Supplementary Data

Plasma lipidomics profile in pregnancy and gestational diabetes risk- a prospective study in a multi-racial/ethnic cohort

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General Business
**Supplementary table S1.** Individual lipid metabolites and their associations with gestational diabetes (GDM) risk by study visit.

**Supplementary table S2.** Associations of lipid networks with GDM risk stratified by disease severity at visit 1 (15-26 weeks).

**Supplementary figure S1.** Flow chart of the nested case–control study, within the NICHD Fetal Growth Studies–Singleton Cohort. NICHD = National Institute of Child Health and Human Development.

**Supplementary figure S2.** Scatterplots showing prospective associations between individual lipid metabolites and subsequent GDM risk by number of acyl carbons (x-axis) and double bonds (y-axis) by lipid classes at visit 0 (A) and visit 1 (B). Each circle represents individual lipid metabolite-GDM relations, where the color gradient of the circle represents the direction of association (red= positive associations; blue= negative associations), and the size of the circle represents -log10(p-value). Associations were adjusted for maternal age, enrollment BMI, family history of diabetes, alcohol use before pregnancy, race/ethnicity, and gestational age at blood collection.

**Supplementary figure S3.** Longitudinal profiles (mean concentrations ± standard errors) of selected metabolites between GDM cases and non-GDM controls across pregnancy. Annotated and unannotated metabolites that showed most significant and consistent associations with GDM
at both study visits were selected for visualization. *$P < 0.05$; **$P < 0.01$; ***$P < 0.001$ are test statistics for between-group comparisons at each gestational interval.