

Supplementary Table 1: Search terms

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| 1 | exp Dementia/ (159151) |
| 2 | dementia.tw. (99204) |
| 3 | dementia.mp. (118365) |
| 4 | exp Alzheimer Disease/ (90082) |
| 5 | Alzheimer's disease.mp. (111260) |
| 6 | Alzheimer's disease.tw. (108060) |
| 7 | Alzheimer.mp. (99838) |
| 8 | Alzheimer.tw. (25566) |
| 9 | early onset alzheimer.tw. (162) |
| 10 | late onset alzheimer.tw. (333) |
| 11 | early onset alzheimer.mp. (168) |
| 12 | late onset alzheimer.mp. (340) |
| 13 | alzheimer dementia.mp. (621) |
| 14 | alzheimer dementia.tw. (594) |
| 15 | dementia alzheimer.mp. (208) |
| 16 | dementia alzheimer.tw. (197) |
| 17 | alzheimer type dementia.mp. (713) |
| 18 | alzheimer type dementia.tw. (710) |
| 19 | dementia alzheimer type.mp. (51) |
| 20 | dementia alzheimer type.tw. (51) |
| 21 | exp Frontotemporal Dementia/ (2957) |
| 22 | fronto?temporal dementia.mp. (6629) |
| 23 | fronto?temporal dementia.tw. (5813) |
| 24 | (dementia adj5 lewy bod*).tw. (4649) |
| 25 | (dementia adj5 lewy bod*).mp. (4761) |
| 26 | dementia with lewy bodies.mp. (3786) |
| 27 | dementia with lewy bodies.tw. (3693) |
| 28 | exp Dementia, Vascular/ (6467) |
| 29 | vascular dementia.mp. (6197) |
| 30 | vascular dementia.tw. (5995) |
| 31 | dementia senile.mp. (42) |
| 32 | dementia senile.tw. (32) |
| 33 | senile dementia.mp. (2839) |
| 34 | senile dementia.tw. (2828) |
| 35 | senile dementia alzheimer type.mp. (27) |
| 36 | senile dementia alzheimer type.tw. (27) |
| 37 | Alzheimer type senile dementia.mp. (23) |
| 38 | alzheimer type senile dementia.tw. (23) |
| 39 | dementia primary senile degenerative.mp. (1) |
| 40 | disease alzheimer.mp. (129) |
| 41 | disease alzheimer.tw. (129) |
| 42 | alzheimer disease.mp. (95803) |
| 43 | alzheimer disease.tw. (15402) |
| 44 | familial alzheimer disease.mp. (309) |
| 45 | familial alzheimer disease.tw. (305) |
| 46 | sporadic alzheimer disease.mp. (155) |
| 47 | sporadic alzheimer disease.tw. (153) |
| 48 | exp Cognitive Dysfunction/ (14131) |
| 49 | mild cognitive impairment.mp. (15263) |
| 50 | cognitive dysfunction.mp. (25698) |
| 51 | cognitive dysfunction.tw. (12358) |
| 52 | mild cognitive impairment.tw. (14658) |
| 53 | cognitive impairment.mp. (52889) |
| 54 | cognitive impairment.tw. (51378) |
| 55 | cognitive decline.mp. (20005) |
| 56 | cognitive decline.tw. (19666) |

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| 57 | exp Cognition/ (153665) |
| 58 | exp Memory/ (131781) |
| 59 | exp "Mental Status and Dementia Tests"/ (7153) |
| 60 | mini-mental state examination.mp. (12525) |
| 61 | mini-mental state examination.tw. (12420) |
| 62 | exp Neuropsychological Tests/ (172797) |
| 63 | RBANS.mp. (429) |
| 64 | RBANS.tw. (420) |
| 65 | exp Cognitive Aging/ (514) |
| 66 | cognitive aging.mp. (2371) |
| 67 | cognitive aging.tw. (1664) |
| 68 | cognitive ageing.mp. (287) |
| 69 | cognitive ageing.tw. (246) |
| 70 | age related cognitive decline.mp. (1152) |
| 71 | age related cognitive decline.tw. (1142) |
| 72 | neurodegenerati*.mp. (107535) |
| 73 | neurodegenerati*.tw. (99625) |
| 74 | exp Cerebrospinal Fluid/ (18386) |
| 75 | cerebrospinal fluid.mp. (113892) |
| 76 | cerebrospinal fluid.tw. (81799) |
| 77 | CSF.mp. (95526) |
| 78 | CSF.tw. (94530) |
| 79 | exp Neurofilament Proteins/ (5269) |
| 80 | neurofilament light chain.mp. (418) |
| 81 | neurofilament light chain.tw. (405) |
| 82 | neurofilament light polypeptide.mp. (48) |
| 83 | neurofilament light polypeptide.tw. (48) |
| 84 | NEFL.mp. (187) |
| 85 | NEFL.tw. (185) |
| 86 | NFL.mp. (1473) |
| 87 | NFL.tw. (1444) |
| 88 | neurofilament.mp. (10782) |
| 89 | neurofilament.tw. (8901) |
| 90 | neurofilament light.mp. (877) |
| 91 | neurofilament light.tw. (864) |
| 92 | light polypeptide.mp. (427) |
| 93 | light polypeptide.tw. (405) |
| 94 | exp Neurogranin/ (273) |
| 95 | neurogranin.mp. (426) |
| 96 | neurogranin.tw. (377) |
| 97 | RC3.mp. (190) |
| 98 | RC3.tw. (190) |
| 99 | p17.mp. (2213) |
| 100 | p17.tw. (2039) |
| 101 | BICKS.mp. (20) |
| 102 | BICKS.tw. (20) |
| 103 | protein kinase C substrate.mp. (356) |
| 104 | protein kinase C substrate.tw. (355) |
| 105 | NRGN.mp. (184) |
| 106 | NRGN.tw. (64) |
| 107 | exp Synaptosomal-Associated Protein 25/ (1614) |
| 108 | synaptosom* associated protein 25.mp. (1742) |
| 109 | synaptosom* associated protein 25.tw. (270) |
| 110 | exp GAP-43 Protein/ (2364) |
| 111 | GAP-43.mp. (3042) |
| 112 | GAP-43.tw. (2184) |
| 113 | growth associated protein 43.mp. (1198) |
| 114 | growth associated protein 43.tw. (1179) |

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| 115 | protein F1.mp. (125) |
| 116 | protein F1.tw. (124) |
| 117 | neuromodulin.mp. (170) |
| 118 | neuromodulin.tw. (166) |
| 119 | neural phosphoprotein B-50.mp. (1) |
| 120 | exp Calmodulin/ (14092) |
| 121 | calmodulin.mp. (43103) |
| 122 | calmodulin.tw. (29083) |
| 123 | exp Calcium-Calmodulin-Dependent Protein Kinases/ (18328) |
| 124 | exp Calmodulin-Binding Proteins/ (5522) |
| 125 | calmodulin dependent protein kinase.mp. (8786) |
| 126 | calmodulin dependent protein kinase.tw. (5682) |
| 127 | calmodulin binding protein.mp. (541) |
| 128 | calmodulin binding protein.tw. (535) |
| 129 | (synap* protein adj5 cogniti*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (15) |
| 130 | (synap* protein adj5 cogniti*).tw. (15) |
| 131 | (synap* protein adj15 dementia).mp. (9) |
| 132 | (synap* protein adj15 dementia).tw. (9) |
| 133 | (synap* protein adj15 cerebrospinal fluid).mp. (6) |
| 134 | (synap* protein adj15 cerebrospinal fluid).tw. (6) |
| 135 | SNAP25.mp. (1378) |
| 136 | SNAP25.tw. (567) |
| 137 | synap* protein.mp. (1465) |
| 138 | synap* protein.tw. (1446) |
| 139 | synap* marker.mp. (290) |
| 140 | synap* marker.tw. (287) |
| 141 | or/1-73 (693628) |
| 142 | or/74-78 (165537) |
| 143 | or/79-140 (67285) |
| 144 | 141 and 142 and 143 (470) |

Supplementary Table 2: National Institute of Health Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies ratings for included studies

| Study | Was the research question or objective in this paper clearly stated? | Was the study population clearly specified and defined? | Was the participant rate of eligible persons at least 50%? | Were all the participants selected or recruited from the same or similar populations (including the same time period)? Were inclusion/exclusion criteria prespecified and applied uniformly? | Was a sample size justification, power description, or variance effect estimates provided? | For the analyses, were the exposure(s) of interest measured prior to the outcome(s) being measured? | Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed? | For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome? | Were the exposure measures clearly defined, valid, reliable, and implemented consistently across all participants? | Was the exposure assessed more than once over time? | Were the outcome measures clearly defined, valid, reliable, and implemented consistently across all participants? | Were the outcome assessors blinded to the exposure status of participants? | Was loss to follow-up after baseline 20% or less? | Were key potential confounding variables measured and adjusted for statistically? | Quality Rating |
|----------------------------|--|---|--|--|--|---|--|---|--|---|---|--|---|---|----------------|
| Abu-Rumeileh et al. (2018) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| Agnello et al. (2020) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | N | Fair |
| Alcolea et al. (2017) | Y | Y | NR | N | N | N/A | N/A | Y | N | N | Y | NR | N/A | Y | Fair |
| Aschenbrenner 2020 | Y | Y | NR | Y | N | Y | N/A | Y | Y | Y | Y | NR | N | Y | Good |
| Bartos et al. (2012) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | NR | Fair |
| Begcevic et al. (2020) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | N | Fair |
| Bendlin et al. (2012) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| Bjerke et al. (2009) | Y | Y | NR | N | N | N/A | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| Boiten et al. (2021) | Y | Y | NR | Y | N | CD | N/A | Y | Y | N | Y | CD | N/A | Y | Fair |
| Bos et al. (2019) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | Y | Y | Y | N/A | Y | Good |
| Brinkmalm et al. (2014) | Y | Y | NR | N | N | N/A | N/A | Y | Y | N | Y | NR | N/A | NR | Fair |
| Bruno et al. (2020) | Y | N | NR | CD | N | N | N/A | Y | Y | N | Y | NR | N/A | N | Fair |
| Casaleto et al. (2017) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| Chatterjee et al. (2018) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| deJong et al. (2007) | Y | N | NR | CD | N | N/A | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| Delaby et al. (2020) | Y | Y | NR | Y | N | N | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| DeVos et al. (2016) | Y | N | NR | CD | N | N/A | N/A | Y | Y | Y | Y | NR | N/A | Y | Fair |

| Study | Was the research question or objective in this paper clearly stated? | Was the study population clearly specified and defined? | Was the participant rate of eligible persons at least 50%? | Were all the participants selected or recruited from the same or similar populations (including the same time period)? Were inclusion/exclusion criteria prespecified and applied uniformly? | Was a sample size justification, power description, or variance effect estimates provided? | For the analyses, were the exposure(s) of interest measured prior to the outcome(s) being measured? | Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed? | For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome? | Were the exposure measures clearly defined, valid, reliable, and implemented consistently across all participants? | Was the exposure assessed more than once over time? | Were the outcome measures clearly defined, valid, reliable, and implemented consistently across all participants? | Were the outcome assessors blinded to the exposure status of participants? | Was loss to follow-up after baseline 20% or less? | Were key potential confounding variables measured and adjusted for statistically? | Quality Rating |
|----------------------------|--|---|--|--|--|---|--|---|--|---|---|--|---|---|----------------|
| Dhiman et al. (2020) | Y | Y | NR | Y | N | CD | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| Galasko et al. (2019) | Y | Y | NR | CD | N | N/A | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| Gifford et al. (2018) | Y | Y | N | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| Headley et al. (2018) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| Hellwig et al. (2015) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | CD | Fair |
| Hoglund et al. (2015) | Y | Y | Y | Y | N | Y | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| Jia et al. (2020) | Y | N | NR | N | N | N/A | N/A | Y | Y | N | Y | Y | N/A | CD | Fair |
| Kirsebom et al. (2018) | Y | Y | NR | N | N | N/A | N/A | Y | Y | Y | Y | NR | N/A | Y | Fair |
| Kvartsberg et al. (2015) | Y | Y | NR | CD | N | N/A | N/A | Y | Y | Y | Y | Y | N/A | Y | Good |
| Lee et al. (2008) | Y | N | NR | CD | N | N/A | N/A | Y | Y | N | Y | NR | N/A | CD | Poor |
| Lim et al. (2019) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | CD | N/A | N | Fair |
| Mattsson et al. (2016) | Y | Y | NR | CD | N | N/A | N/A | Y | Y | Y | Y | NR | N/A | Y | Good |
| McGuire et al. (2015) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | Y | Y | NR | N/A | N | Fair |
| Meeter et al. (2016) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| Meeter et al. (2018) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| Meeter et al. (2019) | Y | Y | NR | N | N | N/A | N/A | Y | Y | Y | N | NR | N/A | Y | Fair |
| Meeter et al. (2017) | Y | N | NR | CD | N | N/A | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| Mielke et al. (2019a) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | N | NR | N/A | Y | Fair |
| Mielke et al. (2019b) | Y | Y | NR | Y | N | CD | N/A | Y | Y | N | Y | NR | N/A | Y | Good |
| Mouton-Liger et al. (2020) | Y | Y | NR | Y | N | CD | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| Oeckl et al. (2020) | Y | Y | NR | Y | N | N | N/A | Y | Y | N | N | Y | N/A | Y | Fair |

| Study | Was the research question or objective in this paper clearly stated? | Was the study population clearly specified and defined? | Was the participant rate of eligible persons at least 50%? | Were all the participants selected or recruited from the same or similar populations (including the same time period)? Were inclusion/exclusion criteria prespecified and applied uniformly? | Was a sample size justification, power description, or variance effect estimates provided? | For the analyses, were the exposure(s) of interest measured prior to the outcome(s) being measured? | Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed? | For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome? | Were the exposure measures clearly defined, valid, reliable, and implemented consistently across all participants? | Was the exposure assessed more than once over time? | Were the outcome measures clearly defined, valid, reliable, and implemented consistently across all participants? | Were the outcome assessors blinded to the exposure status of participants? | Was loss to follow-up after baseline 20% or less? | Were key potential confounding variables measured and adjusted for statistically? | Quality Rating |
|---------------------------|--|---|--|--|--|---|--|---|--|---|---|--|---|---|----------------|
| Ohrfelt et al. (2016) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | CD | N/A | N | Fair |
| Ohrfelt et al. (2019) | Y | N | NR | CD | N | CD | N/A | Y | Y | CD | Y | CD | N/A | Yes | Fair |
| Osborn et al. (2019) | Y | Y | N/A | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| Portelius et al. (2015) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| Racine et al. (2016) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| Rojas et al. (2018) | Y | Y | Y | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| Rolstad et al. (2015a) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N | Y | Fair |
| Rolstad et al. (2015b) | Y | Y | N | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| Sancesario et al. (2020) | Y | Y | NR | Y | N | CD | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| Sandelius et al. (2019) | Y | N | NR | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | CD | Fair |
| Sanfilippo et al. (2016) | Y | N | NR | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | CD | Fair |
| Santillo et al. (2019) | N | N | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | Y | Poor |
| Scherling et al. (2014) | Y | N | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | CD | Poor |
| Schindler et al. (2019) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | Y | Y | NR | N/A | Y | Fair |
| Sjogren et al. (2001) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| Sjogren et al. (2000) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | Y | Fair |
| Skillback et al. (2014) | Y | Y | NR | Y | N | Y | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| Sun et al. (2016) | Y | N | NR | CD | N | N/A | N/A | Y | Y | N | Y | CD | N/A | Y | Fair |
| Swanson et al., (2016) | Y | N | NR | Y | N | N/A | N/A | Y | Y | N | Y | CD | N/A | Y | Fair |
| Teitsdottir et al. (2020) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| VanDerEnde et al. (2020) | Y | Y | NR | Y | Y | Y | N/A | Y | Y | N | Y | Y | N/A | Y | Good |

| Study | Was the research question or objective in this paper clearly stated? | Was the study population clearly specified and defined? | Was the participant rate of eligible persons at least 50%? | Were all the participants selected or recruited from the same or similar populations (including the same time period)? Were inclusion/exclusion criteria prespecified and applied uniformly? | Was a sample size justification, power description, or variance effect estimates provided? | For the analyses, were the exposure(s) of interest measured prior to the outcome(s) being measured? | Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed? | For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome? | Were the exposure measures clearly defined, valid, reliable, and implemented consistently across all participants? | Was the exposure assessed more than once over time? | Were the outcome measures clearly defined, valid, reliable, and implemented consistently across all participants? | Were the outcome assessors blinded to the exposure status of participants? | Was loss to follow-up after baseline 20% or less? | Were key potential confounding variables measured and adjusted for statistically? | Quality Rating |
|-----------------------------|--|---|--|--|--|---|--|---|--|---|---|--|---|---|----------------|
| Van Steenoven et al. (2020) | Y | Y | NR | Y | N | N | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| Wang et al. (2019) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | Y | Fair |
| Wang et al. (2018) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | NR | N/A | N | Fair |
| Wellington et al. (2016) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | N | Fair |
| Xiao et al. (2017) | Y | N | NR | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | N | Fair |
| Zetterberg et al. (2016) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | Y | N/A | Y | Good |
| Zhang et al. (2018a) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | CD | N/A | Y | Fair |
| Zhang et al. (2018b) | Y | Y | NR | Y | N | N/A | N/A | Y | Y | N | Y | CD | N/A | Y | Fair |