**SUPPLEMENTAL MATERIAL**

**Depressive symptoms and anti-N-Methyl-D-Aspartate-receptor GluN1 antibody seropositivity in the PROSpective Cohort with Incident Stroke**

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Supplemental Material I:

ATC-Codes encoding anti-depressive drugs:

N06AA Non-selective monoamine reuptake inhibitors  
N06AB Selective serotonin reuptake inhibitors  
N06AF Monoamine oxidase inhibitors, non-selective  
N06AG Monoamine oxidase A inhibitors  
N06AX Other antidepressants

Supplemental Material II: Directed Acyclic Graph

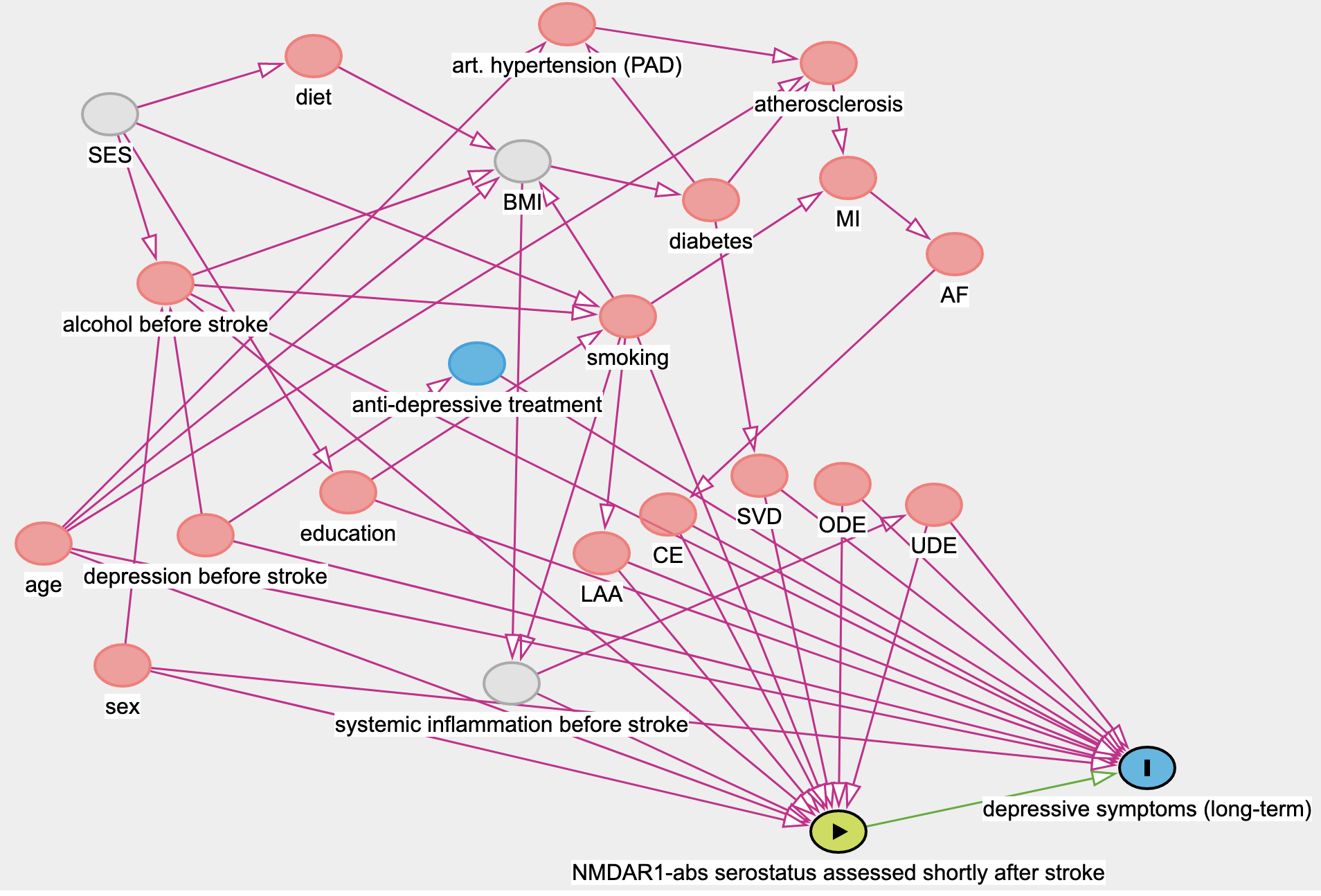


Figure drawn using a web application available on <https://www.dagitty.net>.

Model conclusions:

Exposure: NMDAR1-abs serostatus assessed shortly after stroke

Outcome: depressive symptoms (long-term)

Biasing paths are open.

Minimal sufficient adjustment sets for estimating the total effect of NMDAR1-abs serostatus assessed shortly after stroke on depressive symptoms (long-term):

* CE, LAA, ODE, SVD, UDE, age, alcohol before stroke, depression before stroke, education, sex
* CE, LAA, ODE, SVD, UDE, age, alcohol before stroke, diet, sex, smoking

The model implies the following conditional independences:

* sex ⊥ age
* sex ⊥ diet
* sex ⊥ atherosclerosis | age, diabetes
* sex ⊥ atherosclerosis | alcohol before stroke, diet, smoking
* sex ⊥ AF | MI
* sex ⊥ AF | atherosclerosis, smoking
* sex ⊥ AF | age, diabetes, smoking
* sex ⊥ AF | alcohol before stroke, diet, smoking
* sex ⊥ depression before stroke
* sex ⊥ anti-depressive treatment
* sex ⊥ art. hypertension (PAD) | age, diabetes
* sex ⊥ art. hypertension (PAD) | alcohol before stroke, diet, smoking
* sex ⊥ diabetes | alcohol before stroke, diet, smoking
* sex ⊥ LAA | smoking
* sex ⊥ CE | AF
* sex ⊥ CE | MI
* sex ⊥ CE | atherosclerosis, smoking
* sex ⊥ CE | age, diabetes, smoking
* sex ⊥ CE | alcohol before stroke, diet, smoking
* sex ⊥ SVD | diabetes
* sex ⊥ SVD | alcohol before stroke, diet, smoking
* sex ⊥ ODE
* sex ⊥ UDE | alcohol before stroke, diet, smoking
* sex ⊥ MI | atherosclerosis, smoking
* sex ⊥ MI | age, diabetes, smoking
* sex ⊥ MI | alcohol before stroke, diet, smoking
* sex ⊥ education
* age ⊥ diet
* age ⊥ AF | MI
* age ⊥ AF | atherosclerosis, smoking
* age ⊥ depression before stroke
* age ⊥ anti-depressive treatment
* age ⊥ smoking
* age ⊥ LAA
* age ⊥ CE | AF
* age ⊥ CE | MI
* age ⊥ CE | atherosclerosis, smoking
* age ⊥ SVD | diabetes
* age ⊥ ODE
* age ⊥ MI | atherosclerosis, smoking
* age ⊥ education
* age ⊥ alcohol before stroke
* diet ⊥ atherosclerosis | age, diabetes
* diet ⊥ AF | MI
* diet ⊥ AF | atherosclerosis, smoking
* diet ⊥ AF | age, diabetes, smoking
* diet ⊥ depression before stroke
* diet ⊥ anti-depressive treatment
* diet ⊥ art. hypertension (PAD) | age, diabetes
* diet ⊥ LAA | smoking
* diet ⊥ CE | AF
* diet ⊥ CE | MI
* diet ⊥ CE | atherosclerosis, smoking
* diet ⊥ CE | age, diabetes, smoking
* diet ⊥ SVD | diabetes
* diet ⊥ ODE
* diet ⊥ MI | atherosclerosis, smoking
* diet ⊥ MI | age, diabetes, smoking
* diet ⊥ depressive symptoms (long-term) | CE, LAA, NMDAR1-abs serostatus assessed shortly after stroke, ODE, SVD, UDE, age, alcohol before stroke, depression before stroke, education, sex
* atherosclerosis ⊥ AF | MI
* atherosclerosis ⊥ depression before stroke | alcohol before stroke, diet, smoking
* atherosclerosis ⊥ depression before stroke | age, diabetes
* atherosclerosis ⊥ anti-depressive treatment | depression before stroke
* atherosclerosis ⊥ anti-depressive treatment | alcohol before stroke, diet, smoking
* atherosclerosis ⊥ anti-depressive treatment | age, diabetes
* atherosclerosis ⊥ smoking | age, diabetes
* atherosclerosis ⊥ LAA | smoking
* atherosclerosis ⊥ LAA | age, diabetes
* atherosclerosis ⊥ CE | AF
* atherosclerosis ⊥ CE | MI
* atherosclerosis ⊥ SVD | diabetes
* atherosclerosis ⊥ ODE
* atherosclerosis ⊥ UDE | age, diabetes
* atherosclerosis ⊥ education | alcohol before stroke, diet, smoking
* atherosclerosis ⊥ education | age, diabetes
* atherosclerosis ⊥ depressive symptoms (long-term) | CE, LAA, NMDAR1-abs serostatus assessed shortly after stroke, ODE, SVD, UDE, age, alcohol before stroke, depression before stroke, education, sex
* atherosclerosis ⊥ depressive symptoms (long-term) | CE, LAA, NMDAR1-abs serostatus assessed shortly after stroke, ODE, SVD, UDE, age, alcohol before stroke, diet, sex, smoking
* atherosclerosis ⊥ depressive symptoms (long-term) | CE, age, diabetes, smoking
* atherosclerosis ⊥ depressive symptoms (long-term) | AF, age, diabetes, smoking
* atherosclerosis ⊥ depressive symptoms (long-term) | MI, age, diabetes, smoking
* atherosclerosis ⊥ alcohol before stroke | age, diabetes
* atherosclerosis ⊥ NMDAR1-abs serostatus assessed shortly after stroke | CE, age, diabetes, smoking
* atherosclerosis ⊥ NMDAR1-abs serostatus assessed shortly after stroke | AF, age, diabetes, smoking
* atherosclerosis ⊥ NMDAR1-abs serostatus assessed shortly after stroke | MI, age, diabetes, smoking
* AF ⊥ depression before stroke | alcohol before stroke, diet, smoking
* AF ⊥ depression before stroke | age, diabetes, smoking
* AF ⊥ depression before stroke | atherosclerosis, smoking
* AF ⊥ depression before stroke | MI
* AF ⊥ anti-depressive treatment | depression before stroke
* AF ⊥ anti-depressive treatment | alcohol before stroke, diet, smoking
* AF ⊥ anti-depressive treatment | age, diabetes, smoking
* AF ⊥ anti-depressive treatment | atherosclerosis, smoking
* AF ⊥ anti-depressive treatment | MI
* AF ⊥ art. hypertension (PAD) | age, atherosclerosis, diabetes
* AF ⊥ art. hypertension (PAD) | atherosclerosis, smoking
* AF ⊥ art. hypertension (PAD) | MI
* AF ⊥ diabetes | atherosclerosis, smoking
* AF ⊥ diabetes | MI
* AF ⊥ smoking | MI
* AF ⊥ LAA | smoking
* AF ⊥ LAA | MI
* AF ⊥ SVD | diabetes
* AF ⊥ SVD | atherosclerosis, smoking
* AF ⊥ SVD | MI
* AF ⊥ ODE
* AF ⊥ UDE | age, diabetes, smoking
* AF ⊥ UDE | atherosclerosis, smoking
* AF ⊥ UDE | MI
* AF ⊥ education | alcohol before stroke, diet, smoking
* AF ⊥ education | age, diabetes, smoking
* AF ⊥ education | atherosclerosis, smoking
* AF ⊥ education | MI
* AF ⊥ depressive symptoms (long-term) | CE, LAA, NMDAR1-abs serostatus assessed shortly after stroke, ODE, SVD, UDE, age, alcohol before stroke, depression before stroke, education, sex
* AF ⊥ depressive symptoms (long-term) | CE, LAA, NMDAR1-abs serostatus assessed shortly after stroke, ODE, SVD, UDE, age, alcohol before stroke, diet, sex, smoking
* AF ⊥ depressive symptoms (long-term) | CE, age, diabetes, smoking
* AF ⊥ depressive symptoms (long-term) | CE, atherosclerosis, smoking
* AF ⊥ depressive symptoms (long-term) | CE, MI
* AF ⊥ alcohol before stroke | age, diabetes, smoking
* AF ⊥ alcohol before stroke | atherosclerosis, smoking
* AF ⊥ alcohol before stroke | MI
* AF ⊥ NMDAR1-abs serostatus assessed shortly after stroke | CE, age, diabetes, smoking
* AF ⊥ NMDAR1-abs serostatus assessed shortly after stroke | CE, atherosclerosis, smoking
* AF ⊥ NMDAR1-abs serostatus assessed shortly after stroke | CE, MI
* depression before stroke ⊥ art. hypertension (PAD) | age, diabetes
* depression before stroke ⊥ art. hypertension (PAD) | alcohol before stroke, diet, smoking
* depression before stroke ⊥ diabetes | alcohol before stroke, diet, smoking
* depression before stroke ⊥ LAA | smoking
* depression before stroke ⊥ CE | AF
* depression before stroke ⊥ CE | MI
* depression before stroke ⊥ CE | atherosclerosis, smoking
* depression before stroke ⊥ CE | age, diabetes, smoking
* depression before stroke ⊥ CE | alcohol before stroke, diet, smoking
* depression before stroke ⊥ SVD | diabetes
* depression before stroke ⊥ SVD | alcohol before stroke, diet, smoking
* depression before stroke ⊥ ODE
* depression before stroke ⊥ UDE | alcohol before stroke, diet, smoking
* depression before stroke ⊥ MI | atherosclerosis, smoking
* depression before stroke ⊥ MI | age, diabetes, smoking
* depression before stroke ⊥ MI | alcohol before stroke, diet, smoking
* depression before stroke ⊥ education
* depression before stroke ⊥ NMDAR1-abs serostatus assessed shortly after stroke | alcohol before stroke, diet, sex, smoking
* anti-depressive treatment ⊥ art. hypertension (PAD) | age, diabetes
* anti-depressive treatment ⊥ art. hypertension (PAD) | alcohol before stroke, diet, smoking
* anti-depressive treatment ⊥ art. hypertension (PAD) | depression before stroke
* anti-depressive treatment ⊥ diabetes | alcohol before stroke, diet, smoking
* anti-depressive treatment ⊥ diabetes | depression before stroke
* anti-depressive treatment ⊥ smoking | depression before stroke
* anti-depressive treatment ⊥ LAA | smoking
* anti-depressive treatment ⊥ LAA | depression before stroke
* anti-depressive treatment ⊥ CE | AF
* anti-depressive treatment ⊥ CE | MI
* anti-depressive treatment ⊥ CE | atherosclerosis, smoking
* anti-depressive treatment ⊥ CE | age, diabetes, smoking
* anti-depressive treatment ⊥ CE | alcohol before stroke, diet, smoking
* anti-depressive treatment ⊥ CE | depression before stroke
* anti-depressive treatment ⊥ SVD | diabetes
* anti-depressive treatment ⊥ SVD | alcohol before stroke, diet, smoking
* anti-depressive treatment ⊥ SVD | depression before stroke
* anti-depressive treatment ⊥ ODE
* anti-depressive treatment ⊥ UDE | alcohol before stroke, diet, smoking
* anti-depressive treatment ⊥ UDE | depression before stroke
* anti-depressive treatment ⊥ MI | atherosclerosis, smoking
* anti-depressive treatment ⊥ MI | age, diabetes, smoking
* anti-depressive treatment ⊥ MI | alcohol before stroke, diet, smoking
* anti-depressive treatment ⊥ MI | depression before stroke
* anti-depressive treatment ⊥ education
* anti-depressive treatment ⊥ alcohol before stroke | depression before stroke
* anti-depressive treatment ⊥ NMDAR1-abs serostatus assessed shortly after stroke | alcohol before stroke, diet, sex, smoking
* anti-depressive treatment ⊥ NMDAR1-abs serostatus assessed shortly after stroke | depression before stroke
* art. hypertension (PAD) ⊥ smoking | age, diabetes
* art. hypertension (PAD) ⊥ LAA | smoking
* art. hypertension (PAD) ⊥ LAA | age, diabetes
* art. hypertension (PAD) ⊥ CE | AF
* art. hypertension (PAD) ⊥ CE | MI
* art. hypertension (PAD) ⊥ CE | atherosclerosis, smoking
* art. hypertension (PAD) ⊥ CE | age, atherosclerosis, diabetes
* art. hypertension (PAD) ⊥ SVD | diabetes
* art. hypertension (PAD) ⊥ ODE
* art. hypertension (PAD) ⊥ UDE | age, diabetes
* art. hypertension (PAD) ⊥ MI | atherosclerosis, smoking
* art. hypertension (PAD) ⊥ MI | age, atherosclerosis, diabetes
* art. hypertension (PAD) ⊥ education | alcohol before stroke, diet, smoking
* art. hypertension (PAD) ⊥ education | age, diabetes
* art. hypertension (PAD) ⊥ depressive symptoms (long-term) | CE, LAA, NMDAR1-abs serostatus assessed shortly after stroke, ODE, SVD, UDE, age, alcohol before stroke, depression before stroke, education, sex
* art. hypertension (PAD) ⊥ depressive symptoms (long-term) | CE, LAA, NMDAR1-abs serostatus assessed shortly after stroke, ODE, SVD, UDE, age, alcohol before stroke, diet, sex, smoking
* art. hypertension (PAD) ⊥ depressive symptoms (long-term) | CE, age, diabetes, smoking
* art. hypertension (PAD) ⊥ depressive symptoms (long-term) | AF, age, diabetes, smoking
* art. hypertension (PAD) ⊥ depressive symptoms (long-term) | MI, age, diabetes, smoking
* art. hypertension (PAD) ⊥ depressive symptoms (long-term) | age, atherosclerosis, diabetes
* art. hypertension (PAD) ⊥ alcohol before stroke | age, diabetes
* art. hypertension (PAD) ⊥ NMDAR1-abs serostatus assessed shortly after stroke | CE, age, diabetes, smoking
* art. hypertension (PAD) ⊥ NMDAR1-abs serostatus assessed shortly after stroke | AF, age, diabetes, smoking
* art. hypertension (PAD) ⊥ NMDAR1-abs serostatus assessed shortly after stroke | MI, age, diabetes, smoking
* art. hypertension (PAD) ⊥ NMDAR1-abs serostatus assessed shortly after stroke | age, atherosclerosis, diabetes
* diabetes ⊥ LAA | smoking
* diabetes ⊥ CE | AF
* diabetes ⊥ CE | MI
* diabetes ⊥ CE | atherosclerosis, smoking
* diabetes ⊥ ODE
* diabetes ⊥ MI | atherosclerosis, smoking
* diabetes ⊥ education | alcohol before stroke, diet, smoking
* diabetes ⊥ depressive symptoms (long-term) | CE, LAA, NMDAR1-abs serostatus assessed shortly after stroke, ODE, SVD, UDE, age, alcohol before stroke, depression before stroke, education, sex
* diabetes ⊥ depressive symptoms (long-term) | CE, LAA, NMDAR1-abs serostatus assessed shortly after stroke, ODE, SVD, UDE, age, alcohol before stroke, diet, sex, smoking
* smoking ⊥ CE | AF
* smoking ⊥ CE | MI
* smoking ⊥ SVD | diabetes
* smoking ⊥ ODE
* smoking ⊥ depressive symptoms (long-term) | CE, LAA, NMDAR1-abs serostatus assessed shortly after stroke, ODE, SVD, UDE, age, alcohol before stroke, depression before stroke, education, sex
* LAA ⊥ CE | AF
* LAA ⊥ CE | MI
* LAA ⊥ CE | smoking
* LAA ⊥ SVD | diabetes
* LAA ⊥ SVD | smoking
* LAA ⊥ ODE
* LAA ⊥ UDE | smoking
* LAA ⊥ MI | smoking
* LAA ⊥ education | smoking
* LAA ⊥ alcohol before stroke | smoking
* CE ⊥ SVD | diabetes
* CE ⊥ SVD | atherosclerosis, smoking
* CE ⊥ SVD | MI
* CE ⊥ SVD | AF
* CE ⊥ ODE
* CE ⊥ UDE | age, diabetes, smoking
* CE ⊥ UDE | atherosclerosis, smoking
* CE ⊥ UDE | MI
* CE ⊥ UDE | AF
* CE ⊥ MI | AF
* CE ⊥ education | alcohol before stroke, diet, smoking
* CE ⊥ education | age, diabetes, smoking
* CE ⊥ education | atherosclerosis, smoking
* CE ⊥ education | MI
* CE ⊥ education | AF
* CE ⊥ alcohol before stroke | age, diabetes, smoking
* CE ⊥ alcohol before stroke | atherosclerosis, smoking
* CE ⊥ alcohol before stroke | MI
* CE ⊥ alcohol before stroke | AF
* SVD ⊥ ODE
* SVD ⊥ UDE | diabetes
* SVD ⊥ MI | atherosclerosis, smoking
* SVD ⊥ MI | diabetes
* SVD ⊥ education | alcohol before stroke, diet, smoking
* SVD ⊥ education | diabetes
* SVD ⊥ alcohol before stroke | diabetes
* ODE ⊥ UDE
* ODE ⊥ MI
* ODE ⊥ education
* ODE ⊥ alcohol before stroke
* UDE ⊥ MI | atherosclerosis, smoking
* UDE ⊥ MI | age, diabetes, smoking
* UDE ⊥ education | alcohol before stroke, diet, smoking
* MI ⊥ education | alcohol before stroke, diet, smoking
* MI ⊥ education | age, diabetes, smoking
* MI ⊥ education | atherosclerosis, smoking
* MI ⊥ depressive symptoms (long-term) | CE, LAA, NMDAR1-abs serostatus assessed shortly after stroke, ODE, SVD, UDE, age, alcohol before stroke, depression before stroke, education, sex
* MI ⊥ depressive symptoms (long-term) | CE, LAA, NMDAR1-abs serostatus assessed shortly after stroke, ODE, SVD, UDE, age, alcohol before stroke, diet, sex, smoking
* MI ⊥ depressive symptoms (long-term) | CE, age, diabetes, smoking
* MI ⊥ depressive symptoms (long-term) | CE, atherosclerosis, smoking
* MI ⊥ depressive symptoms (long-term) | AF, age, diabetes, smoking
* MI ⊥ depressive symptoms (long-term) | AF, atherosclerosis, smoking
* MI ⊥ alcohol before stroke | age, diabetes, smoking
* MI ⊥ alcohol before stroke | atherosclerosis, smoking
* MI ⊥ NMDAR1-abs serostatus assessed shortly after stroke | CE, age, diabetes, smoking
* MI ⊥ NMDAR1-abs serostatus assessed shortly after stroke | CE, atherosclerosis, smoking
* MI ⊥ NMDAR1-abs serostatus assessed shortly after stroke | AF, age, diabetes, smoking
* MI ⊥ NMDAR1-abs serostatus assessed shortly after stroke | AF, atherosclerosis, smoking
* education ⊥ NMDAR1-abs serostatus assessed shortly after stroke | alcohol before stroke, diet, sex, smoking

R-code for the model:

dag {

"NMDAR1-abs serostatus assessed shortly after stroke" [exposure,pos="0.125,1.771"]

"alcohol before stroke" [pos="-1.845,-0.566"]

"anti-depressive treatment" [pos="-0.933,-0.224"]

"art. hypertension (PAD)" [pos="-0.670,-1.670"]

"depression before stroke" [pos="-1.727,0.508"]

"depressive symptoms (long-term)" [outcome,pos="1.029,1.499"]

"systemic inflammation before stroke" [latent,pos="-0.832,1.139"]

AF [pos="0.465,-0.690"]

BMI [latent,pos="-0.799,-1.086"]

CE [pos="-0.374,0.419"]

LAA [pos="-0.568,0.585"]

MI [pos="0.153,-1.015"]

ODE [pos="0.137,0.290"]

SES [latent,pos="-2.007,-1.286"]

SVD [pos="-0.106,0.254"]

UDE [pos="0.404,0.378"]

age [pos="-2.201,0.543"]

atherosclerosis [pos="0.096,-1.505"]

diabetes [pos="-0.248,-0.920"]

diet [pos="-1.411,-1.534"]

education [pos="-1.310,0.325"]

sex [pos="-1.970,1.063"]

smoking [pos="-0.491,-0.425"]

"NMDAR1-abs serostatus assessed shortly after stroke" -> "depressive symptoms (long-term)"

"alcohol before stroke" -> "NMDAR1-abs serostatus assessed shortly after stroke"

"alcohol before stroke" -> "depressive symptoms (long-term)"

"alcohol before stroke" -> BMI

"alcohol before stroke" -> smoking

"anti-depressive treatment" -> "depressive symptoms (long-term)"

"art. hypertension (PAD)" -> atherosclerosis

"depression before stroke" -> "alcohol before stroke"

"depression before stroke" -> "anti-depressive treatment"

"depression before stroke" -> "depressive symptoms (long-term)"

"systemic inflammation before stroke" -> "NMDAR1-abs serostatus assessed shortly after stroke"

"systemic inflammation before stroke" -> UDE

AF -> CE

BMI -> "systemic inflammation before stroke"

BMI -> diabetes

CE -> "NMDAR1-abs serostatus assessed shortly after stroke"

CE -> "depressive symptoms (long-term)"

LAA -> "NMDAR1-abs serostatus assessed shortly after stroke"

LAA -> "depressive symptoms (long-term)"

MI -> AF

ODE -> "NMDAR1-abs serostatus assessed shortly after stroke"

ODE -> "depressive symptoms (long-term)"

SES -> "alcohol before stroke"

SES -> diet

SES -> education

SES -> smoking

SVD -> "NMDAR1-abs serostatus assessed shortly after stroke"

SVD -> "depressive symptoms (long-term)"

UDE -> "NMDAR1-abs serostatus assessed shortly after stroke"

UDE -> "depressive symptoms (long-term)"

age -> "NMDAR1-abs serostatus assessed shortly after stroke"

age -> "art. hypertension (PAD)"

age -> "depressive symptoms (long-term)"

age -> BMI

age -> atherosclerosis

atherosclerosis -> MI

diabetes -> "art. hypertension (PAD)"

diabetes -> SVD

diabetes -> atherosclerosis

diet -> BMI

education -> "depressive symptoms (long-term)"

education -> smoking

sex -> "NMDAR1-abs serostatus assessed shortly after stroke"

sex -> "alcohol before stroke"

sex -> "depressive symptoms (long-term)"

smoking -> "NMDAR1-abs serostatus assessed shortly after stroke"

smoking -> "systemic inflammation before stroke"

smoking -> BMI

smoking -> LAA

smoking -> MI

}

Supplemental Table I: Full results of anti-neuronal autoantibodies measured in PROSCIS-B:

|  |  |  |  |
| --- | --- | --- | --- |
| Antibody | N (%) | | |
|  | IgM | IgA | IgG |
| NMDAR1-abs |  |  |  |
| 1:10 | 18 (3) | 19 (3) | 0 (0) |
| 1:32 | 1 (>0) | 4 (1) | 0 (0) |
| 1:100 | 18 (3) | 10 (2) | 2 (>0) |
| 1:320 | 10 (2) | 9 (2) | 0 (0) |
| 1:1000 | 2 (>0) | 1 (>0) | 0 (0) |
| any titer | 49 (8) | 43 (7) | 2 (>0) |
|  |  |  |  |
| GAD65 | - | - | 0 (0) |
|  |  |  |  |
| GABA-B | - | - | 0 (0) |
|  |  |  |  |
| AQP4 | - | - | 0 (0) |
|  |  |  |  |
| LGI1 |  |  |  |
| 1:10 | - | - | 1 (>0) |
|  |  |  |  |
| CASPR2 | - | - | 0 (0) |
|  |  |  |  |
| Cerebellum (monkey) |  |  |  |
| 1:100 | - | - | 12 (2) |
| 1:320 | - | - | 5 (1) |
| any titer | - | - | 17 (3) |

glutamic acid decarboxylase ﻿65 kDa isoform (GAD65), gamma-aminobutyric acid B receptor (GABA-B), ﻿aquaporin 4 (AQP4), leucine-rich glioma-inactivated 1 (LGI1) and ﻿contactin-associated protein-like 2 (CASPR2); Cerebellum (monkey), results from tissue-based assays (TBA)

Supplemental Table II: **Baseline Characteristics Table of PROSCIS – B Participants** **stratified to patients with and without 3-year follow-up assessment of depression**

|  |  |  |
| --- | --- | --- |
|  | **CES-D after 3 years available** | **No CES-D after 3 years available** |
| **Participants** \**n (%)* | 324 (56) | 259 (44) |
| **Anti-NMDAR GluN1 antibody seropositive** *n (%)* | 36 (47) | 40 (53) |
| **Age (years**) *mean (SD)* | 65 (12) | 68 (14) |
| **Female sex** *n (%)* | 115 (35) | 111 (43) |
| **Blood pressure (mmHg)** *mean (SD)* |  |  |
| Systolic | 139 (22) | 139 (23) |
| Diastolic | 78 (13) | 75 (16) |
| **History of hypertension** *n (%)* | 199 (61) | 183 (71) |
| **BMI (kg/m2)** *median (IQR)* | 27 (24 – 30) | 27 (24 – 30) |
| **Habitual alcohol consumption***n (%)* | 119 (38) | 83 (33) |
| **Current smokers** *n (%)* | 89 (28) | 72 (29) |
| **Cholesterol (mg/dl)** *mean (SD)* |  |  |
| Total‡ | 202 (47) | 195 (50) |
| HDL§ | 53 (16) | 49 (16) |
| LDL§ | 124 (39) | 120 (43) |
| **Triglycerides (mg/dl)** | | *mean (SD)* | 134 (66) | 145 (95) |
| **History of diabetes mellitus** *n (%)* | 65 (20) | 63 (24) |
| **History of arterial disease** *n (%)* |  |  |
| PAD | 16 (5) | 24 (9) |
| CHD | 45 (14) | 51 (2) |
| **eGFR** *mean (SD)* | 79 (19) | 74 (23) |
| **History of atrial fibrillation** *n (%)* | 69 (27) | 55 (17) |
| **NIHSS** *median (IQR)* |  |  |
| 0 – 4 | 256 (79) | 184 (71) |
| 5 – 16 | 68 (21) | 75 (29) |
| **TOAST** *n (%)* |  |  |
| Large-artery atherosclerosis | 86 (27) | 67 (26) |
| Cardioembolic | 68 (21) | 71 (28) |
| Small-vessel occlusion | 51 (16) | 42 (16) |
| Stroke of other determined etiology | 11 (3) | 6 (2) |
| Stroke of undetermined etiology | 108 (33) | 73 (28) |
| **mRS at baseline** *median (IQR)* | 1 (1 – 2) | 2 (1– 3) |
| **Years of school education** *n (%)* |  |  |
| ≤ 10 years | 205 (63) | 191 (74) |
| > 10 years | 109 (34) | 51 (20) |
| **MMSE** *median (IQR)* | 29 (27 – 30) | 28 (25 – 29) |
| **Cognitive impairment (MMSE≤26)** *n (%)* | 72 (22) | 86 (33) |
| **Anti-depressive medication before stroke** *n (%)* | 18 (6) | 17 (7) |

CES-D, Center for Epidemiological Studies – Depression; SD, Standard deviation; IQR, inter quartile range between the 25th and 75th percentile; MI, myocardial infarction; PAD, peripheral artery disease; CHD, coronary heart disease; BMI, Body Mass Index; GFR, glomerular filtration rate calculated using the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) formula; HDL, high density lipoprotein; LDL, low density lipoprotein; NIHSS, National Institutes of Health Stroke Scale; TOAST, stroke etiology according to Trial of Org 10172 in Acute Stoke Treatment; mRS, modified Rankin Scale; MMSE, Mini Mental State Examination \*38 participants were missing antibody measurements; Missing values were < 10% in all characteristics except for ‡‘total cholesterol’ missing: n = 57, §‘HDL’ and ‘LDL’ missing: n = 38 , | |‘Triglycerides’ missing: n = 49; Due to rounding values might not add to 100%.