Supplemental Material

Supplementary Table S1. Measurements and definitions for health examination data 2

Supplementary Table S2. ICD-10 code for pancreatic disease 4

Supplementary Table S3. ICD-10 code for diabetic complications 6

Supplementary Table S4. ICD-10 code for Charlson comorbidity index 11

Supplementary Table S5. Hazard ratios of insulin use in DEP 12

Supplementary Table S6. Baseline characteristics of DEP subtypes 13

Supplementary Table S7. Relative odds for diabetic complications and all-cause mortality by DEP subtypes compared to type 2 diabetes 15

Supplementary Table S8. Relative odds for all-cause mortality in DEP compared to cardiovascular or renal disease-matched type 2 diabetes 17

Supplementary Table S9. Sensitivity analysis for diabetic complications and all-cause mortality among insulin first users in DEP compared to type 2 diabetes 18

Supplementary Figure S1. Flowchart of patient selection 19

Supplementary Figure S2. Sensitivity analysis for insulin use at each time point between DEP and type 2 diabetes excluding patients who initiated insulin within 6 months since diagnosis of diabetes 20

Supplementary Figure S3. Subgroup analysis of HRs for diabetic complications and all-cause mortality of DEP compared to type 2 diabetes by insulin regimen 21

Supplementary Table S1. Measurements and definitions for health examination data

Measurement parameters	Definitions
Medical coverage	• The inequality index used the quintiles of property and annual income provided by Korean medical insurance.
Anthropometric measurements	• Standing height and weight were measured, and BMI was calculated by dividing the weight (kg) by the square of the height (m).
Blood pressure	• Resting systolic and diastolic blood pressures were measured twice in a sitting position.
Laboratory test	• FPG, Lipid panel, and serum creatinine were analyzed using blood samples after overnight fasting. • eGFR was calculated using CKD-EPI (Chronic Kidney Disease Epidemiology Collaboration) equation; eGFR = 141 x $\min(SCr/\kappa, 1)^{\alpha}$ x $\max(SCr/\kappa, 1)^{-1.209}$ x 0.993^{Age} x 1.018 [if female] x 1.159 [if Black]. SCr is serum creatinine, κ is 0.7 for females and 0.9 for males, α is -0.329 for females and -0.411 for males, min indicates the minimum of SCr/κ or 1, and max indicates the maximum of SCr/κ or 1.
Self-reported questionnaires	• Smoking and alcohol consumption status were obtained through self-reported questionnaires. • Smoking was classified into three categories: never smoked, former smoked, and currently smoked. • Alcohol was dichotomized into non-drinkers and current drinkers. Then, current drinkers were divided into two groups: less than or more than 14units per week, as defined by the NIAAA as the maximum drinking limit for moderate drinking.

All health examinations are performed after overnight fasting, and the Korean Association of Laboratory Quality Control supervises the quality control procedures. Lipid panel includes total cholesterol, triglyceride, HDL-cholesterol, and LDL-cholesterol. BMI=body mass index. FPG=fasting plasma glucose. eGFR=estimated glomerular filtration rate. SCr=serum creatinine. HDL=high-density lipoprotein. LDL =low-density lipoprotein.

NIAAA=National Institute on Alcohol Abuse and Alcoholism.

Supplementary Table S2. ICD-10 code for pancreatic disease

ICD code	Description
Acute pancreatic disease	
K85	Acute pancreatitis
K85.0	Idiopathic acute pancreatitis
K85.1	Biliary acute pancreatitis
K85.2	Alcohol-induced acute pancreatitis
K85.3	Drug-induced acute pancreatitis
K85.8	Other acute pancreatitis
K85.9	Acute pancreatitis, unspecified
Chronic pancreatic disease	
K86	Other diseases of pancreas
K86.0	Alcohol-induced chronic pancreatitis
K86.1	Other chronic pancreatitis
K86.2	Cyst of pancreas
K86.3	Pseudocyst of pancreas
K86.8	Other specified diseases of pancreas
K86.9	Disease of pancreas, unspecified
Pancreatic cancer	
C25	Malignant neoplasm of pancreas
C25.0	Malignant neoplasm of head of pancreas
C25.1	Malignant neoplasm of body of pancreas
C25.2	Malignant neoplasm of tail of pancreas
C25.3	Malignant neoplasm of pancreatic duct
C25.4	Malignant neoplasm of endocrine pancreas
C25.7	Malignant neoplasm of other parts of pancreas
C25.8	Malignant neoplasm of overlapping lesion of pancreas
C25.9	Malignant neoplasm of pancreas, unspecified

Cystic fibrosis

E84	Cystic fibrosis (Mucoviscidosis)
E84.0	Cystic fibrosis with pulmonary manifestations
E84.8	Cystic fibrosis with other manifestations
E84.9	Cystic fibrosis, unspecified

Supplementary Table S3. ICD-10 code for diabetic complications

ICD code	Disease description
Acute diabetic complication	
Hypoglycemia	
E11.08	Type 2 diabetes mellitus, with diabetic hypoglycemic coma
E11.63	Type 2 diabetes mellitus, with hypoglycemia
E12.08	Malnutrition-related diabetes mellitus, with diabetic hypoglycemic coma
E12.63	Malnutrition-related diabetes mellitus, with hypoglycemia
E13.08	Other unspecified diabetes mellitus, with diabetic hypoglycemic coma
E13.63	Other specified diabetes mellitus, with hypoglycemia
E14.08	Unspecified diabetic mellitus, with diabetic hypoglycemic coma
E14.63	Unspecified diabetes mellitus, with hypoglycemia
E16.2	Hypoglycemia, unspecified
Hyperosmolar hyperglycemic state	
E11.00	Type 2 diabetes mellitus, with coma, with hyperosmolarity
E12.00	Malnutrition-related diabetes mellitus, with coma, with hyperosmolarity
E13.00	Other specified diabetes mellitus, with coma, with hypersomolarity
E14.00	Unspecified diabetes mellitus, with coma, with hypersomolarity
Diabetic ketoacidosis	
E11.01	Type 2 diabetes mellitus, with coma, with ketoacidosis
E11.03	Type 2 diabetes mellitus , with coma, with ketoacidosis, with lactic acidosis
E11.10	Type 2 diabetes mellitus, with ketoacidosis
E11.12	Type 2 diabetes mellitus, with ketoacidosis, with lactic acidosis
E12.01	Malnutrition-related diabetes mellitus, with coma, with ketoacidosis
E12.03	Malnutrition-related diabetes mellitus, with coma, with ketoacidosis, with lactic acidosis
E12.10	Malnutrition-related diabetes mellitus, with ketoacidosis
E12.12	Malnutrition-related diabetes mellitus, with ketoacidosis, with lactic acidosis
E13.01	Other specified diabetes mellitus, with coma, with ketoacidosis

E13.03	Other specified diabetes mellitus, with coma, with ketoacidosis, with lactic acidosis
E13.10	Other specified diabetes mellitus, with ketoacidosis
E13.12	Other specified diabetes mellitus, with ketoacidosis, with lactic acidosis
E14.01	Unspecified diabetes mellitus, with coma, with ketoacidosis
E14.03	Unspecified diabetes mellitus, with coma, with ketoacidosis, with lactic acidosis
E14.10	Unspecified diabetes mellitus, with ketoacidosis
E14.12	Unspecified diabetes mellitus, with ketoacidosis, with lactic acidosis

Chronic diabetic complication

Diabetic neuropathy

E11.4	Type 2 diabetes mellitus, with neurological complications
E12.4	Malnutrition-related diabetes mellitus, with neurological complications
E13.4	Other specified diabetes mellitus, with neurological complications
E14.4	Unspecified diabetes mellitus, with neurological complications
G99.0	Diabetic autonomic neuropathy
G59.0	Diabetic mononeuropathy
G63.2	Diabetic polyneuropathy

Diabetic nephropathy

E11.2	Type 2 diabetes mellitus, with renal complications
E12.2	Malnutrition-related diabetes mellitus, with renal complications
E13.2	Other specified diabetes mellitus, with renal complications
E14.2	Unspecified diabetes mellitus, with renal complications
N08.3	Diabetic nephropathy
N18	Chronic kidney diseases
Z49	Person encountering health services for dialysis

Diabetic retinopathy

E11.3	Type 2 diabetes mellitus, with ophthalmic complications
E12.3	Malnutrition-related diabetes mellitus, with ophthalmic complications
E13.3	Other specified diabetes mellitus, with ophthalmic complications

E14.3	Unspecified diabetes mellitus, with ophthalmic complications
H28.0	Diabetic cataract
H36.0	Diabetic retinopathy

Coronary heart disease

I20.0	Unstable angina
I20.1	Angina pectoris with documented spasm
I20.8	Other forms of angina pectoris
I20.9	Angina pectoris, unspecified
I21	Acute myocardial infarction
I22	Subsequent myocardial infarction
I23	Current complication of acute myocardial infarction
I24	Other acute ischemic heart diseases
I25	Coronary atherosclerosis
I50	Heart failure
I98.8	Other specified disorders of circulatory system in diseases classified elsewhere
M6551*	Percutaneous transluminal coronary angioplasty
M6552*	Percutaneous transluminal coronary angioplasty
M6561*	Percutaneous transcatheter placement of intracoronary stent
M6562*	Percutaneous transcatheter placement of intracoronary stent
M6563*	Percutaneous transcatheter placement of intracoronary stent
M6564*	Percutaneous transcatheter placement of intracoronary stent
M6571*	Percutaneous transluminal coronary atherectom
M6572*	Percutaneous transluminal coronary atherectomy
M6633*	Percutaneous mechanical thrombolysis
M6634*	Percutaneous thrombolytic treatment, coronary artery
M6620*	Percutaneous intravascular atherectomy
O1641*	Vascular bypass operation, aorta-coronary
O1642*	Vascular bypass operation, aorta-coronary

O1647*	Vascular bypass operation, aorta-coronary
OA641*	Vascular bypass operation, aorta-coronary
OA642*	Vascular bypass operation, aorta-coronary
OA647*	Vascular bypass operation, aorta-coronary

Cerebrovascular disease

I60	Cerebrovascular diseases
I61	Intracerebral hemorrhage
I62	Other nontraumatic intracranial hemorrhage
I63	Cerebral infarction
I64	Stroke, not specified as hemorrhage or infarction
I65	Occlusion and stenosis of precerebral arteries, not resulting in cerebral infarction
I66	Occlusion and stenosis of cerebral arteries, not resulting in cerebral infarction
I67	Other cerebrovascular diseases
I68	Cerebrovascular disorders in diseases classified elsewhere
G45	Transient cerebral ischemic attacks and related syndromes
G46.8	Other vascular syndromes of brain in cerebrovascular diseases
M6631*	Percutaneous thrombus removal, cerebral
M6593*	Percutaneous transluminal angioplasty, cerebral and carotid
M6594*	Percutaneous transluminal angioplasty, cerebral and carotid
M6599*	Percutaneous cerebral angioplasty with drug
M6601*	Percutaneous intravascular installation of metallic stent cerebral and carotid
M6602*	Percutaneous intravascular installation of metallic stent cerebral and carotid

Peripheral arterial disease

E11.5	Type 2 diabetes mellitus, with circulatory complications
E12.5	Malnutrition-related diabetes mellitus, with circulatory complications
E13.5	Other specified diabetes mellitus, with circulatory complications
E14.5	Unspecified diabetes mellitus, with circulatory complications
I70.2	Atherosclerosis of arteries of extremities

I70.3	Unspecified Atherosclerosis of unspec. type of bypass graft(s) of extremities
I70.9	Generalized and unspecified atherosclerosis
I73.1	Thromboangiitis obliterans
I73.8	Other specified peripheral vascular diseases
I73.9	Peripheral vascular disease, unspecified
I77.9	Disorder of arteries and arterioles, unspecified
I79.2	Diabetic peripheral angiopathy
M6597*	Percutaneous transluminal angioplasty
M6605*	Percutaneous intravascular installation of metallic stent
M6613*	Percutaneous intravascular installation of stent-graft
M6632*	Percutaneous thrombus removal
M6620*	Percutaneous intravascular atherectomy
O1643*	Vascular bypass operation, artery, others
O1644*	Vascular bypass operation, artery, others
O0161*	Vascular bypass operation, artery, others
O0171*	Vascular bypass operation, artery, others
O1645*	Vascular bypass operation, artery, others
O1646*	Vascular bypass operation, artery, others

* Procedure code.

Supplementary Table S4. ICD-10 code for Charlson comorbidity index which was modified to avoid the duplication of target disease and outcomes

Comorbidity	ICD code
Dementia	F00-F03, F05.1, G30, G31.1
Chronic pulmonary disease	I27.8, I27.9, J40-J47, J60-J67, J68.4, J70.1, J70.3
Rheumatic disease	M05, M06, M31.5, M32-M34, M35.1, M35.3, M36
Peptic ulcer disease	K25-K28
Mild liver disease	B18, K70.0-K70.3, K70.9, K71.3-K71.5, K71.7, K73, K74, K76.0, K76.2-K76.4, K76.8, K76.9, Z94.4
Moderate or severe liver disease	I85.0, I85.9, I86.4, I98.2, K70.4, I71.1, K72.1, K72.9, K76.5, K76.6, K76.7
Alcohol-related disease	K70.2, K70.30-K70.43
AIDS/HIV*	B20-B22, B24

*AIDS/HIV=Acquired Immune Deficiency Syndrome/Human Immunodeficiency Virus

Supplementary Table S5. Hazard ratios of insulin use in DEP

	Type 2 diabetes	DEP	*p* value
1 YEAR			
Total patient number	153,894	3,629	
Number of insulin use	16,551	646	
Crude HR [95% CI]	1.00 (Reference)	1.71 [1.58–1.85]	<0.0001
Model 1 HR [95% CI]	1.00 (Reference)	1.50 [1.38–1.62]	<0.0001
Model 2 HR [95% CI]	1.00 (Reference)	1.39 [1.29–1.51]	<0.0001
5 YEAR			
Total patient number	153,894	3,629	
Number of insulin use	29,764	1,175	
Crude HR [95% CI]	1.00 (Reference)	1.63 [1.54–1.73]	<0.0001
Model 1 HR [95% CI]	1.00 (Reference)	1.47 [1.39–1.56]	<0.0001
Model 2 HR [95% CI]	1.00 (Reference)	1.38 [1.30–1.47]	<0.0001

Hazard ratios of insulin use within 1 and 5 years after a diagnosis of DEP was compared to type 2 diabetes by Cox proportional hazard models. Multivariate hazard ratios of model 1 were adjusted for sex, age, BMI, FPG, LDL-cholesterol, alcohol consumption, smoking status, and medical coverage. Multivariate hazard ratios of model 2 were adjusted for sex, age, BMI, FPG, LDL-cholesterol, alcohol consumption, smoking status, medical coverage (same as model 1), systolic BP, triglyceride, eGFR, and CCI.

DEP=diabetes following pancreatic disease. Type 2 diabetes=diabetes without prior pancreatic disease. HR=hazard ratio. CI=Confidence interval. BMI=body mass index. FBG=fasting blood glucose. LDL=low-density lipoprotein. BP=blood pressure. eGFR=estimated glomerular filtration rate. CCI=Charlson comorbidity index.

Supplementary Table S6. Baseline characteristics of DEP subtypes

	PPDM-A (n=1,029)	PPDM-C (n=2,264)	PCRD (n=328)	CFRD (n=8)
Male sex	690 (67.1%)	1,395 (61.6%)	175 (53.4%)	8 (100.0%)
Age, years	60.3 (11.9)	60.7 (11.7)	63.8 (11.1)	61.1 (11.9)
Medical aid	48 (4.7%)	70 (3.1%)	10 (3.0%)	0 (0.0%)
CCI	1.2 (1.0)	1.3 (1.1)	1.4 (1.1)	1.4 (1.1)
BMI, kg/m2	24.9 (3.5)	24.8 (3.6)	24.4 (3.3)	24.4 (3.0)
Waist circumference, cm	85.7 (8.6)	85.0 (8.9)	83.8 (8.9)	83.5 (5.7)
Systolic BP, mmHg	127.8 (15.4)	128.1 (16.0)	128.7 (15.6)	134.4 (10.5)
Diastolic BP, mmHg	79.0 (10.4)	79.1 (10.6)	77.9 (9.3)	83.1 (5.9)
FPG, mg/dL	128.8 (47.1)	124.6 (40.7)	119.3 (35.1)	122.3 (11.2)
Total cholesterol, mg/dL	200.9 (48.3)	199.4 (44.2)	197.1 (42.8)	230.4 (61.6)
Triglyceride, mg/dL	201.9 (210.5)	178.3 (161.6)	164.7 (124.5)	180.5 (87.3)
HDL-cholesterol, mg/dL	51.2 (24.1)	51.5 (17.2)	52.0 (15.1)	47.9 (9.3)
LDL-cholesterol, mg/dL	112.3 (39.3)	113.8 (40.7)	113.4 (36.5)	146.1 (61.4)
Serum Cr, mg/dL	1.0 (0.8)	1.0 (0.8)	0.9 (0.2)	1.1 (0.2)
eGFR, mL/min/1.73m2*	82.9 (20.1)	83.1 (19.3)	80.9 (16.6)	75.3 (14.4)
Alcohol consumption (Any)†	455 (44.2%)	903 (39.9%)	121 (36.9%)	3 (37.5%)
Smoking status (Any)‡	528 (51.3%)	1,039 (45.9%)	120 (36.6%)	6 (75.0%)

Data are mean (SD) or n (%). Percentage might not add up to 100% due to rounding. DEP=diabetes following pancreatic disease. PPDM-A=post-acute pancreatitis diabetes mellitus. PPDM-C=post-chronic pancreatitis diabetes mellitus. PCRD=pancreatic cancer-related diabetes. CFRD=cystic fibrosis-related diabetes. CCI=Charlson comorbidity index. BMI=body mass index. BP=blood pressure. FPG=fasting plasma glucose. HDL =high-density lipoprotein. LDL=low-density lipoprotein. Cr=creatinine. eGFR=estimated glomerular filtration rate.

*eGFR was calculated using CKD-EPI (Chronic Kidney Disease Epidemiology Collaboration) equation; eGFR = 141 x $\min(SCr/\kappa, 1)^{\alpha}$ x $\max(SCr/\kappa, 1)^{-1.209}$ x 0.993^{Age} x 1.018 [if female] x 1.159 [if Black]. SCr is serum creatinine,

κ is 0.7 for females and 0.9 for males, α is -0.329 for females and -0.411 for males, min indicates the minimum of SCr/κ or 1, and max indicates the maximum of SCr/κ or 1.

†Former and current smokers are included.

‡Any amount of alcohol consumption are included.

Supplementary Table S7. Relative odds for diabetic complications and all-cause mortality by DEP subtypes compared to type 2 diabetes.

	PPDM-A	*p* value	PPDM-C	*p* value	PCRD	*p* value	CFRD	*p* value
Acute diabetic complications								
Hypoglycemia	1.86 [1.34–2.59]	0.0002	1.91 [1.53–2.38]	<0.0001	1.48 [0.81–2.72]	0.2027	0.00	N/A
Hyperosmolar hyperglycemic state	1.22 [0.65–2.28]	0.5332	1.26 [0.83–1.92]	0.2710	2.25 [1.00–5.07]	0.0497	0.00	N/A
Diabetic ketoacidosis	0.91 [0.29–2.84]	0.8692	1.43 [0.76–2.69]	0.2667	3.09 [0.98–9.70]	0.0537	0.00	N/A
Chronic diabetic complications								
Diabetic neuropathy	1.22 [1.06–1.41]	0.0070	1.52 [1.39–1.67]	<0.0001	0.99 [0.76–1.30]	0.9542	1.43 [0.29–7.14]	0.6603
Diabetic nephropathy	1.33 [1.14–1.55]	0.0003	1.37 [1.24–1.52]	<0.0001	1.59 [1.23–2.06]	0.0004	2.67 [0.63–11.25]	0.1811
Diabetic retinopathy	1.02 [0.87–1.20]	0.8361	1.15 [1.03–1.27]	0.0120	1.00 [0.75–1.34]	0.9998	1.70 [0.34–8.45]	0.5161
Coronary heart disease	1.49 [1.30–1.70]	<0.0001	1.67 [1.53–1.83]	<0.0001	1.41 [1.12–1.78]	0.0033	0.29 [0.04–2.39]	0.2491
Cerebrovascular disease	1.36 [1.18–1.57]	<0.0001	1.39 [1.26–1.53]	<0.0001	1.40 [1.10–1.77]	0.0068	1.94 [0.44–8.62]	0.3823
Peripheral arterial disease	1.31 [1.15–1.48]	<0.0001	1.39 [1.28–1.52]	<0.0001	1.09 [0.87–1.36]	0.4733	2.39 [0.56–10.22]	0.2389
All-cause mortality	1.77 [1.46–2.14]	<0.0001	1.47 [1.29–1.69]	<0.0001	3.85 [2.93–5.05]	<0.0001	1.31 [0.15–11.83]	0.8102

A logistic regression model was used to analyze the relative odds and their 95% confidence intervals for diabetic complications and all-cause mortality according to each pancreatic disease in the DEP group. Odds ratios were adjusted for sex, age, BMI, FPG, LDL-cholesterol, alcohol consumption, smoking status, medical coverage, systolic BP, triglyceride, eGFR, and CCI as previously defined as Model 2 OR. Diabetes without prior pancreatic disease described as type 2 diabetes was used as a reference group. N/A indicates insufficient number of events to estimates odds of the outcome.

Type 2 diabetes=diabetes without prior pancreatic disease. PPDM-A=post-acute pancreatitis diabetes mellitus. PPDM-C=post-chronic pancreatitis diabetes mellitus. PCRD=pancreatic cancer-related diabetes. CFRD=cystic fibrosis-related diabetes. OR=Odds ratio. BMI=body mass index. N/A=not available. FPG=fasting plasma glucose. LDL=low-density lipoprotein. BP=blood pressure. eGFR=estimated glomerular filtration rate. CCI=Charlson comorbidity index.

Supplementary Table S8. Relative odds for all-cause mortality in DEP compared to cardiovascular (CV) or renal disease-matched type 2 diabetes.

	Type 2 diabetes with CV disease	DEP with CV disease	95% CI	*p* value
Crude OR	1.00	2.05	1.72–2.46	<0.0001
Model 1 OR	1.00	1.71	1.40–2.08	<0.0001
Model 2 OR	1.00	1.52	1.25–1.87	<0.0001
	Type 2 diabetes with renal disease	DEP with renal disease	95% CI	*p* value
Crude OR	1.00	2.01	1.25–3.25	0.0041
Model 1 OR	1.00	1.74	1.01–3.03	0.0481
Model 2 OR	1.00	1.84	1.05–3.22	0.0320

Relative odds for all-cause mortality was analyzed using logistic regression models after specific disease-matched in DEP and type 2 diabetes. Type 2 diabetes was used as a reference group. Model 1 OR is the odds ratio adjusted for sex, age, BMI, FPG, LDL-cholesterol, alcohol consumption, smoking status, and medical coverage. Model 2 OR is the odds ratio adjusted for sex, age, BMI, FPG, LDL-cholesterol, alcohol consumption, smoking status, medical coverage (same as model 1), systolic BP, triglyceride, eGFR, and CCI.

DEP=diabetes following pancreatic disease. Type 2 diabetes=diabetes without prior pancreatic disease. OR=Odds ratio. CI=Confidence interval. BMI=body mass index. FPG=fasting plasma glucose. LDL=low-density lipoprotein. BP=blood pressure. eGFR=estimated glomerular filtration rate. CCI=Charlson comorbidity index.

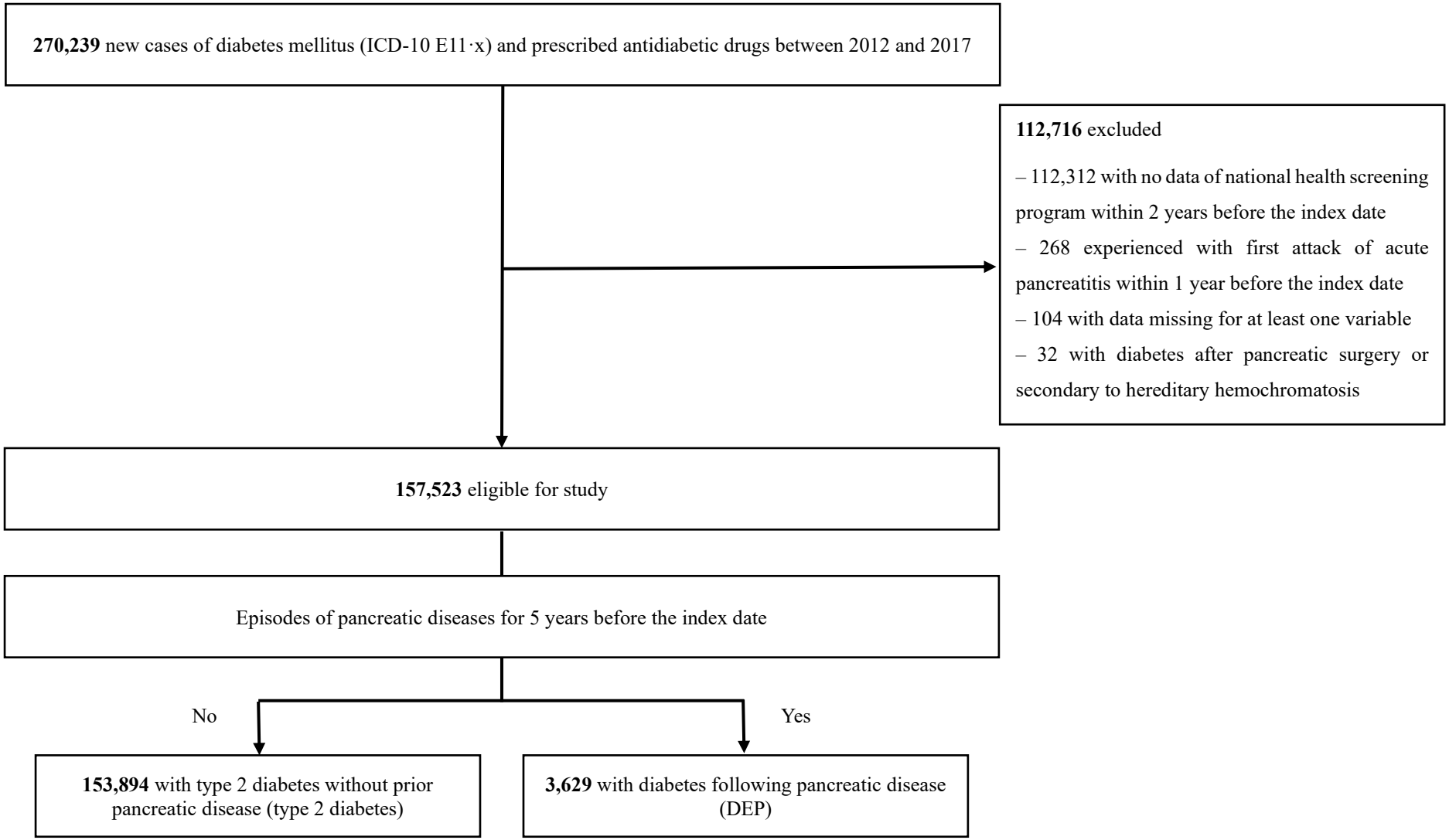
Supplementary Table S9. Sensitivity analysis for diabetic complications and all-cause mortality among insulin first users in DEP compared to type 2 diabetes.

	OR	95% CI	*p* value
Acute diabetic complications			
Hypoglycemia	1.82	1.50–2.20	<0.0001
Hyperosmolar hyperglycemic state	1.34	0.96–1.87	0.0901
Diabetic ketoacidosis	1.46	0.87–2.47	0.1522
Chronic diabetic complications			
Diabetic neuropathy	1.38	1.28–1.49	<0.0001
Diabetic nephropathy	1.37	1.26–1.49	<0.0001
Diabetic retinopathy	1.11	1.02–1.21	0.0224
Coronary heart disease	1.60	1.48–1.72	<0.0001
Cerebrovascular disease	1.38	1.28–1.50	<0.0001
Peripheral arterial disease	1.35	1.26–1.45	<0.0001
All-cause mortality	1.81	1.62–2.02	<0.0001

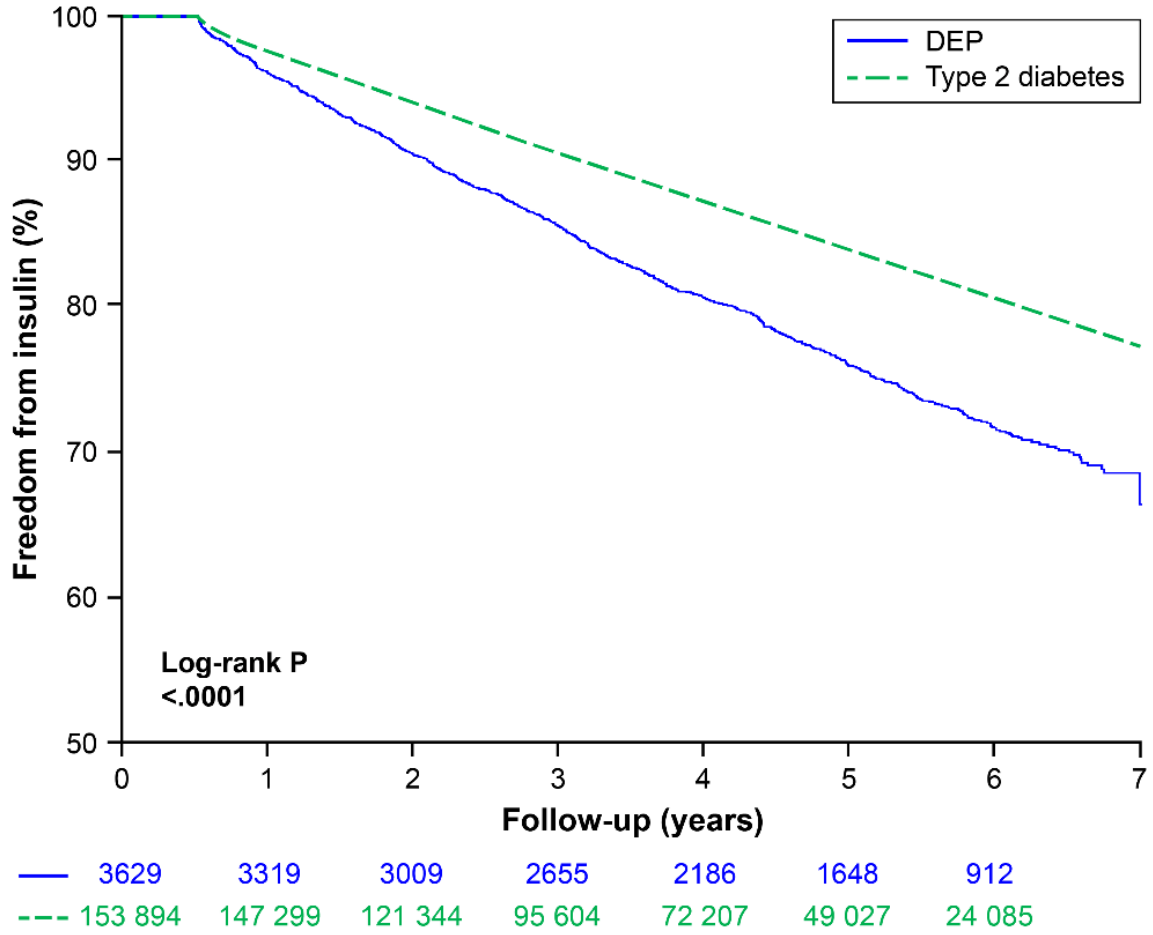
We performed a sensitivity analysis using a logistic regression model for diabetic complications and all-cause mortality in patients new to insulin among antidiabetic drug-naïve patients in the DEP group. Diabetes without prior pancreatic disease described as type 2 diabetes was used as a reference group. Odds ratios were adjusted for sex, age, BMI, FPG, LDL-cholesterol, alcohol consumption, smoking status, medical coverage, systolic BP, triglyceride, eGFR, and CCI as previously defined as Model 2 OR.

DEP=diabetes following pancreatic disease. Type 2 diabetes=diabetes without prior pancreatic disease. OR=Odds ratio. CI=Confidence interval. BMI=body mass index. FPG=fasting plasma glucose. LDL=low-density lipoprotein. BP=blood pressure. eGFR=estimated glomerular filtration rate. CCI=Charlson comorbidity index.

Supplementary Figure S1. Flowchart of patient selection

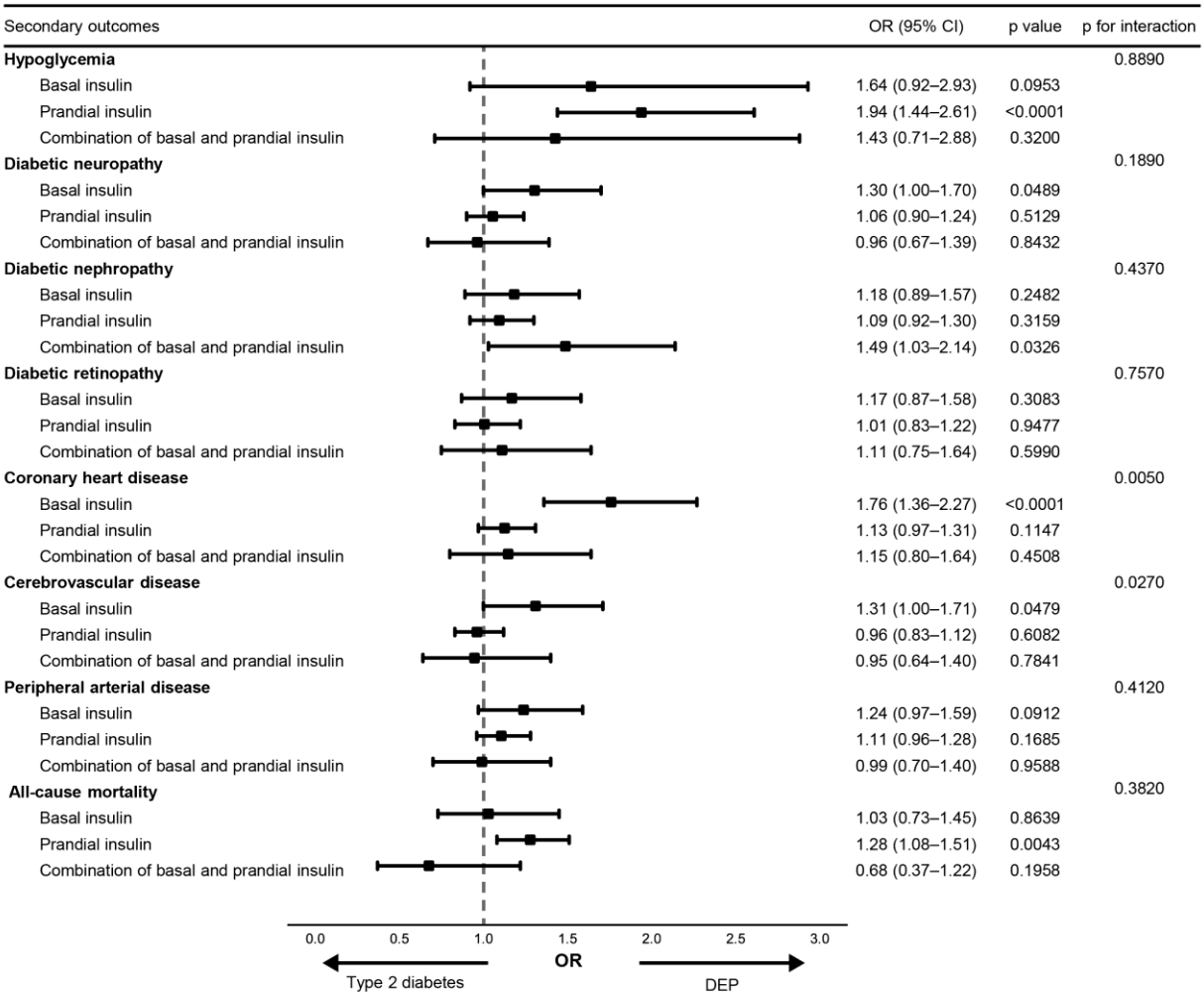


Supplementary Figure S2. Sensitivity analysis for insulin use at each time point between DEP and type 2 diabetes excluding patients who initiated insulin within 6 months since diagnosis of diabetes



We performed a sensitivity analysis for the cumulative insulin use by eliminating the number of patients who had started insulin within 6 months since diagnosis of diabetes. We nullified insulin use for first 6-month period after the index date to exclude transient insulin use for acute hyperglycemia in patients with first diagnosis of diabetes. Therefore insulin use for the first 6 months had a value of zero on the y-axis, resulting in a horizontal line with slope of zero. And if subjects continue to use insulin even after 6 months from the index date, it was recognized as true insulin use. The table is the number of patients at risk over time ($p < 0.0001$ by log-rank test). DEP=diabetes following pancreatic disease. Type 2 diabetes=diabetes without prior pancreatic disease.

Supplementary Figure S3. Subgroup analysis of ORs for diabetic complications and all-cause mortality of DEP compared to type 2 diabetes by insulin regimen



Forest plots of the odds ratios and 95% confidence intervals for diabetic complications and all-cause mortality according to insulin regimen were analyzed by logistic regression models. Each insulin regimen consisted of basal insulin (intermediate, long acting insulin) alone, prandial insulin (short, rapid acting insulin) alone, and combination of basal and prandial insulin. Diabetes without prior pancreatic disease described as type 2 diabetes was used as a reference group. OR is the odds ratio adjusted for sex, age, BMI, FPG, LDL-cholesterol, alcohol consumption, smoking status, medical coverage, systolic BP, triglyceride, eGFR, and CCI.

DEP=diabetes following pancreatic disease. Type 2 diabetes=diabetes without prior pancreatic disease. OR=Odds ratio. CI=Confidence interval. BMI=body mass index. FPG=fasting plasma glucose. LDL=low-density lipoprotein. BP=blood pressure. eGFR=estimated glomerular filtration rate. CCI=Charlson comorbidity index.