Diabetes-related Complications and Costs in Medicare Beneficiaries with Comorbid Rheumatoid Arthritis and Diabetes Treated with Abatacept versus Other Targeted DMARDs

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### SUPPLEMENTARY MATERIAL

Fig. S1 Patient Attrition Steps for TNFi-experienced and tDMARD Naïve Patient Cohorts

| Step | Description | Abxcept | TNFi | Other non-TNFi |
|------|-------------|---------|------|---------------|
| 1    | Patients with at least 1 ICD or HCPCS claim for DMARD between January 1, 2010 through December 31, 2017. | Abxcept = 70,825 | TNFi = 418,000 | Other non-TNFi = 273,515 |
| 2    | And with no medical or pharmacy claim for more than 1 DMARD on the index date. | Abxcept = 70,750 | TNFi = 417,791 | Other non-TNFi = 273,518 |
| 3    | Aged 65 years or older at index date | Abxcept = 37,715 | TNFi = 199,790 | Other non-TNFi = 175,659 |

#### TNFi-experienced Patient Cohort

| Step | Description | Abxcept | TNFi | Other non-TNFi |
|------|-------------|---------|------|---------------|
| 4a   | And no prior dispensing for index drug within 12 months prior to the index date. | Abxcept = 34,524 | TNFi = 80,984 | Other non-TNFi = 145,861 |
| 4b   | And no prior dispensing for any DMARD within 12 months prior to the index date. | Abxcept = 11,600 | TNFi = 22,214 | Other non-TNFi = 12,784 |
| 5a   | And at least 1 therapy claim for TNFi within 12 months prior to the index date. | Abxcept = 12,793 | TNFi = 18,997 | Other non-TNFi = 12,832 |
| 5b   | And at least 1 therapy claim for any TNFi within 12 months prior to the index date. | Abxcept = 3,259 | TNFi = 3,383 | Other non-TNFi = 3,286 |
| 6a   | And at least 1 diagnosis code for ICD10 or at least 1 ICD10 drug therapy claim prior to initiating a treatment with DMARD within 12 months prior to the index date. | Abxcept = 2,804 | TNFi = 4,084 | Other non-TNFi = 3,429 |
| 6b   | And patients with at least 2 diagnosis codes for ICD10 within 12 months prior to the index date were excluded. | Abxcept = 2,193 | TNFi = 2,123 | Other non-TNFi = 2,280 |

#### tDMARD Naïve Patient Cohort

| Step | Description | Abxcept | TNFi | Other non-TNFi |
|------|-------------|---------|------|---------------|
| 7a   | And no cancer diagnosis at any time within 12 months prior to the index date or follow-up period. | Abxcept = 2,088 | TNFi = 3,215 | Other non-TNFi = 2,491 |
| 7b   | And with only 1 index per person based on visit clustering workflow. | Abxcept = 2,088 | TNFi = 3,215 | Other non-TNFi = 2,491 |
a TNFi drug included adalimumab, certolizumab pegol, etanercept, golimumab, and infliximab;

b Other Non-TNFi drug included anakinra, sarilumab, tocilizumab, baricitinib, rituximab, and tofacitinib; 

 Patient counts are mutually exclusive and reflects those beneficiaries who met all the inclusion/exclusion criteria and had earliest qualifying index event. A hierarchical order was applied to increase the sample size. Patients were assigned to abatacept first followed by a non-TNFi and then to TNFi. Among TNFi, patients were assigned in the following order: (1) adalimumab, (2) certolizumab pegol, (3) etanercept, (4) golimumab, and (5) infliximab. Patients were followed from index date and ended at the earliest of the end of study period, patient disenrollment, death, switch to another tDMARD, or discontinuation of the index drug.

HCPC Healthcare Common Procedure Coding System, NDC National Drug Code, RA rheumatoid arthritis, T2DM type 2 diabetes mellitus, tDMARD targeted disease-modifying antirheumatic drug, TNFi tumor necrosis factor-α inhibitor.
Table S1 Sensitivity Analysis Outcomes with Additional 90 days for End of Index treatment Date

| Variable                         | TNFi-experienced Patient Cohort | tDMARD Naïve Patient Cohort |
|----------------------------------|---------------------------------|-----------------------------|
|                                  | N  | Mean | SD   | Median | N  | Mean | SD   | Median |
| T2DM-related Medical Costs PPPM  |     |      |      |        |     |      |      |        |
| Post-Index Medicare DCSI Medical Payment Amount |     |      |      |        |     |      |      |        |
| Abatacept                        | 2,169 | $652 | $1,753 | $97     | 2,667 | $807 | $2,154 | $131 |
| TNFi                             | 2,169 | $777 | $2,155 | $114    | 2,667 | $795 | $2,086 | $119 |
| Post-Index Medicare DCSI Medical Payment Amount |     |      |      |        |     |      |      |        |
| Abatacept                        | 2,118 | $676 | $1,840 | $96     | 2,247 | $810 | $2,179 | $123 |
| Non-TNFi                         | 2,118 | $785 | $2,264 | $119    | 2,247 | $1,012 | $2,585 | $108 |
| Rate of Inpatient Stay P1000PPM  |     |      |      |        |     |      |      |        |
| Post-Index DCSI IP Stay          |     |      |      |        |     |      |      |        |
| Abatacept                        | 2,169 | 27   | 70    | 0       | 2,667 | 31   | 77    | 0     |
| TNFi                             | 2,169 | 30   | 76    | 0       | 2,667 | 32   | 76    | 0     |
| Post-Index DCSI IP Stay          |     |      |      |        |     |      |      |        |
| Abatacept                        | 2,118 | 28   | 75    | 0       | 2,247 | 31   | 78    | 0     |
| Non-TNFi                         | 2,118 | 32   | 77    | 0       | 2,247 | 41   | 97    | 0     |

Length of follow-up = index drug + days’ supply + 90 days. DCSI, diabetes complications severity index, IP inpatient, P1000PPM per 1000 patients per month, PPPM per-patient-per-month, SD standard deviation, T2DM type 2 diabetes mellitus, tDMARD targeted disease-modifying antirheumatic drug, TNFi tumor necrosis factor-α inhibitor.