Supplementary Table 1. Adipokine, glucose metabolism, and cardiometabolic marker assay information

Biomarker	Inter- Intra- assay CVS	Kit	Manufacturer
Chemerin	6.2% - 18.0%	Quantikine Human Chemerin Immunoassay	R & D Systems
FABP4	8.1% - 10.2%	Human FABP4 ELISA	BioVendor
RBP4	3.1% - 9.6%	Quantikine Human RBP4 Immunoassa	R & D Systems
IL-6	8.1% - 14.4%	Quantikine HS Human IL-6 Immunoassay	R & D Systems
Leptin	3.7% - 6.0%	Quantitative direct sandwich enzyme immunoassay	Mercodia, Uppsala, Sweden
sOB-R	3.5% - 10.2%	Quantikine Human Leptin sR	R & D Systems
Vaspin	14.4% - 16.2%	Human Vaspin ELISA	BioVendor
Omentin1	8.5% - 11.1%	Human Omentin-1 ELISA	Millipore
HMW-adiponectin	9.2% - 10.9%	Human Adiponectin/Acrp30 Immunoassay	R & D Systems
Adiponectin	5.8% - 9.3%	Human Adiponectin/Acrp30 Immunoassay	R & D Systems
Glucose	1.3% - 1.8%	enzymatic assays with the use of the Roche Modular P Chemistry analyzer	Roche Diagnostics
Insulin	3.3%	Roche Elecsys 2010 Analyzer	Roche Diagnostics
HbA1c	0.5% - 1.2%	Non-porous ion Exchange High Performance Liquid Chromatography	Tosoh Bioscience, Inc
hsCRP	2.1% - 4.3%	enzymatic assays with the use of the Roche Modular P Chemistry analyzer	Roche Diagnostics
Triglycerides	2.0% - 2.3%	Roche COBAS 6000 Chemistry Analyzer	Roche Diagnostics
HDLD	1.9% - 3.2%	Roche COBAS 6000 Chemistry Analyzer	Roche Diagnostics
LDLD	calculated by the Friedewald's formula: LDL cholesterol = total cholesterol − HDL cholesterol − triglycerides ÷ 5 [51]		

Supplementary Table 2 – Adjusted odds ratio (95% CI) for the associations of GDM risk with quartiles of adipokines at gestational weeks 10–14 and 15–26 adjusted for prepregnancy BMI

			Multivariable model III*	
	GDM cases (*n*)	Controls (*n*)	10-14 GW	15-26 GW
FABP4				
Q1:	11	54	1.00	1.00
Q2:	27	53	2.40 (0.94, 6.18)	**4.58 (1.22, 17.2)**
Q3:	31	54	**2.74 (1.04, 7.23)**	**6.66 (1.79, 24.8)**
Q4:	35	53	2.45 (0.81, 7.38)	**6.35 (1.50, 26.9)**
P for trend			0.27	**0.047**
Chemerin				
Q1:	9	53	1.00	1.00
Q2:	33	53	**3.10 (1.23, 7.79)**	1.23 (0.45, 3.33)
Q3:	22	53	2.25 (0.83, 6.06)	1.47 (0.51, 4.22)
Q4:	39	53	**3.24 (1.16, 9.03)**	**3.87 (1.42, 10.5)**
P for trend			0.10	**0.002**
IL-6				
Q1:	6	41	1.00	1.00
Q2:	16	40	**3.77 (1.15, 12.3)**	1.39 (0.45, 4.29)
Q3:	23	41	**3.30 (1.12, 9.68)**	1.91 (0.63, 5.78)
Q4:	35	40	**7.65 (2.25, 26.0)**	2.32 (0.78, 6.89)
P for trend			**0.003**	0.11
Leptin				
Q1:	18	54	1.00	1.00
Q2:	10	53	0.57 (0.23, 1.42)	0.71 (0.29, 1.72)
Q3:	28	54	1.49 (0.62, 3.58)	1.11 (0.44, 2.81)
Q4:	48	53	2.14 (0.82, 5.59)	1.88 (0.65, 5.43)
P for trend			**0.04**	0.12
sOB-R				
Q1:	56	54	1.00	1.00
Q2:	21	53	**0.42 (0.21, 0.85)**	**0.21 (0.09, 0.49)**
Q3:	14	54	**0.37 (0.17, 0.83)**	**0.11 (0.04, 0.34)**
Q4:	13	53	**0.33 (0.14, 0.76)**	**0.14 (0.05, 0.39)**
P for trend			**0.002**	**<.0001**
Adiponectin				
Q1:	43	54	1.00	1.00
Q2:	29	53	**0.65 (0.32, 1.31)**	0.55 (0.26, 1.15)
Q3:	24	54	**0.54 (0.26, 1.15)**	**0.30 (0.13, 0.69)**
Q4:	8	53	**0.17 (0.06, 0.49)**	**0.20 (0.07, 0.56)**
P for trend			**0.001**	**0.001**
HMW-Adiponectin				
Q1:	45	54	1.00	1.00
Q2:	30	53	**0.65 (0.32, 1.30)**	0.82 (0.37, 1.80)
Q3:	18	54	**0.38 (0.17, 0.83)**	**0.32 (0.14, 0.76)**
Q4:	11	53	**0.27 (0.11, 0.65)**	**0.27 (0.10, 0.71)**
P for trend			**0.002**	**0.002**
Omentin-1				
Q1:	24	54	1.00	1.00
Q2:	37	53	1.67 (0.77, 3.62)	1.57 (0.77, 3.21)
Q3:	19	54	0.97 (0.41, 2.28)	1.20 (0.51, 2.82)
Q4:	24	53	1.33 (0.54, 3.27)	1.30 (0.52, 3.20)
P for trend			0.85	0.70
Vaspin				
Q1:	19	52	1.00	1.00

Q2:	22	52	1.67 (0.69, 4.05)	1.09 (0.46, 2.58)
Q3:	39	52	**2.70 (1.18, 6.20)**	1.85 (0.83, 4.15)
Q4:	22	51	1.62 (0.72, 3.65)	2.37 (1.00, 5.61)
P for trend			0.60	**0.03**
RBP4				
Q1:	22	54	1.00	1.00
Q2:	27	53	1.42 (0.66, 3.07)	1.16 (0.51, 2.62)
Q3:	22	54	1.18 (0.52, 2.68)	1.40 (0.61, 3.21)
Q4:	33	53	1.84 (0.88, 3.85)	1.06 (0.45, 2.51)
P for trend			0.14	0.92

Q, quartile; * Model III adjust for covariates in model I and additional adjusts for pre-pregnancy BMI

Supplementary Table 3. Adjusted odds ratio (95% CI) for the associations of GDM risk with quartiles of categories of the weighted adipokine score. Chemerin, FABP4, IL-6, leptin, sOB-R, and HMW-adiponectin at gestational weeks 10–14 and 15–26 Weighted adipokine score

Adipokine score categories	10-14 GWs		15-26 GWs	
	Model I*	**Model II***	**Model I***	**Model II***
Zero	1.00	1.00	1.00	1.00
Tertile 1	1.69 (0.65, 4.40)	1.56 (0.59, 4.16)	3.24 (0.73, 14.48)	3.53 (0.75, 16.52)
Tertile 2	2.51 (1.02, 6.17)	2.20 (0.85, 5.72)	**6.32 (1.50, 26.67)**	**7.33 (1.62, 33.16)**
Tertile 3	**7.51 (2.87, 19.66)**	**6.06 (2.03, 18.06)**	**14.87 (4.02, 55.02)**	**18.74 (4.19, 83.83)**

Weighted adipokine score represents high-risk cutoff values of chemerin, FABP4, IL-6, leptin, sOB-R, and HMW-adiponectin expressed as ng/mL (IL-6 expressed as pg/mL).
Model I adjusts for maternal age, gestational week of blood collection, parity, family history of diabetes, parity; Model II adjust for covariates in model I and additionally adjusts for prepregnancy BMI.
Weights were derived from a model that adjusted for high-risk cutoff values of chemerin, FABP4, IL-6, leptin, sOB-R, and HMW-adiponectin, maternal age, gestational week of blood collection, parity, and family history of diabetes.
At 10-14 GWs the cutoff values (weights) were: FABP4 17.7 (-0.04), Chemerin 94.9 (0.50), IL-6 1.5 (0.57), Leptin 51.1 (0.40), sOB-R 33.9 (0.74), HMW-adiponectin 6420.9 (0.51).
At 15-26 GWs the cutoff values (weights) were FABP4 16.9 (-0.001), Chemerin 98.0 (0.98), IL-6 1.6 (0.14), Leptin 55.3 (-0.02), sOB-R 39.9 (1.79), HMW-adiponectin 5464.2 (0.21).

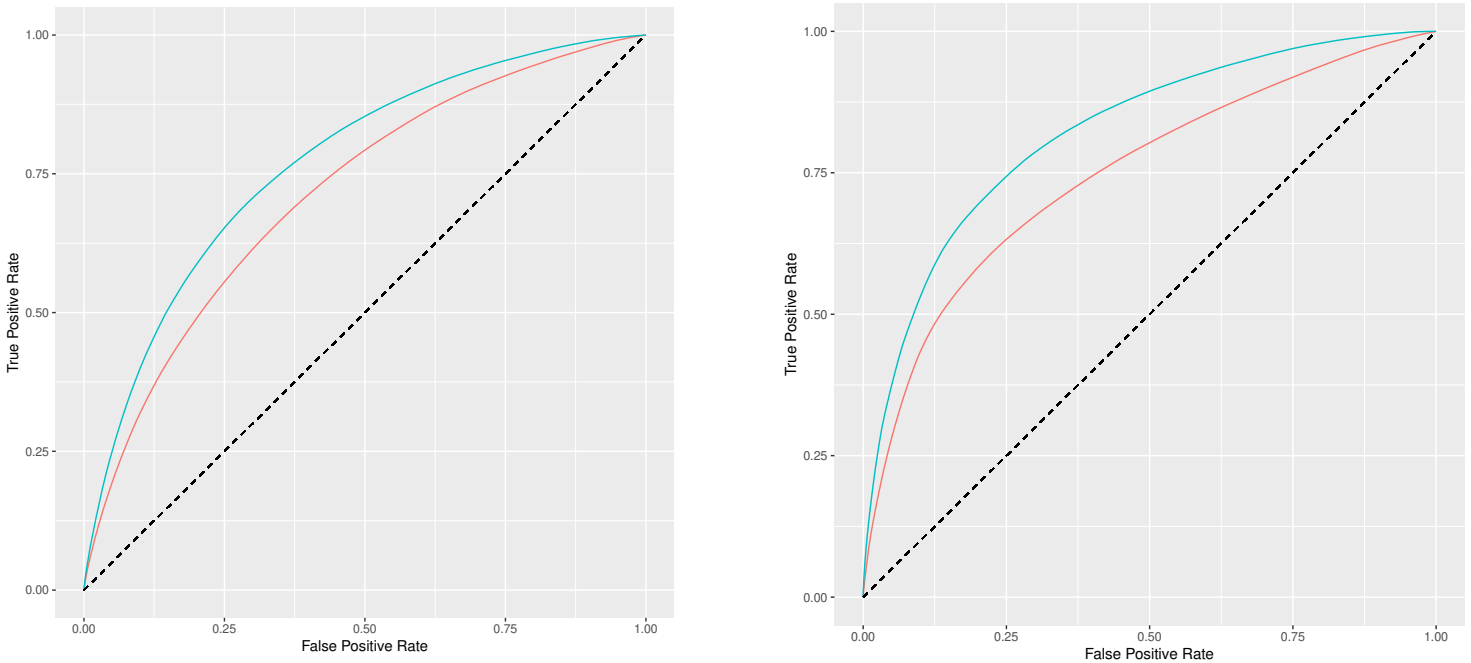
Supplementary Table 4. Receiver operating characteristic (ROC) curves and area under the curve (AUC) statistics for different models to predict gestational diabetes (GDM) (biomarker measured at 10-14 and 15-26 GWs)

Model	Variables included in the model	AUC (95%CI)
Visit 0 (10-14 GWs)		
Conventional	Age, enrollment BMI categories, race, family history of diabetes, glucose	0.71 (0.66,0.77)
FABP4	Conventional + quartiles of FABP4	0.73 (0.67,0.79)
Chemerin	Conventional + quartiles of chemerin	0.74 (0.69,0.79)
Leptin	Conventional + leptin > 4th quartile value	0.72 (0.67,0.78)
sOB-R	Conventional + quartiles of sOB-R	0.74 (0.69,0.80)
Adiponectin	Conventional + quartiles of adiponectin	0.74 (0.69,0.79)
HMW-adiponectin	Conventional + quartiles of HMW-adiponectin	0.74 (0.69,0.79)
Final model at visit 0	Conventional+FABP4+Chemerin +sOB-R+ HMW-adiponectin	0.77 (0.72,0.82)
Visit 1 (15-26 GWs)		
Conventional	Age, enrollment BMI categories, race, family history of diabetes, glucose (>90mg/dL)	0.75 (0.69,0.80)
FABP4	Conventional + quartiles of FABP4	0.77 (0.72,0.82)
Chemerin	Conventional + quartiles of chemerin	0.77 (0.71,0.82)
Leptin	Conventional + leptin > 4th quartile value	0.75 (0.70,0.81)
sOB-R	Conventional + quartiles of sOB-R	0.79 (0.74,0.84)
Adiponectin	Conventional + quartiles of adiponectin	0.77 (0.71,0.82)
HMW-adiponectin	Conventional + quartiles of HMW-adiponectin	0.77 (0.72,0.82)
Final model at visit 1	Conventional+FABP4+chemerin +sOB-R+ HMW-adiponectin	0.82 (0.77,0.87)

Supplementary Material: **Adipokines in Early and Mid-Pregnancy and Subsequent Risk of Gestational Diabetes: A longitudinal study in a multi-racial cohort**

Supplementary Figure 1. Receiver operating characteristic (ROC) curves and area under the curve (AUC) statistics for the prediction of gestational diabetes (GDM) using conventional risk factors only (maternal age, enrollment BMI categories, family history of diabetes, glucose), conventional risk factors and the addition of adipokines at 10-14 and 15-26 GWs

ROC curve comparisons at 10-14 GWs **ROC curve comparisons at 15-26 GWs**



Red line: conventional model; Blue line: conventional model + adipokines

10-14 GWs - conventional model: age, enrollment BMI categories, race, family history of diabetes, glucose (>90mg/dL); final model with adipokines: conventional+FABP4+chemerin +sOB-R+ HMW-adiponectin

15-26 GWs – conventional model: age, enrollment BMI categories, race, family history of diabetes, glucose (>90mg/dL); final model with adipokines: conventional+FABP4+chemerin +sOB-R+ HMW-adiponectin