

**Supplementary Table 1.** Definitions and classifications of baseline covariates.

Variable	Classification/ definition (ATC code, ICD-10 or NOMESCO codes)	Measurement point	Data source
Age, years	<65 65-74 75-84 ≥85	At the start of follow-up	PR
Gender	Male Female	At the start of follow-up	PR
Time since AD diagnosis	0-364 365-730 731-1095 ≥1096	At the start of follow-up	SR
University hospital catchment area	Helsinki Turku Tampere Kuopio Oulu Unknown/ other	At the time of AD diagnosis	SF
Occupational socioeconomic position	High Medium Low Unknown	Highest position recorded in the middle age (45-55 years)	SF
<b>Drug use at the start of follow-up</b>			
Antipsychotics	N05A excluding lithium N05AN01	Within 2 weeks before start of follow-up	PR
Antidepressants	N06A	Within 2 weeks before start of follow-up	PR
Benzodiazepines and related drugs	N05BA, N05CD, N05CF	Within 2 weeks before start of follow-up	PR
Antiepileptics	N03A	Within 2 weeks before start of follow-up	PR
Paracetamol	N02BE01	Within 2 weeks before start of follow-up	PR
PPI use	A02BC	Within 2 weeks before start of follow-up	PR
Oral glucocorticoid use	H02AB	Within 2 weeks before start of follow-up	PR
Estrogen	G03C	Within 2 weeks before start of follow-up	PR

The sum of cardiovascular drugs	C*	Within 2 weeks before start of follow-up	PR
Glaucoma drug use	S01E	Within 2 weeks before start of follow-up	PR
AChEIs	N06DA	Within 2 weeks before start of follow-up	PR
Memantine	N06DX01	Within 2 weeks before start of follow-up	PR
<b>Comorbidities</b>			
Previous fracture	ICD-10: S*2 or T02*	Ever (since 1972) before the start of follow-up	HR
Previous opioid use	N02A	Ever (since 1995) before the start of 1-year washout period	PR
Previous head injury	Hospitalization (ICD-10: S0* (Injuries to the head))	Diagnosed since 1972 until the start of follow-up	HR
Prosthetic replacement of knee or hip	NOMESCO codes: NFB (Primary prosthetic replacement of hip joint), NFC (Secondary prosthetic replacement of hip joint), NGB (Primary prosthetic replacement of knee joint), NGC (Secondary prosthetic replacement of knee joint)	Diagnosed since 1994 until the start of follow-up	HR
Hypertension	Hospitalization (ICD-10 I10-I15) or special reimbursement of hypertension (classification number 205)	Diagnosed since 1996 until the start of follow-up (hospitalization); or since 1972 until the start of follow-up (special reimbursement)	SR, HR
Chronic heart failure	Hospitalization (ICD-10 I42, I43, I50, I11.0) or special reimbursement of chronic heart failure (classification number 201)	Diagnosed since 1996 until the start of follow-up (hospitalization); or since 1972 until the start of follow-up (special reimbursement)	SR, HR
Active cancer	<b>ICD-10:</b> C00-C97, or surgical procedures related to cancer, <b>NOMESCO:</b> AAG50, AX, HA0, PJO, QA0, QB0, QC0, QD0, QW0, QX0, WA, WB, WC, WD, WE, WF0, WFO, ZX0, or <b>ATC codes</b> L01, L02, L03AA, L03AB01, L03AB04, L03AB05, L03AC, L03AX (excluding L03AX13),	Within one year before start of follow-up, diagnoses in the HR or antineoplastic drug use (except metotrexate for rheumatoid arthritis)	HR, PR, SR

	L04AA10, L04AA18, L04AA34, L04AX02, L04AX03, L01BA01		
Previous stroke	Hospitalization (ICD-10: I60-I64, I69)	Diagnosed since 1972 until the start of follow-up (I69 since 1996)	HR
Number of hospital days within previous year	0 1-14 ≥15	Within one year before start of follow-up.	HR

Abbreviations: AD, Alzheimer's disease; ATC, Anatomical Therapeutic Chemical; COPD, chronic obstructive pulmonary disease; HR, Hospital Discharge Register; ICD, International Classification of Diseases; PR, Prescription Register; SF, Statistics Finland; SR, Special Reimbursement Register, AChEI, acetylcholinesterase inhibitor.