Figure 2: The absolute number of Th17 and Treg cells in peripheral blood of the patients before and after treatment were detected by flow cytometry. After the treatment of short-term and low-dose rhIL-2(50WIU/day for a 5-day course), there was a more significant increase in the absolute number of Treg cells leading to a decrease in the ratio of Th17 and Treg ($p<0.05$). Data are presented as medians with 95%CI. Statistical analyses were performed by the Wilcoxon signed rank test. * $p<0.05$, ** $p<0.01$, *** $p<0.001$. CI: Confidence intervals.

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SAT0279

FACTORS PREDICTIVE OF POSITIVE TEMPORAL ARTERY BIOPSY IN TWO AUSTRALIAN COHORTS

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Background: Temporal artery biopsy (TAB) is widely recognised as the diagnostic gold standard for GCA despite having a poor sensitivity due to the presence of 'skip' lesions. There is, however, a lack of consensus guiding TAB practice, particularly in relation to optimal length, need for bilateral specimens, and number of segments examined.

Objectives: To investigate the impact of factors such as total biopsied length, laterality, segment number, and referral centre on histopathological outcomes in an Australian setting.

Methods: Reports for all available biopsy specimens labelled "temporal artery" were extracted from the pathology service records of two rheumatology referral centres with adjacent geographic catchments. Each histopathology report was manually reviewed to establish length of biopsied artery, laterality, and number of segments, along with patient demographics such as age, sex, and referral centre. Key histopathological findings including intimal hyperplasia, disruption of the internal elastic lamina, presence of giant cells, and adventitial inflammation were recorded. Multivariable logistic regression with site-varying intercept was performed.

Results: TAB reports from a total of 577 patients were captured, with results available from the two centres from 1999-2019 and 2010-2019 respectively. The mean age in this group was 73, and 69% were female (Table 1). A bilateral TAB was performed in 29%, and the mean total biopsy length was 2.5cm. Of these patients, 122 had positive biopsies (21%), with intimal hyperplasia reported in 100 (17%), giant cells in 83 (14%), and adventitial findings in 68 (12%). Positive biopsy weakly correlated with increased total length of biopsy in centimetres (OR 1.25 [1.06-1.47]) (Figure 1) and increased age in years (OR 1.02 [1.00-1.05]) but not laterality or sex (Table 2). There was a substantial difference between the two centres, which was incompletely accounted for once corrected for total biopsy length and calendar year of biopsy, suggesting either unmeasured differences in patient demographics or a difference in clinical practice. This change was preserved across analysis of different histopathological subtypes.

Table 1. Patient characteristics by biopsy result.

	Negative (n = 455)	Positive (n = 122)	Total (n = 577)
Age (years)			
Mean (SD)	72 (± 11)	75 (± 8.9)	73 (± 10)
Sex			
Female	310 (68%)	88 (72%)	398 (69%)
Male	145 (32%)	34 (28%)	179 (31%)
Maximum biopsy length (cm)			
Mean (SD)	1.8 (± 0.86)	2.0 (± 1.10)	1.9 (± 0.92)
Total biopsy length (cm)			
Mean (SD)	2.4 (± 1.6)	2.8 (± 2.1)	2.5 (± 1.7)
Mean biopsy length (cm)			
Mean (SD)	1.7 (± 0.78)	1.9 (± 0.97)	1.7 (± 0.83)
Laterality			
Bilateral	130 (29%)	39 (32%)	169 (29%)
Unilateral	325 (71%)	83 (68%)	408 (71%)

Table 2. Associations with positive TAB on multivariable logistic regression.

	Overall positive finding	Intimal hyperplasia	Giant cells	Adventitial inflammation
Total biopsy length (cm)	1.25 (1.06-1.47)	1.18 (0.98-1.40)	1.21 (1.00-1.46)	1.07 (0.87-1.31)
Unilateral (vs. bilateral)	1.56 (0.82-3.07)	1.12 (0.56-2.30)	1.28 (0.61-2.77)	0.82 (0.38-1.82)
Age (years)	1.02 (1.00-1.05)	1.02 (1.00-1.04)	1.03 (1.00-1.05)	1.00 (0.98-1.03)
Male (vs. female)	0.83 (0.52-1.29)	0.63 (0.37-1.05)	0.59 (0.32-0.92)	0.75 (0.41-1.31)
Centre 2 (vs. centre 1)	0.54 (0.34-0.84)	0.41 (0.24-0.68)	0.55 (0.32-0.92)	0.46 (0.25-0.82)

Figure 1. The effect of total biopsy length on result, stratified by laterality.

Conclusion: Total biopsy length was weakly associated with a positive TAB result, but differences in results between referral centres independent of biopsy length suggest other selection factors may be important in determining TAB yield. Examination of differences in results between a greater number of referral centres would assist in determining the extent of this variability.

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Systemic sclerosis, myositis and related syndromes - etiology, pathogenesis and animal models

SAT0280

IMPACT OF PLACENTAL FACTORS ON PREGNANCY AND FETAL OUTCOME IN SYSTEMIC SCLEROSIS

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