Methods: The patients, fulfilling the International Criteria for Behçet's disease (ICBD), and healthy controls, of a comparable age, were evaluated in the Rheumatology and Urology Clinics. The demographic and clinical data was collected. Disease activity of the patients was assessed using Behçet's Syndrome Activity Score (BSAS). For both groups, the sexual function and the psychological status were evaluated using the International Index of Erectile Functions (IIEF-5) and the Beck Depression Inventory (BDI), respectively. Spearman's rho, Chi-Square and Mann-Whitney U tests were used as appropriated.

Results: The number of BD patients was 26 and that of the controls was 27. The mean age of the patients was 36 ± 7.4 and that of controls was 40.9 ± 5.2 . Though BD patients were younger in age they exhibited significantly lower scores in sexual function, and scored higher in depression as illustrated in **Table 1**.

Abstract THU308 – Table 1. Demographic and clinical data of the participants

	Patients (n=26)	Controls (n=27)	P value
Smoking, n (%)	8 (30.8%)	4 (14.8%)	0.4
Disease duration (years), mean $\pm$ SD	4.2 $\pm$ 1.9	NA	NA
Erectile dysfunction (IIEF-5 score), median (Interquartile range)	15 (9-20)	20 (20-25)	<0.001*
Depression score (Beck questionnaire), median (Interquartile range)	13 (9-18)	9 (7-14)	0.039*

There were no associations between the disease duration, smoking status or different clinical phenotypes and the sexual or psychological functions. However, there was an inverse relationship between BSAS and the sexual function ($\rho = -0.443$, $p = 0.024$). The duration of corticosteroids intake was negatively correlating with the sexual function ($\rho = -0.604$, $p = .001$) as well. The depression scores correlated significantly with the presence of inflammatory back pain ($\rho = .413$, $p = .036$).

There was no association between the severity of sexual dysfunction and that of depression. The patients showed different degrees of depression, and there was a tendency towards increased rates of erectile dysfunction in all groups as shown in **Table 2**.

Abstract THU308 – Table 2. Correlation of IIEF-5 and BDI

Sexual function (IIEF-5 score)	Beck Depression Inventory (BDI)			Total	P value
	Minimal (n=14)	Mild (n=7)	Moderate (n=5)		
No ED or Mild ED $\geq$ 17, n (%)	4 (28.6%)	3 (42.9%)	2 (40%)	9	0.78
ED $\leq$ 16, n (%)	10 (71.4%)	4 (57.1%)	3 (60%)	17	

ED; erectile dysfunction.

Conclusion: BD has a negative impact on men's psychological state and sexual function. Severe disease states, evident in the long duration of corticosteroids use and the high activity scores, are linked to sexual dysfunction.

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THU0309

NONLINEAR PHARMACOKINETICS OF RITUXIMAB IN ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY ASSOCIATED VASCULITIS

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Background: Rituximab (RTX) was approved in patients with anti-neutrophil cytoplasmic antibody (ANCA) associated vasculitis (AAV).

Objectives: To describe the pharmacokinetics of rituximab in AAV patients and to explore its sources of variability

Methods: Rituximab pharmacokinetics was described in 92 AAV patients from the RAVE trial (rituximab for ANCA-associated vasculitis) using a population modeling approach. A semi-mechanistic model including a latent target antigen turnover allowed the estimation of specific target-mediated elimination of rituximab in addition to its non-specific elimination. Sex, body surface area (BSA), BVAS/WG score, and status newly diagnosed on pharmacokinetic parameters were investigated as covariates.

Results: A two compartments model including target mediated elimination best described rituximab pharmacokinetics. The mean (interindividual standard deviation) estimated central volume of distribution was 3.06 L (2.61%), systemic clearance was 0.135 L days⁻¹ (6.43%), and target-mediated elimination rate constant was 19.13×10^{-6} nmol⁻¹ days⁻¹ (fixed to 0). The initial activity of the disease was higher in male than in female ($p = 4.09 \times 10^{-14}$), and in patients newly diagnosed at inclusion ($p = 7.91 \times 10^{-5}$). Moreover, systemic clearance was slightly lower in granulomatosis with polyangiitis group than in other AAV groups ($p = 3.6 \times 10^{-3}$). Neither BVAS/WG score nor BSA were significant covariates in a multivariate analysis.

Conclusion: We report a nonlinear target-mediated elimination of rituximab in AAV patients. Granulomatosis with polyangiitis patients have a lower global clearance of rituximab than other AAV groups. Our study not support the utility of BSA based individualized dosing protocols, as previously reported (1).

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THU0310

OPTIMAL INITIAL DOSE OF GLUCOCORTICOID FOR ELDERLY-ONSET ANCA ASSOCIATED VASCULITIS: SAFETY OUTCOME ANALYSIS OF TWO NATIONWIDE, PROSPECTIVE, INCEPTION COHORT STUDIES

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Background: Glucocorticoid (GC) is still the mainstay of treatment for antineutrophil cytoplasmic antibody (ANCA)-associated vasculitis (AAV) while GC use, disease severity, and older age are risk factors for accrual of damage and infection in AAV^{1,2}.

Objectives: To explore optimal initial dose of GC for patients with elderly-onset AAV based on safety outcome analysis using data from two nationwide prospective inception cohort studies (RemIT-JAV and RemIT-JAV-RPGN).

Methods: RemIT-JAV and RemIT-JAV-RPGN enrolled consecutive patients with newly diagnosed AAV fulfilling the criteria for primary systemic vasculitis as proposed by the European Medicines Agency algorithm and requiring immunosuppressive treatment. From the cohort studies, elderly-onset (≥ 65 years) patients with microscopic polyangiitis and granulomatosis with polyangiitis, classified as generalized or severe disease type according to the European Vasculitis Study Group-defined disease severity, were enrolled in this analysis. The primary outcome measures were Vasculitis Damage Index (VDI) at 24th month and serious infections during 2 years after starting treatment for AAV. The patients were divided into three groups based on initial dose of GC: high-dose (HD) group, prednisolone (PSL) ≥ 0.8 mg/kg/day; medium-dose group (MD), $0.6 \leq$ PSL < 0.8 mg/kg/day; low-dose (LD) group, PSL < 0.6 mg/kg/day. The VDI were classified into treatment-related VDI¹⁾ and disease-related VDI