

Supplementary Table 1. ICD-10 Codes and medications used to define key conditions, comorbidities, and medication histories

Variable	Definitions ^a	Codes
Key condition		
Alzheimer disease	Defined from diagnosis and prescription of dementia drug for more than 30 days	ICD-10: F00, G30
Depressive disorder	Defined from diagnosis and prescription of antidepressants for more than 30 days	Dementia drugs: Donepezil, galantamine, memantine, rivastigmine ICD-10: F32, F33, F34, or F38 Antidepressants: agomelatine, amitriptyline, bupropion, clomipramine, desvenlafaxine, doxepin, duloxetine, escitalopram, fluoxetine, fluvoxamine, imipramine, milnacipran, mirtazapine, nortriptyline, paroxetine, sertraline, tianeptine, trazodone, venlafaxine, vortioxetine ICD-10: Z49.1, Z49.2, Z94.0, Z99.2, T86.1
End-stage kidney disease	Defined from diagnosis for dialysis or kidney transplantation or dialysis claim codes for more than 90 days	Korean procedure codes: O2013, O2014, O2016, O2017, O2018, O2019, O7020, O7021, O7071, O7072, O7073, O7074, O7075, O7076, O7077, O9991
Comorbidity		
Hypertension	Defined from diagnosis and antihypertensive medications	ICD-10: I10, I11, I12, I13, I15
Diabetes mellitus	Defined from diagnosis and oral antidiabetics and insulin	ICD-10: E10, E11, E12, E13, E14
Dyslipidemia	Defined from diagnosis and lipid-lowering agents	ICD-10: E78
Chronic kidney disease	Defined from diagnosis	ICD-10: N18, N19 except those who met ESKD definition
Myocardial infarction	Defined from diagnosis	ICD-10: I21, I22, I23, I25.2, I25.5
Congestive heart failure	Defined from diagnosis	ICD-10: I50, I11.0
Peripheral arterial disease	Defined from diagnosis	ICD-10: I70.2, I73
Cerebrovascular disease	Defined from diagnosis	ICD-10: I60, I61, I62, I63, I64, I69
Malignancy	Defined from diagnosis	ICD-10: C00-C97
Chronic liver disease	Defined from diagnosis	ICD-10: B18, K70, K71, K72, K73
Chronic obstructive pulmonary disease	Defined from diagnosis	ICD-10: J42, J43.1-J43.9, J44
Osteoporosis	Defined from diagnosis	ICD-10: M80, M81, M82.1, M82.8
Medication history		
Renin-angiotensin-aldosterone system blocker	Defined from general name code ^b	Alacepril, captopril, cilazapril, delapril, enalapril, fosinopril, imidapril, lisinopril, moexipril, perindopril, quinapril, ramipril, temocapril, enalapril, zofenopril, candesartan, irbesartan, losartan, valsartan, telmisartan, eprosartan, olmesartan, fimasartan
Dihydropyridine calcium channel blocker	Defined from general name code ^b	Amlodipine, S-amlodipine, barnidipine, benidipine, cilnidipine, felodipine, lacidipine, lercanidipine, manidipine, nicardipine, nifedipine, nilvadipine, nimodipine, nitrendipine, nisoldipine, efonidipine, nitrendipine
Statin	Defined from general name code ^b	Atorvastatin, fluvastatin, lovastatin, pitavastatin, rosuvastatin, simvastatin
Diuretics	Defined from general name code ^b	Furosemide, torasemide, hydrochlorothiazide, chlorthalidone, indapamide, cicletanone, tripartamide

ICD-10, International Classification of Diseases, 10th revision; ESKD, end-stage kidney disease.

^aDefinitions of diagnoses were established based on one inpatient or two outpatient records of ICD-10 codes in the database. ^bGeneral name codes for each drug are available at <https://www.hira.or.kr/rf/medicine/getHistoryList.do?pgmid=HIRAA030035020000>.