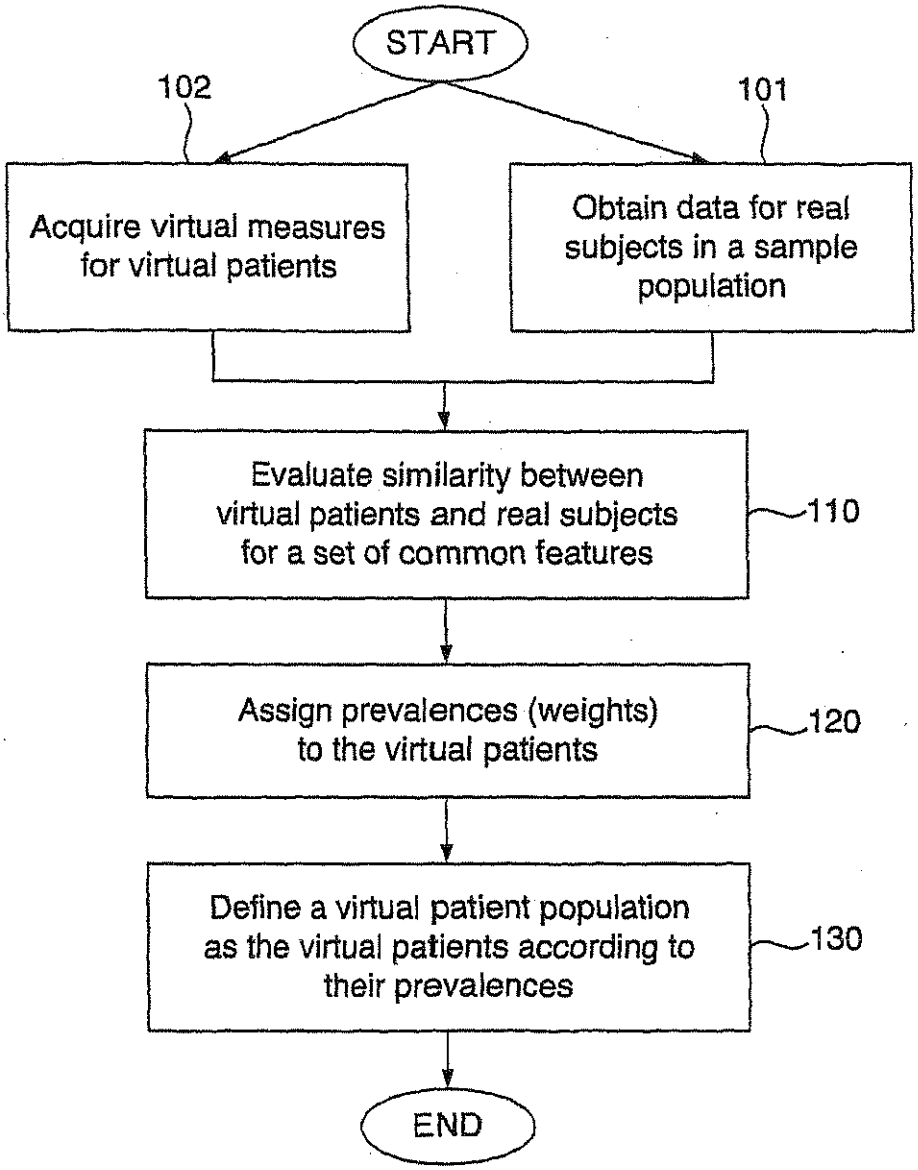

START
102
101
Acquire virtual measures for virtual patients
Obtain data for real subjects in a sample population
Evaluate similarity between virtual patients and real subjects for a set of common features
110
Assign prevalences (weights) to the virtual patients
120
Define a virtual patient population as the virtual patients according to their prevalences
130
END

FIG. 1

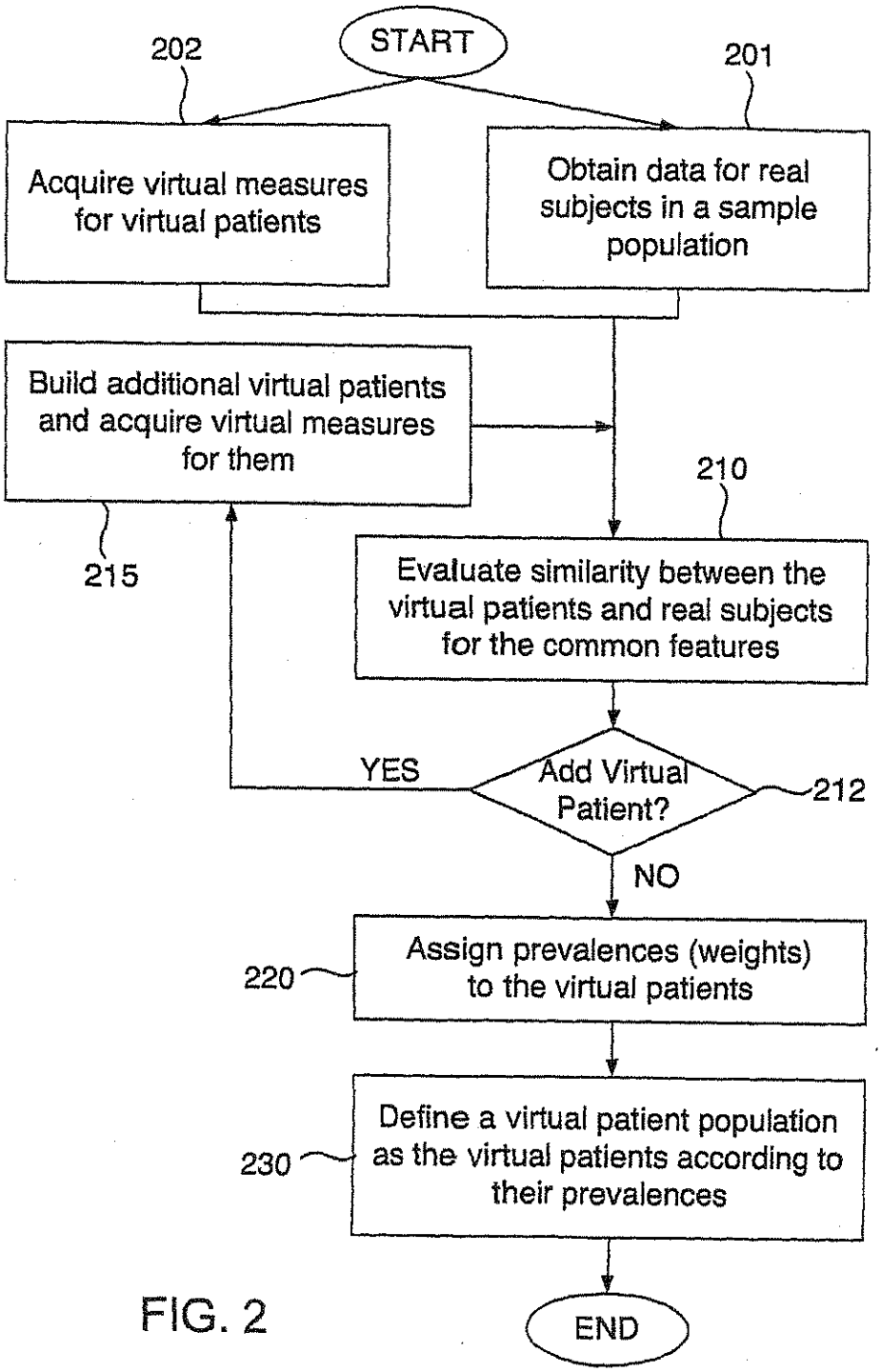

START
202
201
Acquire virtual measures for virtual patients
Obtain data for real subjects in a sample population
Build additional virtual patients and acquire virtual measures for them
215
210
Evaluate similarity between the virtual patients and real subjects for the common features
YES
Add Virtual Patient?
212
NO
220
Assign prevalences (weights) to the virtual patients
230
Define a virtual patient population as the virtual patients according to their prevalences
END

FIG. 2

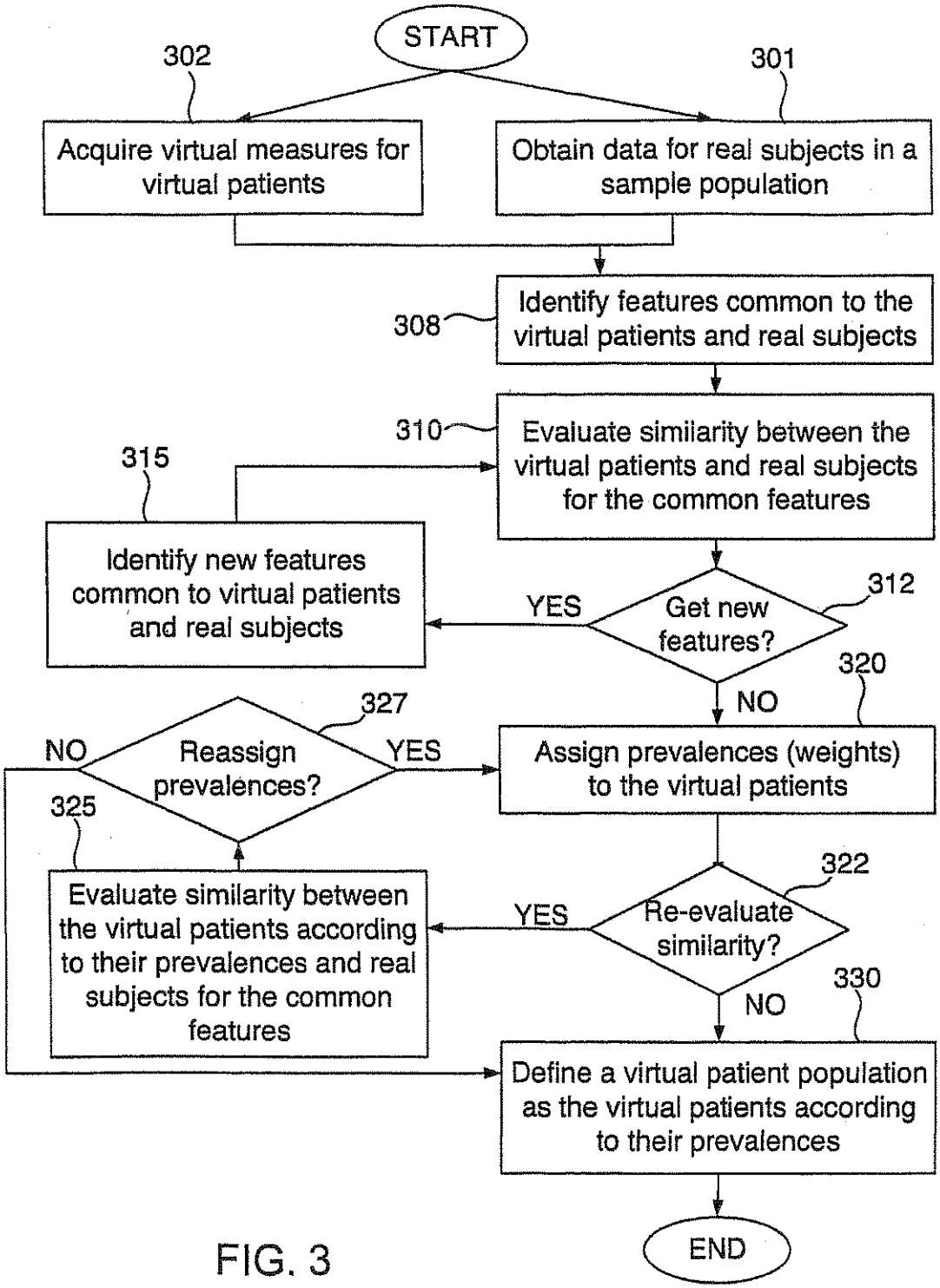
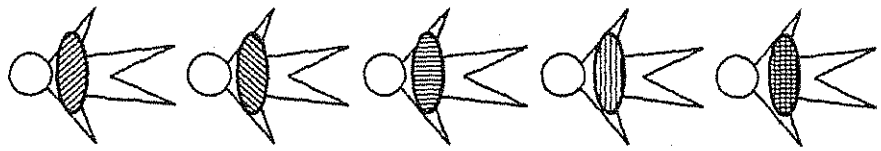

START
302
301
Acquire virtual measures for virtual patients
Obtain data for real subjects in a sample population
308
Identify features common to the virtual patients and real subjects
310
Evaluate similarity between the virtual patients and real subjects for the common features
315
Identify new features common to virtual patients and real subjects
YES
Get new features?
312
NO
320
327
NO
Reassign prevalences?
YES
Assign prevalences (weights) to the virtual patients
325
Evaluate similarity between the virtual patients according to their prevalences and real subjects for the common features
322
YES
Re-evaluate similarity?
NO
330
Define a virtual patient population as the virtual patients according to their prevalences
END

FIG. 3



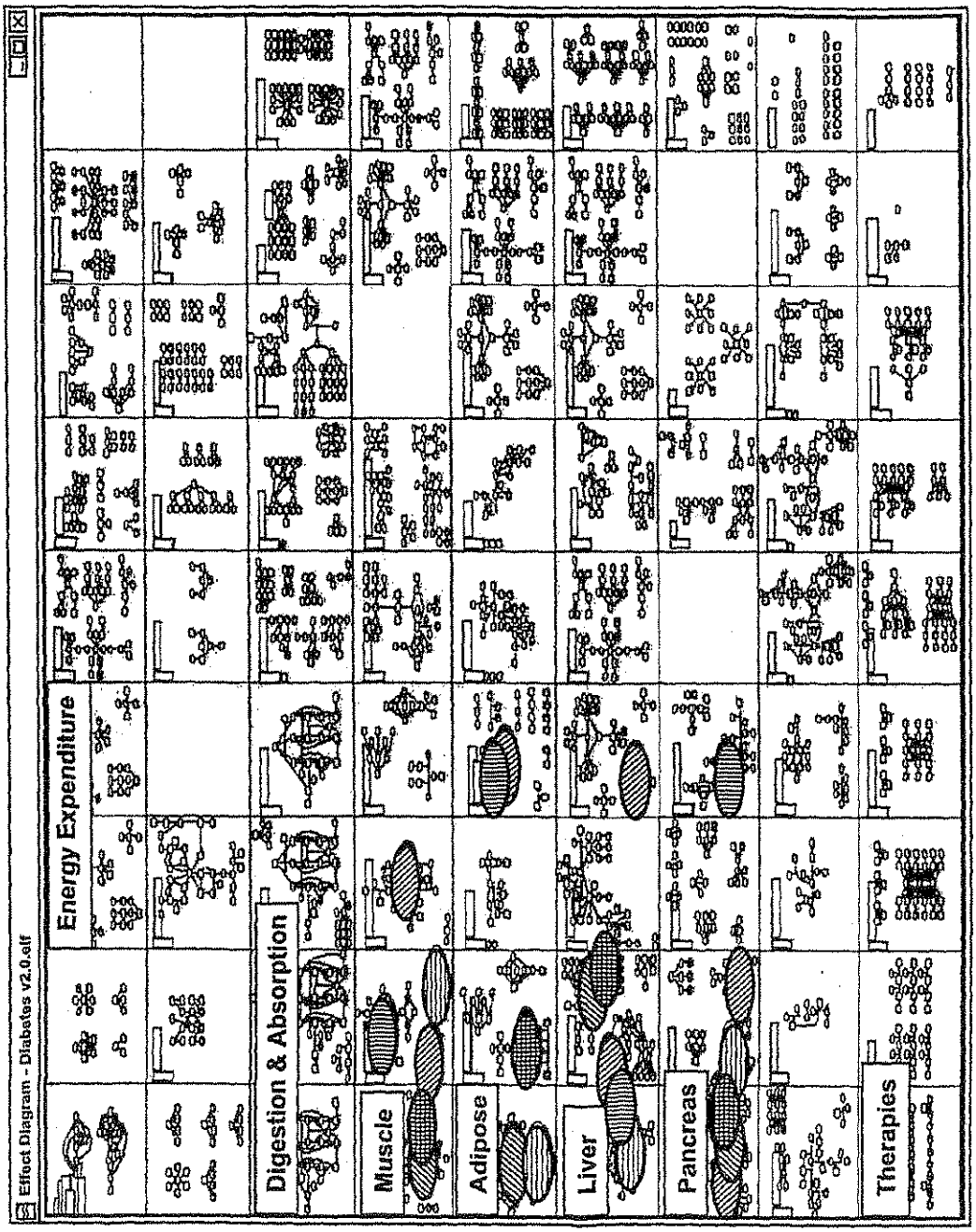

Effect Diagram - Diabetes v2.0.elf
Energy Expenditure
Digestion & Absorption
Muscle
Adipose
Liver
Pancreas
Therapies

FIG. 4

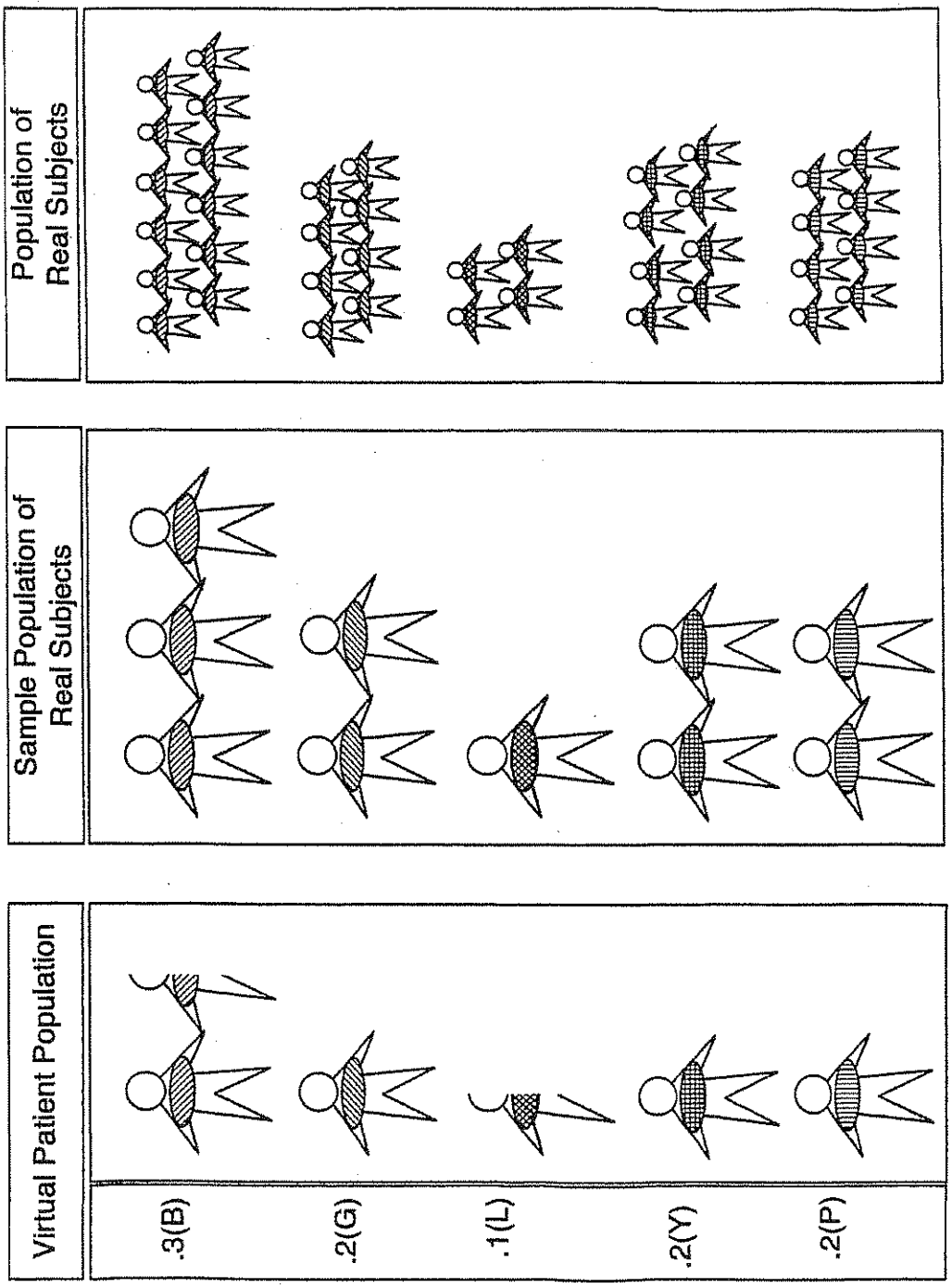

Virtual Patient Population
.3(B)
.2(G)
.1(L)
.2(Y)
.2(P)
Sample Population of Real Subjects
Population of Real Subjects

FIG. 5

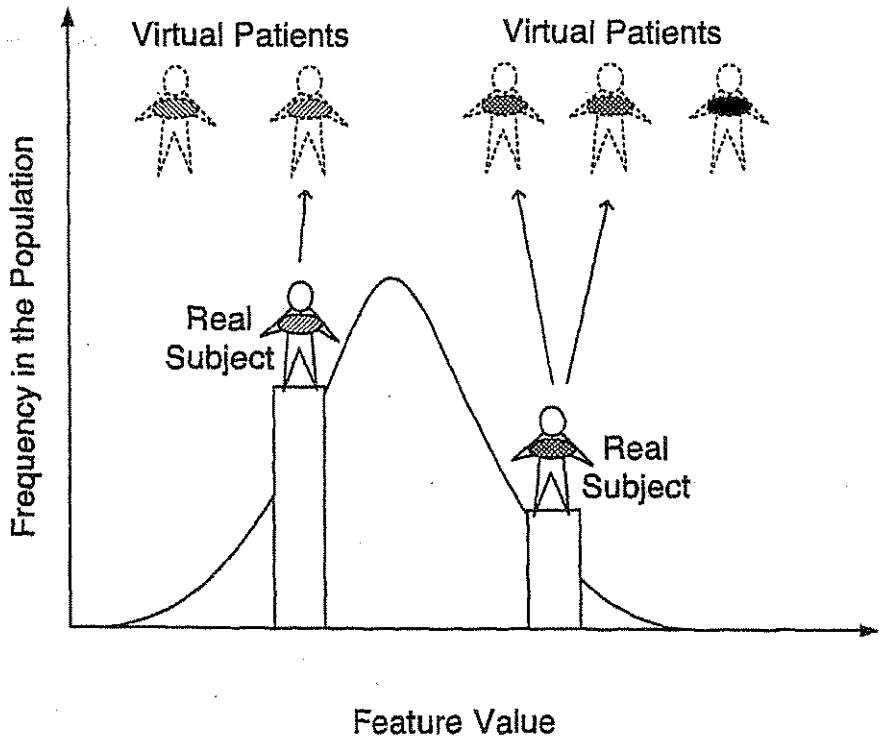

Virtual Patients
Virtual Patients
Real Subject
Real Subject
Frequency in the Population
Feature Value

FIG. 6

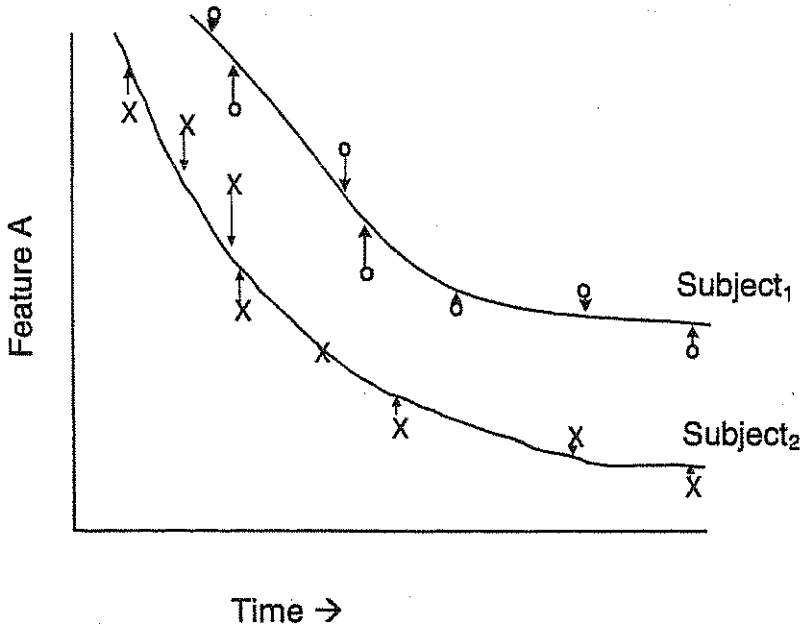


FIG. 7

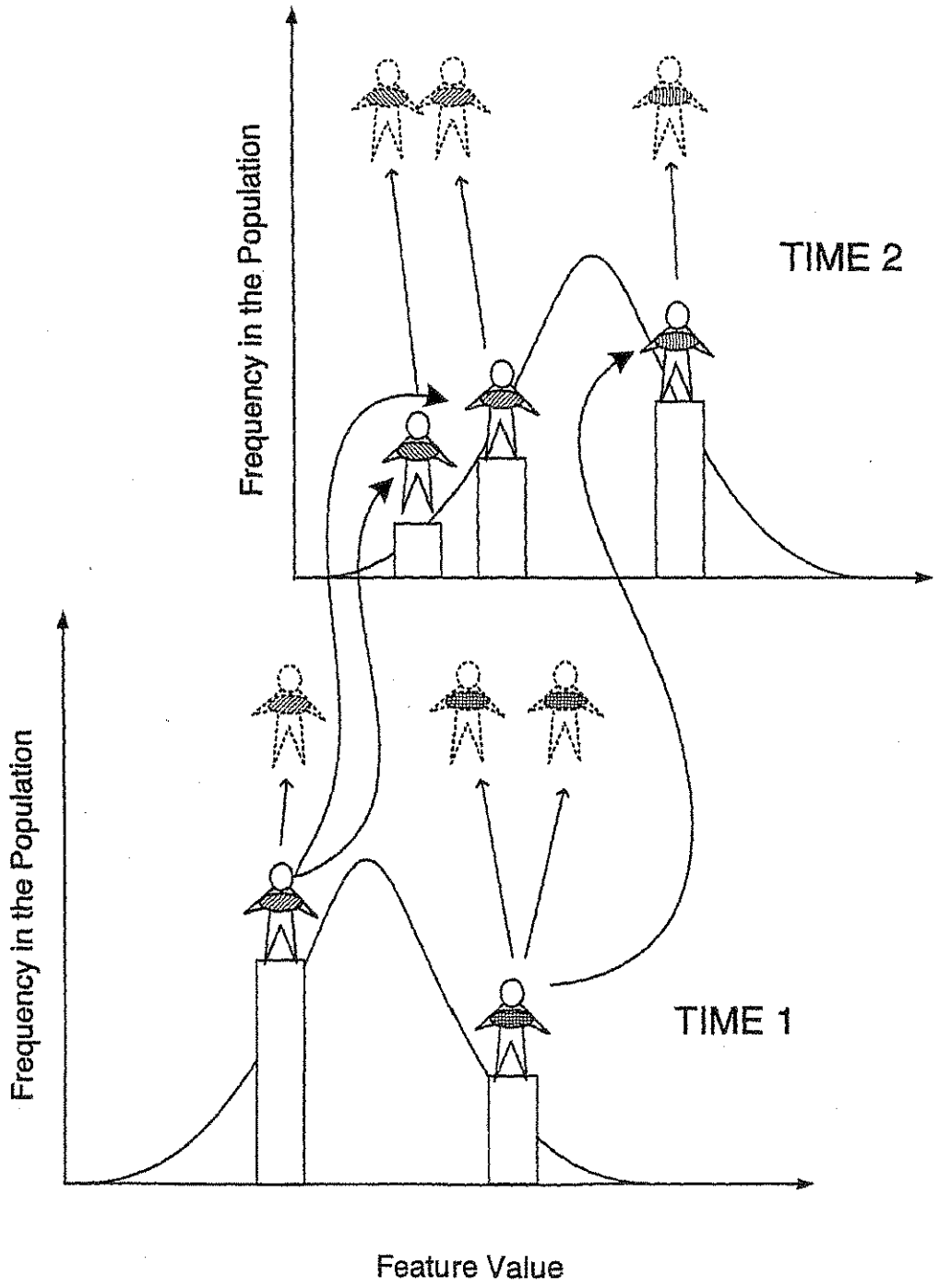

Frequency in the Population
TIME 2
Frequency in the Population
TIME 1
Feature Value

FIG. 8

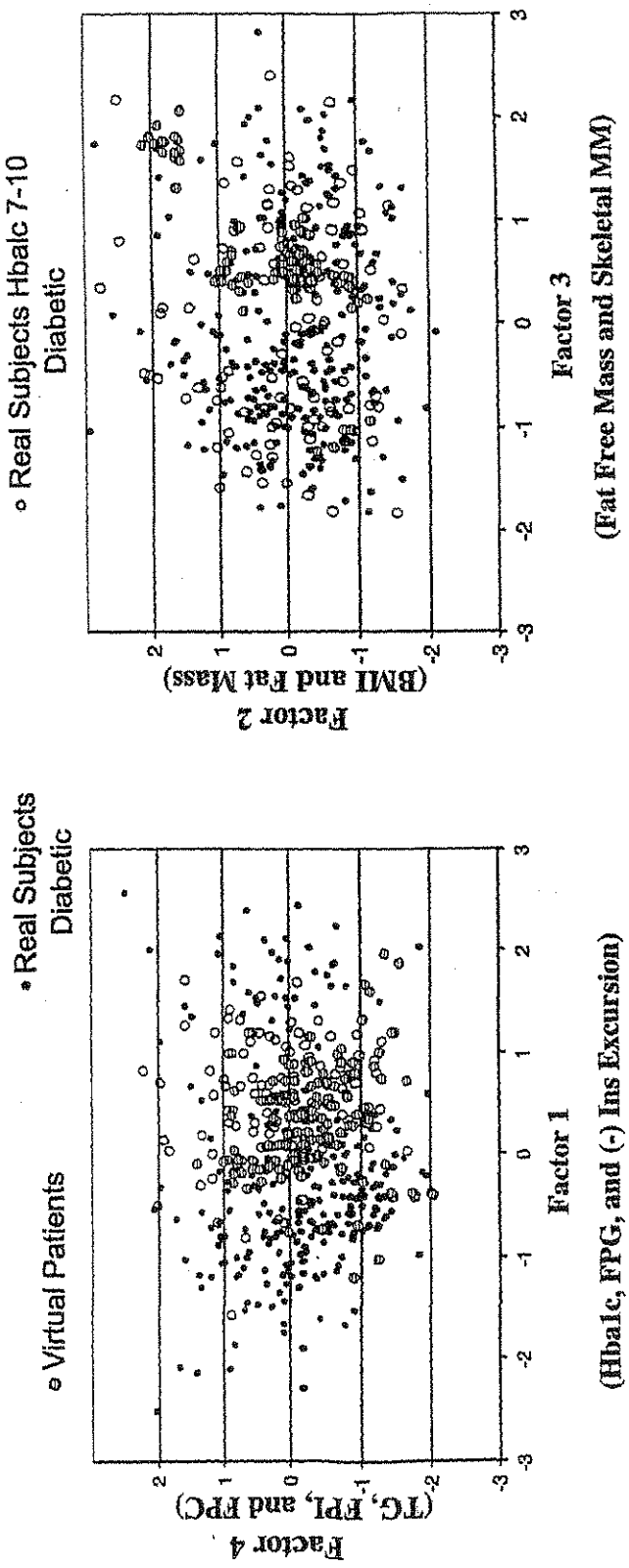

Real Subjects Hbalc 7-10
Diabetic
Factor 2
(BMI and Fat Mass)
Factor 3
(Fat Free Mass and Skeletal MM)
Real Subjects
Diabetic
Virtual Patients
Factor 4
(TG, FPI, and FPC)
Factor 1
(Hba1c, FPG, and (-) Ins Excursion)

FIG. 9

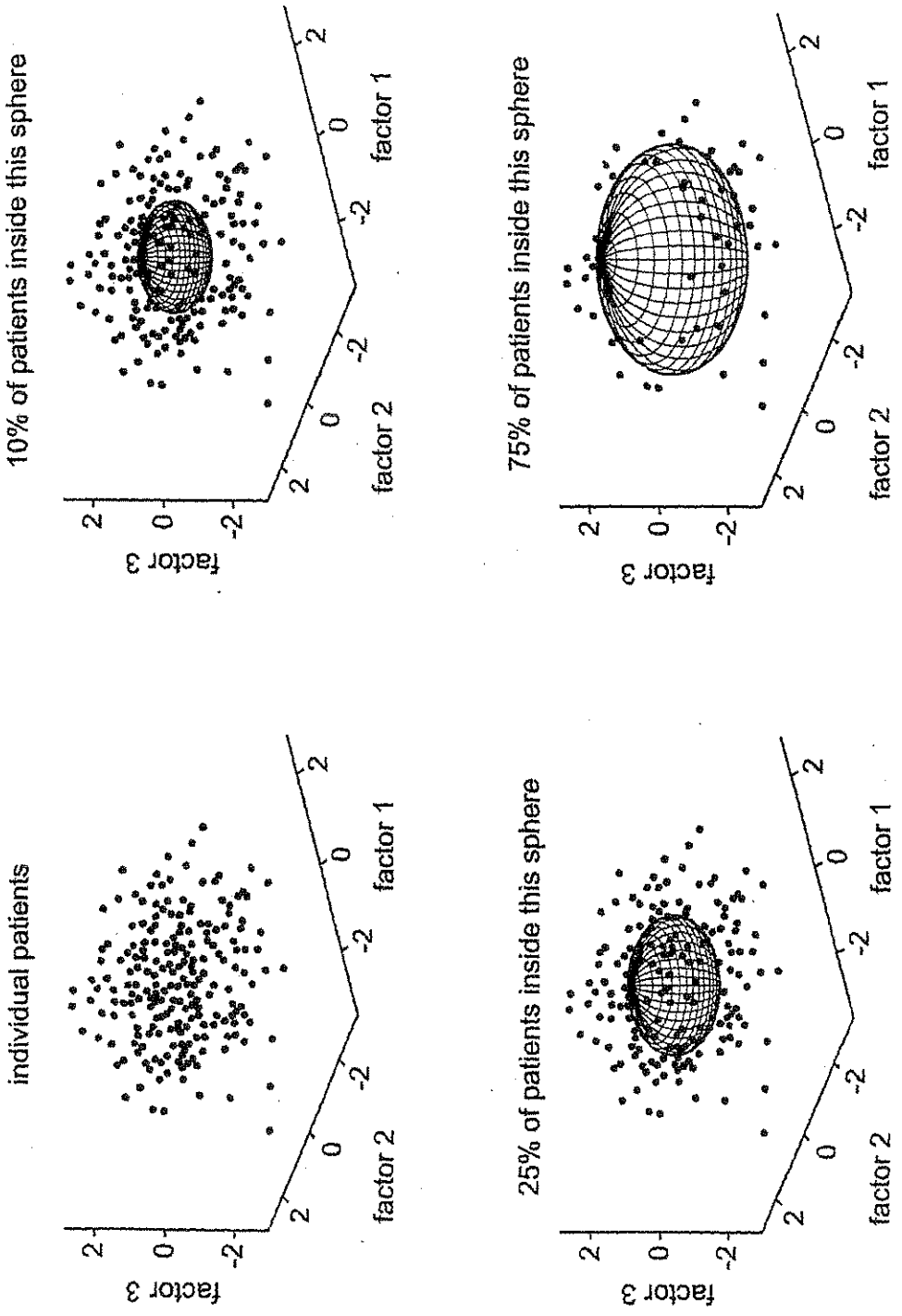

10% of patients inside this sphere
75% of patients inside this sphere
individual patients
25% of patients inside this sphere
factor 1
factor 2
factor 3
2
0
-2

FIG. 10

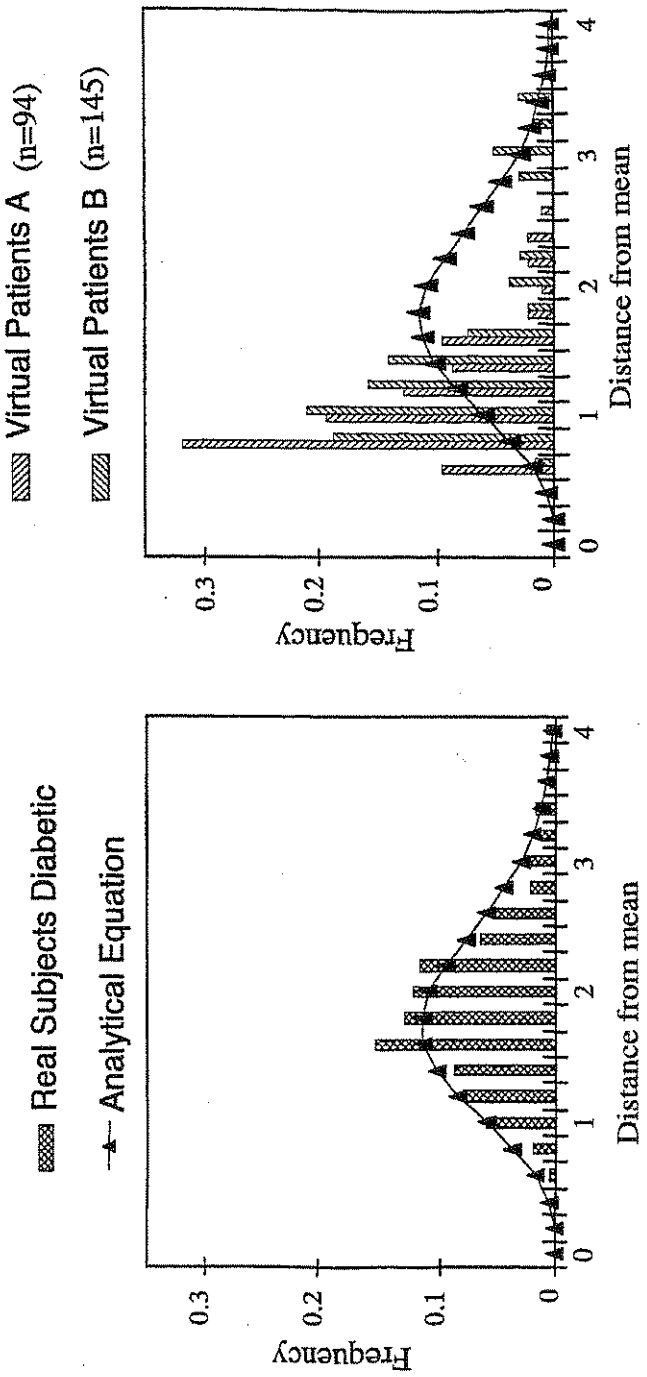

Virtual Patients A (n=94)
Virtual Patients B (n=145)
Frequency
0.3
0.2
0.1
0
0
1
2
3
4
Distance from mean
Real Subjects Diabetic
Analytical Equation
Frequency
0.3
0.2
0.1
0
0
1
2
3
4
Distance from mean

FIG. 11

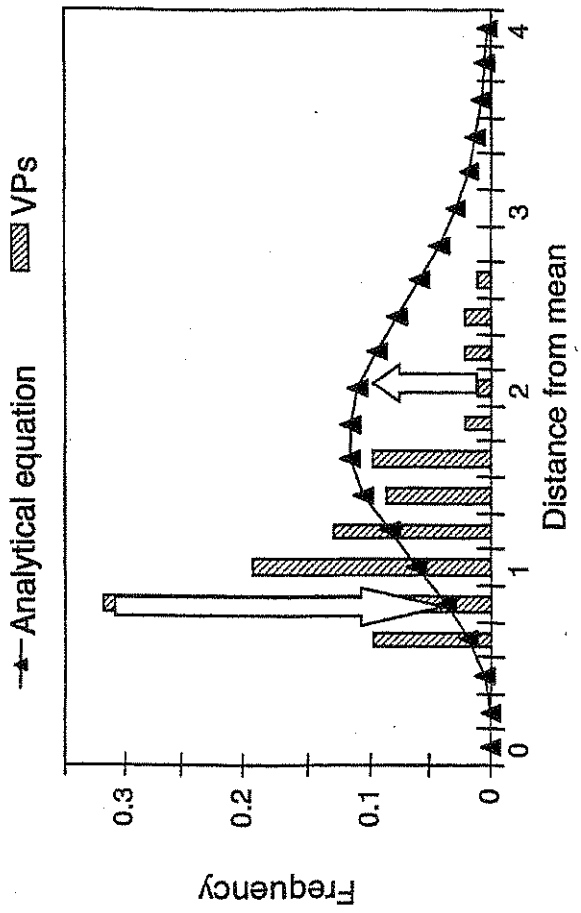

Analytical equation
VPs
Frequency
0.3
0.2
0.1
0
0
1
2
3
4
Distance from mean

FIG. 12

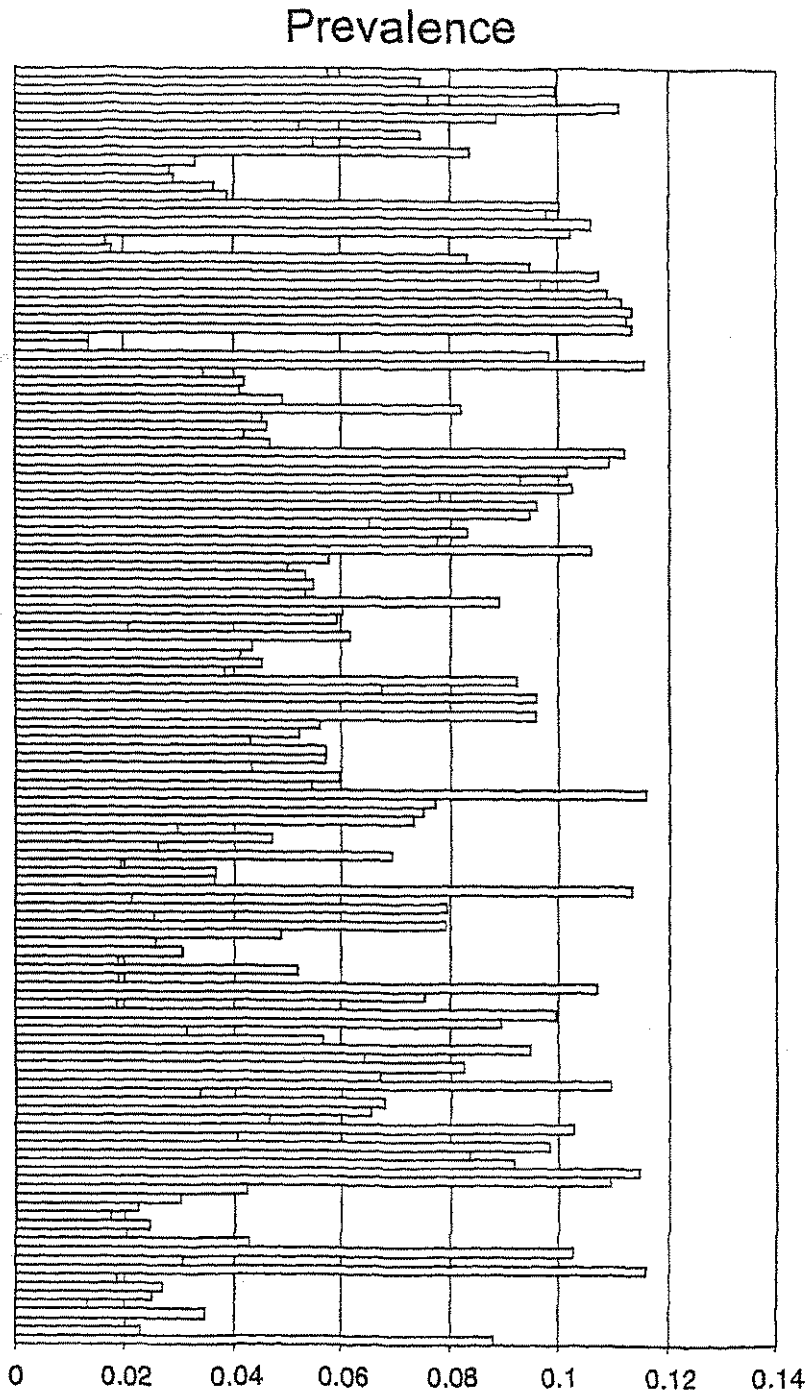


FIG. 13A

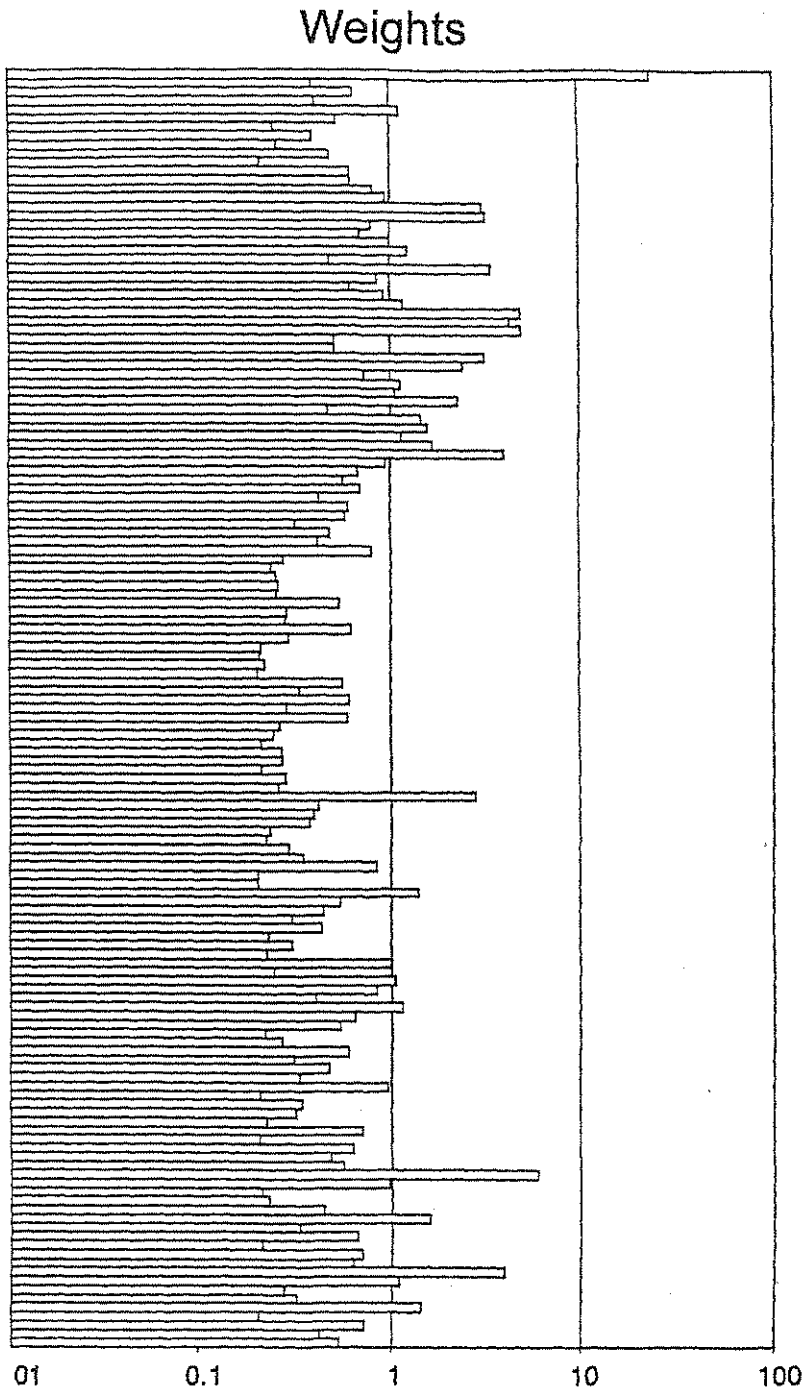


FIG. 13B