# Draft tables for COMORBIDITIES AND DISEASE MANIFESTATIONS IN ANKYLOSING SPONDYLITIS: AN ANALYSIS OF US CLAIMS DATABASES

Notes

* Tables 1, 2a-2c were filled in by the UAB team
* Tables 3-5 were filled in by the OHSU team
* Table 4 is believed not appropriate for dissemination. Prevalence is anchored in time to AS cohort index date (± 6 months) but broken out by future therapy exposure. It remains in the set of draft tables for historical reasons.

Summary of changes from 2017-09-08 call

* Fixed denominator used in overall prevalence calculation
* Fixed filtering of claims to satisfy physician-diagnosed criterion
  + Use enc\_type in ("IP", "AV", "ED", "NH", "HH") instead of provider type
* Fixed incident MI outcome to require inpatient admission of at least 1 day
* In progress incidence rates are greyed-out

To-do (mostly for Ben)

1. Ask UAB for clarification on definition/implementation on clean, new use of exposure
   1. Was it 6 months?
   2. How is switching exposures implemented?
2. Check censoring of incidence
   1. Which outcomes do we need to censor? (E.g., cancer)
   2. Which outcomes do we allow to occur across multiple exposures within person (E.g., infection)
3. For non-AS cohort prevalence (Table 3), check the date the prevalence is anchored to
   1. Field used is indexDate from the UCB.cntlCohortStdMPCD and UCB.cntlCohortStdC5P tables
4. Separate NSAIDS exposure from no exposure in Table 5
5. Respond to comments in tables

Table 1: Distribution of characteristics of disease cohort by data source\*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | AS cohort | | | Non-AS cohort | |
|  | Market Scan  N=22,625 | MPCD  N=5,078 | Medicare  N=35,349 | MPCD  N=1,139,225 | Medicare  N=1,844,703 |
| Age in years, Mean (std) | 47 (14) | 47 (14) | 63 (14) | 50 (17) | 69 (14) |
| Female | 43.01 | 38.32 | 44.94 | 55.82 | 61.27 |
| Race |  |  |  |  |  |
| Combines co-morbidity index |  |  |  |  |  |
| <0 | 13.81 | 12.82 | 13.68 | 13.41 | 18.69 |
| 0 | 66.35 | 67.76 | 29.65 | 70.74 | 37.68 |
| 1 | 12.84 | 11.91 | 19.52 | 9.11 | 16.96 |
| 2 | 3.65 | 3.72 | 11.65 | 3.07 | 9.11 |
| ≥3 | 3.35 | 3.78 | 25.50 | 3.68 | 17.57 |
| Charlson Index |  |  |  |  |  |
| 0 | 71.04 | 69.63 | 26.27 | 73.54 | 43.90 |
| 1 | 19.58 | 19.75 | 26.70 | 16.57 | 24.99 |
| 2 | 5.84 | 6.03 | 18.16 | 5.50 | 14.11 |
| 3 | 2.05 | 2.23 | 11.54 | 2.21 | 7.56 |
| 4 and more | 1.50 | 2.36 | 17.33 | 2.18 | 9.43 |
| Charlson Index, mean (std) | 0.45 (0.88) | 0.54 (1.38) | 1.88 (1.89) | 0.45 (0.99) | 1.24 (1.61) |
| Myocardial Infarction | 1.17 | 1.36 | 6.41 | 0.96 | 3.68 |
| Coronary heart disease | 5.23 | 6.28 | 25.60 | 6.21 | 20.04 |
| Peripheral vascular disorder | 1.27 | 2.01 | 12.67 | 1.77 | 10.56 |
| Cerebrovascular disease | 1.83 | 2.36 | 12.88 | 2.00 | 11.19 |
| Dementia | 0.13 | 0.35 | 1.60 | 0.38 | 3.20 |
| Chronic pulmonary disease | 8.44 | 9.26 | 26.30 | 7.21 | 18.74 |
| Rheumatologic disease | 10.78 | 11.66 | 38.80 | 7.45 | 3.25 |
| Peptic ulcer disease | 0.57 | 0.83 | 2.75 | 0.39 | 1.38 |
| Mild liver disease | 0.26 | 0.59 | 1.04 | 0.29 | 0.74 |
| Diabetes | 7.79 | 9.41 | 27.32 | 9.55 | 25.62 |
| Diabetes with chronic complications | 1.26 | 1.46 | 8.21 | 1.51 | 5.98 |
| Hemiplegia or paraplegia | 0.25 | 0.43 | 1.80 | 0.17 | 1.13 |
| Renal Disease | 2.22 | 2.32 | 11.25 | 2.70 | 6.88 |
| Malignancy, including leukemia and lymphoma | 3.10 | 3.33 | 11.10 | 3.13 | 9.79 |
| Moderate or severe liver disease | 0.09 | 0.30 | 0.35 | 0.08 | 0.31 |
| Metastatic solid tumor | 0.32 | 0.37 | 1.23 | 0.23 | 1.31 |
| AIDS | 0.07 | 0.28 | 0.30 | 0.19 | 0.45 |
| Other co-morbidities |  |  |  |  |  |
| Hypertension | 25.31 | 25.46 | 64.93 | 24.72 | 58.81 |
| Metabolic syndrome | 0.34 | 0.35 | 0.65 | 0.28 | 0.45 |
| Non-alcoholic fatty liver disease | 0.61 | 0.45 | 2.02 | 0.17 | 0.83 |
| Osteoporosis |  |  |  |  |  |
| Health utilization |  |  |  |  |  |
| Prostate specific antigen (men only) | 19.27 | 10.67 | 52.02 | 9.45 | 50.24 |
| PAP smear (women only) | 29.36 | 25.49 | 19.27 | 16.23 | 14.77 |
| Mammography (women only) | 22.81 | 20.09 | 53.96 | 12.51 | 46.82 |
| Any hospitalization | 10.47 | 6.03 | 27.51 | 4.06 | 16.30 |
| Number of physician visit, mean(std) | 8.4 (8.3) | 6.0 (6.2) | 26.5 (22.0) | 3.4 (5.0) | 14.2 (15.8) |

\*using 6 month baseline period, unless otherwise indicated

\*\* using all available prior data (updated by OHSU team)

Table 2a: Distribution of characteristics of by exposure for Market Scan data\*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TNF  N=4,797 | DMARDS  N=1,799 | NSAIDS  N=3,644 | No Exposure  N=5,696 |
| Age in years, Mean (std) | 43 (13) | 46 (14) | 45 (15) | 49 (15) |
| Female, % | 46.68 | 54.03 | 47.26 | 42.57 |
| Race |  |  |  |  |
| Combines co-morbidity index, % |  |  |  |  |
| <0 | 13.61 | 14.56 | 13.94 | 12.80 |
| 0 | 65.00 | 61.81 | 62.54 | 61.75 |
| 1 | 15.22 | 14.73 | 15.23 | 14.33 |
| 2 | 3.63 | 4.78 | 3.98 | 5.06 |
| ≥3 | 2.54 | 4.11 | 4.31 | 6.07 |
| Charlson Index, % |  |  |  |  |
| 0 | 68.31 | 63.15 | 70.42 | 69.36 |
| 1 | 22.58 | 24.35 | 18.88 | 17.78 |
| 2 | 6.00 | 7.34 | 6.61 | 6.65 |
| 3 | 1.83 | 3.06 | 2.25 | 3.32 |
| 4 and more | 1.27 | 2.11 | 1.84 | 2.88 |
| Charlson Index, mean (std) | 0.46 (0.84) | 0.59 (1.01) | 0.47 (0.91) | 0.55 (1.07) |
| Myocardial Infarction, % | 1.21 | 1.56 | 1.45 | 2.07 |
| Coronary heart disease | 4.79 | 6.11 | 5.98 | 8.02 |
| Peripheral vascular disorder | 0.94 | 1.50 | 1.43 | 2.16 |
| Cerebrovascular disease | 1.50 | 2.11 | 2.28 | 3.13 |
| Dementia | 0.04 | 0.00 | 0.14 | 0.35 |
| Chronic pulmonary disease | 9.56 | 10.32 | 9.78 | 9.11 |
| Rheumatologic disease | 18.40 | 8.01 | 6.64 | 14.18 |
| Peptic ulcer disease | 0.89 | 0.60 | 0.67 | 0.65 |
| Mild liver disease | 0.17 | 0.33 | 0.53 | 0.35 |
| Diabetes | 8.78 | 3.08 | 9.90 | 7.19 |
| Diabetes with chronic complications | 0.92 | 1.22 | 1.62 | 2.11 |
| Hemiplegia or paraplegia | 0.10 | 0.17 | 0.38 | 0.51 |
| Renal Disease | 2.02 | 3.00 | 2.14 | 3.48 |
| Malignancy, including leukemia and lymphoma | 1.90 | 4.34 | 4.03 | 4.34 |
| Moderate or severe liver disease | 0.13 | 0.11 | 0.11 | 0.25 |
| Metastatic solid tumor | 0.04 | 0.33 | 0.25 | 0.53 |
| AIDS | 0.06 | 0.28 | 0.05 | 0.09 |
| Other co-morbidities |  |  |  |  |
| Hypertension | 24.20 | 29.79 | 28.27 | 28.81 |
| Metabolic syndrome | 0.54 | 1.22 | 0.52 | 0.46 |
| Non-alcoholic fatty liver disease | 0.96 | 0.67 | 0.85 | 0.67 |
| Osteoporosis |  |  |  |  |
| Health utilization |  |  |  |  |
| Prostate specific antigen (men only) | 20.76 | 23.58 | 23.00 | 20.85 |
| PAP smear (women only) | 36.62 | 32.82 | 34.79 | 28.74 |
| Mammography (women only) | 25.73 | 31.28 | 28.11 | 21.79 |
| Any hospitalization | 12.13 | 14.29 | 18.77 | 15.33 |
| Number of physician visit, mean(std) | 11.63 (9.01) | 11.87 (10.71) | 10.74 (10.34) | 8.94 (9.78) |

\*using 6 month baseline period, unless otherwise indicated

\*\* using all available prior data (updated by OHSU team)

Table 2b: Distribution of characteristics of by exposure for MPCD data\*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TNF  N=1,107 | DMARDS  N=421 | NSAIDS  N=763 | No Exposure  N=1,593 |
| Age in years, Mean (std) | 41 (13) | 42 (14) | 42 (14) | 52 (16) |
| Female, % | 38.12 | 44.42 | 43.38 | 38.17 |
| Race |  |  |  |  |
| Combines co-morbidity index, % |  |  |  |  |
| <0 | 12.83 | 11.16 | 13.63 | 14.44 |
| 0 | 70.19 | 67.46 | 68.28 | 57.50 |
| 1 | 11.92 | 14.96 | 11.66 | 14.69 |
| 2 | 2.89 | 3.56 | 3.15 | 6.28 |
| ≥3 | 2.17 | 2.85 | 3.28 | 7.09 |
| Charlson Index, % |  |  |  |  |
| 0 | 71.73 | 67.46 | 75.88 | 60.20 |
| 1 | 20.14 | 19.95 | 16.25 | 21.72 |
| 2 | 5.69 | 9.26 | 5.11 | 8.73 |
| 3 | 1.08 | 1.66 | 1.31 | 4.90 |
| 4 and more | 1.36 | 1.66 | 1.44 | 4.46 |
| Charlson Index, mean (std) | 0.47 (1.44) | 0.52 (0.95) | 0.37 (0.81) | 0.76 (1.28) |
| Myocardial Infarction, % | 1.26 | 0.71 | 1.05 | 2.45 |
| Coronary heart disease | 4.70 | 5.46 | 4.85 | 10.86 |
| Peripheral vascular disorder | 1.17 | 0.71 | 1.31 | 3.64 |
| Cerebrovascular disease | 1.45 | 1.19 | 1.18 | 4.08 |
| Dementia | 0.36 | 0.00 | 0.00 | 0.56 |
| Chronic pulmonary disease | 7.77 | 9.50 | 8.78 | 12.37 |
| Rheumatologic disease | 12.56 | 13.78 | 4.72 | 10.48 |
| Peptic ulcer disease | 1.26 | 0.71 | 0.92 | 1.13 |
| Mild liver disease | 0.72 | 0.48 | 0.39 | 1.07 |
| Diabetes | 7.86 | 9.74 | 7.60 | 16.01 |
| Diabetes with chronic complications | 0.99 | 0.48 | 1.05 | 2.45 |
| Hemiplegia or paraplegia | 0.45 | 0.71 | 0.13 | 0.38 |
| Renal Disease | 1.81 | 3.09 | 1.97 | 3.77 |
| Malignancy, including leukemia and lymphoma | 1.72 | 2.61 | 3.54 | 4.46 |
| Moderate or severe liver disease | 0.09 | 0.00 | 0.26 | 0.50 |
| Metastatic solid tumor | 0.36 | 0.00 | 0.26 | 0.19 |
| AIDS | 0.36 | 0.24 | 0.00 | 0.13 |
| Other co-morbidities |  |  |  |  |
| Hypertension | 20.87 | 25.18 | 24.25 | 35.66 |
| Metabolic syndrome | 0.27 | 0.00 | 0.92 | 0.38 |
| Non-alcoholic fatty liver disease | 0.54 | 0.48 | 0.19 | 0.25 |
| Osteoporosis |  |  |  |  |
| Health utilization |  |  |  |  |
| Prostate specific antigen (men only) | 9.05 | 11.87 | 12.27 | 16.24 |
| PAP smear (women only) | 30.81 | 26.74 | 36.56 | 22.53 |
| Mammography (women only) | 20.14 | 21.93 | 18.73 | 21.38 |
| Any hospitalization | 3.70 | 4.51 | 4.85 | 11.74 |
| Number of physician visit, mean(std) | 7.68 (6.09) | 8.19 (7.76) | 7.57 (7.08) | 6.91 (7.24) |

\*using 6 month baseline period, unless otherwise indicated

\*\* using all available prior data (updated by OHSU team)

Table 2c: Distribution of characteristics of by exposure for Medicare data\*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TNF  N=4,866 | DMARDS  N=4,231 | NSAIDS  N=8,602 | No Exposure  N=13,275 |
| Age in years, Mean (std) | 55 (14) | 61 (14) | 62 (15) | 67 (14) |
| Female, % | 44.57 | 55.05 | 45.69 | 39.29 |
| Race |  |  |  |  |
| Combines co-morbidity index, % |  |  |  |  |
| <0 | 13.48 | 12.05 | 13.21 | 11.46 |
| 0 | 32.20 | 26.83 | 26.40 | 24.93 |
| 1 | 22.30 | 20.23 | 19.48 | 17.36 |
| 2 | 12.78 | 13.83 | 12.58 | 12.95 |
| ≥3 | 19.24 | 27.06 | 28.33 | 31.16 |
| Charlson Index, % |  |  |  |  |
| 0 | 27.74 | 18.48 | 25.38 | 24.99 |
| 1 | 29.39 | 26.73 | 25.45 | 23.04 |
| 2 | 18.35 | 21.01 | 18.14 | 17.72 |
| 3 | 11.34 | 13.73 | 11.87 | 12.52 |
| 4 and more | 13.17 | 20.04 | 19.17 | 21.73 |
| Charlson Index, mean (std) | 1.68 (1.74) | 2.15 (1.91) | 1.98 (1.96) | 2.11 (2.05) |
| Myocardial Infarction, % | 5.03 | 6.71 | 6.22 | 8.60 |
| Coronary heart disease | 18.68 | 25.64 | 27.62 | 31.95 |
| Peripheral vascular disorder | 8.38 | 13.42 | 14.66 | 16.14 |
| Cerebrovascular disease | 8.55 | 13.30 | 15.10 | 16.41 |
| Dementia | 0.66 | 1.32 | 1.89 | 2.49 |
| Chronic pulmonary disease | 25.15 | 31.25 | 30.64 | 28.53 |
| Rheumatologic disease | 42.70 | 50.39 | 27.54 | 21.03 |
| Peptic ulcer disease | 3.25 | 3.85 | 3.17 | 2.88 |
| Mild liver disease | 1.01 | 1.37 | 1.22 | 1.31 |
| Diabetes | 25.11 | 29.95 | 30.63 | 30.54 |
| Diabetes with chronic complications | 6.91 | 8.15 | 10.08 | 10.30 |
| Hemiplegia or paraplegia | 0.82 | 1.39 | 2.07 | 2.80 |
| Renal Disease | 8.78 | 11.56 | 10.65 | 16.01 |
| Malignancy, including leukemia and lymphoma | 7.36 | 10.38 | 11.93 | 13.92 |
| Moderate or severe liver disease | 0.31 | 0.40 | 0.33 | 0.53 |
| Metastatic solid tumor | 0.47 | 1.09 | 1.35 | 1.58 |
| AIDS | 0.35 | 0.33 | 0.43 | 0.29 |
| Other co-morbidities |  |  |  |  |
| Hypertension | 59.06 | 67.95 | 68.93 | 69.73 |
| Metabolic syndrome | 1.01 | 0.85 | 0.79 | 0.57 |
| Non-alcoholic fatty liver disease | 2.77 | 2.86 | 2.57 | 2.03 |
| Osteoporosis |  |  |  |  |
| Health utilization |  |  |  |  |
| Prostate specific antigen (men only) | 50.69 | 56.83 | 58.56 | 50.80 |
| PAP smear (women only) | 26.97 | 23.87 | 22.39 | 15.97 |
| Mammography (women only) | 60.07 | 61.74 | 58.22 | 49.77 |
| Any hospitalization | 24.11 | 30.30 | 33.11 | 34.85 |
| Number of physician visit, mean(std) | 29.81 (21.94) | 33.52 (25.47) | 32.70 (25.93) | 27.61 (23.43) |

\*using 6 month baseline period, unless otherwise indicated

\*\* using all available prior data (updated by OHSU team)

Table 3: Prevalence of comorbidities by disease cohort and data source; 6 months pre & post index date (per 100 cohort members).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Outcome categories** | **Specific manifestation** | **AS cohort** | | | **Non-AS cohort** | |
| **MPCD** | **Market Scan** | **Medicare** | **MPCD** | **Medicare** |
|  | N | 3,000 | 11,982 | 22,584 | 1,139,225 | 1,844,703 |
| Cancer | Hematologic Cancer | 0.5 | 0.6 | 1.6 | 0.6 | 1.2 |
| Non Melanoma Skin Cancer | 0.0 | 0.6 | 1.9 | 0.0 | 0.7 |
| Solid Cancer | 4.0 | 3.5 | 9.8 | 3.9 | 8.8 |
| Cardiac disease | Aortic Insufficiency/Aortic Regurgitation | 1.9 | 1.3 | 4.9 | 0.9 | 2.7 |
| Conduction Block | 0.6 | 1.3 | 4.5 | 0.7 | 2.3 |
| Myocardial infarction | 0.5 | 0.6 | 1.8 | 0.2 | 1.0 |
| Infection | Hospitalized infection | 5.2 | 6.9 | 19.4 | 2.2 | 8.9 |
| Opportunistic infection | 1.1 | 1.0 | 2.4 | 0.4 | 0.9 |
| Inflammatory bowel disease | Crohn’s Disease | 4.3 | 3.6 | 4.8 | 2.2 | 0.3 |
| Ulcerative Colitis | 2.5 | 2.6 | 2.7 | 2.0 | 0.4 |
| Kidney disease | Amyloidosis | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| IgA nephropathy | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 |
| Nephrotic syndrome | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 |
| Lung disease | Apical Pulmonary fibrosis | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Interstitial lung disease | 0.1 | 0.1 | 0.7 | 0.0 | 0.0 |
| Restrictive lung disease | 1.3 | 1.4 | 3.2 | 0.7 | 1.3 |
| Neurological Disease | Cauda Equina syndrome | 0.1 | 0.1 | 0.2 | 0.0 | 0.0 |
| Spinal Cord compression | 0.2 | 0.2 | 0.9 | 0.0 | 0.1 |
| Osteoporotic fracture | Clinical vertebral fracture | 2.4 | 2.2 | 7.3 | 0.5 | 1.1 |
| Non-vertebral osteoporotic fracture | 2.9 | 1.9 | 4.5 | 1.2 | 2.5 |
| PsO/PsA | Psoriasis | 2.5 | 2.7 | 3.8 | 4.6 | 1.0 |
| Psoriatic arthritis | 3.7 | 4.1 | 5.0 | 1.0 | 0.2 |
| Uveitis | Uveitis | 7.0 | 7.6 | 4.0 | 0.2 | 0.2 |

Table 4: Prevalence of comorbidities by data source and exposure; 6 months pre & post index date (per 100 treatment exposures).

**NOT APPROPRIATE FOR DISSEMENATION (see notes)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Outcome categories** | **Specific manifestation** | **MPCD** | | | **Marketscan** | | | **Medicare** | | |
| **TNF** | **DMARDS** | **NSAIDS or no exposure** | **TNF** | **DMARDS** | **NSAIDS or no exposure** | **TNF** | **DMARDS** | **NSAIDS or no exposure** |
|  | N | 1,107 | 421 | 2,083 | 4,797 | 1,799 | 8,025 | 4,866 | 4,231 | 17,983 |
| Cancer | Hematologic Cancer | 0.3 | 0.2 | 0.5 | 0.1 | 0.8 | 0.6 | 0.4 | 1.6 | 1.7 |
| Non Melanoma Skin Cancer | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.8 | 1.2 | 1.3 | 2.2 |
| Solid Cancer | 2.6 | 1.5 | 4.2 | 1.8 | 4.2 | 4.0 | 5.7 | 7.7 | 10.5 |
| Cardiac disease | Aortic Insufficiency/Aortic Regurgitation | 1.7 | 0.6 | 1.6 | 0.8 | 0.9 | 1.3 | 2.9 | 3.7 | 5.0 |
| Conduction Block | 0.2 | 0.0 | 0.9 | 0.7 | 1.1 | 1.5 | 2.4 | 3.0 | 4.6 |
| Myocardial infarction | 0.3 | 0.0 | 0.5 | 0.2 | 0.1 | 0.7 | 0.5 | 0.9 | 1.7 |
| Infection | Hospitalized infection | 1.0 | 1.2 | 5.6 | 3.5 | 4.8 | 7.2 | 9.1 | 13.8 | 19.0 |
| Opportunistic infection | 1.3 | 1.0 | 0.8 | 1.2 | 1.5 | 1.0 | 2.7 | 2.8 | 2.3 |
| Inflammatory bowel disease | Crohn’s Disease | 5.8 | 4.0 | 3.4 | 5.5 | 3.9 | 2.7 | 8.4 | 6.6 | 3.9 |
| Ulcerative Colitis | 3.0 | 2.3 | 1.9 | 3.6 | 2.6 | 2.1 | 3.9 | 3.6 | 2.1 |
| Kidney disease | Amyloidosis | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 |
| IgA nephropathy | 0.3 | 0.2 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 |
| Nephrotic syndrome | 0.2 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 |
| Lung disease | Apical Pulmonary fibrosis | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Interstitial lung disease | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.4 | 1.1 | 0.6 |
| Restrictive lung disease | 0.7 | 0.4 | 1.5 | 0.9 | 0.7 | 1.3 | 2.4 | 3.4 | 3.1 |
| Neurological Disease | Cauda Equina syndrome | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.2 |
| Spinal Cord compression | 0.2 | 0.0 | 0.2 | 0.2 | 0.2 | 0.4 | 0.3 | 0.4 | 0.7 |
| Osteoporotic fracture | Clinical vertebral fracture | 1.3 | 0.4 | 2.7 | 0.6 | 0.8 | 2.7 | 1.8 | 2.7 | 7.1 |
| Non-vertebral osteoporotic fracture | 2.0 | 0.8 | 3.3 | 1.0 | 1.0 | 2.1 | 2.9 | 3.0 | 4.7 |
| PsO/PsA | Psoriasis | 4.3 | 1.5 | 1.9 | 4.4 | 3.6 | 2.1 | 7.0 | 4.8 | 3.1 |
| Psoriatic arthritis | 6.5 | 5.4 | 2.4 | 7.1 | 6.4 | 2.4 | 10.5 | 8.1 | 3.1 |
| Uveitis | Uveitis | 8.4 | 7.3 | 6.2 | 7.8 | 6.8 | 7.3 | 6.9 | 5.0 | 3.5 |

Table 5: Unadjusted outcome incidence per 100 person-years by data source and exposure. Calculations still in progress are greyed-out; current numbers are placeholders.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Outcome categories** | **Specific manifestation** | **MPCD** | | | **Marketscan** | | | **Medicare** | | |
| **TNF** | **DMARDS** | **NSAIDS or no exposure** | **TNF** | **DMARDS** | **NSAIDS or no exposure** | **TNF** | **DMARDS** | **NSAIDS or no exposure** |
|  | Person-years |  |  |  |  |  |  |  |  |  |
| Cancer | Hematologic Cancer | 0.20 | 0.23 | 0.57 | 0.19 | 0.84 | 0.61 | 0.43 | 1.01 | 1.05 |
| Non Melanoma Skin Cancer | 0.00 | 0.00 | 0.00 | 0.78 | 1.12 | 0.88 | 1.34 | 1.50 | 2.03 |
| Solid Cancer | 2.18 | 1.91 | 4.46 | 1.79 | 4.47 | 3.98 | 3.35 | 5.27 | 6.96 |
| Cardiac disease | Aortic Insufficiency/Aortic Regurgitation | 1.14 | 0.23 | 1.70 | 0.72 | 0.95 | 1.26 | 1.82 | 2.79 | 3.43 |
| Conduction Block | 0.27 | 0.00 | 0.88 | 0.69 | 0.78 | 1.62 | 1.87 | 2.47 | 3.62 |
| Myocardial infarction | 0.33 | 0.00 | 0.61 | 0.21 | 0.28 | 0.63 | 0.69 | 1.20 | 1.53 |
| Infection | Hospitalized infection | 1.07 | 0.94 | 6.38 | 3.09 | 4.21 | 6.71 | 8.77 | 11.74 | 15.91 |
| Opportunistic infection | 0.87 | 1.42 | 0.53 | 0.87 | 1.35 | 0.79 | 1.71 | 2.14 | 1.97 |
| Inflammatory bowel disease | Crohn’s Disease | 4.48 | 3.61 | 2.91 | 4.29 | 3.64 | 2.32 | 3.57 | 3.42 | 2.17 |
| Ulcerative Colitis | 2.40 | 0.95 | 1.58 | 2.56 | 2.39 | 1.68 | 1.96 | 1.83 | 1.35 |
| Kidney disease | Amyloidosis | 0.00 | 0.00 | 0.11 | 0.03 | 0.00 | 0.00 | 0.06 | 0.02 | 0.04 |
| IgA nephropathy | 0.20 | 0.00 | 0.08 | 0.12 | 0.00 | 0.08 | 0.15 | 0.12 | 0.15 |
| Nephrotic syndrome | 0.13 | 0.00 | 0.00 | 0.04 | 0.11 | 0.04 | 0.14 | 0.12 | 0.08 |
| Lung disease | Apical Pulmonary fibrosis | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.01 | 0.00 | 0.02 | 0.01 |
| Interstitial lung disease | 0.00 | 0.00 | 0.11 | 0.07 | 0.11 | 0.09 | 0.39 | 0.85 | 0.44 |
| Restrictive lung disease | 0.81 | 0.00 | 1.85 | 0.75 | 0.84 | 1.28 | 1.99 | 2.48 | 2.42 |
| Neurological Disease | Cauda Equina syndrome | 0.00 | 0.00 | 0.15 | 0.03 | 0.06 | 0.01 | 0.09 | 0.01 | 0.09 |
| Spinal Cord compression | 0.07 | 0.00 | 0.26 | 0.18 | 0.22 | 0.30 | 0.20 | 0.28 | 0.40 |
| Osteoporotic fracture | Clinical vertebral fracture | 0.87 | 0.23 | 1.73 | 0.45 | 0.72 | 2.34 | 1.73 | 2.35 | 4.00 |
| Non-vertebral osteoporotic fracture | 1.28 | 0.94 | 3.29 | 1.22 | 1.12 | 1.77 | 2.57 | 3.27 | 3.58 |
| PsO/PsA | Psoriasis | 3.36 | 0.95 | 1.58 | 3.41 | 3.11 | 1.67 | 3.52 | 3.22 | 1.92 |
| Psoriatic arthritis | 5.13 | 5.13 | 1.80 | 5.20 | 6.39 | 1.89 | 4.58 | 3.97 | 1.62 |
| Uveitis | Uveitis | 4.95 | 6.55 | 4.86 | 5.59 | 6.57 | 5.76 | 3.69 | 2.76 | 2.08 |