

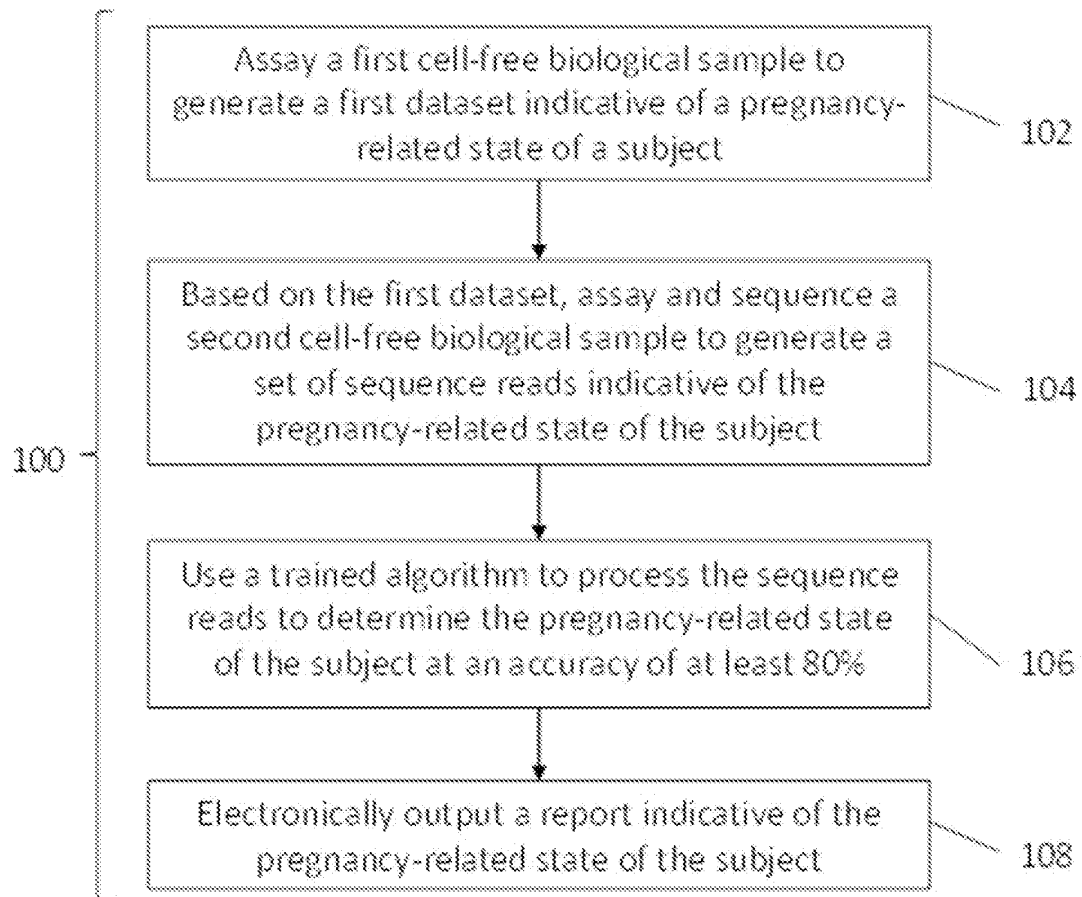


FIG. 1

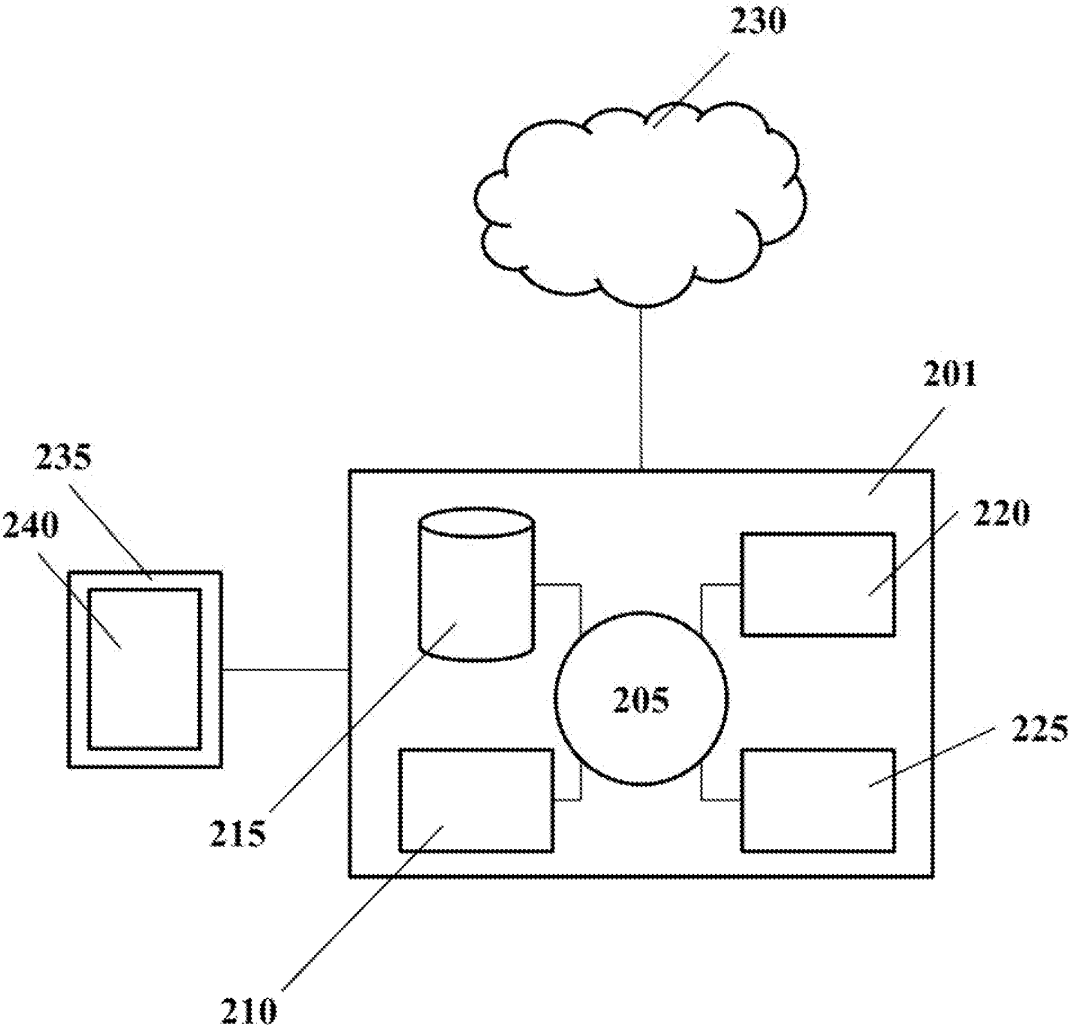


FIG. 2

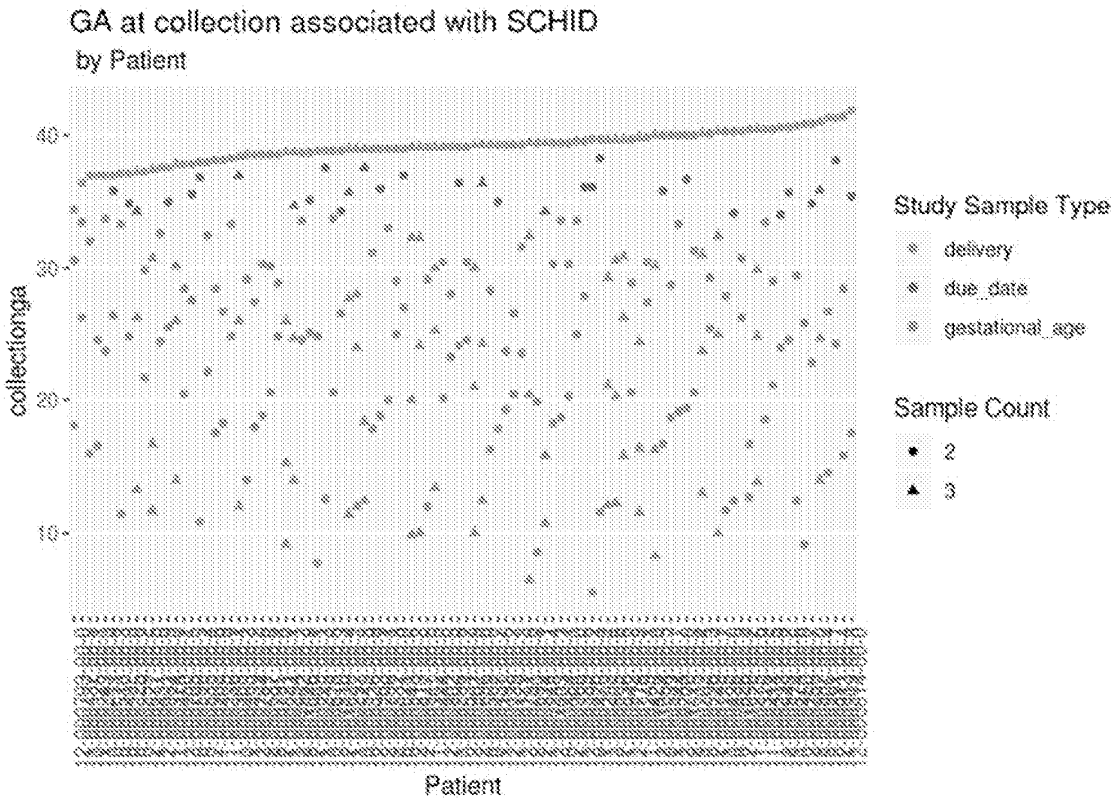


FIG. 3A

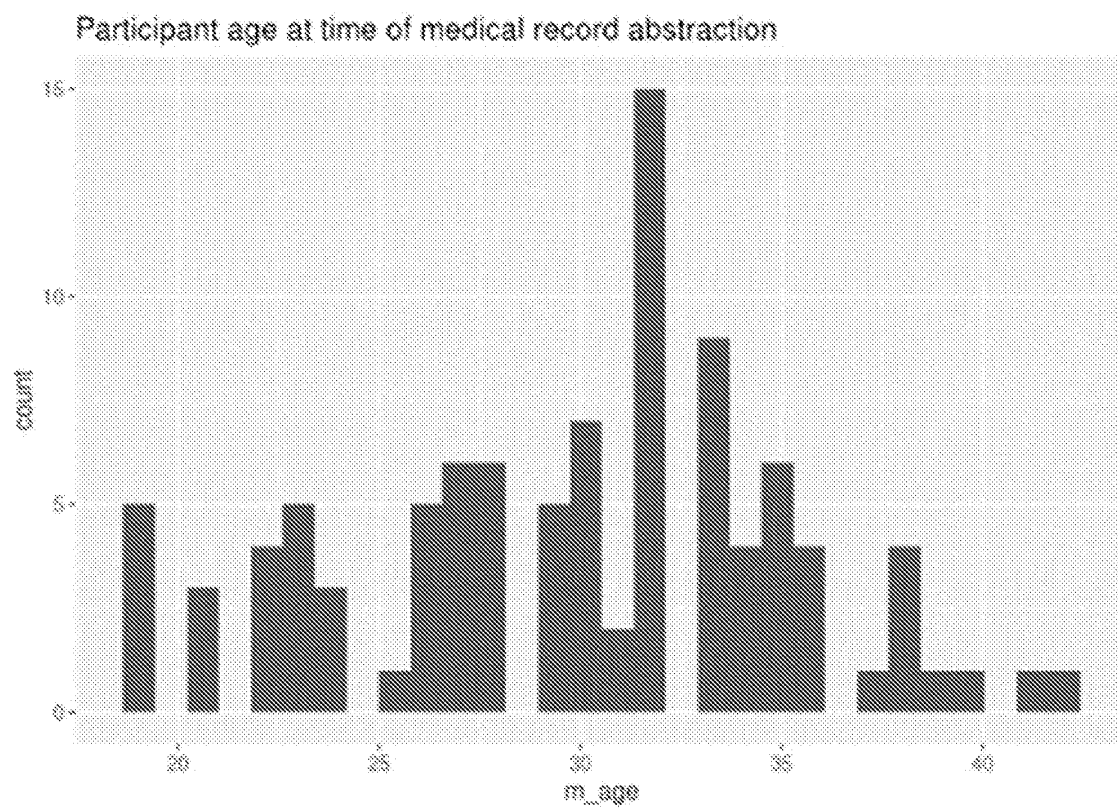


FIG. 3B

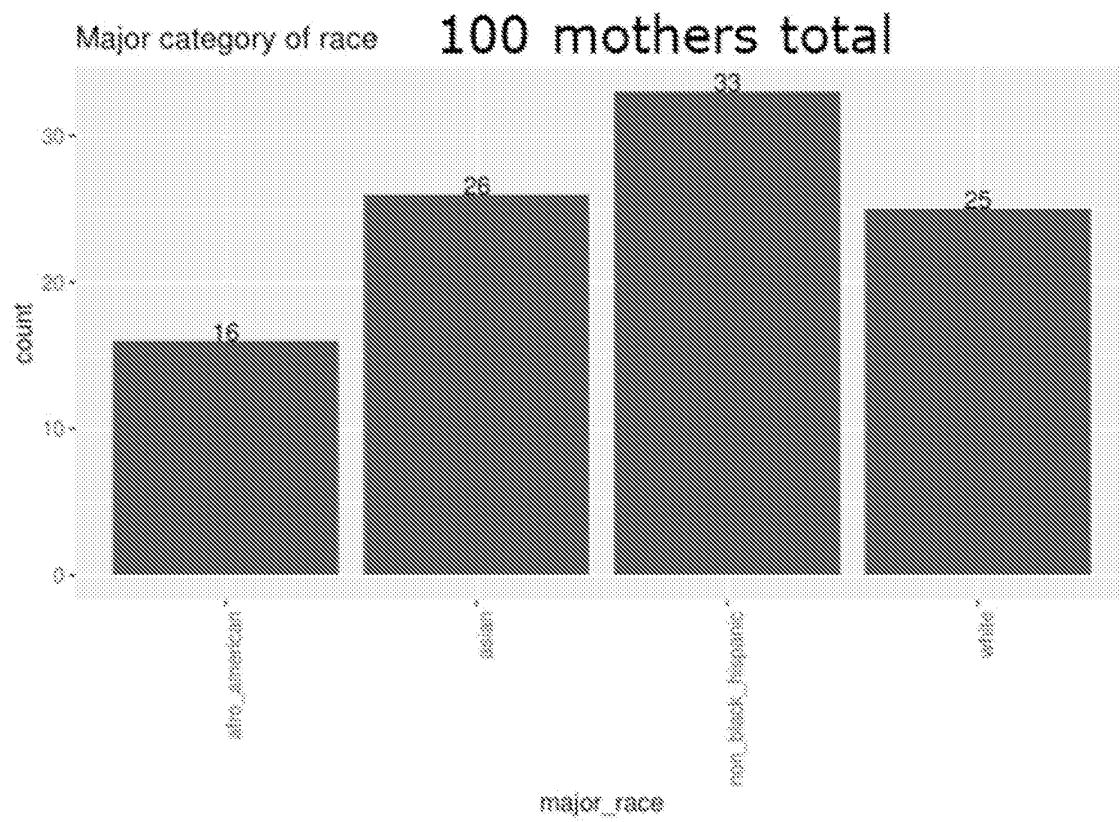


FIG. 3C

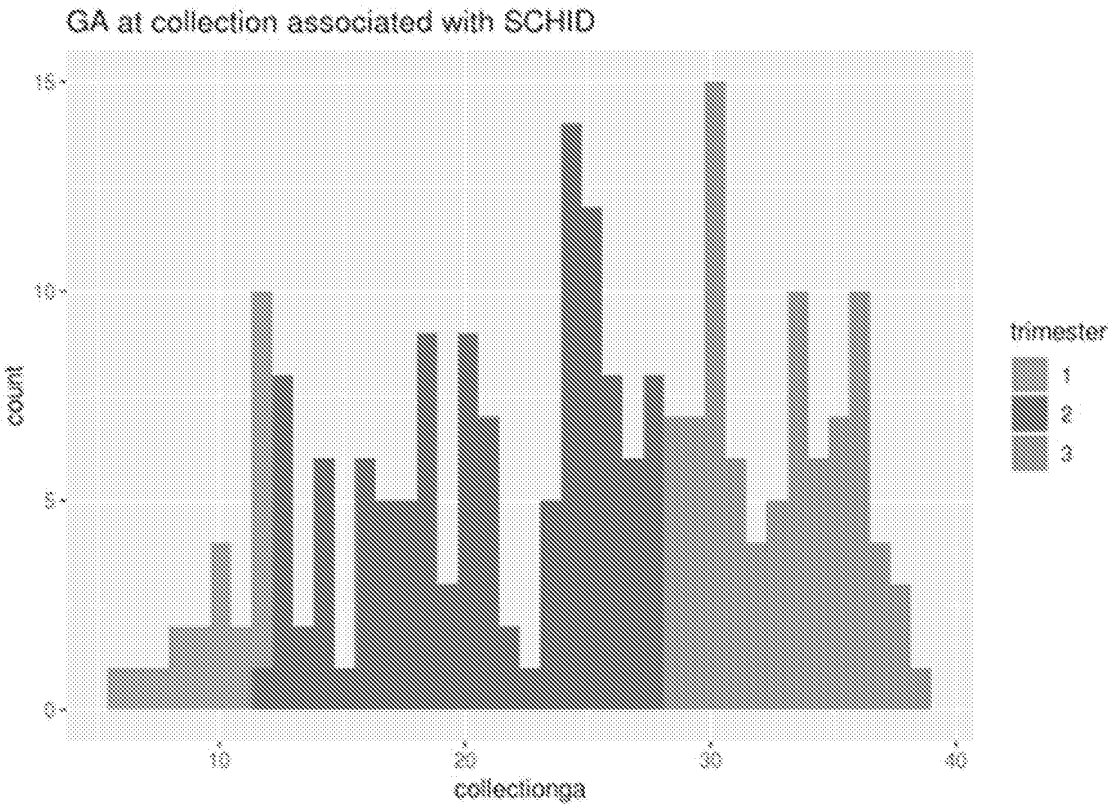


FIG. 3D

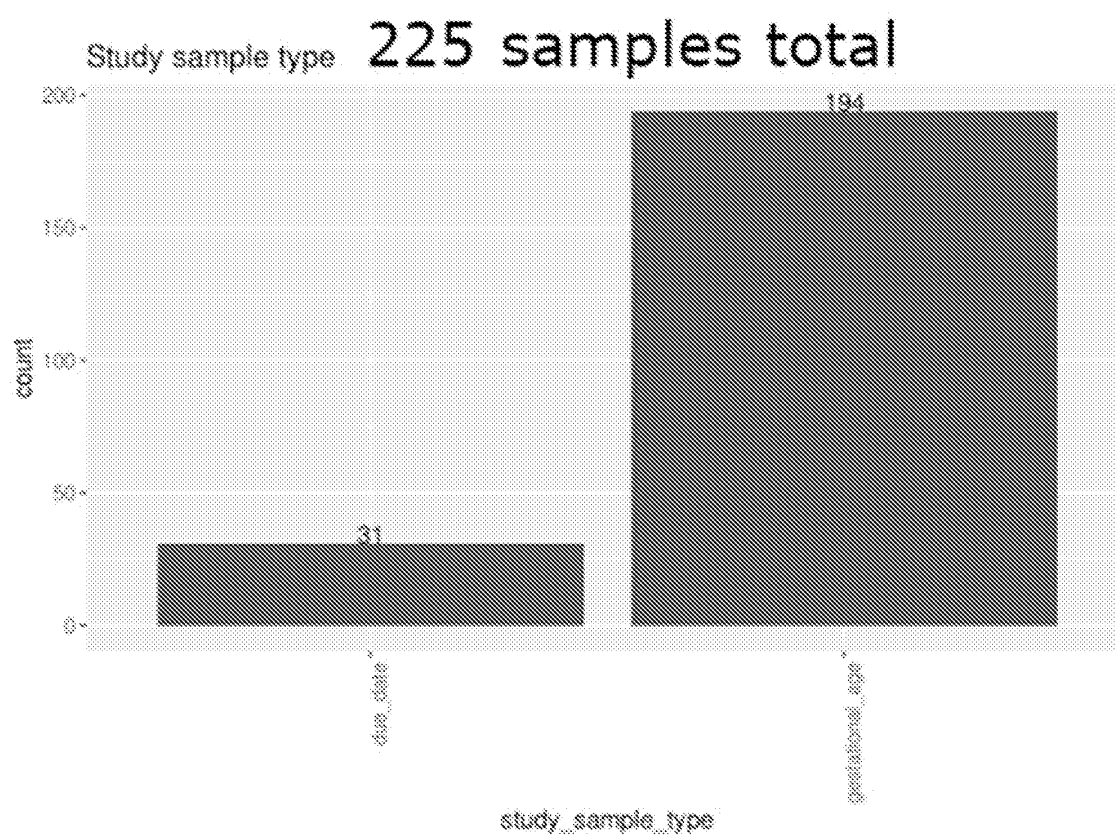


FIG. 3E

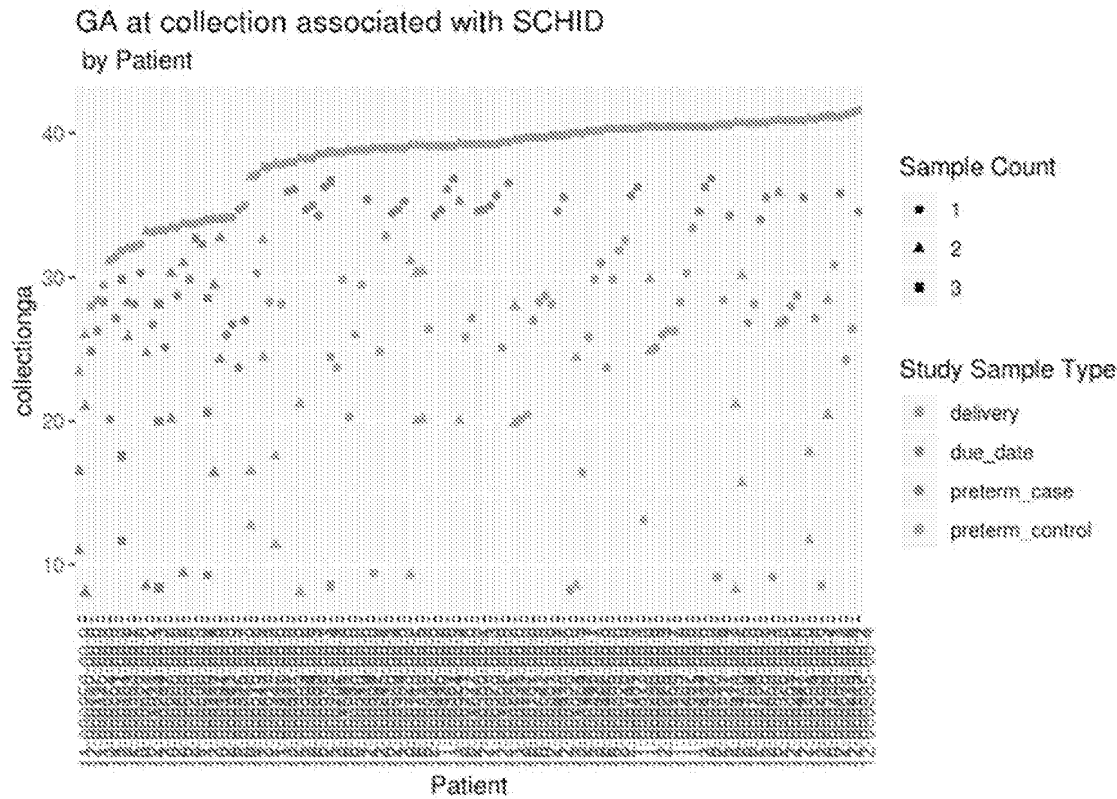


FIG. 4A

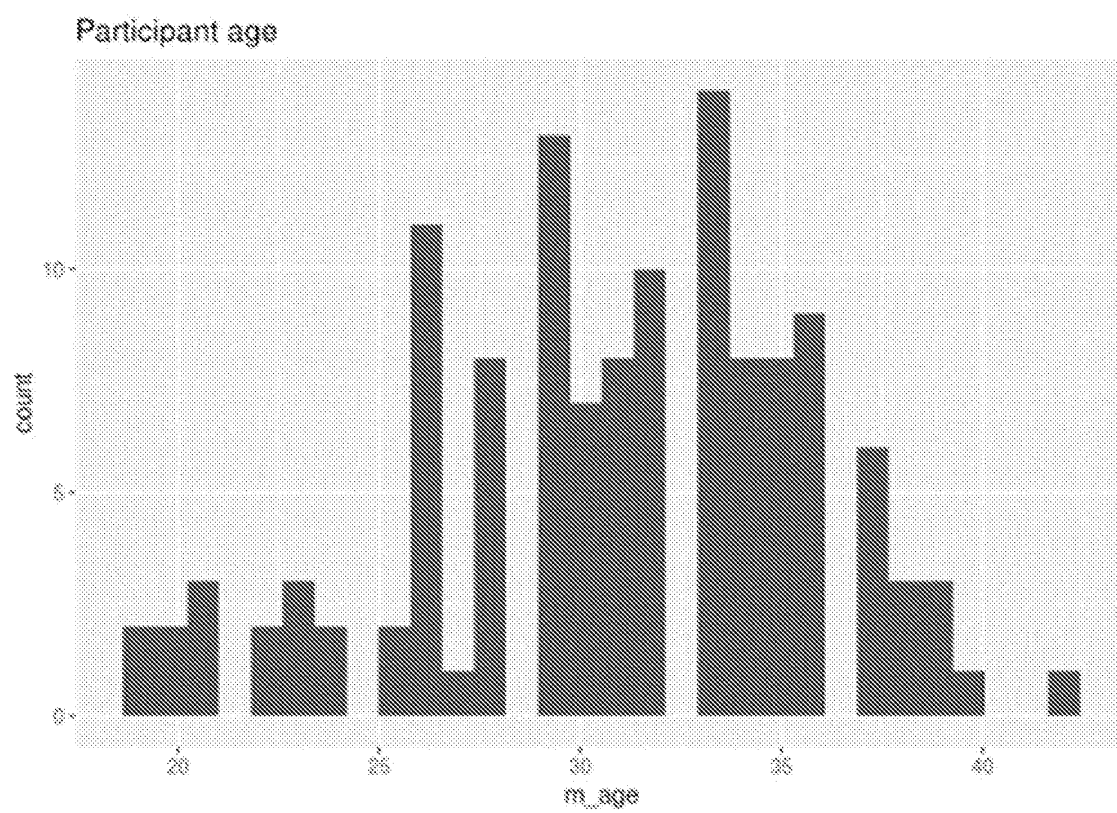


FIG. 4B

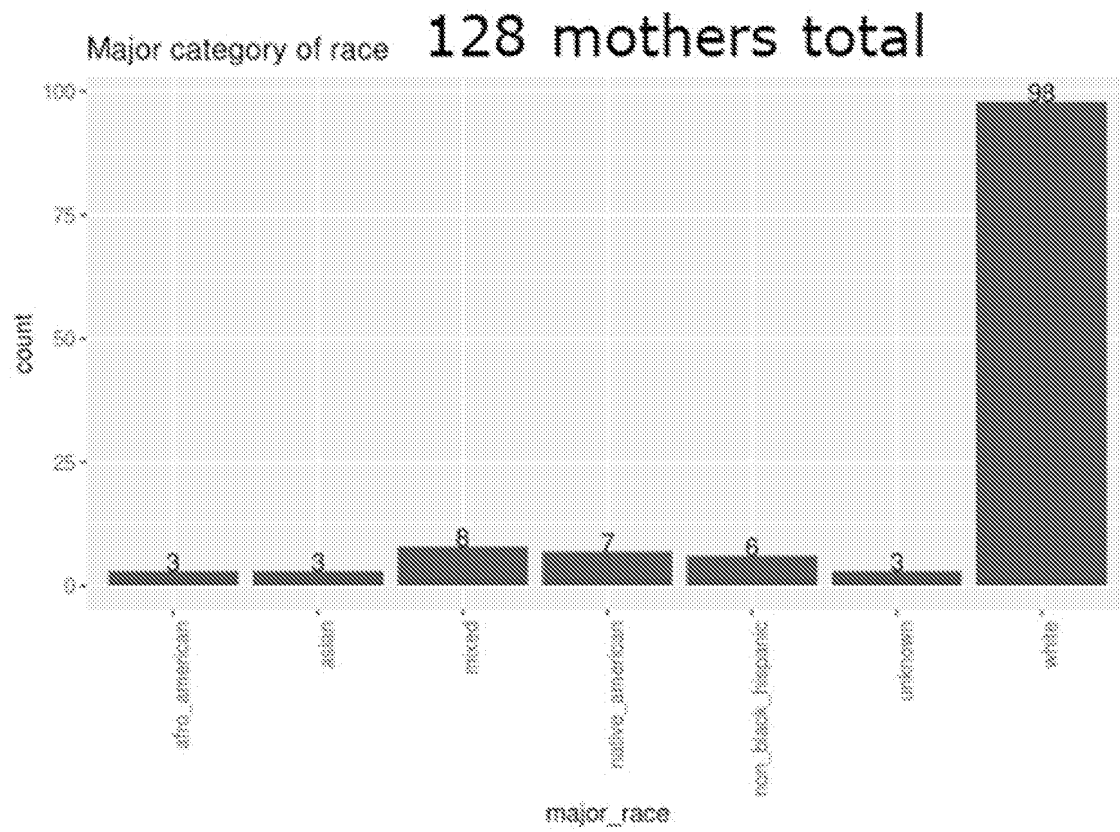


FIG. 4C

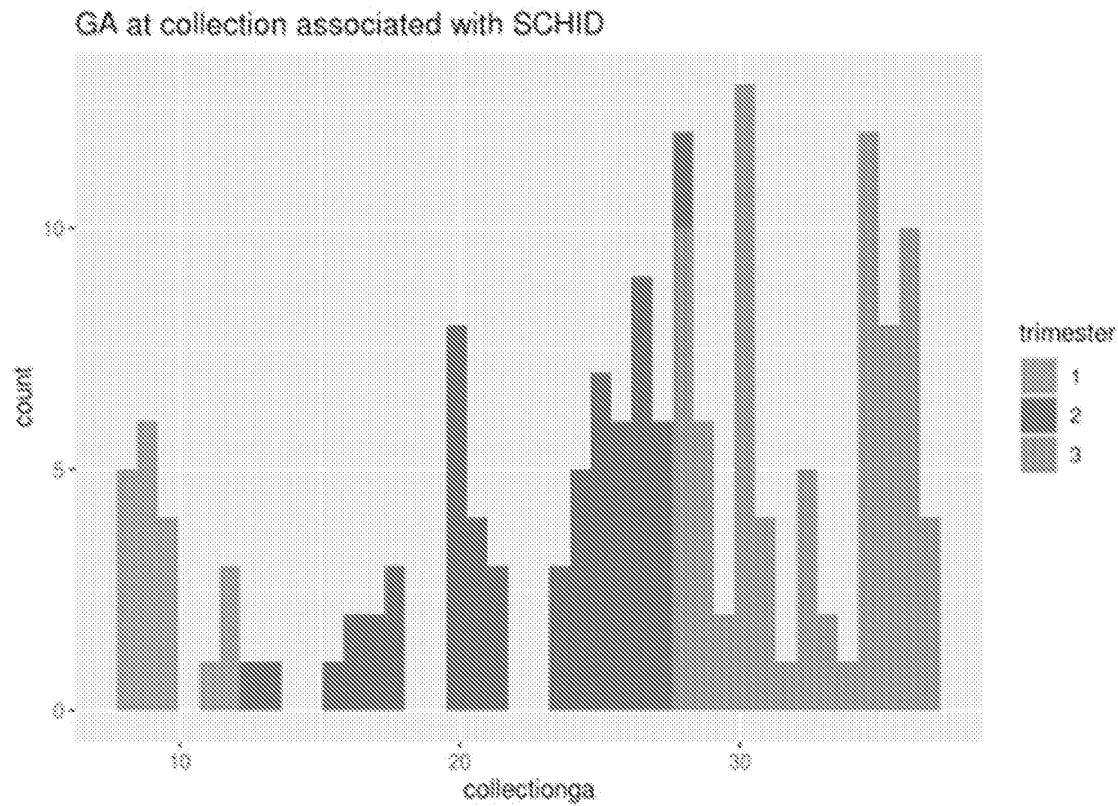


FIG. 4D

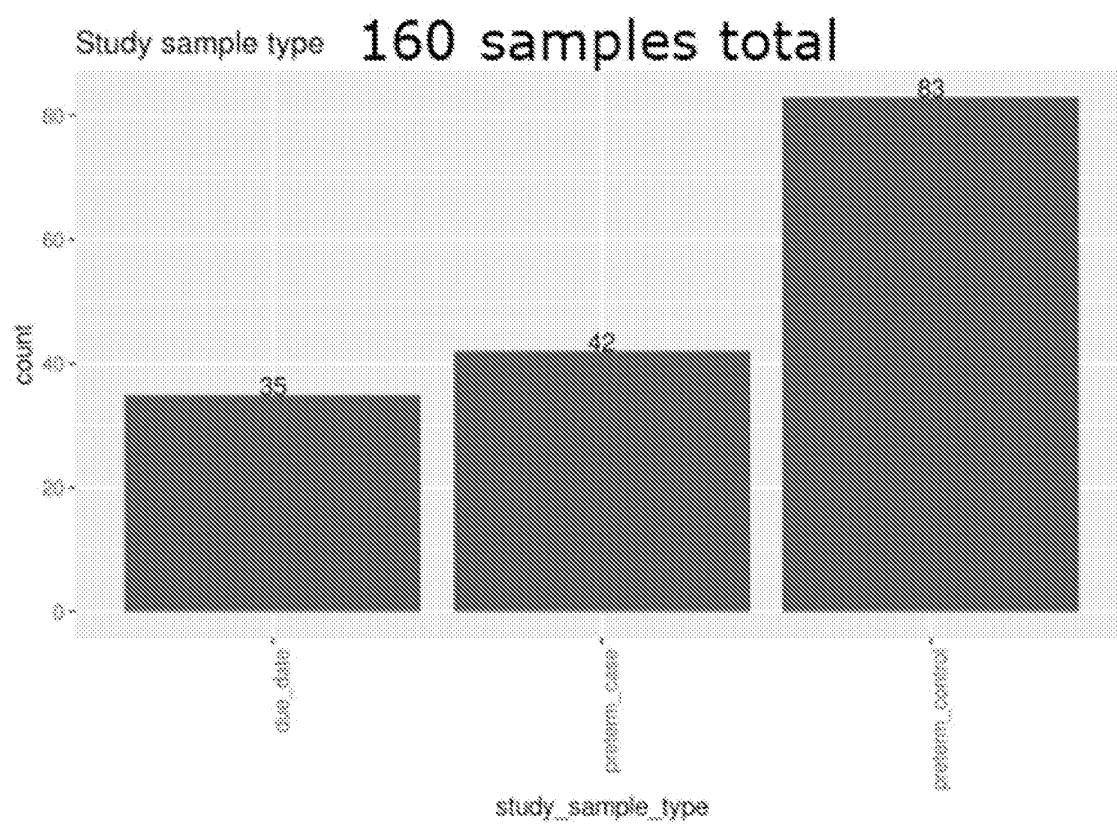


FIG. 4E

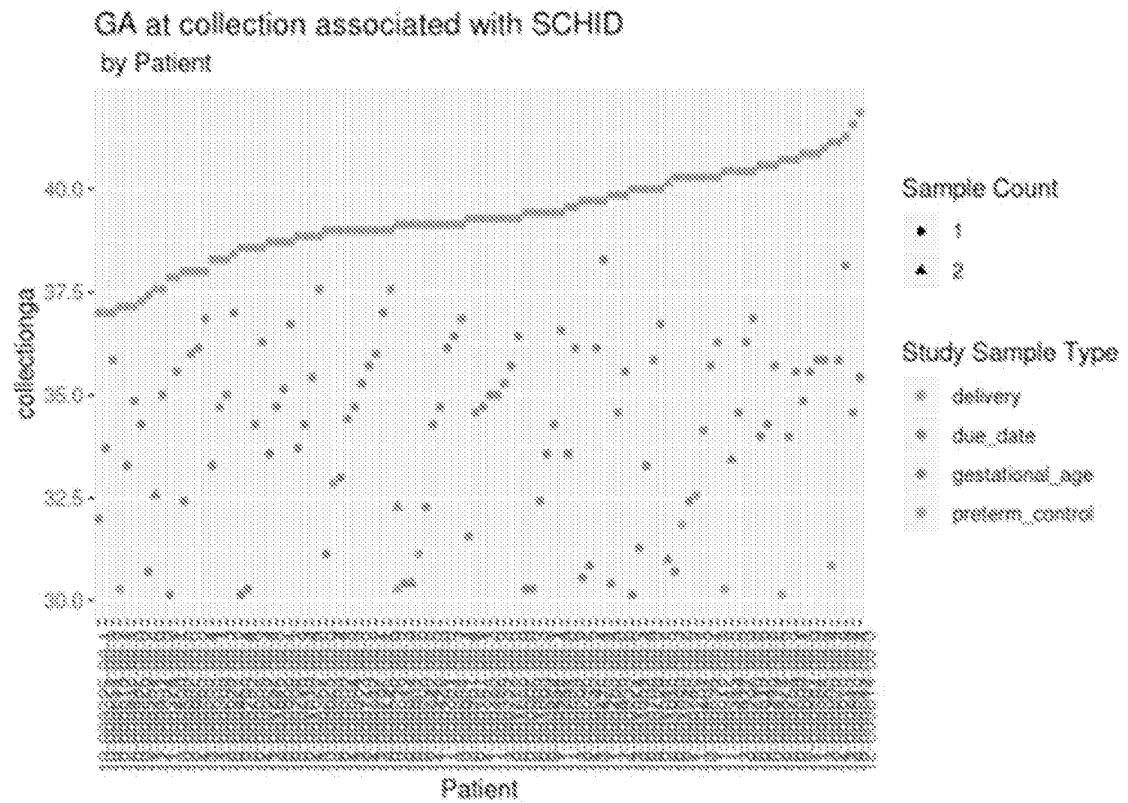


FIG. 5A

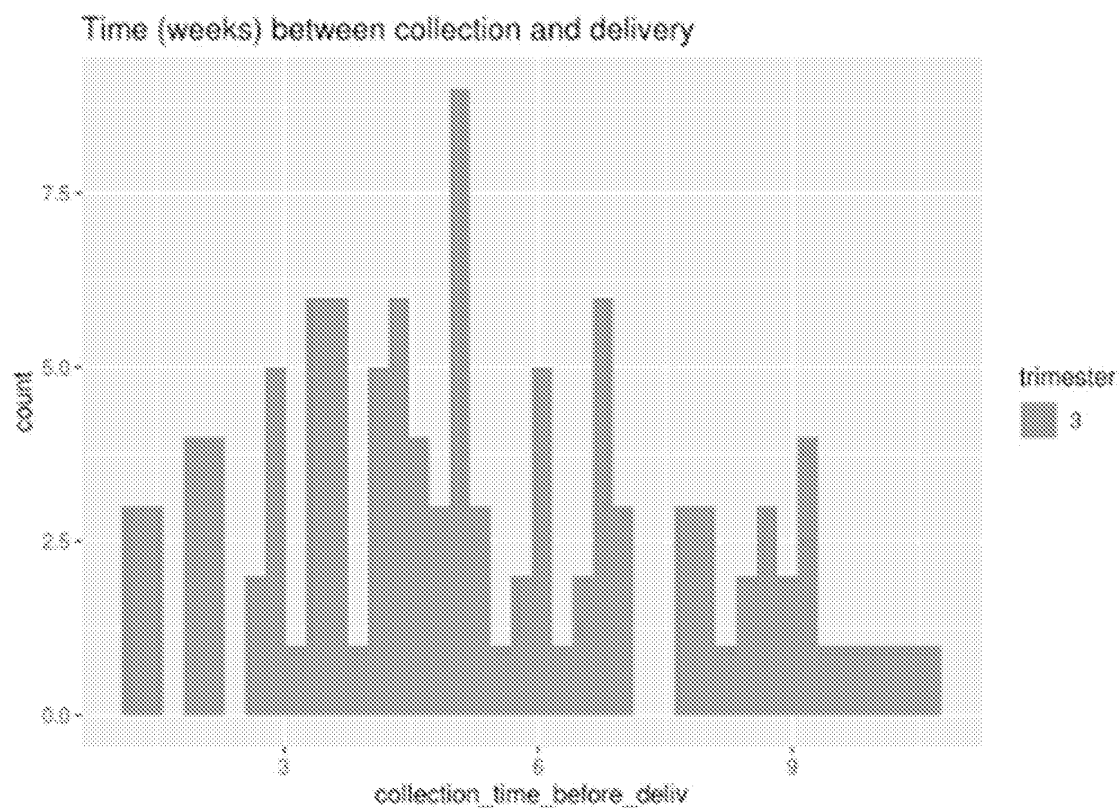


FIG. 5B

Overlap of genes used in model

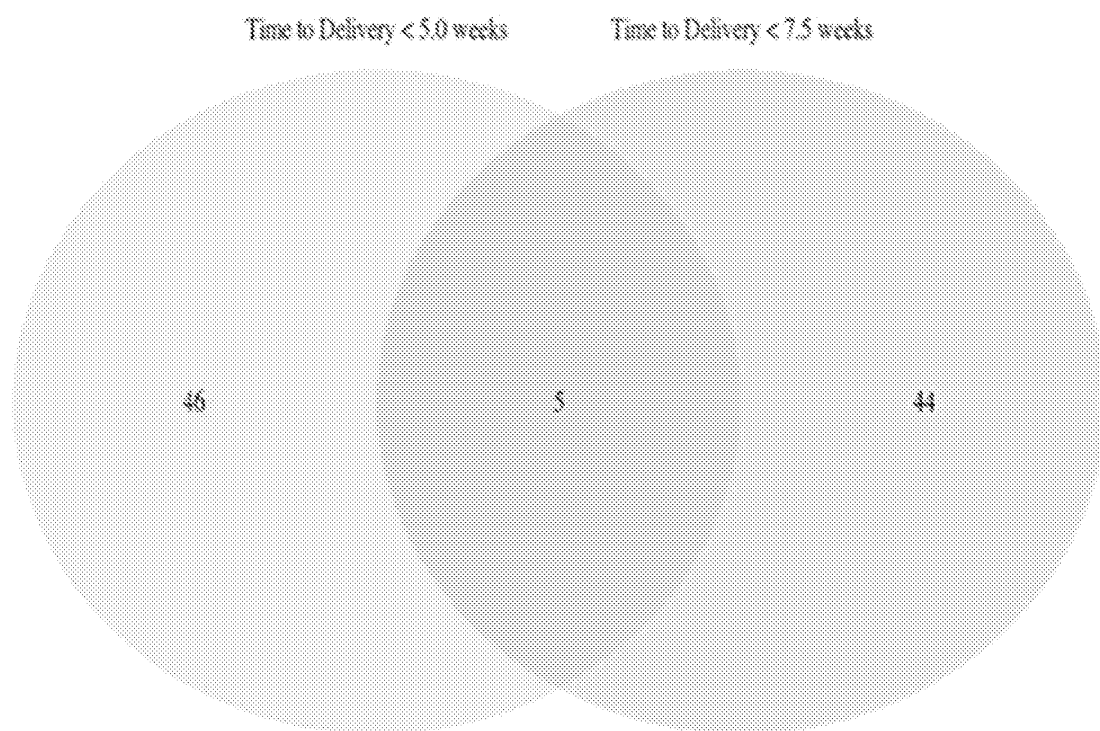


FIG. 5C

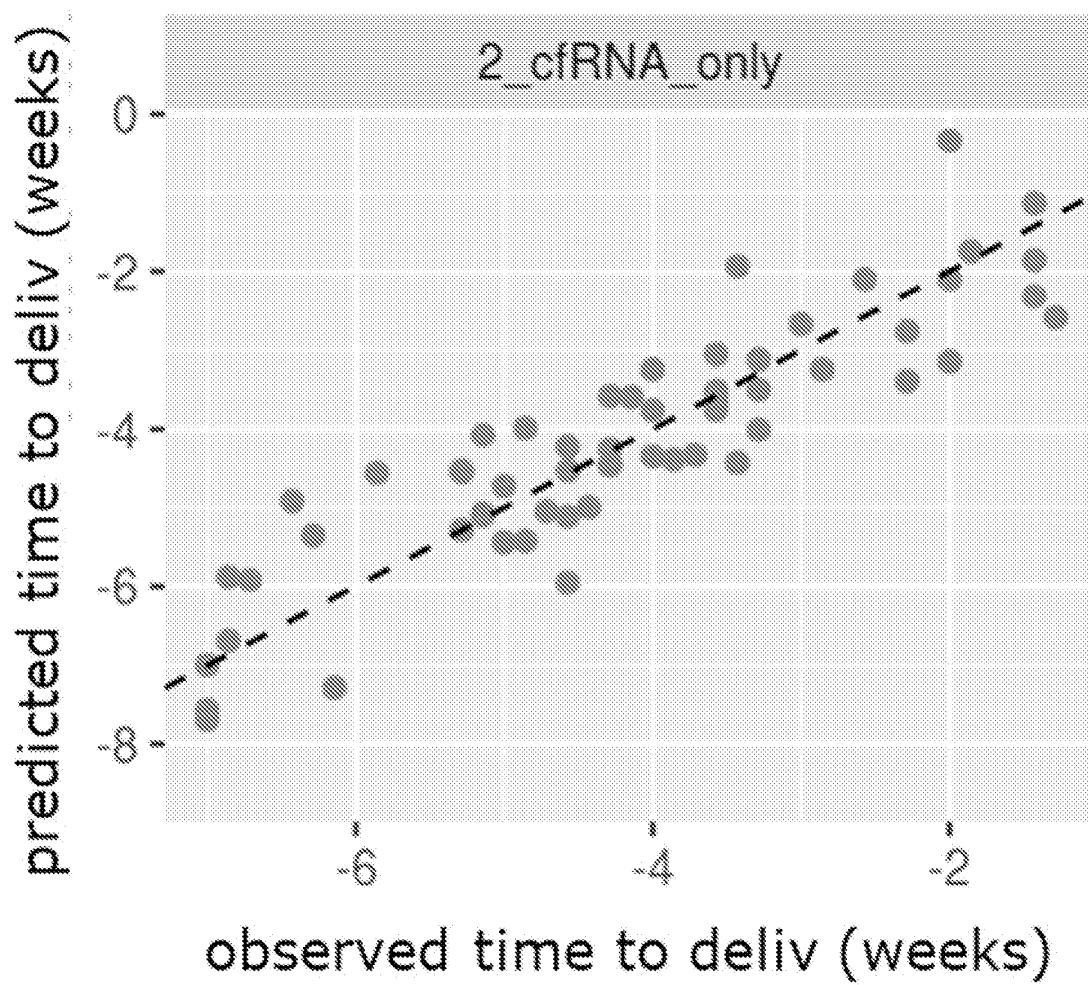


FIG. 5D

Gene Discovery					Model Building							
Project	sample dataset description	nSamples	nGenes input	Gene Discovery Model	n_genes_discovered	sample dataset description	nSamples	model	nGenes used	RMSE null model	RMSE	RSME description
DD	003_GA + 004_PG, min_time_to_deliv <5	43	15k	min_corr > 0.35	130	same	43	linear, elastic net regularization	28, 50+us	7.8 (days)	4.4, 4.2+us	LOOCV
	003_GA + 004_PG, min_time_to_deliv <7.5	59	15k	min_corr > 0.30	62	same	59	linear, elastic net regularization	47, 48+us	11 days	5.0, 4.9+us	LOOCV

FIG. 5E

Distribution of samples for Gestational Age at collection:

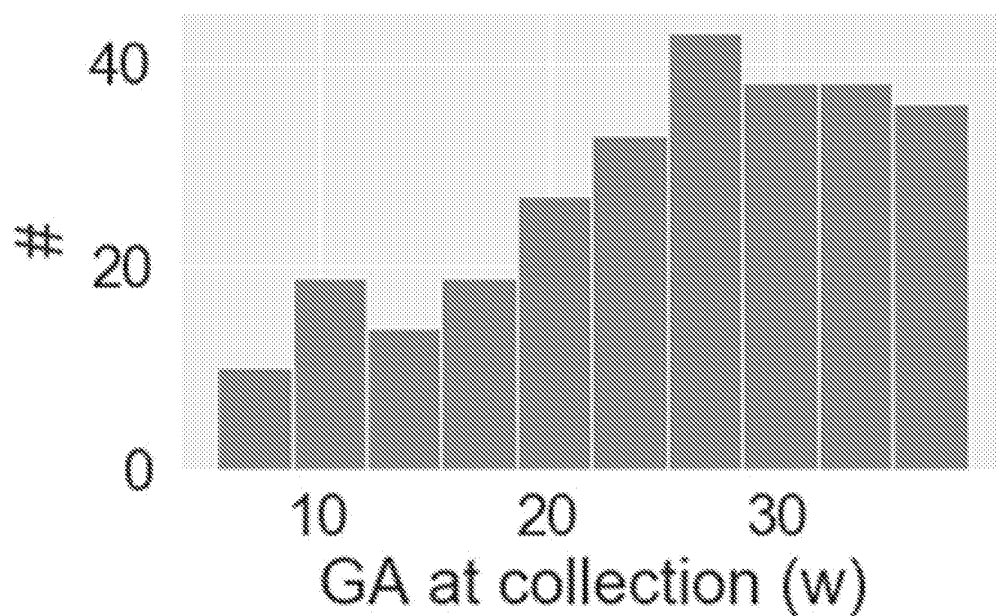


FIG. 6A

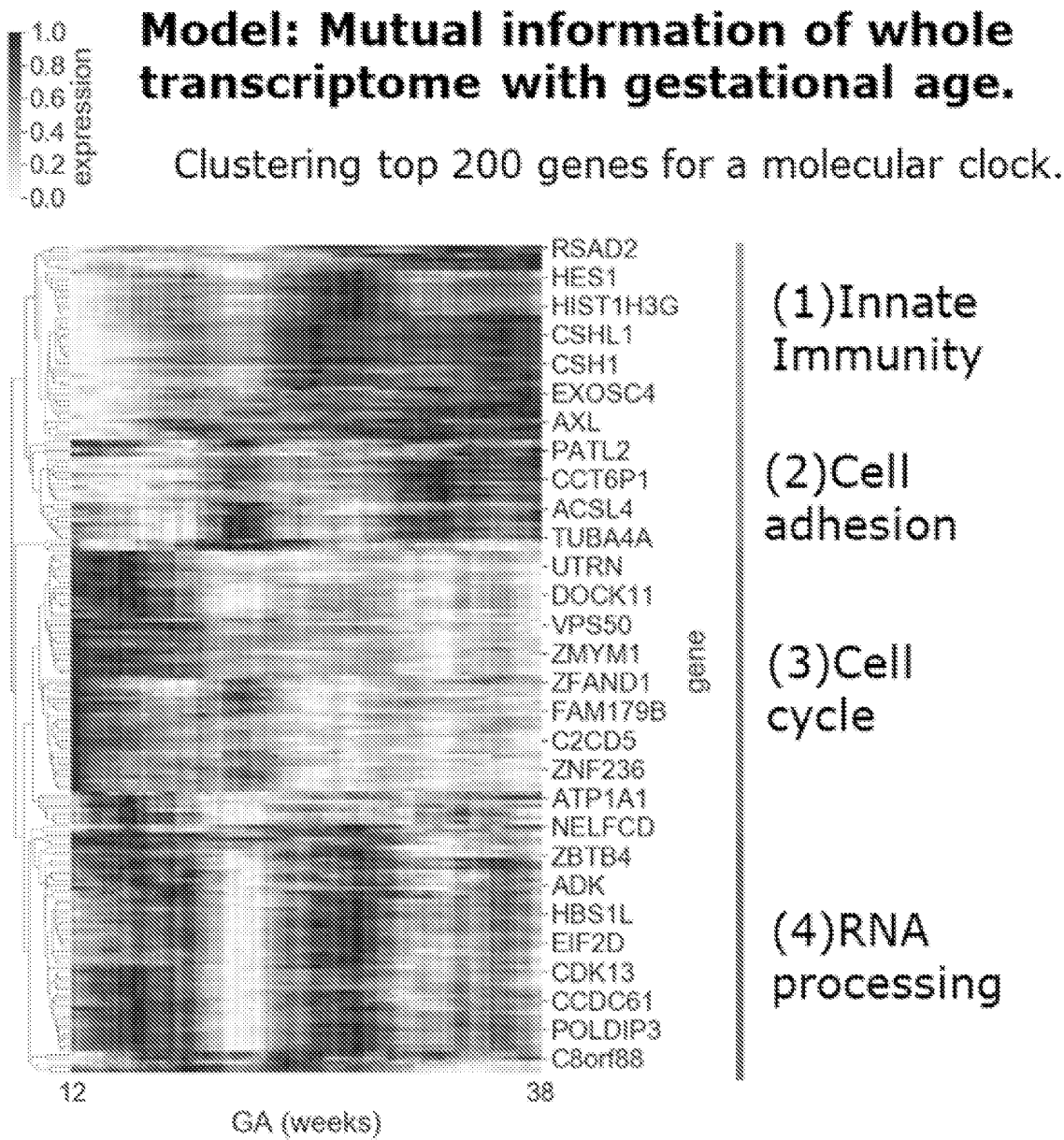


FIG. 6B

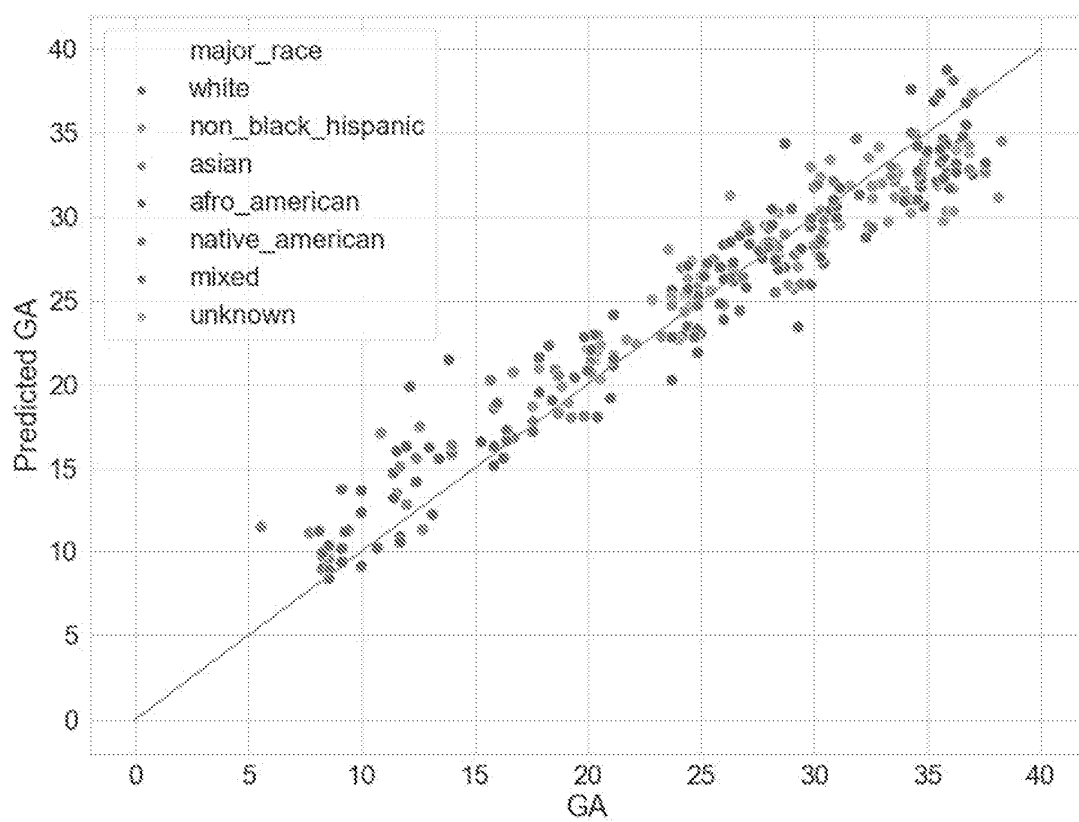


FIG. 6C

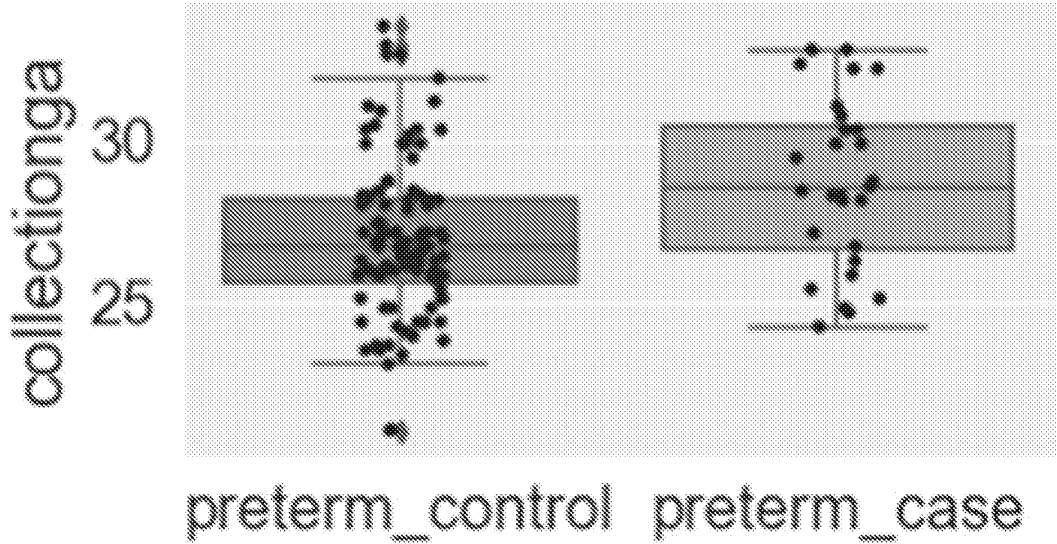


FIG. 7A

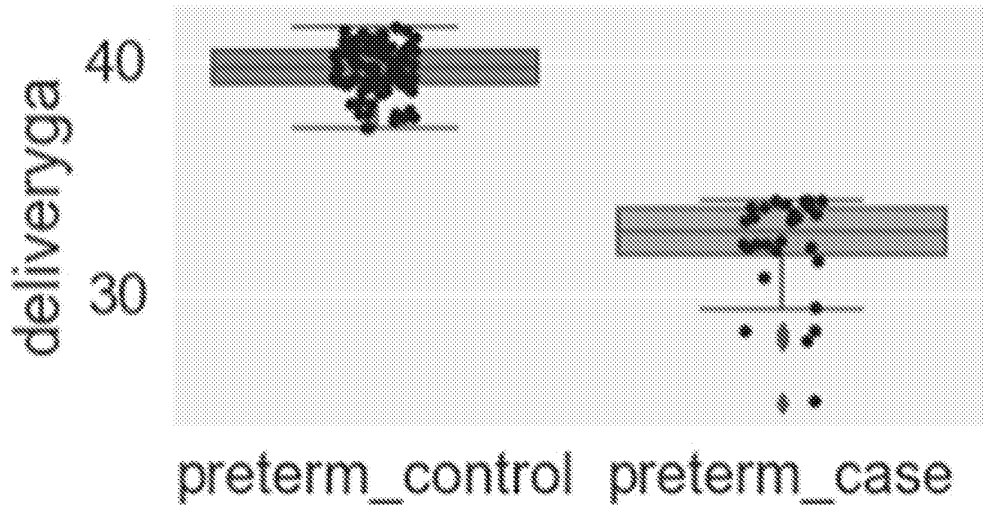


FIG. 7B

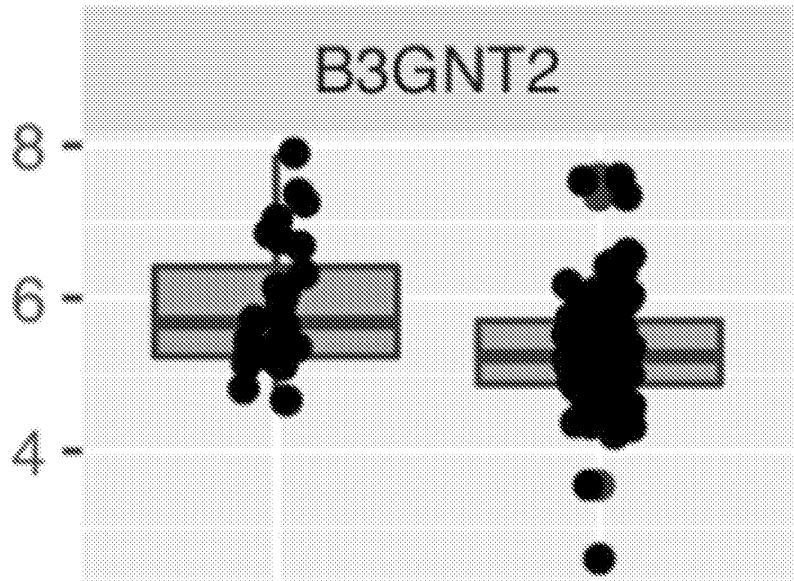


FIG. 7C

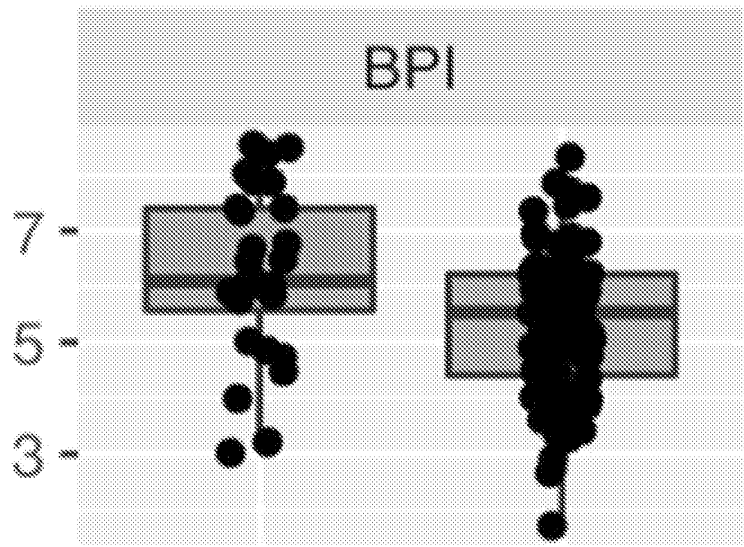


FIG. 7D

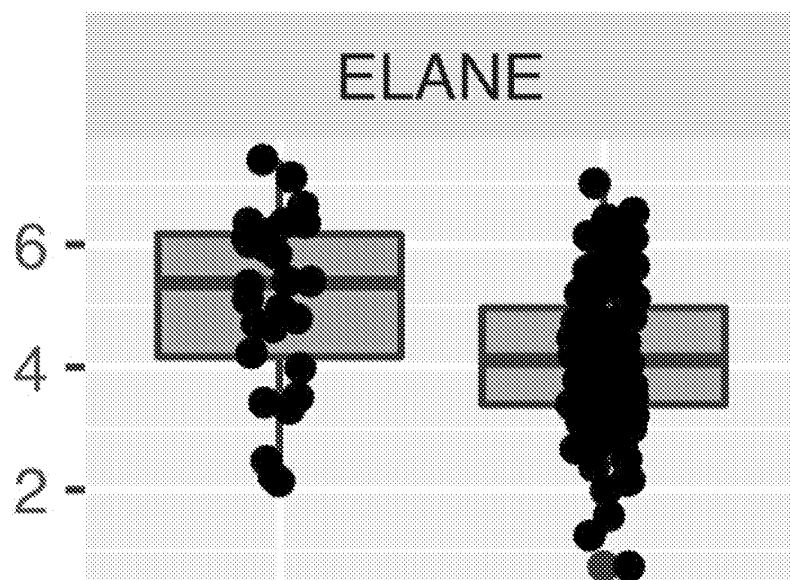


FIG. 7E

(Delivery:)

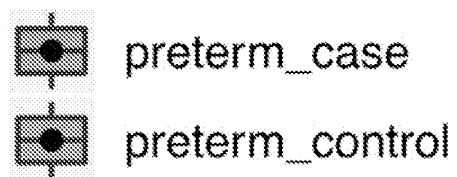
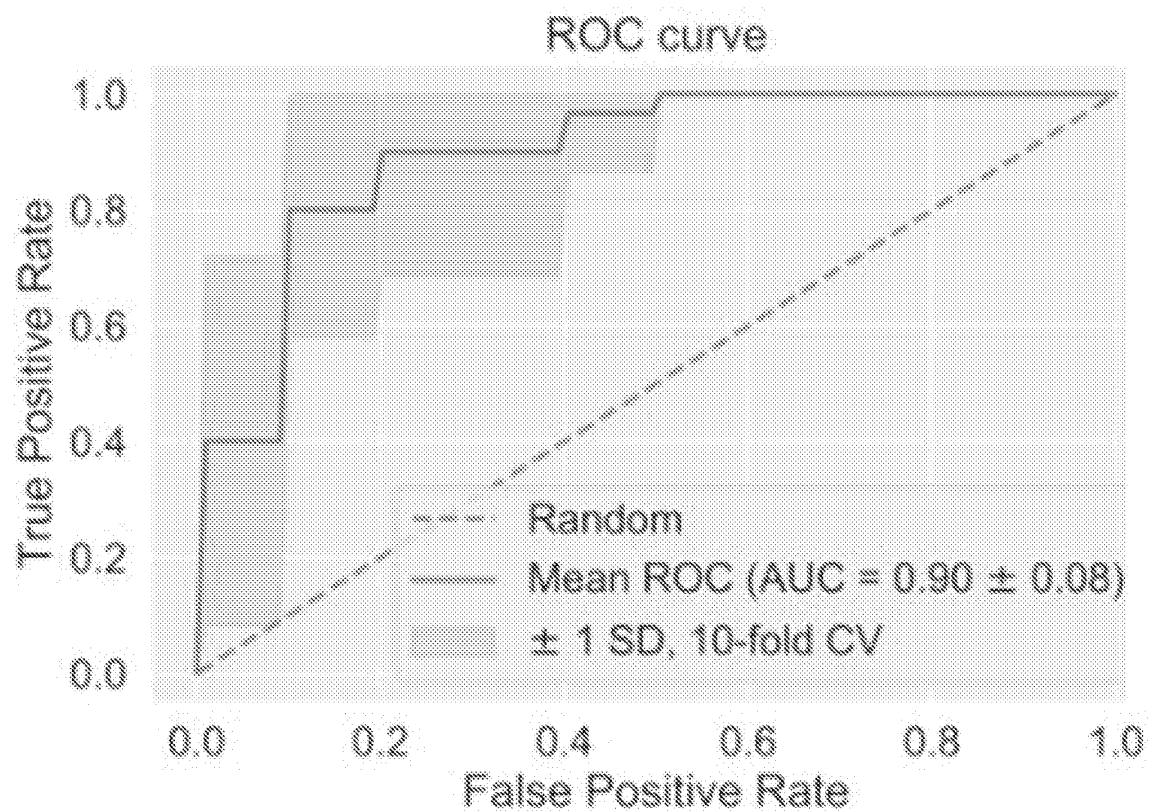
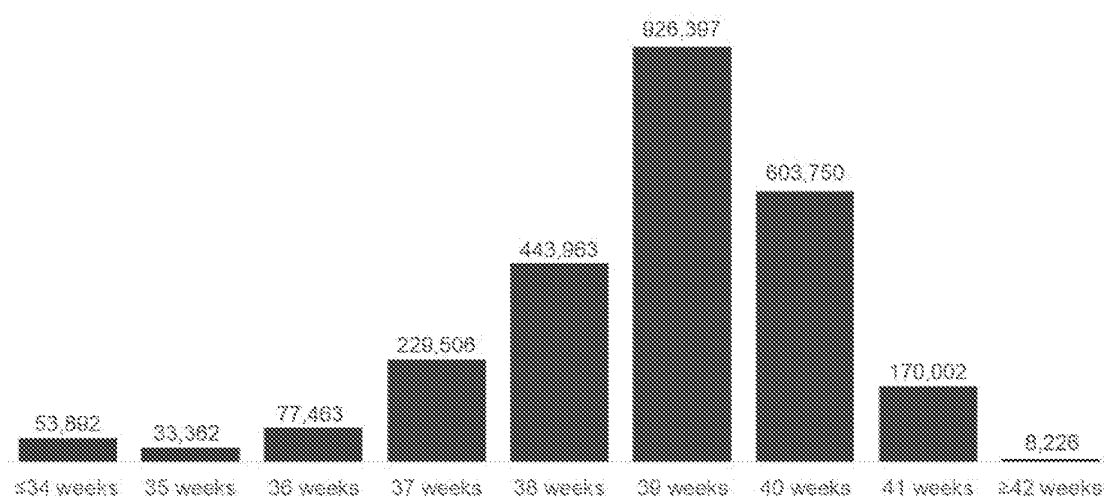


FIG. 7F



**FIG. 8**

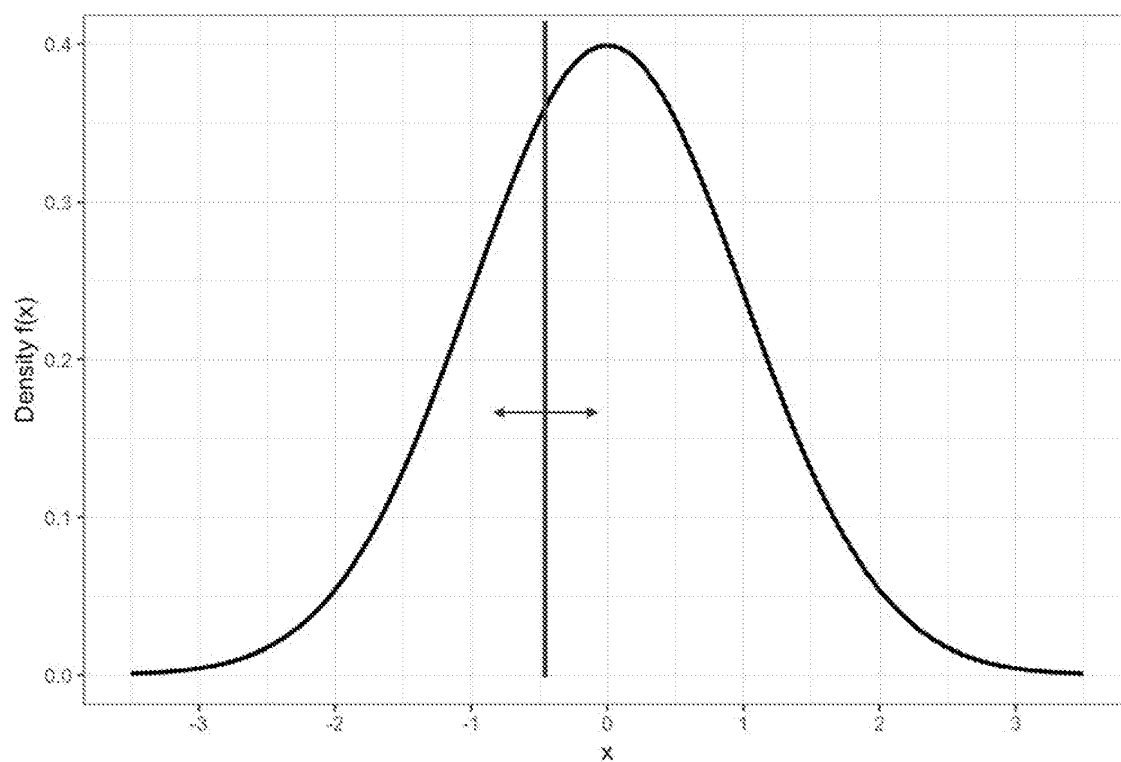


FIG. 9A

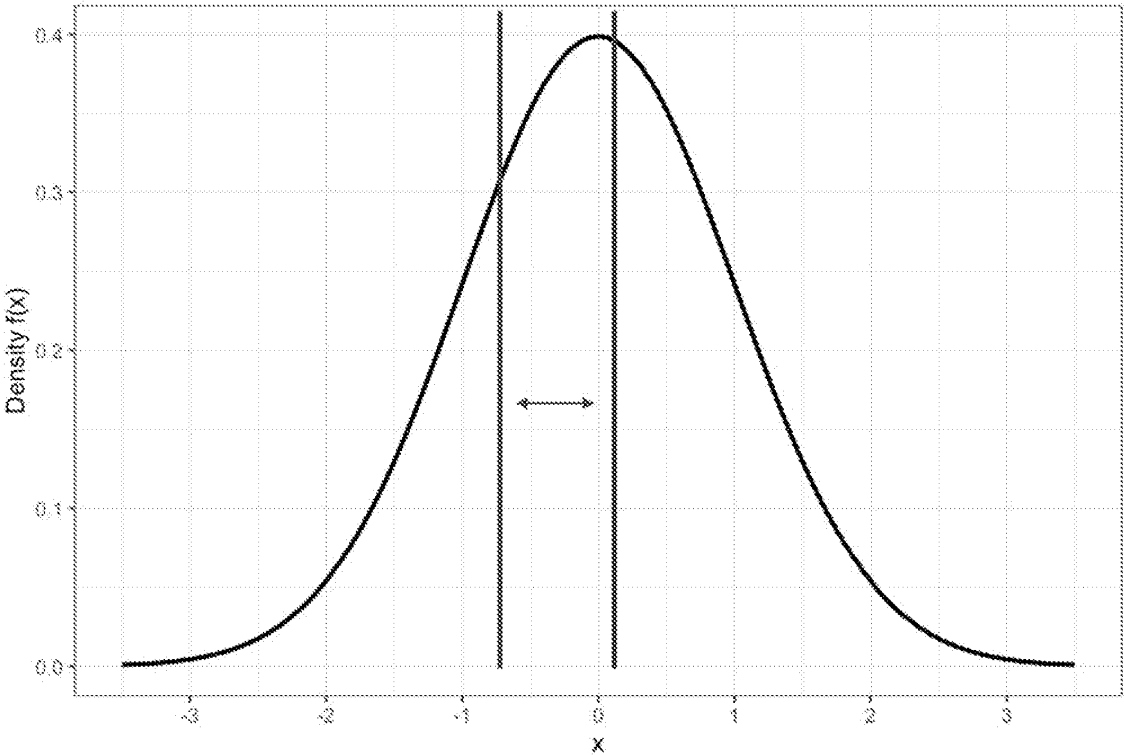


FIG. 9B

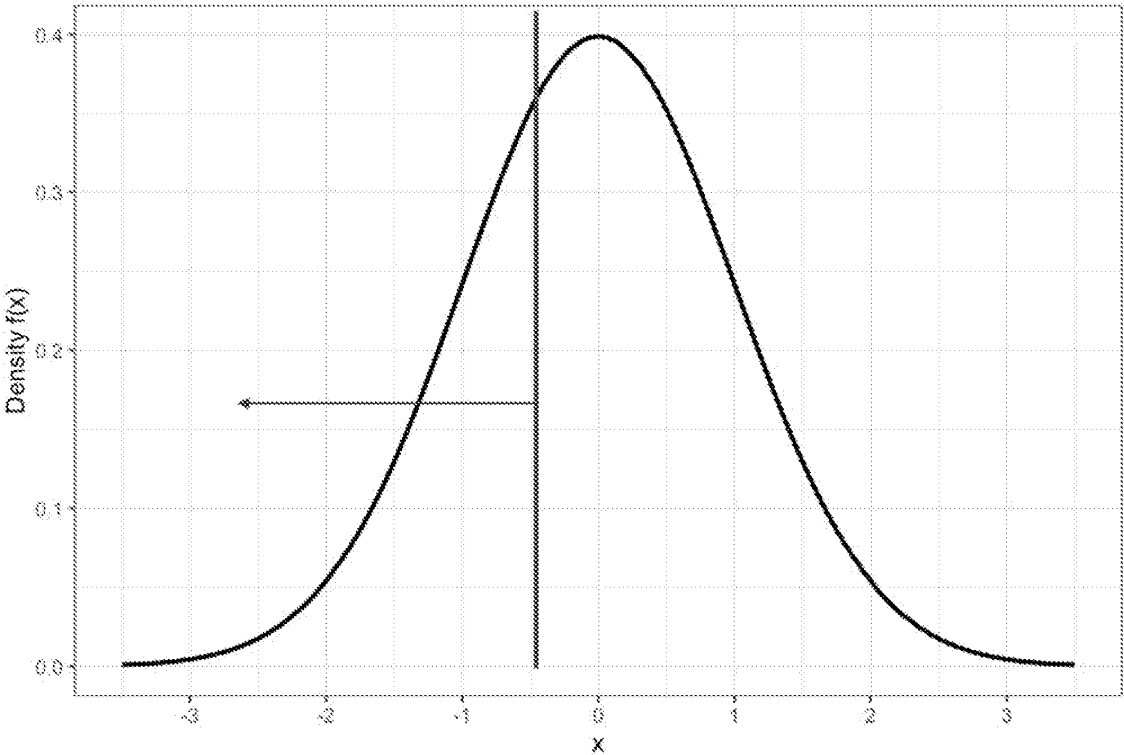


FIG. 9C

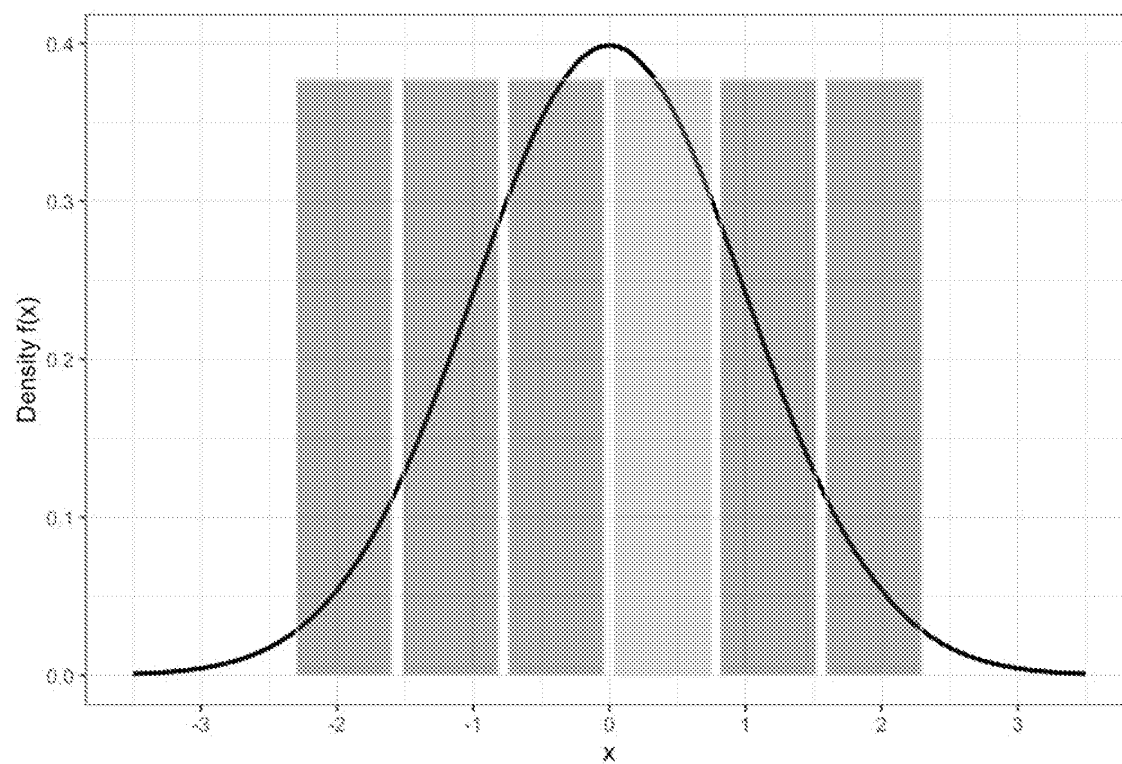


FIG. 9D

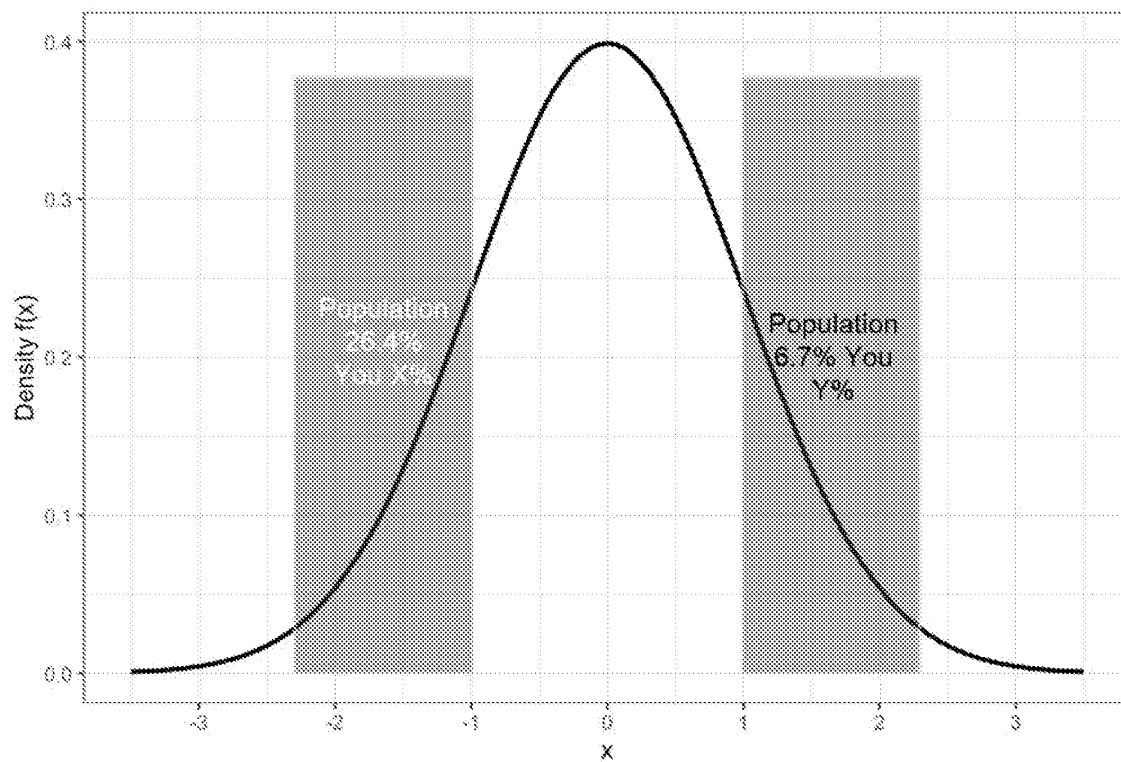


FIG. 9E

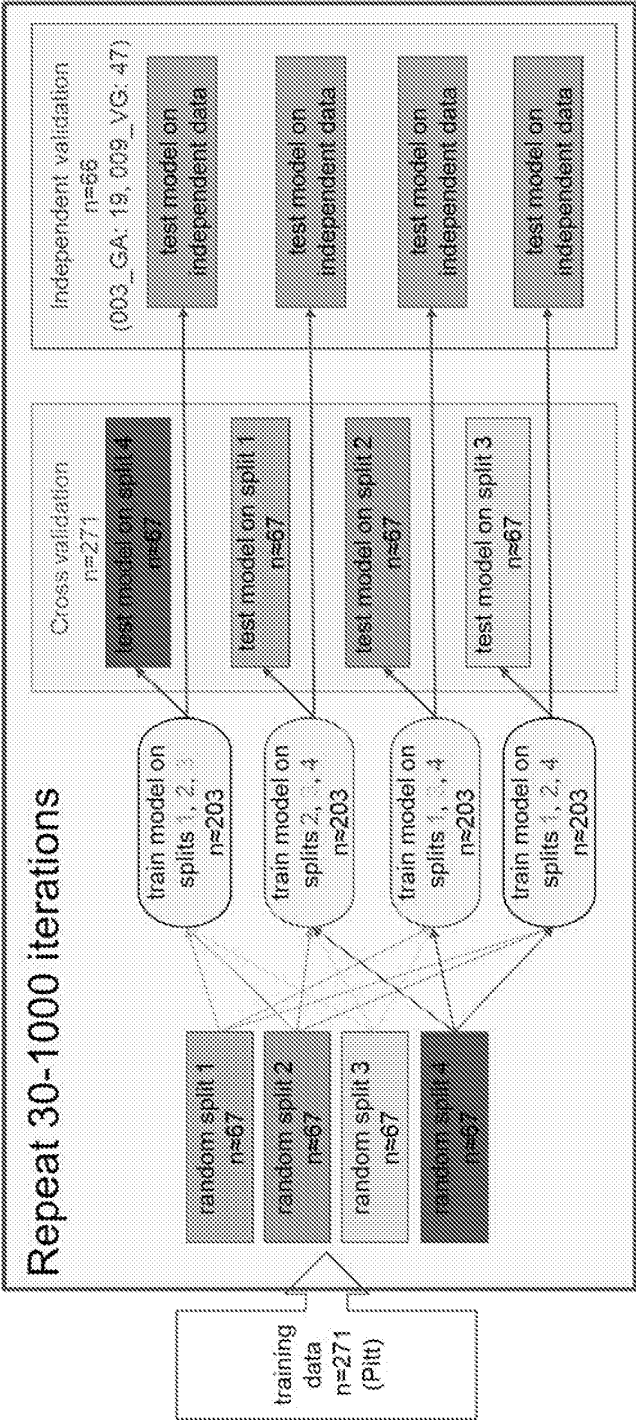


FIG. 10

50 iterations: Train Pitt, n=260.29, n_noCall = 9.709999999999998 (3.59629629629629%)

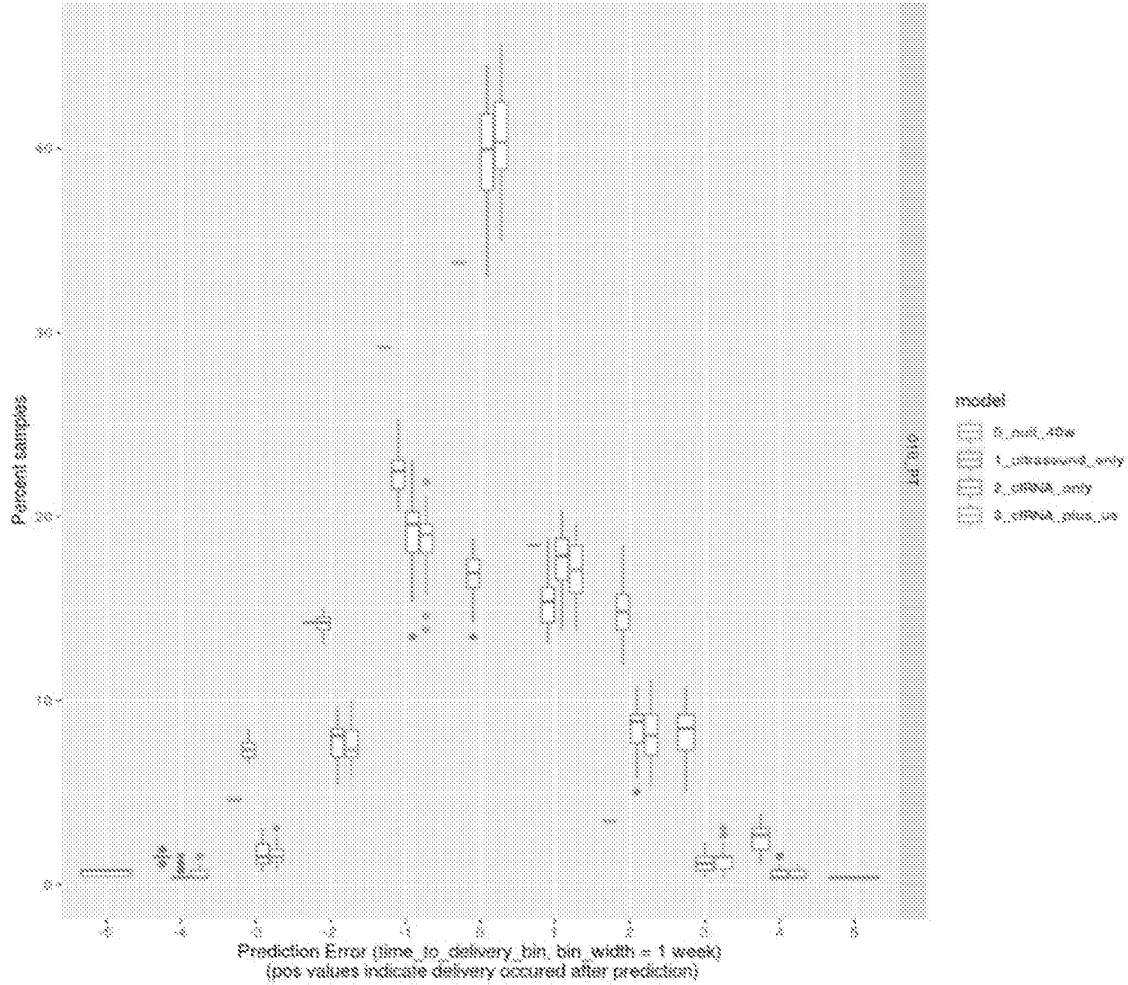


FIG. 11A

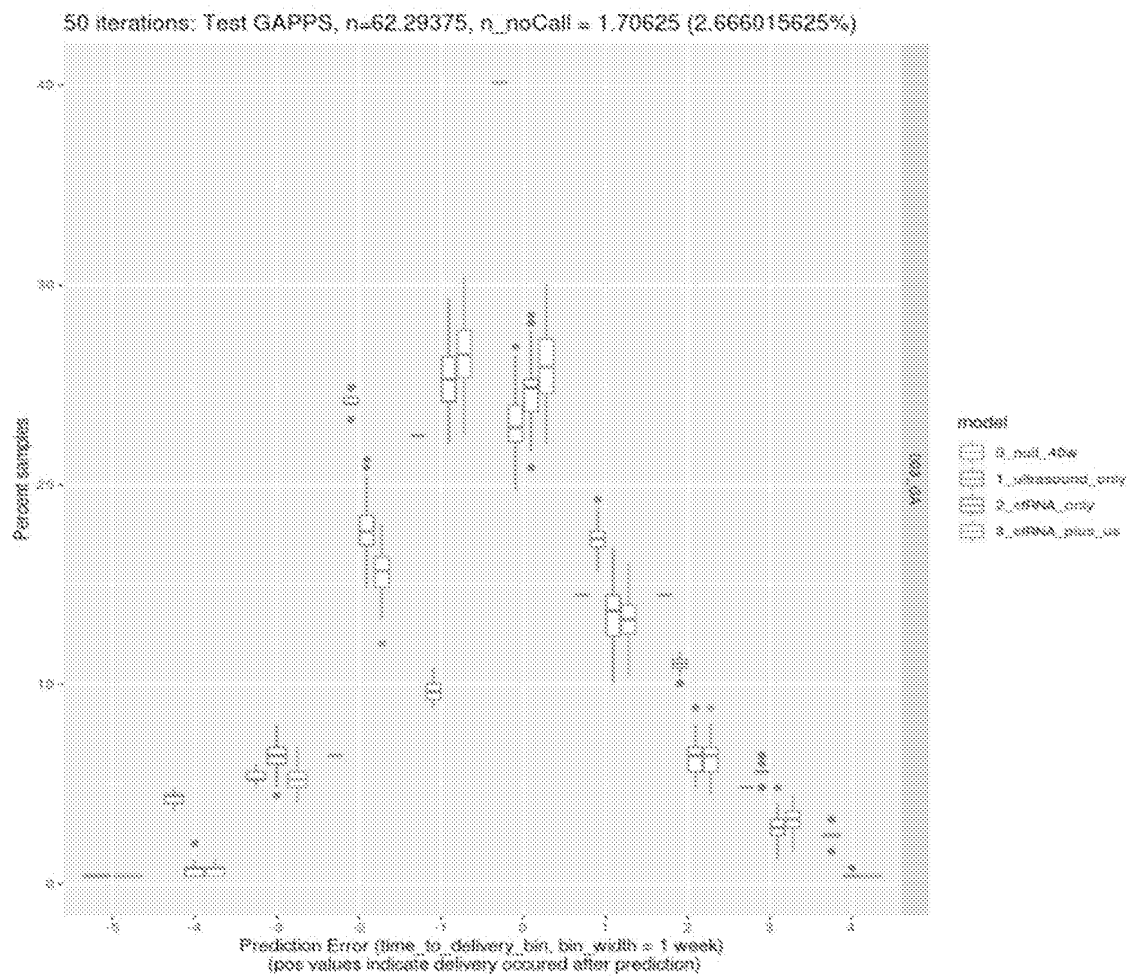
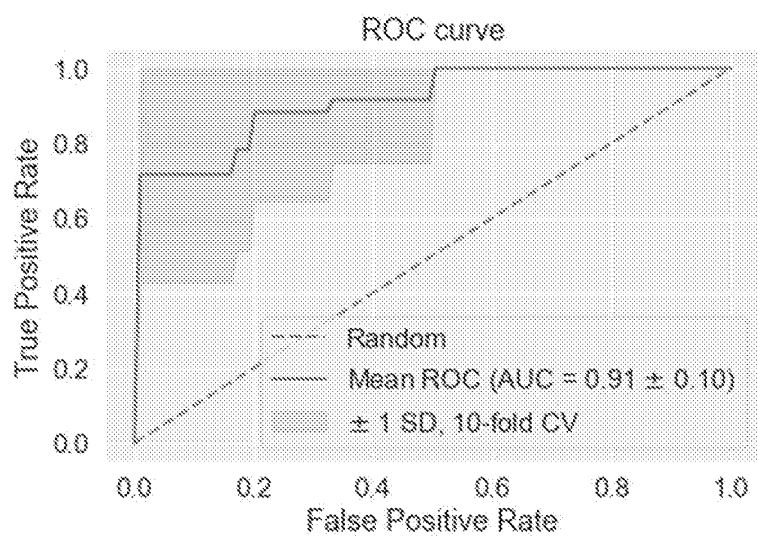


FIG. 11B



79 samples total
23 early PTB (<34 w)
1 cohort

FIG. 12

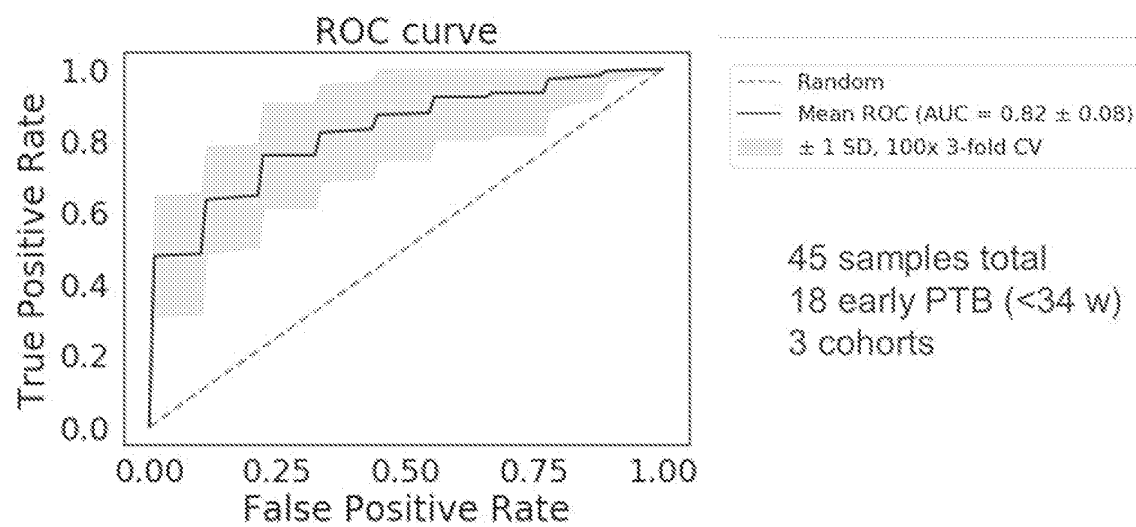


FIG. 13A

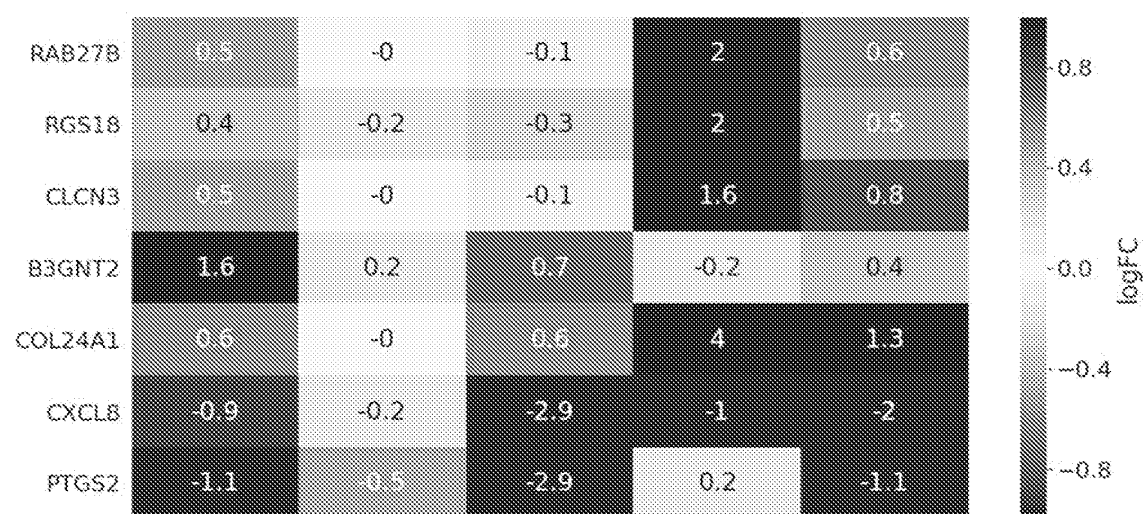
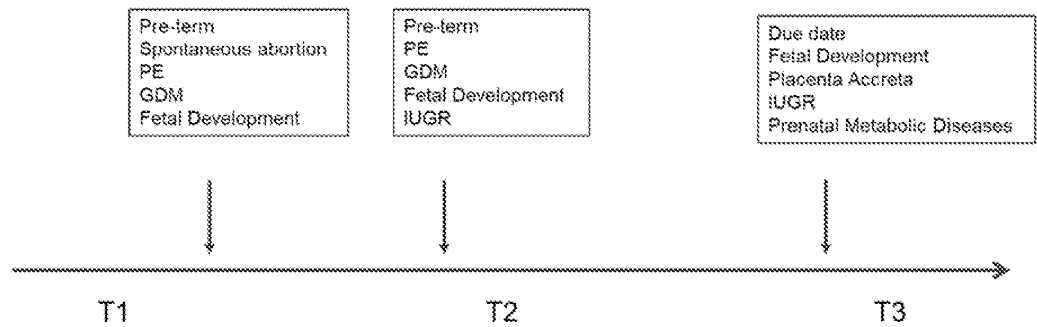


FIG. 13B



Single blood draw will be used for test multiple conditions.

Several blood draws will be preformed along the pregnancy to survey/test pregnancy progression.

Blood draw at specific time (T1, T2, T3) will be tested for determining the risk of specific pregnancy complications that will happened several weeks away

For fetal development longitudinal testing will be perform at each blood draw (T1, T2, and T3) to provide results of progression of fetal development

FIG. 14A

Condition/product	Testing time
Pre-term	T1
Gestational age	T2
Due date	T3
Preeclampsia (pregnancy-related hypertensive disorders)	T1,T2
Gestational diabetes	T1,T2
Congenital disorder	T3
spontaneous abortion	T1,T2
Placenta previa	T2,T3
Placenta accreta (hemorrhage or excessive bleeding during delivery same?)	T2,T3
Premature rupture of membrane, PROM	T2,T3
Fetal development, normal and abnormal	T1,T2,T3
IUGR, intrauterine/fetal growth restriction	T2,T3
post-partum depression	T3
Prenatal Metabolic genetic disease	T3
post-partum cardiomyopathy	T3

FIG. 14B