

**Supplementary Table S1.** Mixed linear regression model to evaluate the association between treatment class, follow up visit for disease activity, QoL, treatment satisfaction and work productivity measures.

| Outcome                      | Predictor variable           | Coefficient | Lower 95% CI | Upper 95% CI | p-value          |
|------------------------------|------------------------------|-------------|--------------|--------------|------------------|
| ASDAS-CRP                    | Biologics vs. csDMARDs       | -0.52       | -0.74        | -0.30        | <b>&lt;0.001</b> |
|                              | Corticosteroids vs. csDMARDs | 0.35        | -0.21        | 0.92         | 0.22             |
|                              | NSAIDs vs. csDMARDs          | -0.18       | -0.49        | 0.13         | 0.25             |
|                              | 3 months vs. baseline        | -0.08       | -0.17        | 0.01         | <b>0.058</b>     |
|                              | 6 months vs. baseline        | -0.21       | -0.29        | -0.12        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline       | -0.28       | -0.35        | -0.19        | <b>&lt;0.001</b> |
|                              | Constant                     | 2.55        | 2.33         | 2.77         | <b>&lt;0.001</b> |
| BASDAI                       | Biologics vs. csDMARDs       | -0.89       | -1.36        | -0.42        | <b>&lt;0.001</b> |
|                              | Corticosteroids vs. csDMARDs | 0.29        | -0.90        | 1.49         | 0.63             |
|                              | NSAIDs vs. csDMARDs          | -0.14       | -0.81        | 0.52         | 0.67             |
|                              | 3 months vs. baseline        | -0.26       | -0.42        | -0.09        | <b>0.002</b>     |
|                              | 6 months vs. baseline        | -0.57       | -0.73        | -0.41        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline       | -0.59       | -0.75        | -0.43        | <b>&lt;0.001</b> |
|                              | Constant                     | 4.00        | 3.49         | 4.47         | <b>&lt;0.001</b> |
| PhGA-(VAS)                   | Biologics vs. csDMARDs       | -1.43       | -1.92        | -0.93        | <b>&lt;0.001</b> |
|                              | Corticosteroids vs. csDMARDs | 0.30        | -1.32        | 1.38         | 0.97             |
|                              | NSAIDs vs. csDMARDs          | -1.07       | -1.78        | -0.35        | <b>0.004</b>     |
|                              | 3 months vs. baseline        | -0.24       | -0.47        | -0.02        | <b>0.036</b>     |
|                              | 6 months vs. baseline        | -0.68       | -0.89        | -0.46        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline       | -0.90       | -1.12        | -0.68        | <b>&lt;0.001</b> |
|                              | Constant                     | 3.95        | 3.46         | 4.46         | <b>&lt;0.001</b> |
| PtGA-(VAS)                   | Biologics vs. csDMARDs       | -0.99       | -1.54        | -0.45        | <b>&lt;0.001</b> |
|                              | Corticosteroids vs. csDMARDs | 0.75        | -0.67        | 2.17         | 0.3              |
|                              | NSAIDs vs. csDMARDs          | -0.20       | -0.97        | 0.57         | 0.61             |
|                              | 3 months vs. baseline        | -0.28       | -0.48        | -0.07        | <b>0.008</b>     |
|                              | 6 months vs. baseline        | -0.58       | -0.77        | -0.38        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline       | -0.57       | -0.77        | -0.37        | <b>&lt;0.001</b> |
|                              | Constant                     | 4.47        | 3.92         | 5.01         | <b>&lt;0.001</b> |
| Treatment Satisfaction (VAS) | Biologics vs. csDMARDs       | 11.71       | 5.52         | 17.90        | <b>&lt;0.001</b> |
|                              | Corticosteroids vs. csDMARDs | -12.06      | -29.31       | 5.19         | 0.17             |
|                              | NSAIDs vs. csDMARDs          | 0.80        | -8.08        | 9.69         | 0.86             |
|                              | 3 months vs. baseline        | 1.31        | -1.49        | 4.11         | 0.36             |
|                              | 6 months vs. baseline        | 4.18        | 1.45         | 6.90         | <b>0.003</b>     |
|                              | 12 months vs. baseline       | 4.30        | 1.58         | 7.03         | <b>0.002</b>     |
|                              | Constant                     | 63.12       | 56.94        | 69.31        | <b>&lt;0.001</b> |
| ASQoL                        | Biologics vs. csDMARDs       | -0.96       | -1.83        | 0.12         | 0.084            |
|                              | Corticosteroids vs. csDMARDs | 1.12        | -1.39        | 3.62         | 0.38             |
|                              | NSAIDs vs. csDMARDs          | 0.14        | -1.24        | 1.52         | 0.84             |
|                              | 3 months vs. baseline        | -0.54       | -0.88        | -0.21        | <b>0.001</b>     |
|                              | 6 months vs. baseline        | -1.07       | -1.39        | -0.75        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline       | -1.27       | -1.59        | -0.94        | <b>&lt;0.001</b> |
|                              | Constant                     | 6.38        | 5.38         | 7.38         | <b>&lt;0.001</b> |
| EQ-5D-5L (VAS)               | Biologics vs. csDMARDs       | 9.92        | 5.46         | 14.39        | <b>&lt;0.001</b> |
|                              | Corticosteroids vs. csDMARDs | 3.38        | -8.39        | 15.15        | 0.57             |
|                              | NSAIDs vs. csDMARDs          | 5.86        | -0.52        | 12.24        | 0.072            |
|                              | 3 months vs. baseline        | 1.95        | 0.24         | 3.67         | <b>0.026</b>     |
|                              | 6 months vs. baseline        | 2.96        | 1.30         | 4.63         | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline       | 2.54        | 0.87         | 4.21         | <b>0.003</b>     |
|                              | Constant                     | 57.80       | 53.32        | 62.27        | <b>&lt;0.001</b> |
| WPAI                         | Biologics vs. csDMARDs       | -0.72       | -1.29        | -0.16        | <b>0.012</b>     |
|                              | Corticosteroids vs. csDMARDs | 1.02        | -0.40        | 2.44         | 0.16             |
|                              | NSAIDs vs. csDMARDs          | -0.44       | -1.25        | 0.37         | 0.29             |
|                              | 3 months vs. baseline        | -0.28       | -0.47        | -0.09        | <b>0.005</b>     |
|                              | 6 months vs. baseline        | -0.39       | -0.58        | -0.21        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline       | -0.45       | -0.64        | -0.26        | <b>&lt;0.001</b> |
|                              | Constant                     | 4.09        | 3.52         | 4.66         | <b>&lt;0.001</b> |
| MARS-5*                      | Biologics vs. csDMARDs       | 1.14        | 0.44         | 2.91         | 0.79             |
|                              | Corticosteroids vs. csDMARDs | 0.56        | 0.04         | 7.80         | 0.67             |
|                              | NSAIDs vs. csDMARDs          | 0.19        | 0.05         | 0.76         | <b>0.018</b>     |
|                              | 3 months vs. baseline        | 1.69        | 1.12         | 2.53         | <b>0.012</b>     |
|                              | 6 months vs. baseline        | 1.73        | 1.16         | 2.57         | <b>0.007</b>     |
|                              | 12 months vs. baseline       | 1.68        | 1.13         | 2.49         | <b>0.010</b>     |

ASDAS-CRP: Ankylosing Spondylitis Disease Activity Score based on C-reactive protein; ASQoL: Ankylosing Spondylitis Quality of Life; BASDAI: Bath Ankylosing Spondylitis Disease Activity Index; CI: confidence interval; EQ-5D-5L EuroQoL 5-Dimension 5-Level; MARS-5: Medication Adherence Rating Scale; PhGA: physician global assessment; PtGA: patient global assessment; VAS: visual analogue scale; WPAI: work productivity and activity impairment. Coefficient of variation values represent mean variation in scores/values. For example, ASDAS-CRP values at are -2.74 units lower in patients treated with biologics *versus* NSAIDs. \*Odds ratio values are shown for MARS-5 (=25 vs. <25) while coefficient values are presented for all other outcome variables. Constant represents the baseline value of the parameter (QoL measures) for csDMARDs treatment. For example, patients treated with biologics significantly decreased ASDAS-CRP values compared to csDMARDs by 0.52 ( $p<0.001$ ), independently of the time of the study. Upper and lower 95% confidence intervals are shown and statistically significant differences are represented by  $p$ -values highlighted in bold.

**Supplementary Table S2.** Estimated adjusted mean differences for time and duration of bDMARD treatment from disease onset on disease activity, QoL, treatment satisfaction and work productivity measures for time of visit and axSpA (radiographic vs. non-radiographic).

| Outcome                      | Variables                         | Estimated difference | Lower 95% CI | Upper 95% CI | p-value          |
|------------------------------|-----------------------------------|----------------------|--------------|--------------|------------------|
| ASDAS-CRP                    | 3 months vs. baseline             | -0.08                | -0.17        | 0.02         | 0.10             |
|                              | 6 months vs. baseline             | -0.20                | -0.29        | -0.11        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline            | -0.25                | -0.34        | -0.16        | <b>&lt;0.001</b> |
|                              | 1-3 years vs. <1 year             | -0.30                | -0.54        | -0.07        | <b>0.011</b>     |
|                              | 3-5 years vs. <1 year             | -0.44                | -0.67        | -0.20        | <b>&lt;0.001</b> |
|                              | >5 years vs. <1 year              | -0.46                | -0.69        | -0.23        | <b>&lt;0.001</b> |
|                              | Radiographic vs. non-radiographic | -0.09                | -0.28        | 0.11         | 0.39             |
|                              | Disease duration from onset*      | 0.01                 | 0.00         | 0.02         | 0.075            |
|                              | Constant                          | 2.28                 | 2.05         | 2.50         | <b>&lt;0.001</b> |
| BASDAI                       | 3 months vs. baseline             | -0.26                | -0.44        | -0.08        | <b>0.004</b>     |
|                              | 6 months vs. baseline             | -0.54                | -0.72        | -0.37        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline            | -0.55                | -0.73        | -0.38        | <b>&lt;0.001</b> |
|                              | 1-3 years vs. <1 year             | -0.54                | -1.10        | 0.01         | 0.056            |
|                              | 3-5 years vs. <1 year             | -0.96                | -1.52        | -0.41        | <b>0.001</b>     |
|                              | >5 years vs. <1 year              | -1.17                | -1.71        | -0.63        | <b>&lt;0.001</b> |
|                              | Radiographic vs. non-radiographic | -0.19                | -0.61        | 0.24         | 0.39             |
|                              | Disease duration from onset       | 0.01                 | -0.01        | 0.03         | 0.19             |
|                              | Constant                          | 3.65                 | 3.15         | 4.16         | <b>&lt;0.001</b> |
| PtGA-(VAS)                   | 3 months vs. baseline             | -0.27                | -0.49        | -0.06        | <b>0.013</b>     |
|                              | 6 months vs. baseline             | -0.59                | -0.80        | -0.38        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline            | -0.55                | -0.76        | -0.34        | <b>&lt;0.001</b> |
|                              | 1-3 years vs. <1 year             | -0.88                | -1.48        | -0.27        | <b>0.004</b>     |
|                              | 3-5 years vs. <1 year             | -1.20                | -1.80        | -0.60        | <b>&lt;0.001</b> |
|                              | >5 years vs. <1 year              | -1.42                | -2.01        | -0.84        | <b>&lt;0.001</b> |
|                              | Radiographic vs. non-radiographic | -0.22                | -0.71        | 0.26         | 0.37             |
|                              | Disease duration from onset       | 0.03                 | 0.01         | 0.05         | <b>0.012</b>     |
|                              | Constant                          | 4.09                 | 3.53         | 4.66         | <b>&lt;0.001</b> |
| PhGA-(VAS)                   | 3 months vs. baseline             | -0.32                | -0.56        | -0.07        | 0.012            |
|                              | 6 months vs. baseline             | -0.79                | -1.03        | -0.55        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline            | -0.94                | -1.18        | -0.69        | <b>&lt;0.001</b> |
|                              | 1-3 years vs. <1 year             | -0.80                | -1.24        | -0.36        | <b>&lt;0.001</b> |
|                              | 3-5 years vs. <1 year             | -1.02                | -1.46        | -0.58        | <b>&lt;0.001</b> |
|                              | >5 years vs. <1 year              | -0.84                | -1.26        | -0.41        | <b>&lt;0.001</b> |
|                              | Radiographic vs. non-radiographic | 0.09                 | -0.1         | 0.50         | 0.649            |
|                              | Disease duration from onset       | 0.00                 | -0.01        | 0.02         | 0.707            |
|                              | Constant                          | 3.04                 | 2.59         | 3.48         | <b>&lt;0.001</b> |
| Treatment Satisfaction (VAS) | 3 months vs. baseline             | 1.40                 | -1.61        | 4.42         | 0.36             |
|                              | 6 months vs. baseline             | 5.06                 | 2.11         | 8.01         | <b>0.001</b>     |
|                              | 12 months vs. baseline            | 5.08                 | 2.14         | 8.03         | <b>0.001</b>     |
|                              | 1-3 years vs. <1 year             | 2.91                 | -2.62        | 8.45         | 0.30             |
|                              | 3-5 years vs. <1 year             | 7.25                 | 1.76         | 12.75        | <b>0.01</b>      |
|                              | >5 years vs. <1 year              | 12.14                | 6.79         | 17.50        | <b>&lt;0.001</b> |
|                              | Radiographic vs. non-radiographic | -0.97                | -6.00        | 4.06         | 0.70             |
|                              | Disease duration from onset       | 0.08                 | -0.13        | 0.29         | 0.45             |
|                              | Constant                          | 68.80                | 63.23        | 74.36        | <b>&lt;0.001</b> |
| ASQoL                        | 3 months vs. baseline             | -0.58                | -0.92        | -0.24        | <b>0.001</b>     |
|                              | 6 months vs. baseline             | -1.07                | -1.41        | -0.73        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline            | -1.25                | -1.59        | -0.92        | <b>&lt;0.001</b> |
|                              | 1-3 years vs. <1 year             | -1.42                | -2.68        | -0.17        | <b>0.026</b>     |
|                              | 3-5 years vs. <1 year             | -2.71                | -3.96        | -1.46        | <b>&lt;0.001</b> |
|                              | >5 years vs. <1 year              | -2.67                | -3.88        | -1.45        | <b>&lt;0.001</b> |
|                              | Radiographic vs. non-radiographic | 0.17                 | -0.73        | 1.06         | 0.72             |
|                              | Disease duration from onset       | 0.04                 | -0.01        | 0.08         | 0.12             |
|                              | Constant                          | 6.41                 | 5.30         | 7.52         | <b>&lt;0.001</b> |
| EQ-5D-5L (VAS)               | 3 months vs. baseline             | 2.31                 | 0.51         | 4.10         | <b>0.012</b>     |
|                              | 6 months vs. baseline             | 3.62                 | 1.86         | 5.38         | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline            | 3.47                 | 1.71         | 5.24         | <b>&lt;0.001</b> |
|                              | 1-3 years vs. <1 year             | 5.30                 | 0.43         | 10.17        | <b>0.033</b>     |
|                              | 3-5 years vs. <1 year             | 7.75                 | 2.91         | 12.59        | <b>0.002</b>     |
|                              | >5 years vs. <1 year              | 9.33                 | 4.62         | 14.05        | <b>&lt;0.001</b> |
|                              | Radiographic vs. non-radiographic | -1.11                | -5.08        | 2.86         | 0.58             |
|                              | Disease duration from onset       | -0.13                | -0.31        | 0.06         | 0.18             |
|                              | Constant                          | 64.73                | 60.16        | 69.30        | <b>&lt;0.001</b> |
| WPAI                         | 3 months vs. baseline             | -3.23                | -5.28        | -1.19        | <b>0.002</b>     |
|                              | 6 months vs. baseline             | -4.66                | -6.67        | -2.65        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline            | -3.94                | -5.95        | -1.93        | <b>&lt;0.001</b> |
|                              | 1-3 years vs. <1 year             | -6.33                | -12.95       | 0.29         | 0.061            |
|                              | 3-5 years vs. <1 year             | -11.49               | -18.07       | -4.90        | <b>0.001</b>     |
|                              | >5 years vs. <1 year              | -13.32               | -19.75       | -6.88        | <b>&lt;0.001</b> |
|                              | Radiographic vs. non-radiographic | -2.14                | -7.18        | 2.89         | 0.4              |
|                              | Disease duration from onset       | 0.19                 | -0.06        | 0.44         | 0.13             |
|                              | Constant                          | 39.90                | 33.89        | 45.91        | <b>&lt;0.001</b> |

continued **Supplementary Table S2.**

| Outcome  | Variables                         | Estimated difference | Lower 95% CI | Upper 95% CI | p-value      |
|----------|-----------------------------------|----------------------|--------------|--------------|--------------|
| MARS-5** | 3 months vs. baseline             | 1.71                 | 1.09         | 2.68         | <b>0.020</b> |
|          | 6 months vs. baseline             | 1.78                 | 1.14         | 2.77         | <b>0.011</b> |
|          | 12 months vs. baseline            | 1.59                 | 1.14         | 2.46         | <b>0.039</b> |
|          | 1-3 years vs. <1 year             | 1.66                 | 0.64         | 4.27         | 0.294        |
|          | 3-5 years vs. <1 year             | 0.81                 | 0.32         | 2.04         | 0.649        |
|          | >5 years vs. <1 year              | 0.93                 | 0.38         | 2.30         | 0.878        |
|          | Radiographic vs. non-radiographic | 2.07                 | 0.88         | 4.86         | 0.093        |
|          | Disease duration from onset       | 0.95                 | 0.92         | 0.99         | <b>0.009</b> |

ASDAS-CRP: Ankylosing Spondylitis Disease Activity Score based on C-reactive protein; ASQoL: Ankylosing Spondylitis Quality of Life; BASDAI: Bath Ankylosing Spondylitis Disease Activity Index; CI: confidence interval; EQ-5D-5L: EuroQoL 5-Dimension 5-Level; MARS-5: Medication Adherence Rating Scale; PhGA: physician global assessment; PtGA: patient global assessment; VAS: visual analogue scale; WPAI: work productivity and activity impairment.

\*1 year increments. \*\*Odds ratio values are shown for MARS-5 (=25 vs. <25) while coefficient values are presented for all other outcome variables. All estimates are derived from multiple multilevel linear regression models with patient as clustering variable. Constant means the baseline value of the parameter (QoL measures) for a disease duration <1 year, non-radiographic diagnosis and for minimum value of disease duration. For example, ASDAS-CRP values compared to baseline were significantly decreased in a time-dependent manner as well as 1–3 years, 2–5 years and >5 years vs. <1 year as evidenced by the progressive reduction in the estimated difference in values, independently of radiographic diagnosis, time of study and disease duration. Upper and lower 95% confidence intervals are shown and statistically significant differences are represented by p-values highlighted in bold.

**Supplementary Table S3.** Estimated adjusted mean differences on disease activity, QoL, treatment satisfaction and work productivity measures among different bDMARDs, time of visit and axSpA (radiographic vs. non-radiographic).

| Outcome    | Variables                         | Estimated difference | Lower 95% CI | Upper 95% CI | p-value          |
|------------|-----------------------------------|----------------------|--------------|--------------|------------------|
| ASDAS-CRP  | Etanercept vs. adalimumab         | 0.18                 | -0.02        | 0.38         | 0.08             |
|            | Golimumab vs. Adalimumab          | 0.11                 | -0.12        | 0.34         | 0.36             |
|            | Infliximab vs. Adalimumab         | 0.03                 | -0.16        | 0.22         | 0.75             |
|            | Etanercept vs. Golimumab          | 0.07                 | -0.19        | 0.33         | 0.61             |
|            | Etanercept vs. Infliximab         | 0.15                 | -0.08        | 0.38         | 0.21             |
|            | Golimumab vs. Infliximab          | 0.08                 | -0.18        | 0.33         | 0.55             |
|            | Radiographic vs. non-radiographic | -0.03                | -0.22        | 0.15         | 0.73             |
|            | 3 months vs. baseline             | -0.07                | -0.16        | 0.02         | 0.11             |
|            | 6 months vs. baseline             | -0.19                | -0.28        | -0.10        | <b>&lt;0.001</b> |
|            | 12 months vs. baseline            | -0.22                | -0.31        | -0.13        | <b>&lt;0.001</b> |
| BASDAI     | Etanercept vs. Adalimumab         | 0.42                 | -0.04        | 0.88         | 0.075            |
|            | Golimumab vs. Adalimumab          | 0.20                 | -0.33        | 0.72         | 0.46             |
|            | Infliximab vs. Adalimumab         | -0.18                | -0.60        | 0.25         | 0.42             |
|            | Etanercept vs. Golimumab          | 0.22                 | -0.38        | 0.82         | 0.47             |
|            | Etanercept vs. Infliximab         | 0.59                 | 0.07         | 1.12         | <b>0.026</b>     |
|            | Golimumab vs. Infliximab          | 0.37                 | -0.19        | 0.94         | 0.19             |
|            | Radiographic vs. non-radiographic | -0.10                | -0.50        | 0.31         | 0.63             |
|            | 3 months vs. baseline             | -0.25                | -0.43        | -0.08        | <b>0.005</b>     |
|            | 6 months vs. baseline             | -0.55                | -0.73        | -0.38        | <b>&lt;0.001</b> |
|            | 12 months vs. baseline            | -0.53                | -0.71        | -0.36        | <b>&lt;0.001</b> |
| PhGA-(VAS) | Etanercept vs. Adalimumab         | 0.12                 | -0.28        | 0.52         | 0.55             |
|            | Golimumab vs. Adalimumab          | 0.09                 | -0.39        | 0.57         | 0.71             |
|            | Infliximab vs. Adalimumab         | -0.02                | -0.41        | 0.38         | 0.94             |
|            | Etanercept vs. Golimumab          | 0.03                 | -0.50        | 0.56         | 0.90             |
|            | Etanercept vs. Infliximab         | 0.14                 | -0.32        | 0.60         | 0.56             |
|            | Golimumab vs. Infliximab          | 0.10                 | -0.41        | 0.62         | 0.69             |
|            | Radiographic vs. non-radiographic | 0.06                 | -0.34        | 0.47         | 0.75             |
|            | 3 months vs. baseline             | -0.25                | -0.50        | -0.01        | <b>0.044</b>     |
|            | 6 months vs. baseline             | -0.66                | -0.91        | -0.42        | <b>&lt;0.001</b> |
|            | 12 months vs. baseline            | -0.79                | -1.03        | -0.55        | <b>&lt;0.001</b> |
| PtGA-(VAS) | Etanercept vs. Adalimumab         | 0.53                 | 0.02         | 1.05         | <b>0.041</b>     |
|            | Golimumab vs. Adalimumab          | 0.37                 | -0.22        | 0.96         | 0.22             |
|            | Infliximab vs. Adalimumab         | 0.02                 | -0.47        | 0.50         | 0.94             |
|            | Etanercept vs. Golimumab          | 0.17                 | -0.50        | 0.83         | 0.63             |
|            | Etanercept vs. Infliximab         | 0.52                 | -0.07        | 1.10         | 0.084            |
|            | Golimumab vs. Infliximab          | 0.35                 | -0.29        | 0.99         | 0.28             |
|            | Radiographic vs. non-radiographic | -0.11                | -0.58        | 0.35         | 0.63             |
|            | 3 months vs. baseline             | -0.28                | -0.50        | -0.06        | <b>0.013</b>     |
|            | 6 months vs. baseline             | -0.61                | -0.82        | -0.39        | <b>&lt;0.001</b> |
|            | 12 months vs. baseline            | -0.53                | -0.75        | -0.32        | <b>&lt;0.001</b> |

continued Supplementary Table S3.

| Outcome                      | Variables                         | Estimated difference | Lower 95% CI | Upper 95% CI | p-value          |
|------------------------------|-----------------------------------|----------------------|--------------|--------------|------------------|
| Treatment Satisfaction (VAS) | Etanercept vs. Adalimumab         | -2.19                | -7.14        | 2.75         | 0.39             |
|                              | Golimumab vs. Adalimumab          | -1.42                | -7.25        | 4.42         | 0.63             |
|                              | Infliximab vs. Adalimumab         | 5.42                 | 0.56         | 10.28        | <b>0.029</b>     |
|                              | Etanercept vs. Golimumab          | -0.78                | -7.26        | 5.71         | 0.81             |
|                              | Etanercept vs. Infliximab         | -7.61                | -13.3        | -2.0         | <b>0.008</b>     |
|                              | Golimumab vs. Infliximab          | -6.84                | -13.2        | -0.51        | <b>0.034</b>     |
|                              | Radiographic vs. non-radiographic | -0.25                | -5.18        | 4.68         | 0.92             |
|                              | 3 months vs. baseline             | 0.29                 | -2.70        | 3.28         | 0.85             |
|                              | 6 months vs. baseline             | 3.38                 | 0.45         | 6.31         | <b>0.024</b>     |
|                              | 12 months vs. baseline            | 3.56                 | 0.64         | 6.49         | <b>0.017</b>     |
| ASQoL                        | Etanercept vs. Adalimumab         | 1.20                 | 0.20         | 2.20         | <b>0.019</b>     |
|                              | Golimumab vs. Adalimumab          | 0.40                 | -0.72        | 1.53         | 0.48             |
|                              | Infliximab vs. Adalimumab         | -0.42                | -1.33        | 0.49         | 0.37             |
|                              | Etanercept vs. Golimumab          | 0.80                 | -0.50        | 2.10         | 0.23             |
|                              | Etanercept vs. Infliximab         | 1.62                 | 0.48         | 2.76         | <b>0.005</b>     |
|                              | Golimumab vs. Infliximab          | 0.82                 | -0.38        | 2.02         | 0.18             |
|                              | Radiographic vs. non-radiographic | 0.36                 | -0.49        | 1.20         | 0.41             |
|                              | 3 months vs. baseline             | -0.56                | -0.91        | -0.22        | <b>0.001</b>     |
|                              | 6 months vs. baseline             | -1.04                | -1.38        | -0.70        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline            | -1.08                | -1.42        | -0.75        | <b>&lt;0.001</b> |
| EQ-5D-5L (VAS)               | Etanercept vs. Adalimumab         | -3.29                | -7.43        | 0.86         | 0.12             |
|                              | Golimumab vs. Adalimumab          | -2.10                | -6.88        | 2.69         | 0.39             |
|                              | Infliximab vs. Adalimumab         | -0.93                | -4.86        | 3.00         | 0.64             |
|                              | Etanercept vs. Golimumab          | -1.19                | -6.60        | 4.22         | 0.67             |
|                              | Etanercept vs. Infliximab         | -2.36                | -7.08        | 2.38         | 0.33             |
|                              | Golimumab vs. Infliximab          | -1.17                | -6.33        | 3.99         | 0.66             |
|                              | Radiographic vs. non-radiographic | -1.29                | -5.12        | 2.54         | 0.51             |
|                              | 3 months vs. baseline             | 1.94                 | 0.11         | 3.76         | <b>0.038</b>     |
|                              | 6 months vs. baseline             | 2.99                 | 1.20         | 4.78         | <b>0.001</b>     |
|                              | 12 months vs. baseline            | 2.59                 | 0.79         | 4.38         | <b>0.005</b>     |
| WPAI                         | Etanercept vs. Adalimumab         | 0.30                 | -0.25        | 0.85         | 0.28             |
|                              | Golimumab vs. Adalimumab          | 0.23                 | -0.40        | 0.85         | 0.48             |
|                              | Infliximab vs. Adalimumab         | -0.18                | -0.69        | 0.33         | 0.49             |
|                              | Etanercept vs. Golimumab          | 0.07                 | -0.64        | 0.79         | 0.84             |
|                              | Etanercept vs. Infliximab         | 0.48                 | -1.44        | 1.10         | 0.13             |
|                              | Golimumab vs. Infliximab          | 0.40                 | -0.27        | 1.07         | 0.24             |
|                              | Radiographic vs. non-radiographic | -0.18                | -0.66        | 0.31         | 0.47             |
|                              | 3 months vs. baseline             | -0.33                | -0.54        | -0.13        | <b>0.002</b>     |
|                              | 6 months vs. baseline             | -0.46                | -0.67        | -0.26        | <b>&lt;0.001</b> |
|                              | 12 months vs. baseline            | -0.38                | -0.59        | -0.18        | <b>&lt;0.001</b> |
| MARS-5*                      | Etanercept vs. Adalimumab         | 1.00                 | 0.41         | 2.47         | 0.99             |
|                              | Golimumab vs. Adalimumab          | 1.21                 | 0.42         | 3.52         | 0.73             |
|                              | Infliximab vs. Adalimumab         | 0.47                 | 0.20         | 1.11         | 0.085            |
|                              | Radiographic vs. non-radiographic | 1.67                 | 0.70         | 4.03         | 0.25             |
|                              | 3 months vs. baseline             | 1.55                 | 0.96         | 2.49         | 0.073            |
|                              | 6 months vs. baseline             | 1.44                 | 0.90         | 2.29         | 0.13             |
|                              | 12 months vs. baseline            | 1.35                 | 0.85         | 2.14         | 0.20             |

ASDAS-CRP: Ankylosing Spondylitis Disease Activity Score based on C-reactive protein; ASQoL: Ankylosing Spondylitis Quality of Life; BASDAI: Bath Ankylosing Spondylitis Disease Activity Index; CI: confidence interval; EQ-5D-5L: EuroQoL 5-Dimension 5-Level; MARS-5: Medication Adherence Rating Scale; PhGA: physician global assessment; PtGA: patient global assessment; VAS: visual analogue scale; WPAI: work productivity and activity impairment.

\*Odds ratio values are shown for MARS-5 while coefficient values are presented for all other outcome variables. All estimates are derived from multiple multilevel linear regression models with patient as clustering variable. For example, AsQoL values for etanercept *versus* adalimumab and infliximab were significantly higher (worse), independently of radiographic diagnosis and time of study. Upper and lower 95% confidence intervals are shown and statistically significant differences are represented by *p*-values highlighted in bold.