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)