**SUPPLEMENTARY MATERIAL**

**Supplementary Table 1.** Patient demographics and baseline clinical characteristics in the untrimmed population

| Baseline Characteristics | TCZ mono n = 301 | TNFi + MTX ≤ 10 mg n = 116 | TCZ mono n = 301 | TNFi + MTX > 10 mg to ≤ 15 mg n = 200 | TCZ mono n = 301 | TNFi + MTX > 15 mg to ≤ 20 mg n = 337 | TCZ mono n = 301 | TNFi + MTX > 20 mg n = 119 |
|--------------------------|------------------|-----------------------------|------------------|----------------------------------------|------------------|----------------------------------------|------------------|----------------------------|
| Female, n (%)            | 246 (81.7)       | 98 (84.5)                   | 246 (81.7)       | 154 (77.0)                             | 246 (81.7)       | 260 (77.4)                             | 246 (81.7)       | 90 (75.6)                   |
| Age, years, mean (SD)    | 59.1 (12.6)      | 58.6 (13.0)                 | 59.1 (12.6)      | 58.5 (13.0)                            | 59.1 (12.6)      | 56.2 (12.4)                            | 59.1 (12.6)      | 53.9 (11.5)                 |
| White, n (%)             | 261 (86.7)       | 88 (75.9)                   | 261 (86.7)       | 169 (84.5)                             | 261 (86.7)       | 278 (82.7)                             | 261 (86.7)       | 95 (79.8)                   |
| Hispanic, n (%)          | 24 (8.7)         | 7 (7.0)                     | 24 (8.7)         | 12 (6.7)                               | 24 (8.7)         | 23 (7.7)                               | 24 (8.7)         | 11 (10.3)                   |
| Current smoker, n (%)    | 45 (15.0)        | 15 (12.9)                   | 45 (15.0)        | 33 (16.5)                              | 45 (15.0)        | 60 (17.8)                              | 45 (15.0)        | 22 (18.5)                   |
| BMI, mean (SD), kg/m²    | 29.4 (7.1)       | 30.8 (8.5)                  | 29.4 (7.1)       | 30.1 (7.1)                             | 29.4 (7.1)       | 31.5 (7.9)                             | 29.4 (7.1)       | 31 (7.7)                    |
| Work status, n (%)       |                 |                             |                 |                                        |                  |                                        |                  |                             |
| Full- or part-time       | 109 (36.2)       | 42 (36.5)                   | 109 (36.2)       | 84 (42.6)                              | 109 (36.2)       | 147 (43.8)                             | 109 (36.2)       | 56 (49.1)                   |
| Retired                  | 67 (22.3)        | 17 (14.7)                   | 67 (22.3)        | 34 (17.1)                              | 67 (22.3)        | 68 (20.2)                              | 67 (22.3)        | 26 (22.2)                   |
| Disabled                 | 81 (26.9)        | 42 (36.2)                   | 81 (26.9)        | 49 (24.6)                              | 81 (26.9)        | 68 (20.2)                              | 81 (26.9)        | 18 (15.4)                   |
| Other                    | 45 (15.0)        | 13 (11.3)                   | 45 (15.0)        | 32 (16.2)                              | 45 (15.0)        | 53 (15.8)                              | 45 (15.0)        | 15 (13.2)                   |
| Insurance, n (%)         |                 |                             |                 |                                        |                  |                                        |                  |                             |
| None                     | 4 (1.3)          | 2 (1.7)                     | 4 (1.3)          | 4 (2.0)                                | 4 (1.3)          | 6 (1.8)                                | 4 (1.3)          | 2 (1.7)                     |
| Private                  | 225 (74.8)       | 82 (70.7)                   | 225 (74.8)       | 154 (77.0)                             | 225 (74.8)       | 257 (76.3)                             | 225 (74.8)       | 89 (74.8)                   |
| Medicaid                 | 14 (4.7)         | 6 (5.2)                     | 14 (4.7)         | 10 (5.0)                               | 14 (4.7)         | 22 (6.5)                               | 14 (4.7)         | 8 (6.7)                     |
| Medicare                 | 121 (40.2)       | 44 (37.9)                   | 121 (40.2)       | 58 (29.0)                              | 121 (40.2)       | 96 (28.5)                              | 121 (40.2)       | 27 (22.7)                   |
| Duration of RA, mean (SD), years | 13.3 (9.4) | 11.8 (8.6) | 13.3 (9.4) | 12.2 (10.5) | 13.3 (9.4) | 9.7 (8.8) | 13.3 (9.4) | 9.1 (7.5) |
| RF+, n (%)               | 105 (67.3)       | 36 (58.1)                   | 105 (67.3)       | 76 (68.5)                              | 105 (67.3)       | 140 (70.0)                             | 105 (67.3)       | 40 (66.7)                   |
| CCP+, n (%)              | 68 (61.3)        | 24 (54.5)                   | 68 (61.3)        | 59 (61.5)                              | 68 (61.3)        | 94 (59.1)                              | 68 (61.3)        | 34 (65.4)                   |
| History of comorbidities, n (%) |          |                             |                 |                                        |                  |                                        |                  |                             |
| Cardiovascular           | 34 (11.3)        | 12 (10.3)                   | 34 (11.3)        | 15 (7.5)                               | 34 (11.3)        | 31 (9.2)                               | 34 (11.3)        | 8 (6.7)                     |
| Malignancy               | 22 (7.3)         | 3 (2.6)                     | 22 (7.3)         | 13 (6.5)                               | 22 (7.3)         | 20 (5.9)                               | 22 (7.3)         | 4 (3.4)                     |
| Serious infection        | 27 (9.0)         | 7 (6.0)                     | 27 (9.0)         | 12 (6.0)                               | 27 (9.0)         | 21 (6.2)                               | 27 (9.0)         | 7 (5.9)                     |
**Effectiveness of tocilizumab monotherapy vs TNFi with methotrexate**

|                   | Treatment 1 | Treatment 2 | Treatment 3 | Treatment 4 | Treatment 5 | Treatment 6 | Treatment 7 | Treatment 8 |
|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| **Diabetes**      | 25 (8.3)    | 10 (8.6)    | 25 (8.3)    | 13 (6.5)    | 25 (8.3)    | 36 (10.7)   | 25 (8.3)    | 12 (10.1)   |
| **Depression**    | 75 (24.9)   | 28 (24.1)   | 75 (24.9)   | 44 (22.0)   | 75 (24.9)   | 74 (22.0)   | 75 (24.9)   | 32 (26.9)   |
| mHAQ, mean (SD)   | 0.7 (0.6)<sup>a</sup> | 0.6 (0.5)   | 0.7 (0.6)<sup>a</sup> | 0.6 (0.5)<sup>a</sup> | 0.7 (0.6)<sup>a</sup> | 0.6 (0.5)   | 0.7 (0.6)<sup>a</sup> | 0.6 (0.5)   |
| CDAI, mean (SD)   | 28.3 (11.9)<sup>a</sup> | 24.9 (12.9) | 28.3 (11.9)<sup>a</sup> | 26.2 (13.0) | 28.3 (11.9)<sup>a</sup> | 25.6 (12.6) | 28.3 (11.9) | 27.5 (11.8) |
| **Patient pain, mean (SD), VAS (0-100)** | 60.4 (25.1)<sup>a</sup> | 52.9 (25.7) | 60.4 (25.1)<sup>a</sup> | 52.7 (26.3) | 60.4 (25.1)<sup>a</sup> | 54.9 (26.6) | 60.4 (25.1)<sup>a</sup> | 55.9 (24.4) |
| **Prednisone use, n (%)** | | | | | | | | |
| None              | 204 (67.8)  | 80 (69.0)   | 204 (67.8)<sup>a</sup> | 146 (73.0)  | 204 (67.8)  | 223 (66.2)  | 204 (67.8)  | 81 (68.1)   |
| < 10 mg           | 81 (26.9)   | 36 (31.0)   | 81 (26.9)   | 49 (24.5)   | 81 (26.9)<sup>a</sup> | 107 (31.8)  | 81 (26.9)   | 33 (27.7)   |
| ≥ 10 mg           | 16 (5.3)<sup>a</sup> | 0           | 16 (5.3)<sup>a</sup> | 5 (2.5)     | 16 (5.3)<sup>a</sup> | 7 (2.1)     | 16 (5.3)    | 5 (4.2)     |
| **Prior biologics, n (%)** | | | | | | | | |
| 1                 | 60 (19.9)<sup>a</sup> | 55 (47.4)   | 60 (19.9)<sup>a</sup> | 110 (55.0)  | 60 (19.9)<sup>a</sup> | 200 (59.3)  | 60 (19.9)<sup>a</sup> | 67 (56.3)   |
| 2                 | 84 (27.9)<sup>a</sup> | 25 (21.6)   | 84 (27.9)   | 60 (30.0)   | 84 (27.9)   | 87 (25.8)   | 84 (27.9)<sup>a</sup> | 21 (17.6)   |
| ≥ 3               | 157 (52.2)<sup>a</sup> | 36 (31.0)   | 157 (52.2)<sup>a</sup> | 30 (15.0)   | 157 (52.2)<sup>a</sup> | 50 (14.8)   | 157 (52.2)<sup>a</sup> | 31 (26.1)   |
| **Prior TNFis, n (%)** | | | | | | | | |
| 1                 | 118 (39.2)<sup>a</sup> | 68 (58.6)   | 118 (39.2)<sup>a</sup> | 130 (65.0)  | 118 (39.2)<sup>a</sup> | 235 (69.7)  | 118 (39.2)<sup>a</sup> | 82 (68.9)   |
| ≥ 2               | 183 (60.8)<sup>a</sup> | 48 (41.4)   | 183 (60.8)<sup>a</sup> | 70 (35.0)   | 183 (60.8)<sup>a</sup> | 102 (30.3)  | 183 (60.8)<sup>a</sup> | 37 (31.1)   |

<sup>a</sup>Standardized difference > 0.1. A standardized difference < 0.1 has been taken to indicate a negligible difference in the mean or prevalence of a covariate between treatment groups.

*BMI*, body mass index; *CCP*, cyclic citrullinated peptide antibody; *CDAI*, Clinical Disease Activity Index; *mHAQ*, modified Health Assessment Questionnaire; *mono*, monotherapy; *MTX*, methotrexate; *RA*, rheumatoid arthritis; *RF*, rheumatoid factor; *TCZ*, tocilizumab; *TNFi*, tumor necrosis factor inhibitor; *VAS*, visual analogue scale.
**Effectiveness of tocilizumab monotherapy vs TNFi with methotrexate**

**Supplementary Table 2.** Patient demographics and baseline clinical characteristics in the stratified-matched population

| Baseline Characteristics | TCZ mono n = 61 | TNFi + MTX ≤ 10 mg n = 61 | TCZ mono n = 71 | TNFi + MTX > 10 mg to ≤ 15 mg n = 71 | TCZ mono n = 95 | TNFi + MTX > 15 mg to ≤ 20 mg n = 95 | TCZ mono n = 53 | TNFi + MTX > 20 mg n = 53 |
|-------------------------|----------------|---------------------------|----------------|----------------------------------|----------------|----------------------------------|----------------|---------------------------|
| Female, n (%)           | 52 (85.2)      | 51 (83.6)                 | 57 (80.3) a    | 52 (73.2)                        | 74 (77.9)      | 73 (76.8)                        | 41 (77.4) a    | 44 (83.0)                 |
| Age, years, mean (SD)   | 57.4 (14.1)    | 57.4 (14.0)               | 58.9 (11.5)    | 59.2 (12.9)                      | 58.6 (12.8)    | 59.1 (12.4)                      | 54.5 (13.6)    | 53.6 (12.3)               |
| White, n (%)            | 52 (85.2)      | 50 (82.0)                 | 59 (83.1) a    | 63 (88.7)                        | 78 (82.1)      | 77 (81.1)                        | 42 (79.2) a    | 47 (88.7)                 |
| Hispanic, n (%)         | 5 (8.6)        | 5 (8.8)                   | 8 (11.9) a     | 5 (7.6)                          | 13 (14.3) a    | 5 (6.0)                          | 7 (14.6) a     | 3 (6.4)                   |
| Current smoker, n (%)   | 9 (14.8)       | 9 (14.8)                  | 11 (15.5)      | 10 (14.1)                        | 18 (18.9)      | 18 (18.9)                        | 9 (17.0)       | 8 (15.1)                  |
| BMI, mean (SD), kg/m²   | 28.8 (6.2)     | 29.3 (8.7)                | 29.8 (5.8) a   | 28.9 (6.8)                       | 29.8 (7.2)     | 29.2 (6.3)                       | 30.4 (7.6)     | 30.7 (6.9)                |
| Work status, n (%)      |                |                           |                |                                 |                |                                 |                |                           |
| Full- or part-time      | 25 (41.0)      | 22 (36.7)                 | 22 (31.0) a    | 28 (39.4)                        | 31 (32.6)      | 31 (32.6)                        | 19 (35.8) a    | 23 (43.4)                 |
| Retired                 | 8 (13.1)       | 8 (13.1)                  | 15 (21.1)      | 14 (19.7)                        | 23 (24.2)      | 25 (26.3)                        | 12 (22.6) a    | 17 (32.1)                 |
| Disabled                | 19 (31.1) a    | 24 (39.3)                 | 18 (25.4)      | 19 (26.8)                        | 22 (23.2)      | 19 (20.0)                        | 9 (17.0) a     | 5 (9.4)                   |
| Other                   | 9 (14.8) a     | 6 (10.0)                  | 16 (22.5) a    | 10 (14.1)                        | 19 (20.0)      | 20 (21.1)                        | 13 (24.5) a    | 8 (15.1)                  |
| Insurance, n (%)        |                |                           |                |                                 |                |                                 |                |                           |
| None                    | 0 a            | 1 (1.6)                   | 2 (2.8)        | 1 (1.4)                          | 3 (3.2)        | 3 (3.2)                          | 0 a            | 2 (3.8)                   |
| Private                 | 43 (70.5)      | 44 (72.1)                 | 53 (74.6)      | 50 (70.4)                        | 69 (72.6)      | 66 (69.5)                        | 43 (81.1) a    | 37 (69.8)                 |
| Medicaid                | 4 (6.6) a      | 2 (3.3)                   | 1 (1.4) a      | 4 (5.6)                          | 3 (3.2) a      | 6 (6.3)                          | 2 (3.8)        | 3 (5.7)                   |
| Medicare                | 26 (42.6)      | 23 (37.7)                 | 23 (32.4)      | 24 (33.8)                        | 37 (38.9)      | 37 (38.9)                        | 17 (32.1)      | 16 (30.2)                 |
| Duration of RA, mean (SD), years | 10.8 (7.7) a | 11.8 (8.2)             | 12.5 (9.3)      | 13 (10.5)                        | 11.7 (7.9)     | 11.9 (8.8)                        | 9.9 (6.1)      | 10.6 (8.8)               |
| RF+, n (%)              | 20 (66.7)      | 20 (69.0)                 | 24 (63.2)      | 22 (61.1)                        | 33 (71.7) a    | 43 (79.6)                        | 16 (59.3)      | 15 (60.0)                 |
| CCP+, n (%)             | 13 (56.5)      | 12 (60.0)                 | 15 (57.7)      | 17 (53.1)                        | 25 (64.1) a    | 20 (55.6)                        | 8 (53.3) a     | 13 (59.1)                 |
| History of comorbidities, n (%) |                |                           |                |                                 |                |                                 |                |                           |
| Cardiovascular          | 8 (13.1)       | 8 (13.1)                  | 5 (7.0)        | 6 (8.5)                          | 11 (11.6)      | 10 (10.5)                        | 3 (5.7)        | 4 (7.5)                   |
| Malignancy              | 6 (9.8) a      | 1 (1.6)                   | 2 (2.8)        | 2 (2.8)                          | 5 (5.3)        | 4 (4.2)                          | 1 (1.9)        | 1 (1.9)                   |
| Serious infection       | 2 (3.3) a      | 5 (8.2)                   | 5 (7.0) a      | 1 (1.4)                          | 7 (7.4)        | 7 (7.4)                          | 5 (9.4) a      | 2 (3.8)                   |
| Diabetes                | 3 (4.9) a      | 5 (8.2)                   | 8 (11.3) a     | 5 (7.0)                          | 15 (15.8) a    | 7 (7.4)                          | 4 (7.5) a      | 9 (17.0)                  |
| Depression              | 14 (23.0)      | 13 (21.3)                 | 17 (23.9)      | 20 (28.2)                        | 22 (23.2)      | 20 (21.1)                        | 12 (22.6) a    | 16 (30.2)                 |
**Effectiveness of tocilizumab monotherapy vs TNFi with methotrexate**

|                      | mHAQ, mean (SD) | CDAI, mean (SD) | Patient pain, mean (SD), VAS (0-100) | Prednisone use, n (%) | Prior biologics, n (%) | Prior TNFis, n (%) |
|----------------------|-----------------|-----------------|---------------------------------------|-----------------------|------------------------|-------------------|
|                      | 0.7 (0.6)<sup>a</sup> | 26.0 (11.0)<sup>a</sup> | 55.8 (27.9) | None | 15 (24.6) | 26 (42.6) |
|                      | 0.5 (0.4)       | 27.2 (13.5)     | 55 (24.5) | < 10 mg | 17 (27.9)<sup>a</sup> | 23 (37.7) |
|                      | 0.7 (0.6)<sup>a</sup> | 27.8 (10.8)     | 61.2 (25.2)<sup>a</sup> | ≥ 10 mg | 0 | 35 (57.4) |
|                      | 0.7 (0.5)       | 26.9 (13.3)     | 57.5 (26.0) | 1 | 15 (24.6) | 35 (57.4) |
|                      | 0.8 (0.5)       | 27.6 (12.7)     | 60.3 (26.5)<sup>a</sup> | ≥ 2 | 26 (49.1)<sup>a</sup> | 29 (54.7) |
|                      | 0.7 (0.6)       | 27.1 (13.8)     | 57.5 (27.1) | 1 | 26 (49.1)<sup>a</sup> | 29 (54.7) |
|                      | 0.7 (0.5)       | 26.2 (11.8)<sup>a</sup> | 53.8 (27.7)<sup>a</sup> | ≥ 3 | 26 (42.6) | 24 (45.3) |
|                      | 0.7 (0.5)       | 28.4 (11.3)     | 56.7 (22.8) | 1 | 26 (49.1)<sup>a</sup> | 29 (54.7) |

<sup>a</sup>Standardized difference > 0.1. A standardized difference < 0.1 has been taken to indicate a negligible difference in the mean or prevalence of a covariate between treatment groups.

*BMI*, body mass index; *CCP*, cyclic citrullinated peptide antibody; *CDAI*, Clinical Disease Activity Index; *mHAQ*, modified Health Assessment Questionnaire; *mono*, monotherapy; *MTX*, methotrexate; *RA*, rheumatoid arthritis; *RF*, rheumatoid factor; *TCZ*, tocilizumab; *TNFi*, tumor necrosis factor inhibitor; *VAS*, visual analogue scale.
**Effectiveness of tocilizumab monotherapy vs TNFi with methotrexate**

**Supplementary Table 3.** Unadjusted responses at 6 months in the trimmed and stratified-matched patient populations

|                     | TCZ mono | TNFi + MTX ≤ 10 mg | TCZ mono | TNFi + MTX > 10 mg to ≤ 15 mg | TCZ mono | TNFi + MTX > 15 mg to ≤ 20 mg | TCZ mono | TNFi + MTX > 20 mg |
|---------------------|----------|-------------------|----------|-----------------------------|----------|-------------------------------|----------|-------------------|
| **Trimmed population** |          |                   |          |                             |          |                               |          |                   |
| Patients, n         | 283      | 108               | 300      | 186                         | 292      | 273                           | 285      | 107               |
| Change in CDAI, mean (SD) | -9.7 (14.6) | -7.8 (13.6) | -9.6 (14.5) | -9.0 (14.2) | -9.6 (14.7) | -6.9 (12.8) | -9.7 (14.7) | -8.4 (15.0) |
| LDA (CDAI < 10), n (%) | 82 (29.0) | 33 (30.6) | 88 (29.3) | 70 (38.0) | 85 (29.1) | 73 (26.8) | 85 (29.8) | 32 (30.2) |
| mACR20, n (%)       | 100 (36.0) | 32 (29.6) | 105 (35.7) | 68 (37.6) | 102 (35.7) | 66 (24.3) | 101 (36.2) | 36 (34.0) |
| mACR50, n (%)       | 56 (20.1) | 17 (15.7) | 59 (20.1) | 37 (20.4) | 57 (19.9) | 36 (13.2) | 58 (20.8) | 15 (14.2) |
| Change in mHAQ, mean (SD) | -0.1 (0.5) | -0.1 (0.4) | -0.1 (0.5) | -0.1 (0.4) | -0.1 (0.5) | -0.1 (0.4) | -0.1 (0.5) | -0.1 (0.4) |
| **Stratified-matched population** |          |                   |          |                             |          |                               |          |                   |
| Patients, n         | 61       | 61                | 71       | 71                          | 95       | 95                            | 53       | 53                |
| Change in CDAI, mean (SD) | -7.3 (15.0) | -9.0 (14.1) | -9.9 (12.7) | -8.7 (14.8) | -8.0 (13.5) | -7.3 (11.1) | -6.1 (15.0) | -7.4 (16.8) |
| LDA (CDAI < 10), n (%) | 17 (27.9) | 18 (29.5) | 27 (38.0) | 23 (32.4) | 29 (30.5) | 24 (25.3) | 17 (32.1) | 11 (20.8) |
| mACR20, n (%)       | 21 (35.0) | 18 (29.5) | 21 (29.6) | 26 (37.1) | 28 (29.5) | 21 (22.1) | 12 (24.0) | 18 (34.0) |
| mACR50, n (%)       | 11 (18.3) | 8 (13.1)  | 14 (19.7) | 13 (18.6) | 15 (15.8) | 11 (11.6) | 9 (18.0)  | 8 (15.1)  |
| Change in mHAQ, mean (SD) | -0.1 (0.5) | -0.1 (0.3) | -0.2 (0.5) | -0.1 (0.4) | -0.1 (0.5) | -0.1 (0.4) | 0 (0.4)  | -0.1 (0.3) |

*CDAI*, Clinical Disease Activity Index; *LDA*, low disease activity; *mACR*, modified American College of Rheumatology response; *mHAQ*, modified Health Assessment Questionnaire; *mono*, monotherapy; *MTX*, methotrexate; *TCZ*, tocilizumab; *TNFi*, tumor necrosis factor inhibitor.
Effectiveness of tocilizumab monotherapy vs TNFi with methotrexate

Supplementary Figure 1. Differences in the mean change from baseline in CDAI at 6 months in the stratified-matched population, TCZ monotherapy vs TNFi + MTX

MTX Dose Group

- $\leq 10$ mg
  - Matched, unadjusted
  - Matched, adjusted$^a$
  - $1.75 (-3.47, 6.97)$
  - $0.44 (-3.76, 4.64)$

- $> 10$ to $\leq 15$ mg
  - Matched, unadjusted
  - Matched, adjusted$^a$
  - $-1.27 (-5.83, 3.30)$
  - $-1.61 (-6.22, 3.01)$

- $> 15$ to $\leq 20$ mg
  - Matched, unadjusted
  - Matched, adjusted$^a$
  - $-0.71 (-4.25, 2.83)$
  - $0.01 (-3.50, 3.52)$

- $> 20$ mg
  - Matched, unadjusted
  - Matched, adjusted$^a$
  - $1.26 (-4.87, 7.38)$
  - $0.83 (-4.51, 6.17)$

$^a$Adjusted for age, sex, race (white vs nonwhite), disabled, retired, baseline CDAI, baseline modified Health Assessment Questionnaire, baseline patient pain, baseline prednisone use/dose, baseline body mass index, prior biologic use, prior TNF use, and American College of Rheumatology functional class. CDAI, Clinical Disease Activity Index; mono, monotherapy; MTX, methotrexate; TCZ, tocilizumab; TNFi, tumor necrosis factor inhibitor.
Effectiveness of tocilizumab monotherapy vs TNFi with methotrexate

Supplementary Figure 2. ORs for achievement of LDA (CDAI ≤ 10) at 6 months in the stratified-matched population, TCZ monotherapy vs TNFi + MTX

MTX Dose Group

| Dose Range | Matched, unadjusted | Matched, adjusted\(^a\) |
|------------|---------------------|------------------------|
| ≤ 10 mg    |                     |                        |
| > 10 to ≤ 15 mg |                  |                        |
| > 15 to ≤ 20 mg |                  |                        |
| > 20 mg    |                     |                        |

\(^a\) Adjusted for age, sex, race (white vs nonwhite), disabled, retired, baseline CDAI, baseline modified Health Assessment Questionnaire, baseline patient pain, baseline prednisone use/dose, baseline body mass index, prior biologic use, prior TNF use, and American College of Rheumatology functional class.

CDAI, Clinical Disease Activity Index; LDA, low disease activity; mono, monotherapy; MTX, methotrexate; OR, odds ratio; TCZ, tocilizumab; TNFi, tumor necrosis factor inhibitor.
Supplementary Figure 3. ORs for achievement of mACR20 and mACR50 responses at 6 months in the stratified-matched population, TCZ monotherapy vs TNFi + MTX

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**mACR20**

- **≤ 10 mg**
  - Matched, unadjusted: 0.71 (0.35, 1.44)
  - Matched, adjusted: 1.15 (0.55, 2.41)
- **> 10 to ≤ 15 mg**
  - Matched, unadjusted: 1.47 (0.76, 2.84)
  - Matched, adjusted: 1.38 (0.69, 2.74)
- **> 20 mg**
  - Matched, unadjusted: 0.61 (0.26, 1.46)
  - Matched, adjusted: 0.31 (0.10, 0.96)

**mACR50**

- **≤ 10 mg**
  - Matched, unadjusted: 1.49 (0.55, 4.00)
  - Matched, adjusted: 1.52 (0.51, 4.47)
- **> 10 to ≤ 15 mg**
  - Matched, unadjusted: 1.08 (0.47, 2.49)
  - Matched, adjusted: 0.72 (0.34, 1.51)
- **> 15 to ≤ 20 mg**
  - Matched, unadjusted: 1.43 (0.62, 3.30)
  - Matched, adjusted: 1.38 (0.58, 3.32)
- **> 20 mg**
  - Matched, unadjusted: 1.23 (0.44, 3.50)
  - Matched, adjusted: 0.98 (0.23, 4.26)

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**a**Adjusted for age, sex, race (white vs nonwhite), disabled, retired, baseline Clinical Disease Activity Index, baseline modified Health Assessment Questionnaire, baseline patient pain, baseline prednisone use/dose, baseline body mass index, prior biologic use, prior TNF use, and ACR functional class.

mACR, modified American College of Rheumatology response; mono, monotherapy; MTX, methotrexate; OR, odds ratio; TCZ, tocilizumab; TNFi, tumor necrosis factor inhibitor.
Supplementary Figure 4. Differences in mean change from baseline in mHAQ at 6 months in the stratified-matched population, TCZ monotherapy vs TNFi + MTX

| MTX Dose Group | Matched, unadjusted | Matched, adjusted* |
|----------------|---------------------|--------------------|
| ≤ 10 mg        | -0.02 (−0.17, 0.13) | 0.06 (−0.09, 0.20) |
| > 10 to ≤ 15 mg| -0.06 (−0.20, 0.09) | -0.04 (−0.18, 0.10) |
| > 15 to ≤ 20 mg| 0.01 (−0.12, 0.14)  | 0.04 (−0.09, 0.16)  |
| > 20 mg        | 0.12 (−0.03, 0.26)  | 0.08 (−0.08, 0.23)  |

*Adjusted for age, sex, race (white vs nonwhite), disabled, retired, baseline Clinical Disease Activity Index, baseline mHAQ, baseline patient pain, baseline prednisone use/dose, baseline body mass index, prior biologic use, prior TNF use, and American College of Rheumatology functional class.

mHAQ, modified Health Assessment Questionnaire; mono, monotherapy; MTX, methotrexate; TCZ, tocilizumab; TNFi, tumor necrosis factor inhibitor.