

Supplementary Table 4. Characteristic of models for patients with diabetes

Study sample	Sample size	Outcomes	Follow-up	Baseline age	Number of events	Model	Sensitivity (%)	Specificity (%)	PPV (%)	NPV (%)	Accuracy (%)	AUC
Type 2 diabetes patients from the Kaiser Permanente Northern California (KPNC) Diabetes Registry, Oakland, CA, USA ¹	29,961	dementia	10 years	≥60	5173	age, education, microvascular disease, diabetic foot, cerebrovascular disease, cardiovascular disease, acute metabolic event, depression						0.74
Patients with type 2 diabetes from pathways study cohort from Washington, USA	2,413	dementia	mean 6.7 years	≥60	328	age, education, microvascular disease, diabetic foot, cerebrovascular disease, cardiovascular disease, acute metabolic event, depression						0.75
Clinical Practice Research Datalink	133,176	dementia		≥60 years		Age, Male, Myocardial infarction, Congestive heart failure, Coronary and peripheral vascular disease, Cerebrovascular disease, Chronic pulmonary disease, Rheumatologic						0.86

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(CPRD) 2						disease, Peptic ulcer disease, Renal disease/end stage renal disease , Mild liver disease/moderate or severe liver disease, Any malignancy including lymphoma and leukemia/metastatic solid tumor, Epilepsy, Hyperlipidemia, Parkinson’s disease, Cardiac disease ASCVD, Glaucoma, Transplantation , Thyroid disorder, Gout, Crohn’s and ulcerative disease, Pain and inflammation / pain, Depression, Psychotic illness, Bipolar disorders, Anxiety and tension						
National Diabetes Care Management Program (NDCMP) ³	18,360	dementia	mean 8.09 years	50–94 years	853	age, sex, duration of type 2 diabetes, BMI, FPG, HbA1c, stroke, postural hypertension, hypoglycemia, coronary artery disease, anti-diabetes medications (3 years)						0.82
						age, sex, duration of type 2 diabetes, BMI, FPG, HbA1c, stroke, postural hypertension, hypoglycemia, coronary artery disease, anti-diabetes medications (5 years)						0.79
						age, sex, duration of type 2 diabetes, BMI, FPG, HbA1c, stroke, postural hypertension, hypoglycemia, coronary artery disease, anti-diabetes medications (10 years)						0.76
	9,180	dementia	mean 8.09 years	50–94 years	375	age, sex, duration of type 2 diabetes, BMI, FPG, HbA1c, stroke, postural hypertension, hypoglycemia, coronary artery disease, anti-diabetes medications (3 years)						0.84

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						age, sex, duration of type 2 diabetes, BMI, FPG, HbA1c, stroke, postural hypertension, hypoglycemia, coronary artery disease, anti-diabetes medications (5 years)						0.80
						age, sex, duration of type 2 diabetes, BMI, FPG, HbA1c, stroke, postural hypertension, hypoglycemia, coronary artery disease, anti-diabetes medications (10 years)						0.75

Abbreviations: ASCVD: arteriosclerotic cardiovascular disease; BMI: body mass index; FPG: Fasting Plasma Glucose.

1. Exalto LG, Biessels GJ, Karter AJ, *et al.* Risk score for prediction of 10 year dementia risk in individuals with type 2 diabetes: A cohort study. *The Lancet Diabetes and Endocrinology* 2013; 1(3): 183-90.
2. Mehta HB, Mehta V, Tsai CL, *et al.* Development and Validation of the RxDx-Dementia Risk Index to Predict Dementia in Patients with Type 2 Diabetes and Hypertension. *J Alzheimers Dis* 2016; 49(2): 423-32.
3. Li CI, Li TC, Liu CS, *et al.* Risk score prediction model for dementia in patients with type 2 diabetes. *Eur J Neurol* 2018.