Results: We evaluated 68 patients with GCA (51W/17M) with a mean age of 68.06±8.33 years. The vascular territories affected were: TA (n=58, 85.29%), SAT (n=38, 55.88%), AA (n=28, 41.18%), AA (n=18, 26.47%), LLA (n=17, 25%), IA (n=13, 19.12%) and ULA (n=6, 8.82%). We also made a study of the number of vascular territories affected: 1 vascular territory (n=13, 19.12%), 2 territories (n=22, 32.35%), 3 territories (n=18, 26.47%), 4 territories (n=12, 17.65%) and more than 4 territories (n=3, 4.41%). Likewise, a comparative study between both sexes was conducted, in which only statistical significance was achieved in the involvement of ULA, which was more frequent in men (table 1).

Abstract FRI0500 – Table 1

	Men (n= 17)	Women (n= 51)	p
Age, mean ± SD	69.3 ± 8.5	67.6 ± 8.6	0.48
Vascular territories affected, n (%)			
Supra-aortic trunks	8 (47.1)	30 (58.8)	0.57
Aortic arch	4 (23.5)	14 (27.4)	0.99
Thoracic aorta	12 (70.6)	46 (90.2)	0.11
Abdominal aorta	6 (35.3)	22 (43.1)	0.78
Iliac arteries	1 (5.9)	12 (23.5)	0.21
Upper limb arteries	4 (23.5)	2 (3.9)	0.04
Lower limb arteries	6 (35.3)	7 (13.7)	0.11
Number of vascular territories affected, n (%)			
1	5 (29.4)	8 (15.7)	0.37
2	5 (29.4)	20 (39.2)	0.66
3	5 (29.4)	13 (25.5)	0.99
4	1 (5.9)	11 (21.6)	0.27
>4	1 (5.9)	2 (3.9)	0.73

Conclusions: In patients with GCA the involvement of TA is very frequent, followed by the SAT and the AA. To a lesser extent, the AA and the LLA vessels are affected. The involvement of the IA and the ULA vessels is less frequent; the latter more frequently in men. On the other hand, the involvement of 2–3 vascular territories are the most frequent patterns.

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FRI0501 **NEGATIVE TEMPORAL ARTERY BIOPSIES: COMPARISON BETWEEN BIOPSY-NEGATIVE GCA AND NON-GCA PATIENTS**

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Background: Temporal artery biopsy (TAB) plays a key role in diagnosis of giant cell arteritis (GCA). However, approximately 15%–20% of patients ultimately diagnosed with GCA have negative biopsies. Among patients with negative TAB, it is often challenging to identify patients with GCA from those with an alternate (non-GCA) diagnosis.
Objectives: To compare TAB-negative GCA with patients receiving a non-GCA alternate diagnosis.
Methods: Two cohorts were retrospectively identified through direct medical record review. The first cohort consisted of patients with TAB-negative GCA diagnosed between 1/1/1998 and 12/31/2013. The second cohort included all patients with a negative TAB performed between 1/1/2009 and 12/31/2010 in which a non-GCA alternate diagnosis was provided after a minimum of 6 months of follow up. Final diagnoses were confirmed by consensus among two rheumatologists and a

physician abstractor. Baseline characteristics were compared between the two cohorts using chi-square and rank sum tests.
Results: 110 patients with TAB-negative GCA and 195 non-GCA patients with a negative TAB were identified. Alternate diagnoses for non-GCA patients are listed in table 1. Age, sex, number of days on glucocorticoids prior to biopsy, and biopsy length were similar in both groups. Time from first symptom to diagnosis was longer in non-GCA patients [mean (SD); 2.6 (2.5) vs 1.5 (2.1) months; p<0.001] and fewer non-GCA patients fulfilled ≥3 ACR criteria for GCA (27% vs 64%; p<0.001). Although headache was the primary symptom in both cohorts (66% TAB-negative GCA; 68% non-GCA), patients with biopsy-negative GCA had more frequent anorexia, fatigue, fever, polymyalgia rheumatica, temporal artery tenderness and claudication (jaw, arm, or leg). Baseline transient (5% TAB-negative GCA; 6% non-GCA; p=0.58) and permanent (3% TAB-negative GCA; 3% non-GCA; p=0.86) vision loss were infrequently observed. ESR was higher in TAB-negative GCA patients [64.0 (35.1) vs 55.2 (67.4); p=0.002] compared to non-GCA patients but CRP did not differ [44.3 (53.6) vs 43.8 (61.9); p=0.39].

Abstract FRI0501 – Table 1

Alternate diagnosis, n (%)	Negative biopsy with alternate diagnosis (N=195)
Neurologic condition	75 (38%)
Isolated PMR	38 (19%)
Rheumatic disease other than PMR or GCA	26 (13%)
Non-arteritic AION	10 (5%)
Fever of unknown origin	9 (5%)
Infectious disease	7 (4%)
Non-malignant hematologic condition	7 (4%)
Malignant disease	6 (3%)
Other vasculitis	6 (3%)
Cervical arthritis	5 (3%)
Systemic disease of unknown etiology	5 (3%)
Other	1 (1%)
AION: anterior ischemic optic neuropathy; GCA: giant cell arteritis; PMR: polymyalgia rheumatica	

Conclusions: In this cohort, neither headache nor vision loss at presentation were associated with an ability to discriminate between diagnosis of TAB-negative GCA compared to patients without GCA. ACR criteria may be helpful in identifying patients with TAB-negative GCA. Among patients with negative TAB, constitutional symptoms and claudication (jaw/limb) were more frequently associated with an ultimate diagnosis of TAB-negative GCA.
Disclosure of Interest: None declared
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FRI0502 **RISK OF CANCER IN PATIENTS DIAGNOSED WITH GIANT CELL ARTERITIS IN WESTERN NORWAY 1972–2012**

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Background: A meta-analysis from 2014 reported a low but statistically significant increased malignancy risk among patients with giant cell arteritis (GCA), but individual epidemiological studies have shown conflicting results.
Objectives: To determine the risk of cancer in GCA patients during a 41 year period.
Methods: Hospital-based retrospective cohort study including patients diagnosed with GCA in Bergen Health Area during 1972–2012. Patients were identified through computerised hospital records using the International Classification of Diseases (ICD)-coding system. Clinical information was extracted from patients' medical journals. We excluded patients if data were unavailable, if the reviewing rheumatologist found GCA to be an implausible diagnosis or if the American College of Rheumatology (ACR) 1990 classification criteria for GCA were not fulfilled. Each patient was matched for age, sex, and county of residence to 3 control subjects randomly selected from the Central Population Registry of Norway. Information on the occurrence of cancer was obtained from the Cancer Registry of Norway. The cumulative incidence of malignancy in cases and controls were estimated using Kaplan-Meier plots.
Results: The patient inclusion process and patient characteristics have been published previously.² A total of 792 patients were included, 566 (71.5%) women (mean age 73.5 years, SD 8) and 226 (28.5%) men (mean age 72.1, SD 9). There were 2314 matched controls (excluding duplicate controls and control subjects

which were also among the cases). The mean duration of follow-up for the GCA-patients was 7.2 years (SD 6.7). The mean duration of follow-up for the controls was 6.6 years (SD 6.1). The relative risk of malignancy during follow-up was higher for controls compared to cases during the majority of the observation period, but the overall difference was not statistically significant ($p=0.060$, figure 1). However, the subset of 528 patients (66.7%) with a positive temporal artery biopsy (TAB) had a statistically significant lower risk of malignancy compared to their matched controls ($p=0.006$).

Conclusions: We did not find a significant difference in the risk of malignancy in the overall GCA cohort compared to their matched controls. However, we found a statistically significant reduced risk of malignancy during follow-up for the subset of GCA-patients with a positive TAB. This is in contrast to the results of a meta-analysis which found an increased risk of malignancy in the subgroup with positive TAB. Further studies are required to determine whether this is a true difference, and what the potential causes may be.

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FRI0503

RISK FACTORS OF CARDIAC VALVULAR INVOLVEMENT IN PATIENTS WITH TAKAYASU'S ARTERITIS

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Background: Takayasu's arteritis (TA) patients with higher disease activity have more cardiovascular morbidity compared to the TA patients with low disease activity, and active group showed a higher incidence of significant aortic valve regurgitation¹ which may linked heart failure and poor prognosis.²

Objectives: The aim of this study is to investigate the imaging and serological features and evaluated disease activity in TA patients with valvular involvement, to find the risk factors of valvular involvement in those patients.

Methods: 103 patients of TA were divided into 2 groups according to with or without valvular involvement. We compared the difference of serological and imaging features in 2 groups. Logistic model was used to determine the risk factors of valvular involvement in TA patients.

Results: Aortic insufficiency (62.12%) was most common in valvular involvement group, followed by mitral insufficiency (59.09%), tricuspid involvement (54.55%) and pulmonary involvement (6.06%). In which of them, single valvular involvement was 36.36%, multiple valvular involvement was 63.64%. There were 12

(22.22%) patients developed to heart failure. In valvular involvement patients, most common angiographic type was Numano type V (53.30% vs. 32.43%, $p=0.044$). The second was Numano type IIb ($p=0.034$), which were significantly higher than that of non-valvular involvement group. Numano type I was most common type in non-valvular involvement patients, and the proportion was higher than that in the patients with valvular involvement ($p=0.034$). At the same time, we analysed the involvement of pulmonary and coronary in the 2 groups. TA patients with valvular involvement showed a higher incidence of the coronary lesion than the patients without valvular involvement ($p=0.036$) (figure 1). Serum level of IgA ($p=0.032$) and IgG ($p=0.015$) were significantly higher in the patients with valvular involvement than that the patients without valvular involvement. We also evaluated the parameters of TA disease activity between 2 groups, in patients with valvular involvement, level of CRP was higher than that of non-valvular involvement group ($p=0.049$). Kerr score ($p=0.036$) and ITAS ($p=0.009$) were all higher than those in non-valvular involvement group (figure 2). Logistic regression showed that the risk of valve involvement in TA patients with elevated level of IgG is 23 times higher than the patients with normal level of IgG. ($p=0.001$, OR=22.068, 95% CI:3.676–132.488), the risk of valvular involvement in TA patients with Numano type IIb ($p=0.002$, OR=20.352, 95% CI:3.146–131.655) and V ($p=0.001$, OR=9.437, 95% CI:2.661–33.465) was 20.35 times and 9.44 times higher than other types.

Abstract FRI0503 – Figure 1. Angiographic type in TA patients with or without valvular involvement. The prevalence of Numano type IIb (21.21% vs. 5.41%, $p=0.034$) and type V (53.30% vs 32.43%, $p=0.044$) were higher in TA patients with valvular involvement, TA patients with valvular involvement showed a higher incidence of the coronary lesion than that of non-valvular involvement group (28.79% vs 10.81%, $p=0.036$).

Note P: pulmonary; C: coronary

Conclusions: Our study showed that the level of IgA, IgG and CRP were significantly higher in TA patients with valvular involvement and the disease activity was higher in those patients. Elevated IgG, Numano type IIb and type V were the risk factors of valvular involvement in patients with TA.

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