treatment related effects, with non-melanoma skin and genitourinary cancers most frequently reported in European studies^{1,2,3}. Malignancy has not been examined in patients with AAV/PAN in Australia, where environmental factors may influence risk.

Objectives: To determine the risk and timing of incident cancer in Western Australian (WA) AAV/PAN patients compared to controls.

Methods: Patients and controls were ascertained through the WA Hospital Morbidity Data collection System (HMDS). Administrative hospitalisation data were linked with the WA cancer and death registries. Data was available between 1980-2015. Patients were classified into two sub-groups using International Classification of Disease (ICD) -9 and/or -10 codes: (1) GPA/MPA- granulomatosis with polyangiitis (GPA)/microscopic polyangiitis (MPA), and (2) other-AAV/PAN-eosinophilic granulomatosis with polyangiitis (EGPA), PAN, and other patients with any AAV or PAN where more specific ICD-10 coding was not available. Controls were age, sex and temporally matched (at patient diagnosis date) and had no rheumatological diagnosis. Patients and controls with prior cancer were excluded from the analysis.

Spline-based estimation of time-varying hazard ratios (HR) for incident cancer in patients vs controls was performed using the Stata library *stpm2*⁴. Results for cause-specific models, which treated deaths in patients without cancer as censored, were confirmed using models treating death as a competing risk. The risk of specific cancers was analysed by Cox regression.

Results: The analysis included 391 patients (165 GPA/MPA, 217 other-AAV/PAN) and 4913 controls, with 86 incident cancers (over 3556.7 person-years) observed in patients and 1119 (over 64997.0 person-years) in controls. Patients and controls were well matched for age (mean $\pm$ standard deviation GPA/MPA: 55 $\pm$ 18 years, other AAV/PAN: 59 $\pm$ 17 years, controls 57 $\pm$ 16 years), and sex (female: GPA/MPA 48%, other AAV/PAN 46%, controls 46%).

Incident cancer risk and timing differed between the two patient subgroups (Figure 1). The risk of incident cancer in GPA/MPA patients, compared to controls, increased with disease duration, whilst other-AAV/PAN patients had a greater risk within the first two years of diagnosis, but a similar risk to controls in the longer term.

By specific cancers, GPA/MPA patients had an increased risk of skin cancers (excluding squamous and basal cell carcinomas): hazard ratio (HR) 2.71 95% confidence interval (CI) 1.55 – 4.74, and genitourinary cancers: HR 3.64, 95% CI 1.58, 8.39, which was not observed in other-AAV/PAN patients. While there was trend for an overall increase in haematological cancers, this was inconclusive.

Conclusion: Incident cancer risk, driven by skin and genitourinary cancers, increased with disease duration in GPA/MPA patients, consistent with previous studies, suggestive of a treatment related effect. In contrast, cancer was more frequently observed early after diagnosis in other-AAV/PAN patients. Our findings suggest that vigilance for incident cancers is required for all patients with AAV and PAN after diagnosis and in long term management, considering distinct periods of greater risk by disease subgroup.

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Figure 1: Incident Cancer Risk

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OP0146

LONG TERM OUTCOME AND PROGNOSIS FACTORS OF ISOLATED AORTITIS

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Background: Aortitis is a group of disorders characterized by the inflammation of the aorta. The most common causes of aortitis are the large-vessel vasculitis i.e. giant cell arteritis (GCA) and Takayasu arteritis (TA). However, aortitis may be isolated. Because of the wide variation in the course of aortitis, predicting outcome is challenging. The optimal management strategy of isolated aortitis (IA) is still unclear as IA is poorly defined, with data consisting of small retrospective and case control studies.

Objectives: To assess the long-term outcome and prognosis factors for vascular complications in patients with isolated aortitis.

Methods: Retrospective multicenter study of 353 patients with non-infectious aortitis including 136 giant cell arteritis (GCA), 96 Takayasu arteritis (TA) and 73 isolated aortitis (IA). Factors associated with event-free survival, vascular event-free survival and revascularization-free survival were assessed. Risk factors for vascular complications were identified in multivariate analysis.

Results: After a median follow up of 52 months, vascular complications were observed in 32.3 %, revascularization in 30 % and death in 7.6%. The 5-year cumulative incidence of vascular complications was 58% (41; 71), 20% (13; 29), and 19 % (11; 28) in IA, GCA and TA, respectively. In multivariate analysis, IA [HR, 1.85 (1.19 to 2.88), $p=0.017$] and male gender [1.77 (1.26 to 2.49), $p<0.0001$] were independently associated with vascular events. The 5-year surgery-free survival was 45% (31; 65), 71% (62; 81) and 76% (68; 86) in IA, TA and GCA, respectively.

Conclusion: IA has a worse vascular prognosis than GCA and TA. Sixty percent of IA patients will experience a vascular complication within 5 years from diagnosis.

Disclosure of Interests: None declared

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OP0147

MEASUREMENT OF FLOW VELOCITIES OF THE CENTRAL RETINAL ARTERY IN PATIENTS WITH GIANT CELL ARTERITIS WITH VISUAL SYMPTOMS AND CONTROLS

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Background: Giant cell arteritis (GCA) is the most common form of systemic vasculitis in patients aged 50 years and older.¹ Visual symptoms such as amaurosis, diplopia, temporary or permanent visual field loss secondary to optic nerve ischemia are common manifestations.² The value of vascular ultrasound of extra-ocular vessels in diagnosing GCA is well established.³ However, the role of transocular ultrasound of the central retinal artery in GCA patients has not yet been established.

Objectives: To identify changes in flow velocities of the central retinal artery in GCA patients with visual symptoms and controls with transocular high resolution ultrasound.

Methods: Prospective analysis of GCA patients with visual symptoms and controls. Ultrasound of the central retinal artery was performed in 18 newly diagnosed consecutive GCA patients with visual symptoms (GCA-group) and 25 controls without ocular pathology. Visual symptoms included amaurosis, diplopia and temporary or permanent visual field loss. For each eye, peak systolic values (PS) and end diastolic values (ED) were recorded. Furthermore, the resistance index of each central retinal artery was measured.

Results: Twenty-one of 36 eyes of 18 GCA patients were affected. Therefore 21 central retinal were measured. The control group consisted of 50 central retinal arteries of 25 eye-healthy individuals. The mean age and gender distribution of the GCA-group were 75.6 years (SD $\pm$ 8.1) with eight females (44 %) and 67 years (SD $\pm$ 8.9) with twelve females (48%) in the control group. The mean flow velocity of the central retinal artery was PS 12.2 cm/s (SD $\pm$ 3.5) and ED 3.7 cm/s (SD $\pm$ 1.2) in the GCA group and PS 14.4 cm/s (SD $\pm$ 3.2) and ED 5.1 cm/s (SD $\pm$ 1.6) in the control group. The mean RI was 0.9 (SD $\pm$ 0.3) in the GCA group and 0.8 (SD $\pm$ 0.3) in the control group. Mean reduction