

Data Analytics Pipeline

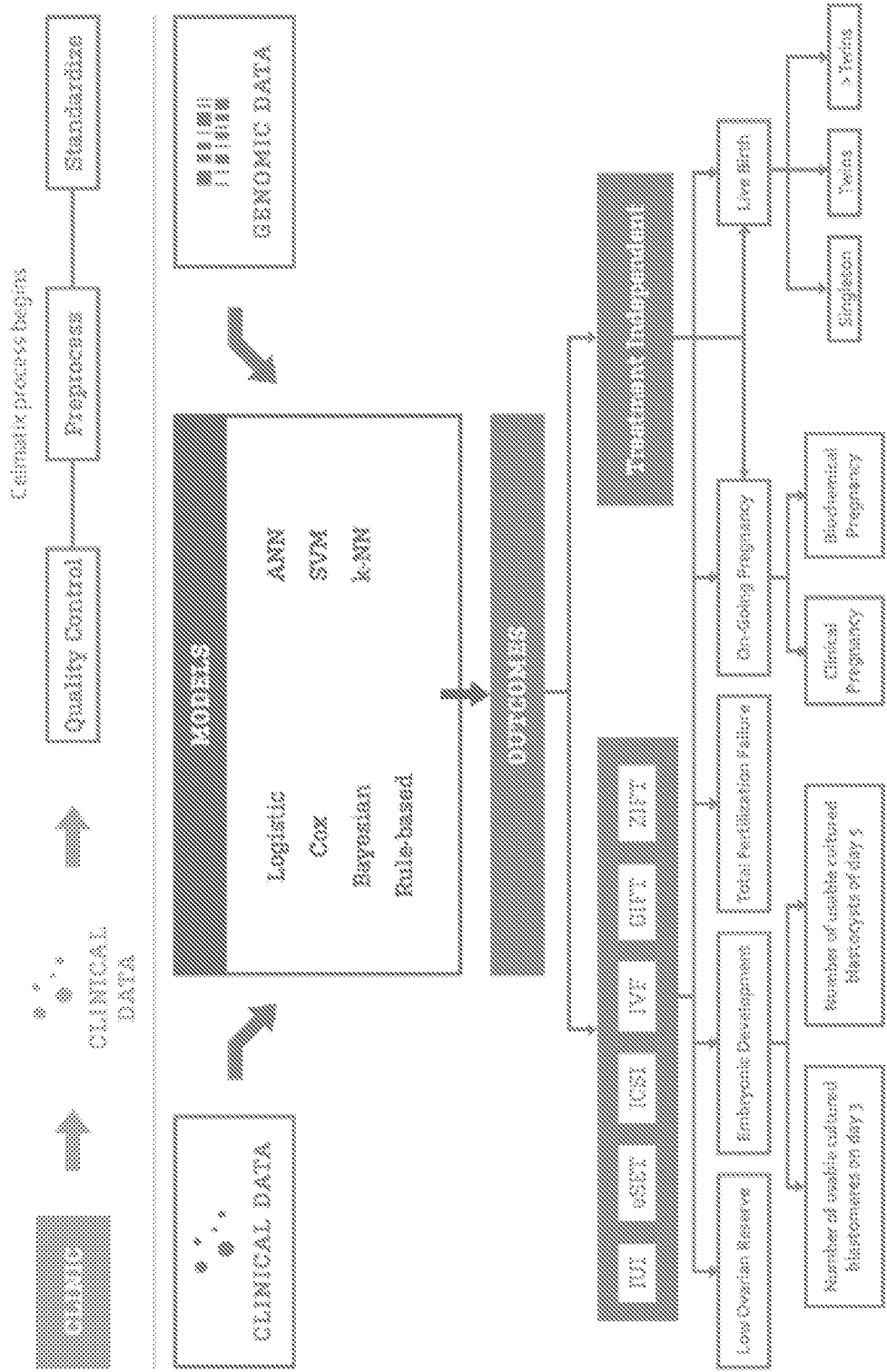


Figure 1

Time to Live Birth

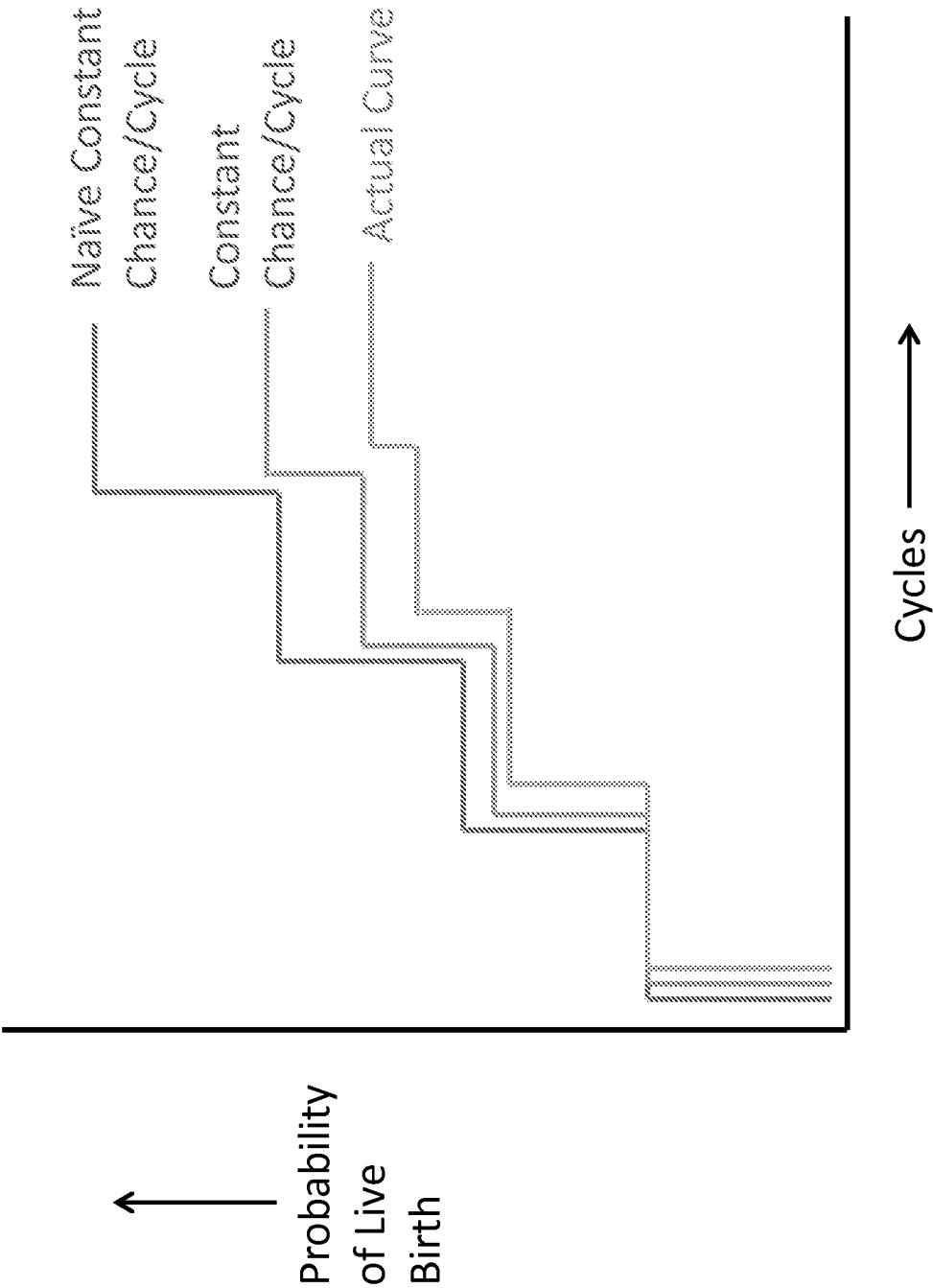


Figure 2

Time to Live Birth

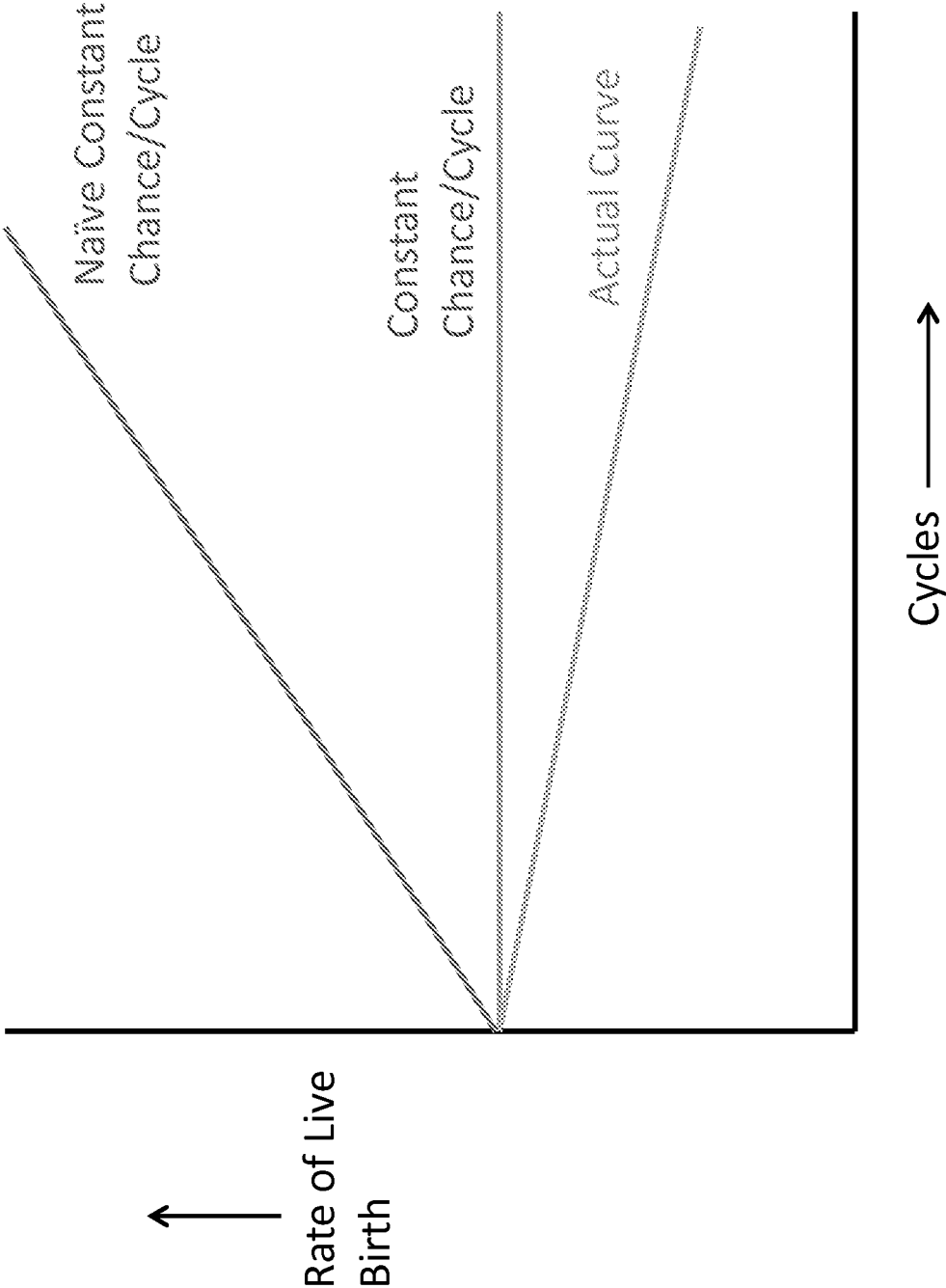


Figure 3

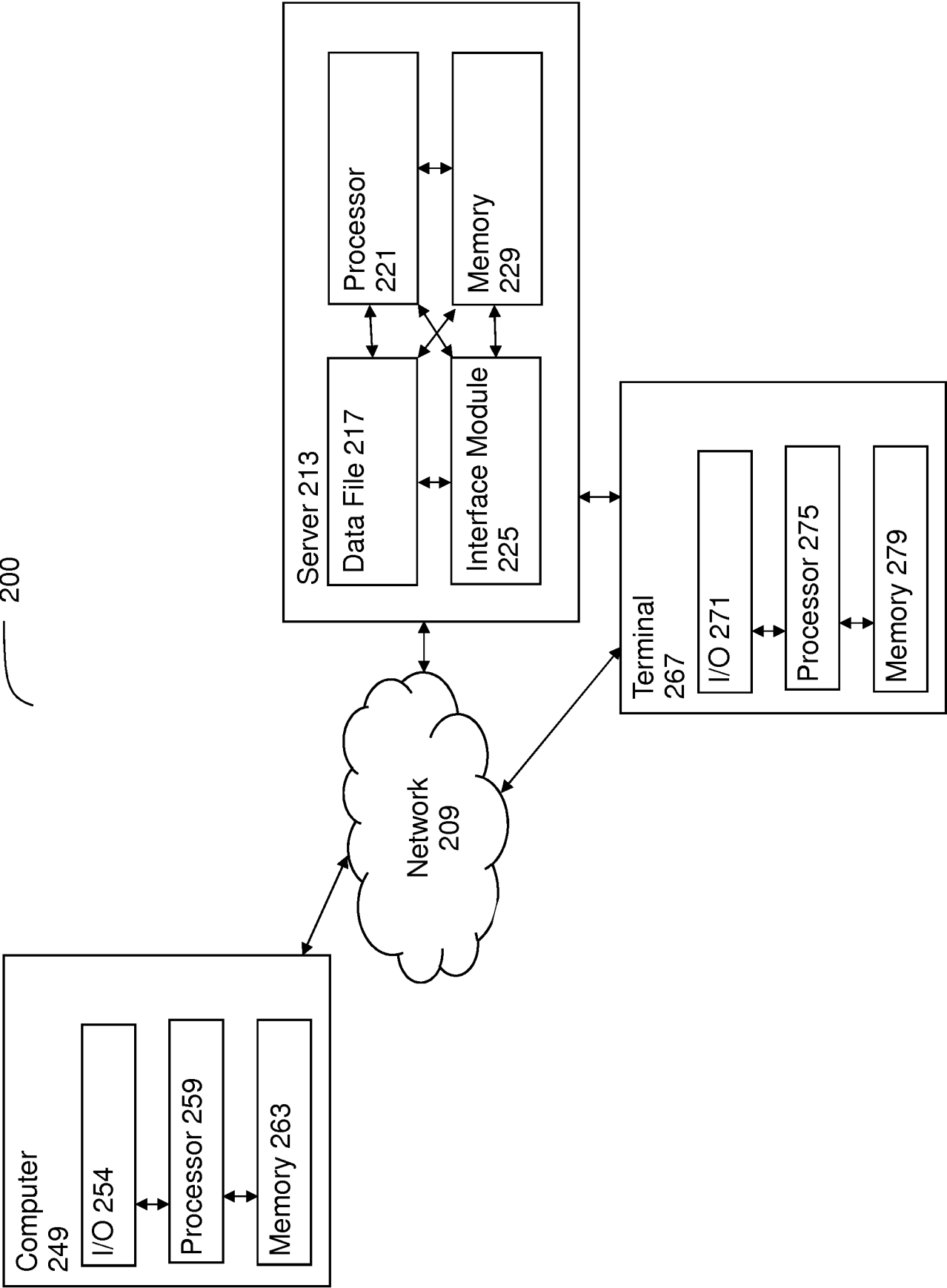


Figure 4

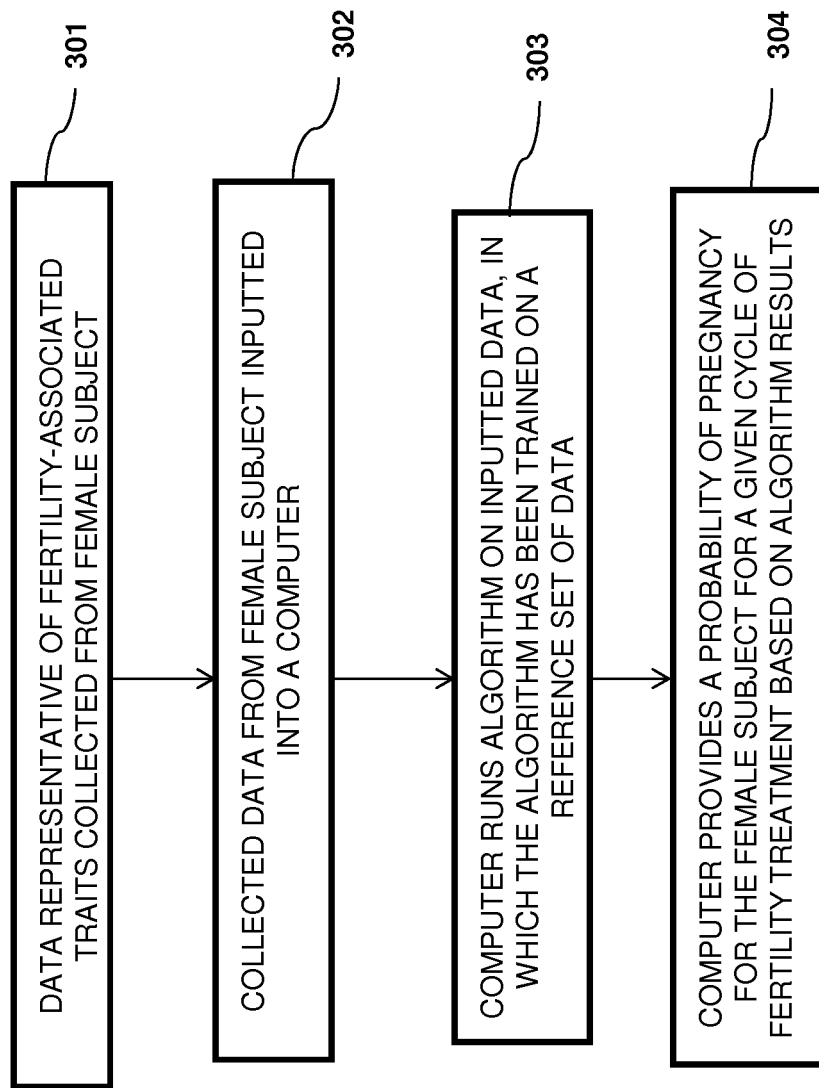


Figure 5

IVF Model Factors

<u>Variable</u>	<u>Trait</u>	<u>Chi.Sq</u>	<u>d.f.</u>	<u>P</u>
Age (Factor+Higher Order Factors)	Age	288.15	6	<.0001
IVF.Fresh (Factor+Higher Order Factors)	Cycle was fresh IVF cycle	117.04	4	<.0001
Age * IVF.Fresh (Factor+Higher Order Factors)	Age versus fresh IVF cycle	116.86	3	<.0001
FreshVsFrz	Fresh/frozen IVF cycle	66.28	1	<.0001
Fresh.CountOfGtrOrEq2pn.1	Count of embryos w/≥2 cells; fresh cycle	62.88	1	<.0001
Fresh.AvgICM.1	Avg blastocyst inner cell mass grade>0; fresh cycle	42.76	1	<.0001
Fresh.CountOfGtrOrEq7cells	Count of embryos w/≥7 cells; fresh cycle	34.44	2	<.0001
FinalNumEmbryosReplaced.t	Final number of embryo transferred	27.28	1	<.0001
Cryo.AvgICM.1	Avg blastocyst inner cell mass grade>0; cryo cycle	25.54	1	<.0001
TotileMotile.1	Totile motile sperm count>0	24.67	1	<.0001
Fresh.EmbryoStageB	Embryo stage = blastocyst; fresh cycle	23.91	1	<.0001
PrevChemPregAny	Prev chemical pregnancy during prior cycle	20.87	1	<.0001
Stim.Antagon	Stimulation w/antagonist treatment	20.44	1	<.0001
FNER.gt.1	Final no. of embryos inserted>1	20.18	1	<.0001
usEndoThick.i	Endometrial thickness by ultrasound	20.16	2	<.0001
Fresh.BCminusCBL.1	Blastocyst count-Count blastocysts replaced>1	19.78	1	<.0001
Cryo.AvgTroph	Avg embryo trophectoderm grade; cryo cycle	18.56	1	<.0001
Diag.Uterus	Diagnosis = Uterine dysfunction	16.01	1	1e-04
Fresh.AvgTroph	Avg embryo trophectoderm grade; fresh cycle	13.52	1	2e-04
GminusP	Gravidity minus parity	12.83	1	3e-04
Cryo.EmbryoStageNB	Embryo stage not = blastocyst; cryo cycle	12.21	1	5e-04
Fresh.AvgICM	Avg blastocyst inner cell mass grade; fresh cycle	11.97	1	5e-04
usEndoP.2	Extent of endometrial maturity by ultrasound	8.51	1	0.0035
IVFF.LogE2.i	Log peak estradiol on day of hCG administration	7.71	1	0.0055
Diag.Tubal	Diagnosis = tubal dysfunction	5.94	1	0.0148
IVFF.BAFC.i	Basal antral follicle count	5.54	1	0.0186
PrevStim.Clomid	Stimulation w/Clomid during prev cycle	5.00	1	0.0254
Cryo.BlastCount	Blastocyst count; cryo cycle	4.63	1	0.0315
Diag.Endo4	Diagnosis = Endometriosis Stage 4	4.49	1	0.0341
OCP	Oral contraceptive use	4.21	1	0.0401
Cryo.AvgICM	Avg blastocyst inner cell mass grade; cryo cycle	1.86	1	0.1732
TOTAL		1127.25	37	<.0001

RE Model Factors

<u>Variable</u>	<u>Trait</u>	<u>Chi.Sq</u>	<u>d.f.</u>	<u>P</u>
RE.IUI (Factor+Higher Order Factors)	Intrauterine insemination	409.69	2	<.0001
Stim.Clomid	Stimulation w/Clomid	282.39	1	<.0001
Age	Age	241.75	3	<.0001
GndCP	Gonadotropin treatment	81.85	1	<.0001
SurgeFollicles.i	No. of follicles post gonadotropin treatment	55.16	1	<.0001
PrevChemPregAny	Prev chemical pregnancy during prior cycle	52.47	1	<.0001
PrevStim.Clomid	Stimulation w/Clomid during prior cycle	45.87	1	<.0001
FSHMax.i	Follicle stimulating hormone	30.51	1	<.0001
PeakEndoThick.i	Peak endometrial thickness	22.91	1	<.0001
Diag.Male (Factor+Higher Order Factors)	Diagnosis = Male factor infertility	16.28	2	3e-04
Diag.Male * RE.IUI (Factor+Higher Order Factors)	Male infertility vs intrauterine insemination	16.23	1	1e-04
PartnerAge.i	Age of partner	14.10	1	2e-04
BMI.cat.45.i	BMI = Obese or very obese	11.95	1	5e-04
PrevStim.GND	Stimulation w/gonadotropin during prev cycle	6.26	1	0.0124
Diag.HyAmen	Diagnosis = Hypothalamic amenorrhea	5.37	1	0.0205
Stim.DownReg	Stimulation w/ DownReg treatment protocol	5.32	1	0.0211
Diag.Ovulatory	Diagnosis = Ovulatory dysfunction	4.64	1	0.0313
Diag.PCO	Diagnosis = Polycystic ovarian syndrome	3.76	1	0.0525
TOTAL		1760.88	20	<.0001

Figure 7

IVF Patients by Score Quintile

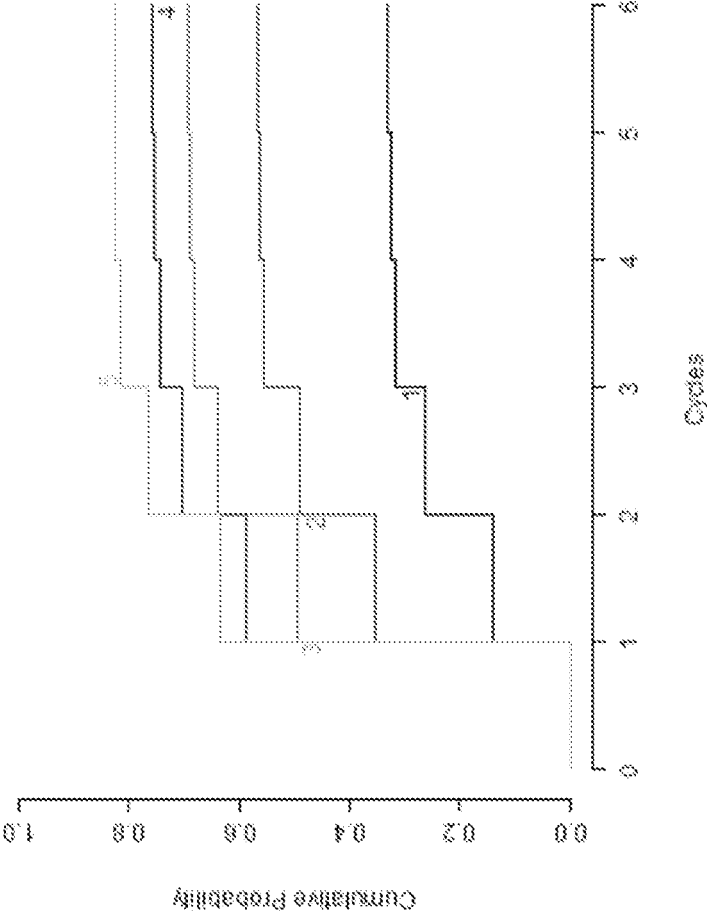


Figure 8

RE Patients by Score Quintile

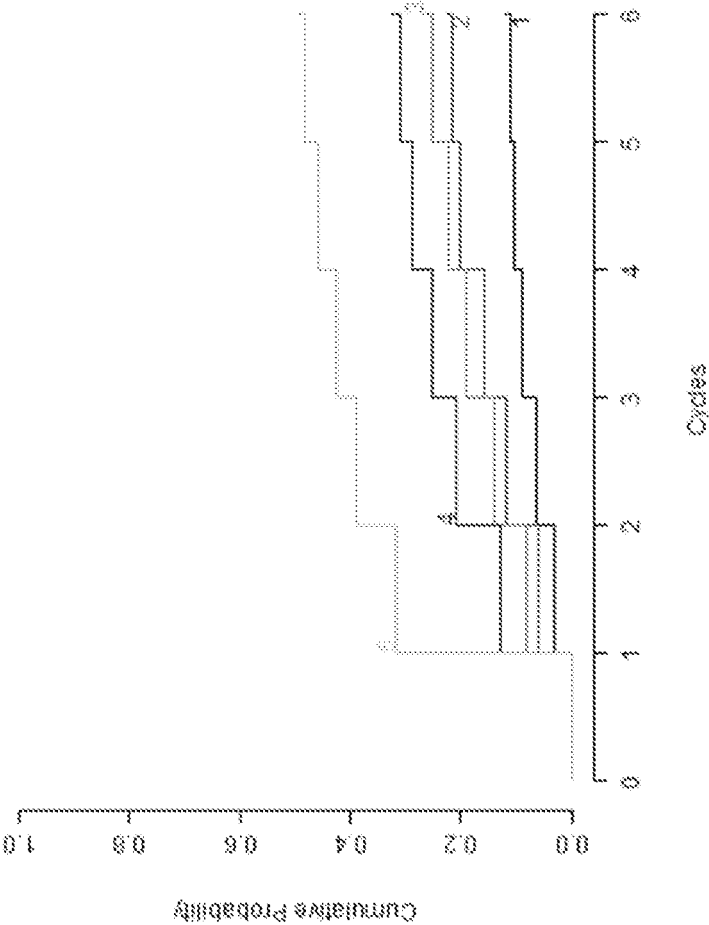


Figure 9

IVF Model: Dropouts

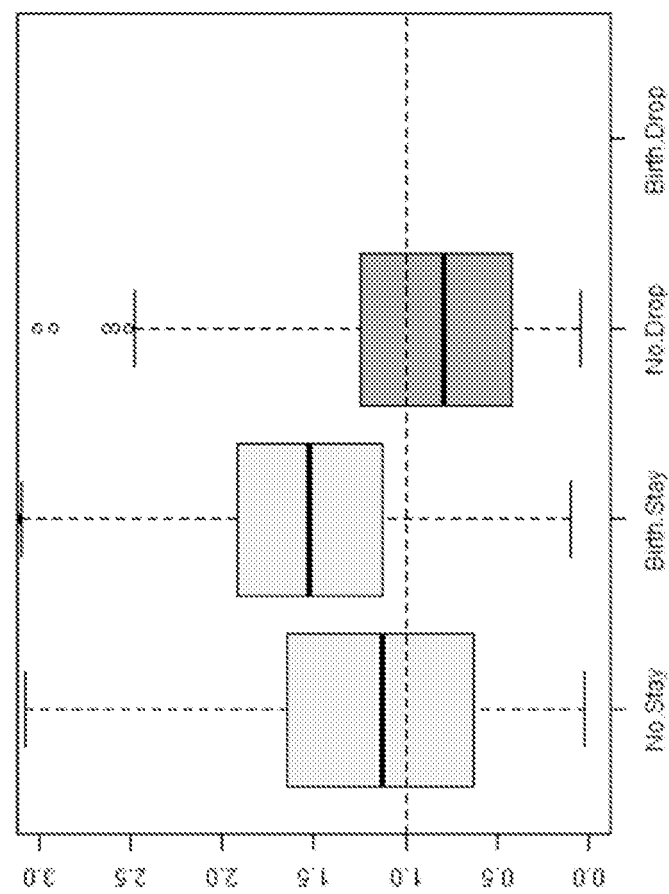


Figure 10

Time to Live Birth: IVF

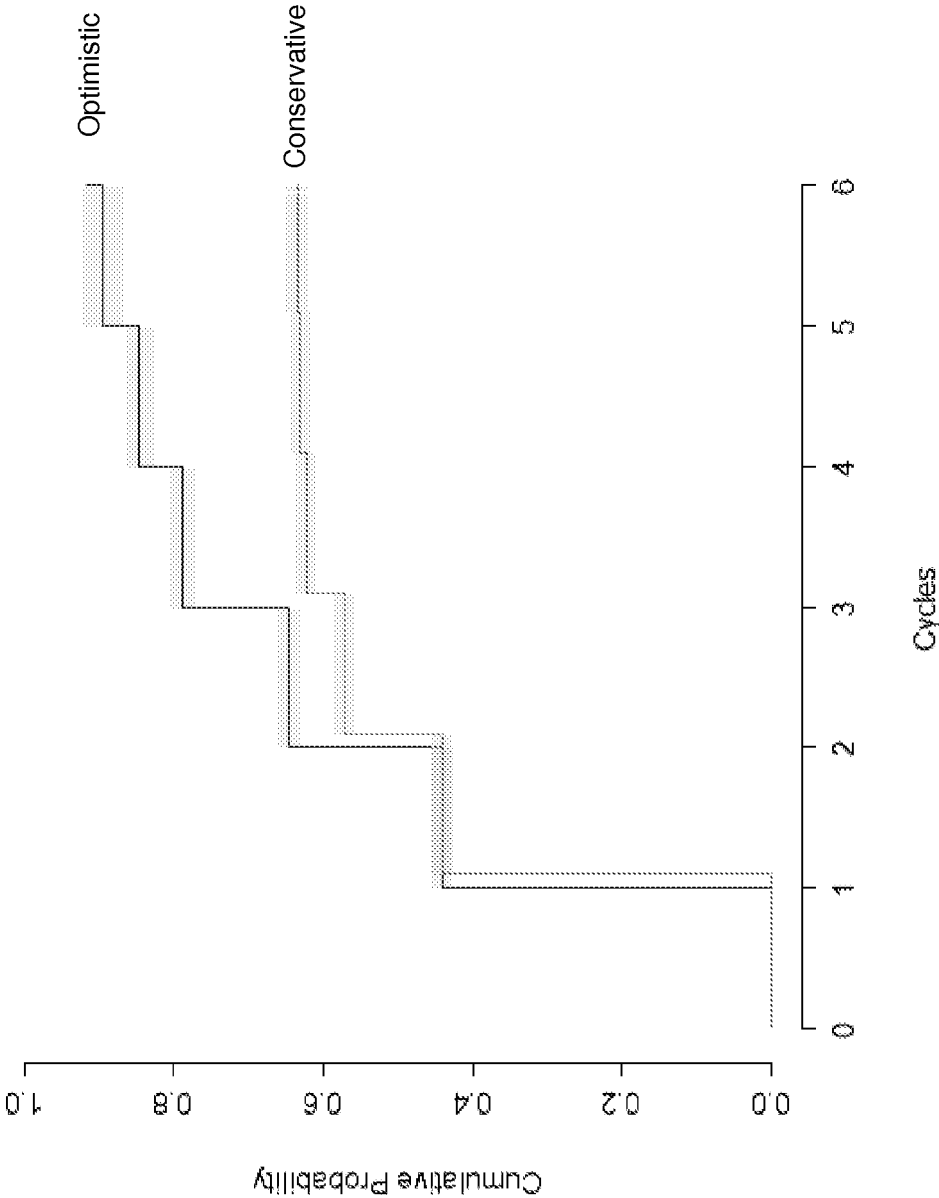


Figure 11

Time to Live Birth: RE

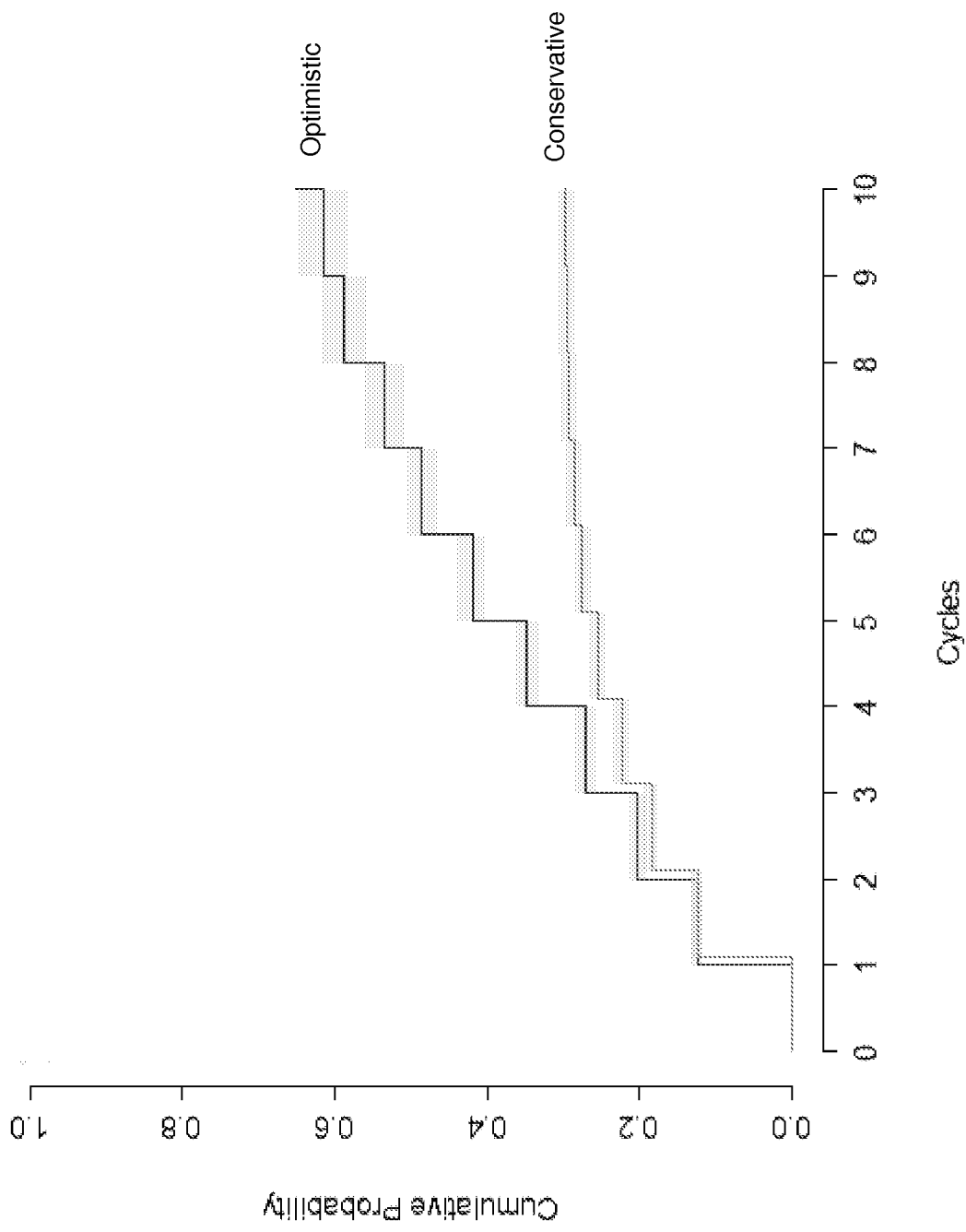


Figure 12

Time to Live Birth: IVF and RE

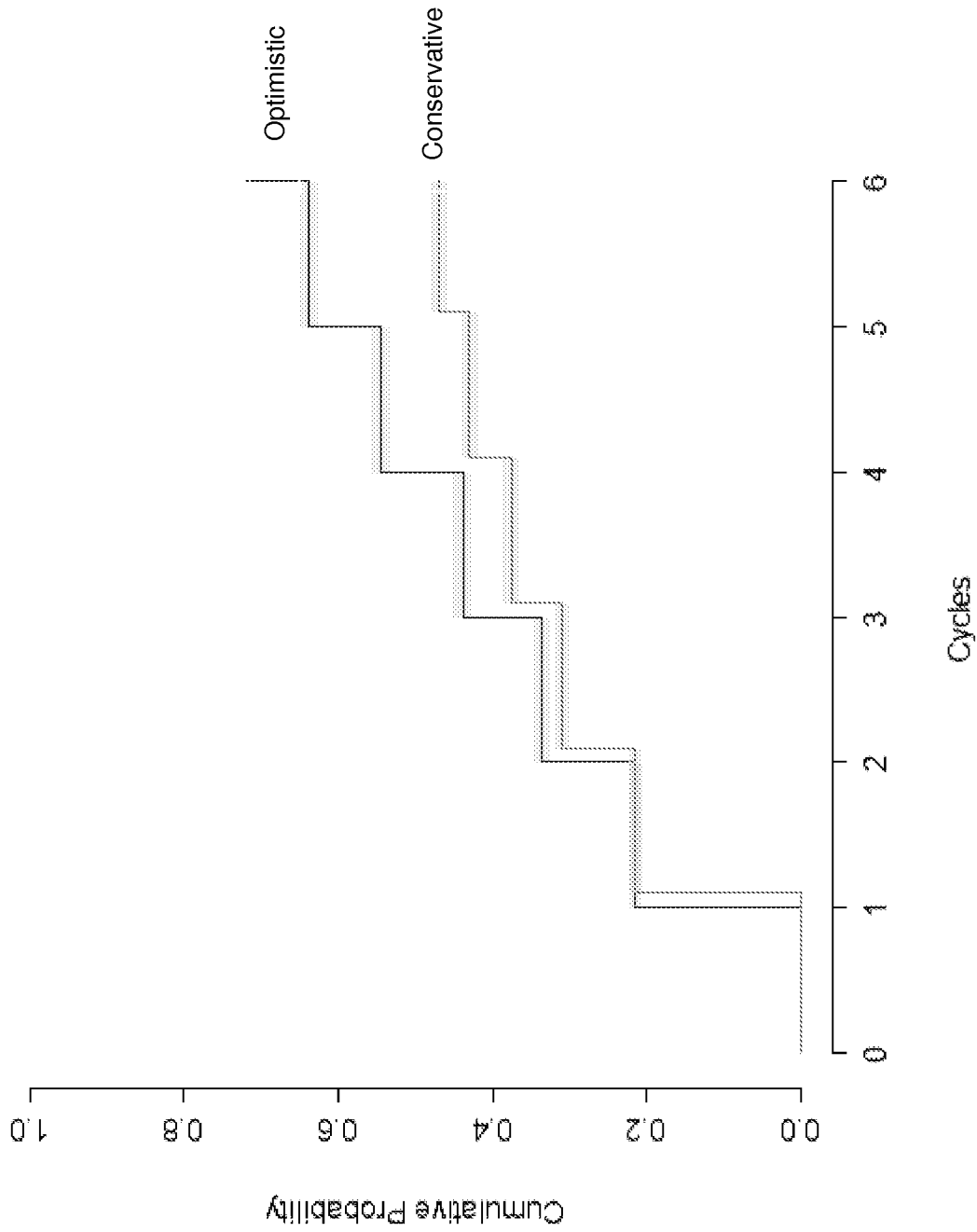


Figure 13

Time to Live Birth: IVF

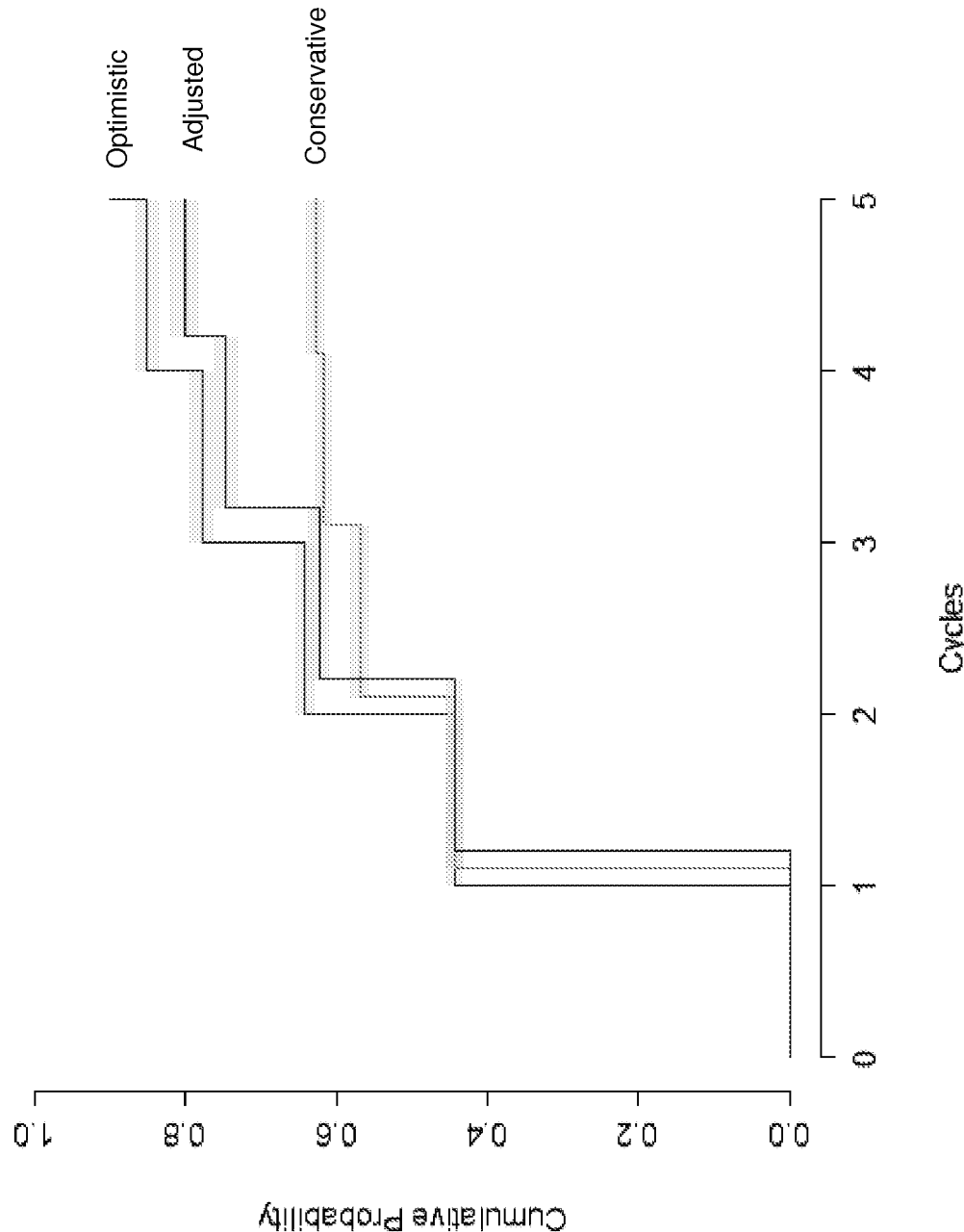


Figure 14

Time to Live Birth: RE

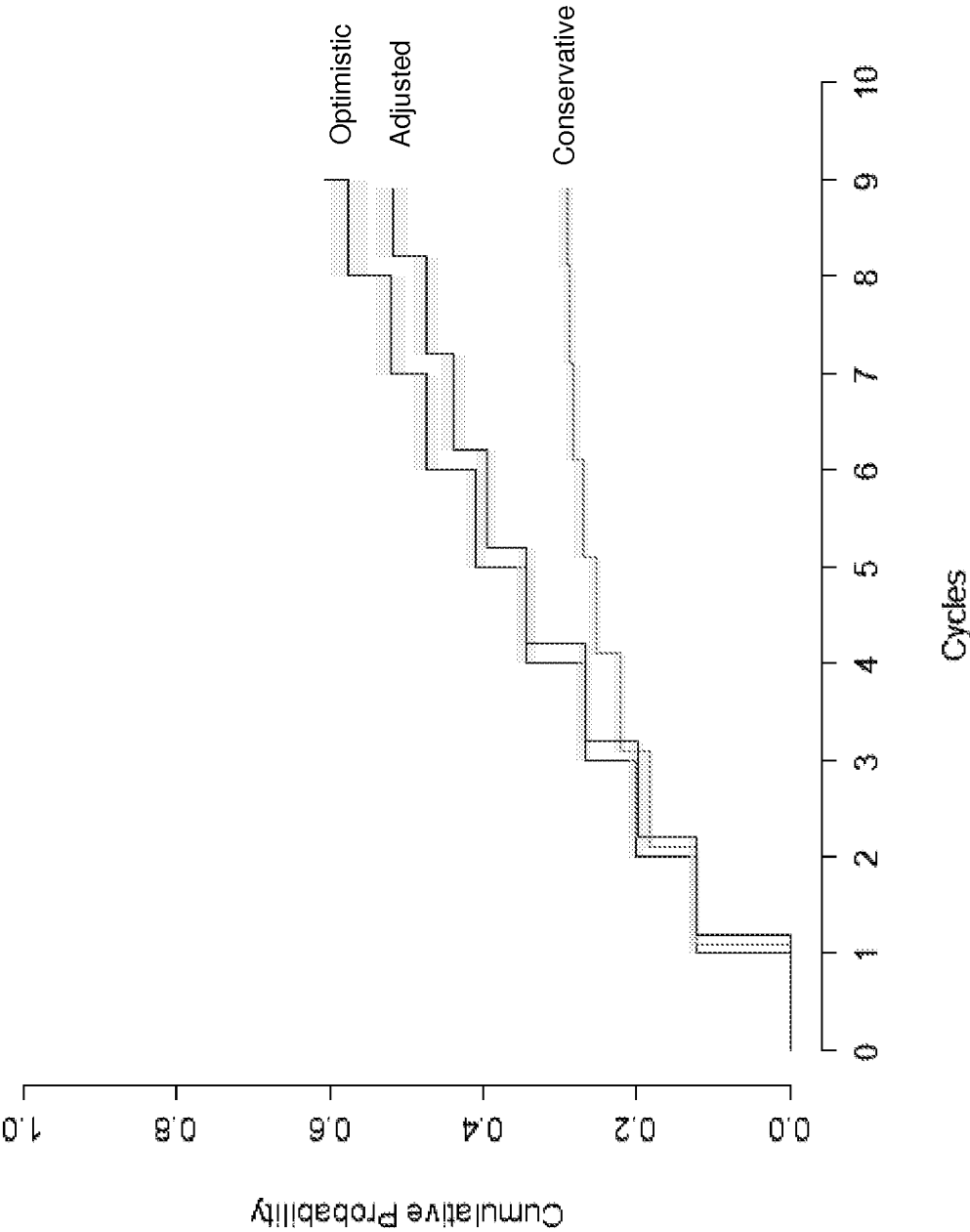


Figure 15

Time to Live Birth: IVF and RE

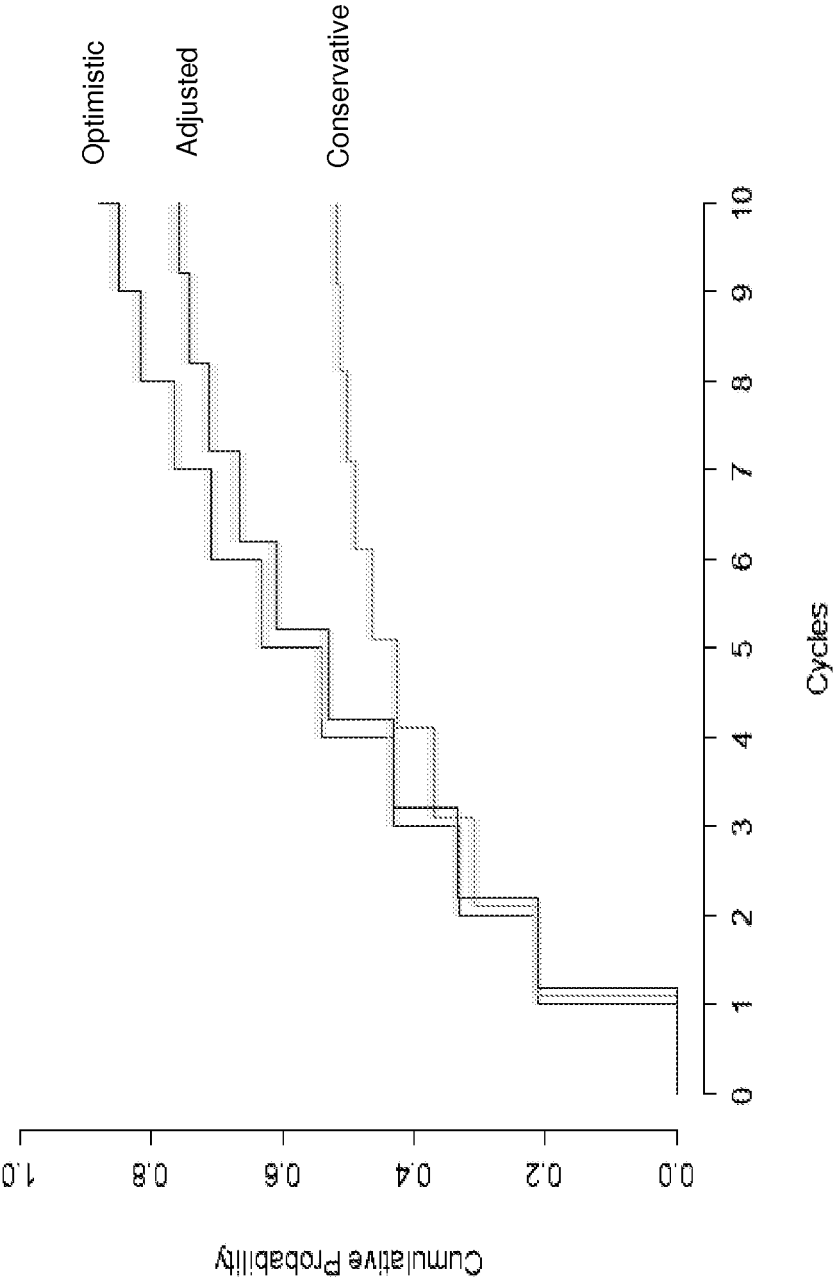


Figure 16