

eAppendix: Exclusion Criteria

Exclusion Criteria Used For Lecanemab Treatment

Unless otherwise noted, the time window is with respect to the MCSA visit where patient first met inclusion criteria.

Please, see https://meps.ahrq.gov/data_stats/download_data/pufs/h110i/h110i_icd9codes.shtml for Medical Expenditure Panel Survey (MEPS)/ Chronic Conditions Software (CCS) code listing.

Please, see the website: [Home - Chronic Conditions Data Warehouse \(ccwdata.org\)](http://www.ccwdata.org) for CMS CCW code listing

#1 CNS- related exclusions (ever)

Codes considered: Any inpatient, outpatient, or carrier claims with Agency for Healthcare Research (AHRQ) CCS code for brain cancer (35), Parkinson disease (79), epilepsy (83), coma/brain damage (85), or intracranial injury (233). Based on the work by Anderson et al. ¹

Comment: There was complete overlap between seizure and epilepsy codes, so seizure was combined with epilepsy in the present criterion.

#2 Cardiovascular disease, not stably and adequately controlled, or which in the opinion of the investigator(s) could affect the participant's safety or interfere with the study assessments (past 1 year), as assessed by medical record review. Conditions assessed were active congestive heart failure, coronary artery disease, angina, significant rhythm abnormalities, and other cardiopulmonary medical conditions in the medical record (pulmonary embolism, syncope, vasculitis, severe pulmonary hypertension, symptomatic aortic stenosis, and amyloid cardiomyopathy).

For the sensitivity analysis, the following codes were considered:

Any inpatient, outpatient, or carrier claims with AHRQ CCS code for congestive heart failure (108), coronary atherosclerosis (101), pulmonary heart disease (103), other and ill-defined heart disease (104), cardiac dysrhythmias (106), cardiac arrest and ventricular fibrillation (107), myocardial infarction (100), conduction disorders (105). Based on the work by Anderson et al. ¹

#3 Immunological disease (ever)

Codes considered: Any inpatient, outpatient, or carrier claims with ICD-9 or 10 codes for lupus, Sjogren's, rheumatoid arthritis and other inflammatory arthritis.

Lupus [ICD 9] 710.0, [ICD 10] M32.0, M32.10, M32.11, M32.12, M32.13, M32.1, M32.15, M32.19, M32.8, M32.9; **Sjogren's** [ICD-9] 710.2, [ICD-10] M35.00, M35.01, M35.02, M35.03, M35.04, M35.09; **rheumatoid arthritis and other inflammatory arthritis** [ICD-9] 714, 714.0, 714.1, 714.2, 714.4, 714.8, 714.81, 714.89, 714.9, 719.3, 720.0, [ICD10] codes starting with M05, M06, M07, M45, M12.0

Comment: Did not consider codes for juvenile arthritis, or unspecified arthropathy.

#4 Serious risk for suicide (past 5 years)

Codes considered: Any inpatient, outpatient, or carrier claims with AHRQ CCS code for suicide or self-harm (662).

#5 Psychiatric diagnosis or symptoms (past 6 months)

Any psychiatric diagnosis that resulted in hospitalization.

Codes considered*: Any inpatient claims with AHRQ CCS codes for adjustment disorder (650), anxiety (651), attention-deficit, conduct, and disruptive behavior disorder (652), delirium and dementia, amnesic and other cognitive disorders with behavioral disturbance (653), developmental disorders (654), disorders usually diagnosed in infancy, childhood, or adolescence (655), impulse control disorders (656), depression and bipolar disorder (657), personality disorders (658), schizophrenia and other psychotic disorders (659). Based on the work by Anderson et al. ¹

Comment: Did not consider codes for psychiatric conditions in remission, unspecified dementia without behavioral disturbance, Alzheimer's Disease, Lewy Body Dementia, and age-related cognitive decline.

#6 Transient ischemic attack (TIA) or stroke (past 1 year)

Codes considered*: Any inpatient, outpatient or carrier claims with CMS CCW ICD-9 and 10 codes for TIA or stroke.

Stroke ICD9 [430, 431, 433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.00, 434.01, 434.10, 434.11, 434.90, 434.91, 435.0, 435.1, 435.3, 435.8, 435.9]
ICD10 [G45.0, G45.1, G45.2, G45.8, G46.0, G46.1, G46.2, G46.3, G46.4, G46.5, G46.6, G46.7, G46.8, G97.31, G97.32, I60.00, I60.01, I60.02, I60.10, I60.11, I60.12, I60.20, I60.21, I60.22, I60.30, I60.31, I60.32, I60.4, I60.50, I60.51, I60.52, I60.6, I60.7, I60.8, I60.9, I61.0, I61.1, I61.2, I61.3, I61.4, I61.5, I61.6, I61.8, I61.9, I63.00, I63.02, I63.011, I63.012, I63.013, I63.019, I63.02, I63.031, I63.032, I63.039, I63.09, I63.10, I63.111, I63.112, I63.119, I63.12, I63.131, I63.132, I63.139, I63.19, I63.20, I63.211, I63.212, I63.213, I63.219, I63.22, I63.231, I63.232, I63.233, I63.239, I63.29, I63.30, I63.311, I63.312, I63.313, I63.319, I63.321, I63.322, I63.323, I63.329, I63.331, I63.332, I63.333, I63.339, I63.341, I63.342, I63.343, I63.349, I63.39, I63.40, I63.411, I63.412, I63.413, I63.419, I63.421, I63.422, I63.423, I63.429, I63.431, I63.432, I63.433, I63.439, I63.441, I63.442, I63.443, I63.449, I63.49, I63.50, I63.511, I63.512, I63.513, I63.519, I63.521, I63.522, I63.523, I63.529, I63.531, I63.532, I63.533, I63.539, I63.541, I63.542, I63.543, I63.549, I63.59, I63.6, I63.8, I63.9, I66.01, I66.02, I66.03, I66.09, I66.11, I66.12, I66.13, I66.19, I66.21, I66.22, I66.23, I66.29]

MEPS [109-112]

Unspecified TIA ICD9 [436, 997.02]

TIA ICD9 [435.9] ICD10 [G45.9]

#7 Imaging findings at time of PET scan

Exclusions: superficial siderosis, cortical infarct of any size, more than 1 lacunar infarct, subcortical infarct wider than 1.5 cm, more than 4 microhemorrhages, or severe white matter disease (white matter hyperintensity fraction of TIV at 90th percentile or higher, based on values for patients in MCSA age 50+ without dementia), from 2D or 3D FLAIR scans. If vascular grading was not available, the patient was coded as not having any microbleeds, infarcts or severe WMH.

#8 Cancer (past 3 years)

Malignant neoplasm

Codes considered*: Any inpatient, outpatient, or carrier claims with ICD-9 or 10 codes for cancer. ICD-9: 140 to 209; ICD-10: C00 to C7A, C81-C96

Comment: Did not consider codes for benign tumors, basal cell carcinoma, squamous cell carcinoma, other non-melanoma skin cancers, or localized prostate cancer (ICD-9 233.4 and ICD-10 D07.5). We could not assess whether cancer was in remission within the past 3 years.

#9 Alcohol or substance abuse (past 2 years)

Codes considered*: Any inpatient, outpatient, or carrier claims with AHRQ CCS codes for alcohol-related disorders (660), and 661, or CMS CCW codes for drug or alcohol abuse

Alcohol abuse [ICD-9] F10.10, F10.120, F10.121, F10.129, F10.130, F10.131, F10.132, F10.139, F10.14, F10.150, F10.151, F10.159, F10.180, F10.181, F10.182, F10.188, F10.19, F10.20, 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, F10.930, F10.931, F10.932, F10.939, 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, K70.41, K70.9, P04.3, Q86.0, T51.0X1A, T51.0X2A, T51.0X3A, T51.0X4A, Z71.41, Z71.42
[ICD-10] 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, 303.90, 303.91, 303.92, 305.00, 305.01, 305.02, 357.5, 425.5, 535.30, 535.31, 571.0, 571.1, 571.2, 571.3, 760.71, 980.0, V65.42, V79.1, E860.0

Drug abuse [ICD-9] 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, 304.10, 304.11, 304.12, 304.2, 304.20, 304.21, 304.22, 304.3, 304.30, 304.31, 304.32, 304.4, 304.40, 304.41, 304.42, 304.5, 304.50, 304.51, 304.52, 304.6, 304.60, 304.61, 304.62, 304.7, 304.70, 304.71, 304.72, 304.8, 304.80, 304.81, 304.82, 304.9, 304.90, 304.91, 304.92, 305.2, 305.20, 305.21, 305.22, 305.3, 305.30, 305.31, 305.32, 305.4, 305.40, 305.41, 305.42, 305.5, 305.50, 305.51, 305.52, 305.6, 305.60, 305.61, 305.62, 305.7, 305.70, 305.71, 305.72, 305.8, 305.80, 305.81, 305.82, 305.9, 305.90, 305.91, 305.92, 648.3, 648.30, 648.31, 648.32, 648.33, 648.34, 655.5, 655.50, 655.51, 655.53, 760.72, 760.73, 760.75, 779.5, 965.0, 965.00, 965.01, 965.02, 965.09, V65.42, E850.0, E850.1, E850.2, E854.1, E935.0, E935.1

[ICD-10] F11.10, F11.120, F11.121, F11.122, F11.129, F11.13, F11.14, F11.150, F11.151, F11.159, F11.181, F11.182, F11.188, F11.19, F11.20, 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, F12.120, F12.121, F12.122, F12.129, F12.13, F12.150,

F12.151, F12.159, F12.180, F12.188, F12.19, F12.20, F12.220, F12.221, F12.222, F12.229, F12.250, F12.251, F12.259, F12.280, F12.288, F12.29, F12.90, F12.920, F12.921, F12.922, F12.929, F12.950, F12.951, F12.959, F12.980, F12.988, F12.99, F13.10, F13.120, F13.121, F13.129, F13.130, F13.131, F13.132, F13.139, F13.14, F13.150, F13.151, F13.159, F13.180, F13.181, F13.182, F13.188, F13.19, F13.20, 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, F14.120, F14.121, F14.122, F14.129, F14.13, F14.14, F14.150, F14.151, F14.159, F14.180, F14.181, F14.182, F14.188, F14.19, F14.20, 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, F14.93, F14.94, F14.950, F14.951, F14.959, F14.980, F14.981, F14.982, F14.988, F14.99, F15.10, F15.120, F15.121, F15.122, F15.129, F15.13, F15.14, F15.150, F15.151, F15.159, F15.180, F15.181, F15.182, F15.188, F15.19, F15.20, 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, F16.120, F16.121, F16.122, F16.129, F16.14, F16.150, F16.151, F16.159, F16.180, F16.183, F16.188, F16.19, F16.20, F16.220, 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, F17.203, F17.208, F17.209, F17.213, F17.218, F17.219, F17.223, F17.228, F17.229, F17.293, F17.298, F17.299, F18.10, F18.120, F18.121, F18.129, F18.14, F18.150, F18.151, F18.159, F18.17, F18.180, F18.188, F18.19, F18.20, F18.220, 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, F19.120, F19.121, F19.122, F19.129, F19.130, F19.131, F19.132, F19.139, F19.14, F19.150, F19.151, F19.159, F19.16, F19.17, F19.180, F19.181, F19.182, F19.188, F19.19, F19.20, F19.220, 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, T40.0X2A, T40.0X3A, T40.0X4A, T40.0X5A, T40.0X5S, T40.1X1A, T40.1X2A, T40.1X3A, T40.1X4A, T40.2X1A, T40.2X2A, T40.2X3A, T40.2X4A, T40.3X1A, T40.3X2A, T40.3X3A, T40.3X4A, T40.3X5A, T40.3X5S, T40.411A, T40.412A, T40.413A, T40.414A, T40.415A, T40.421A, T40.422A, T40.423A, T40.424A, T40.425A, T40.491A, T40.492A, T40.493A, T40.494A, T40.495A, T40.4X1A, T40.4X2A, T40.4X3A, T40.4X4A, T40.601A, T40.602A, T40.603A, T40.604A, T40.691A, T40.692A, T40.693A, T40.694A, T40.711A, T40.721A, T40.7X1A, T40.8X1A, T40.901A, T40.991A, Z71.41, Z71.42, Z71.51, Z71.52, Z71.6

Comment: Did not consider codes for nicotine dependence, or alcohol or substance abuse in remission.

#10 Human immunodeficiency virus (HIV) (past 2 years)

Codes considered: Any inpatient, outpatient, or carrier claims with CMS AHRQ or CCW codes for HIV. HIV MEPS [5], HIV/AIDS ICD9 [042, 042.0, 042.1, 042.2, 042.9, 043, 043.1, 043.2, 043.3, 043.9, 044, 044.0, 044.9, 079.53, 795.71], ICD10 [B20, B97.35, R75, Z21, V08]

#11 Liver impairment (past 2 years)

Codes considered: Any inpatient, outpatient or carrier claims with CMS CCW codes for liver failure or cirrhosis.

[ICD-9] 570, 571, 571.0, 571.1, 571.2, 571.3, 571.42, 571.49, 571.5, 571.6, 571.8, 571.9, 572, 572.0, 572.1, 572.2, 572.3, 572.4, 572.8, 573, 573.0, 573.3, 573.4, 573.5, 573.8, 573.9

[ICD-10] K70.2, K70.3, K70.30, K70.31, K70.4, K70.40, K70.41, K71.7, K71.8, K71.9, K72, K72.0, K72.00, K72.01, K72.1, K72.10, K72.11, K72.9, K72.90, K72.91, K74, K74.0, K74.00, K74.01, K74.02, K74.1, K74.2, K74.3, K74.4, K74.5, K74.6, K74.60, K74.69, K76, K76.1, K76.2, K76.3, K76.4, K76.5, K76.6, K76.7, K76.8, K76.81, K76.82, V42.7, Z48.23, Z94.4

#12 End-stage renal disease (past 2 years)

Codes considered: Any inpatient, outpatient or carrier claims with CMS CCW codes for end-stage renal disease. ICD-9 585.6, ICD-10 N18.6.

Exclusion Criteria Used For Aducanumab Treatment

Exclusion criteria for aducanumab

Unless otherwise noted, the time window is with respect to the MCSA visit where patient first met inclusion criteria.

Please, see https://meps.ahrq.gov/data_stats/download_data/pufs/h110i/h110i_icd9codes.shtml for MEPS/CCS code listing.

Please, see the website: [Home - Chronic Conditions Data Warehouse \(ccwdata.org\)](http://www.ccwdata.org) for CMS CCW code listing

#1 CNS-related exclusions (ever)

Codes considered: Any inpatient, outpatient, or carrier claims with AHRQ CCS code for brain cancer (35), Parkinson disease (79), epilepsy (83), coma/brain damage (85), or intracranial injury (233), or ICD-9 and 10 codes for seizures beginning with 345 (ICD-9), G40, G41 (ICD-10), 780.3 (ICD-9), R56 (ICD-10). Based on the work by Anderson et al. ¹

Comment: Combined this with Criterion 1 (other sources of cognitive impairment including epilepsy), since there was complete overlap between seizure and epilepsy codes.

#2 Psychiatric diagnosis or symptoms (past 6 months)

Any psychiatric diagnosis that resulted in hospitalization.

Codes considered*: Any inpatient claims with AHRQ CCS codes for adjustment disorder (650), anxiety (651), attention-deficit, conduct, and disruptive behavior disorder (652), delirium and dementia, amnesic and other cognitive disorders with behavioral disturbance (653), developmental disorders (654), disorders usually diagnosed in infancy, childhood, or adolescence (655), impulse control disorders (656), depression and bipolar disorder (657), personality disorders (658), schizophrenia and other psychotic disorders (659). Based on the work by Anderson et al. ¹

Comment: Did not consider codes for psychiatric conditions in remission, unspecified dementia without behavioral disturbance, Alzheimer's Disease, Lewy Body Dementia, and age-related cognitive decline.

3 Transient ischemic attack, stroke, or unexplained loss of consciousness (past 1 year)

Codes considered: Any inpatient, outpatient or carrier claims with ICD-9 and 10 codes for TIA, stroke, or syncope.

Stroke ICD9 [430, 431, 433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.00, 434.01, 434.10, 434.11, 434.90, 434.91, 435.0, 435.1, 435.3, 435.8, 435.9]
ICD10 [G45.0, G45.1, G45.2, G45.8, G46.0, G46.1, G46.2, G46.3, G46.4, G46.5, G46.6, G46.7, G46.8, G97.31, G97.32, I60.00, I60.01, I60.02, I60.10, I60.11, I60.12, I60.20, I60.21, I60.22, I60.30, I60.31, I60.32, I60.4, I60.50, I60.51, I60.52, I60.6, I60.7, I60.8, I60.9, I61.0, I61.1,

I61.2, I61.3, I61.4, I61.5, I61.6, I61.8, I61.9, I63.00, I63.02, I63.011, I63.012, I63.013, I63.019, I63.02, I63.031, I63.032, I63.039, I63.09, I63.10, I63.111, I63.112, I63.119, I63.12, I63.131, I63.132, I63.139, I63.19, I63.20, I63.211, I63.212, I63.213, I63.219, I63.22, I63.231, I63.232, I63.233, I63.239, I63.29, I63.30, I63.311, I63.312, I63.313, I63.319, I63.321, I63.322, I63.323, I63.329, I63.331, I63.332, I63.333, I63.339, I63.341, I63.342, I63.343, I63.349, I63.39, I63.40, I63.411, I63.412, I63.413, I63.419, I63.421, I63.422, I63.423, I63.429, I63.431, I63.432, I63.433, I63.439, I63.441, I63.442, I63.443, I63.449, I63.49, I63.50, I63.511, I63.512, I63.513, I63.519, I63.521, I63.522, I63.523, I63.529, I63.531, I63.532, I63.533, I63.539, I63.541, I63.542, I63.543, I63.549, I63.59, I63.6, I63.8, I63.9, I66.01, I66.02, I66.03, I66.09, I66.11, I66.12, I66.13, I66.19, I66.21, I66.22, I66.23, I66.29]

MEPS [109-112]

unspecified TIA ICD9 [436, 997.02]

TIA ICD9 [435.9] ICD10 [G45.9],

Syncope and collapse ICD9 [780.2] ICD10 [R55]; AHRQ CCS (245).

#4 Imaging findings at time of PET scan

Exclusions: superficial siderosis, cortical infarct wider than 1.5 cm, subcortical infarct wider than 1.5 cm, more than 1 lacunar infarct, more than 4 microhemorrhages, or severe white matter disease (white matter hyperintensity fraction of TIV at 90th percentile or higher, based on values for patients in MCSA age 50+ without dementia), from 2D or 3D FLAIR scans.

#5 Cardiovascular disease (past 1 year)

History of unstable angina, myocardial infarction, chronic heart failure (New York Heart Association Class III or IV), or clinically significant conduction abnormalities (e.g., unstable atrial fibrillation)

Codes considered: Any inpatient, outpatient, or carrier claims with AHRQ CCS code for congestive heart failure (108), coronary atherosclerosis (101), pulmonary heart disease (103), other and ill-defined heart disease (104), cardiac dysrhythmias (106), cardiac arrest and ventricular fibrillation (107), myocardial infarction (100), conduction disorders (105). Based on the work by Anderson et al. ¹

#6 Uncontrolled hypertension

Systolic blood pressure greater than 160 at any current or prior visit, or untreated hypertension via medical record at current visit.

#7 Cancer (ever)

History of malignancy or carcinoma

Codes considered*: Any inpatient, outpatient, or carrier claims with ICD-9 or 10 codes for cancer. ICD-9: 141 to 209; ICD-10: C00 to C7A, C81-C96. We did not consider codes for benign tumors, basal cell carcinoma, squamous cell carcinoma, other non-melanoma skin cancers, or localized prostate cancer (ICD-9 233.4 and ICD-10 D07.5).

Note: we are unable to assess whether the cancer was in remission more than 5 years prior to screening.

#8 Immunological disease (ever)

Codes considered: Any inpatient, outpatient, or carrier claims with ICD-9 or 10 codes for lupus, Sjogren's, rheumatoid arthritis and other inflammatory arthritis.

Lupus [ICD 9] 710.0, [ICD 10] M32.0, M32.10, M32.11, M32.12, M32.13, M32.1, M32.15, M32.19, M32.8, M32.9; **Sjogren's** [ICD-9] 710.2, [ICD-10] M35.00, M35.01, M35.02, M35.03, M35.04, M35.09; **rheumatoid arthritis and other inflammatory arthritis*** [ICD-9] 714, 714.0, 714.1, 714.2, 714.4, 714.8, 714.81, 714.89, 714.9, 719.3, 720.0 [ICD10] codes starting with M05, M06, M07, M45, M12.0

Comment: We did not consider codes for juvenile arthritis, or unspecified arthropathy.

#9 Alcohol or substance abuse (past 1 year)

Codes considered*: Any inpatient, outpatient, or carrier claims with AHRQ CCS codes for alcohol-related disorders (660) or substance-related disorders (661), or CMS CCW codes for drug or alcohol abuse.

Alcohol abuse [ICD-9] F10.10, F10.120, F10.121, F10.129, F10.130, F10.131, F10.132, F10.139, F10.14, F10.150, F10.151, F10.159, F10.180, F10.181, F10.182, F10.188, F10.19, F10.20, 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, F10.930, F10.931, F10.932, F10.939, 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, K70.41, K70.9, P04.3, Q86.0, T51.0X1A, T51.0X2A, T51.0X3A, T51.0X4A, Z71.41, Z71.42
[ICD-10] 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, 303.90, 303.91, 303.92, 305.00, 305.01, 305.02, 357.5, 425.5, 535.30, 535.31, 571.0, 571.1, 571.2, 571.3, 760.71, 980.0, V65.42, V79.1, E860.0

Drug abuse [ICD-9] 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, 304.10, 304.11, 304.12, 304.2, 304.20, 304.21, 304.22, 304.3, 304.30, 304.31, 304.32, 304.4, 304.40, 304.41, 304.42, 304.5, 304.50, 304.51, 304.52, 304.6, 304.60, 304.61, 304.62, 304.7, 304.70, 304.71, 304.72, 304.8, 304.80, 304.81, 304.82, 304.9, 304.90, 304.91, 304.92, 305.2, 305.20, 305.21, 305.22, 305.3, 305.30, 305.31, 305.32, 305.4, 305.40, 305.41, 305.42, 305.5, 305.50, 305.51, 305.52, 305.6, 305.60, 305.61, 305.62, 305.7, 305.70, 305.71, 305.72, 305.8, 305.80, 305.81, 305.82, 305.9, 305.90, 305.91, 305.92, 648.3, 648.30, 648.31, 648.32, 648.33, 648.34, 655.5, 655.50, 655.51, 655.53, 760.72, 760.73, 760.75, 779.5, 965.0, 965.00, 965.01, 965.02, 965.09, V65.42, E850.0, E850.1, E850.2, E854.1, E935.0, E935.1
[ICD-10] F11.10, F11.120, F11.121, F11.122, F11.129, F11.13, F11.14, F11.150, F11.151, F11.159, F11.181, F11.182, F11.188, F11.19, F11.20, 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, F12.120, F12.121, F12.122, F12.129, F12.13, F12.150, F12.151, F12.159, F12.180, F12.188, F12.19, F12.20, F12.220, F12.221, F12.222, F12.229,

F12.250, F12.251, F12.259, F12.280, F12.288, F12.29, F12.90, F12.920, F12.921, F12.922, F12.929, F12.950, F12.951, F12.959, F12.980, F12.988, F12.99, F13.10, F13.120, F13.121, F13.129, F13.130, F13.131, F13.132, F13.139, F13.14, F13.150, F13.151, F13.159, F13.180, F13.181, F13.182, F13.188, F13.19, F13.20, 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, F14.120, F14.121, F14.122, F14.129, F14.13, F14.14, F14.150, F14.151, F14.159, F14.180, F14.181, F14.182, F14.188, F14.19, F14.20, 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, F14.93, F14.94, F14.950, F14.951, F14.959, F14.980, F14.981, F14.982, F14.988, F14.99, F15.10, F15.120, F15.121, F15.122, F15.129, F15.13, F15.14, F15.150, F15.151, F15.159, F15.180, F15.181, F15.182, F15.188, F15.19, F15.20, 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, F16.120, F16.121, F16.122, F16.129, F16.14, F16.150, F16.151, F16.159, F16.180, F16.183, F16.188, F16.19, F16.20, F16.220, 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, F17.203, F17.208, F17.209, F17.213, F17.218, F17.219, F17.223, F17.228, F17.229, F17.293, F17.298, F17.299, F18.10, F18.120, F18.121, F18.129, F18.14, F18.150, F18.151, F18.159, F18.17, F18.180, F18.188, F18.19, F18.20, F18.220, 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, F19.120, F19.121, F19.122, F19.129, F19.130, F19.131, F19.132, F19.139, F19.14, F19.150, F19.151, F19.159, F19.16, F19.17, F19.180, F19.181, F19.182, F19.188, F19.19, F19.20, F19.220, 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, T40.0X2A, T40.0X3A, T40.0X4A, T40.0X5A, T40.0X5S, T40.1X1A, T40.1X2A, T40.1X3A, T40.1X4A, T40.2X1A, T40.2X2A, T40.2X3A, T40.2X4A, T40.3X1A, T40.3X2A, T40.3X3A, T40.3X4A, T40.3X5A, T40.3X5S, T40.411A, T40.412A, T40.413A, T40.414A, T40.415A, T40.421A, T40.422A, T40.423A, T40.424A, T40.425A, T40.491A, T40.492A, T40.493A, T40.494A, T40.495A, T40.4X1A, T40.4X2A, T40.4X3A, T40.4X4A, T40.601A, T40.602A, T40.603A, T40.604A, T40.691A, T40.692A, T40.693A, T40.694A, T40.711A, T40.721A, T40.7X1A, T40.8X1A, T40.901A, T40.991A, Z71.41, Z71.42, Z71.51, Z71.52, Z71.6

Comment: We did not consider codes for nicotine dependence, or alcohol or substance abuse in remission.

#10 Human immunodeficiency virus (HIV) (past 2 years)

History of or known seropositivity for human immunodeficiency virus (HIV)

Codes considered: Any inpatient, outpatient, or carrier claims with CMS AHRQ or CCW codes for HIV. **HIV MEPS [5], HIV/AIDS** HIV/AIDS ICD9 [042, 042.0, 042.1, 042.2, 042.9, 043, 043.1, 043.2, 043.3, 043.9, 044, 044.0, 044.9, 079.53, 795.71], ICD10 [B20, B97.35, R75, Z21, V08]

#11 Hepatitis B or C (ever)

Hepatitis B virus or history of/positive test result for hepatitis C virus antibody

Codes considered: Any inpatient, outpatient or carrier claims with CMS CCW ICD-9 or 10 codes for hepatitis B or C. ICD 9/10 [070.30, 070.20, 070.32, 070.22, 070.23, 070.33, 070.21, 070.31, B16, B16.0, B16.1, B16.2, B16.9, B18.0, B18.1, 070.51, 070.41, 070.54, 070.44, 070.70, 070.71, B17.1, B17.10, B17.11, B18.2]

#12 Narcotics (past 1 year before PiB PET scan)

Medications considered: any opioid analgesics prescribed within 1 year before imaging, via medical index, such as morphine, codeine, tramadol, oxycodone, acetaminophen/tramadol, acetaminophen/codeine, and acetaminophen/hydrocodone. Based on work by Hooten et al.²

#13 Blood clotting conditions or use of anticoagulants (past 1 year or at visit)

Use of medications with platelet anti-aggregate or anti-coagulant properties (non-aspirin)

Codes considered: Any inpatient outpatient or carrier claims with CMS AHRQ codes for phlebitis, thrombophlebitis, and thromboembolism in past year (116), or use of heparin, Coumadin/warfarin, Plavix or other anticoagulants via self-report at visit.

#14 Living in organized care facility (at visit)

Subject currently living in an organized care facility with extensive intervention and/or support of daily living activities, via self-report.

#15 Liver failure or cirrhosis (past 2 years)

Codes considered: Any inpatient, outpatient or carrier claims with CMS CCW codes for liver failure or cirrhosis.

[ICD-9] 570,571, 571.0, 571.1,571.2, 571.3, 571.42, 571.49, 571.5, 571.6, 571.8, 571.9, 572, 572.0, 572.1, 572.2, 572.3, 572.4, 572.8, 573, 573.0, 573.3, 573.4, 573.5, 573.8, 573.9

[ICD-10] K70.2, K70.3, K70.30, K70.31, K70.4, K70.40, K70.41, K71.7, K71.8, K71.9, K72, K72.0, K72.00, K72.01, K72.1, K72.10, K72.11, K72.9, K72.90, K72.91, K74, K74.0, K74.00, K74.01, K74.02, K74.1, K74.2, K74.3, K74.4, K74.5, K74.6, K74.60, K74.69, K76, K76.1, K76.2, K76.3, K76.4, K76.5, K76.6, K76.7, K76.8, K76.81, K76.82, V42.7, Z48.23, Z94.4

#16 End-stage renal disease (past 2 years)

Codes considered: Any inpatient, outpatient or carrier claims with CMS CCW codes for end-stage renal disease. ICD-9 585.6, ICD-10 N18.6.

References

1. Anderson TS, Ayanian JZ, Souza J, Landon BE. Representativeness of Participants Eligible to Be Enrolled in Clinical Trials of Aducanumab for Alzheimer Disease Compared With Medicare Beneficiaries With Alzheimer Disease and Mild Cognitive Impairment. *JAMA* 2021;326:1627-1629.
2. Hooten WM, St Sauver JL, McGree ME, Jacobson DJ, Warner DO. Incidence and Risk Factors for Progression From Short-term to Episodic or Long-term Opioid Prescribing: A Population-Based Study. *Mayo Clin Proc* 2015;90:850-856.