**Supplementary Table 2.** Patient characteristics associated with flare during the randomised withdrawal-retreatment period of COAST-Y.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Odds ratio (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Categorical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>Placebo (N=53), IXE (N=102)</td>
<td>5.51 (2.68,11.33)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Sustained low CRP</td>
<td>Yes (N=136), No (N=19)</td>
<td>0.40 (0.15,1.05)</td>
<td>0.063</td>
</tr>
<tr>
<td>BMI group at week 0 of COAST-Y</td>
<td>Non-normal (N=86), normal (N=69)</td>
<td>1.81 (0.93,3.52)</td>
<td>0.081</td>
</tr>
<tr>
<td>Residual inflammation by MRI at Week 24 of COAST-Y</td>
<td>Yes (N=55), No (N=84)</td>
<td>1.79 (0.89,3.60)</td>
<td>0.101</td>
</tr>
<tr>
<td>Geographic region</td>
<td>Non-Europe (N=97), Europe (N=58)</td>
<td>1.63 (0.82,3.23)</td>
<td>0.165</td>
</tr>
<tr>
<td>Length of IXE treatment at week 24 of COAST-Y</td>
<td>24-60 weeks (N=69), 76 weeks (N=86)</td>
<td>1.51 (0.79,2.90)</td>
<td>0.215</td>
</tr>
<tr>
<td>Tobacco use group</td>
<td>Ever (N=63), Never (N=92)</td>
<td>0.89 (0.46,1.73)</td>
<td>0.741</td>
</tr>
<tr>
<td>Concomitant DMARD use at Week 0 of COAST-Y</td>
<td>Yes (N=63), No (N=92)</td>
<td>1.41 (0.73,2.72)</td>
<td>0.310</td>
</tr>
<tr>
<td>CRP group at week 24 of COAST-Y</td>
<td>&gt;5 mg/L (N=22), ≤5 mg/L (N=133)</td>
<td>1.43 (0.57,3.55)</td>
<td>0.442</td>
</tr>
<tr>
<td>Anti-drug antibody positive at any time between Week 0 of the originating study and Week 24 of COAST-Y</td>
<td>Yes (N=32), No (N=123)</td>
<td>1.35 (0.61,2.97)</td>
<td>0.458</td>
</tr>
<tr>
<td>HLA-B27 at baseline of originating study</td>
<td>Positive (N=137), negative (N=18)</td>
<td>0.74 (0.27,2.00)</td>
<td>0.554</td>
</tr>
<tr>
<td>Age group at Week 0 of COAST-Y</td>
<td>≥35 years (N=88), &lt;35 years (N=67)</td>
<td>1.18 (0.61,2.28)</td>
<td>0.616</td>
</tr>
<tr>
<td>Prior TNFi experience</td>
<td>Yes (N=26), No (N=129)</td>
<td>1.24 (0.53,2.91)</td>
<td>0.626</td>
</tr>
<tr>
<td>Tobacco use group</td>
<td>Current (N=45), Former/ Never (N=110)</td>
<td>1.12 (0.55,2.28)</td>
<td>0.751</td>
</tr>
<tr>
<td>CRP group at baseline of originating study</td>
<td>&gt;5 mg/L (N=55), ≤5 mg/L (N=96)</td>
<td>1.05 (0.54,2.06)</td>
<td>0.876</td>
</tr>
<tr>
<td>Anti-drug antibody positive at Week 24 of COAST-Y</td>
<td>Yes (N=10), No (N=143)</td>
<td>1.10 (0.30,4.07)</td>
<td>0.888</td>
</tr>
<tr>
<td>Symptom duration group at Week 0 of COAST-Y</td>
<td>≥5 years (N=123), &lt;5 years (N=32)</td>
<td>1.03 (0.46,2.30)</td>
<td>0.941</td>
</tr>
<tr>
<td>Sex</td>
<td>Male (N=116), Female (N=39)</td>
<td>0.98 (0.46,2.06)</td>
<td>0.953</td>
</tr>
<tr>
<td>AxSpA classification</td>
<td>r-axSpA (N=97), nr-axSpA (N=58)</td>
<td>1.01 (0.52,1.97)</td>
<td>0.979</td>
</tr>
<tr>
<td><strong>Continuous</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASDAS area under the curve</td>
<td>Continuous</td>
<td>1.06 (1.01,1.11)</td>
<td>0.021</td>
</tr>
<tr>
<td>CRP at baseline of originating study</td>
<td>Continuous</td>
<td>1.02 (1.00,1.04)</td>
<td>0.037</td>
</tr>
<tr>
<td>ASDAS at week 24 of COAST-Y</td>
<td>Continuous</td>
<td>2.09 (1.02,4.27)</td>
<td>0.044</td>
</tr>
<tr>
<td>Total back pain at Week 24 of COAST-Y</td>
<td>Continuous</td>
<td>1.26 (1.00,1.60)</td>
<td>0.050</td>
</tr>
<tr>
<td>BASDAI inflammation at Week 24 of COAST-Y</td>
<td>Continuous</td>
<td>1.31 (0.95,1.79)</td>
<td>0.095</td>
</tr>
<tr>
<td>PatGA at Week 24 of COAST-Y</td>
<td>Continuous</td>
<td>1.21 (0.95,1.54)</td>
<td>0.123</td>
</tr>
<tr>
<td>BASDAI at Week 24 of COAST-Y</td>
<td>Continuous</td>
<td>1.25 (0.93,1.69)</td>
<td>0.144</td>
</tr>
<tr>
<td>ASDAS at baseline of originating study</td>
<td>Continuous</td>
<td>1.24 (0.85,1.82)</td>
<td>0.257</td>
</tr>
<tr>
<td>BASFI at Week 24 of COAST-Y</td>
<td>Continuous</td>
<td>1.16 (0.88,1.54)</td>
<td>0.284</td>
</tr>
<tr>
<td>CRP at Week 24 of COAST-Y</td>
<td>Continuous</td>
<td>1.05 (0.94,1.18)</td>
<td>0.353</td>
</tr>
<tr>
<td>CRP area under curve</td>
<td>Continuous</td>
<td>1.00 (1.00,1.01)</td>
<td>0.365</td>
</tr>
<tr>
<td>BASFI at baseline of originating study</td>
<td>Continuous</td>
<td>1.05 (0.90,1.23)</td>
<td>0.542</td>
</tr>
<tr>
<td>Total back pain at baseline of originating study</td>
<td>Continuous</td>
<td>1.04 (0.85,1.27)</td>
<td>0.699</td>
</tr>
<tr>
<td>BASDAI at baseline of originating study</td>
<td>Continuous</td>
<td>1.04 (0.83,1.28)</td>
<td>0.752</td>
</tr>
<tr>
<td>BASDAI inflammation at baseline of originating study</td>
<td>Continuous</td>
<td>0.98 (0.82,1.17)</td>
<td>0.809</td>
</tr>
<tr>
<td>PatGA at baseline of originating study</td>
<td>Continuous</td>
<td>1.02 (0.84,1.23)</td>
<td>0.856</td>
</tr>
</tbody>
</table>

*Treatment group (placebo or IXE) at the start of the randomized withdrawal period at week 24 of COAST-Y. Continuous area under the curve for ASDAS and CRP are defined as the area under the curve across time from weeks 0 to 24 in COAST-Y. Abbreviations: ASDAS, Ankylosing Spondylitis Disease Activity Score; BMI, body mass index; CI, confidence interval; CRP, C-reactive protein; IXE, ixekizumab.