**Supplementary Table S5.** Characteristics of patients either receiving trimethoprim-sulfamethoxazole or no prophylaxis are highlighted. Metric variables are shown as median and (minimum – maximum), nominal variables are shown as %. Statistics tests are Chi quadrate test / Fisher’s exact test and Mann-Whitney U –Test where appropriate. The respective reference ranges, if applicable, are given in parenthesis. Abbreviations used: ALM (alemtuzumab), ANCA (anti-neutrophil cytoplasm antibody), AZA (azathioprine), BVAS (Birmingham Vasculitis Activity Score), CD (cluster of differentiation), CNS (central nervous system), COPD (chronic obstructive pulmonary disease), CRP (C-reactive protein), CYC (cyclophosphamide), DEI (Disease Extent Index), EGPA (eosinophilic granulomatosis with polyangiitis), ENT (ear, nose and throat), ESR (erythrocyte sedimentation rate), GPA (granulomatosis with polyangiitis), Ig (immunoglobulin), IVIG (intravenous immunoglobulins), LVEF (left ventricular ejection fraction), MMF (mycophenolate mofetil), MPA (microscopic polyangiitis), MTX (methotrexate) PLEX (plasma exchange), RTX (rituximab), TNF (tumour necrosis factor), WBC (white blood count).

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|  | **No TMP-SMX**  **(n=119)** | **TMP-SMX**  **(n=73)** | **p-value** |
| ***Demographics***  Age (years)  Gender (male, %) | 58 (16-85)  33 | 56 (21-81)  63 | 0.446  **<0.001** |
| ***Type of vasculitis* (%)**  GPA  MPA  EGPA | 61  20  19 | 85  5  10 | **0.001** |
| ***Symptoms (%)***  B-symptoms (night sweat, fever, unintentional weight loss)  Neuropathy  Sinusitis  Deafness/Mastoiditis/Otitis media  Arthralgia | 48  31  61  22  44 | 12  18  77  40  40 | 0.060  **0.042**  **0.028**  **0.008**  0.589 |
| ***Organ involvement (%)***  CNS  Subglottic/Tracheal stenosis  Skin  Kidney  Eye  Others  ENT  Lung | 6  12  18  45  23  8  7  60 | 8  14  15  47  30  5  86  52 | 0.759  0.694  0.542  0.872  0.292  0.769  **0.003**  0.302 |
| ***Imaging findings (%)***  Pulmonary cavities  Endobronchial  Severe bronchiectasis | 24  23  3 | 24  29  2 | 0.974  0.380  0.646 |
| ***Disease Activity Measures***  BVAS  DEI | 6 (0-17)  6 (2-10) | 8 (0-28)  6 (2-12) | 0.093  0.610 |
| ***Laboratory values***  Creatinine (µmol/l)  eGFR (MDRD equation) ml/min/1.73 m2  CRP (0-6 mg/l)  ESR (5-15 in the 1st hour)  Neutrophils (2-8 x 109/l)  WBC (4-11 x 109/l)  Lymphocytes (1-4.5 x 109/l)  CD19 (0.1-0.5)  CD3 (0.7-2.1)  CD4 (0.3-1.4)  CD8 (0.2-0.9)  CD56 (0.12-0.88)  IgG (6-13 g/l)  IgG decline ≥ 30% (%)  Hypogammaglobulinemia (%)  IgM (0.4-2.2 g/l)  IgA (0.8-3.7 g/l)  AB (%) | 87 (45-879)  71 (5-155)  8.0 (0.7-180.0)  17 (2-112)  7.2 (2.0-18.6)  9.5 (4.1-42.0)  1.1 (0.1-4.5)  0.04 (0.00-0.77)  0.84 (0.05-3.32)  0.54 (0.03-2.80)  0.26 (0.02-1.93)  0.13 (0.00-0.80)  9.2 (4.2-18.9)  19  11  0.7 (0.3-2.6)  1.9 (0.4-5.3)  75 | 95 (53-1451)  70 (3-163)  5.0 (1.0-215.0)  17 (1-116)  8.3 (2.6-21.4)  10.3 (3.3-24.4.)  1.1 (0.1-2.9)  0.02 (0.00-0.80)  0.73 (0.14-7.20)  0.37 (0.05-1.98)  0.23 (0.03-1.04)  0.11 (0.01-0.65)  8.6 (2.8-22.6)  32  19  0.6 (0.3-2.4)  1.7 (0.5-4.4)  71 | 0.147  0.528  0.366  0.908  0.339  0.821  0.271  0.252  0.117  **0.022**  0.355  0.731  0.291  0.055  0.185  **0.015**  0.680  0.588 |
| ***Co-morbidities (%)***  COPD  Diabetes  Hypertension  Myocardial infarction / Reduced LVEF | 3  9  34  10 | 1  10  40  11 | 0.582  0.951  0.415  0.863 |
| ***Indication (%)***  Minor relapse  Major relapse  Maintenance  Refractory disease  Steroid sparing  1st line | 41  29  81  27  19  6 | 33  32  77  36  16  7 | 0.250  0.759  0.512  0.201  0.615  0.769 |
| ***Pre-medication (last 12 months)***  CYC (g)  MMF (g)  AZA (g)  MTX (mg)  IVIG (ever) (%)  antiTNF (ever) (%)  PLEX (ever) (%)  ALM (ever) (%) | 0 (0-45)  0 (0-1080)  0 (0-72)  0 (0-1286)  7  3  6  6 | 2 (0-22)  8 (0-1080)  0 (0-81)  0 (0-1029)  5  5  13  9 | **<0.001**  0.405  0.986  **0.043**  0.741  0.681  0.158  0.542 |
| ***Medication used concurrently with RTX***  Steroids (mg)  Other AB prophylaxis (%) | 11 (0-60)  14 | 18 (4-60)  7 | **0.005**  0.144 |