Fig. 1

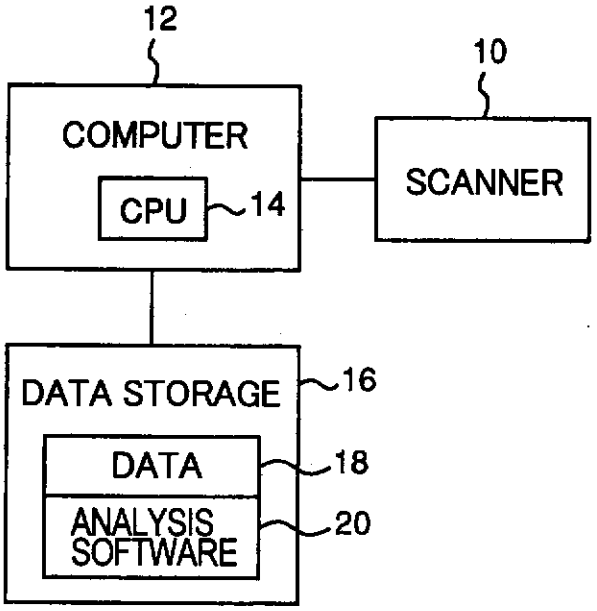

12
10
COMPUTER
CPU
14
SCANNER
DATA STORAGE
16
DATA
18
ANALYSIS SOFTWARE
20

Fig. 2

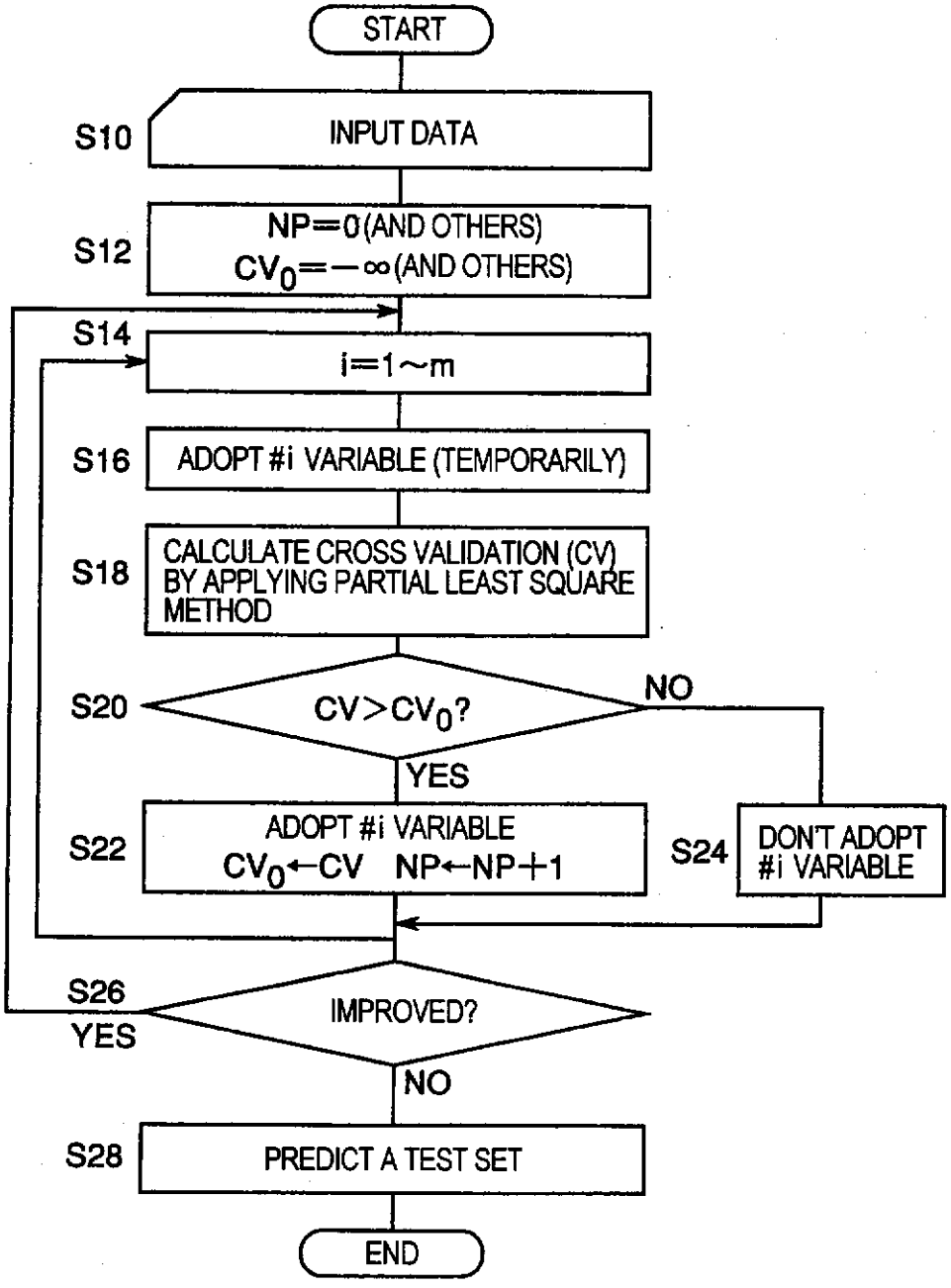

START
S10
INPUT DATA
S12
NP=0(AND OTHERS)
$CV_0=-\infty$(AND OTHERS)
S14
i=1~m
S16
ADOPT #i VARIABLE (TEMPORARILY)
S18
CALCULATE CROSS VALIDATION (CV) BY APPLYING PARTIAL LEAST SQUARE METHOD
S20
$CV>CV_0$?
NO
YES
S22
ADOPT #i VARIABLE
$CV_0 \leftarrow CV$ $NP \leftarrow NP+1$
S24
DON'T ADOPT #i VARIABLE
S26
IMPROVED?
YES
NO
S28
PREDICT A TEST SET
END

Fig. 3

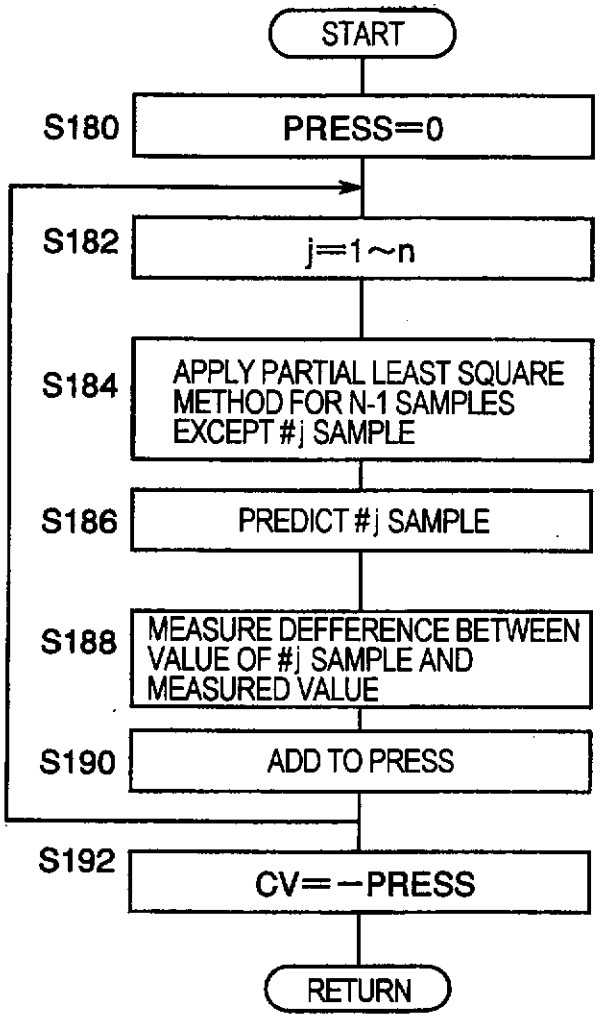

START
S180
PRESS=0
S182
j=1~n
S184
APPLY PARTIAL LEAST SQUARE METHOD FOR N-1 SAMPLES EXCEPT #j SAMPLE
S186
PREDICT #j SAMPLE
S188
MEASURE DEFFERENCE BETWEEN VALUE OF #j SAMPLE AND MEASURED VALUE
S190
ADD TO PRESS
S192
CV=-PRESS
RETURN

Fig. 4

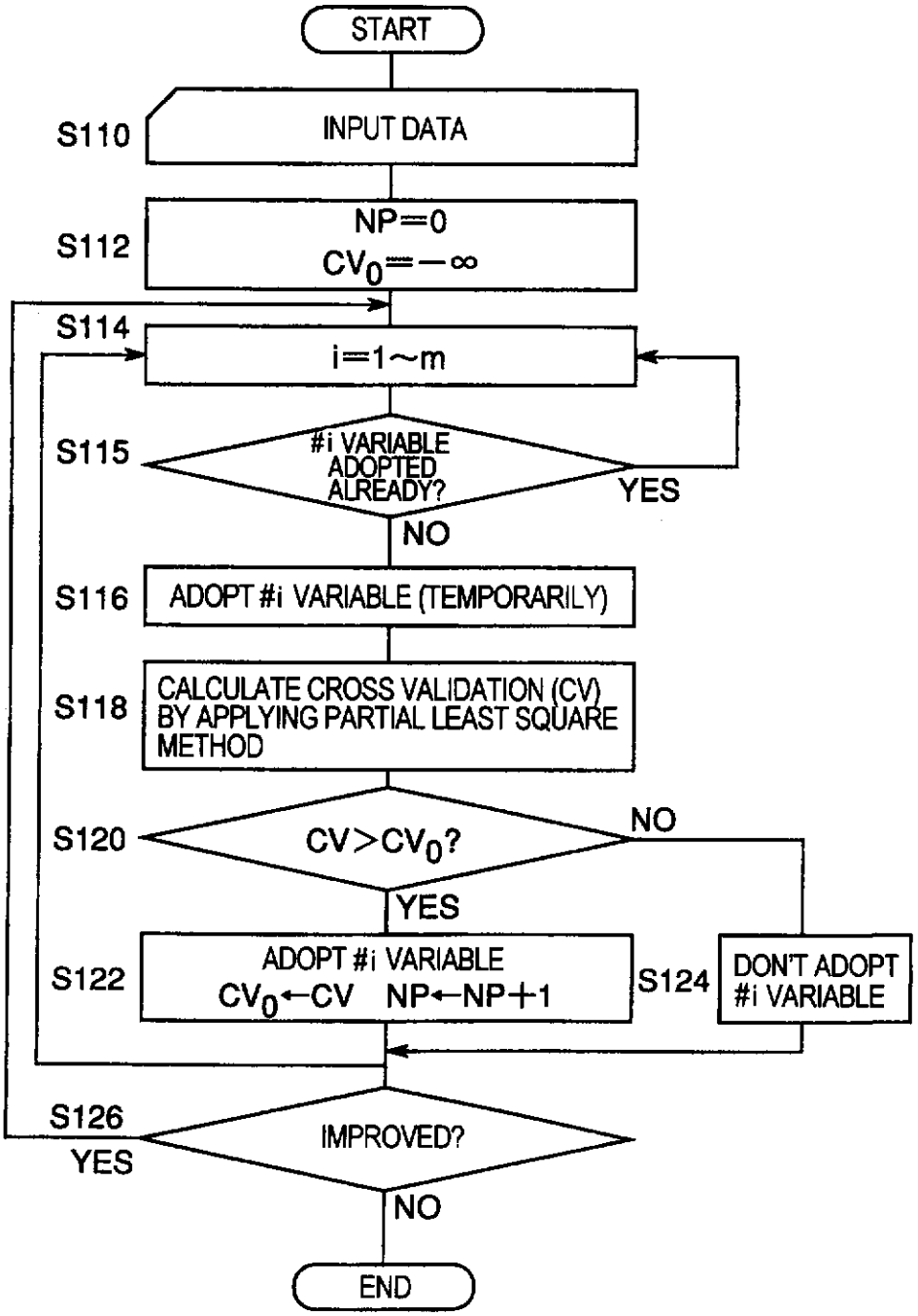

START
S110
INPUT DATA
S112
NP=0
$CV_0=-\infty$
S114
i=1~m
S115
#i VARIABLE ADOPTED ALREADY?
YES
NO
S116
ADOPT #i VARIABLE (TEMPORARILY)
S118
CALCULATE CROSS VALIDATION (CV) BY APPLYING PARTIAL LEAST SQUARE METHOD
S120
$CV>CV_0$?
NO
YES
S122
ADOPT #i VARIABLE
$CV_0 \leftarrow CV$ $NP \leftarrow NP+1$
S124
DON'T ADOPT #i VARIABLE
S126
IMPROVED?
YES
NO
END

Fig. 5

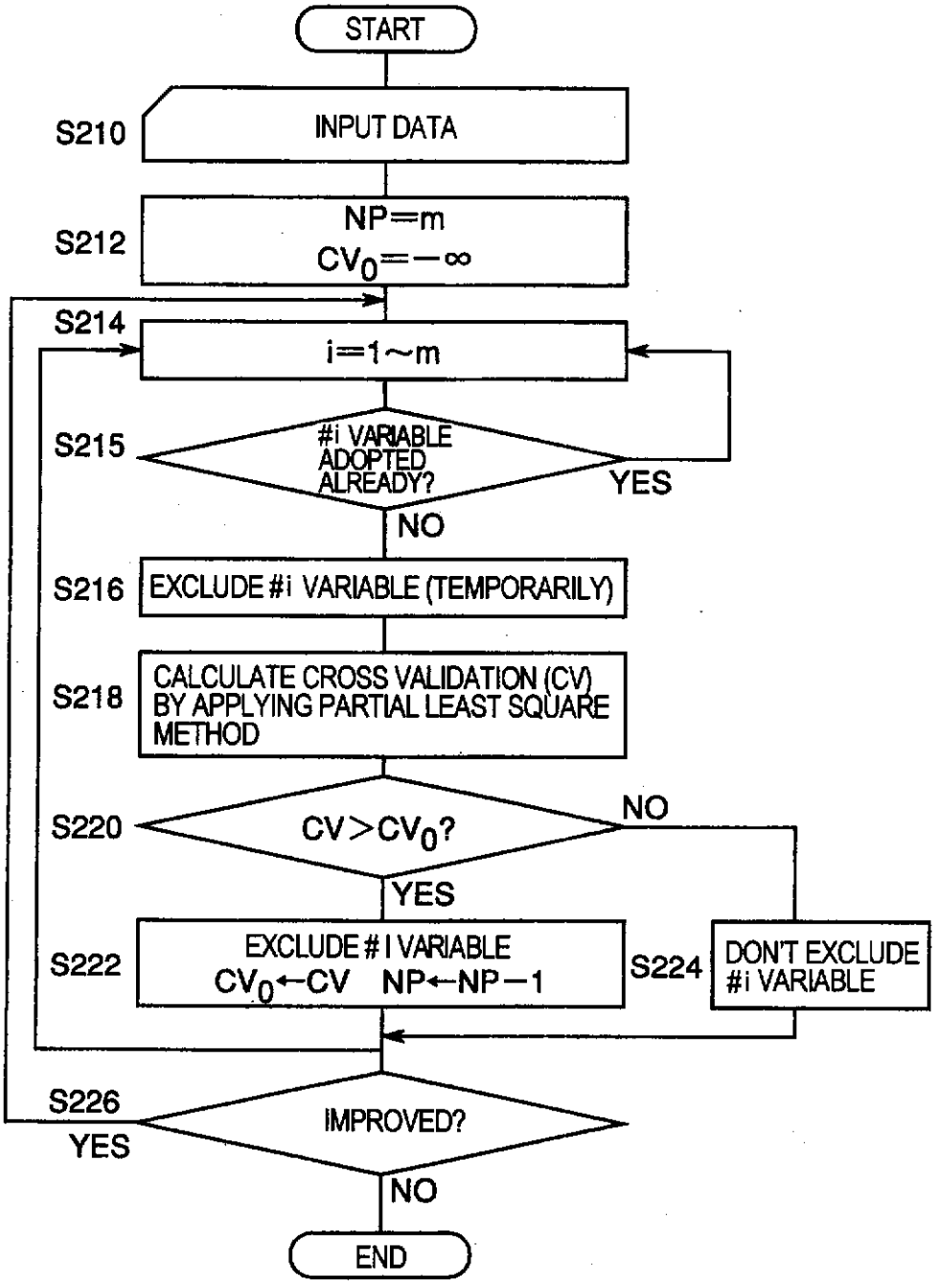

START
S210
INPUT DATA
S212
NP=m
$CV_0=-\infty$
S214
i=1~m
S215
#i VARIABLE ADOPTED ALREADY?
YES
NO
S216
EXCLUDE #i VARIABLE (TEMPORARILY)
S218
CALCULATE CROSS VALIDATION (CV) BY APPLYING PARTIAL LEAST SQUARE METHOD
S220
$CV>CV_0$?
NO
YES
S222
EXCLUDE # I VARIABLE
$CV_0 \leftarrow CV$ $NP \leftarrow NP-1$
S224
DON'T EXCLUDE #i VARIABLE
S226
IMPROVED?
YES
NO
END

Fig. 6

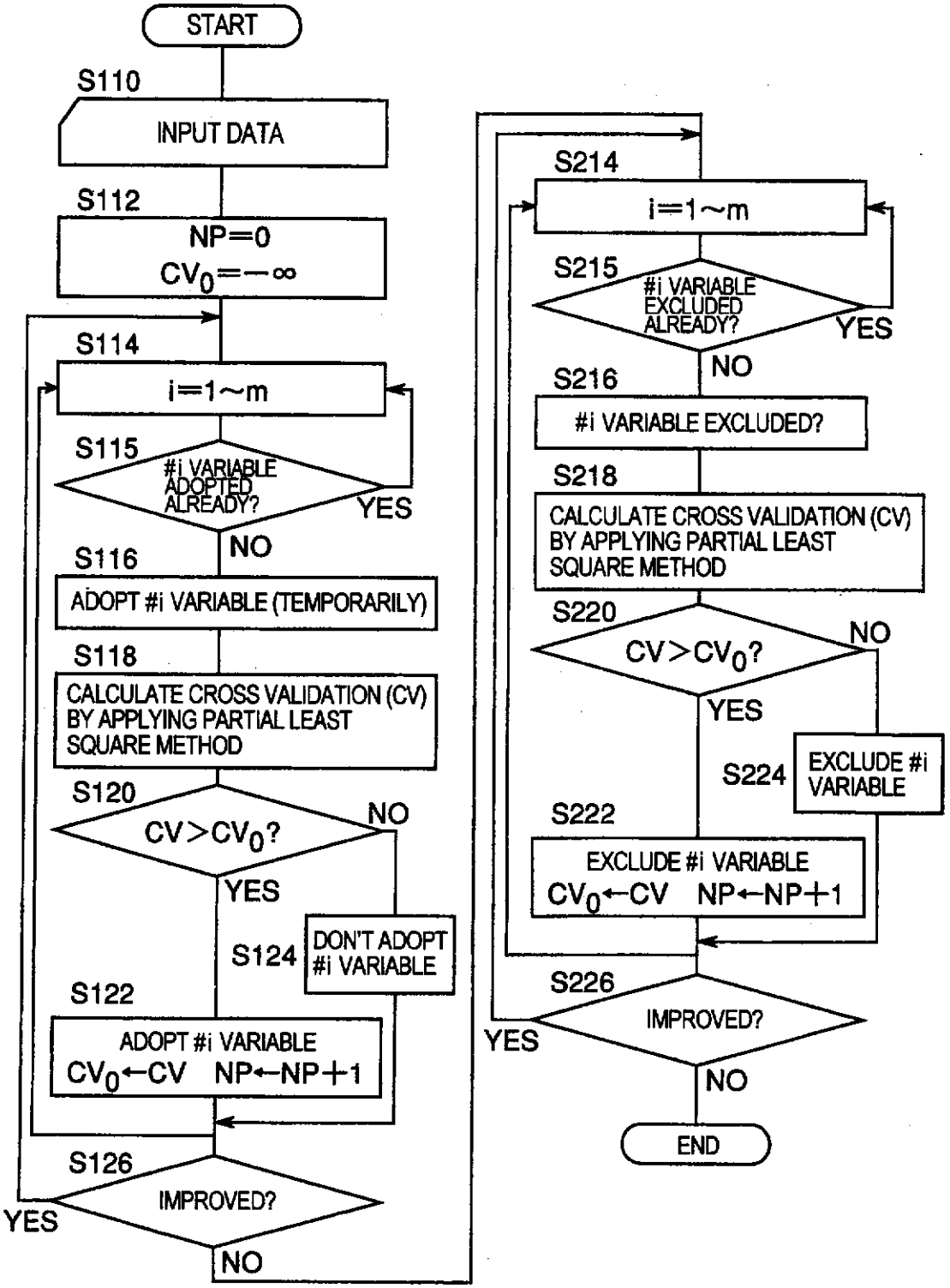

START
S110
INPUT DATA
S112
NP=0
$CV_0=-\infty$
S114
i=1~m
S115
#i VARIABLE ADOPTED ALREADY?
YES
NO
S116
ADOPT #i VARIABLE (TEMPORARILY)
S118
CALCULATE CROSS VALIDATION (CV) BY APPLYING PARTIAL LEAST SQUARE METHOD
S120
$CV>CV_0$?
NO
YES
S124
DON'T ADOPT #i VARIABLE
S122
ADOPT #i VARIABLE
$CV_0 \leftarrow CV$ $NP \leftarrow NP+1$
S126
IMPROVED?
YES
NO
S214
i=1~m
S215
#i VARIABLE EXCLUDED ALREADY?
YES
NO
S216
#i VARIABLE EXCLUDED?
S218
CALCULATE CROSS VALIDATION (CV) BY APPLYING PARTIAL LEAST SQUARE METHOD
S220
$CV>CV_0$?
NO
YES
S224
EXCLUDE #i VARIABLE
S222
EXCLUDE #i VARIABLE
$CV_0 \leftarrow CV$ $NP \leftarrow NP+1$
S226
IMPROVED?
YES
NO
END

Fig. 7

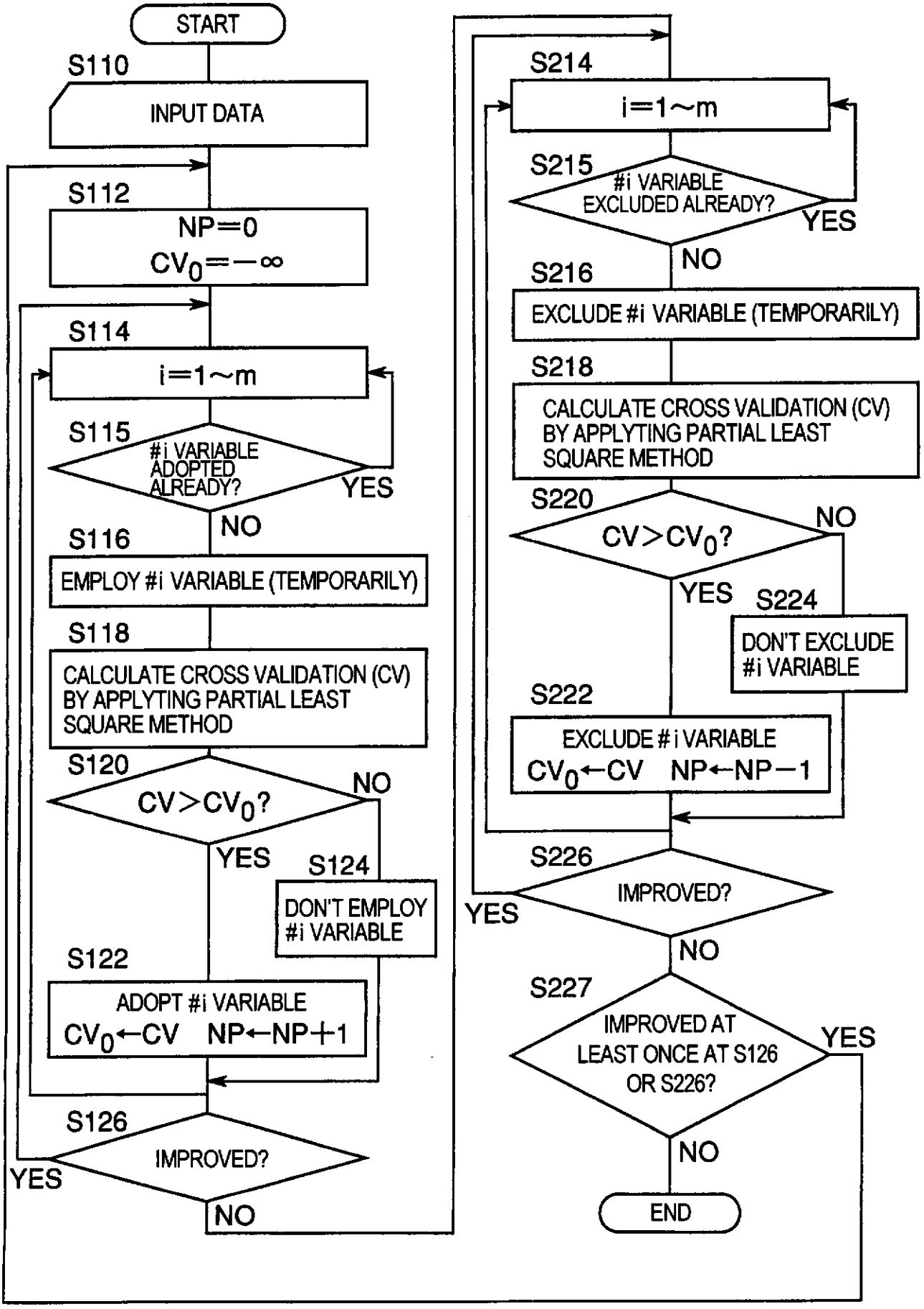

START
S110
INPUT DATA
S112
NP=0
$CV_0=-\infty$
S114
i=1~m
S115
#i VARIABLE ADOPTED ALREADY?
YES
NO
S116
EMPLOY #i VARIABLE (TEMPORARILY)
S118
CALCULATE CROSS VALIDATION (CV) BY APPLYTING PARTIAL LEAST SQUARE METHOD
S120
$CV>CV_0$?
NO
YES
S124
DON'T EMPLOY #i VARIABLE
S122
ADOPT #i VARIABLE
$CV_0 \leftarrow CV$ $NP \leftarrow NP+1$
S126
IMPROVED?
YES
NO
S214
i=1~m
S215
#i VARIABLE EXCLUDED ALREADY?
YES
NO
S216
EXCLUDE #i VARIABLE (TEMPORARILY)
S218
CALCULATE CROSS VALIDATION (CV) BY APPLYTING PARTIAL LEAST SQUARE METHOD
S220
$CV>CV_0$?
NO
YES
S224
DON'T EXCLUDE #i VARIABLE
S222
EXCLUDE #i VARIABLE
$CV_0 \leftarrow CV$ $NP \leftarrow NP-1$
S226
IMPROVED?
YES
NO
S227
IMPROVED AT LEAST ONCE AT S126 OR S226?
YES
NO
END

Fig. 8

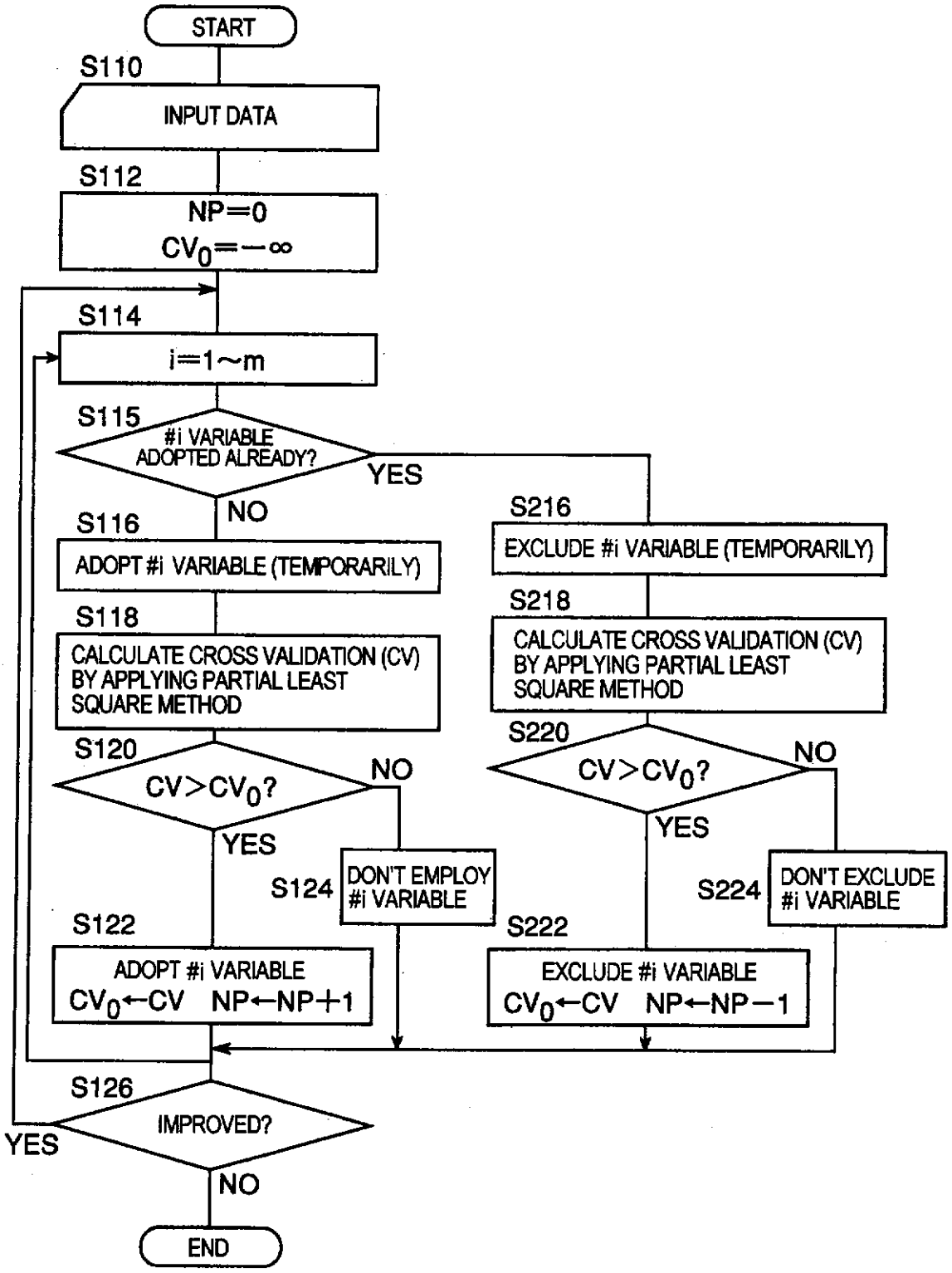

START
S110
INPUT DATA
S112
NP=0
$CV_0=-\infty$
S114
i=1~m
S115
#i VARIABLE ADOPTED ALREADY?
YES
NO
S116
ADOPT #i VARIABLE (TEMPORARILY)
S118
CALCULATE CROSS VALIDATION (CV) BY APPLYING PARTIAL LEAST SQUARE METHOD
S120
$CV>CV_0$?
NO
YES
S124
DON'T EMPLOY #i VARIABLE
S122
ADOPT #i VARIABLE
$CV_0 \leftarrow CV$ $NP \leftarrow NP+1$
S216
EXCLUDE #i VARIABLE (TEMPORARILY)
S218
CALCULATE CROSS VALIDATION (CV) BY APPLYING PARTIAL LEAST SQUARE METHOD
S220
$CV>CV_0$?
NO
YES
S224
DON'T EXCLUDE #i VARIABLE
S222
EXCLUDE #i VARIABLE
$CV_0 \leftarrow CV$ $NP \leftarrow NP-1$
S126
IMPROVED?
YES
NO
END

Fig. 9

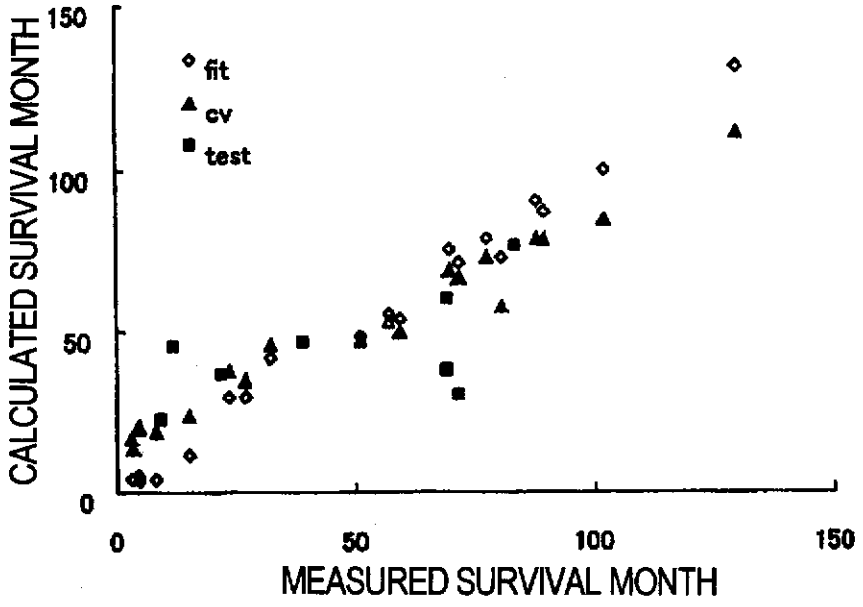

CALCULATED SURVIVAL MONTH
150
100
50
0
fit
cv
test
0
50
100
150
MEASURED SURVIVAL MONTH

Fig. 10

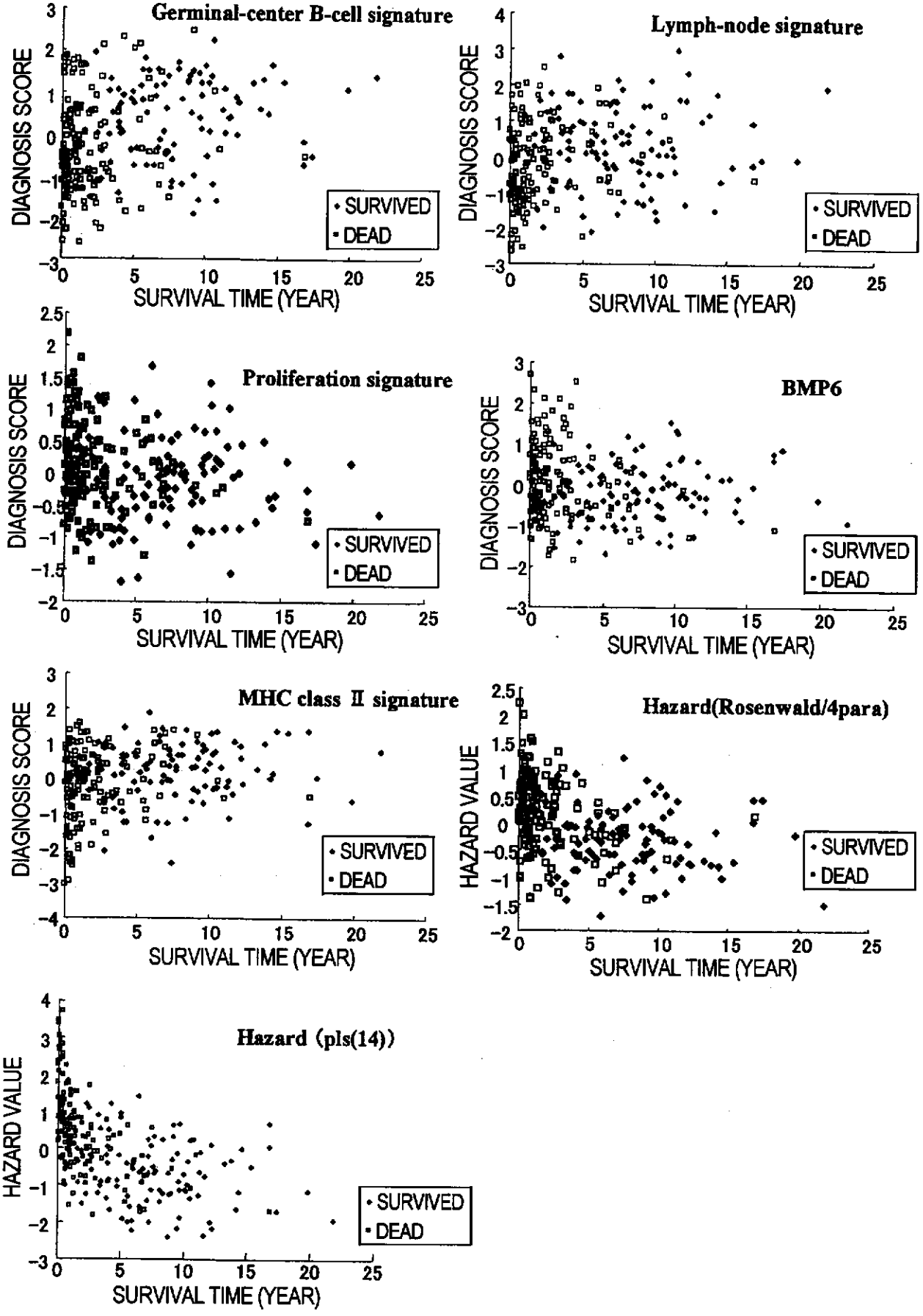

Germinal-center B-cell signature
DIAGNOSIS SCORE
SURVIVAL TIME (YEAR)
• SURVIVED
• DEAD
Lymph-node signature
DIAGNOSIS SCORE
SURVIVAL TIME (YEAR)
• SURVIVED
• DEAD
Proliferation signature
DIAGNOSIS SCORE
SURVIVAL TIME (YEAR)
• SURVIVED
• DEAD
BMP6
DIAGNOSIS SCORE
SURVIVAL TIME (YEAR)
• SURVIVED
• DEAD
MHC class II signature
DIAGNOSIS SCORE
SURVIVAL TIME (YEAR)
• SURVIVED
• DEAD
Hazard(Rosenwald/4para)
HAZARD VALUE
SURVIVAL TIME (YEAR)
• SURVIVED
• DEAD
Hazard (pls(14))
HAZARD VALUE
SURVIVAL TIME (YEAR)
• SURVIVED
• DEAD

Fig. 11

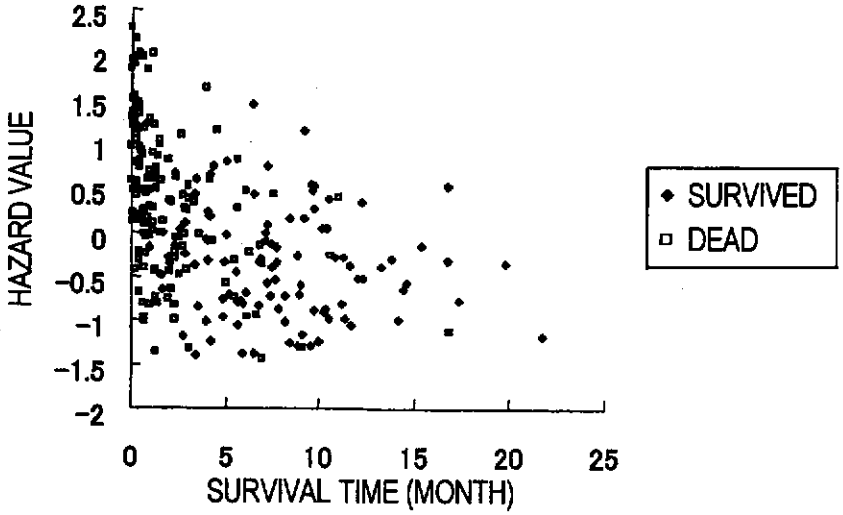


Fig. 12

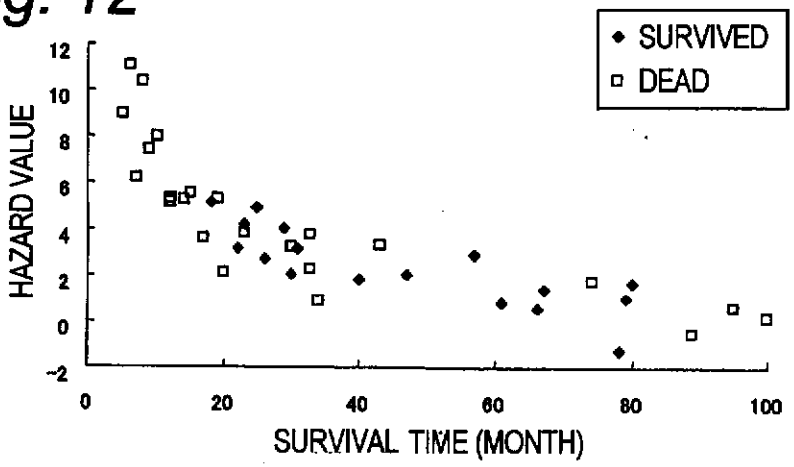


Fig. 13

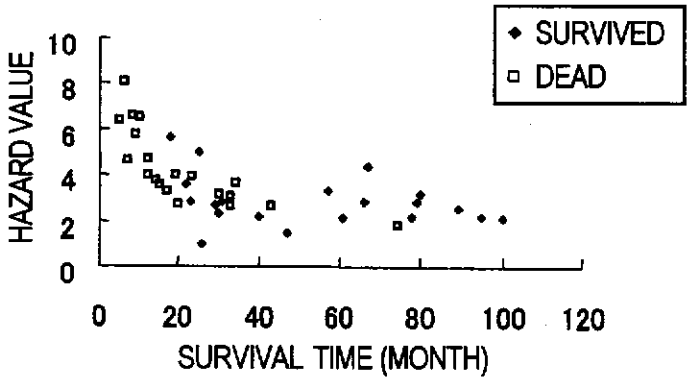


Fig. 14

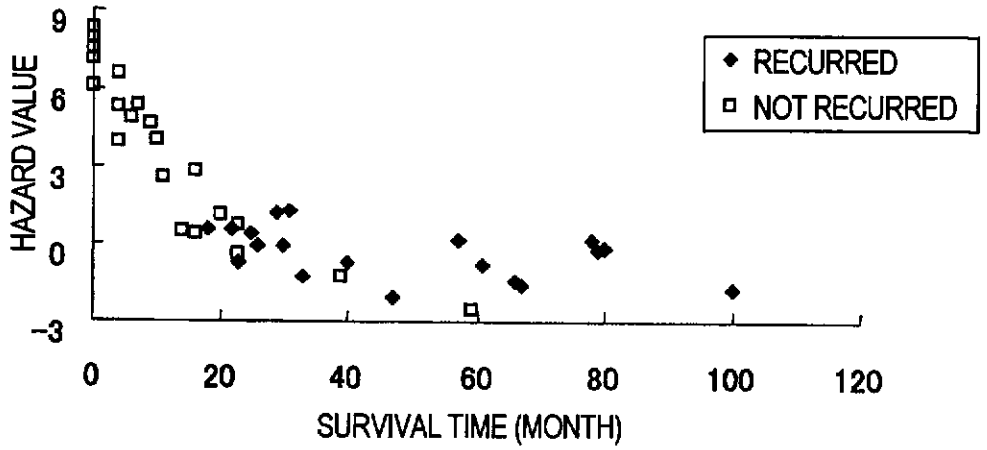

HAZARD VALUE
9
6
3
0
-3
0
20
40
60
80
100
120
SURVIVAL TIME (MONTH)
RECURRED
NOT RECURRED

Fig. 15

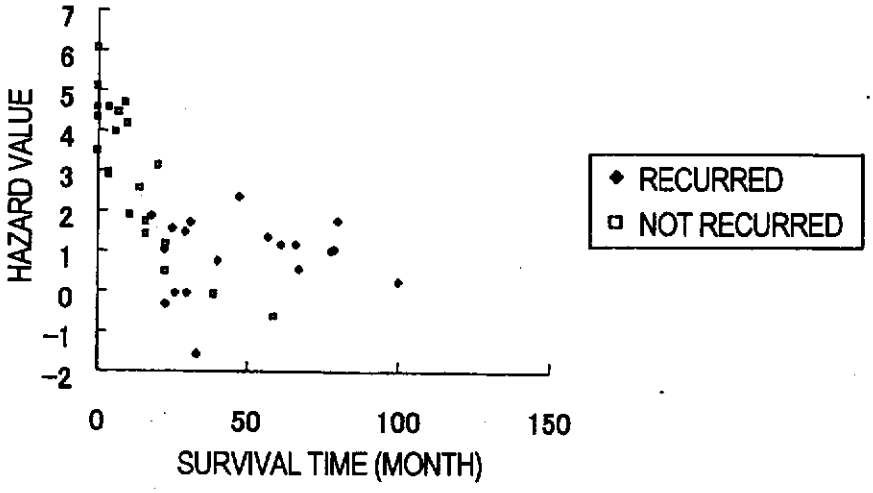

HAZARD VALUE
7
6
5
4
3
2
1
0
-1
-2
0
50
100
150
SURVIVAL TIME (MONTH)
RECURRED
NOT RECURRED

Fig. 16

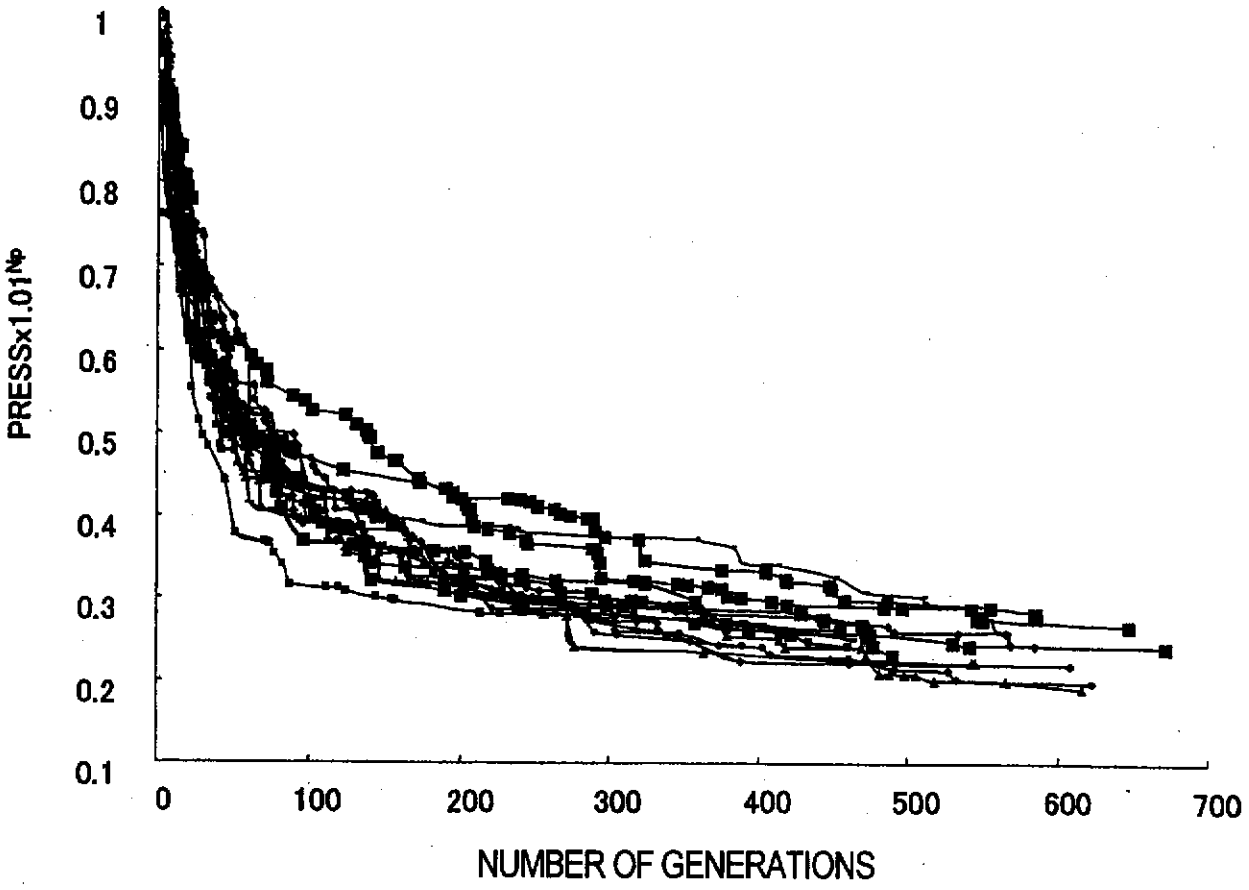

PRESSx1.01^№
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
100
200
300
400
500
600
700
NUMBER OF GENERATIONS

Fig. 17

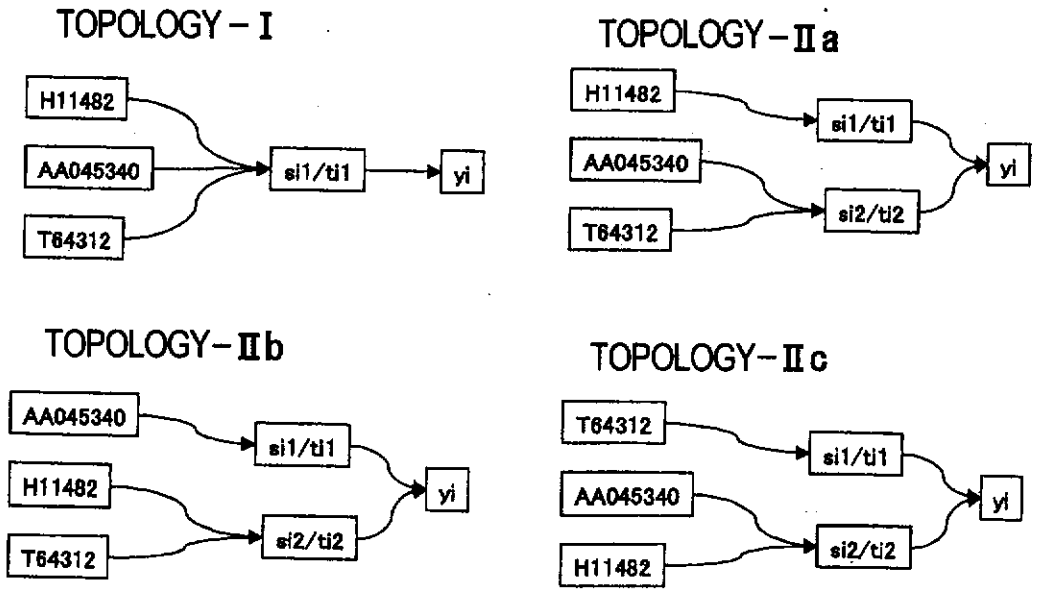

TOPOLOGY－Ⅰ
H11482
AA045340
T64312
si1/ti1
yi
TOPOLOGY－Ⅱa
H11482
AA045340
T64312
si1/ti1
si2/ti2
yi
TOPOLOGY－Ⅱb
AA045340
H11482
T64312
si1/ti1
si2/ti2
yi
TOPOLOGY－Ⅱc
T64312
AA045340
H11482
si1/ti1
si2/ti2
yi

Fig. 18

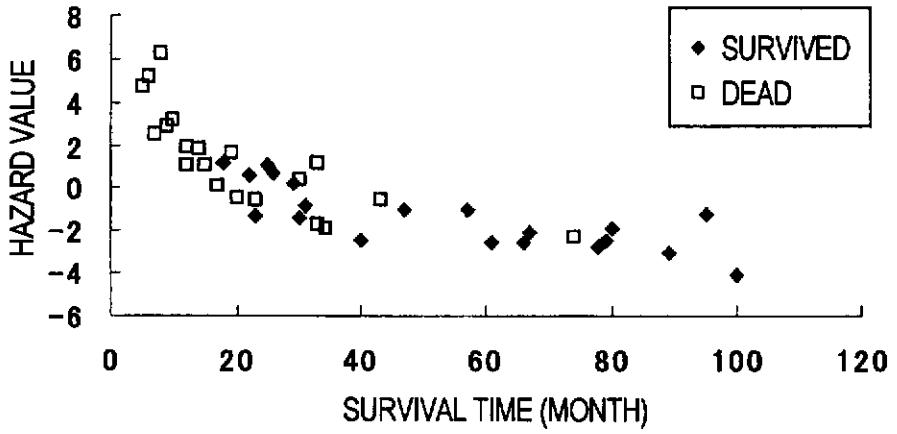
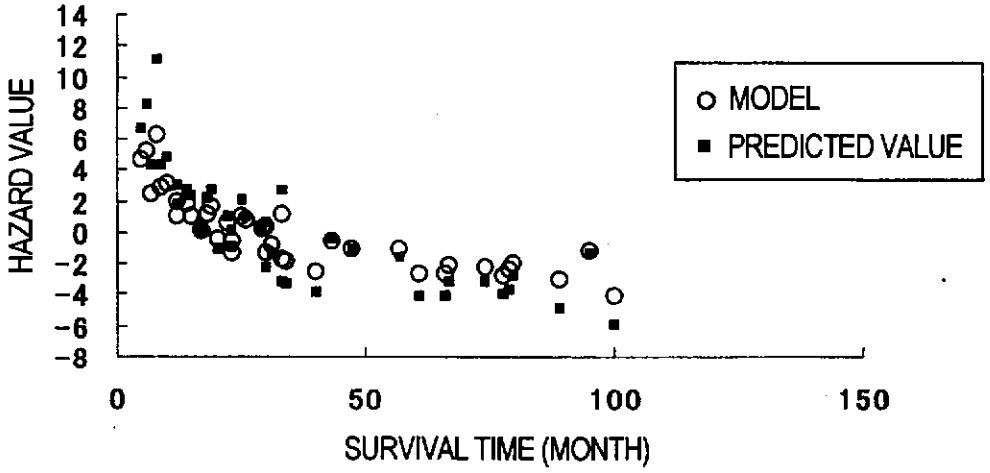

HAZARD VALUE
8
6
4
2
0
−2
−4
−6
0
20
40
60
80
100
120
SURVIVAL TIME (MONTH)
SURVIVED
DEAD

Fig. 19


HAZARD VALUE
14
12
10
8
6
4
2
0
−2
−4
−6
−8
0
50
100
150
SURVIVAL TIME (MONTH)
MODEL
PREDICTED VALUE