**Supplemental Digital Content 4:** Multivariable model

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**Response duration | Coef. Std. Err. z P>|z| [95% Conf. Interval]**

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**Age at RTX start**  | .0578489 .031893 1.81 0.070 -.0046602 .1203579

|

**RTX dose administered**|

**1000 mg** | .Ref .

**2000 mg** | .4438433 .8222304 0.54 0.589 -1.167699 2.055385

|

**RF or ACPA** |

**Negative** | .Ref .

**positive** | 2.720906 1.628474 1.67 0.095 -.4708442 5.912657

|

**Previous Biologicals** | -.66624 .3736132 -1.78 0.075 -1.398508 .0660285

|

**Sex** |

**Men** | .Ref .

**Women** | -.5084578 1.039541 -0.49 0.625 -2.54592 1.529005

**Rituximab monotherapy**|

**Concomitant DMARD** | Ref.

**Monotheraphy** .| -.5912449 1.089581 -0.54 0.587 -2.726784 1.544294

**Rituximab cycles** |

**1-2** | .Ref .

**3-5** | 2.36222 .7443883 3.17 0.002 .9032452 3.821194

**>5** | 1.439355 1.107096 1.30 0.194 -.7305141 3.609224

|

**Constant** | 5.540509 2.865852 1.93 0.053 -.076458 11.15748

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**Abbreviations**: coef. coefficient; Std Err, Standard Error; P>|z|, statistical significance; 95% Conf Interval, 95% confidence interval; RTX, rituximab; RF, rheumatoid factor; ACPA, anti-citrullinated protein antibodies; Ref., reference.