

Supplementary Tables

Table S1. Unadjusted and adjusted associations of glucose exposures with fructosamine levels in mid-pregnancy, without vs. with IPW.

Exposure	Without IPW		With IPW	
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹
	β (95% CI)		β (95% CI)	
1h-glucose after GCT (per SD)	2.7 (0.3, 5.0)	3.4 (1.0, 5.8)	2.9 (0.5, 5.2)	3.6 (1.2, 6.0)
Abnormal GCT result (> vs. \leq 140 mg/dl)	5.5 (-0.8, 11.7)	7.1 (0.7, 13.5)	5.8 (-0.4, 12.1)	7.5 (1.1, 13.9)
GDM (vs. IGT/IH/normal glycemia)	11.6 (0.9, 22.4)	14.7 (3.7, 25.6)	12.4 (1.8, 23.1)	15.5 (4.7, 26.3)

IPW = inverse probability weighting; ¹Adjusted for maternal age, race/ethnicity, parity, smoking during pregnancy, first trimester weight gain and maternal pre-pregnancy BMI.

Table S2. ROC curve (AUC) values for the predictive value of fructosamine levels, without vs. with IPW.

Outcome		Without IPW	With IPW
		ROC curve (AUC)	ROC curve (AUC)
GDM		0.52	0.52
<i>Stratified by GDM status</i>			
Macrosomia	GDM = Yes	0.48	0.48
Macrosomia	GDM = No	0.52	0.52
LGA	GDM = Yes	0.59	0.59
LGA	GDM = No	0.53	0.53
SGA	GDM = Yes	0.57	0.57
SGA	GDM = No	0.51	0.51
Preterm (< 37 weeks)	GDM = Yes	0.46	0.46
Preterm (< 37 weeks)	GDM = No	0.50	0.50
Cesarean section	GDM = Yes	0.58	0.42
Cesarean section	GDM = No	0.54	0.54

IPW = inverse probability weighting; ROC = receiver operating characteristic; AUC = area under the ROC curve.

Table S3. Multivariable associations of fructosamine and GCT levels in mid-pregnancy with birth weight and birth weight for gestational age z score, without vs. with IPW.

Exposure, per 1 SD	Outcome	Stratified by GDM status	Without IPW	With IPW
			β (95% CI) ¹	β (95% CI) ¹
Fructosamine	Birthweight, g	GDM = No	5.7 (-22.5, 33.9)	6.8 (-21.4, 34.9)
Fructosamine	Birthweight, g	GDM = Yes	69.6 (-16.9, 156.1)	64.5 (-20.4, 149.5)
Fructosamine	BW for GA z-score	GDM = No	0.00 (-0.05, 0.05)	0.01 (-0.04, 0.06)
Fructosamine	BW for GA z-score	GDM = Yes	0.11 (-0.05, 0.27)	0.10 (-0.06, 0.25)
GCT	BW for GA z-score	GDM = No	54.2 (24.2, 84.1)	53.5 (23.5, 83.4)
GCT	BW for GA z-score	GDM = Yes	30.0 (-143, 203.0)	20.9 (-151, 192.3)
GCT	BW for GA z-score	GDM = No	0.11 (0.05, 0.16)	0.11 (0.05, 0.16)
GCT	BW for GA z-score	GDM = Yes	-0.09 (-0.40, 0.22)	-0.08 (-0.40, 0.23)

IPW = inverse probability weighting; GCT = glucose challenge test; ¹ Adjusted for maternal age, race/ethnicity, parity, smoking during pregnancy, first trimester weight gain and maternal pre-pregnancy BMI.

Table S4. Multivariable associations of fructosamine and GCT levels in mid-pregnancy with maternal 3-year postpartum glycemic indices, without vs. with IPW ($N = 451$ ¹).

	Without IPW	With IPW	Without IPW	With IPW
	Fructosamine, per 1 SD increment		GCT Result, per 1 SD increment	
	β (95% CI) ²		β (95% CI) ²	
A1c, %	0.03 [0.00, 0.05]	0.02 (0.00, 0.05)	0.04 [0.02, 0.07]	0.05 (0.02, 0.07)
Fasting glucose, mg/dl	2.7 [-0.1, 5.5]	3.3 (0.4, 6.1)	3.6 [0.8, 6.4]	4.1 (1.2, 7.0)
	% difference (95% CI) ²		% difference (95% CI) ²	
Log fasting insulin	12.3 [2.1, 23.5]	13.4 (3.2, 24.7)	11.4 [1.1, 22.7]	12.5 (2.2, 23.9)
Log HOMA-IR	15.7 [3.7, 29.0]	17.7 (5.6, 31.3)	17.6 [5.4, 31.2]	19.7 (7.2, 33.5)

IPW = inverse probability weighting; GCT = glucose challenge test; ¹ $N = 132$ for fasting glucose, fasting insulin and HOMA-IR and $N = 450$ for A1c; ² Adjusted for maternal age, race/ethnicity, parity, smoking during pregnancy, first trimester weight gain and maternal pre-pregnancy BMI.