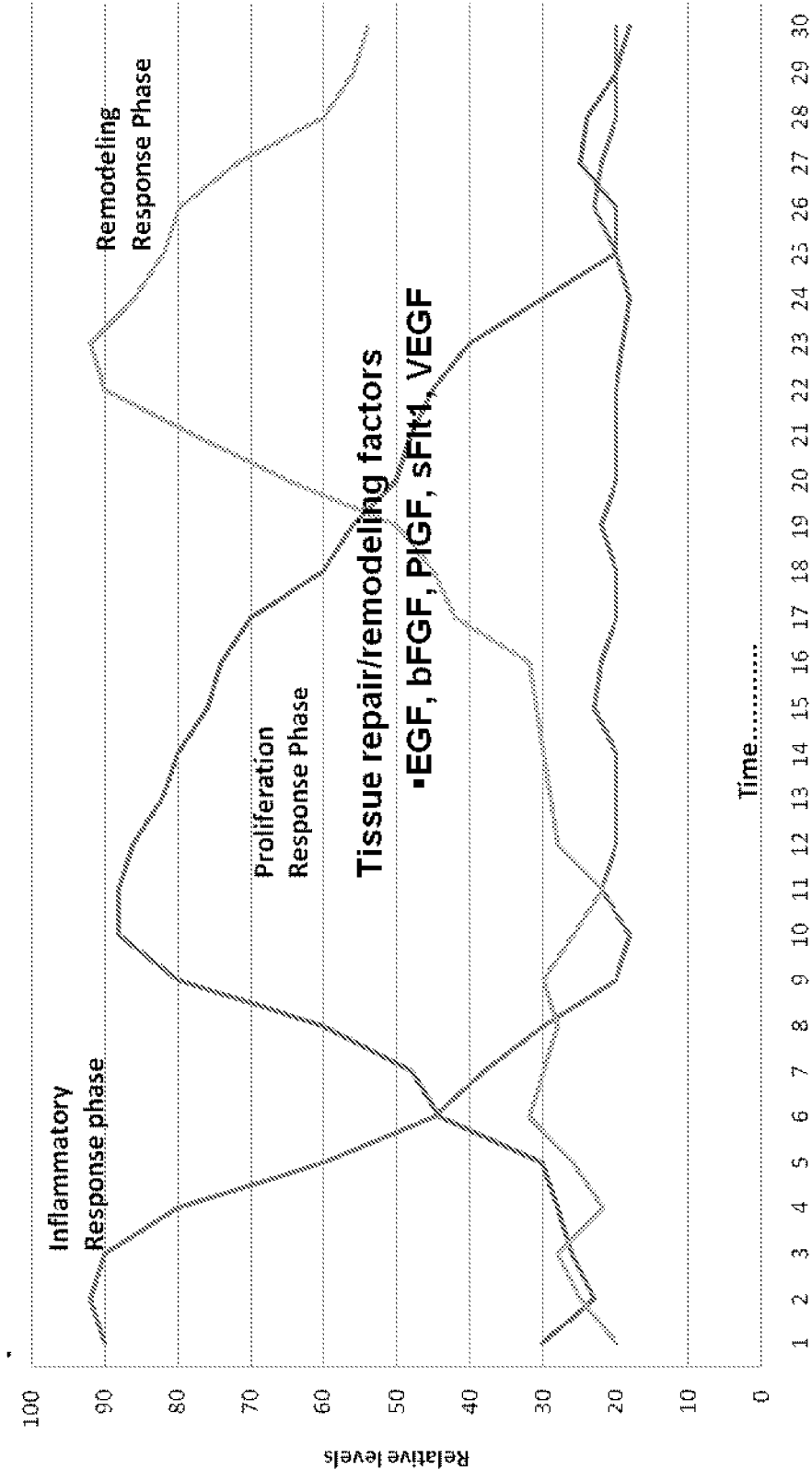


Personalized Inflammatory Disease Activity Profile



Method

Drug Levels

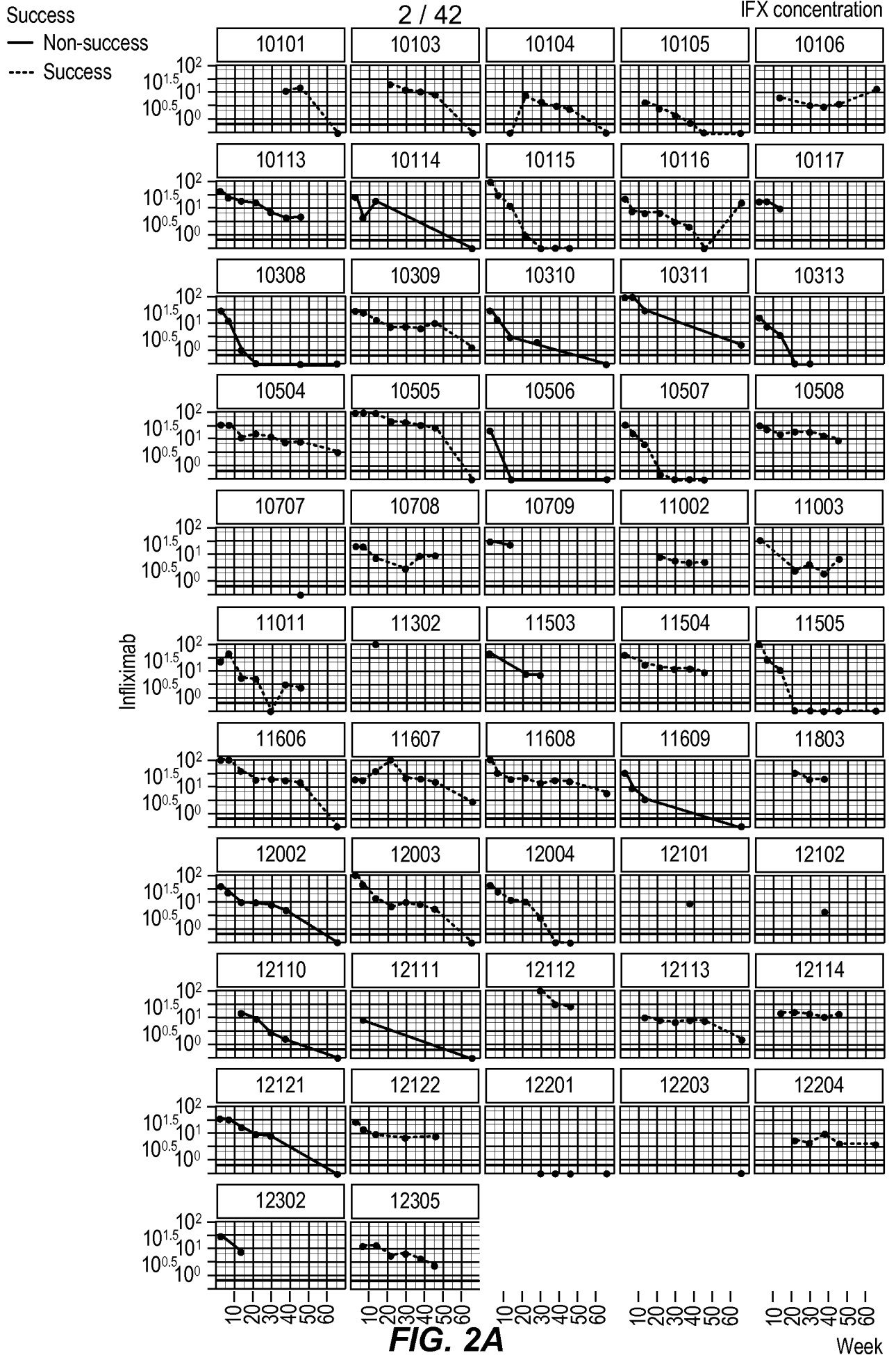
Anti-drug Antibody Levels

Inflammatory Markers

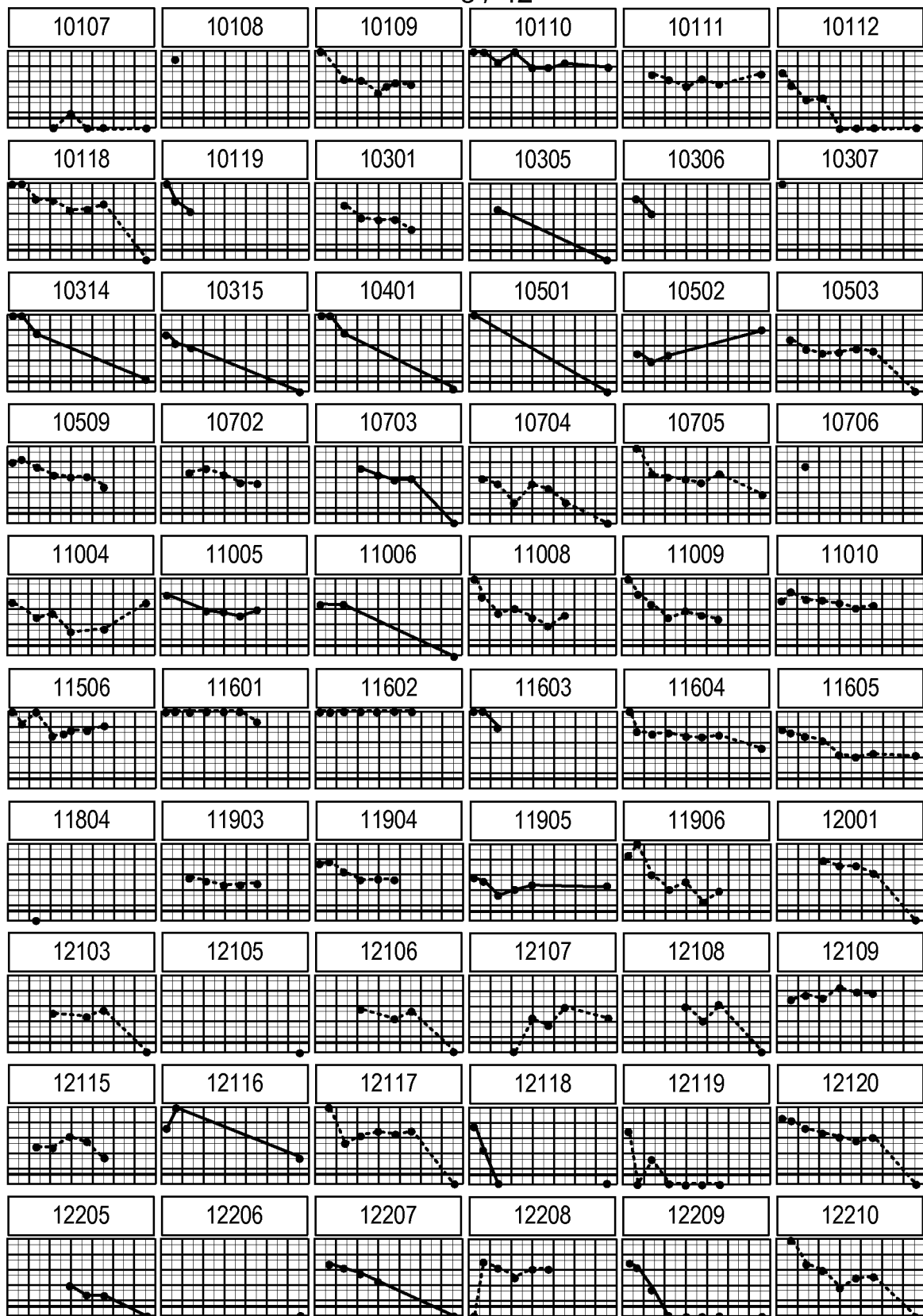
Anti-Inflammatory Markers

Mucosal Healing Markers

FIG. 1



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1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6

FIG. 2A (Continued)

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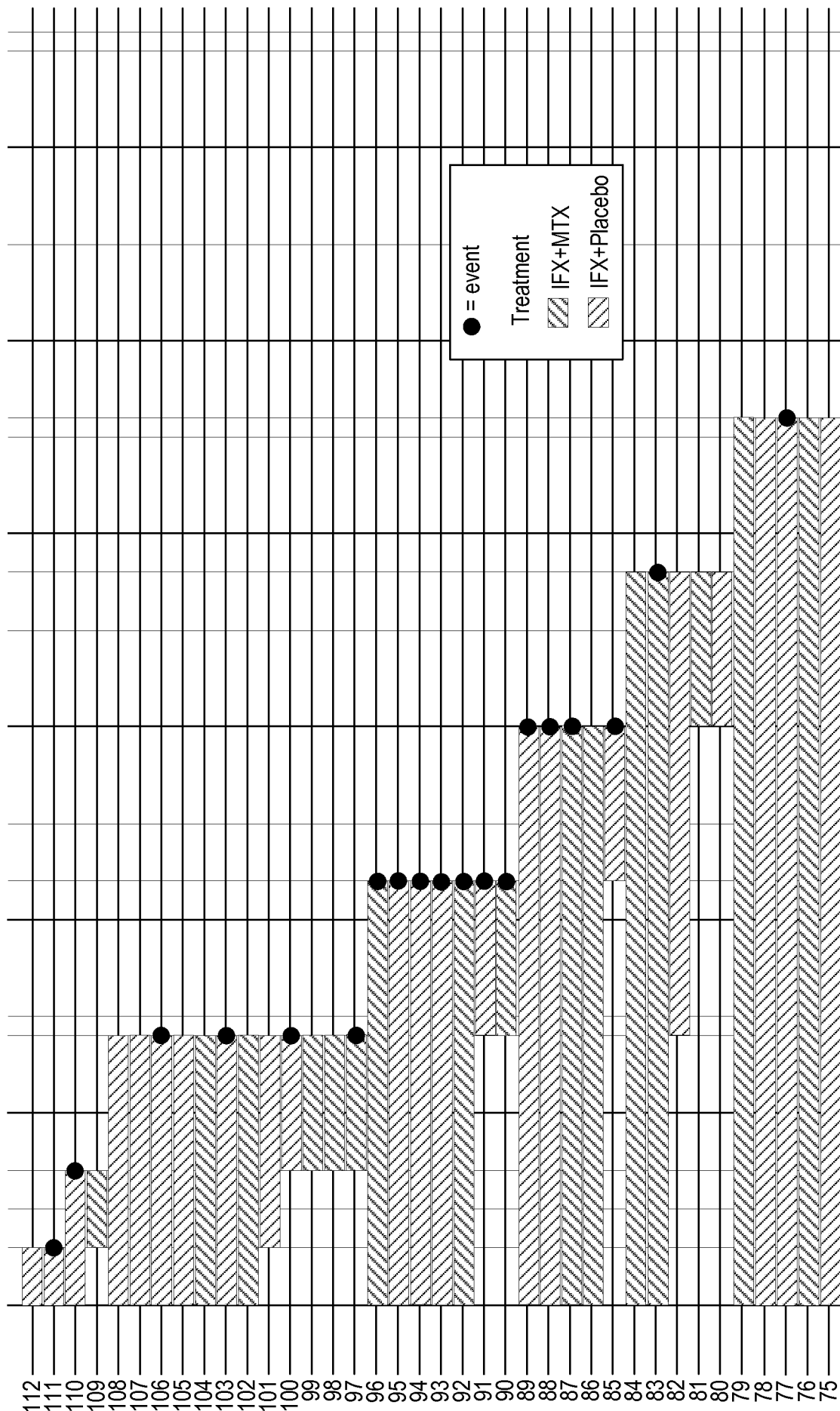


FIG. 2B

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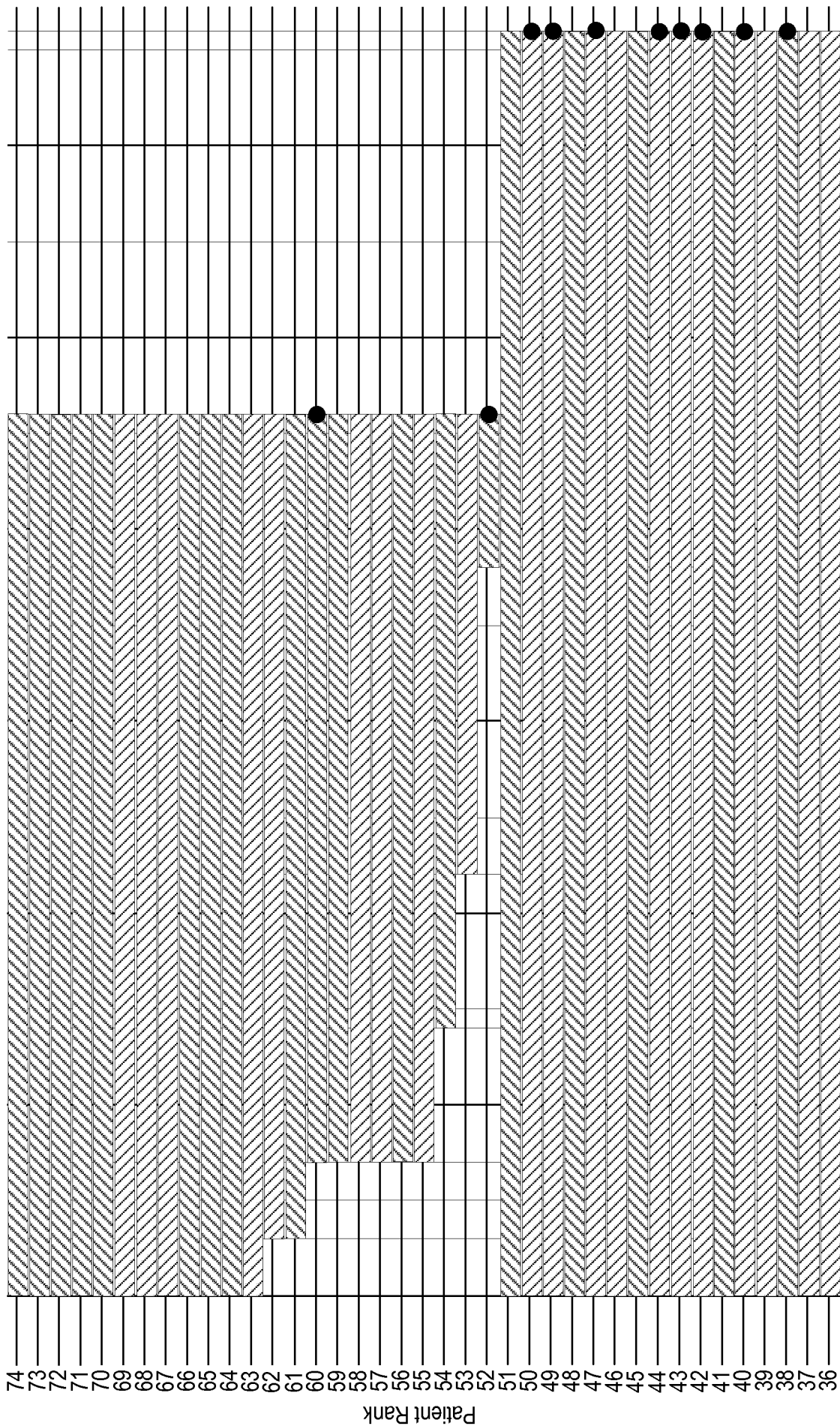


FIG. 2B (Continued)

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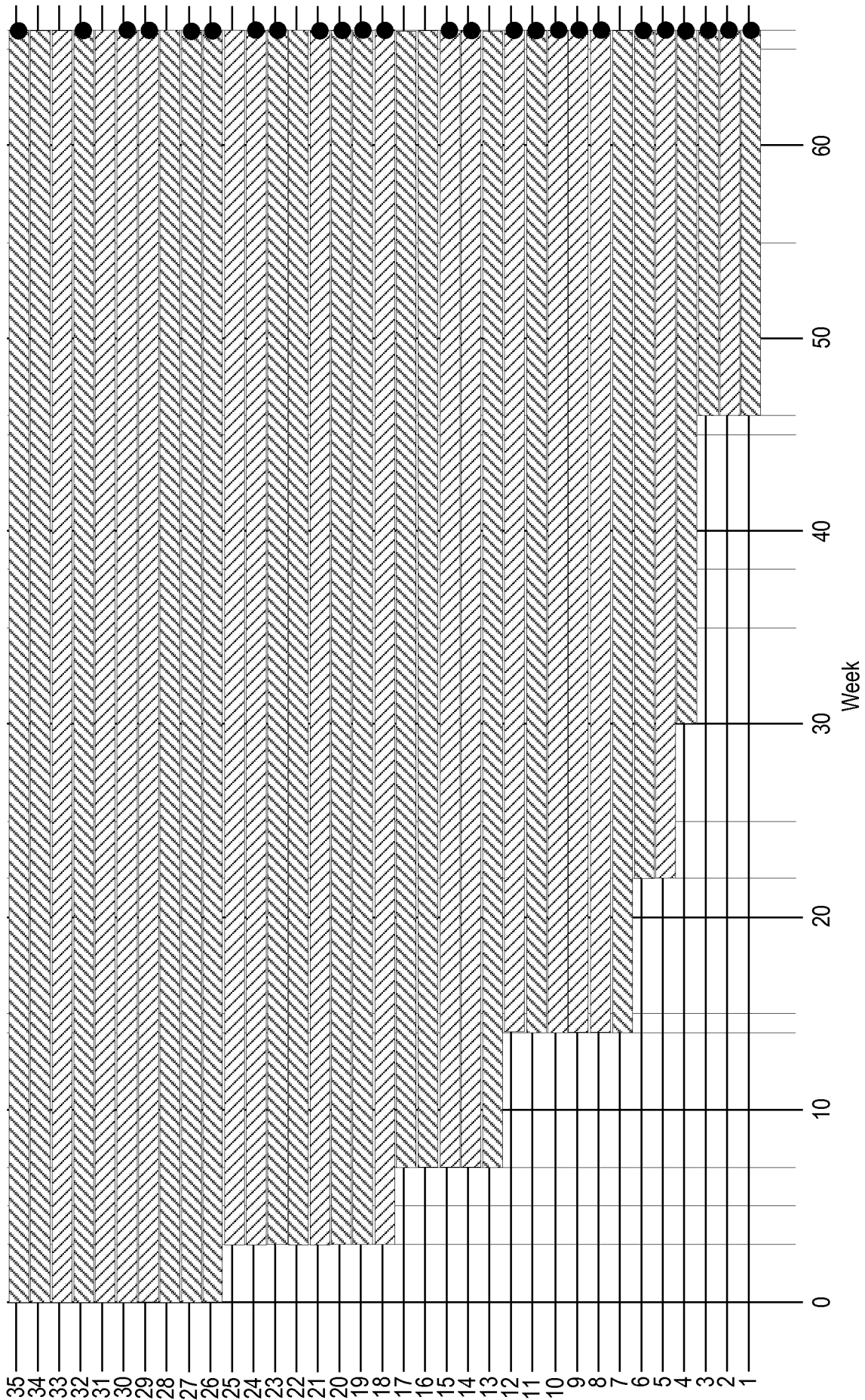
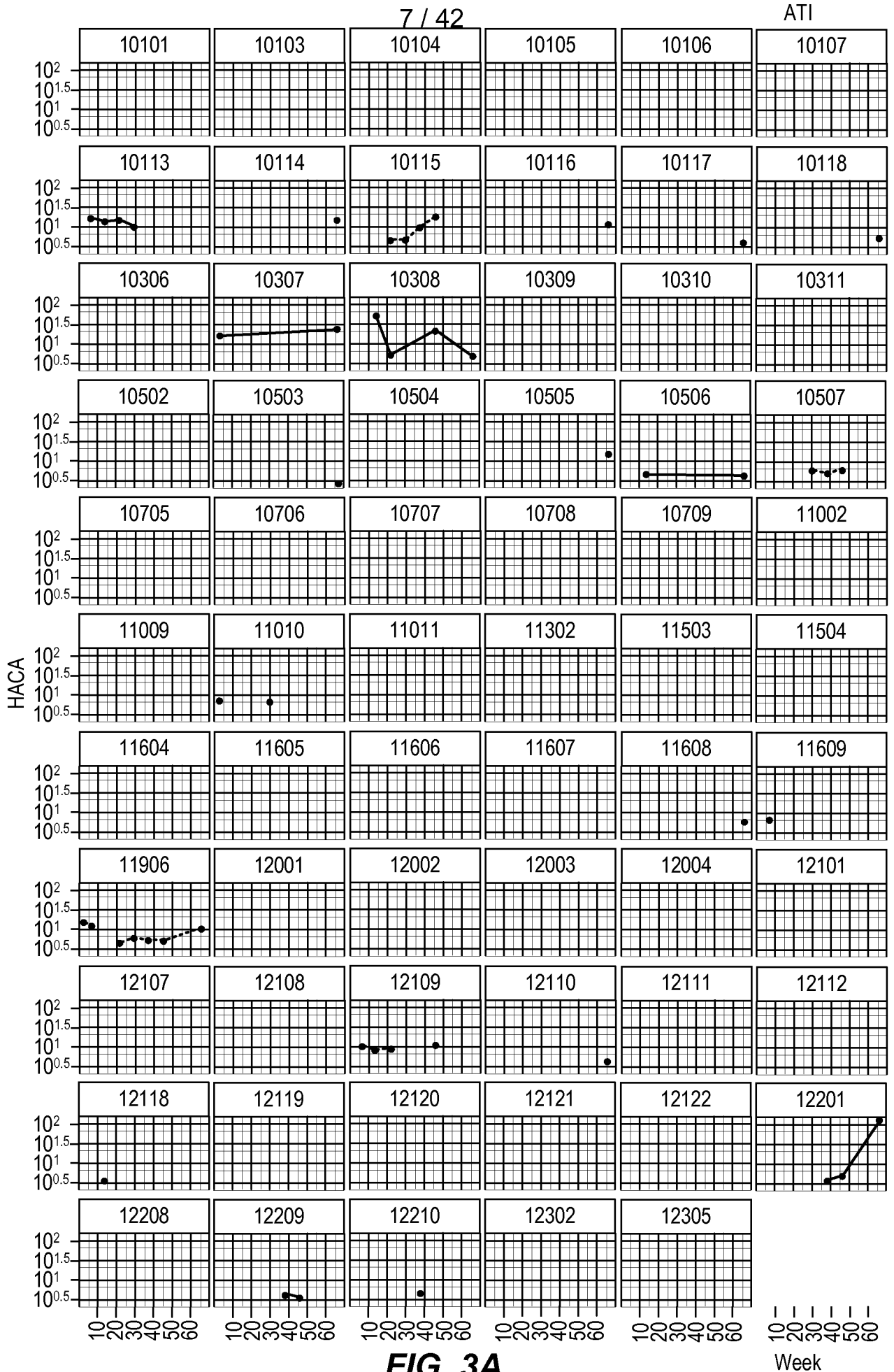
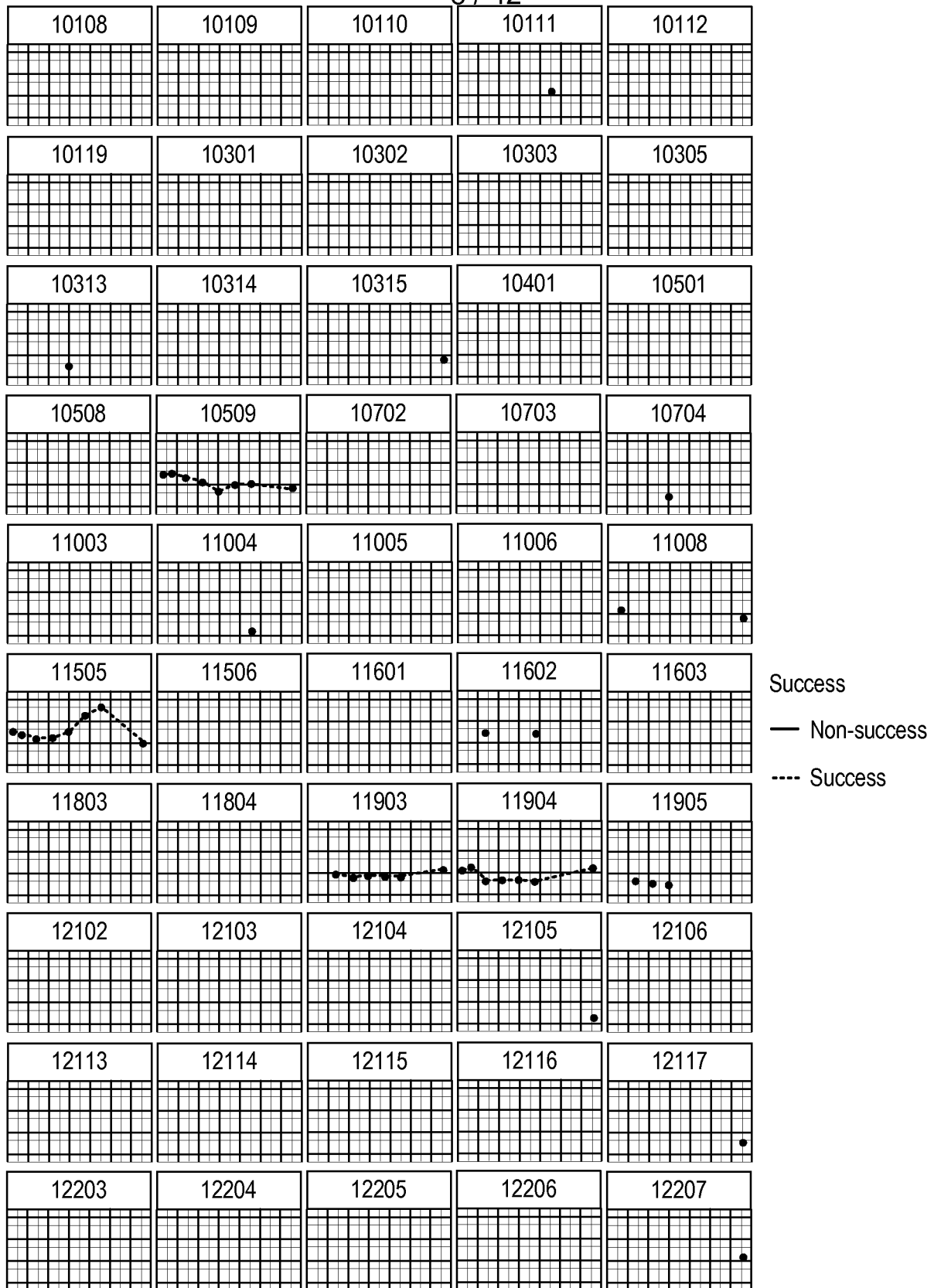


FIG. 2B (Continued)



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1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8 9 10

FIG. 3A (Continued)

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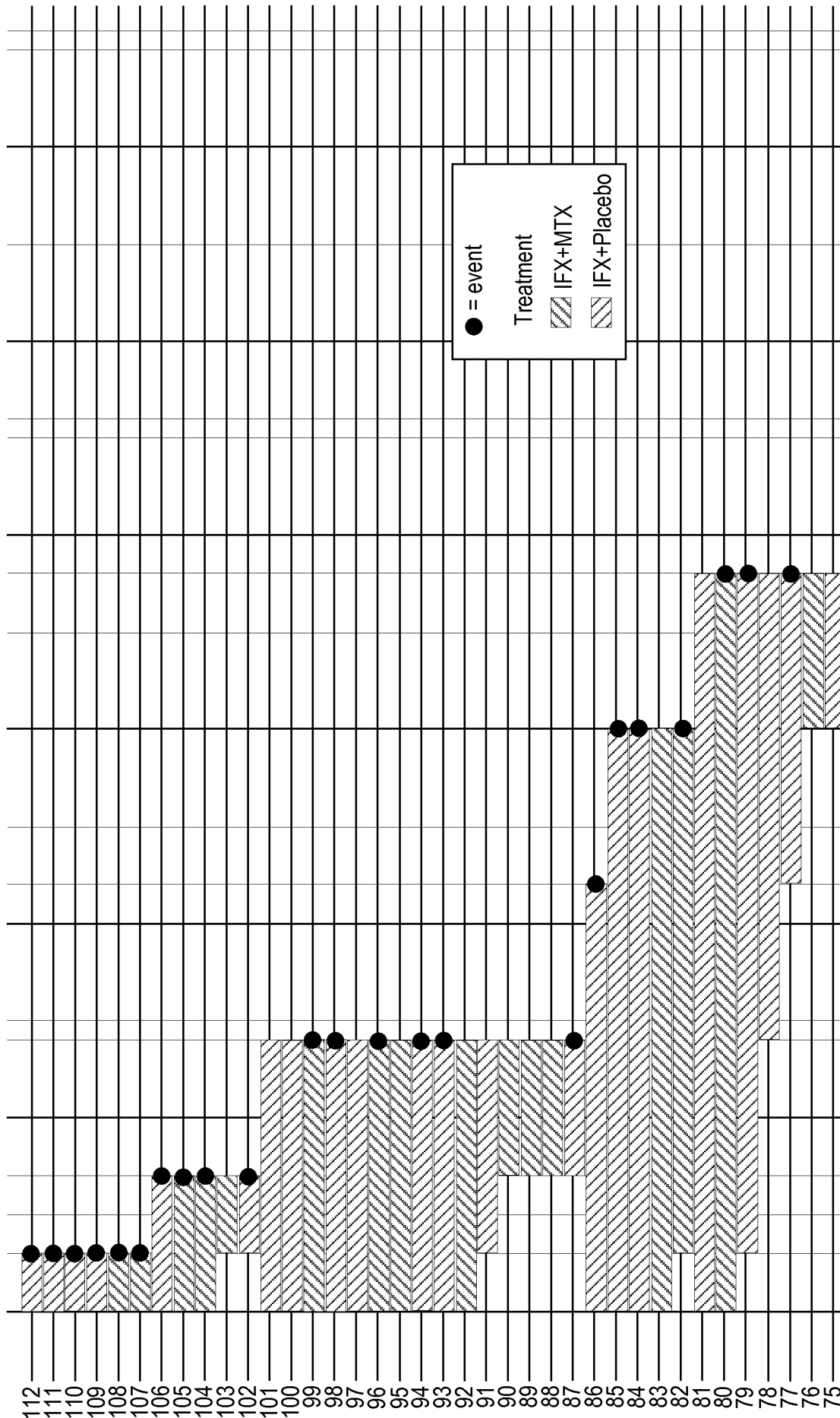


FIG. 3B

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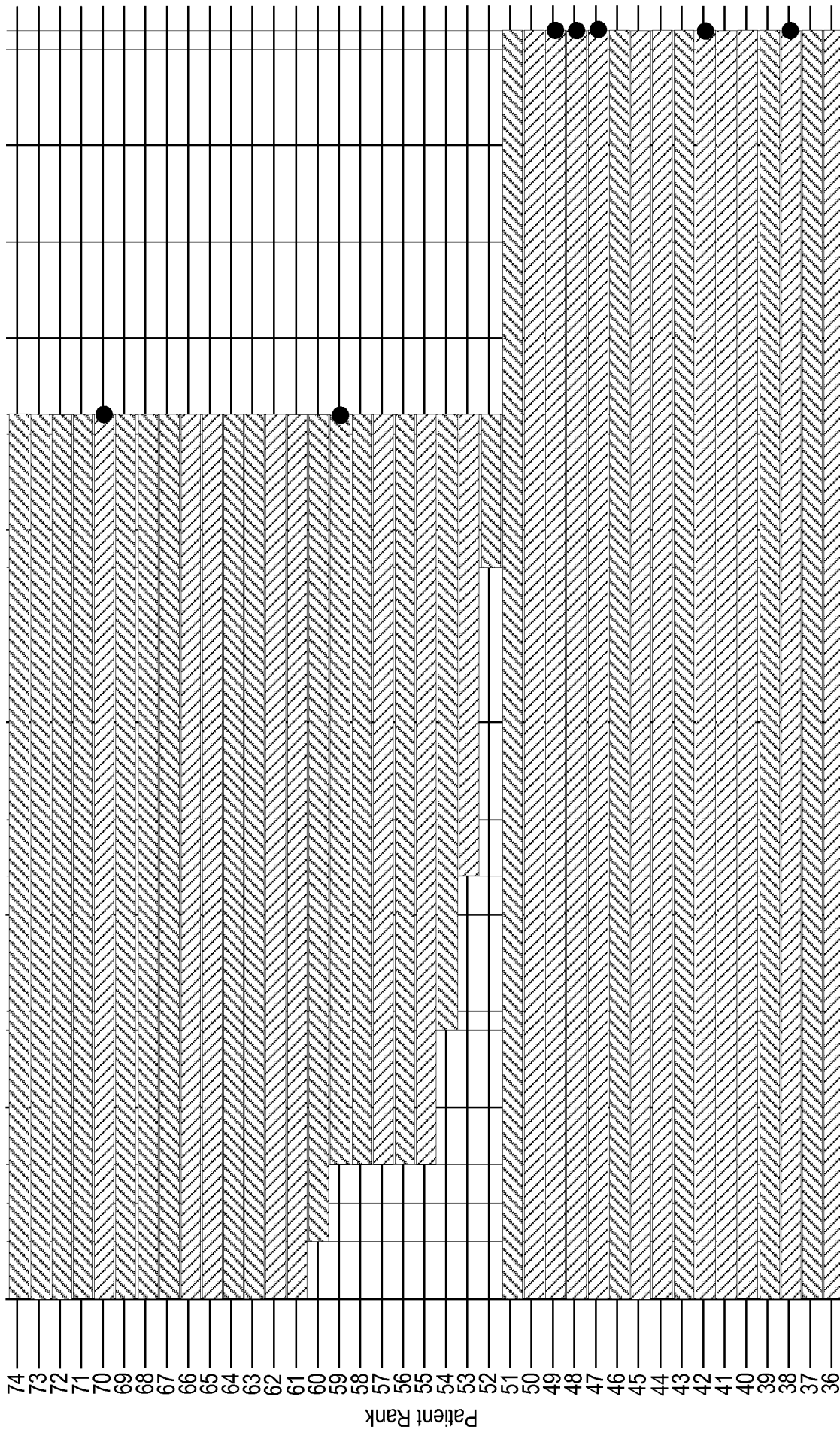


FIG. 3B (Continued)

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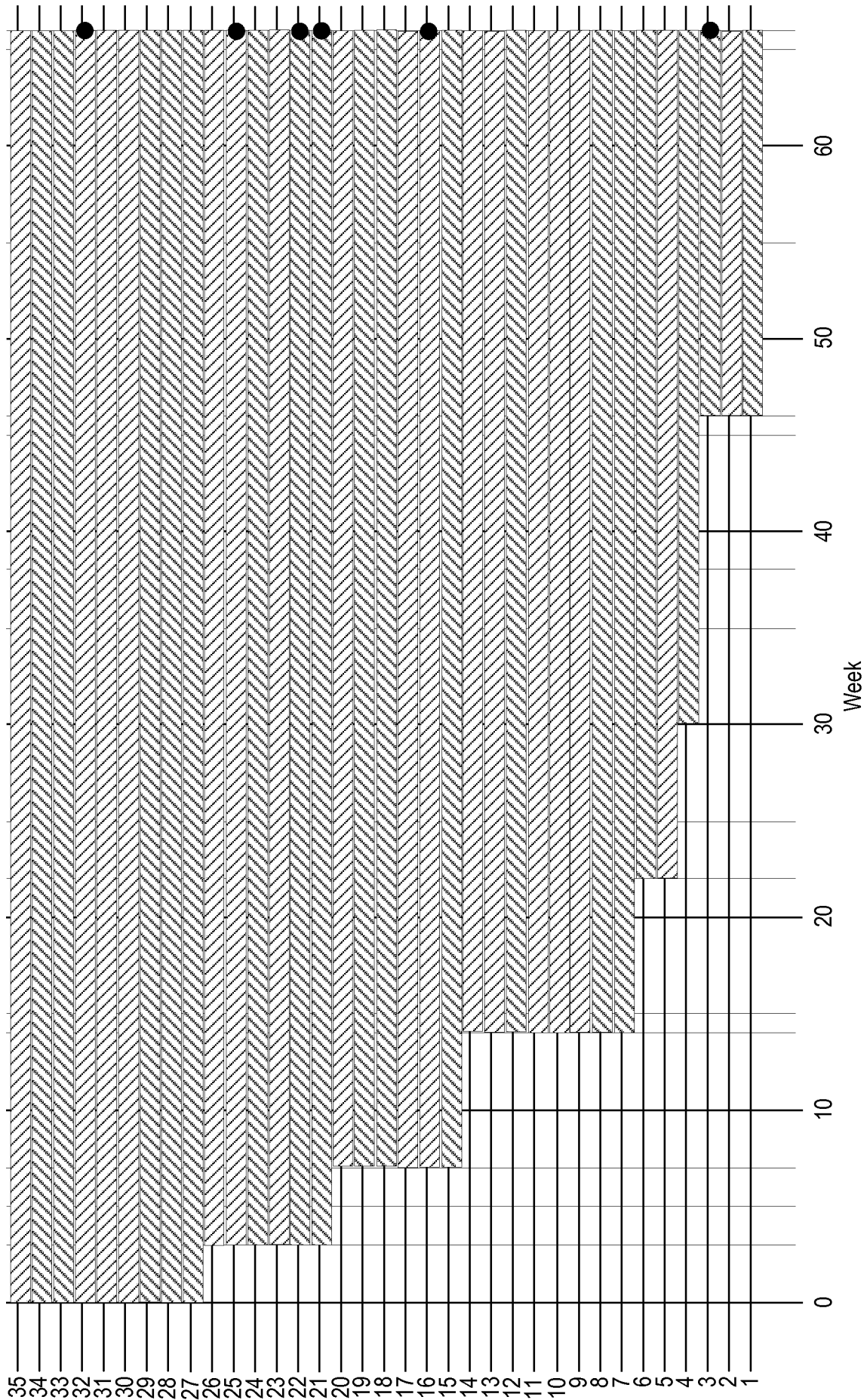


FIG. 3B (Continued)

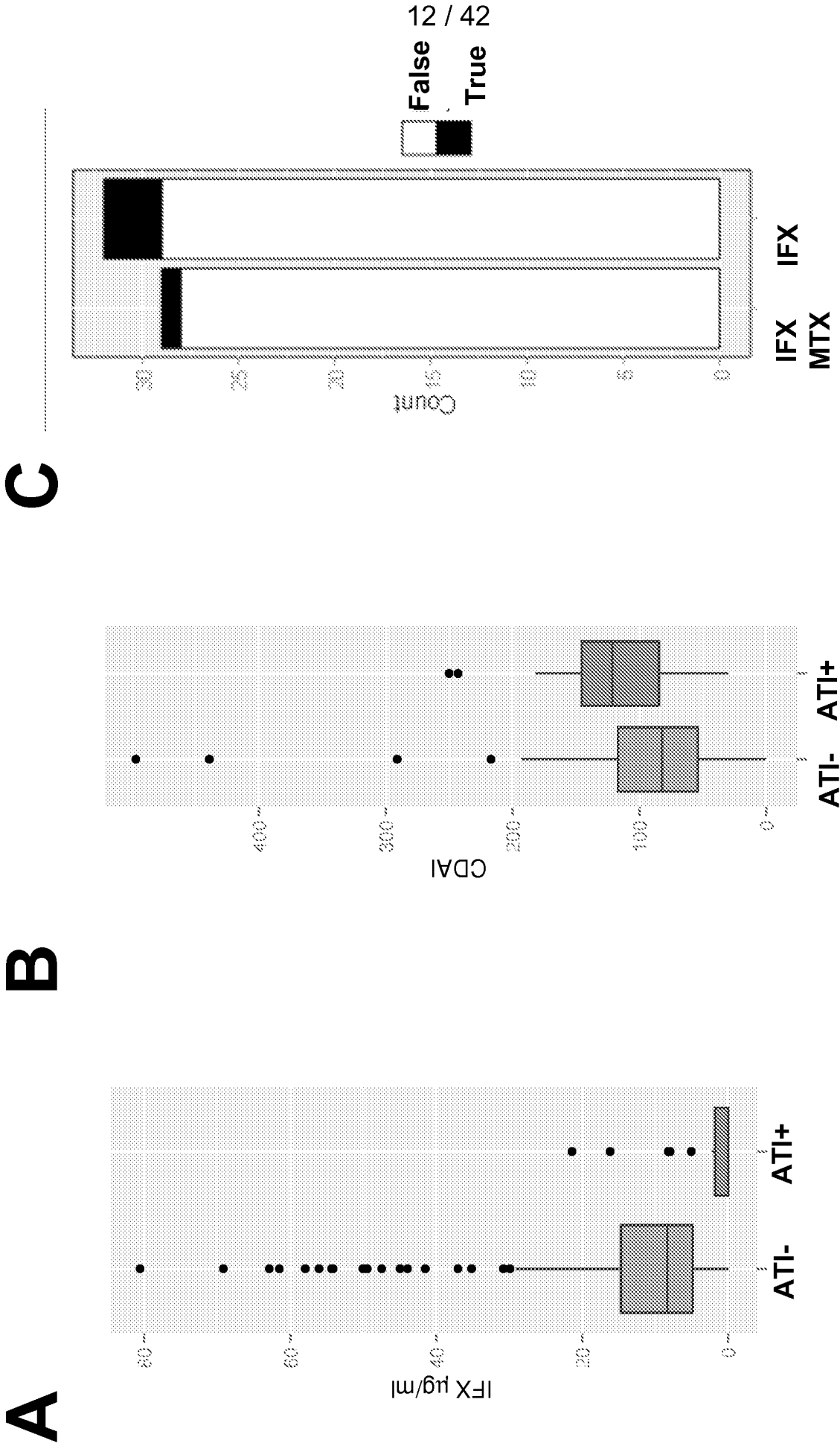
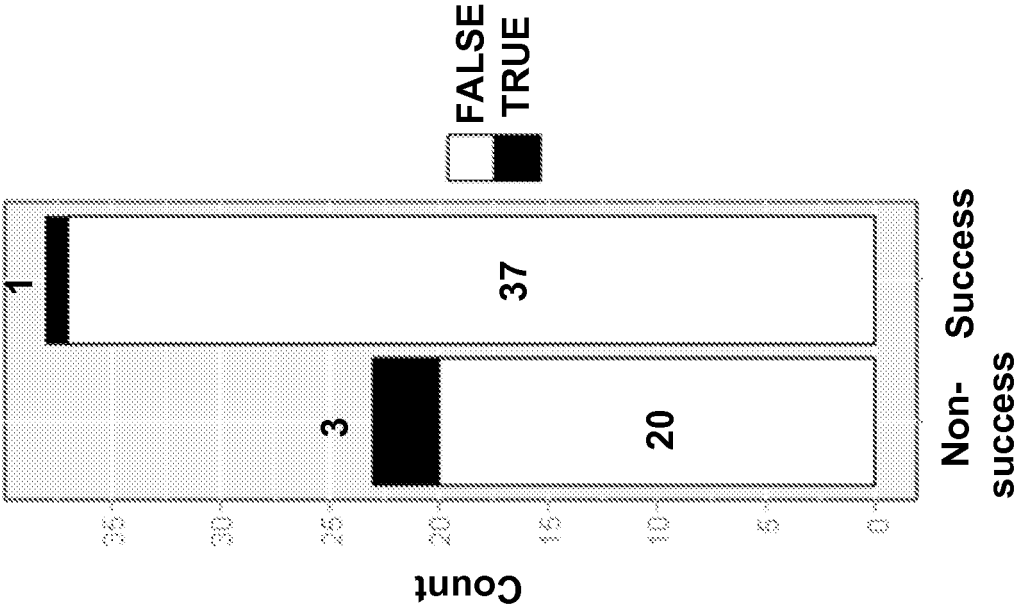


FIG. 4A-C

A



B

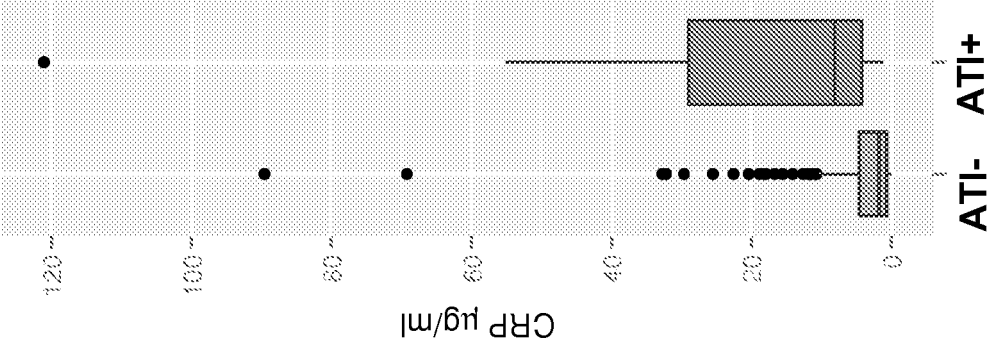


FIG. 5A-B

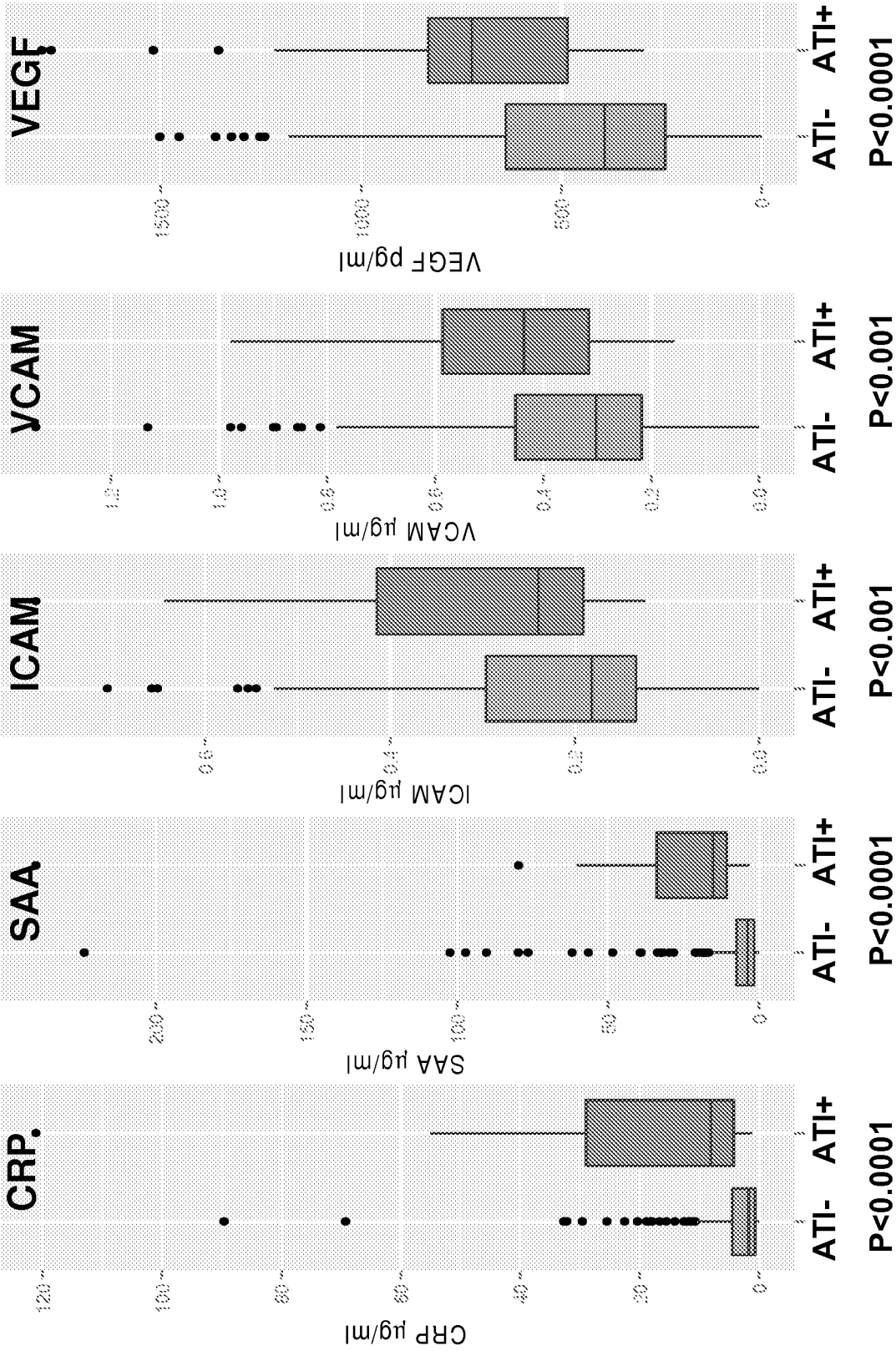
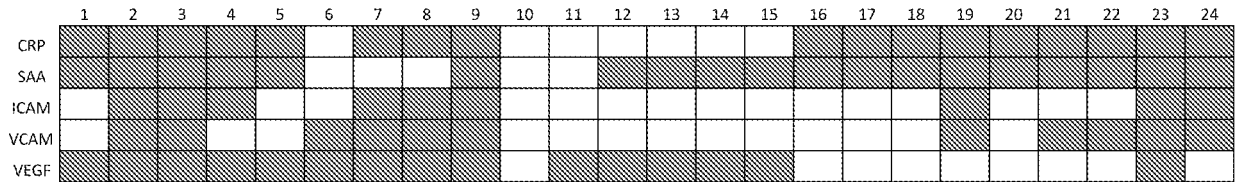
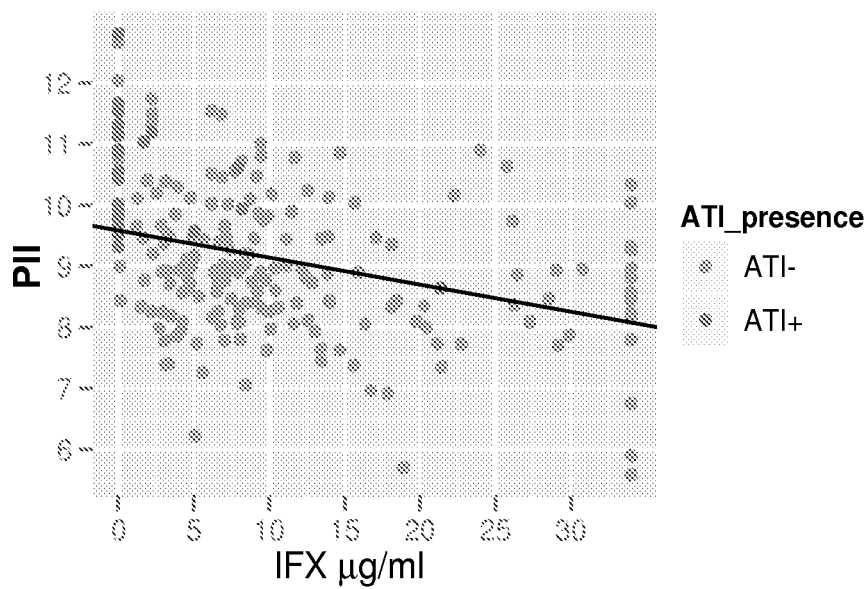
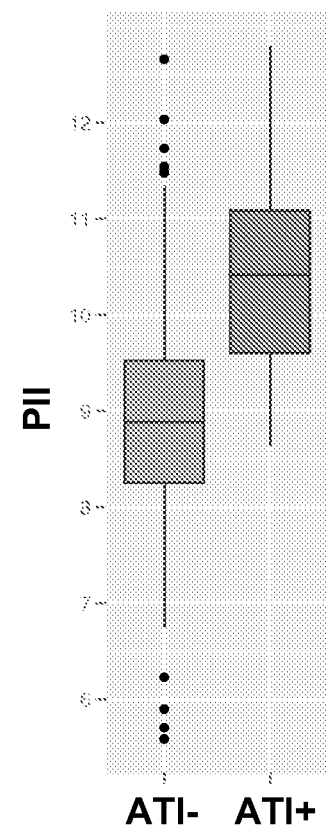


FIG. 6

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A**B****C****FIG. 7**

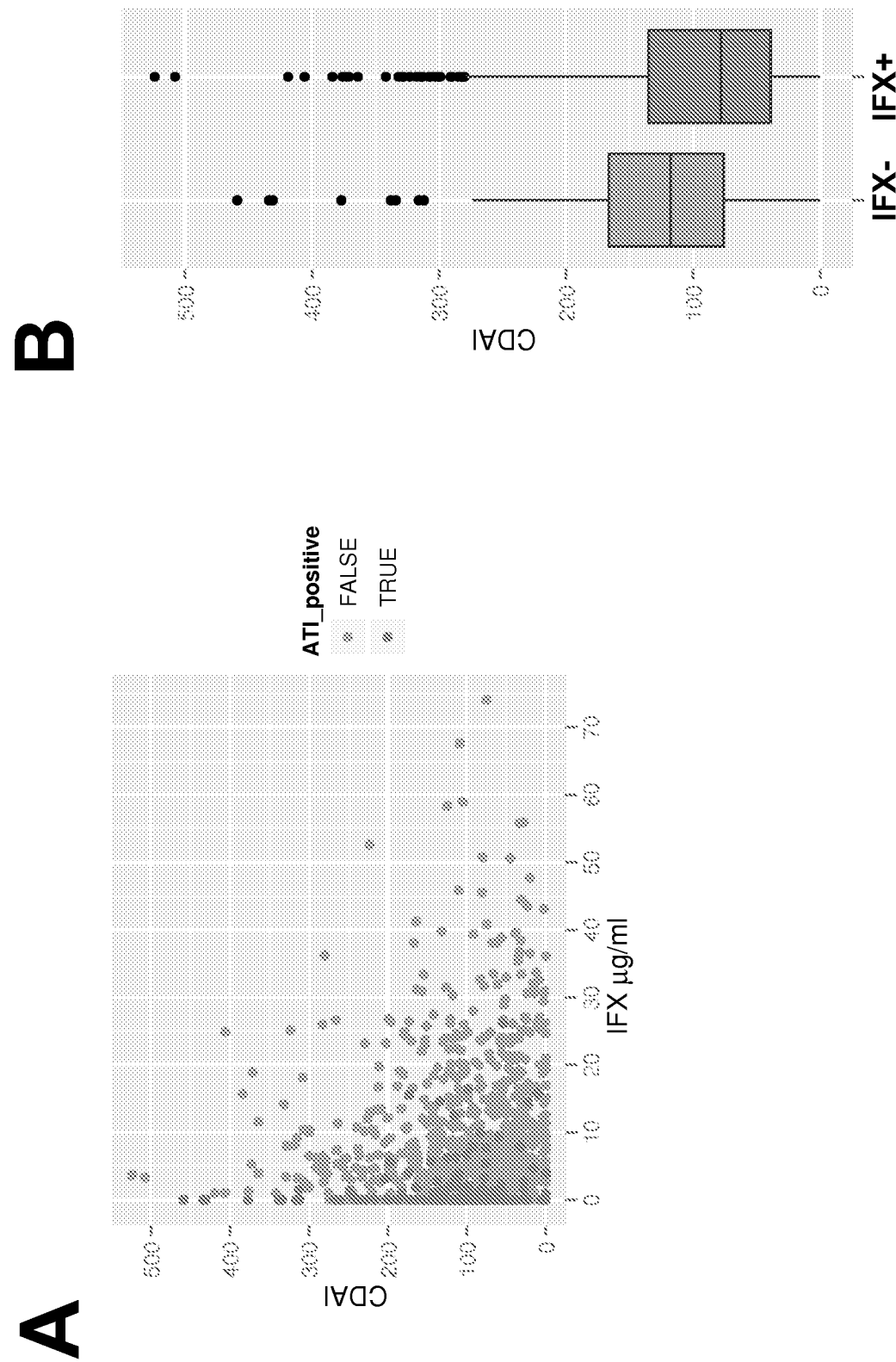


FIG. 8A-B

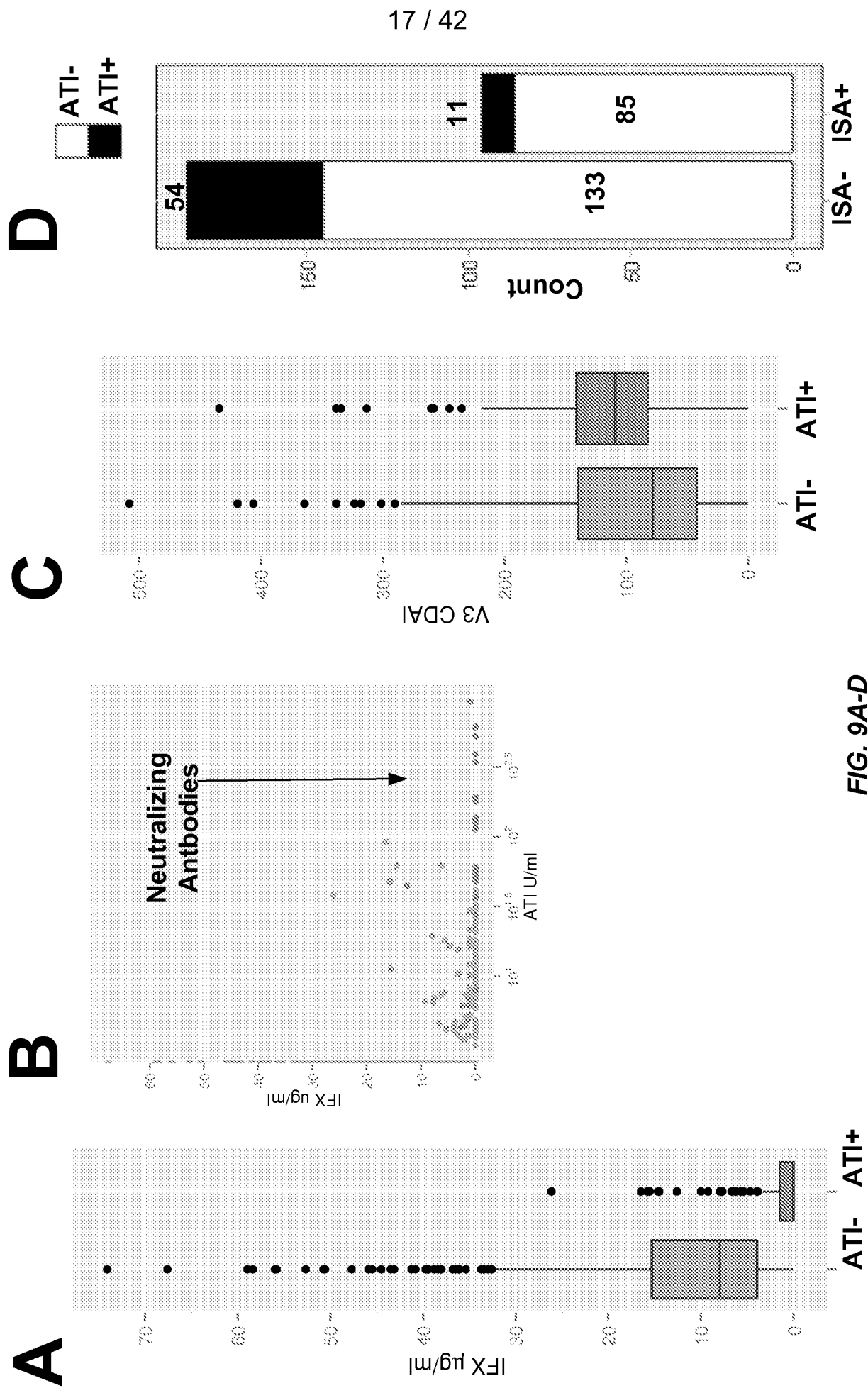


FIG. 9A-D

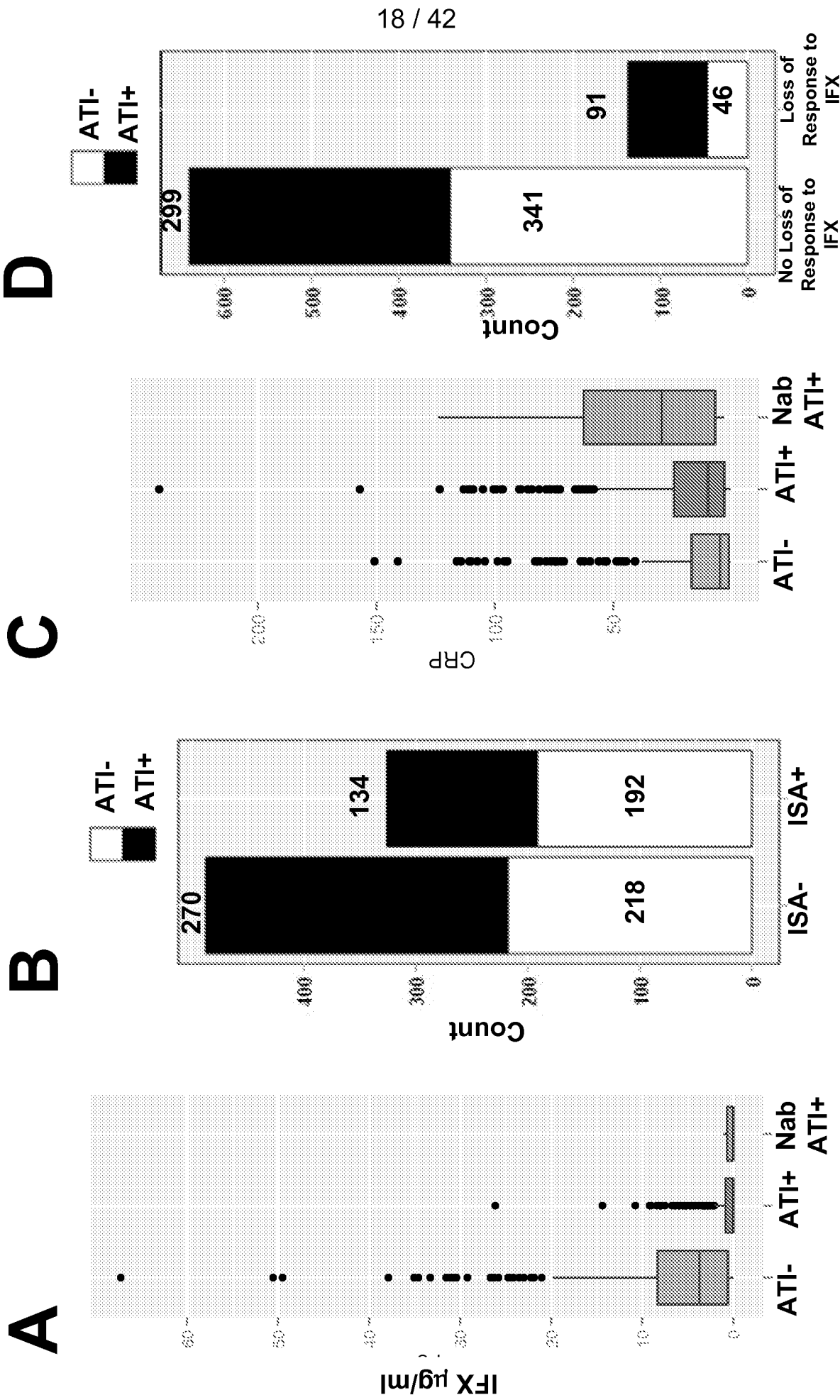
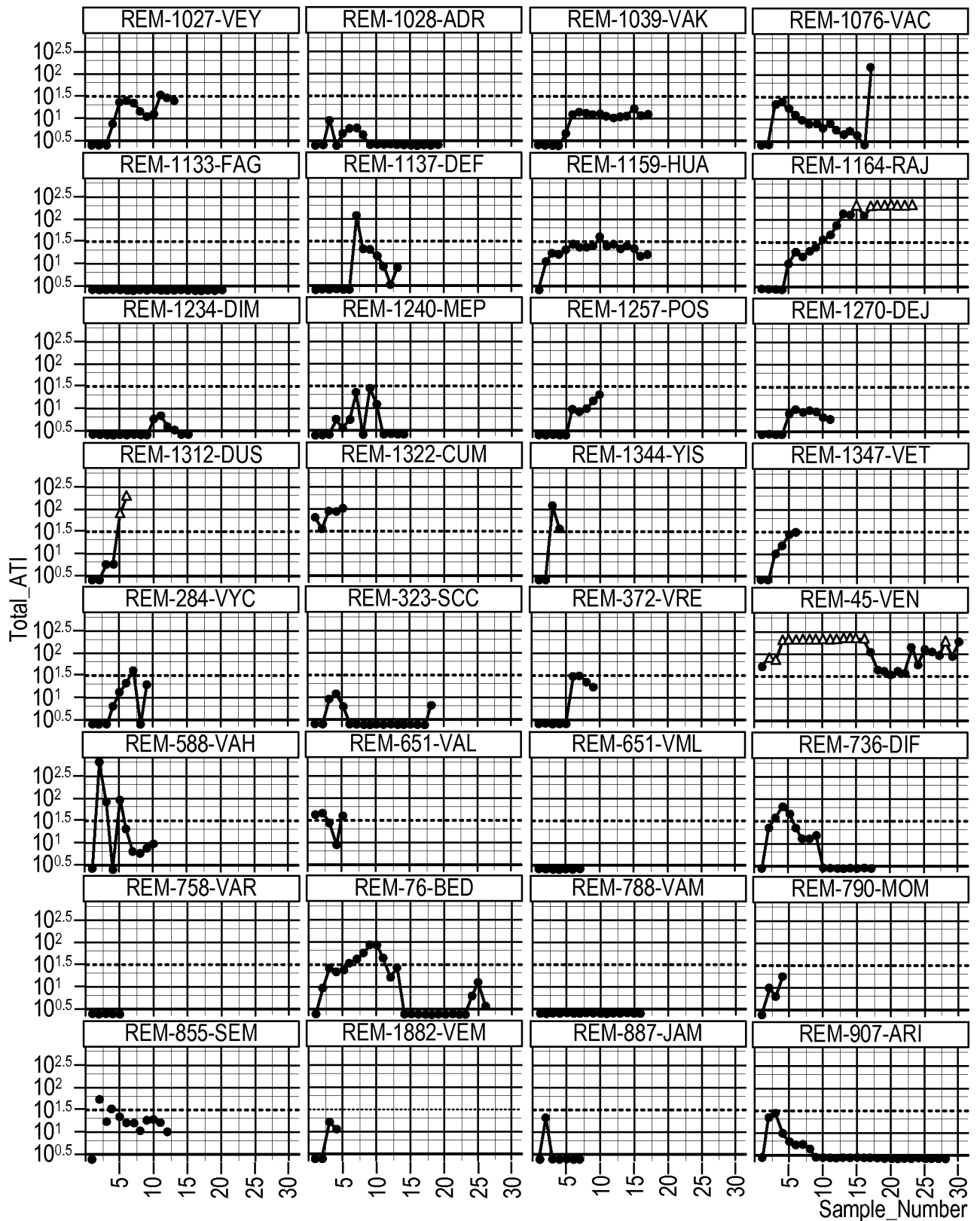
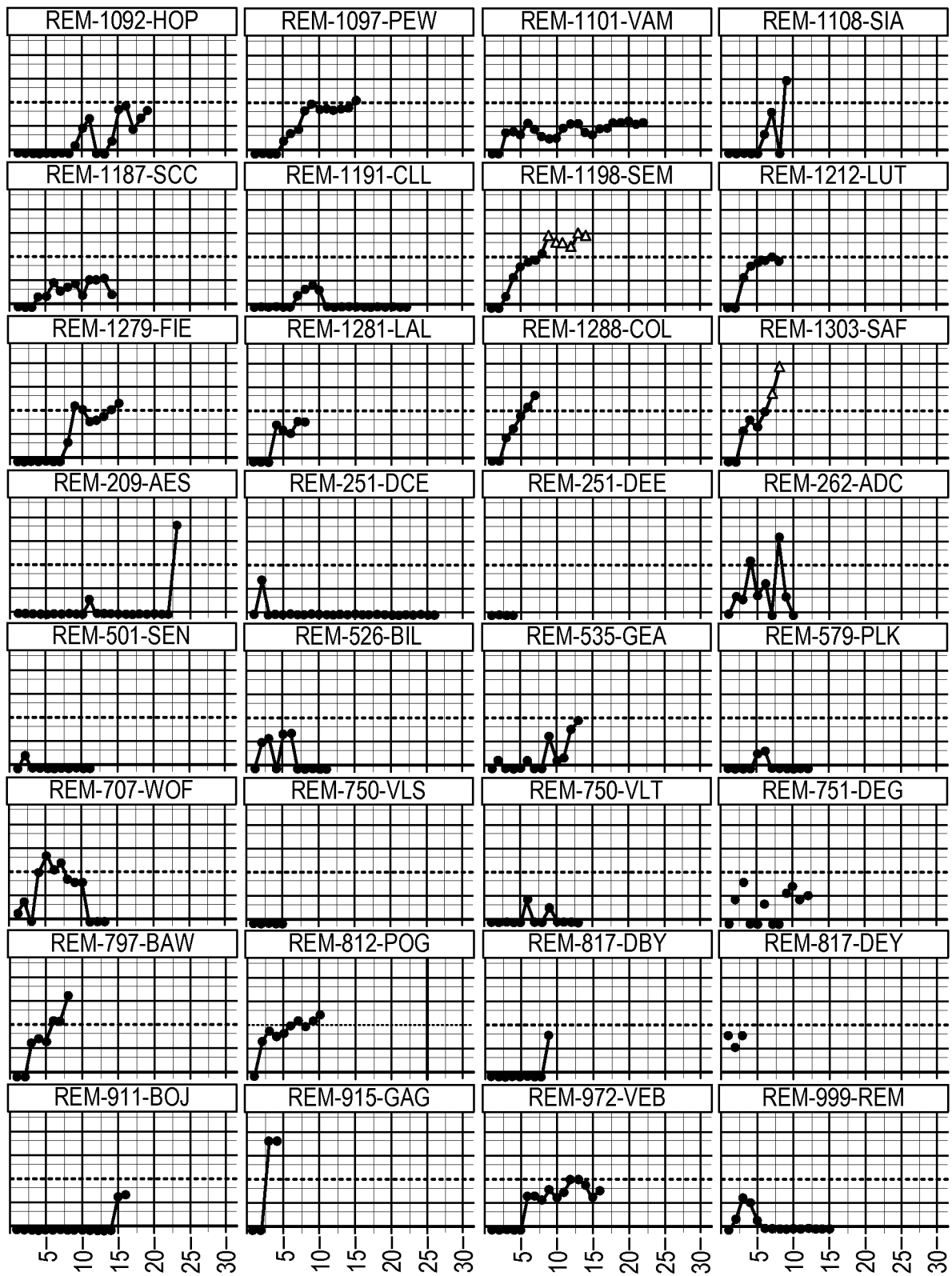


FIG. 10A-D

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**FIG. 11**

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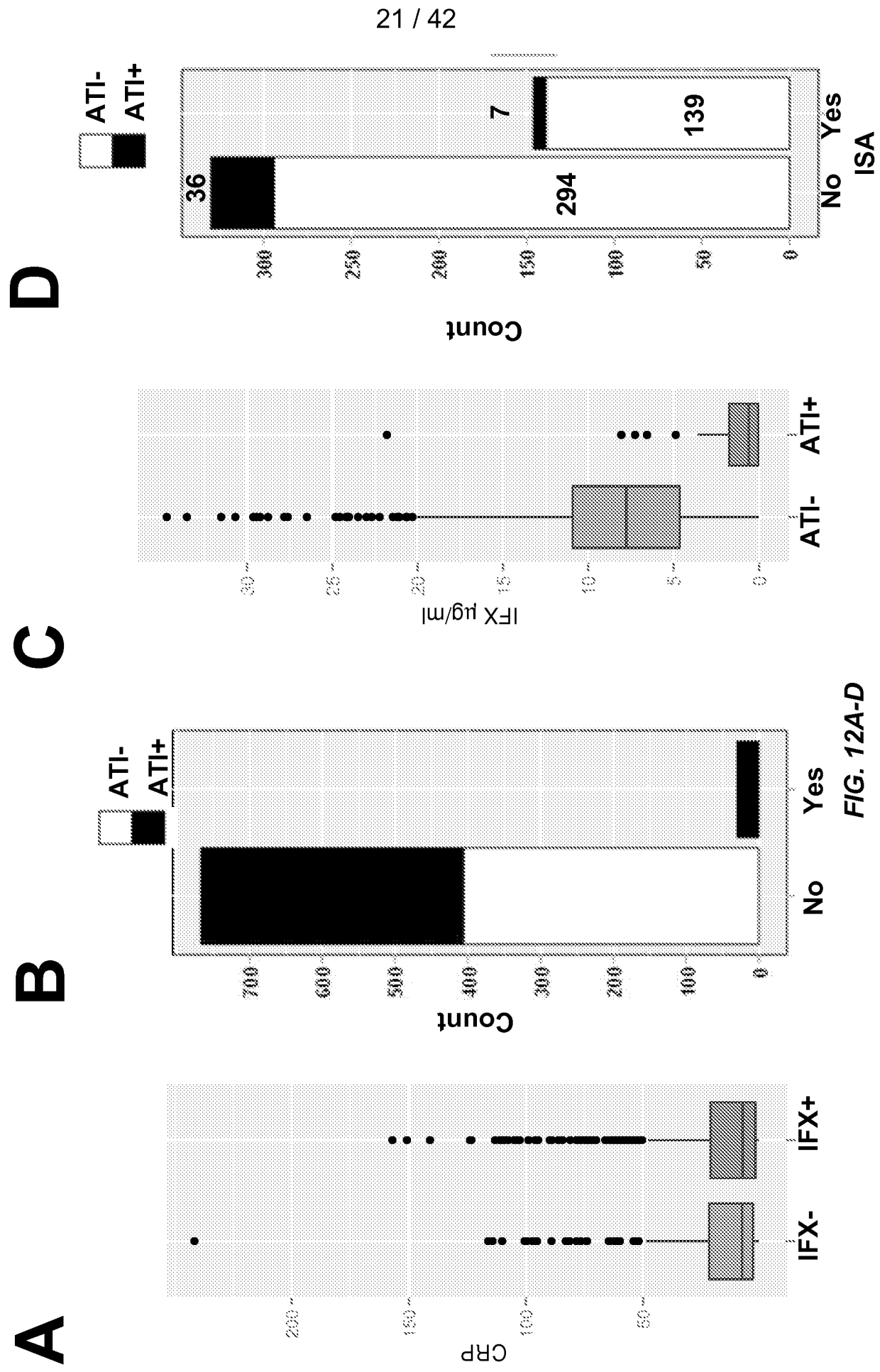


Nab_positive

● FALSE

△ TRUE

FIG. 11 (Continued)



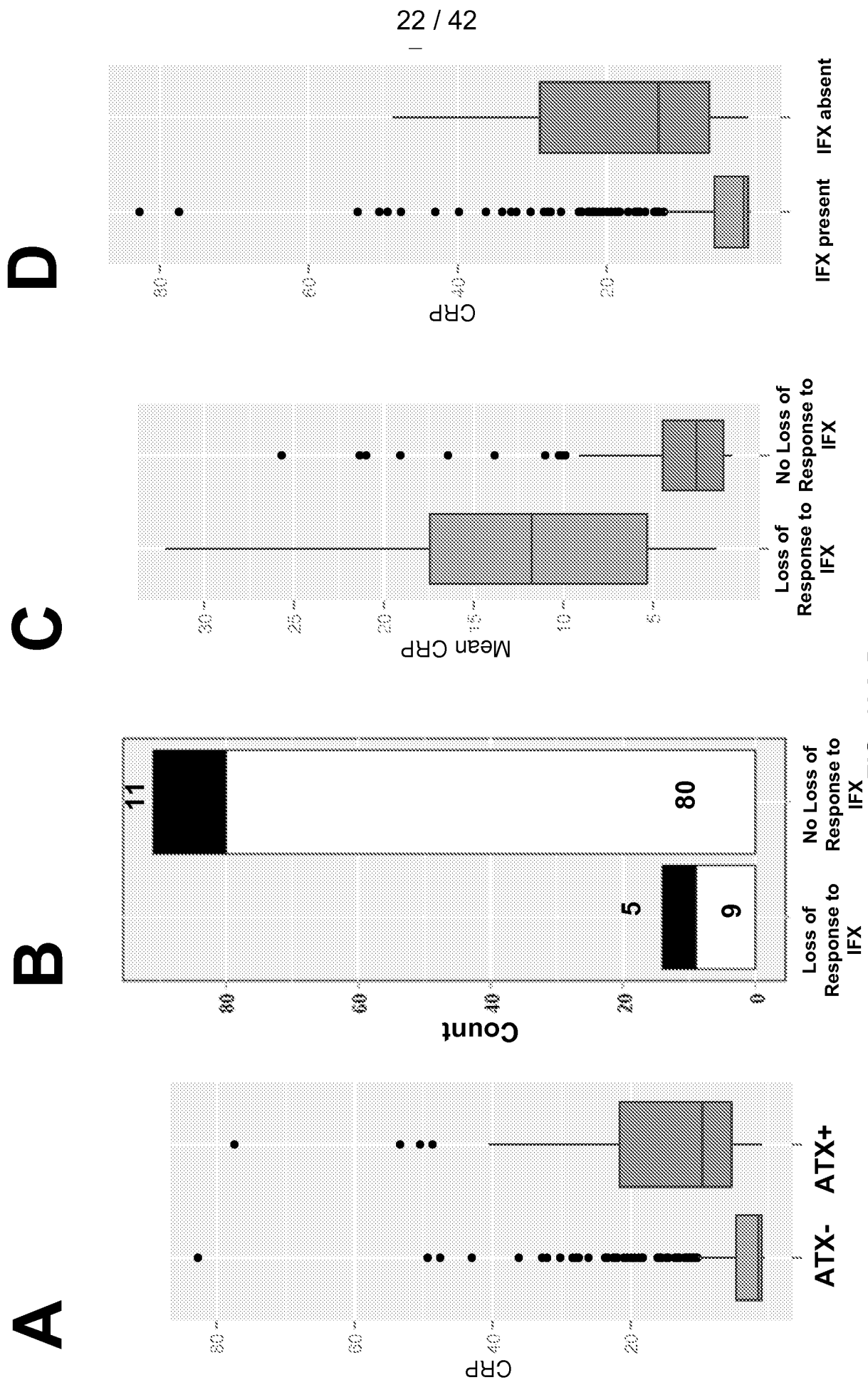


FIG. 13A-D

A
B
C

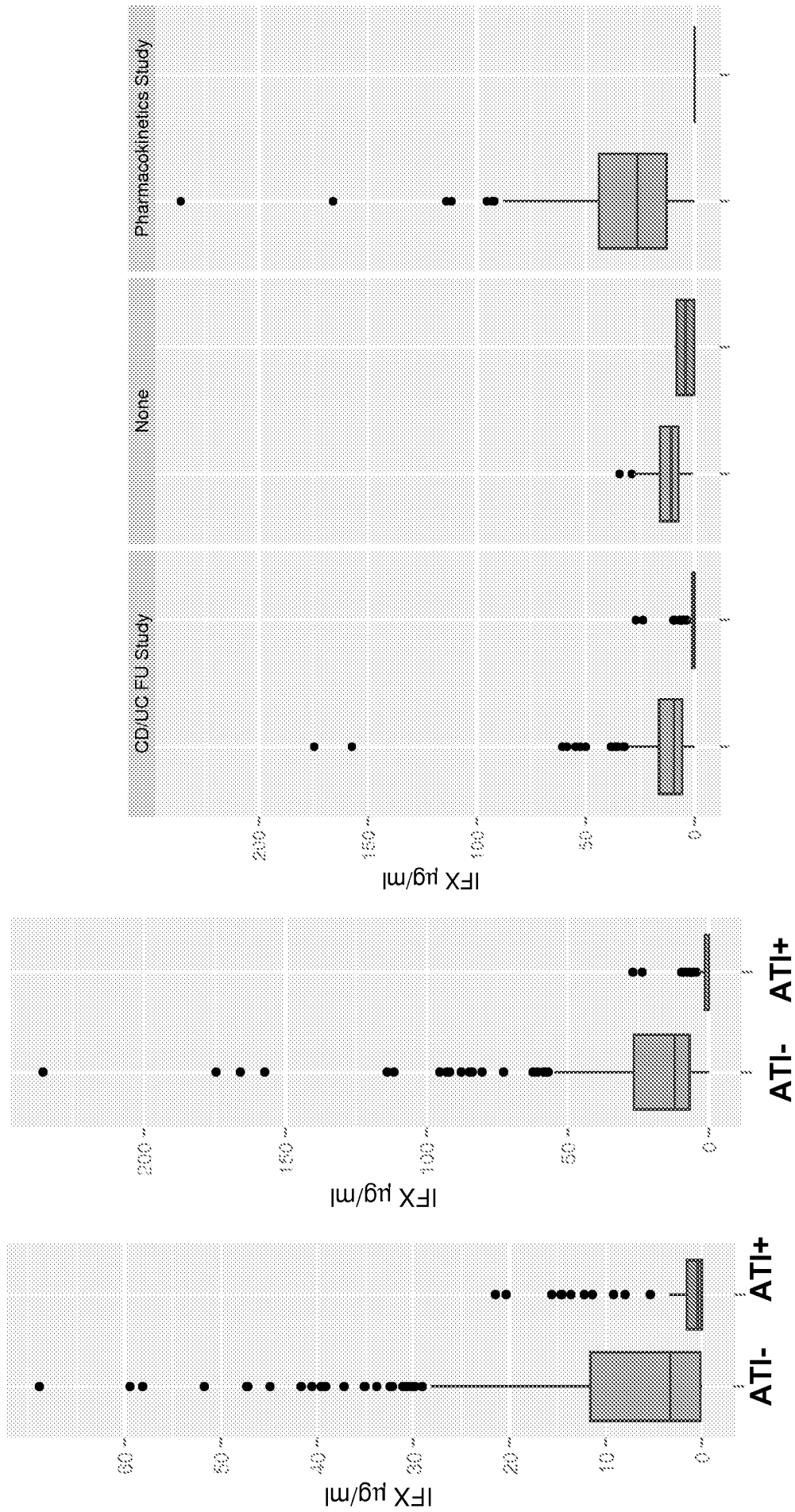


FIG. 14A-C

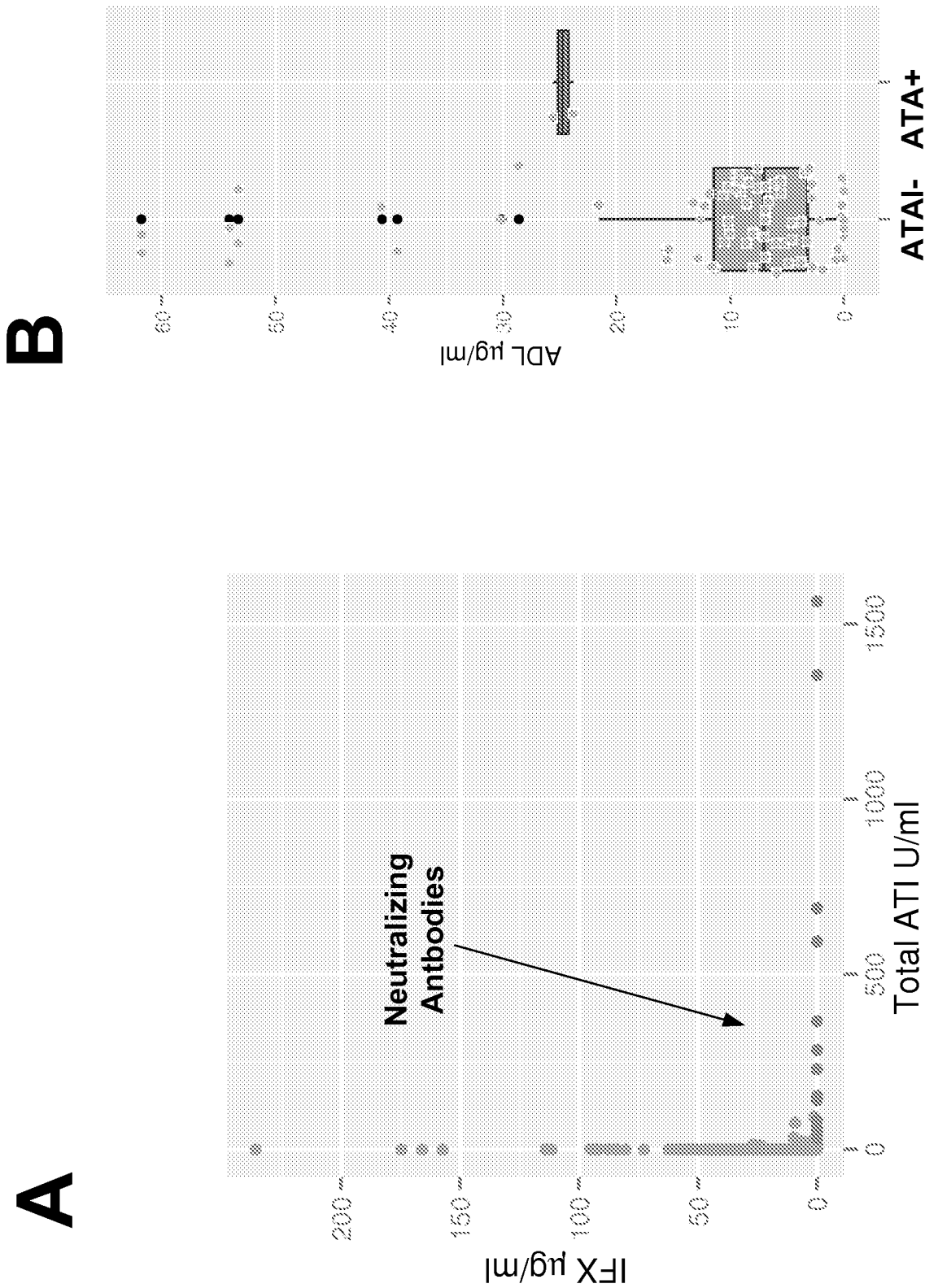
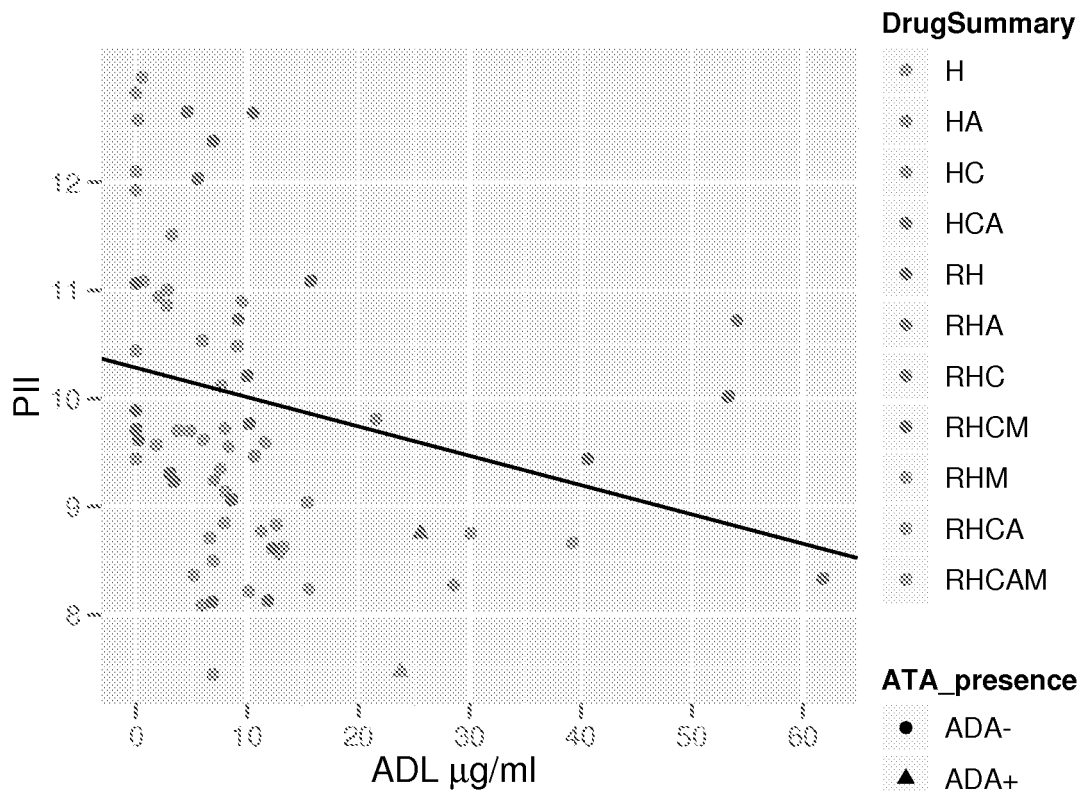


FIG. 15A-B

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A

- **PRO Inflammatory Index (PII)**
 - A single per-sample score describing inflammation levels based on five markers
- Score is the sum of five markers, log transformed
 - VEGF in pg/ml
 - CRP in ng/ml
 - SAA in ng/ml
 - ICAM in ng/ml
 - VCAM in ng/ml
- $PII = \log(VEGF + CRP + SAA + ICAM + VCAM)$

B**FIG. 16A-B**

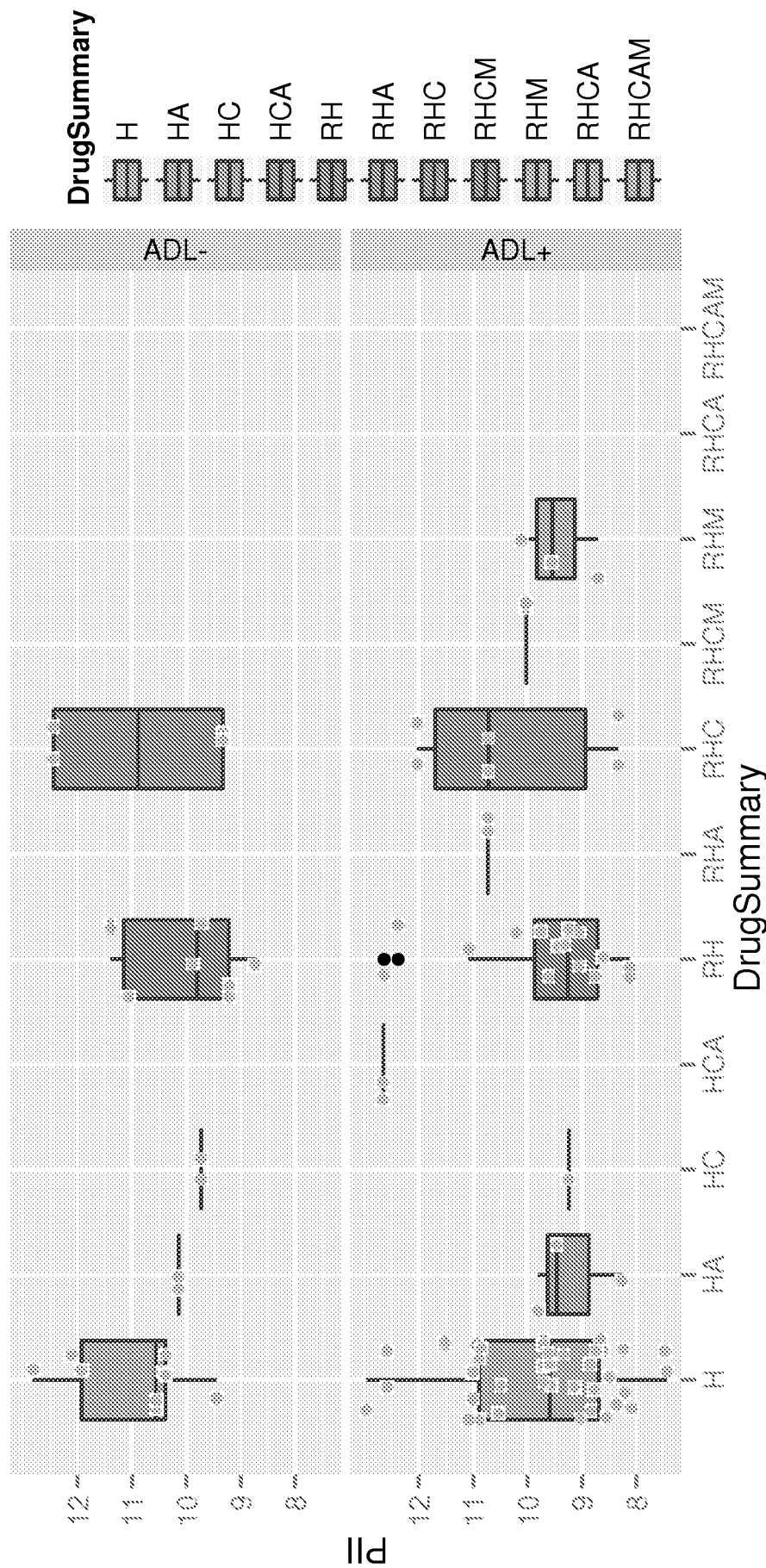


FIG. 17

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- Patients with active CD and UC will be analyzed using novel Mobility Shift Assay in conjunction with measurements of disease activity:
 - Pharmacokinetics
 - Elimination rates
 - Disease activity profile markers
 - Select markers that correlate with changes in infliximab and ATI levels
 - Mucosal Healing
 - Biomarkers and endoscopy
- Correlations found utilizing these methods will allow us to personalize patient treatment

FIG. 18

Multiple Assays to detect cytokine biomarkers: bFGF, TNF- α , IL-12(p70), IL-1 β , IL-2, GM- CSF, IL-13, IFN- γ , TGF- β 1, TGF- β 2,TGF- β 3.

Multiplex Assays to detect inflammatory markers: SAA, CRP, ICAM, VCAM, VCAM

Multiplex Assays to detect anti-Inflammatory: TGFbeta, IL-10

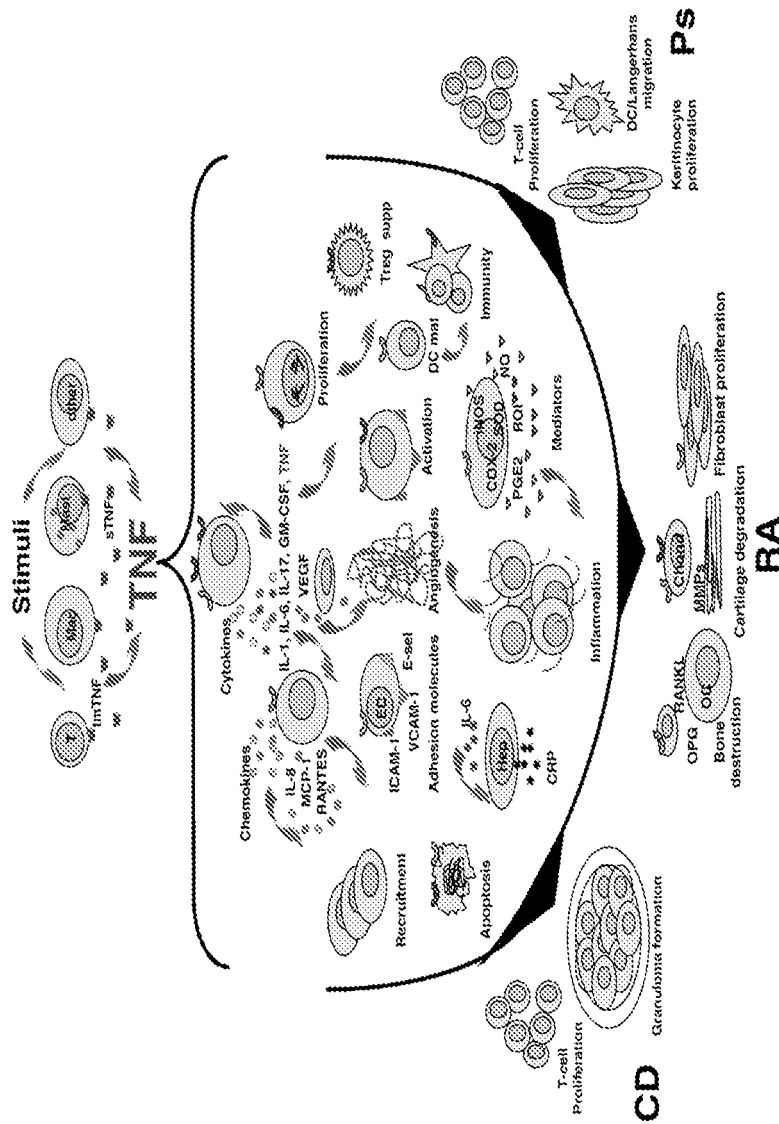


FIG. 19

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Growth Factors, Cytokines, Chemokines, Acute Phase Proteins and Cellular Adhesion Molecules

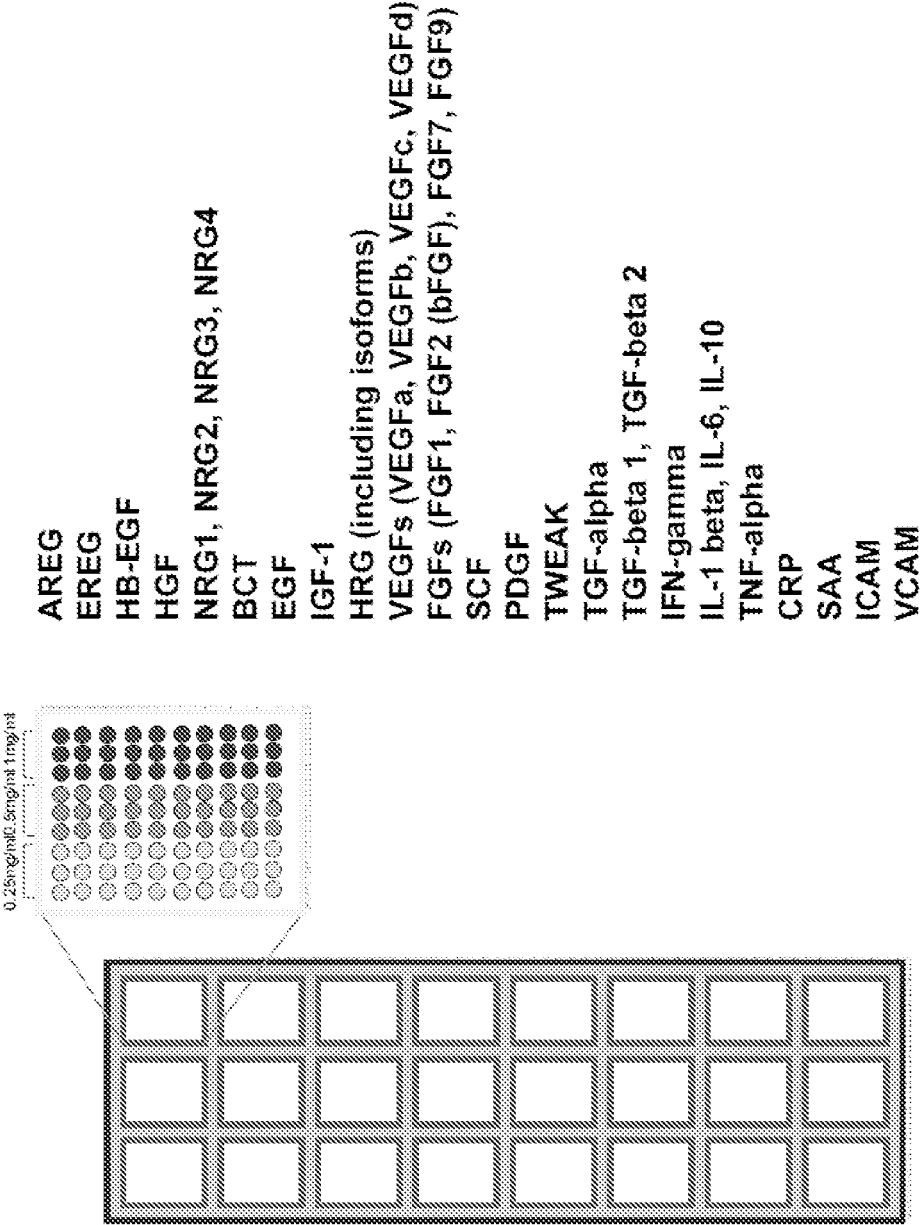


FIG. 20

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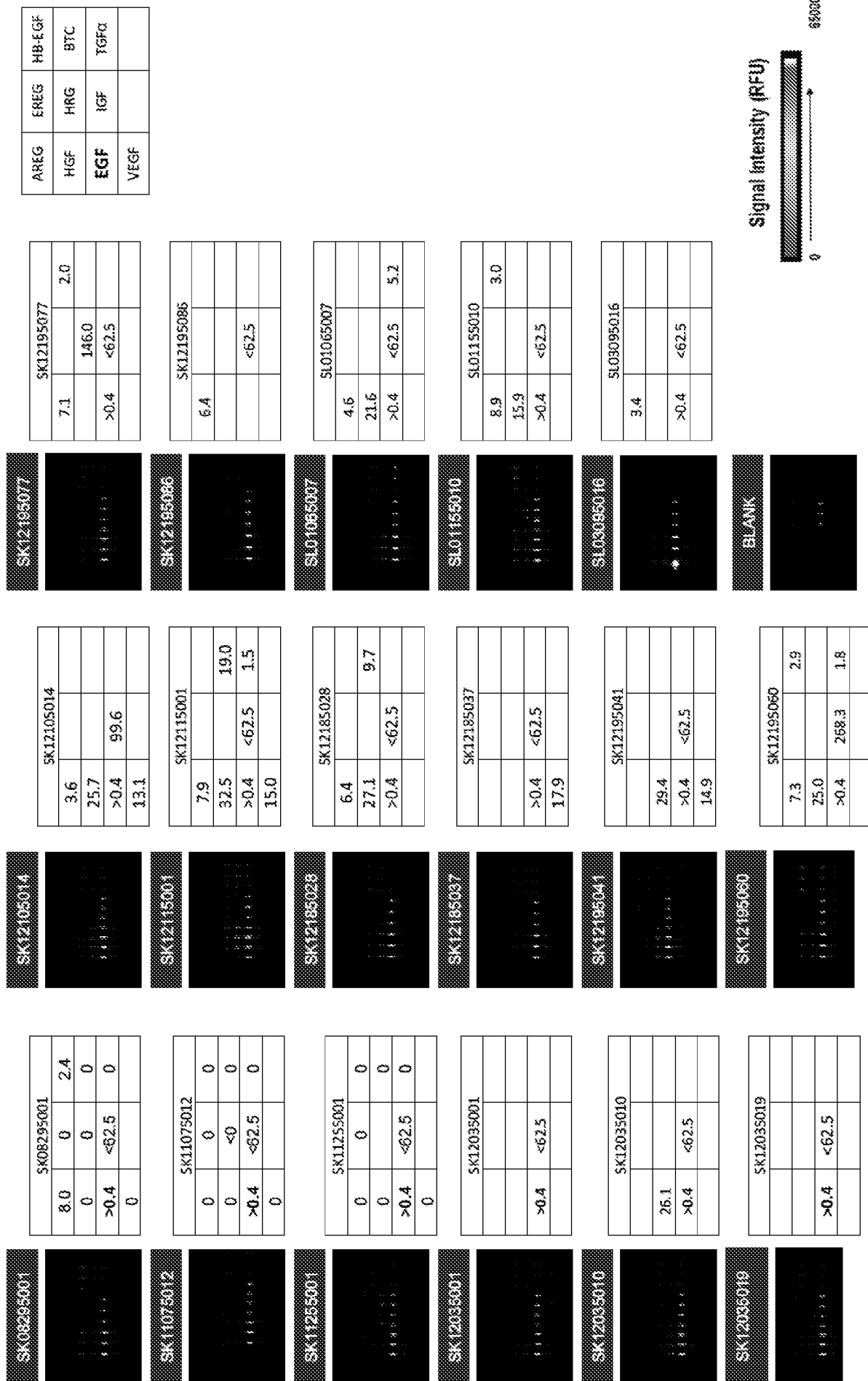


FIG. 21A

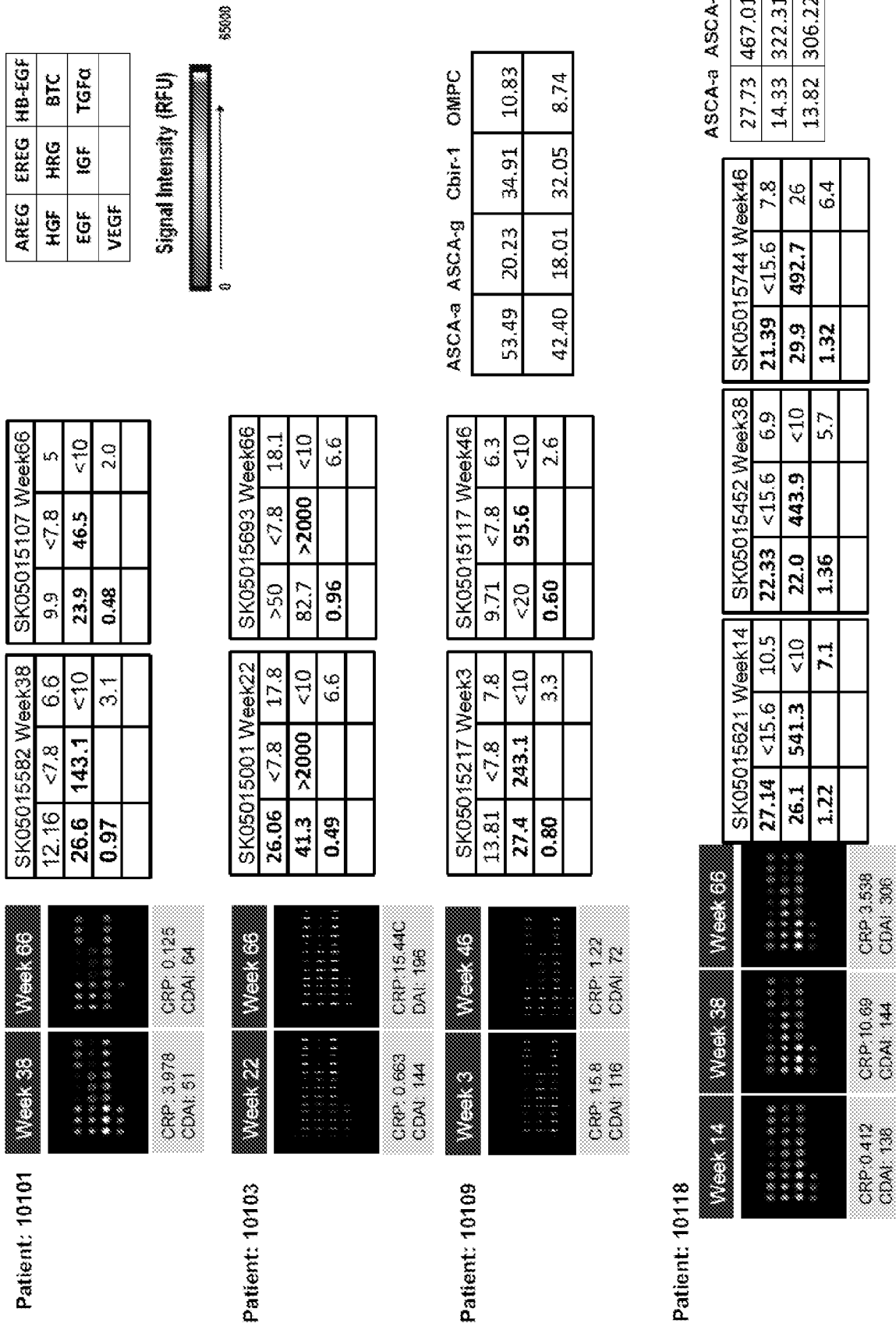


FIG. 21B

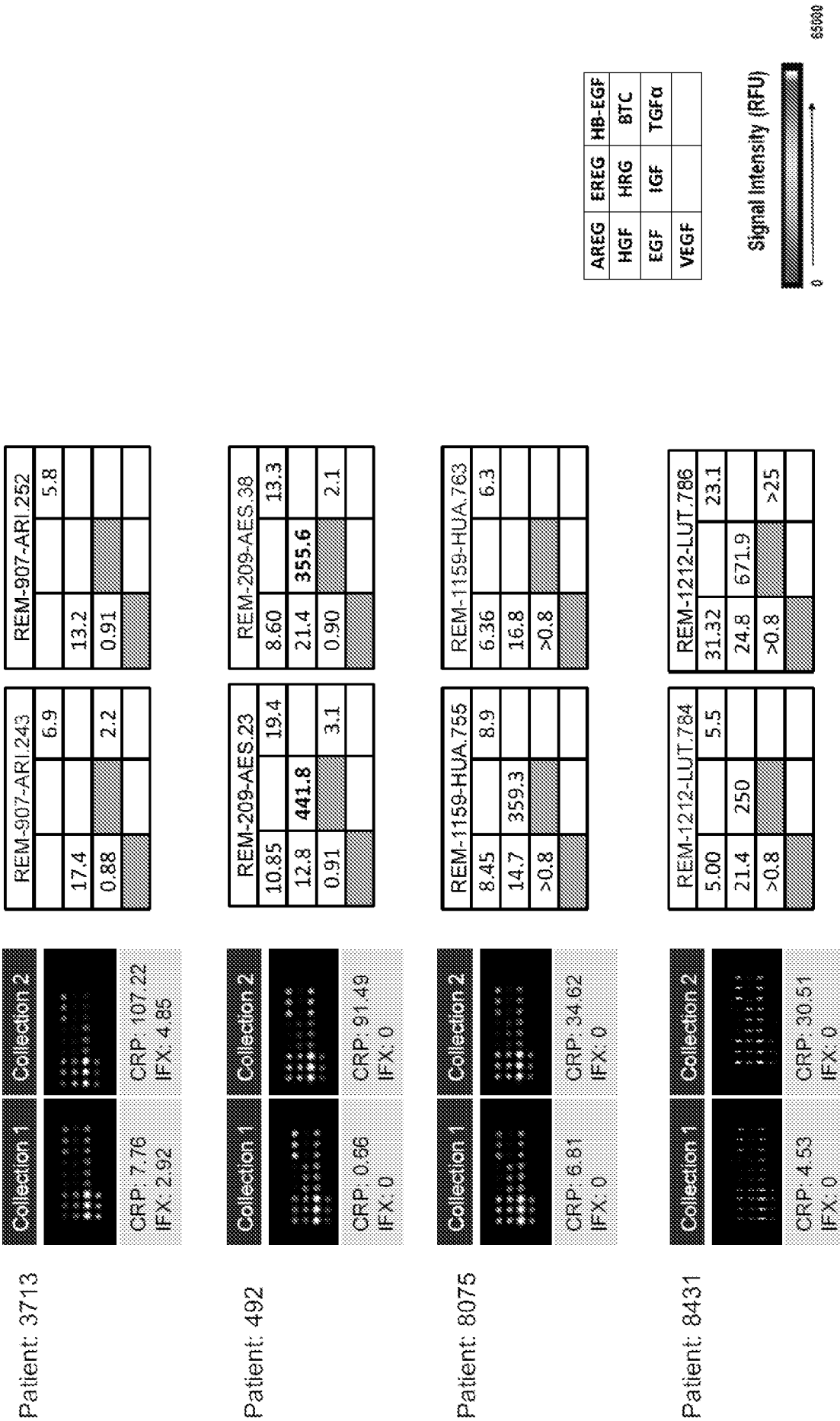


FIG. 21C

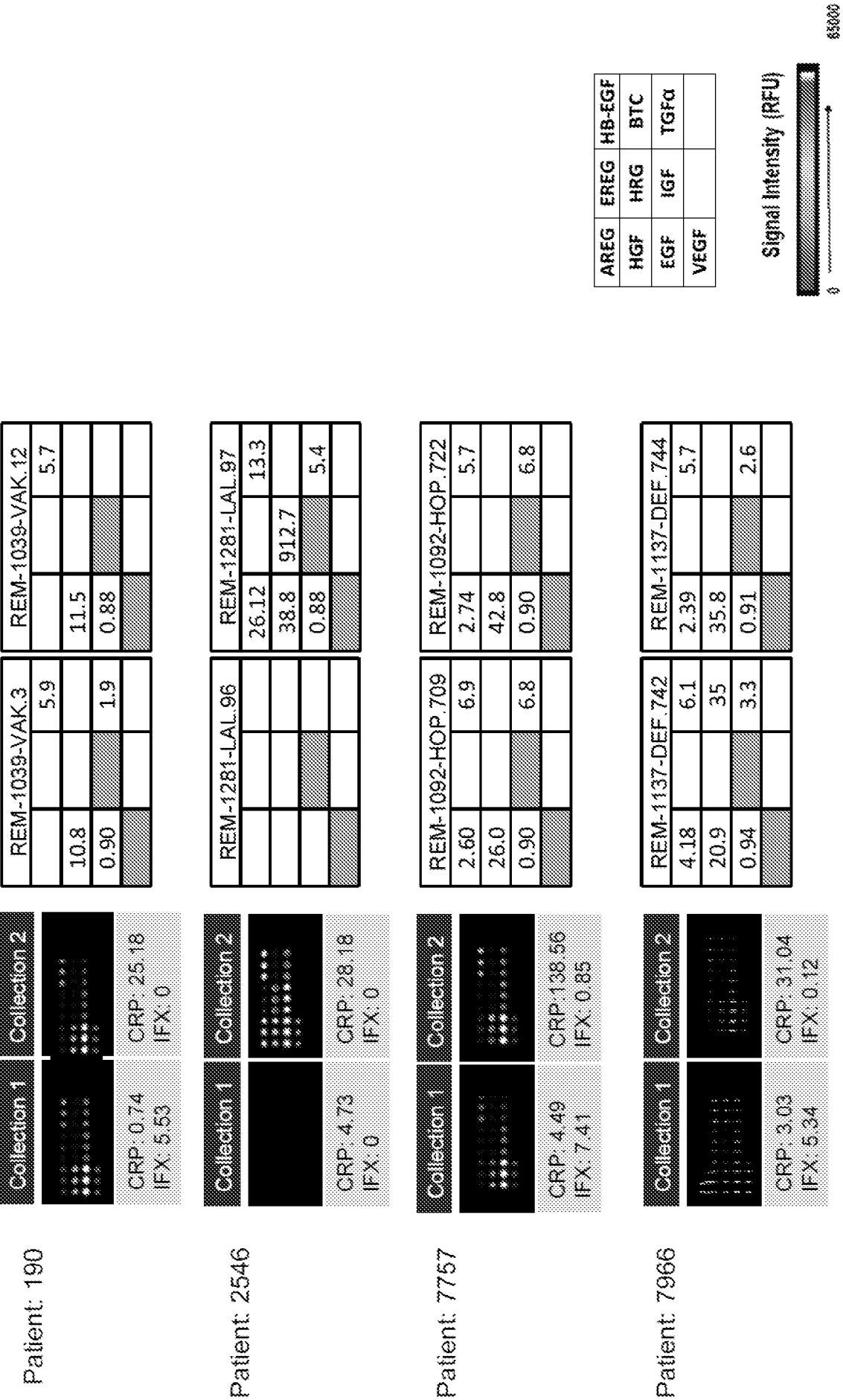


FIG. 21D

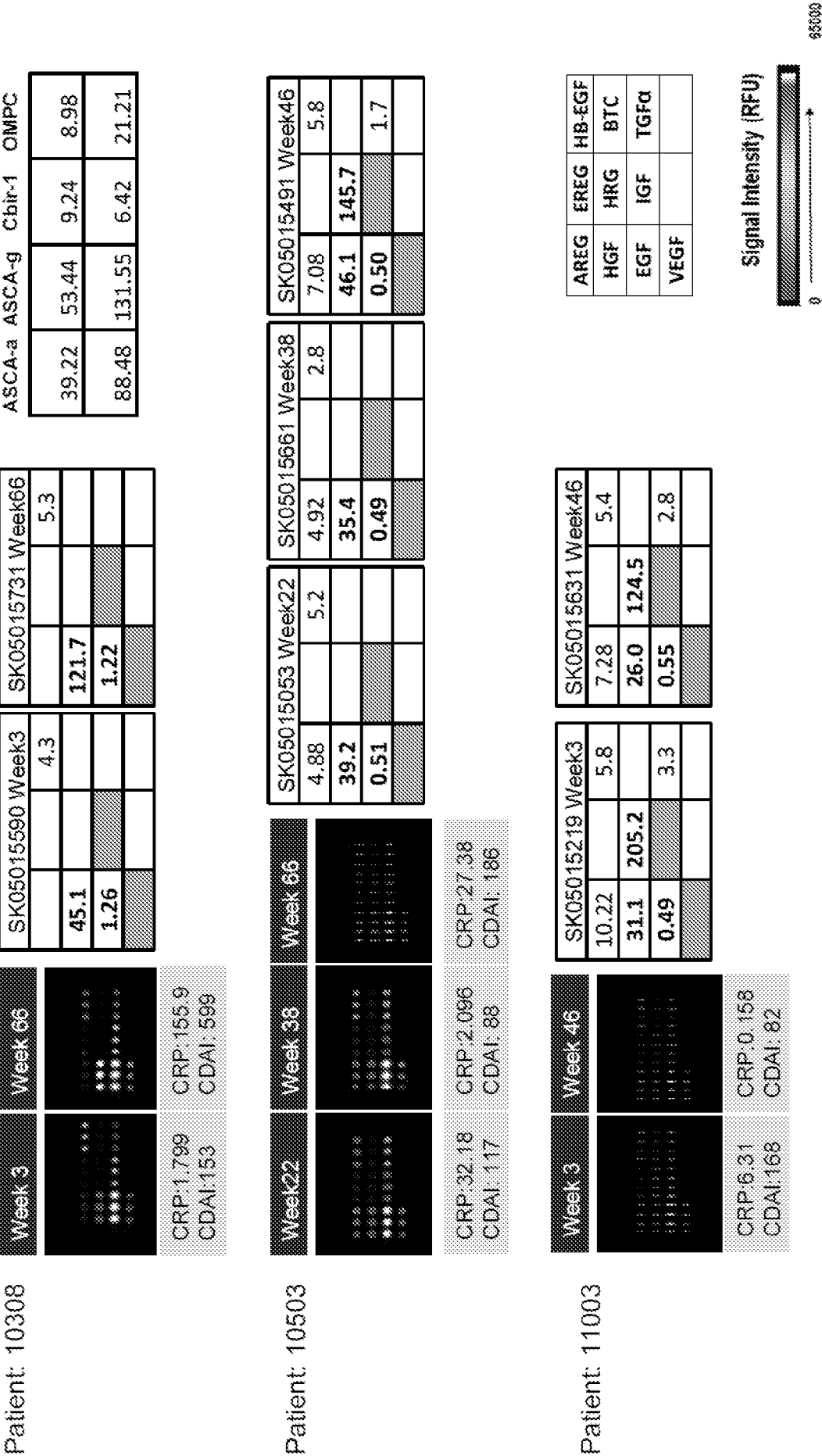
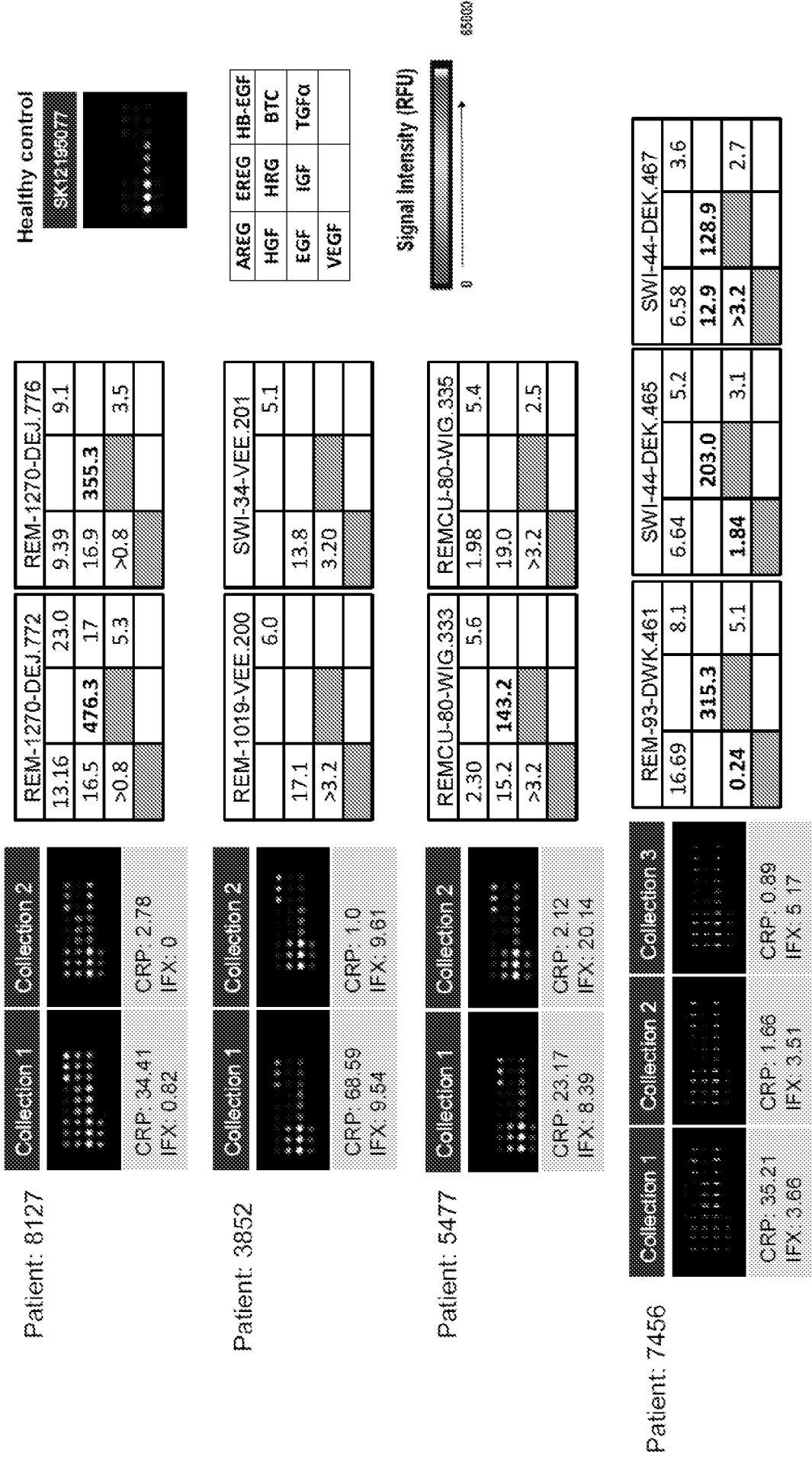


FIG. 21E



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Healthy Controls	SK0829500 1	SK1107501 2	SK1125500 1	SK1203500 1	SK1203501 0	SK1203501 9	SK1210501 4	SK1211500 1	SK1218502 8	SK1218503 7	SK1219504 1
Healthy Controls	SK1219506 0	SK1219507 7	SK1219508 6	SK0106500 7	SK0115501 0	SK0309501 6	BLANK				
IBS-C	SI0216301 9	SI0410300 9	SI0531300 3	SI0614301 3	SI0629300 7	SI0726300 7	SI1129300 1	SI12203011	SJ0318300 1	SJ0611301 7	SK1210500 5
IBS-C	SK1219502 2	SL0122508 5	SL0127501 4	SL0204503 7	SL0210504 4	SL0210506 2	SL0212503 0	SL0213504 6	SL0219501 9	BLANK	
IBS-D	SI0308300 1	SI0309300 9	SI0327300 9	SI0519300 1	SI0607300 5	SI0823301 1	SI0823301 1	SJ0301300 9	SJ0319300 1	SJ0419300 5	SK1121501 1
IBS-D	SK1201501 0	SK1208507 0	SK1223502 1	SL0115507 3	SL0120511 8	SL0121501 4	SL0130504 6	SL0301503 8	SL0311500 5	BLANK	

FIG. 21G

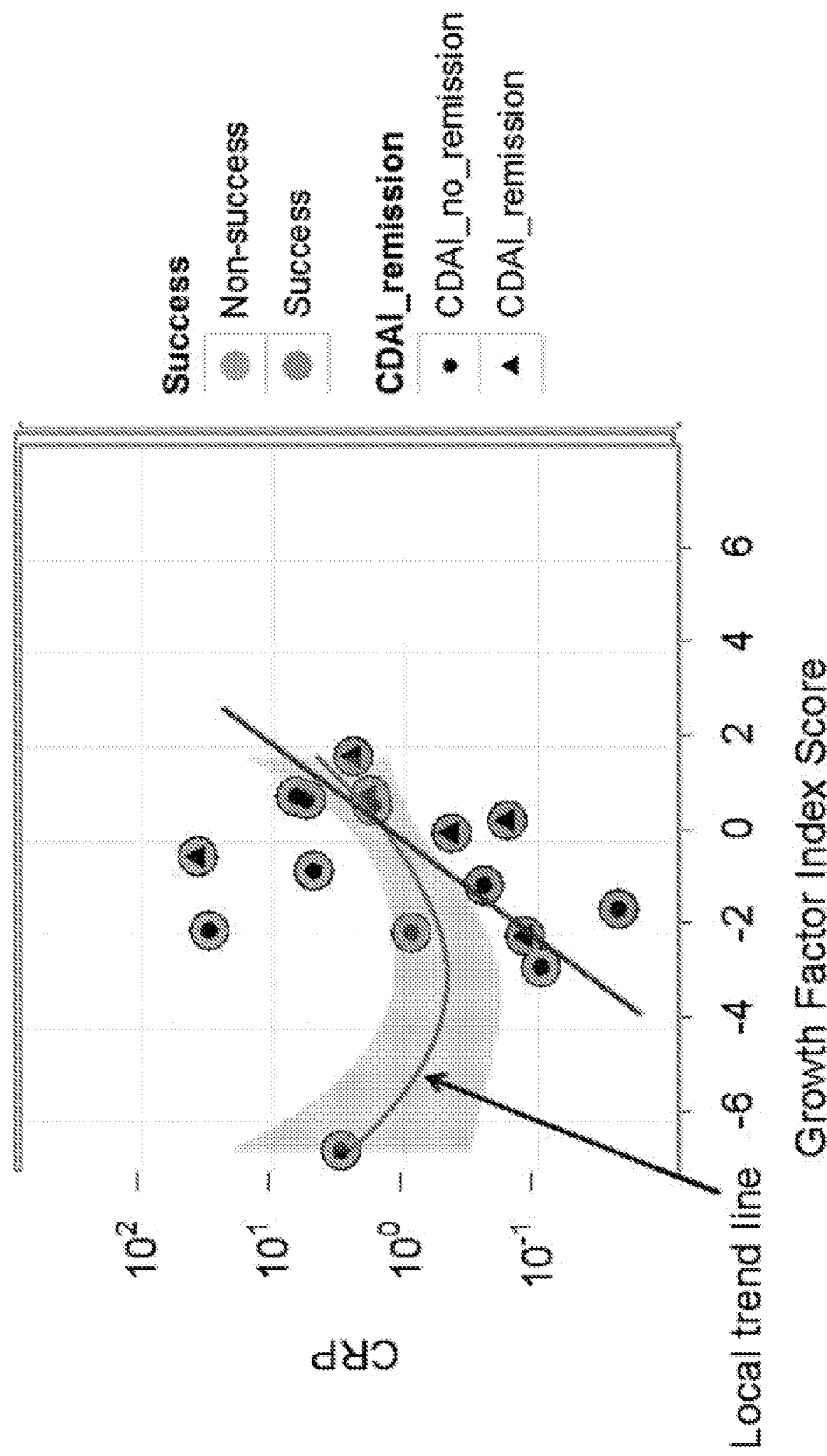
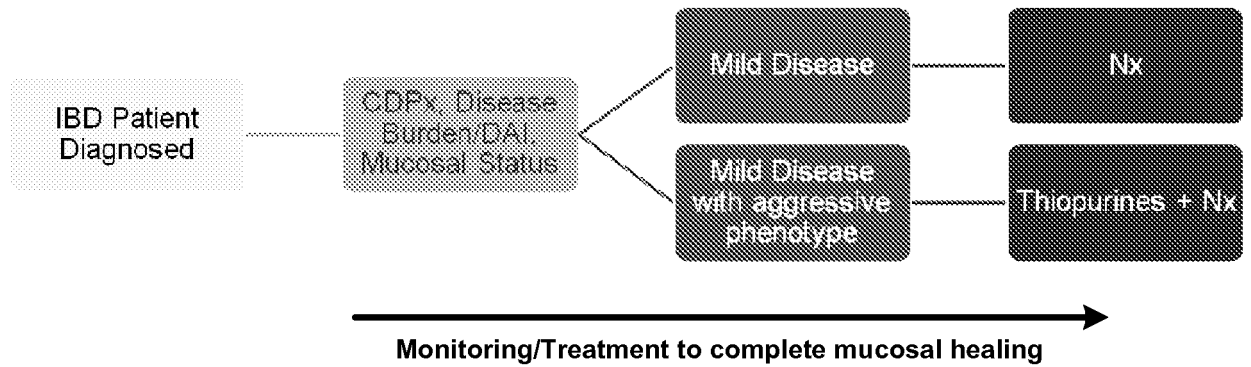
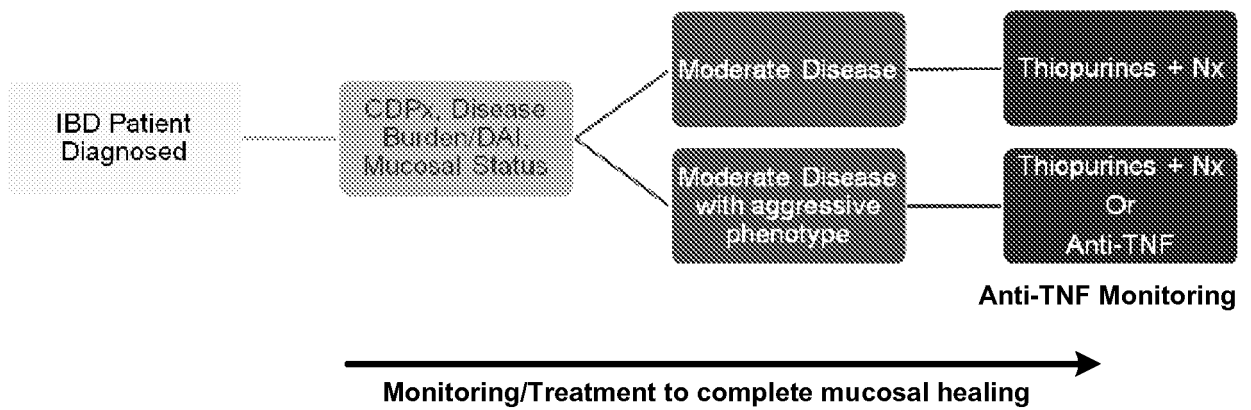
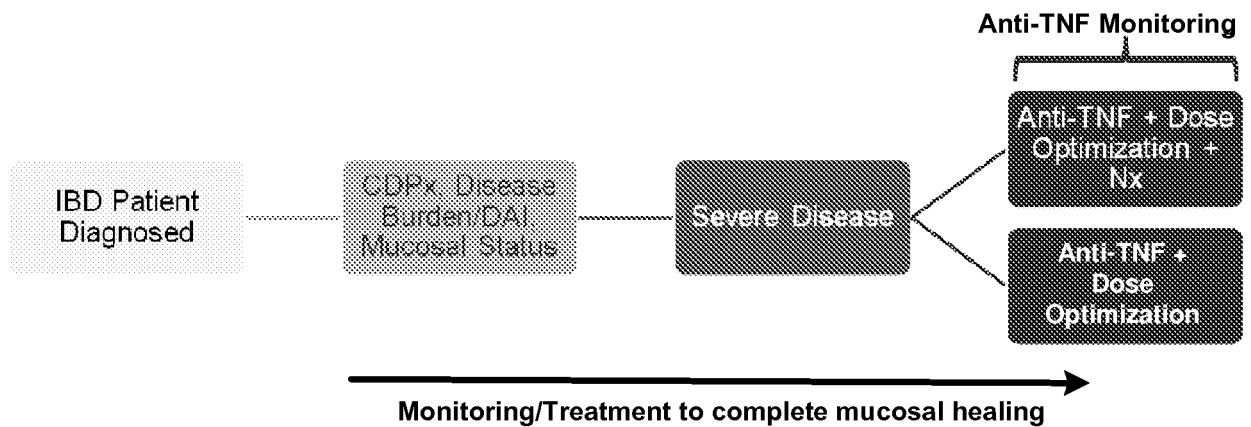


FIG. 22

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A**B****C****FIG. 23**

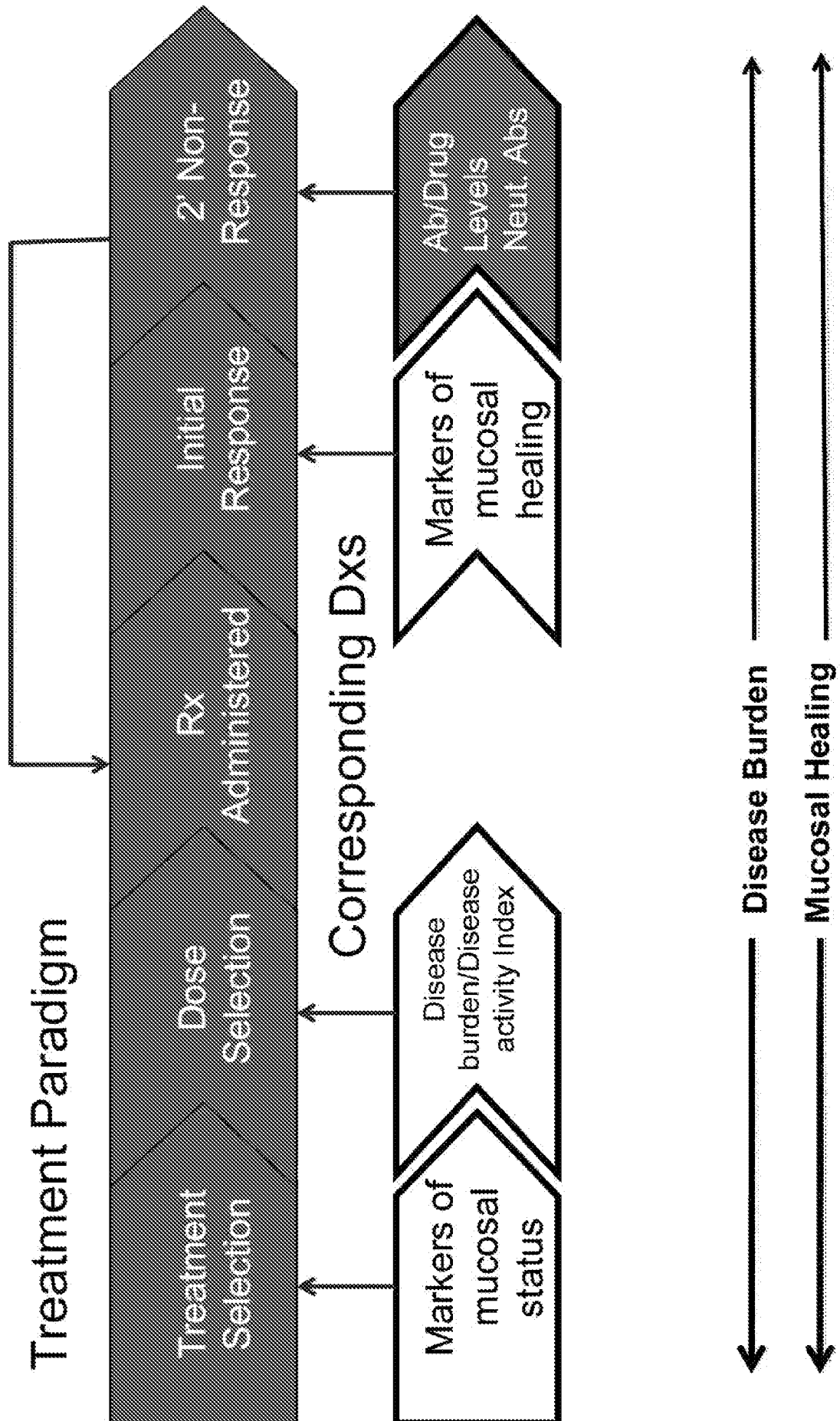
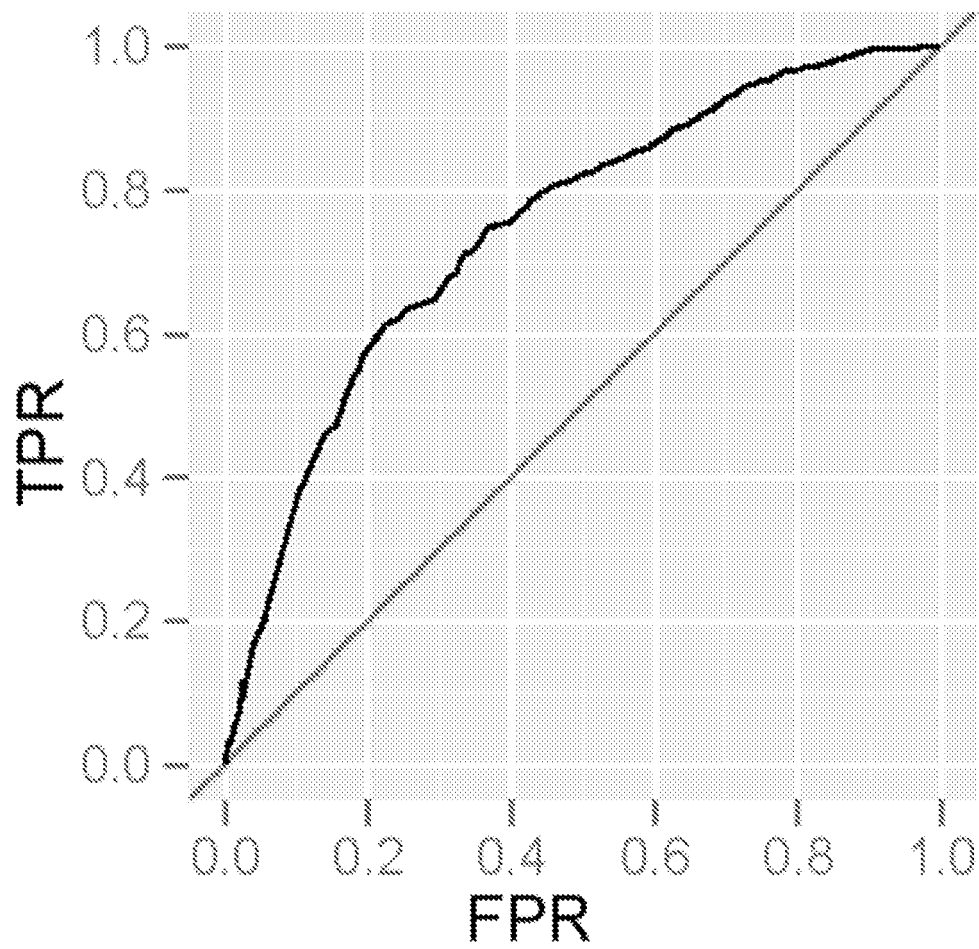


FIG. 24

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ROC Analysis of CRP and IFX Trough Thresholds**FIG. 25**

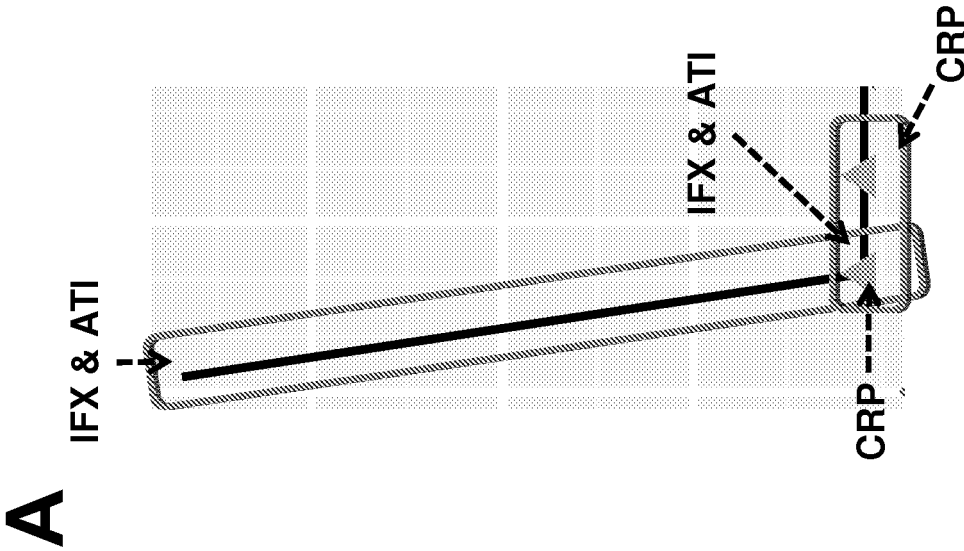
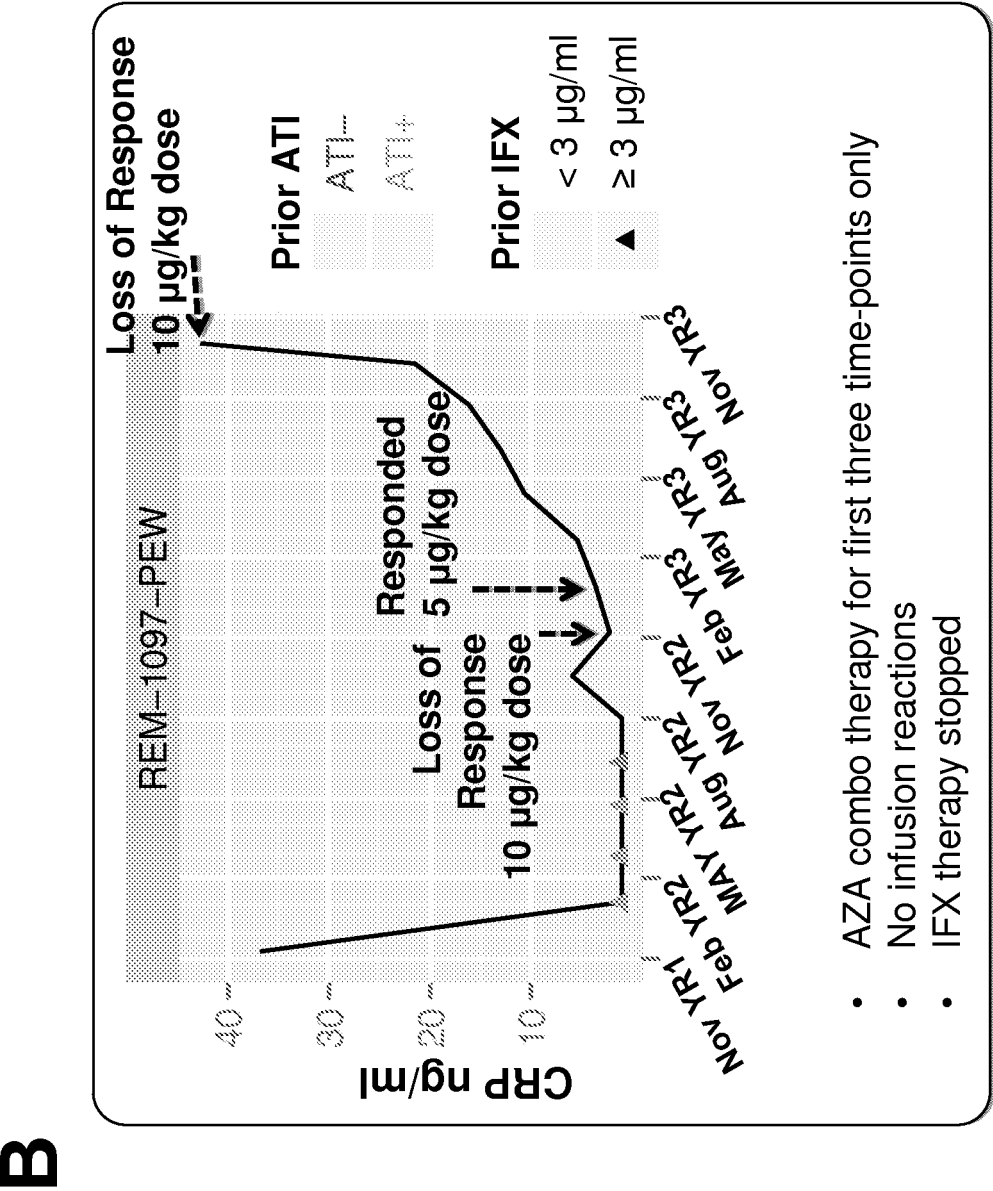


FIG. 26

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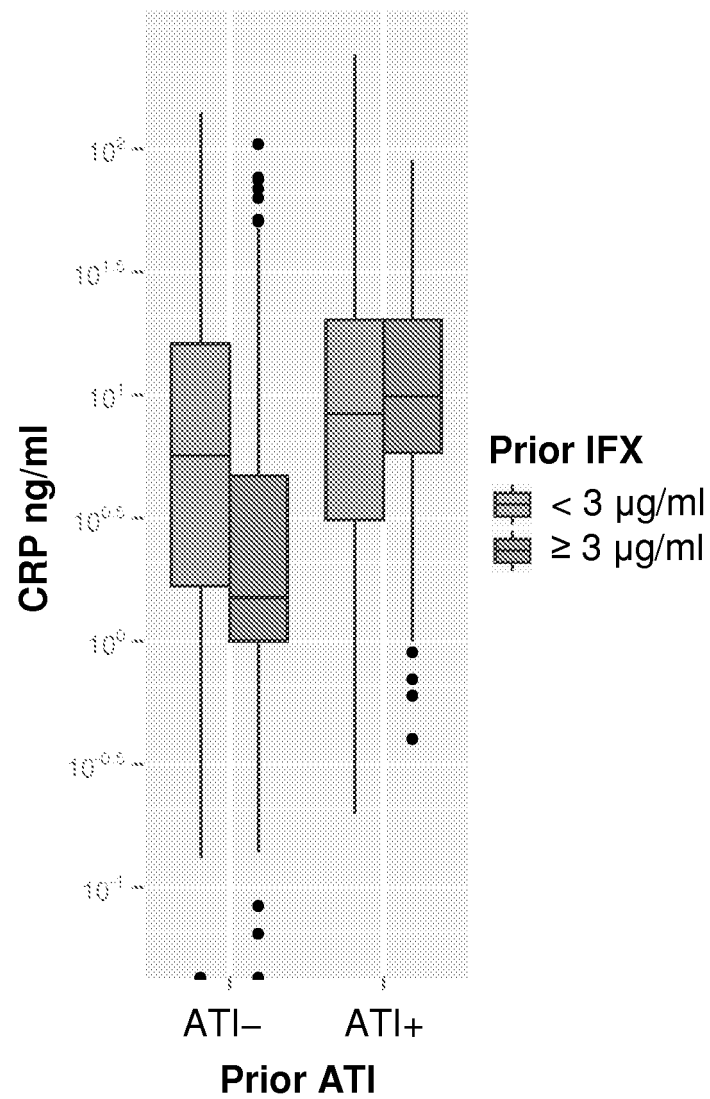


FIG. 27