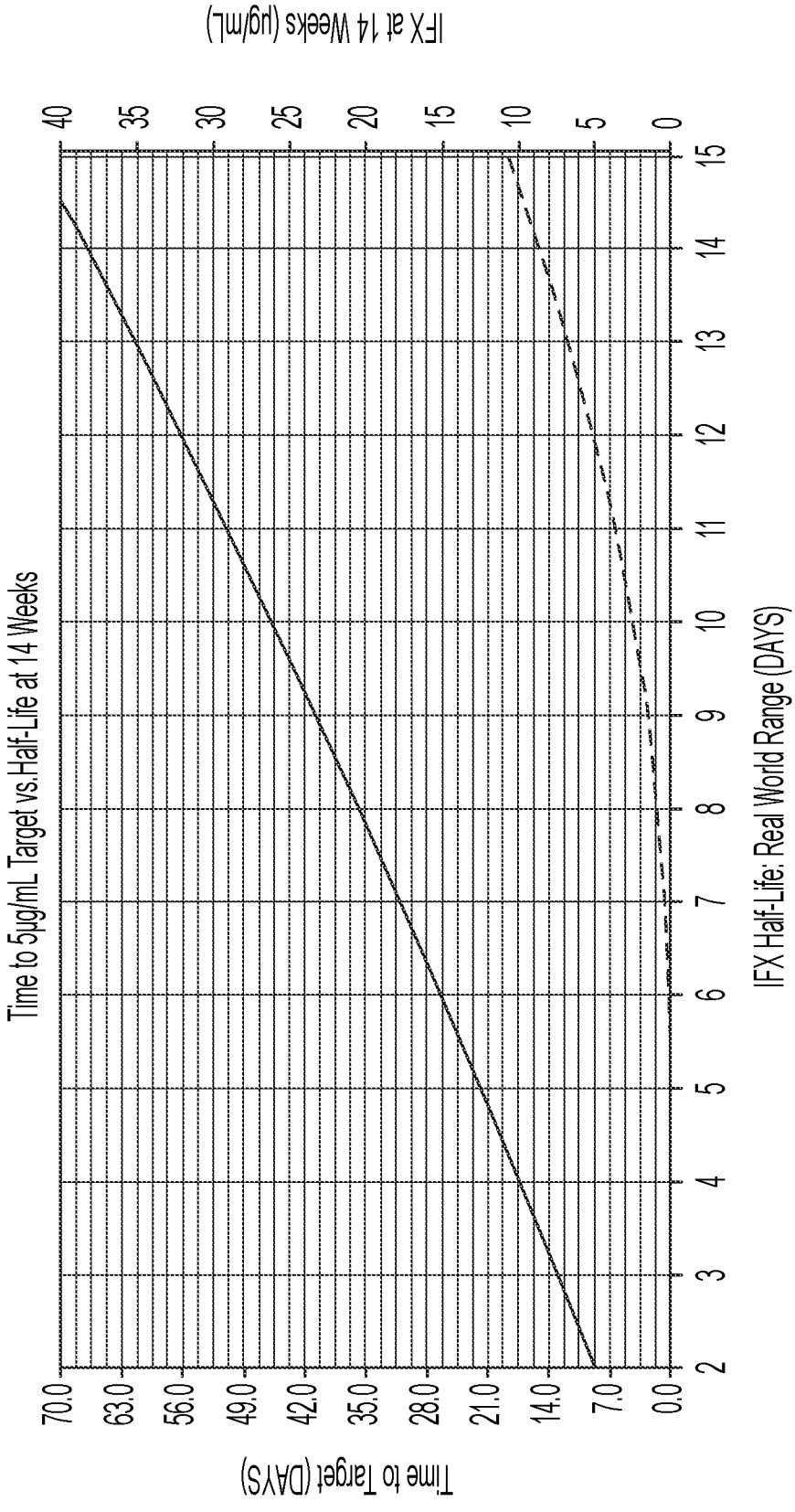

Time to 5µg/mL Target vs.Half-Life at 14 Weeks
Time to Target (DAYS)
70.0
63.0
56.0
49.0
42.0
35.0
28.0
21.0
14.0
7.0
0.0
2 3 4 5 6 7 8 9 10 11 12 13 14 15
IFX Half-Life: Real World Range (DAYS)
40 35 30 25 20 15 10 5 0
IFX at 14 Weeks (µg/mL)

FIG. 1A

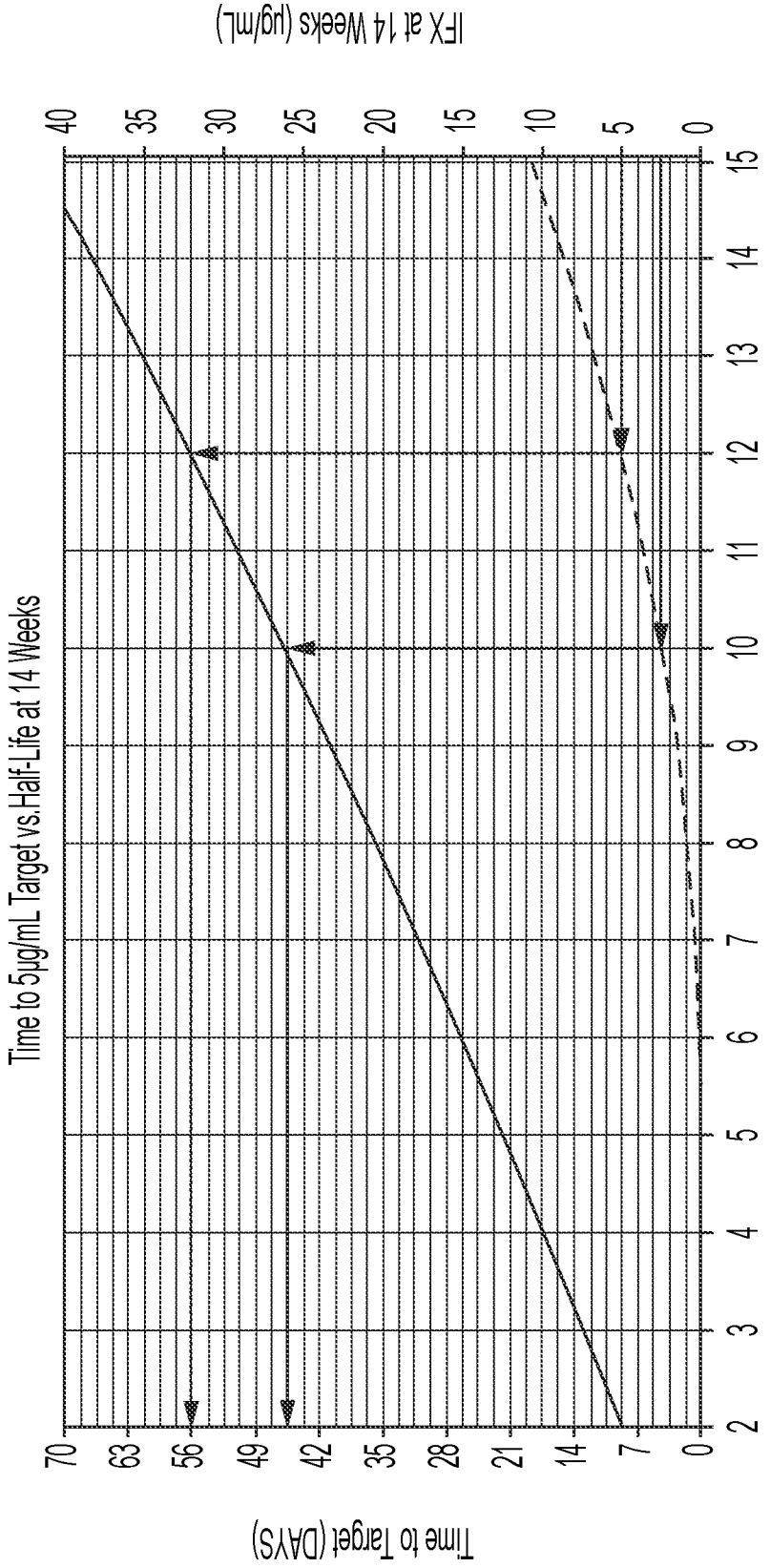

Time to 5µg/mL Target vs.Half-Life at 14 Weeks
Time to Target (DAYS)
70
63
56
49
42
35
28
21
14
7
0
2
3
4
5
6
7
8
9
10
11
12
13
14
15
IFX Half-Life: Real World Range (DAYS)
40
35
30
25
20
15
10
5
0
IFX at 14 Weeks (µg/mL)

FIG. 1B

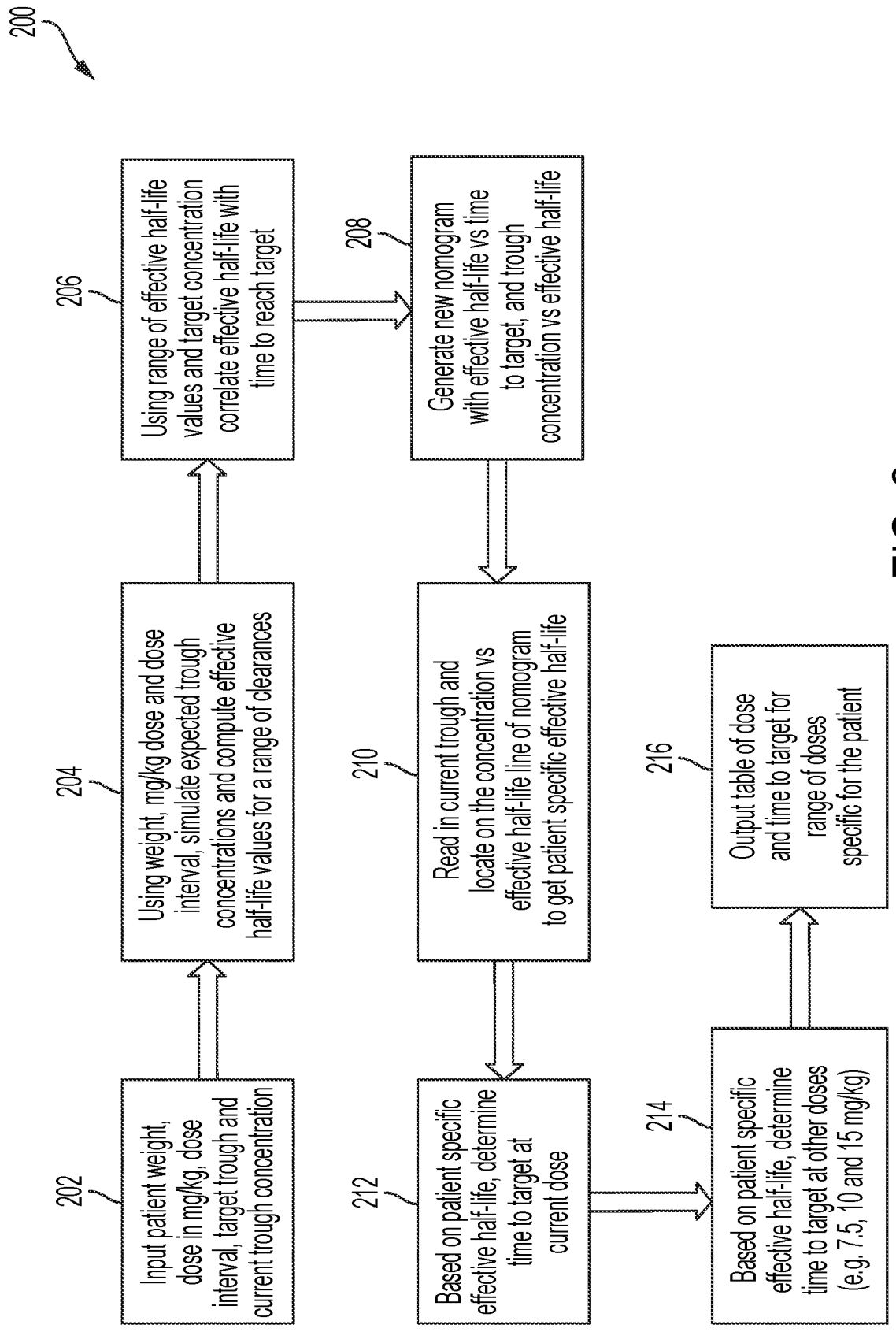

200
202
Input patient weight, dose in mg/kg, dose interval, target trough and current trough concentration
204
Using weight, mg/kg dose and dose interval, simulate expected trough concentrations and compute effective half-life values for a range of clearances
206
Using range of effective half-life values and target concentration correlate effective half-life with time to reach target
208
Generate new nomogram with effective half-life vs time to target, and trough concentration vs effective half-life
210
Read in current trough and locate on the concentration vs effective half-life line of nomogram to get patient specific effective half-life
212
Based on patient specific effective half-life, determine time to target at current dose
214
Based on patient specific effective half-life, determine time to target at other doses (e.g. 7.5, 10 and 15 mg/kg)
216
Output table of dose and time to target for range of doses specific for the patient

FIG. 2

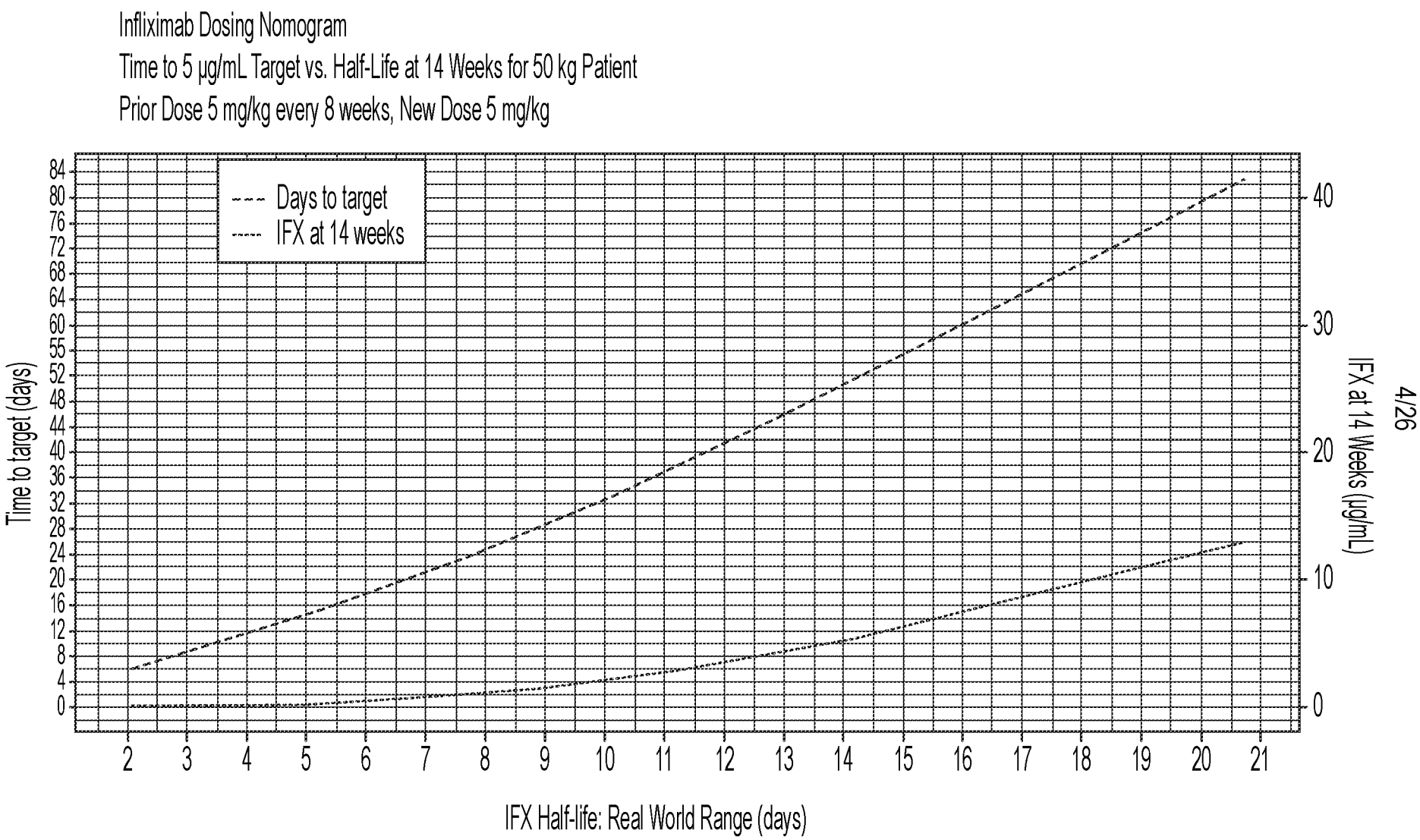

Infliximab Dosing Nomogram
Time to 5 µg/mL Target vs. Half-Life at 14 Weeks for 50 kg Patient
Prior Dose 5 mg/kg every 8 weeks, New Dose 5 mg/kg
Days to target
IFX at 14 weeks
Time to target (days)
IFX at 14 Weeks (µg/mL)
IFX Half-life: Real World Range (days)
0 4 8 12 16 20 24 28 32 36 40 44 48 52 55 60 64 68 72 76 80 84
0 10 20 30 40
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

FIG. 3A

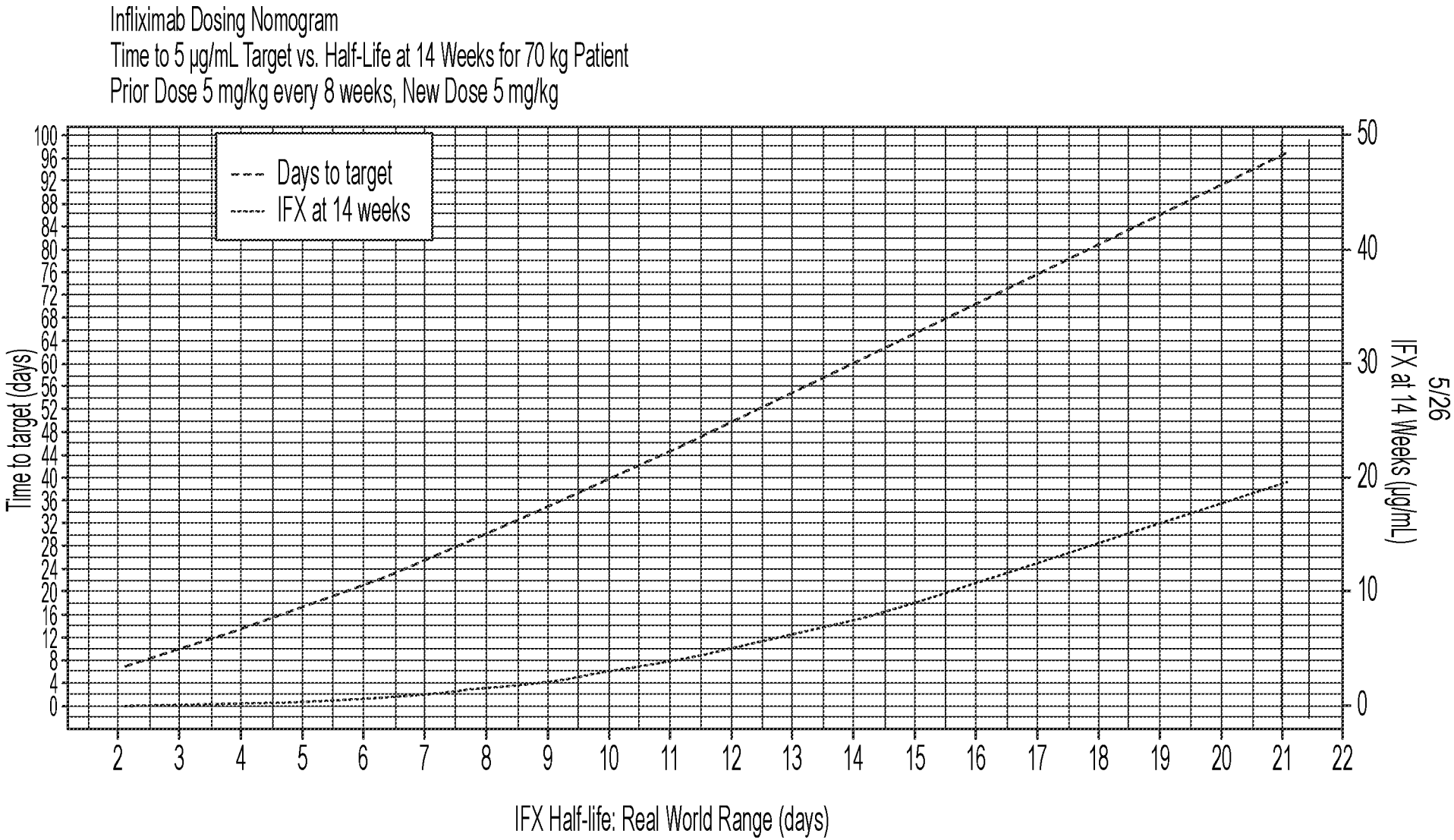

Infliximab Dosing Nomogram
Time to 5 µg/mL Target vs. Half-Life at 14 Weeks for 70 kg Patient
Prior Dose 5 mg/kg every 8 weeks, New Dose 5 mg/kg
Days to target
IFX at 14 weeks
Time to target (days)
IFX at 14 Weeks (µg/mL)
IFX Half-life: Real World Range (days)
5/26

FIG. 3B

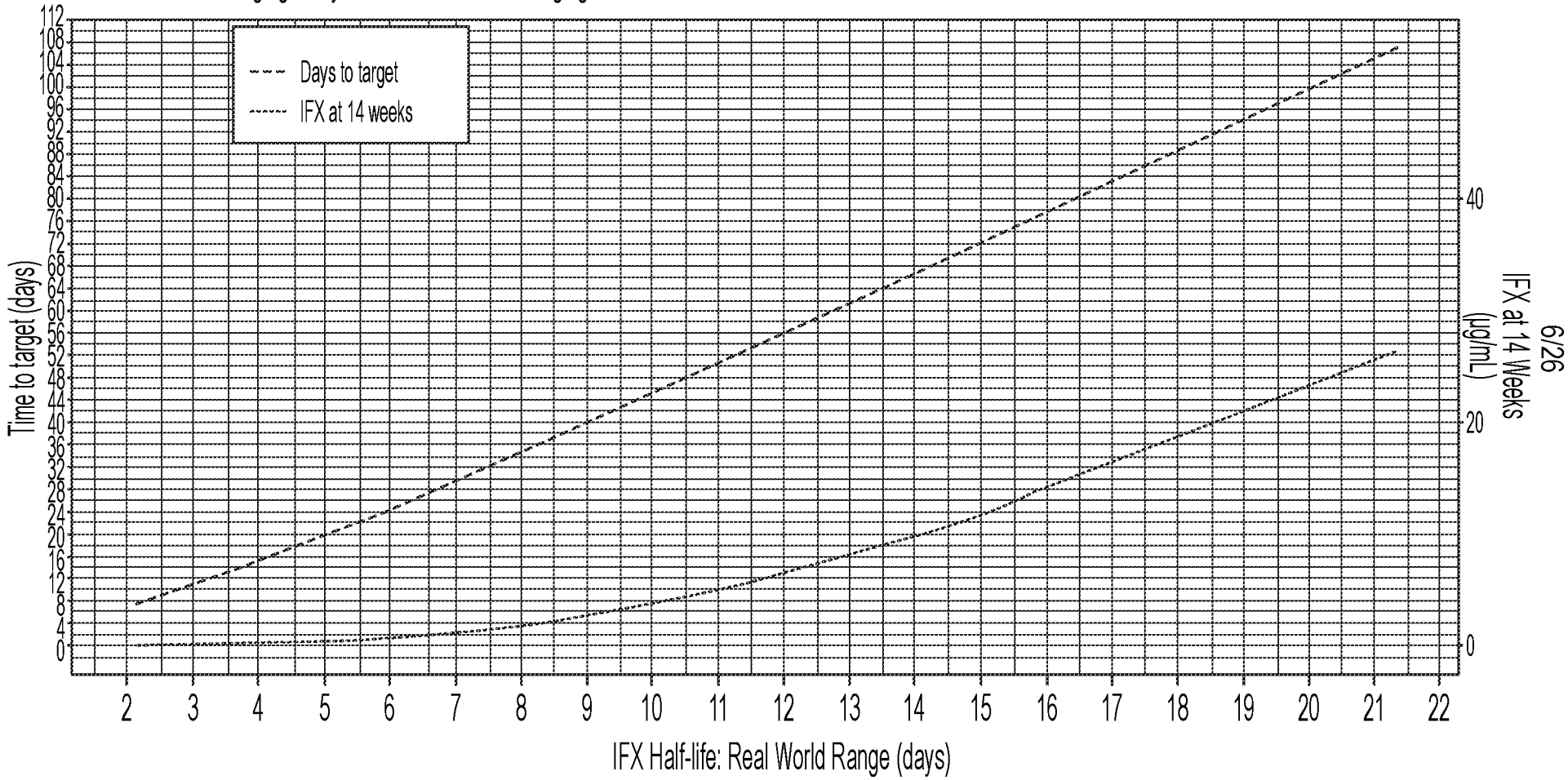

Infliximab Dosing Nomogram
Time to 5 µg/mL Target vs. Half-Life at 14 Weeks for 90 kg Patient
Prior Dose 5 mg/kg every 8 weeks, New Dose 5 mg/kg
Days to target
IFX at 14 weeks
Time to target (days)
IFX at 14 Weeks (µg/mL)
IFX Half-life: Real World Range (days)
6/26

FIG. 3C

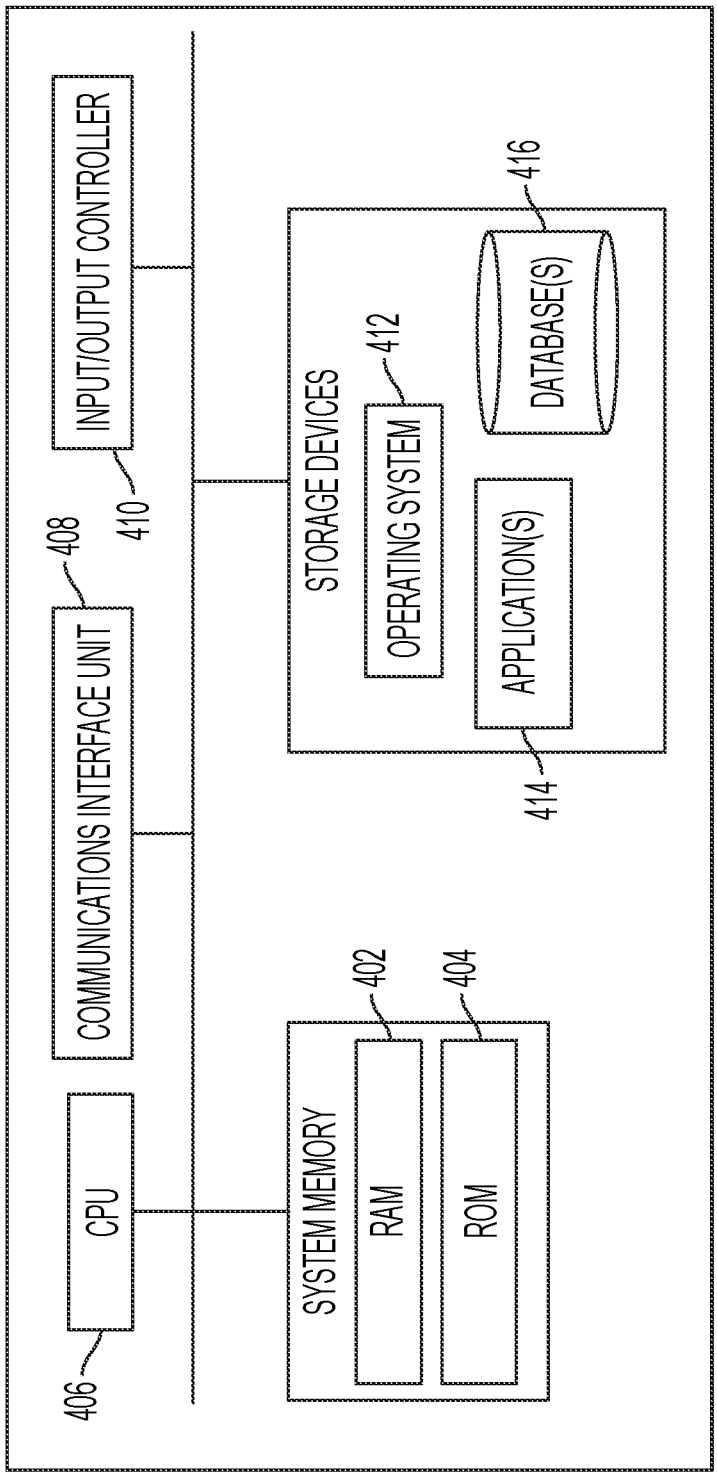

406
CPU
SYSTEM MEMORY
402
RAM
404
ROM
COMMUNICATIONS INTERFACE UNIT
408
INPUT/OUTPUT CONTROLLER
410
STORAGE DEVICES
412
OPERATING SYSTEM
APPLICATION(S)
414
DATABASE(S)
416

FIG. 4

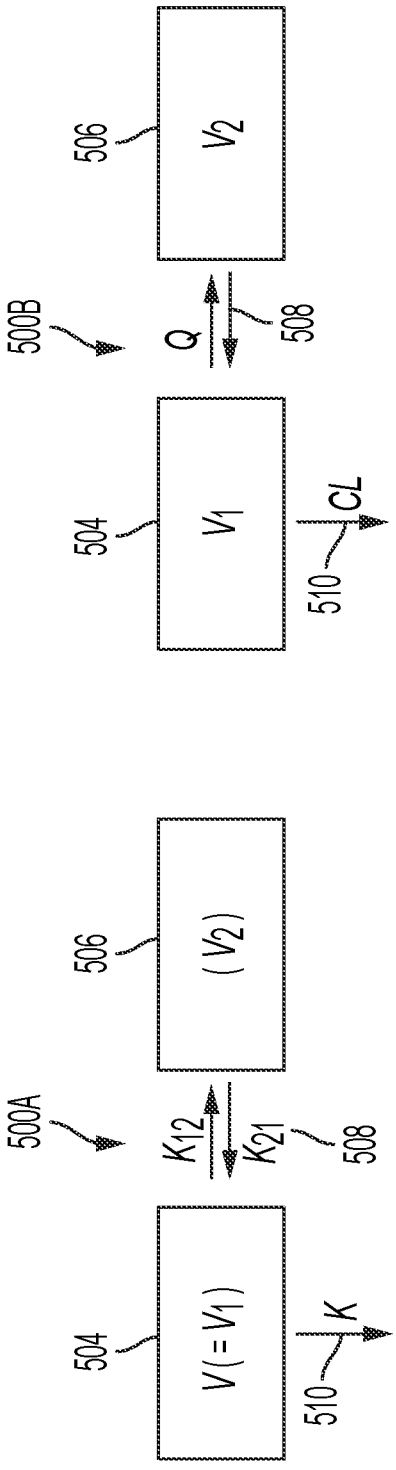


FIG. 5

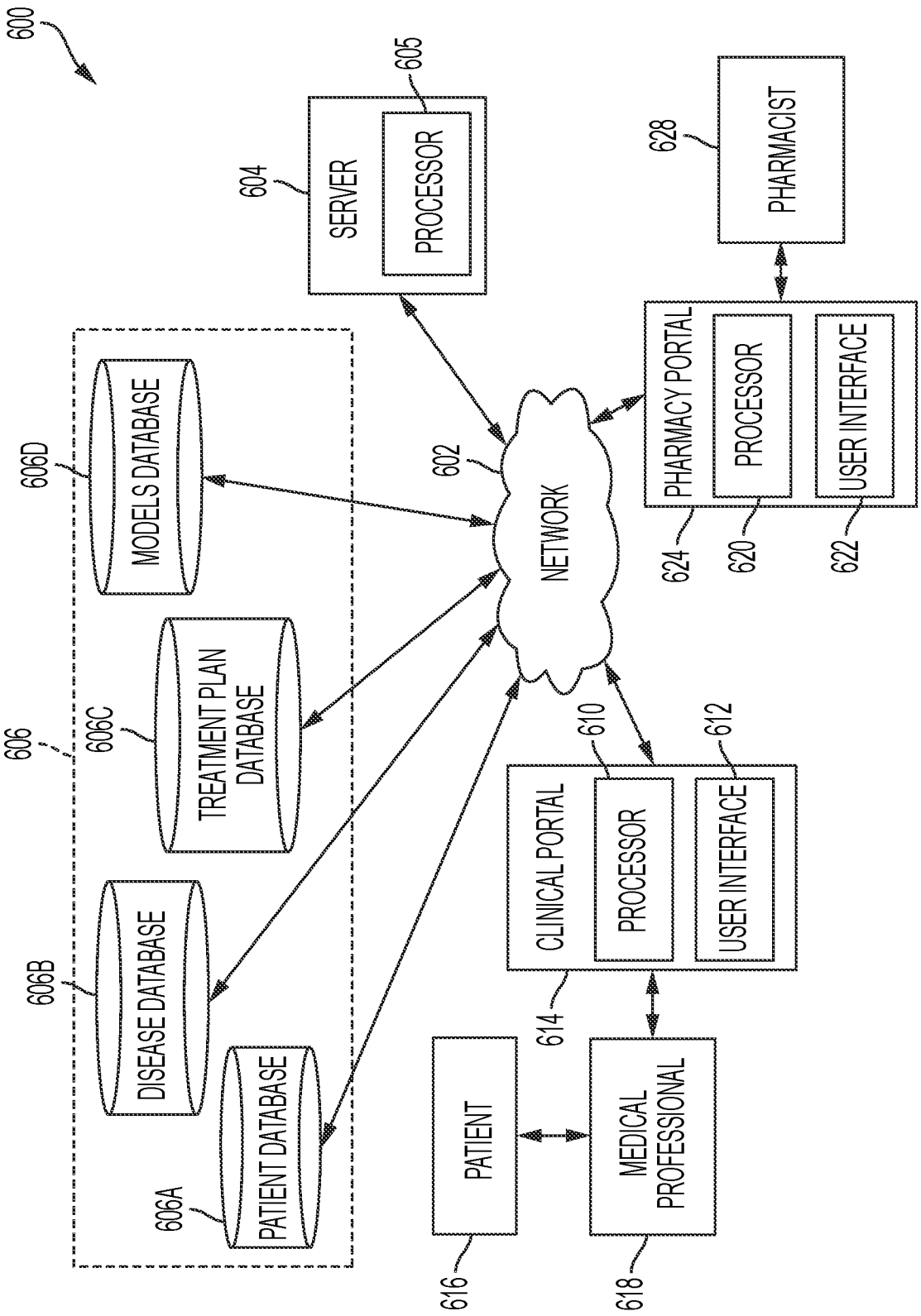

600
604
SERVER
605
PROCESSOR
628
PHARMACIST
PHARMACY PORTAL
PROCESSOR
USER INTERFACE
624
620
622
602
NETWORK
606
606D
MODELS DATABASE
606C
TREATMENT PLAN DATABASE
606B
DISEASE DATABASE
606A
PATIENT DATABASE
610
612
CLINICAL PORTAL
PROCESSOR
USER INTERFACE
614
PATIENT
MEDICAL PROFESSIONAL
616
618

FIG. 6

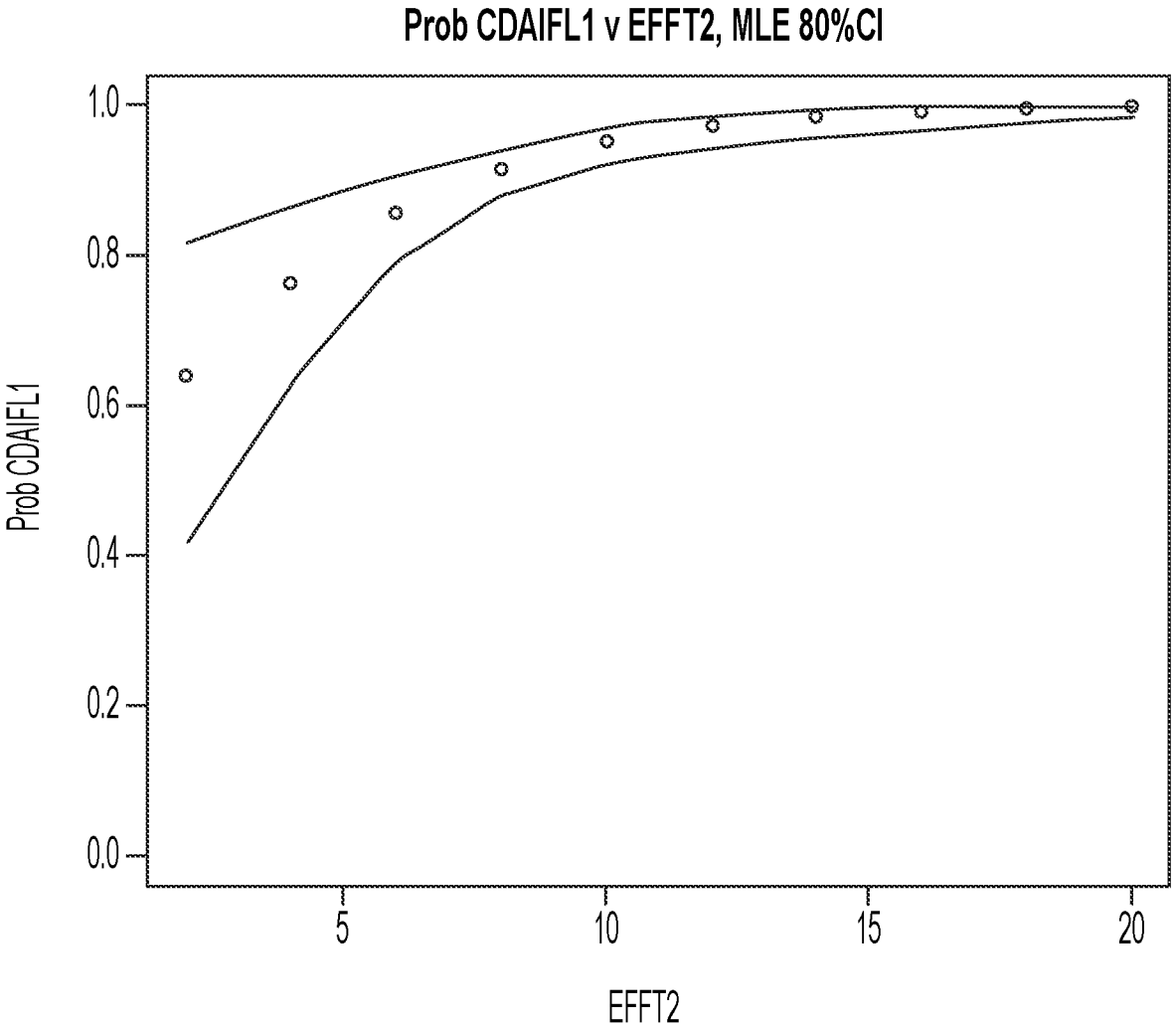

Prob CDAIFL1 v EFFT2, MLE 80%CI
Prob CDAIFL1
1.0
0.8
0.6
0.4
0.2
0.0
5
10
15
20
EFFT2

FIG. 7A

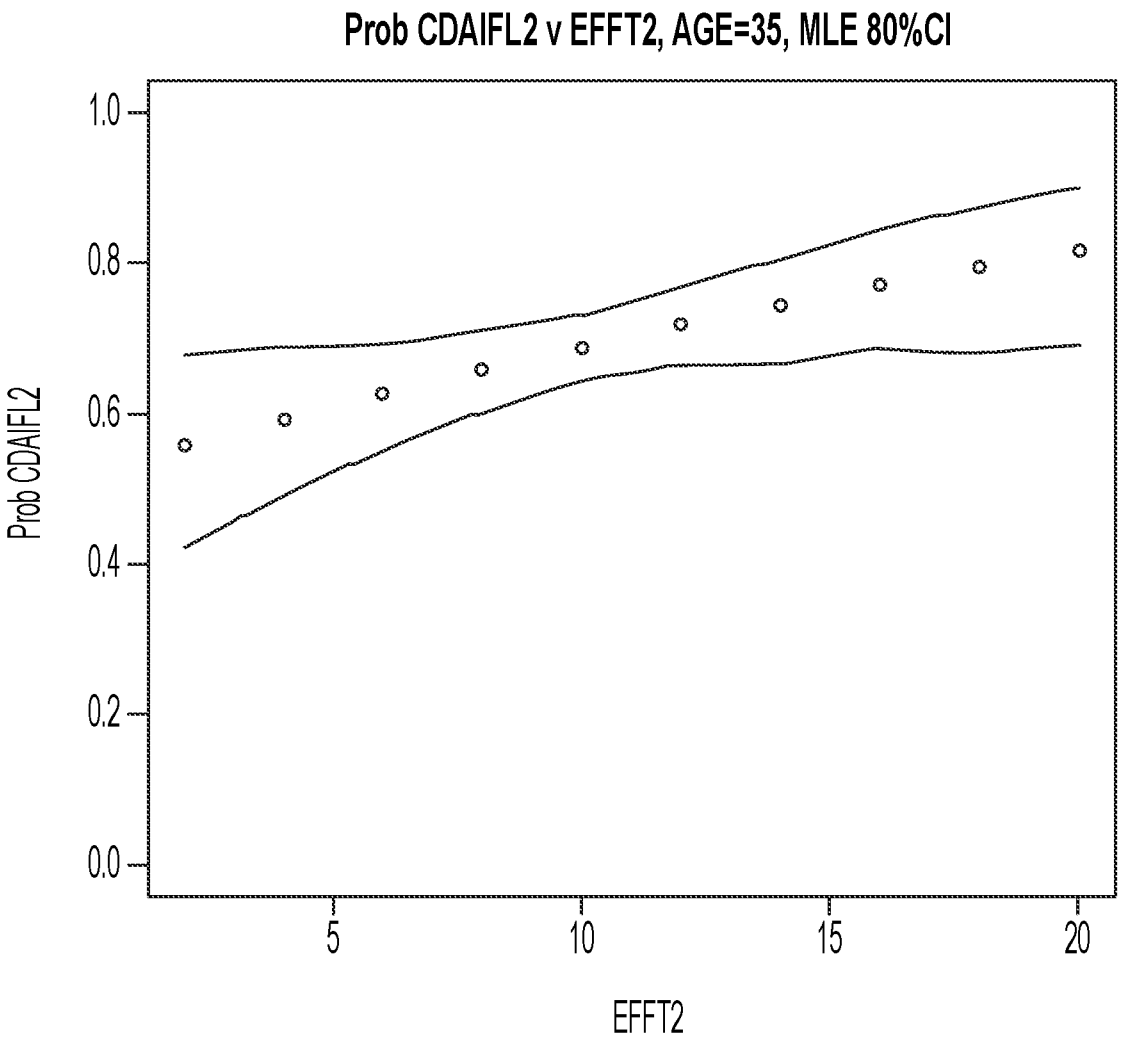

Prob CDAIFL2 v EFFT2, AGE=35, MLE 80%CI
Prob CDAIFL2
1.0
0.8
0.6
0.4
0.2
0.0
5
10
15
20
EFFT2

FIG. 7B

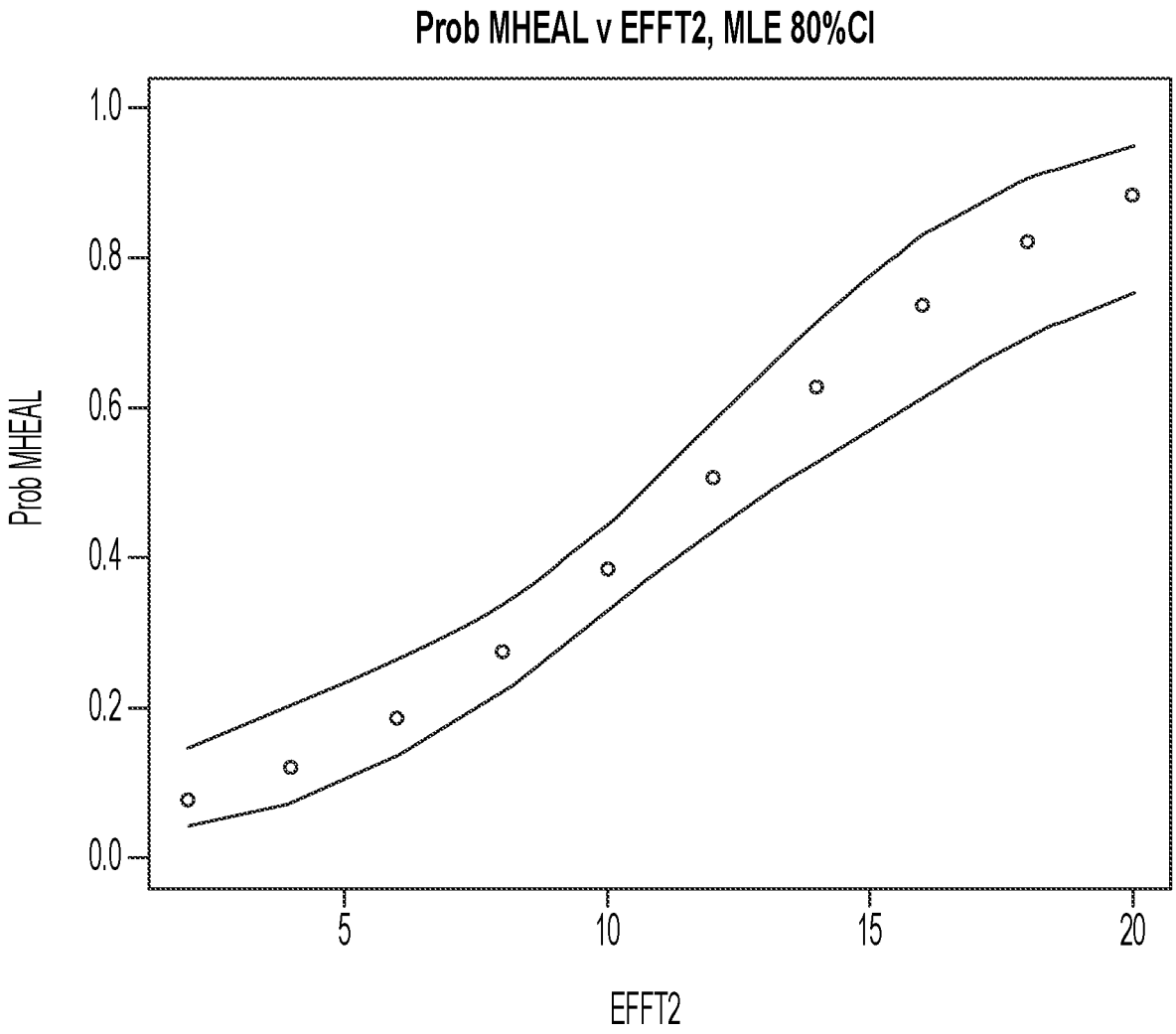

Prob MHEAL v EFFT2, MLE 80%CI
Prob MHEAL
1.0
0.8
0.6
0.4
0.2
0.0
5
10
15
20
EFFT2

FIG. 7C

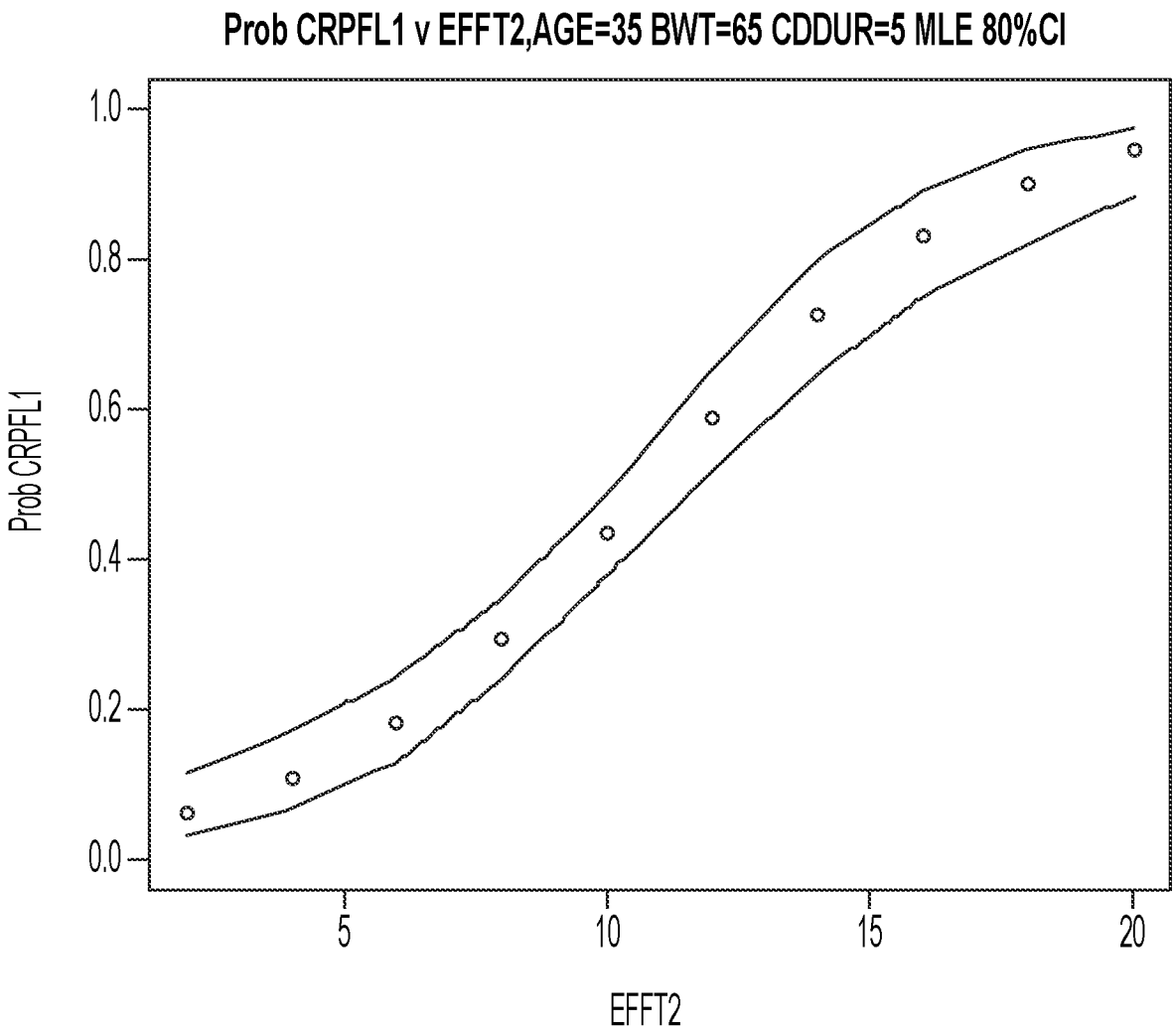

Prob CRPFL1 v EFFT2,AGE=35 BWT=65 CDDUR=5 MLE 80%CI
Prob CRPFL1
1.0
0.8
0.6
0.4
0.2
0.0
5
10
15
20
EFFT2

FIG. 7D

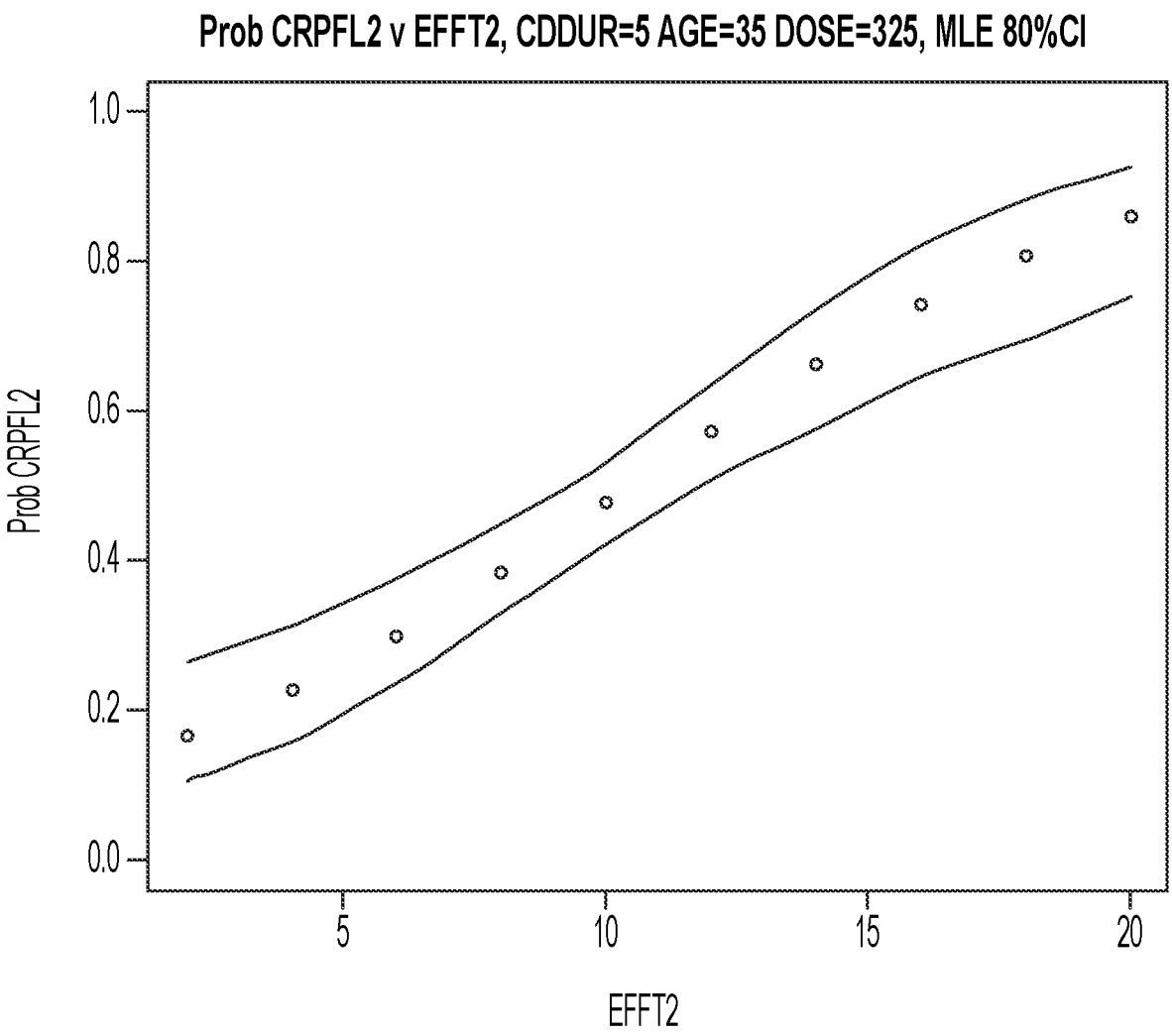

Prob CRPFL2 v EFFT2, CDDUR=5 AGE=35 DOSE=325, MLE 80%CI
Prob CRPFL2
1.0
0.8
0.6
0.4
0.2
0.0
5
10
15
20
EFFT2

FIG. 7E

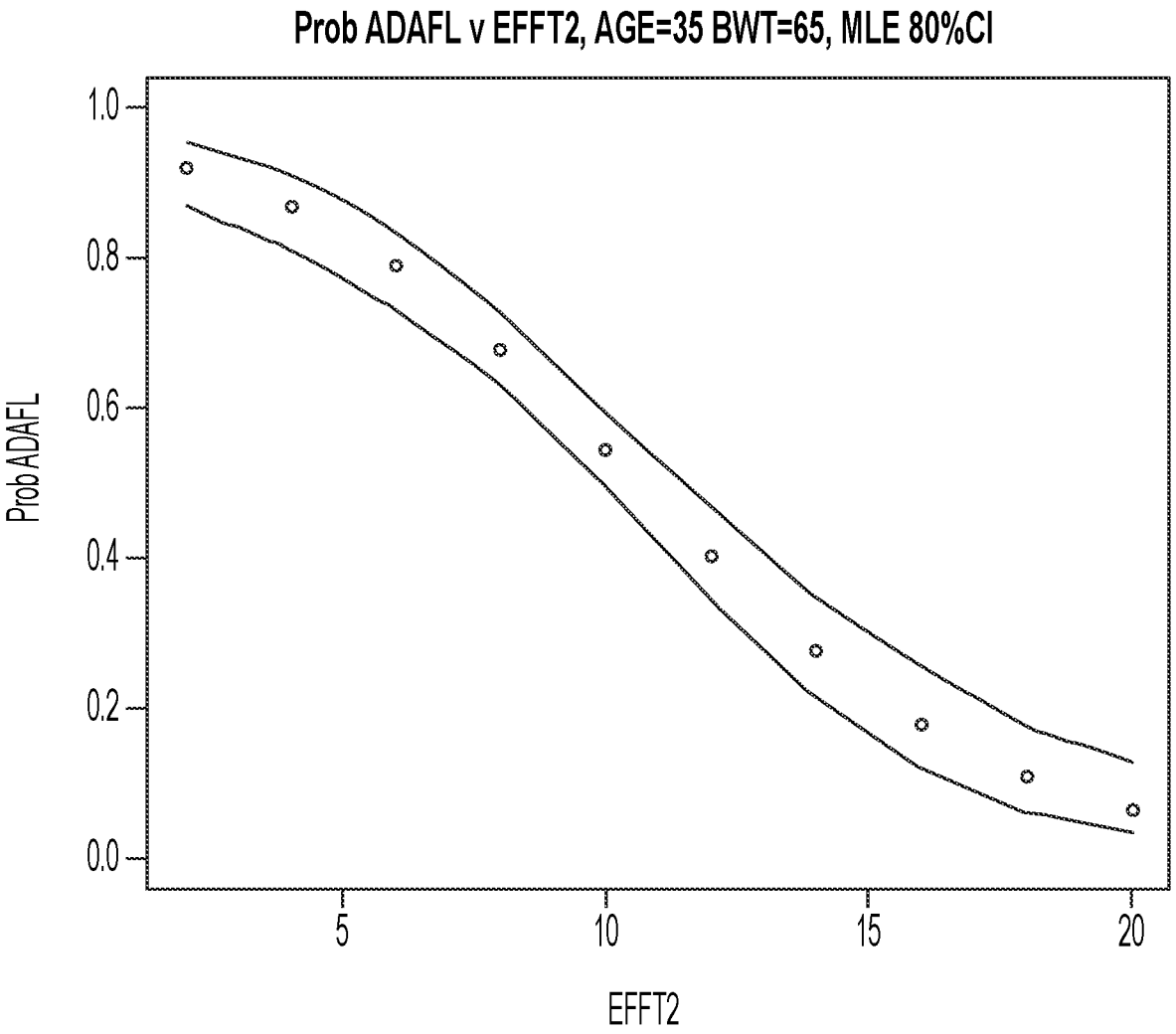

Prob ADAFL v EFFT2, AGE=35 BWT=65, MLE 80%CI
Prob ADAFL
1.0
0.8
0.6
0.4
0.2
0.0
5
10
15
20
EFFT2

FIG. 7F

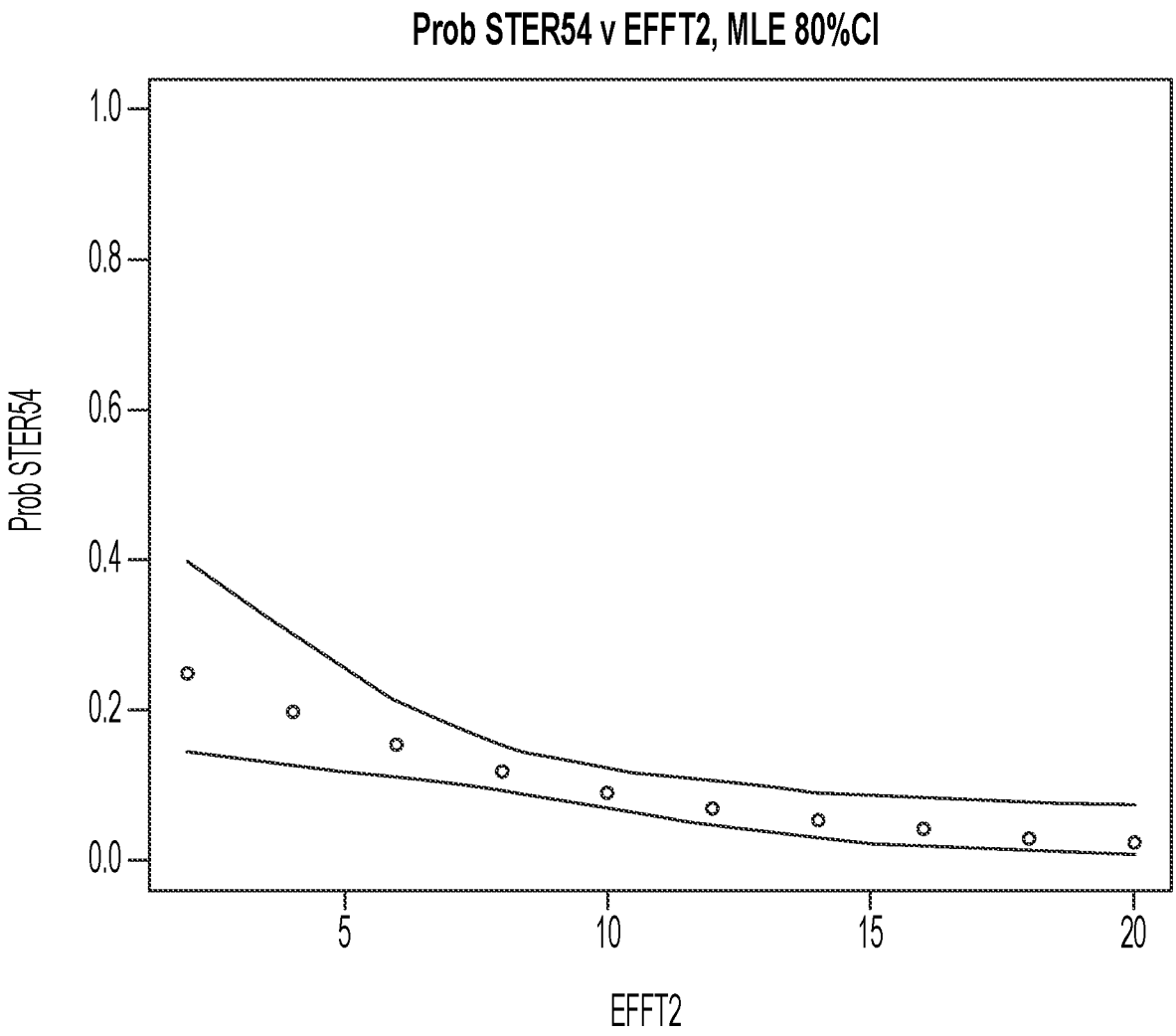

Prob STER54 v EFFT2, MLE 80%CI
Prob STER54
1.0
0.8
0.6
0.4
0.2
0.0
5
10
15
20
EFFT2

FIG. 7G

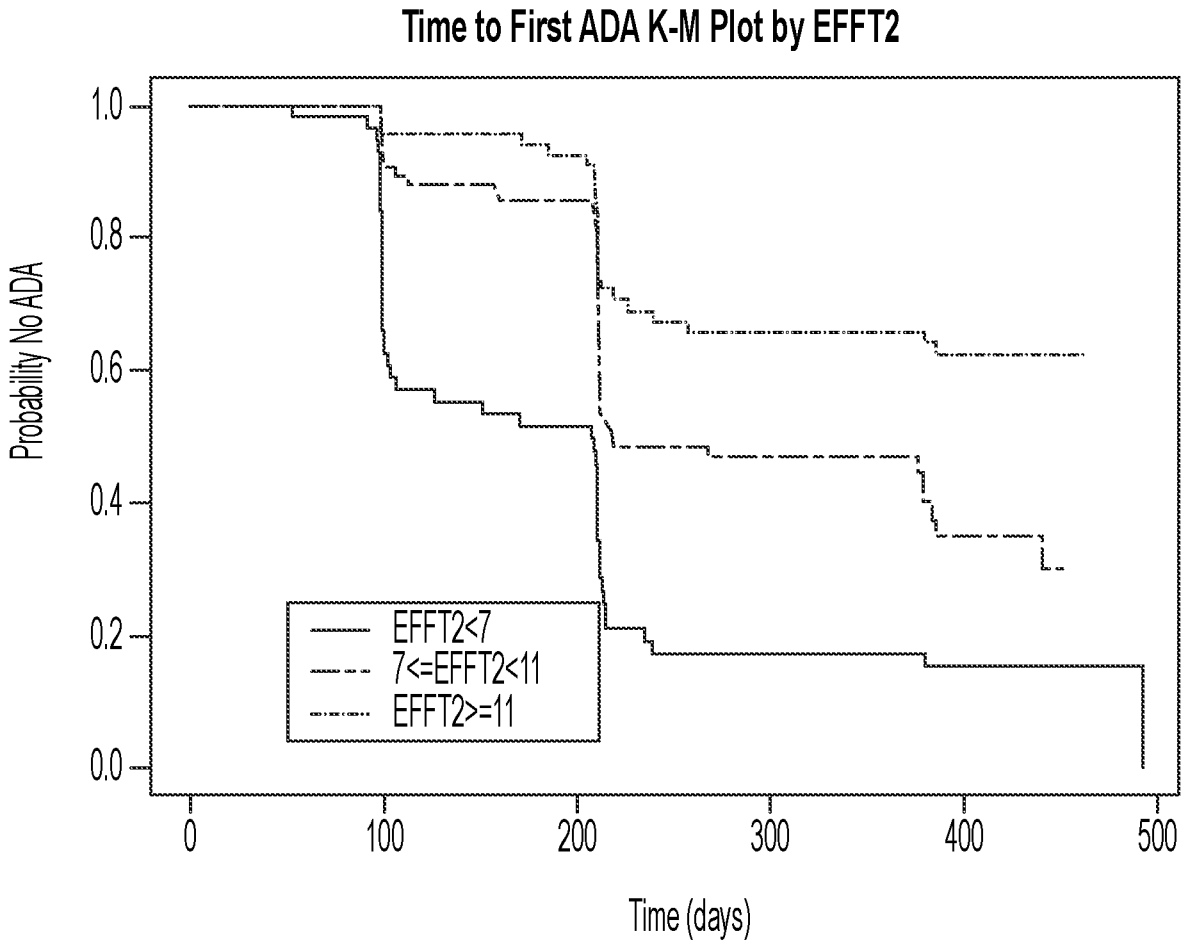

Time to First ADA K-M Plot by EFFT2
Probability No ADA
1.0
0.8
0.6
0.4
0.2
0.0
0
100
200
300
400
500
Time (days)
EFFT2<7
7<=EFFT2<11
EFFT2>=11

FIG. 8A

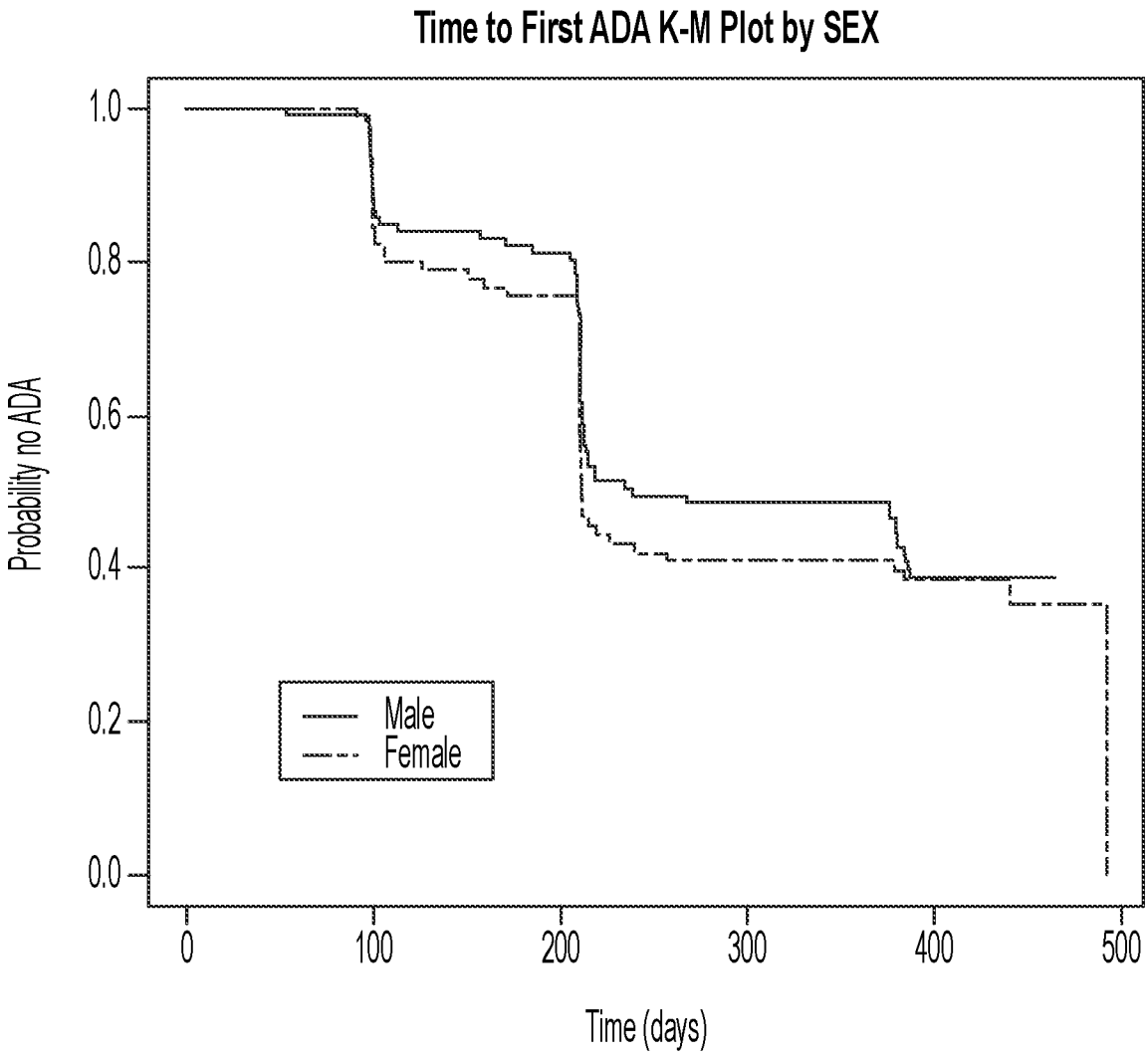

Time to First ADA K-M Plot by SEX
Probability no ADA
1.0
0.8
0.6
0.4
0.2
0.0
Male
Female
0
100
200
300
400
500
Time (days)

FIG. 8B

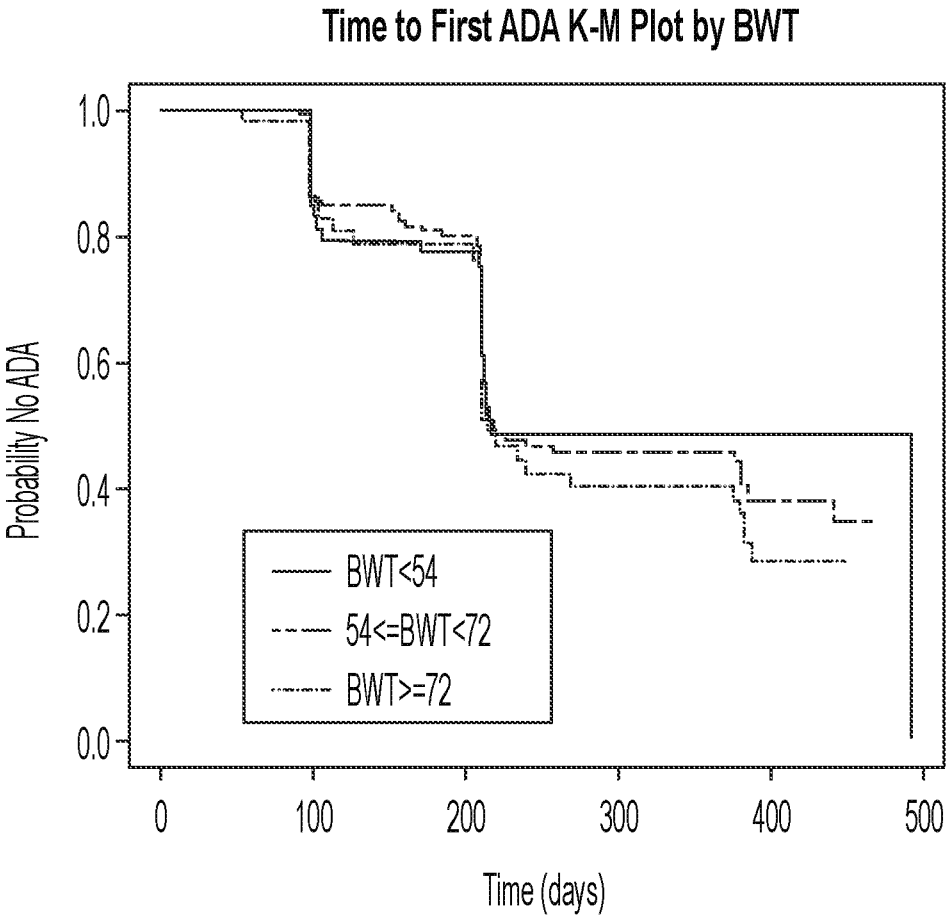

Time to First ADA K-M Plot by BWT
Probability No ADA
1.0
0.8
0.6
0.4
0.2
0.0
0
100
200
300
400
500
Time (days)
BWT<54
54<=BWT<72
BWT>=72

FIG. 8C

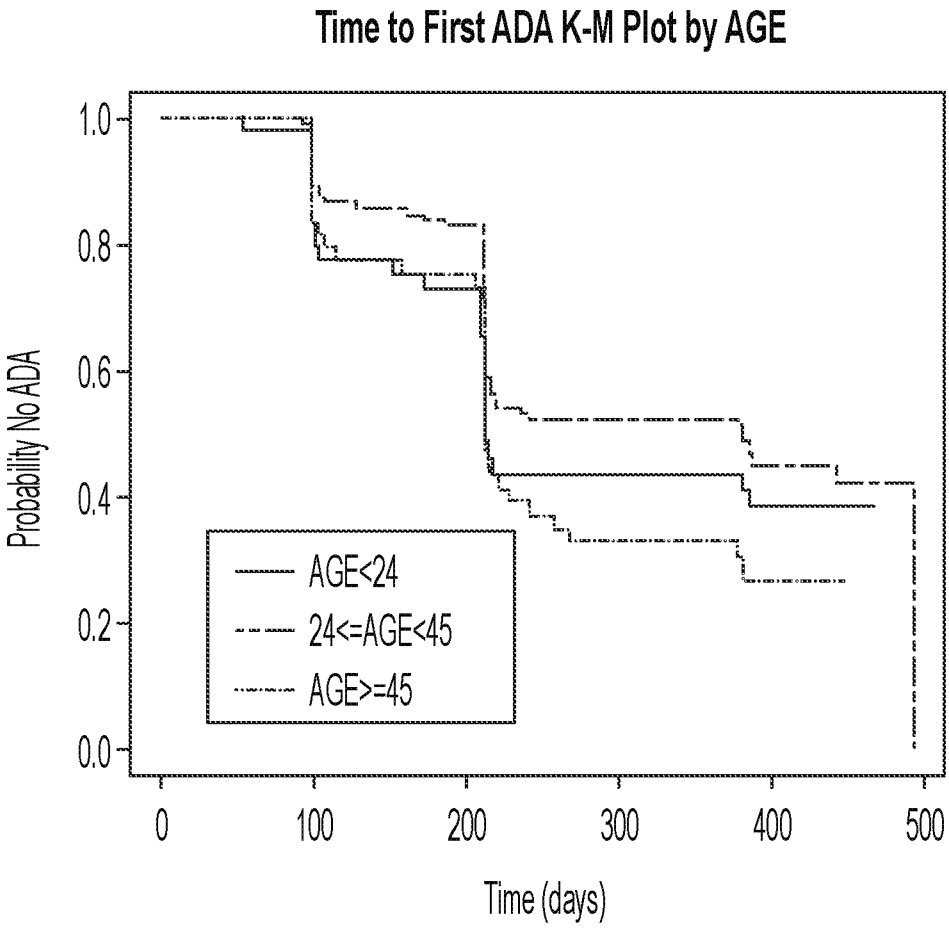

Time to First ADA K-M Plot by AGE
Probability No ADA
1.0
0.8
0.6
0.4
0.2
0.0
AGE<24
24<=AGE<45
AGE>=45
0
100
200
300
400
500
Time (days)

FIG. 8D

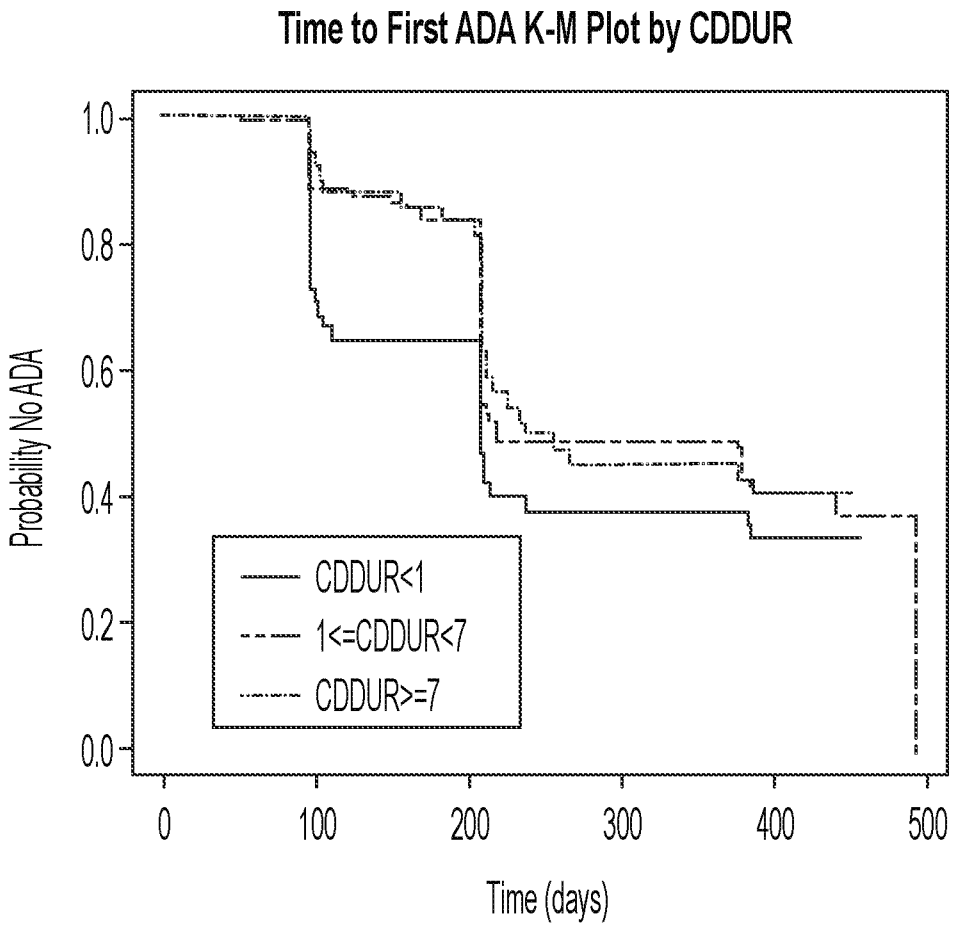

Time to First ADA K-M Plot by CDDUR
Probability No ADA
1.0
0.8
0.6
0.4
0.2
0.0
0
100
200
300
400
500
Time (days)
CDDUR<1
1<=CDDUR<7
CDDUR>=7

FIG. 8E

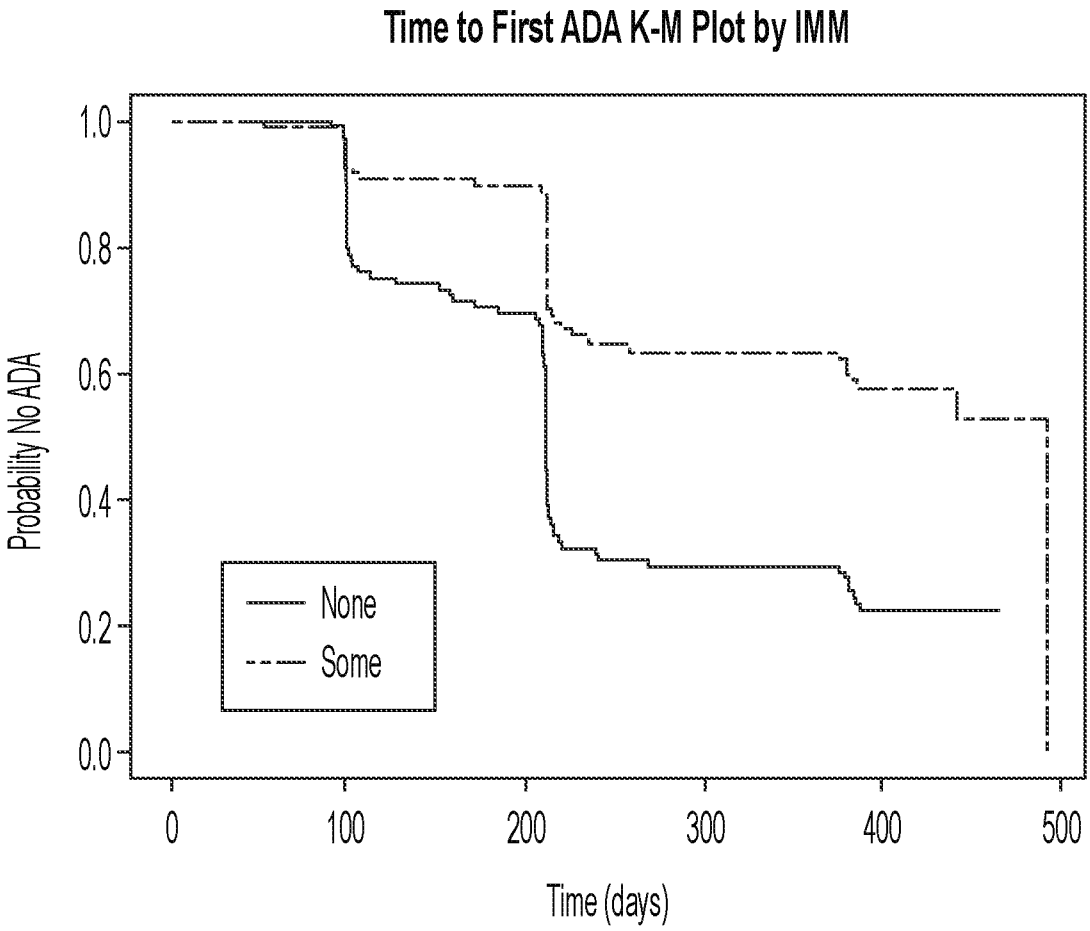

Time to First ADA K-M Plot by IMM
Probability No ADA
1.0
0.8
0.6
0.4
0.2
0.0
None
Some
0
100
200
300
400
500
Time (days)

FIG. 8F

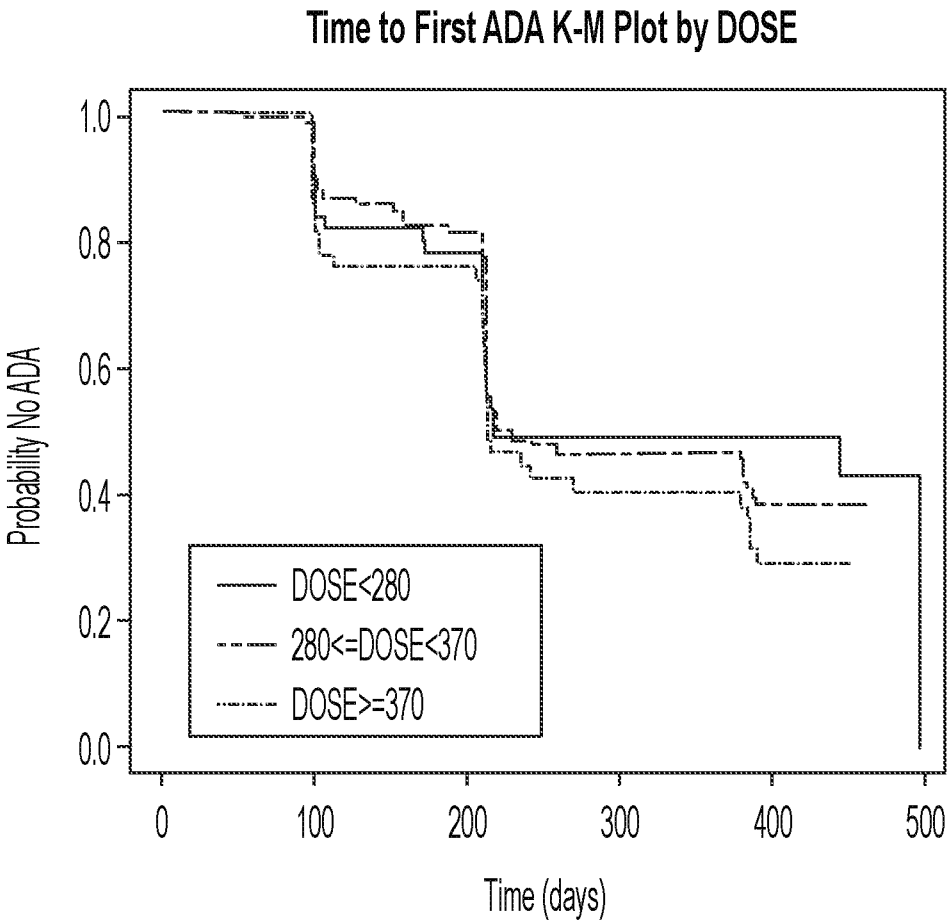

Time to First ADA K-M Plot by DOSE
Probability No ADA
1.0
0.8
0.6
0.4
0.2
0.0
0
100
200
300
400
500
Time (days)
DOSE<280
280<=DOSE<370
DOSE>=370

FIG. 8G

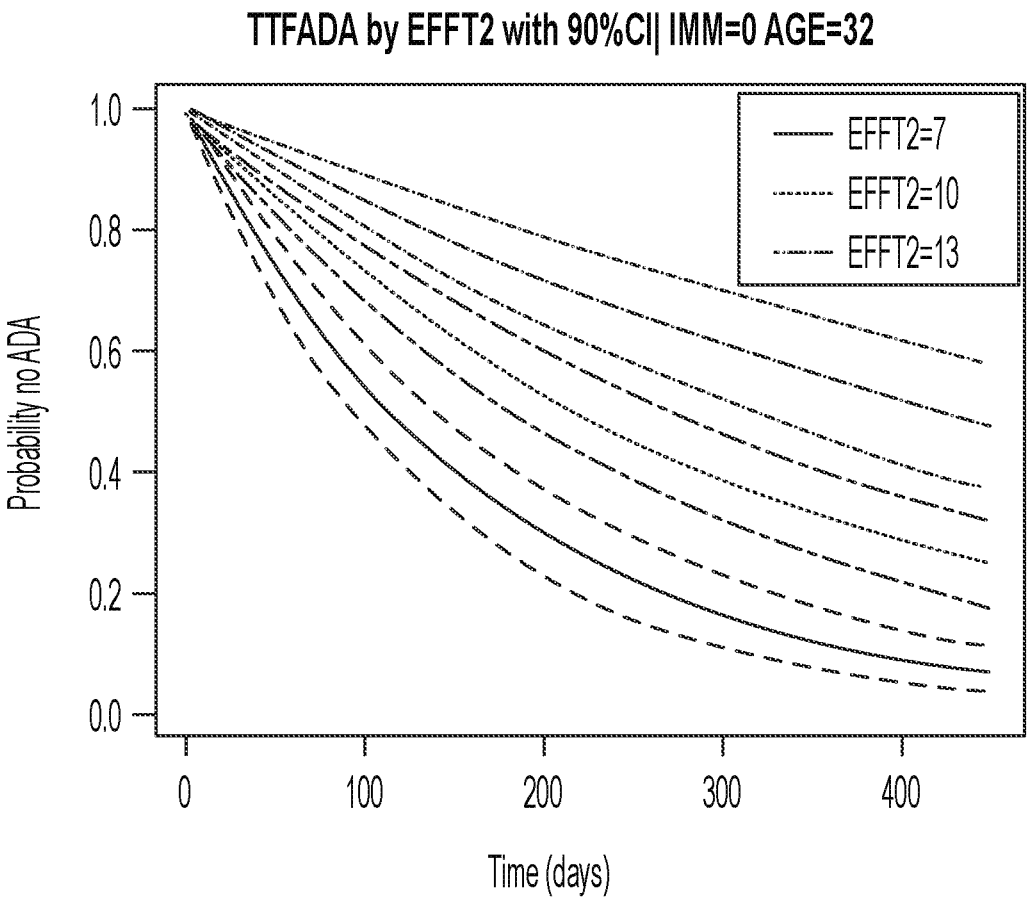

TTFADA by EFFT2 with 90%CI| IMM=0 AGE=32
EFFT2=7
EFFT2=10
EFFT2=13
Probability no ADA
1.0
0.8
0.6
0.4
0.2
0.0
0
100
200
300
400
Time (days)

FIG. 9A

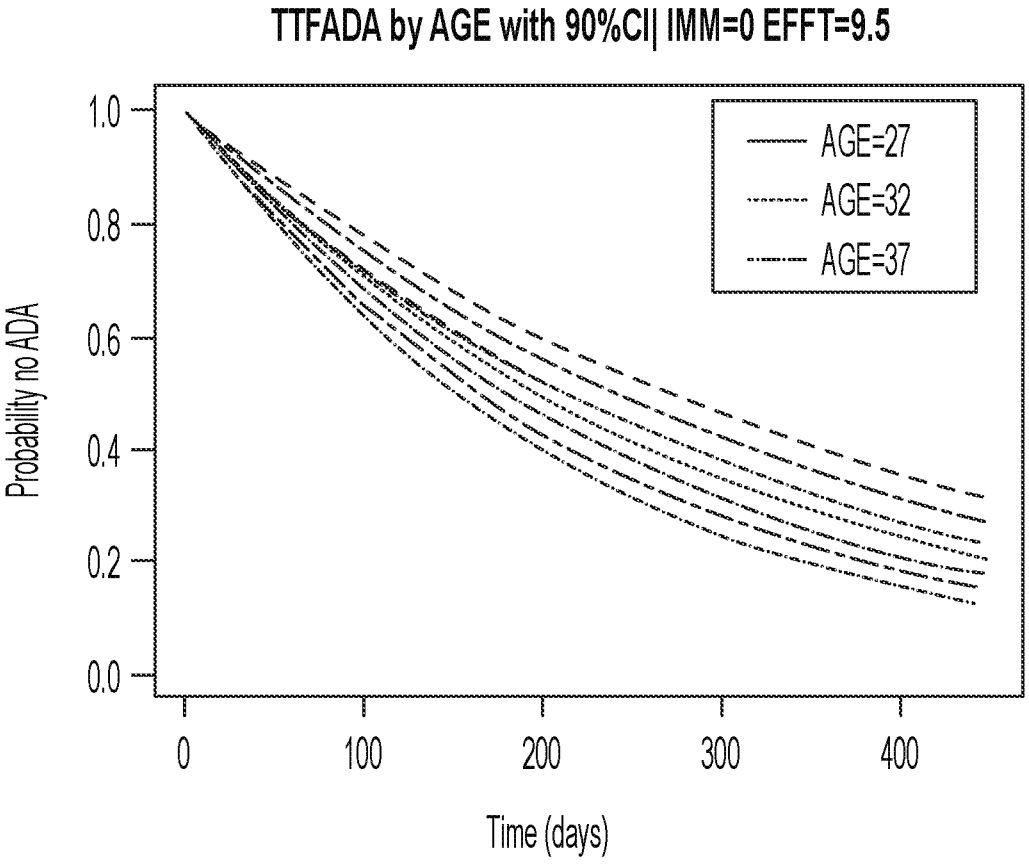

TTFADA by AGE with 90%CI| IMM=0 EFFT=9.5
AGE=27
AGE=32
AGE=37
Probability no ADA
1.0
0.8
0.6
0.4
0.2
0.0
0
100
200
300
400
Time (days)

FIG. 9B

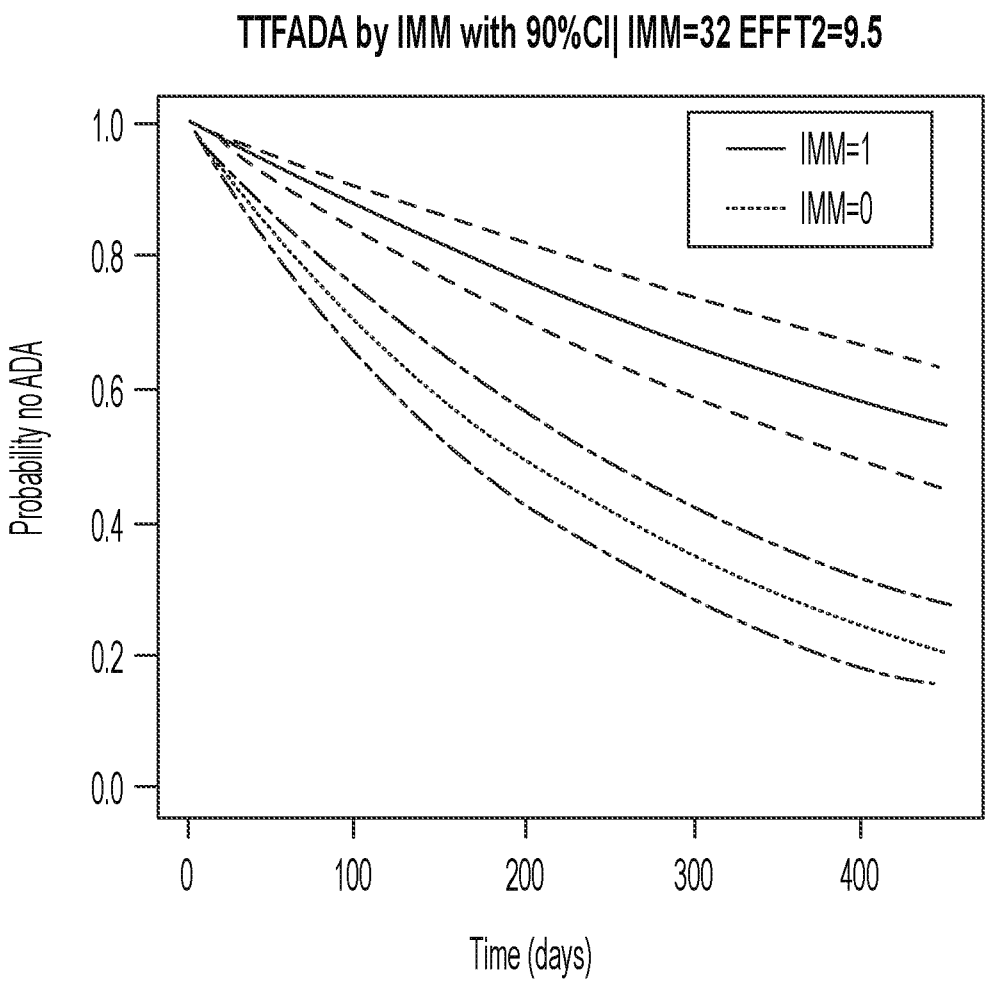

TTFADA by IMM with 90%CI| IMM=32 EFFT2=9.5
IMM=1
IMM=0
Probability no ADA
1.0
0.8
0.6
0.4
0.2
0.0
0
100
200
300
400
Time (days)

FIG. 9C