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

| Variable                                | Definitions                                                                 | Codes                        |
|-----------------------------------------|-----------------------------------------------------------------------------|------------------------------|
| **Key condition**                       |                                                                            |                              |
| Alzheimer disease                       | Defined from diagnosis and prescription of dementia drug for more than 30 days | ICD-10: F00, G30             |
|                                         | Dementia drugs: Donepezil, galantamine, memantine, rivastigmine              |                              |
| Depressive disorder                     | Defined from diagnosis and prescription of antidepressants for more than 30 days | 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 |                              |
| End-stage kidney disease                | Defined from diagnosis for dialysis or kidney transplantation or dialysis claim codes for more than 90 days | ICD-10: Z49.1, Z49.2, Z94.0, Z99.2, T86.1 |
|                                         | Korean procedure codes: 02013, 02014, 02016, 02017, 02018, 02019, 07020, 07021, 07071, 07072, 07073, 07074, 07075, 07076, 07077, 09991 |                              |
| **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–C07                                                        |
| 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    | Defined from general name code\(^a\)                                        |                              |
| blocker                                 | Alacepril, captopril, cilazapril, delapril, enalapril, fosinopril, imidapril, lisinopril, moexipril, perindopril, quinapril, ramipril, temocapril, enalapril, zofenopril, candesartan, irbesartan, losartan, valsartan, telmisartan, eprosartan, olmesartan, fasimartan |                              |
| Dihydropyridine calcium channel blocker | Defined from general name code\(^a\)                                        |                              |
| Statin                                  | Defined from general name code\(^a\)                                        |                              |
| Diuretics                               | Defined from general name code\(^a\)                                        |                              |
|                                         | Furosemide, torasemide, hydrochlorothiazide, chlorthalidone, indapamide, clobetasone, triamterene |                              |

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

\(^a\)Definitions of diagnoses were established based on one inpatient or two outpatient records of ICD-10 codes in the database. \(^b\)General name codes for each drug are available at https://www.hira.or.kr/ft/medicine/getHistoryList.do?pgmid=HIRAA030035020000.