

Table S1. Exclusion criteria

| Exclusion criterion | Codes |
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| | <i>ICD-10</i> |
| Major cardiovascular events | I00.x-I99.x, R57.0, R96.0, R96.1 (patient registers and cause of death) |
| Heart failure | I11.0, I13.0, I13.2, I50.x, J81.x (patient registers and cause of death) |
| Myocardial infarction | I21.x, I22.x (patient registers and cause of death) |
| Stroke | I60.x, I61.x, I63.x, I64.x (patient registers and cause of death) |
| | <i>ATC code</i> |
| Metformin (Taking DPP-4 inhibitors) | A10BA02, A10BD02, A10BD03, A10BD05, A10BD14, A10BD15, A10BD16, A10BD17, A10BD18, A10BD20, A10BD23, A10BD26 |
| DPP-4 inhibitors (Taking Metformin) | A10BD19, A10BH01, A10BH02, A10BH03, A10BH04, A10BH05, A10BH06, A10BH07, A10BH08, A10BH51, A10BH52 |