results expressed according to their distribution. Categorical data, expressed in percentages, were analysed with χ^2 test and variance analysis. The associations of independent variables were analysed with one-tail exact Fisher test. Simple logistic regression was used for variable associations. The interobserver correlation was tested with calculation of the kappa coefficient.

Results: A poor interobserver correlation was found among pathologists (kappa = 0.19), and no airway sign or symptom was predictive of a positive GPA biopsy. Several pitfalls were noticed: lack of adequate clinical information on files (including endoscopic); incomplete relevant information sent to pathologists and inadequate tissue sampling. Nevertheless, in patients with generalised disease, a 2.6 probability to obtain a diagnostic GPA airway biopsy was found. After expert pathologist's review, and applying Devaney et al and Travis et al proposed criteria, from 16 initial GPA diagnoses, the number increased to 25. It further raised to 35/50 randomised biopsies when ANCA results were incorporated, and the EMA algorithm was applied.

Conclusions: Carefully retrieved clinical, endoscopic and serological data, coupled with systematic histopathologic sample review in patients with a GPA suspicion shall be incorporated in an orderly fashion in order to increase the diagnostic yield of this malady, especially in patients with the limited form of the disease.

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AB0682

RISK FACTORS ASSOCIATED WITH RELAPSE OF ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY-ASSOCIATED VASCULITIS

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Background: Several factors increasing the risk of anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis have been reported. These include pulmonary and cardiovascular lesions, PR3-ANCA-positivity in patients with granulomatosis with polyangiitis, and persistent ANCA-positivity or an increase in the titer of such antibodies.

Objectives: We aimed to identify potentially novel factors predicting relapse in patients with ANCA-associated vasculitis.

Methods: We reviewed data on 73 patients (61 with microscopic polyangiitis [MPA], 12 with granulomatosis with polyangiitis [GPA]; 46 females) treated in our centre from 1998 to 2017 for whom medical histories were available. All achieved at least one remission after induction therapy. Relapse was defined as novel organ involvement or a need for therapy intensification. Follow-up continued to the first relapse or for as long as possible if no relapse was noted.

Results: The median age at disease onset (interquartile range) was 74 years (range: 67–80 years). The relapse rate was 42.5% (MPA 41%, GPA 50%), thus not significantly different between the two groups ($p=0.75$). The median follow-up duration was 23 months (range: 11–65 months) and the median time to relapse was 18 months (range: 10.5–54 months). Although pulmonary and cardiac lesions reportedly increase the relapse rate, neither contributed significantly to the rate in this study. Furthermore, ANCA-positivity after remission and increases in ANCA levels prior to relapse did not significantly increase the relapse risk. In terms of medical histories recorded at the time of first onset of disease, the frequency of diabetes, dyslipidemia, coronary artery disease, and cerebral infarction did not differ significantly between patients who did and did not relapse. However, in MPA patients, a history of hypertension was significantly less in those who relapsed ($p=0.01$). In a multiple logistic regression analysis adjusted for sex and age, history of hypertension was a significant predictor of fewer relapse (odds ratio: 0.23; 95% confidence interval 0.07–0.69, $p=0.009$).

Abstract AB0682 – Table 1. The clinical characteristics of two groups

	Relapse, n=31	Non-relapse, n=42	p	OR (95% CI)
Age, years	70.8±10.8	74.6±9.2	0.10	-
Mean±SD	73 (65–79)	76 (68–82)		
Median (interquartile range)				
Median follow up, month	18 (11–54)	30 (13–67)	-	-
*Time to 1st relapse				
Male/female	10/21	17/25	0.62	0.7 (0.23–2.05)
ANCA phenotype, n (%)	4 (13.0%)	7 (16.7%)	0.75	0.74 (0.14–3.29)
PR3-ANCA	27 (87.1%)	36 (85.7%)	>0.99	1.12 (0.24–5.97)
MPO-ANCA				
Disease type, n (%)	6 (19.4%)	6 (14.3%)	0.75	0.70 (0.17–2.94)
GPA	25 (80.6%)	36 (85.7%)		
MPA				
Organ involvement	24	33	>0.99	0.94 (0.27–3.41)
Pulmonary	1	2	>0.99	0.67 (0.01–13.44)
Cardiovascular				
Medical histories	7	3	0.09	3.70 (0.76–24.44)
Diabetes mellitus	9	7	0.26	
Dyslipidemia	10	28	0.005	2.02 (0.58–7.43)
Hypertension				0.24 (0.08–0.71)

ANCA: antineutrophil cytoplasmic antibody; PR3: proteinase 3; MPO: myeloperoxidase; GPA: granulomatosis with polyangiitis; MPA: microscopic polyangiitis; OR: odds ratio; 95% CI: 95% confidence interval

Conclusions: In addition to known factors, a history of hypertension recorded at the time of disease onset may predict fewer MPA relapse.

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AB0683

TREATMENT WITH STATINS IN PATIENTS STUDIED BY FDG-PET/CT FOR POSSIBLE LARGE VESSEL VASCULITIS IS ASSOCIATED WITH A LOW VASCULAR SCORE

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Background: Polymyalgia rheumatica (PMR), giant cell arteritis (GCA), and fever of unknown origin (FUO) may show large vessel vasculitis (LVV) when studied with FDG-PET/CT. Statins, widely used to lower cholesterol concentrations, have shown anti-inflammatory activity in both the atherosclerotic plaque and in rheumatoid arthritis.

Objectives: To test the hypothesis that the concomitant treatment with statins induces a low uptake of the vessels in patients with PMR, FUO and GCA.

Methods: Consecutive patients with a diagnosis of PMR, GCA or FUO underwent a thorough clinical examination, including drug history, and a PET/CT scan. Arterial uptake of FDG was scored relative to liver uptake as 0=no uptake present, 1=lower than liver uptake, 2=similar to liver uptake, 3=higher than liver uptake. The values of each district were summed to obtain a total vascular score (TVS). A further semi-quantitative analysis of FDG uptake was carried out, drawing regions of interest (ROIs) on the theoretical arterial wall and within the left ventricular chamber (blood-pool, BP). Arterial FDG uptake was quantified by calculating the mean standardised uptake value (SUV) within each ROI and the results expressed as the ratio between mean SUV value of each ROI and BP ROI (SUV/BP).

Results: 129 patients were included, 87 women, with median age of 74 years (range 50–92). 95 patients were diagnosed with PMR, 13 with GCA, 16 with both PMR and GCA and 5 patients presented with FUO. 37/129 patients (28.7%) were assuming glucocorticoids (GC) at the time of examination. The mean interval between onset of symptoms and PET/CT was 85 days (range 4–1957 days). LVV was present in 75 patients (58.2%) when a cut-off ≥ 2 was used and 32 patients (24.8%) had a score of 3.

Twenty/129 patients (15.5%) were treated with statins for hypercholesterolemia. The median TVS was significantly lower in these patients when compared with those not treated with statins (8 [range 1–27] vs. 12 [range 0–42], $p=0.02$). This difference was present at the ascending aorta ($p=0.017$), the aortic arch ($p=0.023$), and the femoral arteries ($p=0.025$). The analysis of SUV was not