%) and nonspecific interstitial pneumonia (68.8%) respectively. The majority of patient (88.9%) had the minimum of 2 criteria at the recruitment. Female gender was more common in IPAF compared to IPF (62.2% vs 23%, p<0.0001) and the mean age of onset was lower in patient with IPAF (66 vs 73, p <0.0001). NVC resulted positive in 2 patients, both without RP. Patients with IPAF showed better performances in PFT than patients with IPF than those with IPF (mean forced vital capacity 83% vs 74%, p =0.01; mean diffusing lung capacity for carbon monoxide 64% vs. 52%, p=0.01). Patients with IPAF less commonly than patients with IPF needed oxygen therapy (44.4% vs 77.6%, p <0.0001) and more commonly showed at hrCT NSIP (68.8% vs 6.9%, p <0.0001) than UIP pattern (0% vs 86%, p <0.0001).

Conclusion: IPAF criteria recruit a rare cohort of patients with a disease probably less severe than IPF, even though clinically relevant. Further prospective studies may better define the long-term prognosis of ILD in IPAF. The follow-up of these patients by a multi-disciplinary team may be useful in order to early recognize and treat the new cases of CTDs. Some IPAF criteria probably are useless due to their high specificity for definite CTD and the classification need a revision in the light of the prospective experiences. Nevertheless, IPAF classification can recruit incomplete form or early onset of CTD that can allow a timely treatment in patients without a structured damage.

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THU0564 COULD A PROBABILISTIC REASONING AI ACCELERATE RARE DISEASE DIAGNOSIS? EVALUATING THE POTENTIAL IMPACT OF A DIAGNOSTIC DECISION SUPPORT SYSTEM IN A RETROSPECTIVE STUDY

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Background: The diagnosis of rare diseases is often delayed by years [1]. The main factor for this delay is believed to be the lack of knowledge and awareness regarding rare diseases [2]. Probabilistic diagnostic decision support systems (DDSS) have the potential to accelerate rare disease diagnosis by highlighting differential diagnoses for physicians [3, 4]. DDSS's are based on case input and incorporated medical knowledge.

Objectives: We examine a probabilistic DDSS prototype and assess its potential to provide accurate rare disease suggestions early in the course of rare disease cases.

Methods: Retrospectively, information from the medical records of 93 patients was transferred to the DDSS. Each of these patients had a confirmed rare inflammatory systemic disease. The accuracy of the DDSS disease suggestions was assessed for all documented visits over time. Time to correct top fit (TF) and top five fit (T5F) disease suggestion was assessed, as was the original time to clinical diagnosis (TD). TF/TD as well as T5F/TD were calculated to allow for comparison of TF respective T5F normalized to TD. Wilcoxon signed-rank test was conducted for TD-TF and TD-T5F.

Results: The DDSS suggested the correct disease at a time *earlier* than the time of clinical diagnosis among the top five fit disease suggestions in 53.8% of cases (50 of 93), and as the top fit disease suggestion in 37.6% of cases (35 of 93). Median advantage of correct disease suggestions compared to the time point of clinical diagnosis was 3 months or 50% for top five fit respective 1 month or 21% for top fit. The correct diagnosis was suggested at the *first* documented patient visit among the top five fit disease suggestions in 33.3% (top five fit), respective 16.1% of cases (top fit). Wilcoxon signed-rank test shows a significant difference between the time to clinical diagnosis and the time to correct disease suggestion for both top five fit and top fit (z-score -6.68, respective -5.71, α=0.05, p-value <0.001). The DDSS suggested the correct rare disease at the time of diagnosis in 89% of cases (83 of 93)

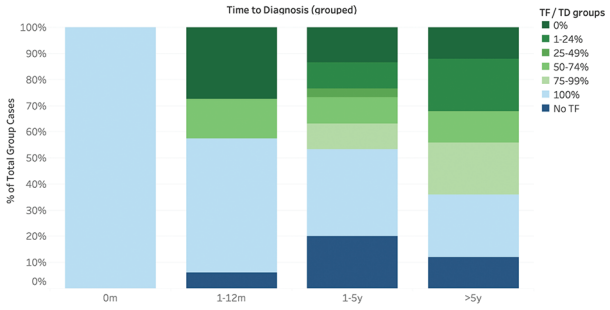

Figure 1. Distribution of TF/TD by TD. Visualisation of the time to correct top fit suggestion relative to the time to diagnosis, grouped by time to diagnosis. Number of cases per group: 0m: 5; 1-12m: 33; 1-5y: 30; >5y: 25

Conclusion: The DDSS was capable of providing accurate rare disease suggestions in most of the rare disease cases. In many cases it provided correct rare disease suggestions early in the course of the disease, sometimes in the very beginning of a patient's journey. The interpretation of these results suggests that DDSS's have the potential to highlight the possibility of a rare disease to physicians early in the course of a case. Limitations of this study derive from its retrospective and unblinded design, data input by a single user, and the optimization of the knowledge base during the course of the study. Whether the use of this DDSS leads to a reduced time to rare disease diagnosis in a clinical setting should be validated in prospective studies.