Results: Of 149 patients assigned to TCZ in part 1, 81 (54%) were in sustained remission on entering part 2. Of these 81 patients, 37 (46%) experienced at least one flare in part 2, including 17 with new-onset GCA and 20 with relapsing GCA at baseline. Median time to flare was 26.6 weeks. In patients with new-onset GCA, flares included cranial (53%) more often than PMR symptoms (18%). Cranial and PMR symptoms were balanced (both 60%) at the time of flare in patients with relapsing GCA. Visual manifestations occurred in two patients (5%) (Table 1). ESR and CRP were elevated in 65% and 36% of patients, respectively, at the time of flare. Three (8%) flares occurred with elevated ESR without clinical symptoms.

Table 1. Clinical manifestations during flare in part 2

	Part 1 Treatment ^a		
	TCZ QW+Pred	TCZ Q2W+Pred	All TCZ
New-onset disease			
Patients, n	28	14	42
Patients with ≥ 1 flare, n (%) ^b	9 (32.1)	8 (57.1)	17 (40.5)
Patients with ESR ≥ 30 mm/h during flare, n (%) ^b	6 (66.7)	6 (75.0)	12 (70.6)
Patients with CRP ≥ 10 mg/L during flare, n (%) ^b	4 (44.4)	2 (25.0)	6 (35.3)
Patients with GCA signs or symptoms during flare, n (%) ^c	7 (77.8)	7 (87.5)	14 (82.4)
PMR symptoms	1 (11.1)	2 (25.0)	3 (17.6)
Cranial symptoms ^d	4 (44.4)	5 (62.5)	9 (52.9)
Amaurosis fugax	0	0	0
Blurred vision	1 (11.1)	0	1 (5.9)
Diplopia	0	0	0
Blindness	0	0	0
Ischemic optic neuropathy	0	0	0
Fever	1 (11.1)	0	1 (5.9)
Other ^e	3 (33.3)	2 (25.0)	5 (29.4)
Relapsing disease			
Patients, n	28	11	39
Patients with ≥ 1 flare, n (%) ^b	14 (50.0)	6 (54.5)	20 (51.3)
Patients with ESR ≥ 30 mm/h during flare, n (%) ^b	8 (57.1)	4 (66.7)	12 (60.0)
Patients with CRP ≥ 10 mg/L during flare, n (%) ^b	5 (35.7)	3 (50.0)	8 (40.0)
Patients with GCA signs or symptoms during flare, n (%) ^c	14 (100)	6 (100)	20 (100)
PMR symptoms	8 (57.1)	4 (66.7)	12 (60.0)
Cranial symptoms ^d	8 (57.1)	4 (66.7)	12 (60.0)
Amaurosis fugax	1 (7.1)	0	1 (5.0)
Blurred vision	0	0	0
Diplopia	0	0	0
Blindness	0	0	0
Ischemic optic neuropathy	1 (7.1)	0	1 (5.0)
Fever	0	0	0
Other ^e	6 (4.3)	1 (16.7)	7 (35.0)

^aPatients from part 1 TCZ+Pred groups who were in sustained remission at week 52 entered part 2 on no treatment.

^bPercentage based on N in disease-onset group.

^cPercentage based on number of flare patients in disease-onset group. Individual signs or symptoms are shown as number of patients with each symptom; patients could have ≥ 1 sign or symptom at the time of flare.

^dNew-onset localized headache, scalp tenderness, temporal artery tenderness or decreased pulsation, ischemia-related vision loss, or jaw pain claudication.

^eIncludes fatigue, malaise, subjective weakness, and night sweats.

Conclusion: Overall, 46% of GCA patients successfully treated with TCZ for 1 year experienced disease flare within the next 2 years. Flares in patients with new-onset disease occurred more often with cranial than PMR symptoms. Visual manifestations were rare, and no blindness occurred. ESR and CRP were normal in a sizable percentage of patients experiencing flare.

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POS0809

A BIOMARKER PROFILE AIDING AN EARLY DIAGNOSIS OF GIANT CELL ARTERITIS

Y. Van Sleen¹, P. Therkildsen², A. Boots¹, B. Dalsgaard Nielsen², K. Van der Geest¹, P. Heeringa³, M. G. Huitema¹, M. D. Posthumus⁴, M. Sandovici¹, E. Toonen⁵, J. Zijlstra¹, E. M. Hauge², E. Brouwer¹. ¹University Medical Center Groningen, Rheumatology and Clinical Immunology, Groningen, Netherlands; ²Aarhus University Hospital, Rheumatology, Aarhus N,

Denmark; ³University Medical Center Groningen, Pathology and Clinical Immunology, Groningen, Netherlands; ⁴Martini Ziekenhuis Groningen, Rheumatology, Groningen, Netherlands; ⁵Hycult Biotech, R&D Department, Uden, Netherlands

Background: Diagnosing patients with giant cell arteritis (GCA) remains difficult. Due to its non-specific symptoms, it is challenging to identify GCA in patients presenting with polymyalgia rheumatica (PMR), which is a more common disease (1). In addition, commonly used acute-phase markers fail to discriminate between GCA patients and (infectious) mimicry patients.

Objectives: To investigate a selection of biomarkers for their utility in the accurate diagnosis of GCA in two cohorts.

Methods: Treatment-naïve GCA patients participated in the Aarhus GCA/PMR cohort (N=52) and the Groningen GPS cohort (N=48). Symptoms and biomarker levels were compared to patients presenting phenotypically as isolated PMR, disease controls and healthy controls (HCs). Diagnosis or exclusion of diagnosis of GCA was based on clinical assessment and in the majority of cases aided by imaging. Serum/plasma levels of 12 biomarkers were measured by ELISA or Luminex.

Results: In both the Aarhus and the GPS cohort, we found that weight loss, elevated erythrocyte sedimentation rate (ESR) and higher angiopoietin-2/-1 ratios but lower matrix metalloproteinase (MMP)-3 levels identify concomitant GCA in PMR patients (Figure 1). In addition, we confirmed (1) that elevated platelet counts are characteristic of GCA but not of GCA look-alikes, and that low MMP-3 and proteinase 3 (PR3) levels may help to discriminate GCA from other diseases (Figure 1). Multiple biomarkers of inflammation were found elevated in patient and disease control groups when compared to HCs.

Conclusion: This study, performed in two independent cohorts, consistently shows the potential of angiopoietin-2/-1 ratios and MMP-3 levels to identify GCA in patients presenting with PMR. These biomarkers may be used to select which PMR patients require further diagnostic workup. Platelet counts may be used to discriminate GCA from GCA look-alike patients.

Figure 1. Summary of the most important and consistent findings in both cohorts. A shows the four factors that perform best in discriminating GCA/PMR patients overlap from isolated PMR patients in both cohorts. B shows the four factors that perform best in discriminate GCA patients from GCA look-alike patients in both cohorts. Cut-off values for the biomarkers are calculated by the Youden index.

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POS0810

PULMONARY FINDINGS ON HIGH-RESOLUTION COMPUTED TOMOGRAPHY IN TAKAYASU ARTERITIS

X. Kong¹, J. Zhang², J. Lin³, P. LV³, H. Chen¹, Z. Ji¹, X. Dai¹, X. Jin⁴, L. Ma¹, L. Jiang¹. ¹Zhongshan Hospital Fudan University, Department of Rheumatology, Shanghai, China; ²Zhongshan Hospital Fudan University, Department of Pulmonary Medicine, Shanghai, China; ³Zhongshan Hospital Fudan University, Department of Radiology, Shanghai, China; ⁴Zhongshan Hospital Fudan University, Department of Clinical Epidemiology Center, Shanghai, China

Background: Takayasu arteritis (TA) is a chronic granulomatous large-vessel vasculitis most commonly seen in women under 50 years of age[1]. The pulmonary arteries are less often involved, with the frequency of involvement varying widely between countries (from 4% to >50%) [2–5]. Respiratory symptoms or signs and pulmonary imaging findings in TA have not been fully investigated [6–7].

Objectives: This study aimed to describe pulmonary high-resolution computed tomography (HRCT) findings in TA and to determine possible causes.

Methods: A total of 243 TA patients were enrolled from a prospective cohort after excluding 260 patients with other pulmonary disorders or incomplete data. Clinical data including symptoms, lab results, imaging information were collected. Pulmonary HRCT were interpreted by two radiologist who were blinded to patients' clinical information. Abnormal pulmonary features were recorded as nodules, stripe opacity (linear opacity), patchy opacity, ground-glass opacity, pleural thickening, pleural effusion, pulmonary infarction, mosaic attenuation, pulmonary bronchiectasis, pulmonary oedema. After evaluation, patients were divided into two groups: those with normal lung HRCT and those with abnormal lung HRCT. Clinical characteristics were compared between groups and binary logistic regression analysis was applied to identify potential risk factors for the lung lesions. Follow-up HRCT (obtained in 64 patients) was analysed to study changes in pulmonary lesions after at least 6 months' treatment.

Results: Of the 243 patients, 107 (44.0%) had normal lung HRCT while 136 (56.0%) had abnormal lung HRCT, including stripe opacity (60.3%), nodules (44.9%), patchy opacity (25.0%), pleural thickening (15.4%), pleural effusion (10.3%), ground-glass opacity (8.1%), pulmonary infarction (6.6%), mosaic attenuation (4.4%), bronchiectasis (3.7%), and pulmonary oedema (2.2%). Patients with abnormal HRCT were significantly more likely to have type II arterial involvement (25% vs. 12.2%, $P = 0.04$), pulmonary arterial involvement (PAI; 21.3% vs. 5.6%, $P < 0.001$), pulmonary hypertension (20.6% vs. 8.4%, $P = 0.01$), and abnormal heart function (27.9% vs. 7.6%, $P < 0.001$). Logistic regression analysis demonstrated that PAI (OR = 3.0, 95% CI = 1.1–8.4, $P = 0.03$), worsened heart function (OR = 2.7, 95% CI = 1.1–6.6, $P = 0.03$), and age (OR = 1.1, 95% CI = 1.0–1.1, $P < 0.01$) were associated with presence of pulmonary lesions. Pulmonary infarction, pleural effusion, and patchy opacities improved partially after treatment.

Conclusion: Pulmonary lesions are not rare in patients with TA. Age, PAI, and worsened heart function are potential risk factors for presence of pulmonary lesions in TA.

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POS0811 EULAR RECOMMENDATIONS ON GIANT CELL ARTERITIS IN REAL LIFE

E. Regola¹, F. Franceschini¹, G. Bosio², P. Toniati¹. ¹ASST Spedali Civili and University of Brescia, Rheumatology and Clinical Immunology Unit, Brescia, Italy; ²ASST Spedali Civili of Brescia, Nuclear Medicine Unit, Brescia, Italy

Background: GCA is the most frequent systemic vasculitis in patients older than 50 years involving medium-sized and large arteries. On July 2019 EULAR published its updated recommendations for the management of large vessel vasculitis, including GCA.

Objectives: To analyze how the application of the updated EULAR recommendations changed clinical practice in GCA patients in our Hospital.

Methods: All patients with a new diagnosis of GCA between January 1st, 2018 and December 31st, 2020 were enrolled in this study. Two cohorts were analyzed: patients who received GCA diagnosis in the eighteen months before EULAR

recommendations publication (between January 1st, 2018 and June 30th, 2019: cohort A) and patients who received GCA diagnosis in the following eighteen months (between July 1st, 2019 and December 31st, 2020: cohort B). Data are expressed as median (IQR).

Results: 70 patients were enrolled in the study (F: 47, M: 23, age: 76 (69-79) years): 39 patients in cohort A, 31 in cohort B. Table 1 summarize main clinical features and treatment of patients. Sixteen patients of cohort A (41%) and eleven patients of cohort B (35%) presented large vessel involvement demonstrated by FDG-PET/CT. Thirty-one patients in cohort A (79%) and twenty-seven in cohort B (87%) presented cranial symptoms and were studied with temporal arteries ultrasound (US) and/or biopsy (TAB). More specifically, in cohort A US was performed in 42% of patients with cranial symptoms and TAB in 58% of them. After EULAR recommendations publication (cohort B) the percentage of patients with cranial symptoms who performed US increased to 56% and the percentage of TAB decreased to 52%.

After EULAR recommendations publication, time between symptoms onset and first rheumatologic evaluation was reduced by 30% (from 61 (23-131) to 43 (22-92) days).

No difference in treatment regimens were found between groups, whether in glucocorticoid initial dose or DMARDs adjunctive therapy.

Conclusion: After EULAR recommendations publication, two major improvement were achieved in our cohort. EULAR suggests GCA patients should be urgently referred to a specialist team. Consistently with this recommendation, time between symptoms onset and first rheumatologic evaluation was markedly reduced. Moreover, EULAR suggests always confirming GCA diagnosis by imaging or TAB, with US as first choice. In line with these recommendations, in our cohort US became more and more frequently performed and progressively preferred over TAB. On the other hand, no differences in treatment regimens were found over time, with EULAR recommendations satisfied both before and after their publication.

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	ALL GCA (n: 70)	Before EULAR recommendations (n: 39)	After EULAR recommendations (n: 31)
Time between symptoms onset and first rheumatologic evaluation (days)	53 (22-110)	61 (23-131)	43 (22-92)
Temporal artery US	28/58 (48%)	13/31 (42%)	15/27 (56%)
Temporal artery biopsy	32/58 (55%)	18/31 (58%)	14/27 (52%)
Large vessel involvement (FDG-PET/CT)	27 (39%)	16 (41%)	11 (35%)
Glucocorticoid initial dose (mg/die pred- nisone equivalent)	50 (47-50)	50 (50-50)	50 (38-50)
DMARDs	43 (61%)	24 (61%)	19 (61%)

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POS0812 SUBCLAVIAN ARTERIES INVOLVEMENT IN PATIENTS WITH GIANT CELL ARTERITIS: DO WE NEED A MODIFIED HALO SCORE?

J. Molina Collada¹, J. Martínez-Barrio¹, B. Serrano-Benavente¹, I. Castrejón¹, J. C. Nieto González¹, L. R. Caballero Motta¹, L. Trives Folguera¹, J. M. Alvaro-Gracia¹. ¹Hospital General Universitario Gregorio Marañón, Rheumatology, Madrid, Spain

Background: EULAR recommendations propose temporal and axillary arteries ultrasound (US) as first-line investigation when predominantly cranial giant cell arteritis (GCA) is suspected. Recently, two novel US scoring systems, the halo count and the Southend Halo Score, have been developed to quantify the extent of inflammation by US in GCA.

Objectives: To assess whether adding the subclavian arteries examination into the ultrasound (US) Southend Halo Score, as proposed in the modified Halo Score, improves the diagnostic accuracy of GCA and its relationship with systemic inflammation.

Methods: Retrospective observational study of patients referred to a GCA fast track pathway (FTP) over a 1-year period. Patients underwent US exam of temporal and large vessel (LV) (carotid, subclavian and axillary) arteries. The extent of inflammation was measured by the halo count, the Southend Halo Score and the modified Halo Score (Image 1). The gold standard for GCA diagnosis was clinical confirmation after 6 months follow-up.

Results: 64 patients were evaluated in the FTP, 17(26.5%) had GCA. Subclavian arteries involvement was present only in patients with GCA (29.4% versus 0%, $p < 0.001$) (Table 1). Overall, the three scores showed excellent diagnostic accuracy for GCA (ROC AUC 0.906, 0.930 and 0.928, respectively) and moderate correlations with acute phase reactants (0.35-0.51, $p < 0.01$). However, in the subgroup of patients presenting LV involvement, moderate correlations were