

**Supplementary Table 8.** Associations between polygenic risk score and risk of gestational diabetes in all discovery and replication cohorts

Stage	Cohort	Ethnicity	Population	Study design	Covariates	Number		Z-score			Top 20% vs. others		
						GDM case	Non-GDM control	OR (95% CI)	P value	P <sub>Q</sub>	OR (95% CI)	P value	P <sub>Q</sub>
Discovery	HAPO-HK Study	East Asian	Chinese pregnant women	Population-based	PCs, age, and BMI	149	810	2.07 (1.71–2.50)	1.2 × 10 <sup>-13</sup>	-	3.49 (2.35–5.19)	6.6 × 10 <sup>-10</sup>	-
						145	776	2.08 (1.70–2.53)	5.5 × 10 <sup>-13</sup>	-	3.54 (2.35–5.34)	1.6 × 10 <sup>-9</sup>	-
	Tianjin Study	East Asian	Chinese pregnant women	Case-control	PCs, age, and BMI	229	226	1.67 (1.36–2.06)	8.9 × 10 <sup>-7</sup>	-	2.68 (1.61–4.43)	1.3 × 10 <sup>-4</sup>	-
	TGDM-NDM Study	East Asian	Cases: Chinese pregnant women; Controls: Chinese non-pregnant women	Case-control	PCs, age, and BMI	86	180	1.68 (1.23–2.29)	1.0 × 10 <sup>-3</sup>	-	2.58 (1.20–5.58)	0.0158	-
	Meta-analysis of discovery cohorts	East Asian	Chinese women	-	PCs, age, and BMI	464	1,216	1.84 (1.62–2.09)	9.2 × 10 <sup>-21</sup>	0.2788	3.07 (2.30–4.09)	3.1 × 10 <sup>-14</sup>	0.6440
De novo replication	Guangzhou Study	East Asian	Chinese pregnant women	Case-control	None	560	566	1.16 (1.03–1.31)	0.0133	-	1.25 (0.96–1.64)	0.0961	-
In silico replication	HAPO-Thai Study	East Asian	Thai pregnant women	Population-based	PCs, age, and BMI	260	933	1.08 (0.94–1.25)	0.2695	-	0.77 (0.49–1.20)	0.2490	-
					PCs, age, BMI, GWG, SBP, DBP, smoking status, education year, parity, family history of diabetes and hypertension	134	459	1.03 (0.84–1.27)	0.7755	-	0.61 (0.30–1.24)	0.1741	-
	HAPO-Hispanic Study	Hispanic	Hispanic pregnant women	Population-based	PCs, age, and BMI	207	596	1.41 (1.18–1.67)	1.2 × 10 <sup>-4</sup>	-	1.96 (1.14–3.39)	0.0154	-
					PCs, age, BMI, GWG, SBP, DBP, smoking status, education year, parity, family history of diabetes and hypertension	194	556	1.37 (1.14–1.64)	7.8 × 10 <sup>-4</sup>	-	1.90 (1.07–3.37)	0.0284	-

OR and 95% CI, as well as P value were obtained from either logistic regression model with the adjustments for covariates, or meta-analysis under a fixed effect model. P<sub>Q</sub> was obtained from heterogeneity test (Cochran's Q test).  
 GDM, gestational diabetes mellitus; OR, odds ratio; CI, confidence interval; HAPO-HK, Hyperglycemia and Adverse Pregnancy Outcome-Hong Kong; BMI, body mass index; GWG, gestational weight gain; SBP, systolic blood pressure; DBP, diastolic blood pressure; PC, principal component; TGDM-NDM, Treated GDM Cases vs. Non-diabetes Controls.