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Supplementary Table S1. Diagnostic Codes for Cerebral Palsy

ICD9 Codes

Cerebral Palsy	343.0, 343.1, 343.2, 343.3, 343.4, 343.8, 343.9, 333.71
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Supplementary Table S2. Diagnostic Codes for Alzheimer’s Disease and Related Dementia

ICD Codes

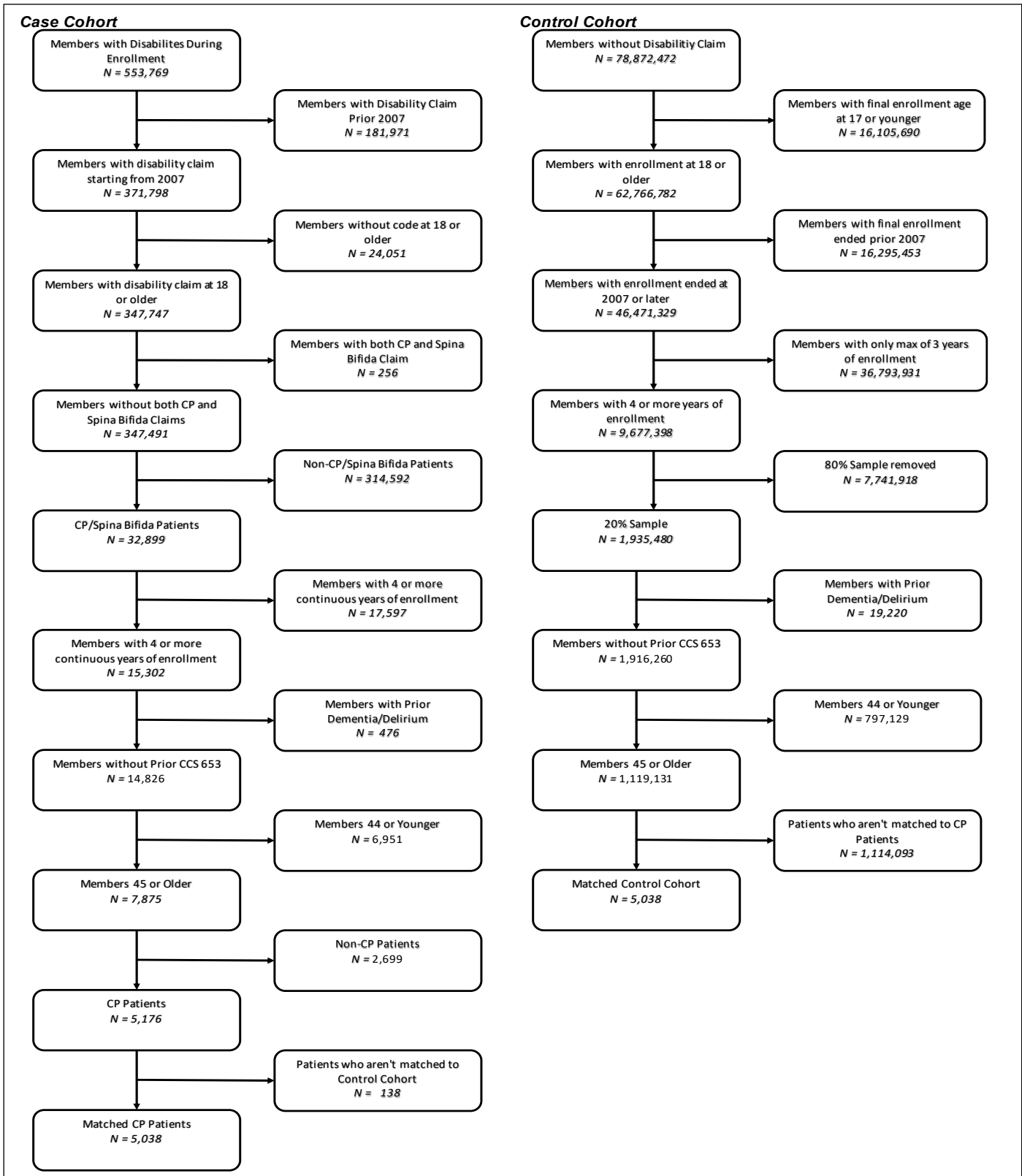
ICD-9

290.0, 290.10, 290.11, 290.12, 290.13, 290.20, 290.21, 290.3, 290.40, 290.41, 290.42, 290.43, 290.8, 290.9, 294.11, 294.12, 294.20, 294.21, 331.0

ICD-10

F0150, F0151, F0280, F0281, F0390, F0391, G300, G301, G308, G309

Supplementary Figure S1. Schematic Flow Diagram



Supplementary Table S3. Diagnostic Codes for Comorbid Conditions

ICD9/ICD10 Codes	
Diagnosis Group	
Cardiometabolic Outcome Group	
Cardiac dysrhythmias	427.0, 427.1, 427.2, 427.31, 427.32, 427.60, 427.61, 427.69, 427.81, 427.89, 427.9, 785.0, 785.1 I47.0, I47.1, I47.2, I47.9, I48.0, I48.1, I48.2, I48.3, I48.4, I48.91, I48.92, I49.1, I49.2, I49.3, I49.40, I49.49, I49.5, I49.8, I49.9, R00.0, R00.1, R00.2
Heart Failure	427.41, 427.42, 427.5, 428.0, 428.1, 428.20, 428.21, 428.22, 428.23, 428.30, 428.31, 428.32, 428.33, 428.40, 428.41, 428.42, 428.43, 428.9 I46.2, I46.8, I46.9, I49.01, I49.02, I50.1, I50.20, I50.21, I50.22, I50.23, I50.30, I50.31, I50.32, I50.33, I50.40, I50.41, I50.42, I50.43, I50.810, I50.811, I50.812, I50.813, I50.814, I50.82, I50.83, I50.84, I50.89, I50.9
Peripheral and visceral Atherosclerosis	440.0, 440.1, 440.2, 440.20, 440.21, 440.22, 440.23, 440.29, 440.4, 440.8, 440.9, 443.9, 557.0, 557.1, 557.9 I70.0, I70.1, I70.201, I70.202, I70.203, I70.208, I70.209, I70.211, I70.212, I70.213, I70.218, I70.219, I70.221, I70.222, I70.223, I70.228, I70.229, I70.231, I70.232, I70.233, I70.234, I70.235, I70.238, I70.239, I70.241, I70.242, I70.243, I70.244, I70.245, I70.248, I70.249, I70.25, I70.291, I70.292, I70.293, I70.298, I70.299, I70.8, I70.90, I70.91, I70.92, I73.9, K55.0, K55.011, K55.012, K55.019, K55.021, K55.022, K55.029, K55.031, K55.032, K55.039, K55.041, K55.042, K55.049, K55.051, K55.052, K55.059, K55.061, K55.062, K55.069, K55.1, K55.8, K55.9
Non-Alcoholic Fatty Liver Disease	571.8, 571.9 K76.0, K76.89, K76.9
Chronic kidney disease	585, 585.1, 585.2, 585.3, 585.4, 585.5, 585.6, 585.9, 792.5, V42.0, V45.1, V45.11, V45.12, V56.0, V56.1, V56.2, V56.31, V56.32, V56.8 N18.1, N18.2, N18.3, N18.4, N18.5, N18.6, N18.9, R88.0, Z49.01, Z49.02, Z49.31, Z49.32, Z91.15, Z94.0, Z99.2
Type 2 Diabetes	250.00, 250.02, 250.10, 250.12, 250.20, 250.22, 250.30, 250.32, 250.40, 250.42, 250.50, 250.52, 250.60, 250.62, 250.70, 250.72, 250.80, 250.82, 250.90, 250.92 E11.00, E11.01, E11.10, E11.11, E11.21, E11.22, E11.29, E11.311, E11.319, E11.321, E11.3211, E11.3212, E11.3213, E11.3219, E11.329, E11.3291, E11.3292, E11.3293, E11.3299, E11.331, E11.3311, E11.3312, E11.3313, E11.3319, E11.339, E11.3391, E11.3392, E11.3393, E11.3399, E11.341, E11.3411, E11.3412, E11.3413, E11.3419, E11.349, E11.3491, E11.3492, E11.3493, E11.3499, E11.351, E11.3511, E11.3512, E11.3513, E11.3519, E11.3521, E11.3522, E11.3523, E11.3529,

	E11.3531, E11.3532, E11.3533, E11.3539, E11.3541, E11.3542, E11.3543, E11.3549, E11.3551, E11.3552, E11.3553, E11.3559, E11.359, E11.3591, E11.3592, E11.3593, E11.3599, E11.36, E11.37X1, E11.37X2, E11.37X3, E11.37X9, E11.39, E11.40, E11.41, E11.42, E11.43, E11.44, E11.49, E11.51, E11.52, E11.59, E11.610, E11.618, E11.620, E11.621, E11.622, E11.628, E11.630, E11.638, E11.641, E11.649, E11.65, E11.69, E11.8, E11.9
Hypercholesterolemia	272.0, 272.1 E78.0, E78.00, E78.01, E78.1
Hypertension	401.0, 401.1, 401.9, 402.00, 402.01, 402.10, 402.11, 402.90, 402.91, 403.0, 403.00, 403.01, 403.1, 403.10, 403.11, 403.9, 403.90, 403.91, 404.0, 404.00, 404.01, 404.02, 404.03, 404.1, 404.10, 404.11, 404.12, 404.13, 404.9, 404.90, 404.91, 404.92, 404.93, 405.01, 405.09, 405.11, 405.19, 405.91, 405.99, 437.2 I10, I11.0, I11.9
Cardiac dysrhythmias	427.0, 427.1, 427.2, 427.31, 427.32, 427.60, 427.61, 427.69, 427.81, 427.89, 427.9, 785.0, 785.1 I47.0, I47.1, I47.2, I47.9, I48.0, I48.1, I48.2, I48.3, I48.4, I48.91, I48.92, I49.1, I49.2, I49.3, I49.40, I49.49, I49.5, I49.8, I49.9, R00.0, R00.1, R00.2
Heart Failure	427.41, 427.42, 427.5, 428.0, 428.1, 428.20, 428.21, 428.22, 428.23, 428.30, 428.31, 428.32, 428.33, 428.40, 428.41, 428.42, 428.43, 428.9 I46.2, I46.8, I46.9, I49.01, I49.02, I50.1, I50.20, I50.21, I50.22, I50.23, I50.30, I50.31, I50.32, I50.33, I50.40, I50.41, I50.42, I50.43, I50.810, I50.811, I50.812, I50.813, I50.814, I50.82, I50.83, I50.84, I50.89, I50.9
Peripheral and visceral Atherosclerosis	440.0, 440.1, 440.2, 440.20, 440.21, 440.22, 440.23, 440.29, 440.4, 440.8, 440.9, 443.9, 557.0, 557.1, 557.9 I70.0, I70.1, I70.201, I70.202, I70.203, I70.208, I70.209, I70.211, I70.212, I70.213, I70.218, I70.219, I70.221, I70.222, I70.223, I70.228, I70.229, I70.231, I70.232, I70.233, I70.234, I70.235, I70.238, I70.239, I70.241, I70.242, I70.243, I70.244, I70.245, I70.248, I70.249, I70.25, I70.291, I70.292, I70.293, I70.298, I70.299, I70.8, I70.90, I70.91, I70.92, I73.9, K55.0, K55.011, K55.012, K55.019, K55.021, K55.022, K55.029, K55.031, K55.032, K55.039, K55.041, K55.042, K55.049, K55.051, K55.052, K55.059, K55.061, K55.062, K55.069, K55.1, K55.8, K55.9
Psychological Outcome Group	
Insomnia	780.51, 780.52 G47.00
Adjustment Disorders	309.0, 309.1, 309.22, 309.23, 309.24, 309.28, 309.29, 309.3, 309.4, 309.82, 309.83, 309.89, 309.9

	F43.20, F43.21, F43.22, F43.23, F43.24, F43.25, F43.29, F43.8, F43.9
Anxiety Disorders	293.84, 300.00, 300.01, 300.02, 300.09, 300.10, 300.20, 300.21, 300.22, 300.23, 300.29, 300.3, 300.5, 300.89, 300.9, 308.0, 308.1, 308.2, 308.3, 308.4, 308.9, 309.81, 313.0, 313.1, 313.21, 313.22, 313.3, 313.82, 313.83 F06.4, F40.00, F40.01, F40.02, F40.10, F40.11, F40.210, F40.218, F40.220, F40.228, F40.230, F40.231, F40.232, F40.233, F40.240, F40.241, F40.242, F40.243, F40.248, F40.290, F40.291, F40.298, F40.8, F40.9, F41.0, F41.1, F41.3, F41.8, F41.9, F42., F42.2, F42.3, F42.4, F42.8, F42.9, F43.0, F43.10, F43.11, F43.12, F48.8, F48.9, R45.2, R45.3, R45.4, R45.5, R45.6, R45.7, R45.81, R45.82, R45.83, R45.84
PTSD	309.81 F43.1
Impulse Control Disorders	312.30, 312.31, 312.32, 312.33, 312.34, 312.35, 312.39 F63.0, F63.1, F63.2, F63.3, F63.81, F63.89, F63.9, R45.850
Mood Disorders	293.83, 296.00, 296.01, 296.02, 296.03, 296.04, 296.05, 296.06, 296.10, 296.11, 296.12, 296.13, 296.14, 296.15, 296.16, 296.20, 296.21, 296.22, 296.23, 296.24, 296.25, 296.26, 296.30, 296.31, 296.32, 296.33, 296.34, 296.35, 296.36, 296.40, 296.41, 296.42, 296.43, 296.44, 296.45, 296.46, 296.50, 296.51, 296.52, 296.53, 296.54, 296.55, 296.56, 296.60, 296.61, 296.62, 296.63, 296.64, 296.65, 296.66, 296.7, 296.80, 296.81, 296.82, 296.89, 296.90, 296.99, 300.4, 311 F06.30, F06.31, F06.32, F06.33, F06.34, F30.10, F30.11, F30.12, F30.13, F30.2, F30.3, F30.4, F30.8, F30.9, F31.0, F31.10, F31.11, F31.12, F31.13, F31.2, F31.30, F31.31, F31.32, F31.4, F31.5, F31.60, F31.61, F31.62, F31.63, F31.64, F31.70, F31.71, F31.72, F31.73, F31.74, F31.75, F31.76, F31.77, F31.78, F31.81, F31.89, F31.9, F32.0, F32.1, F32.2, F32.3, F32.4, F32.5, F32.8, F32.81, F32.89, F32.9, F33.0, F33.1, F33.2, F33.3, F33.40, F33.41, F33.42, F33.8, F33.9, F34.0, F34.1, F34.8, F34.81, F34.89, F34.9, F39, R45.86
Personality Disorders	301.0, 301.10, 301.11, 301.12, 301.13, 301.20, 301.21, 301.22, 301.3, 301.4, 301.50, 301.51, 301.59, 301.6, 301.7, 301.81, 301.82, 301.83, 301.84, 301.89, 301.9

**Alcohol-Related
Disorders**

F60.0, F60.1, F60.2, F60.3, F60.4, F60.5, F60.6, F60.7,
F60.81, F60.89, F60.9, F69

291.0, 291.1, 291.2, 291.3, 291.4, 291.5, 291.8, 291.81,
291.82, 291.89, 291.9, 303.00, 303.01, 303.02, 303.03,
303.90, 303.91, 303.92, 303.93, 305.00, 305.01, 305.02,
305.03, 357.5, 425.5, 535.3, 535.30, 535.31, 571.0,
571.1, 571.2, 571.3, 760.71, 980.0

F10.10, F10.11, F10.120, F10.121, F10.129, F10.14,
F10.150, F10.151, F10.159, F10.180, F10.181, F10.182,
F10.188, F10.19, F10.20, F10.21, F10.220, F10.221,
F10.229, F10.230, F10.231, F10.232, F10.239, F10.24,
F10.250, F10.251, F10.259, F10.26, F10.27, F10.280,
F10.281, F10.282, F10.288, F10.29, F10.920, F10.921,
F10.929, F10.94, F10.950, F10.951, F10.959, F10.96,
F10.97, F10.980, F10.981, F10.982, F10.988, F10.99,
G62.1, I42.6, K29.20, K29.21, K70.0, K70.10, K70.11,
K70.2, K70.30, K70.31, K70.40, K70.9, O99.310,
O99.311, O99.312, O99.313, O99.314, O99.315, P04.3,
Q86.0

**Substance-Related
Disorders**

292.0, 292.11, 292.12, 292.2, 292.81, 292.82, 292.83,
292.84, 292.85, 292.89, 292.9, 304.00, 304.01, 304.02,
304.03, 304.10, 304.11, 304.12, 304.13, 304.20,
304.21, 304.22, 304.23, 304.30, 304.31, 304.32,
304.33, 304.40, 304.41, 304.42, 304.43, 304.50,
304.51, 304.52, 304.53, 304.60, 304.61, 304.62,
304.63, 304.70, 304.71, 304.72, 304.73, 304.80,
304.81, 304.82, 304.83, 304.90, 304.91, 304.92,
304.93, 305.20, 305.21, 305.22, 305.23, 305.30,
305.31, 305.32, 305.33, 305.40, 305.41, 305.42,
305.43, 305.50, 305.51, 305.52, 305.53, 305.60,
305.61, 305.62, 305.63, 305.70, 305.71, 305.72,
305.73, 305.80, 305.81, 305.82, 305.83, 305.90,
305.91, 305.92, 305.93, 648.30, 648.31, 648.32,
648.33, 648.34, 655.50, 655.51, 655.53, 760.72,
760.73, 760.75, 779.5, 965.00, 965.01, 965.02, 965.09,
V65.42

F11.10, F11.11, F11.120, F11.121, F11.122, F11.129,
F11.14, F11.150, F11.151, F11.159, F11.181, F11.182,
F11.188, F11.19, F11.20, F11.21, F11.220, F11.221,
F11.222, F11.229, F11.23, F11.24, F11.250, F11.251,
F11.259, F11.281, F11.282, F11.288, F11.29, F11.90,
F11.920, F11.921, F11.922, F11.929, F11.93, F11.94,
F11.950, F11.951, F11.959, F11.981, F11.982,
F11.988, F11.99, F12.10, F12.11, F12.120, F12.121,
F12.122, F12.129, F12.150, F12.151, F12.159,
F12.180, F12.188, F12.19, F12.20, F12.21, F12.220,

F12.221, F12.222, F12.229, F12.23, F12.250, F12.251, F12.259, F12.280, F12.288, F12.29, F12.90, F12.920, F12.921, F12.922, F12.929, F12.93, F12.950, F12.951, F12.959, F12.980, F12.988, F12.99, F13.10, F13.11, F13.120, F13.121, F13.129, F13.14, F13.150, F13.151, F13.159, F13.180, F13.181, F13.182, F13.188, F13.19, F13.20, F13.21, F13.220, F13.221, F13.229, F13.230, F13.231, F13.232, F13.239, F13.24, F13.250, F13.251, F13.259, F13.26, F13.27, F13.280, F13.281, F13.282, F13.288, F13.29, F13.90, F13.920, F13.921, F13.929, F13.930, F13.931, F13.932, F13.939, F13.94, F13.950, F13.951, F13.959, F13.96, F13.97, F13.980, F13.981, F13.982, F13.988, F13.99, F14.10, F14.11, F14.120, F14.121, F14.122, F14.129, F14.14, F14.150, F14.151, F14.159, F14.180, F14.181, F14.182, F14.188, F14.19, F14.20, F14.21, F14.220, F14.221, F14.222, F14.229, F14.23, F14.24, F14.250, F14.251, F14.259, F14.280, F14.281, F14.282, F14.288, F14.29, F14.90, F14.920, F14.921, F14.922, F14.929, F14.94, F14.950, F14.951, F14.959, F14.980, F14.981, F14.982, F14.988, F14.99, F15.10, F15.11, F15.120, F15.121, F15.122, F15.129, F15.14, F15.150, F15.151, F15.159, F15.180, F15.181, F15.182, F15.188, F15.19, F15.20, F15.21, F15.220, F15.221, F15.222, F15.229, F15.23, F15.24, F15.250, F15.251, F15.259, F15.280, F15.281, F15.282, F15.288, F15.29, F15.90, F15.920, F15.921, F15.922, F15.929, F15.93, F15.94, F15.950, F15.951, F15.959, F15.980, F15.981, F15.982, F15.988, F15.99, F16.10, F16.11, F16.120, F16.121, F16.122, F16.129, F16.14, F16.150, F16.151, F16.159, F16.180, F16.183, F16.188, F16.19, F16.20, F16.21, F16.220, F16.221, F16.229, F16.24, F16.250, F16.251, F16.259, F16.280, F16.283, F16.288, F16.29, F16.90, F16.920, F16.921, F16.929, F16.94, F16.950, F16.951, F16.959, F16.980, F16.983, F16.988, F16.99, F17.200, F17.201, F17.203, F17.208, F17.209, F17.210, F17.211, F17.213, F17.218, F17.219, F17.220, F17.221, F17.223, F17.228, F17.229, F17.290, F17.291, F17.293, F17.298, F17.299, F18.10, F18.11, F18.120, F18.121, F18.129, F18.14, F18.150, F18.151, F18.159, F18.17, F18.180, F18.188, F18.19, F18.20, F18.21, F18.220, F18.221, F18.229, F18.24, F18.250, F18.251, F18.259, F18.27, F18.280, F18.288, F18.29, F18.90, F18.920, F18.921, F18.929, F18.94, F18.950, F18.951, F18.959, F18.97, F18.980, F18.988, F18.99, F19.10, F19.11, F19.120, F19.121, F19.122, F19.129, F19.14, F19.150,

F19.151, F19.159, F19.16, F19.17, F19.180, F19.181, F19.182, F19.188, F19.19, F19.20, F19.21, F19.220, F19.221, F19.222, F19.229, F19.230, F19.231, F19.232, F19.239, F19.24, F19.250, F19.251, F19.259, F19.26, F19.27, F19.280, F19.281, F19.282, F19.288, F19.29, F19.90, F19.920, F19.921, F19.922, F19.929, F19.930, F19.931, F19.932, F19.939, F19.94, F19.950, F19.951, F19.959, F19.96, F19.97, F19.980, F19.981, F19.982, F19.988, F19.99, F55.0, F55.1, F55.2, F55.3, F55.4, F55.8, O35.5XX0, O35.5XX1, O35.5XX2, O35.5XX3, O35.5XX4, O35.5XX5, O35.5XX9, O99.320, O99.321, O99.322, O99.323, O99.324, O99.325, P04.41, P04.49, P96.1, P96.2, T40.0X1A, T40.0X1D, T40.0X1S, T40.0X3A, T40.0X3D, T40.0X3S, T40.0X4A, T40.0X4D, T40.0X4S, T40.0X5A, T40.0X5D, T40.0X5S, T40.0X6A, T40.0X6D, T40.0X6S, T40.1X1A, T40.1X1D, T40.1X1S, T40.1X3A, T40.1X3D, T40.1X3S, T40.1X4A, T40.1X4D, T40.1X4S, T40.1X5A, T40.1X5D, T40.1X5S, T40.5X1A, T40.5X1D, T40.5X1S, T40.5X3A, T40.5X3D, T40.5X3S, T40.5X4A, T40.5X4D, T40.5X4S, T40.5X5A, T40.5X5D, T40.5X5S, T40.5X6A, T40.5X6D, T40.5X6S, T40.7X1A, T40.7X1D, T40.7X1S, T40.7X3A, T40.7X3D, T40.7X3S, T40.7X4A, T40.7X4D, T40.7X4S, T40.7X5A, T40.7X5D, T40.7X5S, T40.7X6A, T40.7X6D, T40.7X6S, T40.8X1A, T40.8X1D, T40.8X1S, T40.8X3A, T40.8X3D, T40.8X3S, T40.8X4A, T40.8X4D, T40.8X4S, T40.8X5A, T40.8X5D, T40.8X5S, T40.901A, T40.901D, T40.901S, T40.903A, T40.903D, T40.903S, T40.904A, T40.904D, T40.904S, T40.905A, T40.905D, T40.905S, T40.906A, T40.906D, T40.906S, T40.991A, T40.991D, T40.991S, T40.993A, T40.993D, T40.993S, T40.994A, T40.994D, T40.994S, T40.995A, T40.995D, T40.995S, T40.996A, T40.996D, T40.996S

Central Pain

338.0, 338.11, 338.12, 338.18, 338.19, 338.21, 338.22, 338.28, 338.29, 338.3, 338.4
G89.0, G89.11, G89.12, G89.18, G89.21, G89.22, G89.28, G89.29, G89.3, G89.4

**Musculoskeletal
Conditions**

**Rheumatoid arthritis and related
disease**

714.0, 714.1, 714.2, 714.30, 714.31, 714.32, 714.33, 714.4, 714.81, 714.89, 714.9, 720.0

M05.00, M05.011, M05.012, M05.019, M05.021, M05.022, M05.029, M05.031, M05.032, M05.039, M05.041, M05.042, M05.049, M05.051, M05.052, M05.059, M05.061, M05.062, M05.069, M05.071, M05.072, M05.079, M05.09, M05.10, M05.111, M05.112, M05.119, M05.121, M05.122, M05.129, M05.131, M05.132, M05.139, M05.141, M05.142, M05.149, M05.151, M05.152, M05.159, M05.161, M05.162, M05.169, M05.171, M05.172, M05.179, M05.19, M05.20, M05.211, M05.212, M05.219, M05.221, M05.222, M05.229, M05.231, M05.232, M05.239, M05.241, M05.242, M05.249, M05.251, M05.252, M05.259, M05.261, M05.262, M05.269, M05.271, M05.272, M05.279, M05.29, M05.30, M05.311, M05.312, M05.319, M05.321, M05.322, M05.329, M05.331, M05.332, M05.339, M05.341, M05.342, M05.349, M05.351, M05.352, M05.359, M05.361, M05.362, M05.369, M05.371, M05.372, M05.379, M05.39, M05.40, M05.411, M05.412, M05.419, M05.421, M05.422, M05.429, M05.431, M05.432, M05.439, M05.441, M05.442, M05.449, M05.451, M05.452, M05.459, M05.461, M05.462, M05.469, M05.471, M05.472, M05.479, M05.49, M05.50, M05.511, M05.512, M05.519, M05.521, M05.522, M05.529, M05.531, M05.532, M05.539, M05.541, M05.542, M05.549, M05.551, M05.552, M05.559, M05.561, M05.562, M05.569, M05.571, M05.572, M05.579, M05.59, M05.60, M05.611, M05.612, M05.619, M05.621, M05.622, M05.629, M05.631, M05.632, M05.639, M05.641, M05.642, M05.649, M05.651, M05.652, M05.659, M05.661, M05.662, M05.669, M05.671, M05.672, M05.679, M05.69, M05.70, M05.711, M05.712, M05.719, M05.721, M05.722, M05.729, M05.731, M05.732, M05.739, M05.741, M05.742, M05.749, M05.751, M05.752, M05.759, M05.761, M05.762, M05.769, M05.771, M05.772, M05.779, M05.79, M05.80, M05.811, M05.812, M05.819, M05.821, M05.822, M05.829, M05.831, M05.832, M05.839, M05.841, M05.842, M05.849, M05.851, M05.852, M05.859, M05.861, M05.862, M05.869, M05.871, M05.872, M05.879, M05.89, M05.9, M06.00, M06.011, M06.012, M06.019, M06.021, M06.022, M06.029, M06.031, M06.032, M06.039, M06.041, M06.042, M06.049, M06.051, M06.052, M06.059, M06.061, M06.062, M06.069, M06.071, M06.072, M06.079, M06.08, M06.09, M06.1, M06.20, M06.211, M06.212, M06.219, M06.221, M06.222, M06.229, M06.231, M06.232, M06.239, M06.241, M06.242, M06.249, M06.251, M06.252, M06.259, M06.261, M06.262, M06.269, M06.271, M06.272, M06.279, M06.28, M06.29, M06.30, M06.311, M06.312, M06.319, M06.321, M06.322, M06.329, M06.331, M06.332, M06.339, M06.341, M06.342, M06.349, M06.351, M06.352, M06.359, M06.361, M06.362, M06.369,

M06.371, M06.372, M06.379, M06.38, M06.39, M06.4, M06.80, M06.811, M06.812, M06.819, M06.821, M06.822, M06.829, M06.831, M06.832, M06.839, M06.841, M06.842, M06.849, M06.851, M06.852, M06.859, M06.861, M06.862, M06.869, M06.871, M06.872, M06.879, M06.88, M06.89, M06.9, M08.00, M08.011, M08.012, M08.019, M08.021, M08.022, M08.029, M08.031, M08.032, M08.039, M08.041, M08.042, M08.049, M08.051, M08.052, M08.059, M08.061, M08.062, M08.069, M08.071, M08.072, M08.079, M08.08, M08.09, M08.1, M08.20, M08.211, M08.212, M08.219, M08.221, M08.222, M08.229, M08.231, M08.232, M08.239, M08.241, M08.242, M08.249, M08.251, M08.252, M08.259, M08.261, M08.262, M08.269, M08.271, M08.272, M08.279, M08.28, M08.29, M08.3, M08.40, M08.411, M08.412, M08.419, M08.421, M08.422, M08.429, M08.431, M08.432, M08.439, M08.441, M08.442, M08.449, M08.451, M08.452, M08.459, M08.461, M08.462, M08.469, M08.471, M08.472, M08.479, M08.48, M08.80, M08.811, M08.812, M08.819, M08.821, M08.822, M08.829, M08.831, M08.832, M08.839, M08.841, M08.842, M08.849, M08.851, M08.852, M08.859, M08.861, M08.862, M08.869, M08.871, M08.872, M08.879, M08.88, M08.89, M08.90, M08.911, M08.912, M08.919, M08.921, M08.922, M08.929, M08.931, M08.932, M08.939, M08.941, M08.942, M08.949, M08.951, M08.952, M08.959, M08.961, M08.962, M08.969, M08.971, M08.972, M08.979, M08.98, M08.99, M12.00, M12.011, M12.012, M12.019, M12.021, M12.022, M12.029, M12.031, M12.032, M12.039, M12.041, M12.042, M12.049, M12.051, M12.052, M12.059, M12.061, M12.062, M12.069, M12.071, M12.072, M12.079, M12.08, M12.09, M45.0, M45.1, M45.2, M45.3, M45.4, M45.5, M45.6, M45.7, M45.8, M45.9, M48.8X1, M48.8X2, M48.8X3, M48.8X4, M48.8X5, M48.8X6, M48.8X7, M48.8X8, M48.8X9

Osteoarthritis

715.00, 715.04, 715.09, 715.10, 715.11, 715.12, 715.13, 715.14, 715.15, 715.16, 715.17, 715.18, 715.20, 715.21, 715.22, 715.23, 715.24, 715.25, 715.26, 715.27, 715.28, 715.30, 715.31, 715.32, 715.33, 715.34, 715.35, 715.36, 715.37, 715.38, 715.80, 715.89, 715.90, 715.91, 715.92, 715.93, 715.94, 715.95, 715.96, 715.97, 715.98, V13.4 M15.0, M15.1, M15.2, M15.3, M15.4, M15.8, M15.9, M16.0, M16.10, M16.11, M16.12, M16.2, M16.30, M16.31, M16.32, M16.4, M16.50, M16.51, M16.52, M16.6, M16.7, M16.9, M17.0, M17.10, M17.11, M17.12, M17.2, M17.30, M17.31, M17.32, M17.4, M17.5, M17.9, M18.0, M18.10, M18.11, M18.12, M18.2, M18.30, M18.31, M18.32, M18.4, M18.50, M18.51, M18.52, M18.9, M19.011, M19.012, M19.019,

M19.021, M19.022, M19.029, M19.031, M19.032, M19.039, M19.041, M19.042, M19.049, M19.071, M19.072, M19.079, M19.111, M19.112, M19.119, M19.121, M19.122, M19.129, M19.131, M19.132, M19.139, M19.141, M19.142, M19.149, M19.171, M19.172, M19.179, M19.211, M19.212, M19.219, M19.221, M19.222, M19.229, M19.231, M19.232, M19.239, M19.241, M19.242, M19.249, M19.271, M19.272, M19.279, M19.90, M19.91, M19.92, M19.93

Pathological fracture

733.1, 733.10, 733.11, 733.12, 733.13, 733.14, 733.15, 733.16, 733.19, 733.93, 733.94, 733.95, 733.96, 733.97, 733.98, V13.51

M80.00XA, M80.00XD, M80.00XG, M80.00XK, M80.00XP, M80.00XS, M80.011A, M80.011D, M80.011G, M80.011K, M80.011P, M80.011S, M80.012A, M80.012D, M80.012G, M80.012K, M80.012P, M80.012S, M80.019A, M80.019D, M80.019G, M80.019K, M80.019P, M80.019S, M80.021A, M80.021D, M80.021G, M80.021K, M80.021P, M80.021S, M80.022A, M80.022D, M80.022G, M80.022K, M80.022P, M80.022S, M80.029A, M80.029D, M80.029G, M80.029K, M80.029P, M80.029S, M80.031A, M80.031D, M80.031G, M80.031K, M80.031P, M80.031S, M80.032A, M80.032D, M80.032G, M80.032K, M80.032P, M80.032S, M80.039A, M80.039D, M80.039G, M80.039K, M80.039P, M80.039S, M80.041A, M80.041D, M80.041G, M80.041K, M80.041P, M80.041S, M80.042A, M80.042D, M80.042G, M80.042K, M80.042P, M80.042S, M80.049A, M80.049D, M80.049G, M80.049K, M80.049P, M80.049S, M80.051A, M80.051D, M80.051G, M80.051K, M80.051P, M80.051S, M80.052A, M80.052D, M80.052G, M80.052K, M80.052P, M80.052S, M80.059A, M80.059D, M80.059G, M80.059K, M80.059P, M80.059S, M80.061A, M80.061D, M80.061G, M80.061K, M80.061P, M80.061S, M80.062A, M80.062D, M80.062G, M80.062K, M80.062P, M80.062S, M80.069A, M80.069D, M80.069G, M80.069K, M80.069P, M80.069S, M80.071A, M80.071D, M80.071G, M80.071K, M80.071P, M80.071S, M80.072A, M80.072D, M80.072G, M80.072K, M80.072P, M80.072S, M80.079A, M80.079D, M80.079G, M80.079K, M80.079P, M80.079S, M80.08XA, M80.08XD, M80.08XG, M80.08XK, M80.08XP, M80.08XS, M80.80XA, M80.80XD, M80.80XG, M80.80XK, M80.80XP, M80.80XS, M80.811A, M80.811D, M80.811G, M80.811K, M80.811P, M80.811S, M80.812A, M80.812D, M80.812G, M80.812K, M80.812P, M80.812S, M80.819A, M80.819D, M80.819G, M80.819K, M80.819P, M80.819S, M80.821A, M80.821D, M80.821G, M80.821K, M80.821P, M80.821S, M80.822A, M80.822D, M80.822G, M80.822K, M80.822P, M80.822S,

M80.829A, M80.829D, M80.829G, M80.829K, M80.829P,
M80.829S, M80.831A, M80.831D, M80.831G, M80.831K,
M80.831P, M80.831S, M80.832A, M80.832D, M80.832G,
M80.832K, M80.832P, M80.832S, M80.839A, M80.839D,
M80.839G, M80.839K, M80.839P, M80.839S, M80.841A,
M80.841D, M80.841G, M80.841K, M80.841P, M80.841S,
M80.842A, M80.842D, M80.842G, M80.842K, M80.842P,
M80.842S, M80.849A, M80.849D, M80.849G, M80.849K,
M80.849P, M80.849S, M80.851A, M80.851D, M80.851G,
M80.851K, M80.851P, M80.851S, M80.852A, M80.852D,
M80.852G, M80.852K, M80.852P, M80.852S, M80.859A,
M80.859D, M80.859G, M80.859K, M80.859P, M80.859S,
M80.861A, M80.861D, M80.861G, M80.861K, M80.861P,
M80.861S, M80.862A, M80.862D, M80.862G, M80.862K,
M80.862P, M80.862S, M80.869A, M80.869D, M80.869G,
M80.869K, M80.869P, M80.869S, M80.871A, M80.871D,
M80.871G, M80.871K, M80.871P, M80.871S, M80.872A,
M80.872D, M80.872G, M80.872K, M80.872P, M80.872S,
M80.879A, M80.879D, M80.879G, M80.879K, M80.879P,
M80.879S, M80.88XA, M80.88XD, M80.88XG, M80.88XK,
M80.88XP, M80.88XS, M84.40XA, M84.40XD, M84.40XG,
M84.40XK, M84.40XP, M84.40XS, M84.411A, M84.411D,
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M84.439G, M84.439K, M84.439P, M84.439S, M84.441A,
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M84.442S, M84.443A, M84.443D, M84.443G, M84.443K,
M84.443P, M84.443S, M84.444A, M84.444D, M84.444G,
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M84.445G, M84.445K, M84.445P, M84.445S, M84.446A,
M84.446D, M84.446G, M84.446K, M84.446P, M84.446S,
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M84.451S, M84.452A, M84.452D, M84.452G, M84.452K,
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M84.673A, M84.673D, M84.673G, M84.673K, M84.673P,

Other connective tissue disease

M84.673S, M84.674A, M84.674D, M84.674G, M84.674K, M84.674P, M84.674S, M84.675A, M84.675D, M84.675G, M84.675K, M84.675P, M84.675S, M84.676A, M84.676D, M84.676G, M84.676K, M84.676P, M84.676S, M84.68XA, M84.68XD, M84.68XG, M84.68XK, M84.68XP, M84.68XS, Z87.310, Z87.311

327.52, 567.31, 710.5, 725, 726.0, 726.10, 726.11, 726.12, 726.13, 726.19, 726.2, 726.30, 726.31, 726.32, 726.33, 726.39, 726.4, 726.5, 726.60, 726.61, 726.62, 726.63, 726.64, 726.65, 726.69, 726.70, 726.71, 726.72, 726.73, 726.79, 726.8, 726.90, 726.91, 727.00, 727.01, 727.02, 727.03, 727.04, 727.05, 727.06, 727.09, 727.2, 727.3, 727.40, 727.41, 727.42, 727.43, 727.49, 727.50, 727.51, 727.59, 727.60, 727.61, 727.62, 727.63, 727.64, 727.65, 727.66, 727.67, 727.68, 727.69, 727.81, 727.82, 727.83, 727.89, 727.9, 728.0, 728.10, 728.11, 728.12, 728.13, 728.19, 728.2, 728.3, 728.4, 728.5, 728.6, 728.71, 728.79, 728.81, 728.82, 728.83, 728.84, 728.85, 728.86, 728.87, 728.88, 728.89, 728.9, 729.0, 729.1, 729.2, 729.30, 729.31, 729.39, 729.4, 729.5, 729.6, 729.71, 729.72, 729.73, 729.79, 729.81, 729.82, 729.89, 729.9, 729.90, 729.91, 729.92, 729.99, 781.9, 781.91, 781.92, 781.94, 781.99, 793.7, V13.5, V13.59, V43.6, V43.60, V43.61, V43.62, V43.63, V43.64, V43.65, V43.66, V43.69, V43.7, V45.4, V48.1, V48.2, V48.3, V49.0, V49.1, V49.2, V49.5, V49.60, V49.61, V49.62, V49.63, V49.64, V49.65, V49.66, V49.67, V49.70, V49.71, V49.72, V49.73, V49.74, V49.75, V49.76, V49.77, V53.7

G47.62, K68.12, M24.20, M24.211, M24.212, M24.219, M24.221, M24.222, M24.229, M24.231, M24.232, M24.239, M24.241, M24.242, M24.249, M24.251, M24.252, M24.259, M24.271, M24.272, M24.273, M24.274, M24.275, M24.276, M24.28, M35.2, M35.3, M35.4, M35.6, M35.7, M35.8, M60.000, M60.001, M60.002, M60.003, M60.004, M60.005, M60.009, M60.011, M60.012, M60.019, M60.021, M60.022, M60.029, M60.031, M60.032, M60.039, M60.041, M60.042, M60.043, M60.044, M60.045, M60.046, M60.051, M60.052, M60.059, M60.061, M60.062, M60.069, M60.070, M60.071, M60.072, M60.073, M60.074, M60.075, M60.076, M60.077, M60.078, M60.08, M60.09, M60.10, M60.111, M60.112, M60.119, M60.121, M60.122, M60.129, M60.131, M60.132, M60.139, M60.141, M60.142, M60.149, M60.151, M60.152, M60.159, M60.161, M60.162, M60.169, M60.171, M60.172, M60.179, M60.18, M60.19, M60.20, M60.211, M60.212, M60.219, M60.221, M60.222, M60.229, M60.231, M60.232, M60.239, M60.241, M60.242, M60.249, M60.251, M60.252, M60.259, M60.261, M60.262, M60.269, M60.271, M60.272,

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Muscle Atrophy Weakness

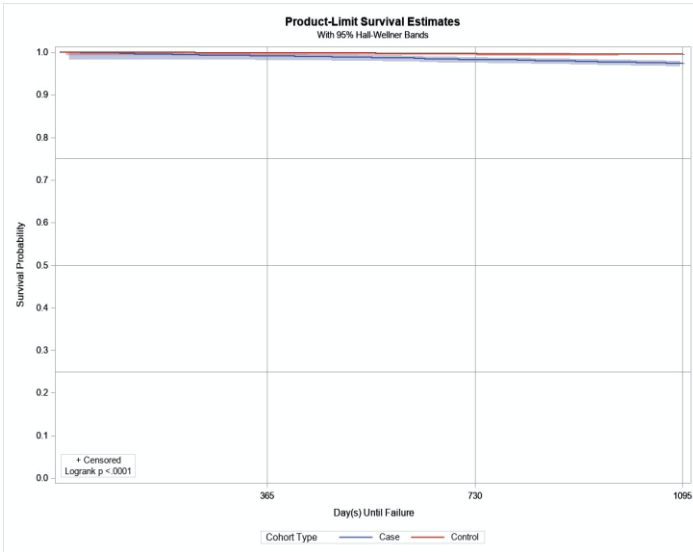
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Myalgia

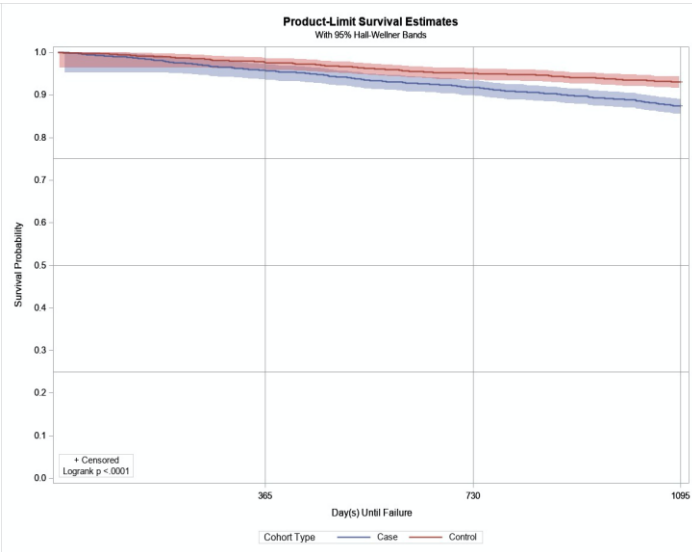
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M62.81
729.1
M60.9, M79.1, M79.10, M79.11, M79.12, M79.18, M79.7

Supplementary Figure S2. Kaplan-Meier ADRD_Free Survival Curves among Matched Cohorts of Adults with and without CP (cases and controls)

A. Matched 45-64-year-old cohorts



B. Matched 65-and-older cohorts



Supplementary File S4. Rationale for Using the Parametric Weibull Regression

The rationale for use of the parametric Weibull regression model was informed by distributional assumptions that included testing Weibull, lognormal, exponential, logistic, loglog, and normal distribution with respect to the follow-up in days by minimizing critical model fit statistics. Critical assessment of Akaike Information Criterion (AIC) was used as a basis for minimization amongst all candidate distributions (reported below). Furthermore, using a log-negative-log graph, we tested the assumption for the proportional hazard. Except for a few early points, the parallel assumption holds true (Supplementary Figure S3). To estimate the adjusted hazard ratio, we performed multivariable Weibull regression to incrementally adjust for demographics, socioeconomic, and composite Elixhauser comorbidity index. Since risk of incident ADRD increases with age, to assess the association of CP and age on incident ADRD, we interacted CP (binary variable) with our categorical age variable (45-64 and 65+) (Supplementary Table S5 and Figure S4; Area Under Curve (AUC)=0.81; C-Statistic (standard error (SE)): 0.80 (0.00)).

Finally, to account for selection bias attributable to CP patients, we performed propensity-score matching. Specifically, we estimated the propensity to be in the case (CP) group using multivariable logistic regression adjusting for demographics, individual comorbidities, and socioeconomic variables. We used a one-to-one caliper matching algorithm with caliper size of 0.0001 without replacement. To assess covariate balance, post-matched analyses of effect sizes were compared between the treated (CP) and control group. All patients were right censored if they did not experience ADRD in the follow-up period or disenrolled from the plan (Supplementary Table S6 and Figure S5; AUC=0.81; C-Statistic (SE): 0.80 (0.01)).

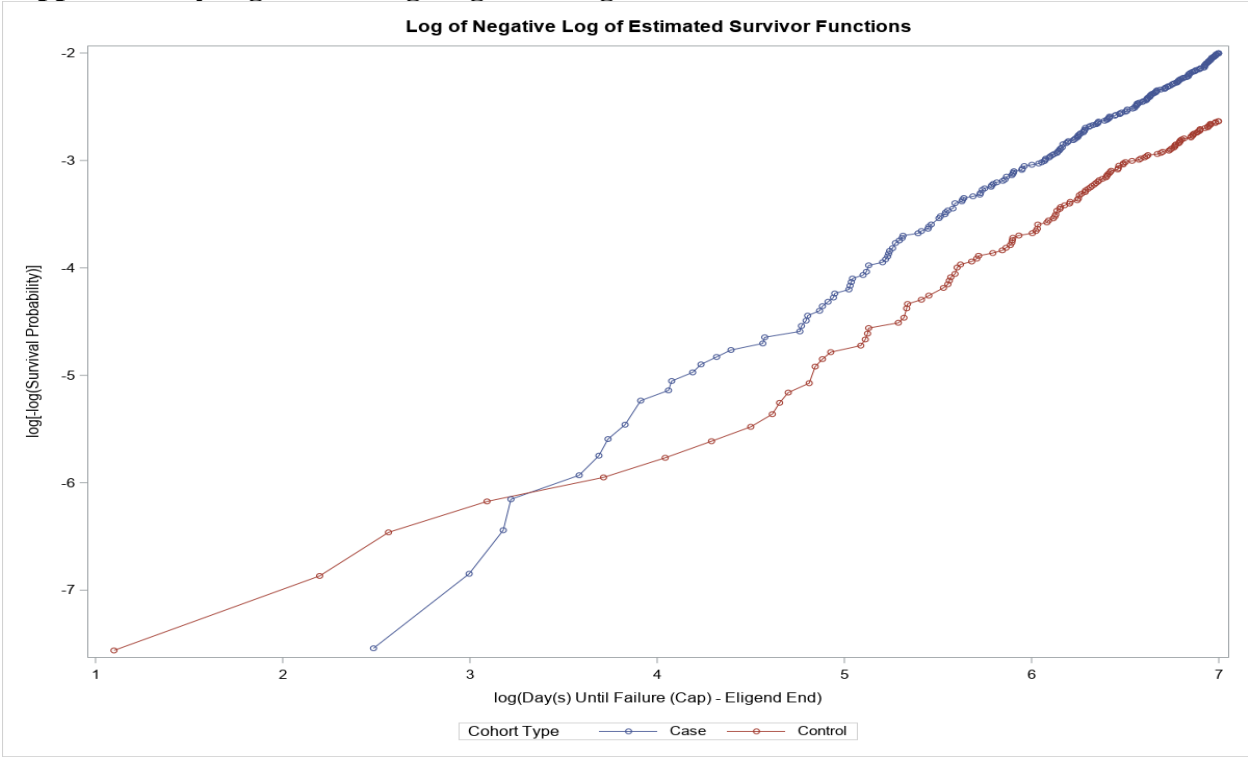
No Interaction

	Criterion	Weibull	Lognormal	Exponential	Logistic	Log-log	Normal
Null Model							
	<i>-2 Log Likelihood</i>	10309.54	10315.18	10310.52	10586.10	10309.55	10548.34
	<i>AIC (smaller is better)</i>	10315.54	10321.18	10314.52	10592.10	10315.55	10554.34
	<i>AICC (smaller is better)</i>	10315.54	10321.18	10314.52	10592.11	10315.55	10554.34
	<i>BIC (smaller is better)</i>	10337.19	10342.83	10328.96	10613.76	10337.20	10575.99
Full Model							
	<i>-2 Log Likelihood</i>	9800.71	9801.49	9802.75	10065.21	9796.09	10028.72
	<i>AIC (smaller is better)</i>	9856.71	9857.49	9856.75	10121.21	9852.09	10084.72
	<i>AICC (smaller is better)</i>	9856.88	9857.65	9856.90	10121.37	9852.25	10084.88
	<i>BIC (smaller is better)</i>	10058.82	10059.59	10051.63	10323.31	10054.19	10286.82

Interaction between CP and Age Group

	Criterion	Weibull	Lognormal	Exponential	Logistic	Log-log	Normal
Null Model							
	<i>-2 Log Likelihood</i>	9942.56	9956.62	9944.01	10214.67	9942.69	10181.02
	<i>AIC (smaller is better)</i>	9952.56	9966.62	9952.01	10224.67	9952.69	10191.02
	<i>AICC (smaller is better)</i>	9952.57	9966.62	9952.02	10224.67	9952.70	10191.02
	<i>BIC (smaller is better)</i>	9988.65	10002.71	9980.88	10260.76	9988.78	10227.11
Full Model							
	<i>-2 Log Likelihood</i>	9787.05	9794.73	9789.06	10053.13	9783.82	10021.95
	<i>AIC (smaller is better)</i>	9845.05	9852.73	9845.06	10111.13	9841.82	10079.95
	<i>AICC (smaller is better)</i>	9845.22	9852.90	9845.22	10111.30	9842.00	10080.12
	<i>BIC (smaller is better)</i>	10054.36	10062.04	10047.16	10320.45	10051.14	10289.27

Supplementary Figure S3. Log-Negative-Log of the Estimated Survival Function



Supplementary Table S5. Regression Results for Unmatched Cohorts of Adults with and without Cerebral Palsy (CP)

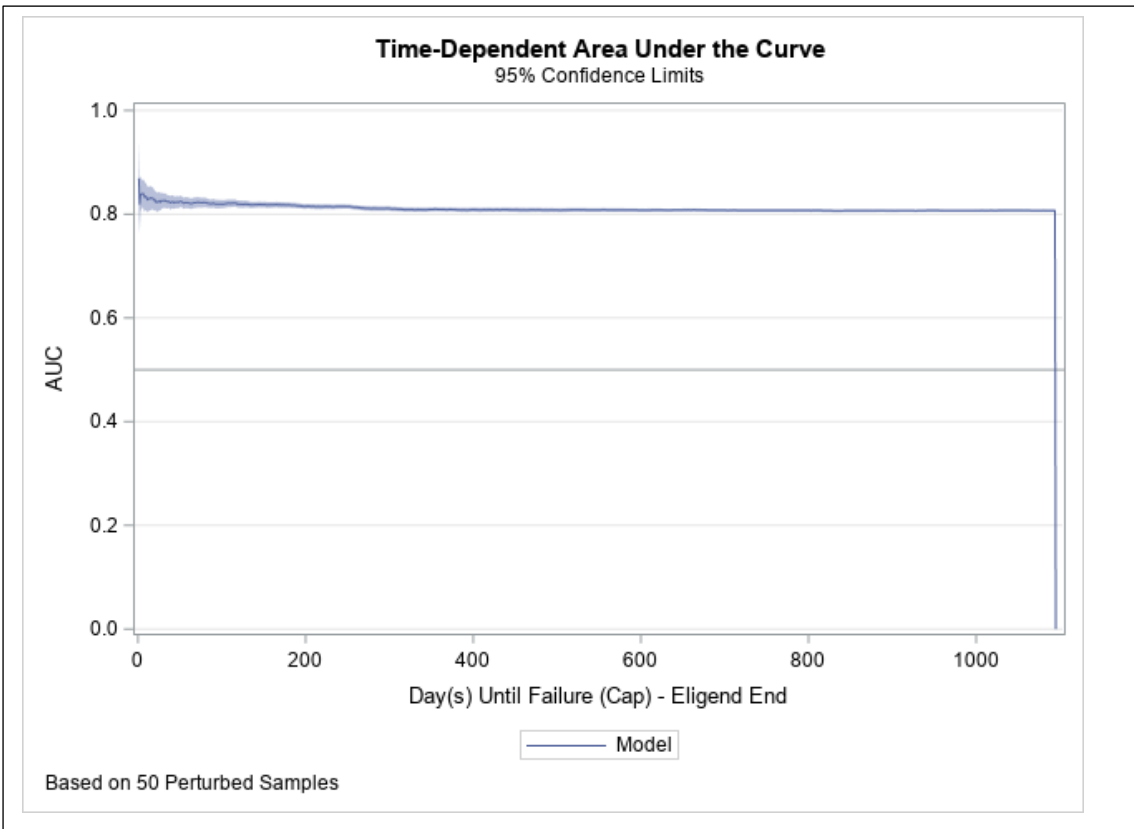
	Estimate	StdErr	HR	95% CI		P
<i>CP</i>	-1.741	0.094				<0.001
<i>Age 65+</i>	-2.311	0.026				<0.001
<i>CP * Age 65+</i>		1.055	0.109			
<i>Female</i>	-0.194	0.011	1.251	1.219	1.284	<0.001
<i>Race</i>						<0.001
<i>Asian</i>	0.270	0.037	0.732	0.674	0.796	<0.001
<i>Black</i>	-0.067	0.021	1.080	1.031	1.132	0.001
<i>Hispanic</i>	-0.054	0.020	1.064	1.017	1.113	0.007
<i>Unknown/Missing</i>	0.048	0.017	0.946	0.909	0.984	0.006
<i>White</i>			Reference			
<i>Division</i>						<0.001
<i>East North Central</i>	-0.088	0.025	1.107	1.047	1.171	<0.001
<i>East South Central</i>	-0.224	0.036	1.296	1.195	1.406	<0.001
<i>Middle Atlantic</i>	-0.262	0.026	1.354	1.278	1.434	<0.001
<i>Mountain</i>	0.004	0.025	0.995	0.940	1.054	0.870
<i>New England</i>	-0.296	0.029	1.408	1.318	1.504	<0.001
<i>Pacific</i>	-0.326	0.022	1.457	1.387	1.531	<0.001
<i>South Atlantic</i>	-0.088	0.022	1.107	1.054	1.163	<0.001
<i>Unknown</i>	-0.243	0.051	1.324	1.180	1.486	<0.001
<i>West North Central</i>	0.070	0.027	0.922	0.867	0.980	0.009
<i>West South Central</i>			Reference			
<i>Elixhauser</i>	-0.124	0.002	1.154	1.147	1.160	<0.001
<i>Education</i>						<0.001
<i>Less than 12th Grade</i>	0.009	0.062	0.990	0.860	1.139	0.889
<i>High School Diploma</i>	-0.013	0.014	1.015	0.984	1.047	0.342
<i>Bachelor Degree Plus</i>	-0.077	0.018	1.093	1.049	1.138	<0.001
<i>Unknown/Missing</i>	0.936	0.032	0.339	0.315	0.364	<0.001
<i>Less than Bachelor Degree</i>			Reference			
<i>Net-worth</i>						<0.001
<i>Unknown/Missing</i>						
<\$25K	-0.771	0.020	2.439	2.333	2.550	<0.001
\$25K-\$149K	-0.204	0.021	1.266	1.206	1.330	<0.001
\$150K-\$249K	-0.248	0.020	1.332	1.272	1.395	<0.001
\$250K-\$499K	-0.229	0.022	1.302	1.238	1.370	<0.001
\$500K+			Reference			

Source: The 2007-2017 OptumInsight

Abbreviations: StdErr: Standard Error; HR: Hazard Ratio; CI: Confidence Interval.

Notes: The rationale for use of the parametric Weibull regression was informed by distributional assumptions that included testing Weibull, lognormal, exponential, gamma, logistic, loglog, and normal distribution with respect to the follow-up in days by minimizing critical model fit statistics. Critical assessment of Akaike Information Criterion was used as a basis for minimization amongst all candidate distributions.

Supplementary Figure S4. Time-Dependent Area Under the Curve for the Fully Adjusted Unmatched Regression Model



Supplementary Table S6. Regression Results for Matched Cohorts of Adults with and without Cerebral Palsy (CP)

	Estimate	StdErr	HR	95% CI		P
<i>CP</i>	-1.456	0.265	-	-	-	<0.001
<i>Age 65+</i>	-2.345	0.271	-	-	-	<0.001
<i>CP * Age 65+</i>	0.945	0.279	-	-	-	
<i>Female</i>	-0.177	0.088	1.208	1.004	1.453	0.045
<i>Race</i>						0.673
<i>Asian</i>	0.253	0.322	0.763	0.389	1.496	0.432
<i>Black</i>	-0.070	0.150	1.078	0.787	1.476	0.640
<i>Hispanic</i>	-0.062	0.171	1.069	0.747	1.529	0.717
<i>Unknown/Missing</i>	0.132	0.125	0.868	0.669	1.128	0.290
<i>White</i>			Reference			
<i>Division</i>						0.002
<i>East North Central</i>	-0.511	0.210	1.726	1.111	2.681	0.015
<i>East South Central</i>	-0.283	0.321	1.353	0.691	2.648	0.377
<i>Middle Atlantic</i>	-0.824	0.212	2.408	1.546	3.751	<0.001
<i>Mountain</i>	-0.235	0.219	1.285	0.812	2.033	0.283
<i>New England</i>	-0.810	0.232	2.374	1.460	3.860	<0.001
<i>Pacific</i>	-0.492	0.198	1.691	1.118	2.557	0.013
<i>South Atlantic</i>	-0.397	0.195	1.528	1.017	2.296	0.041
<i>Unknown</i>	-0.680	0.395	2.066	0.905	4.717	0.085
<i>West North Central</i>	-0.193	0.246	1.229	0.735	2.055	0.433
<i>West South Central</i>			Reference			
<i>Elixhauser</i>	-0.101	0.016	1.114	1.076	1.152	<0.001
<i>Education</i>						0.022
<i>Less than 12th Grade</i>	0.242	0.552	0.773	0.243	2.453	0.662
<i>High School Diploma</i>	-0.074	0.102	1.083	0.874	1.340	0.467
<i>Bachelor Degree Plus</i>	-0.168	0.141	1.196	0.890	1.608	0.236
<i>Unknown/Missing</i>	0.949	0.322	0.363	0.185	0.712	0.003
<i>Less than Bachelor Degree</i>			Reference			
<i>Net worth</i>						<0.001
<i>Unknown/Missing</i>	-0.840	0.153	2.452	1.782	3.373	<0.001
<\$25K	-0.114	0.175	1.129	0.783	1.628	0.515
\$25K-\$149K	-0.168	0.179	1.196	0.824	1.738	0.347
\$150K-\$249K	-0.243	0.200	1.297	0.854	1.969	0.223
\$250K-\$499K	-0.027	0.179	1.030	0.709	1.496	0.878
\$500K+			Reference			

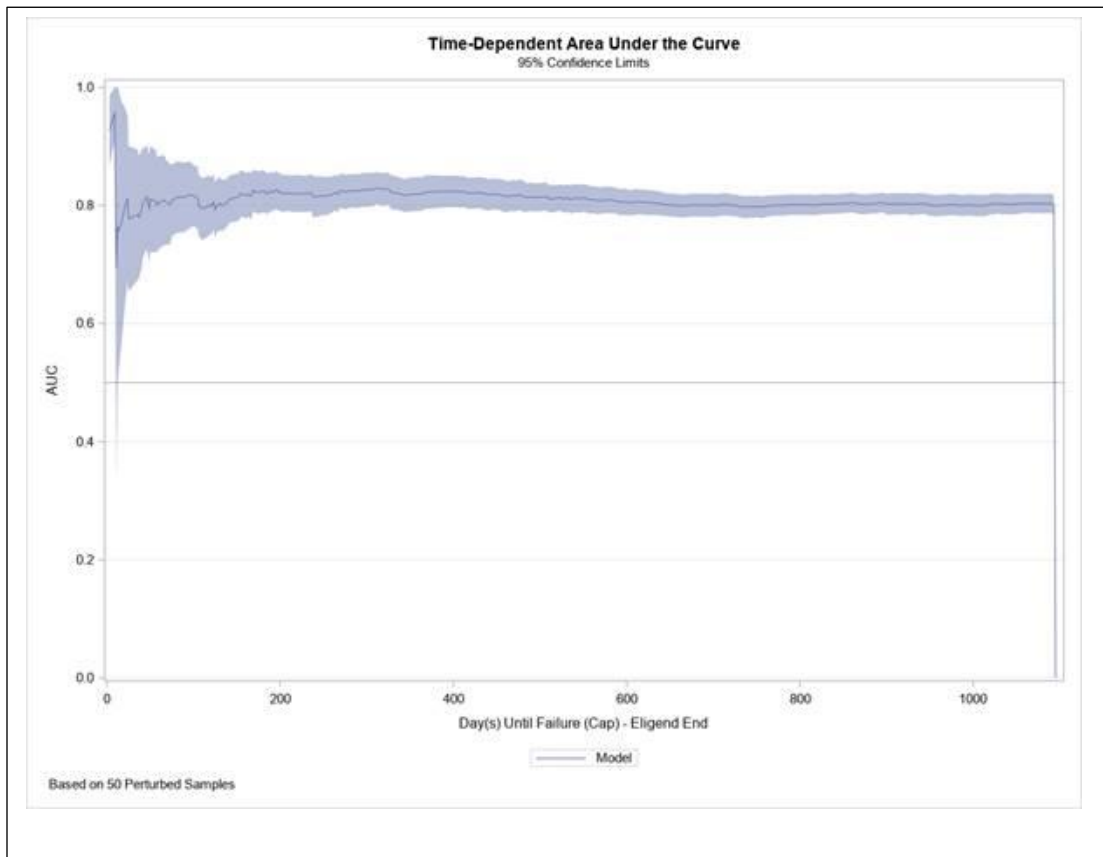
Source: The 2007-2017 OptumInsight;

Abbreviations: StdErr: Standard Error; HR: Hazard Ratio; CI: Confidence Interval.

Notes: The rationale for use of the parametric Weibull regression was informed by distributional assumptions that included testing Weibull, lognormal, exponential, gamma, logistic, loglog, and normal distribution with respect to

the follow-up in days by minimizing critical model fit statistics. Critical assessment of Akaike Information Criterion was used as a basis for minimization amongst all candidate distributions.

Supplementary Figure S5. Time-Dependent Area Under the Curve for the Fully Adjusted Matched Regression Model



Supplementary Table S7. Prevalence of Chronic Conditions among Adults with (Case) and Without (Control) Cerebral Palsy

Spinal Cord Injury	<i>PREMATCHED</i>			<i>POSTMATCHED</i>		
	<i>Case</i>	<i>Control</i>	ES	<i>Case</i>	<i>Control</i>	ES
Overall	5,176	1,119,131		5,038	5,038	
Psychological						
<i>Any Psychological</i>	1397 (27.0%)	178378 (15.9%)	0.27	1290 (25.6%)	1190 (23.6%)	0.05
<i>Insomnia</i>	203 (3.9%)	35917 (3.2%)	0.04	190 (3.8%)	161 (3.2%)	0.03
<i>Adjustment disorders</i>	100 (1.9%)	13438 (1.2%)	0.06	90 (1.8%)	72 (1.4%)	0.03
<i>Anxiety disorders</i>	502 (9.7%)	67336 (6.0%)	0.14	452 (9.0%)	428 (8.5%)	0.02
<i>PTSD</i>	21 (0.4%)	2262 (0.2%)	0.04	18 (0.4%)	10 (0.2%)	0.04
<i>Impulse control</i>	18 (0.3%)	258 (0.0%)	0.11	6 (0.1%)	3 (0.1%)	0.00
<i>Mood disorders</i>	791 (15.3%)	86548 (7.7%)	0.24	708 (14.1%)	671 (13.3%)	0.02
<i>Personality disorders</i>	18 (0.3%)	1132 (0.1%)	0.05	7 (0.1%)	9 (0.2%)	-0.03
<i>Alcohol-related dis.</i>	72 (1.4%)	8425 (0.8%)	0.06	69 (1.4%)	66 (1.3%)	0.01
<i>Substance-related dis.</i>	53 (1.0%)	6251 (0.6%)	0.05	47 (0.9%)	45 (0.9%)	0.00
Cardiometabolic						
<i>Any Cardiometabolic</i>	3051 (58.9%)	579317 (51.8%)	0.14	2926 (58.1%)	2902 (57.6%)	0.01
<i>Cardiac dysrhythmias</i>	616 (11.9%)	102838 (9.2%)	0.09	567 (11.3%)	572 (11.4%)	0.00
<i>Heart Failure</i>	287 (5.5%)	30103 (2.7%)	0.14	246 (4.9%)	262 (5.2%)	-0.01
<i>Peripheral and visceral atherosclerosis</i>	467 (9.0%)	45074 (4.0%)	0.21	408 (8.1%)	405 (8.0%)	0.00
<i>Liver; Non-Alcohol</i>	76 (1.5%)	11491 (1.0%)	0.05	67 (1.3%)	64 (1.3%)	0.00
<i>Chronic kidney disease</i>	234 (4.5%)	35562 (3.2%)	0.07	219 (4.3%)	194 (3.9%)	0.02
<i>Diabetes Type II</i>	970 (18.7%)	180054 (16.1%)	0.07	932 (18.5%)	940 (18.7%)	-0.01
<i>Hypercholesterolemia</i>	906 (17.5%)	186132 (16.6%)	0.02	871 (17.3%)	898 (17.8%)	-0.01
<i>Hypertension</i>	2456 (47.4%)	470379 (42.0%)	0.11	2358 (46.8%)	2369 (47.0%)	0.00
Musculoskeletal						
<i>Any Musculoskeletal</i>	2416 (46.7%)	363488 (32.5%)	0.29	2283 (45.3%)	2291 (45.5%)	0.00
<i>Rheumatoid arthritis</i>	97 (1.9%)	18546 (1.7%)	0.02	91 (1.8%)	89 (1.8%)	0.00
<i>Osteoarthritis</i>	919 (17.8%)	141673 (12.7%)	0.14	866 (17.2%)	903 (17.9%)	-0.02
<i>Osteoporosis</i>	416 (8.0%)	58758 (5.3%)	0.11	381 (7.6%)	366 (7.3%)	0.01
<i>Pathological fracture</i>	39 (0.8%)	4682 (0.4%)	0.05	35 (0.7%)	38 (0.8%)	-0.01
<i>Other connective tissue</i>	1945 (37.6%)	268925 (24.0%)	0.30	1816 (36.0%)	1817 (36.1%)	0.00
<i>Muscle Atrophy</i>	371 (7.2%)	15784 (1.4%)	0.31	264 (5.2%)	314 (6.2%)	-0.04
<i>Myalgia</i>	259 (5.0%)	43065 (3.8%)	0.06	246 (4.9%)	218 (4.3%)	0.03

Source: The 2007-2017 OptumInsight

Abbreviations: StD: Standard Deviation; ES: Effect Size.

*Effect size equal to or greater than 0.20 considered significant.