

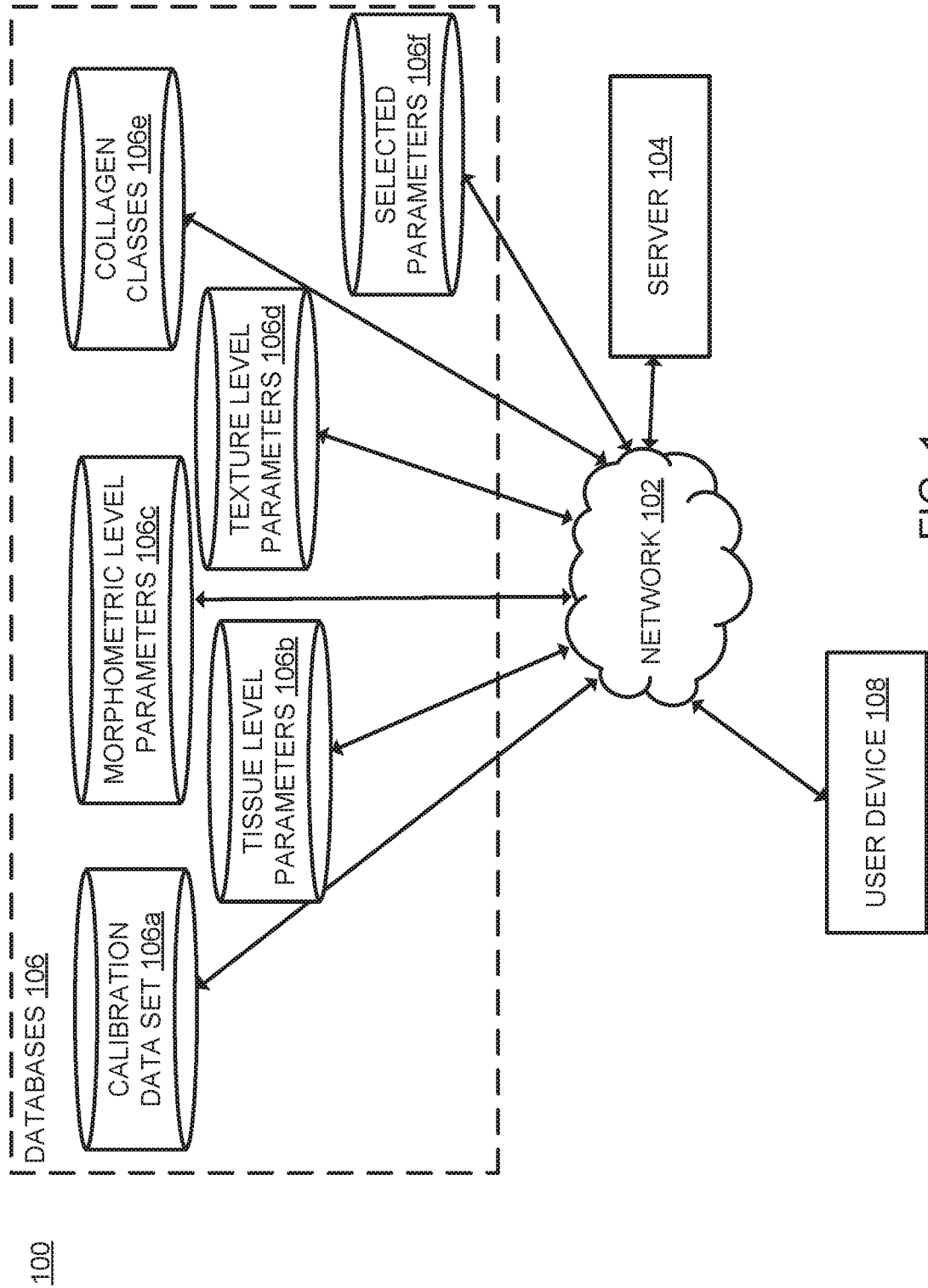
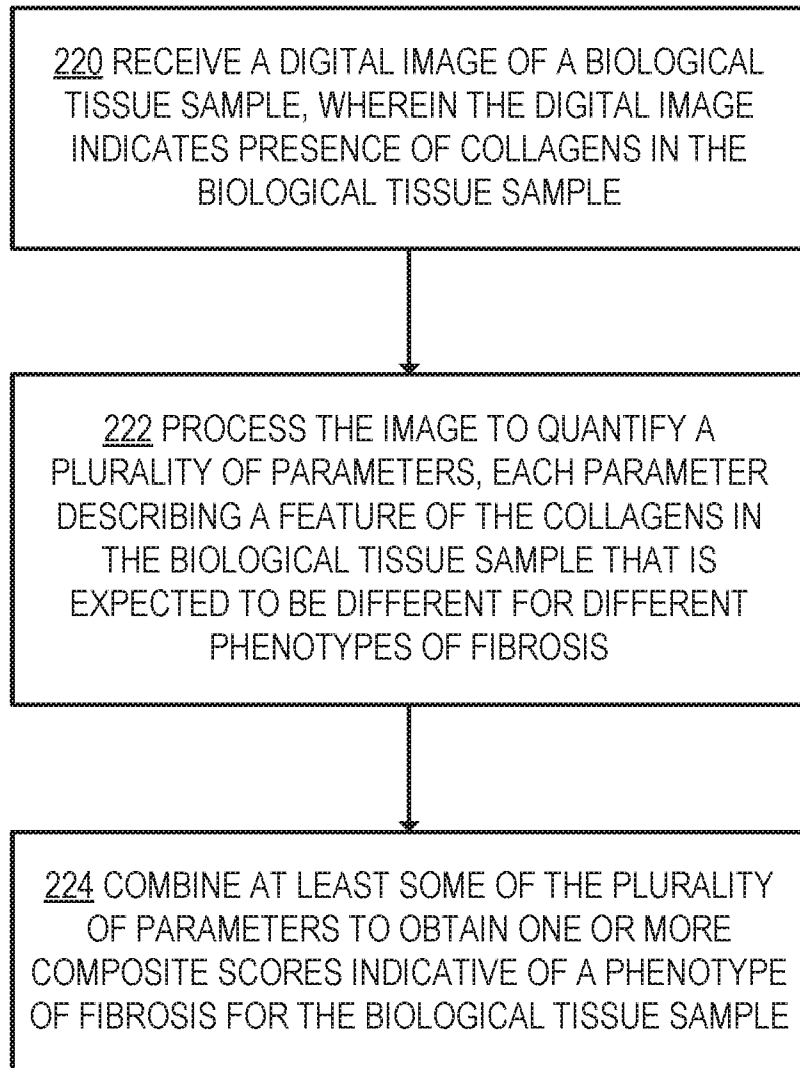
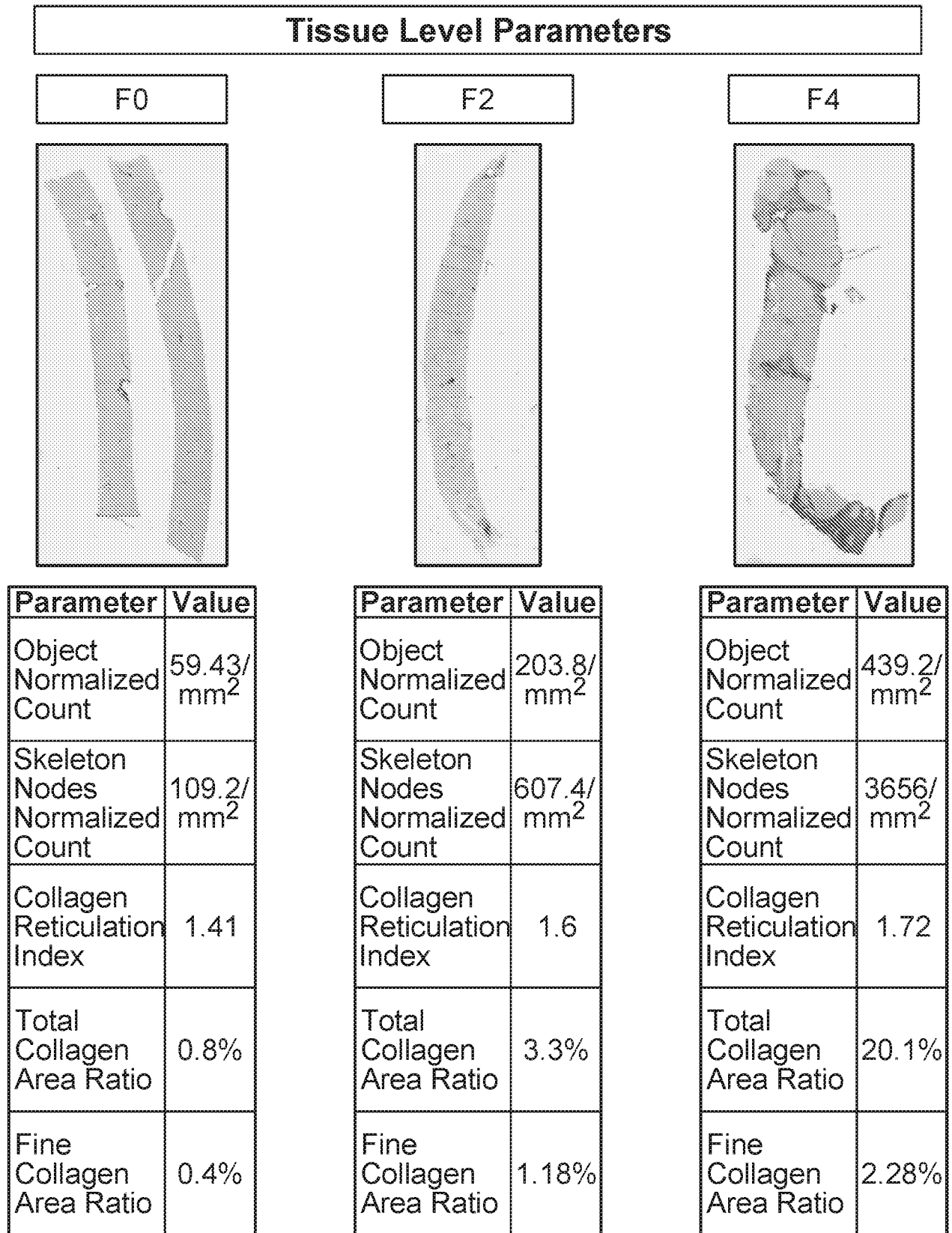


FIG. 1

200FIG. 2



This is also data from the Calibration Set

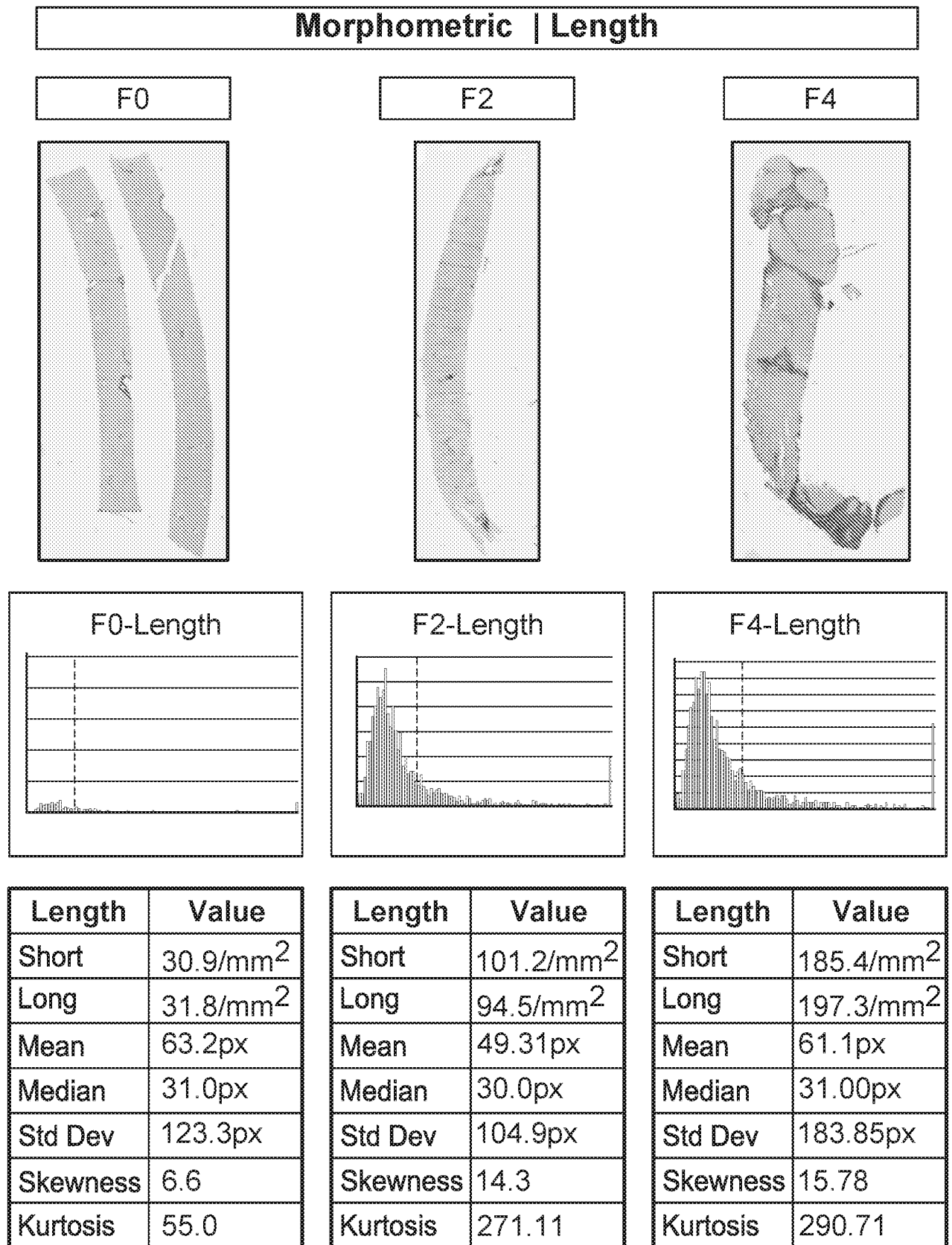
FIG. 3

400 →

Exemplary Tissue Level Parameters And Selection for a Fibrosis Severity Score

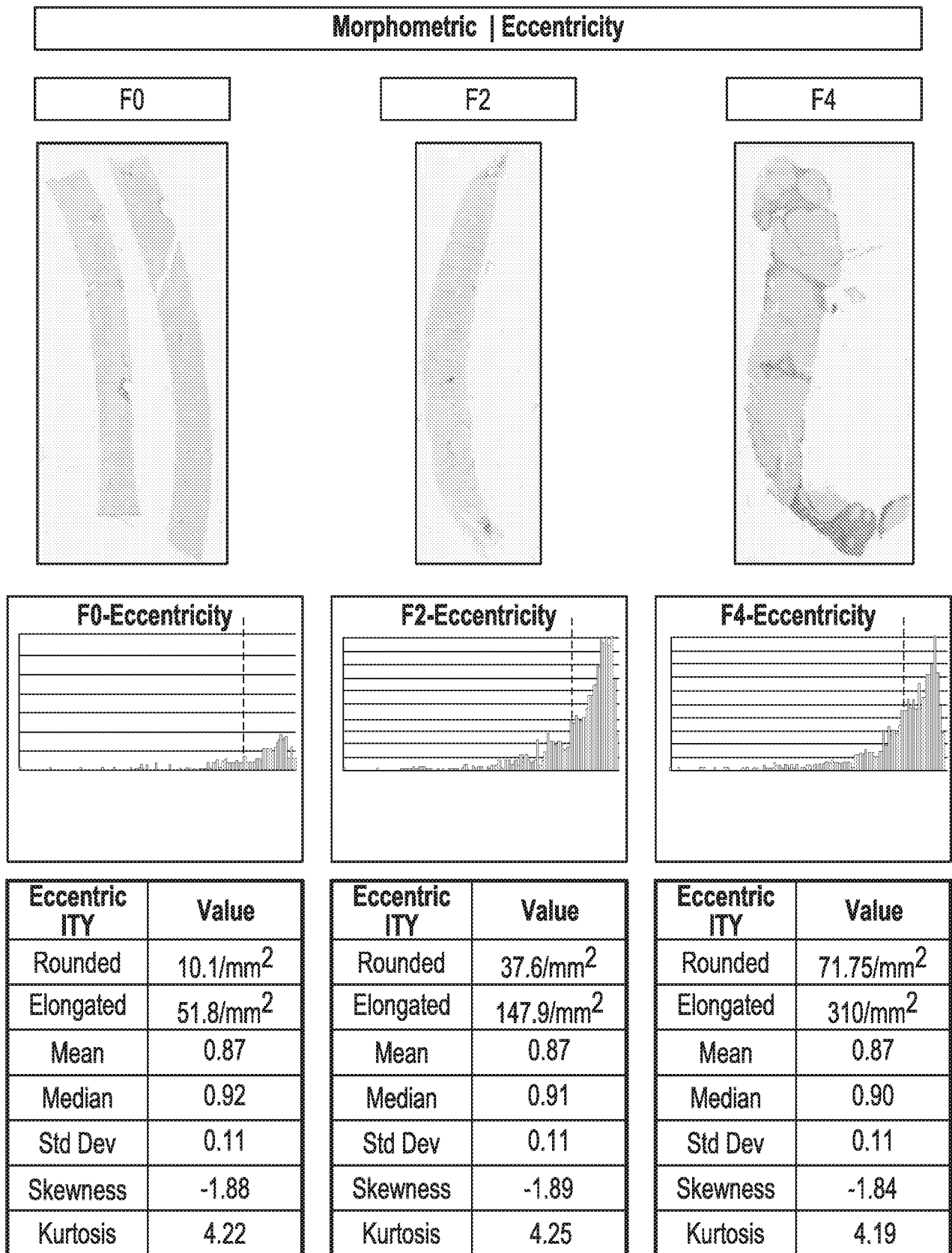
Parameter	Fibrosis stage				Selected
	0	2	4		
Fiber Normalized Count	59.43	203.78	439.14		0
Fine Collagen Normalized Count	58.66	198.61	431.68		0
Assembled Collagen Normalized Count	0.76	5.17	7.46		0
Skeleton Nodes Normalized Count	109.19	607.44	3656.51		0
Skeleton Branch Normalized Count	236.39	1147.26	5321.95		1
Collagen Reticulation Index	1.41	1.60	1.72		0
Collagen Structure Index	3.46	5.68	14.59		0
Total Collagen Area Ratio (%)	0.80	3.30	20.10		1
SQRT(Total Collagen Area Ratio %)	0.89	1.83	4.48		1
Fine Collagen Area Ratio (%)	0.40	1.18	2.83		0
SQRT(Fine Collagen Area Ratio %)	0.64	1.09	1.68		0
Assembled Collagen Area Ratio (%)	0.39	2.16	17.26		1
SQRT(Assembled Collagen Area Ratio %)	0.63	1.47	4.16		0
Total Collagen Density Area Ratio (%)	0.14	0.49	3.56		1
Assembled/Fine CAR Ratio	0.92	1.78	6.10		1

FIG. 4



This is also data from the Calibration Set

FIG. 5



This is also Data from the Calibration Set

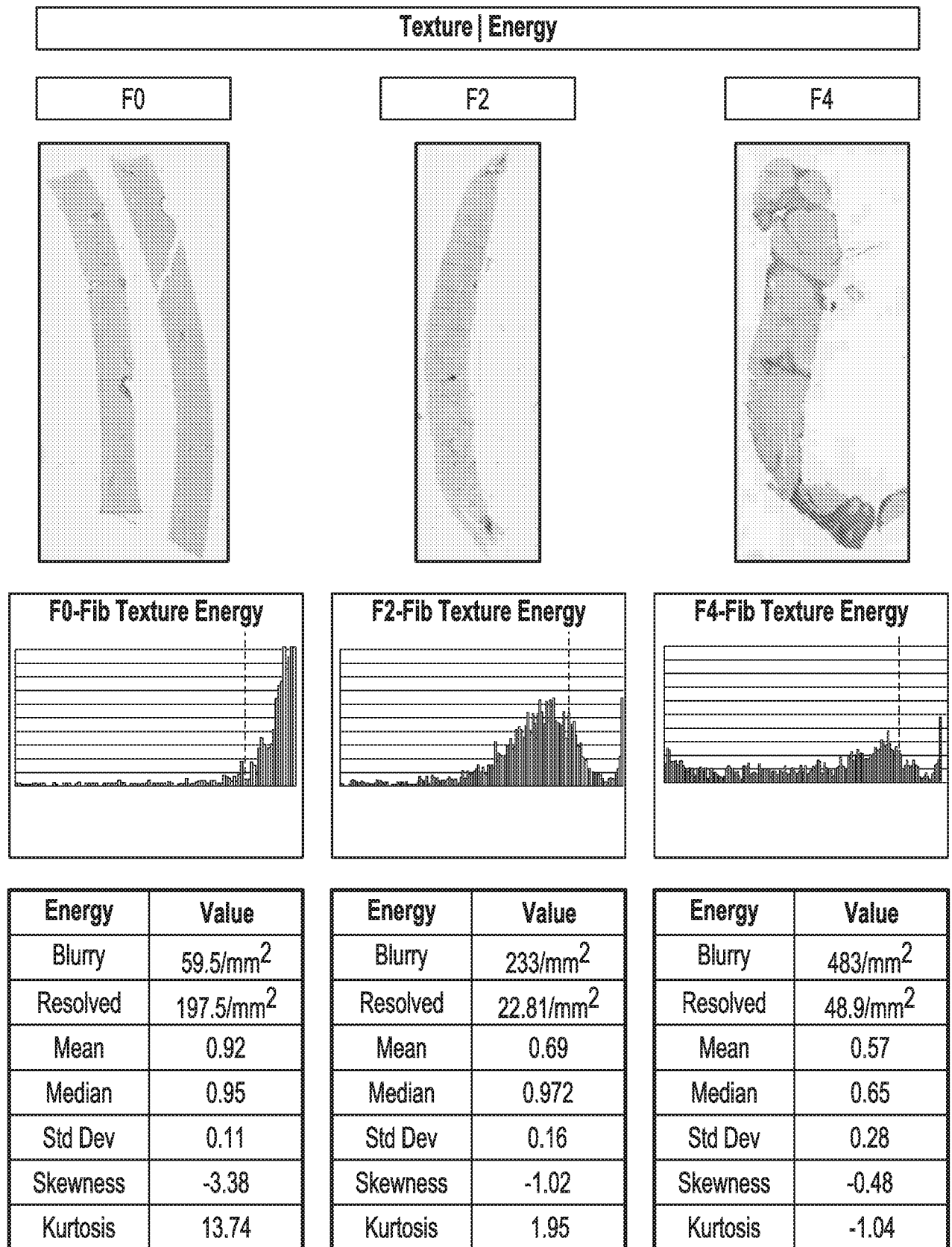
FIG. 6

700

**Exemplary Morphometric Level Parameters and
Selection for a Fibrosis Severity Score**

Parameter	Fibrosis Stage			Selected
	0	2	4	
Normalized Count of Short of Length for All - Collagen Phenotypes	29.52	100.73	5.19	0
Normalized Count of Long of Length for All - Collagen Phenotypes	28.73	92.74	433.96	1
Mean of Length for All - Collagen Phenotypes	52.89	51.04	57.08	1
Median of Length for All - Collagen Phenotypes	30.00	30.00	31.00	0
Std of Length for All - Collagen Phenotypes	81.80	109.86	172.60	0
Skew of Length for All - Collagen Phenotypes	5.85	13.43	14.98	0
Kurtosis of Length for All - Collagen Phenotypes	41.62	239.93	256.70	0
Normalized Count of Short of Total Skeleton Length for All - Collagen Phenotypes	36.30	120.12	249.41	0
Normalized Count of Long of Total Skeleton Length for All - Collagen Phenotypes	21.94	73.35	189.73	1
Mean of Total Skeleton Length for All - Collagen Phenotypes	74.95	91.84	226.14	0
Median of Total Skeleton Length for All - Collagen Phenotypes	24.00	24.00	26.00	1
Std of Total Skeleton Length for All - Collagen Phenotypes	302.94	572.40	3052.70	0
Skew of Total Skeleton Length for All - Collagen Phenotypes	10.59	19.54	21.81	1
Kurtosis of Total Skeleton Length for All - Collagen Phenotypes	122.08	442.61	518.90	0
Normalized Count of Thin of Width for All - Collagen Phenotypes	11.36	33.53	0.65	1
Normalized Count of Thick of Width for All - Collagen Phenotypes	46.88	159.94	438.50	1
Mean of Width for All - Collagen Phenotypes	9.42	9.60	10.27	1
Median of Width for All - Collagen Phenotypes	7.65	8.00	8.49	1
Std of Width for All - Collagen Phenotypes	7.63	7.21	15.68	1
Skew of Width for All - Collagen Phenotypes	5.37	4.66	17.51	1
Kurtosis of Width for All - Collagen Phenotypes	42.51	35.93	391.32	1
Normalized Count of Short of Perimeter for All - Collagen Phenotypes	21.94	73.35	157.63	0
Normalized Count of Long of Perimeter for All - Collagen Phenotypes	36.30	120.12	281.52	1
Mean of Perimeter for All - Collagen Phenotypes	161.24	191.95	345.52	1
Median of Perimeter for All - Collagen Phenotypes	71.01	71.11	75.01	1
Std of Perimeter for All - Collagen Phenotypes	468.28	914.86	3575.71	0
Skew of Perimeter for All - Collagen Phenotypes	10.03	18.31	19.60	0
Kurtosis of Perimeter for All - Collagen Phenotypes	113.08	396.27	408.79	1
Normalized Count of Small of Area for All - Collagen Phenotypes	28.5	96.28	159.7	0
Normalized Count of Large of Area for All - Collagen Phenotypes	29.99	97.19	279.57	1
Mean of Area for All - Collagen Phenotypes	896.62	1000.64	3008.77	0
Median of Area for All - Collagen Phenotypes	208.00	201.00	218.00	1
Std of Area for All - Collagen Phenotypes	4464.35	7636.96	47493.66	1
Skew of Area for All - Collagen Phenotypes	10.33	22.17	25.00	0
Kurtosis of Area for All - Collagen Phenotypes	112.28	567.50	697.86	0

FIG. 7



This is also Data from the Calibration Set

FIG. 8

900

**Exemplary Texture Level Parameters and
Selection for a Fibrosis Severity Score**

Parameter	Fibrosis Stage			Selected
	0	2	4	
Normalized Count of Homogenous of Homogeneity for All - Fibrosis Texture	10.89	66.54	10.70	0
Normalized Count of Organized of Homogeneity for All - Fibrosis Texture	337.31	331.01	474.82	0
Mean of Homogeneity for All - Fibrosis Texture	0.94	0.81	0.69	-1
Median of Homogeneity for All - Fibrosis Texture	0.97	0.85	0.78	-1
Std of Homogeneity for All - Fibrosis Texture	0.08	0.12	0.23	5
Skew of Homogeneity for All - Fibrosis Texture	-4.16	-2.39	-0.89	0
Kurtosis of Homogeneity for All - Fibrosis Texture	23.11	7.45	-0.59	-1
Normalized Count of Irregular of Correlation for All - Fibrosis Texture	301.64	300.10	0.00	-1
Normalized Count of Patterned of Correlation for All - Fibrosis Texture	46.56	97.46	485.52	1
Mean of Correlation for All - Fibrosis Texture	0.74	0.81	0.87	1
Median of Correlation for All - Fibrosis Texture	0.75	0.81	0.90	3
Std of Correlation for All - Fibrosis Texture	0.16	0.10	0.10	0
Skew of Correlation for All - Fibrosis Texture	-0.95	-0.15	-0.76	0
Kurtosis of Correlation for All - Fibrosis Texture	-1.85	-0.86	-0.47	0
Normalized Count of Uniform of Inertia for All - Fibrosis Texture	336.52	371.88	485.52	1
Normalized Count of Contrasted of Inertia for All - Fibrosis Texture	11.68	25.67	0.00	1
Mean of Inertia for All - Fibrosis Texture	4.12	8.74	34.61	5
Median of Inertia for All - Fibrosis Texture	0.00	2.00	6.00	0
Std of Inertia for All - Fibrosis Texture	17.42	25.16	54.61	1
Skew of Inertia for All - Fibrosis Texture	7.41	5.62	1.93	-1
Kurtosis of Inertia for All - Fibrosis Texture	64.93	37.12	3.17	-1
Normalized Count of Smooth of Entropy for All - Fibrosis Texture	334.78	317.52	335.36	0
Normalized Count of Rough of Entropy for All - Fibrosis Texture	13.42	80.03	150.17	0
Mean of Entropy for All - Fibrosis Texture	0.68	2.03	3.24	0
Median of Entropy for All - Fibrosis Texture	0.42	1.75	2.33	1
Std of Entropy for All - Fibrosis Texture	0.87	1.13	2.13	1
Skew of Entropy for All - Fibrosis Texture	3.62	2.16	0.77	0
Kurtosis of Entropy for All - Fibrosis Texture	17.54	5.95	-0.85	0

FIG. 9

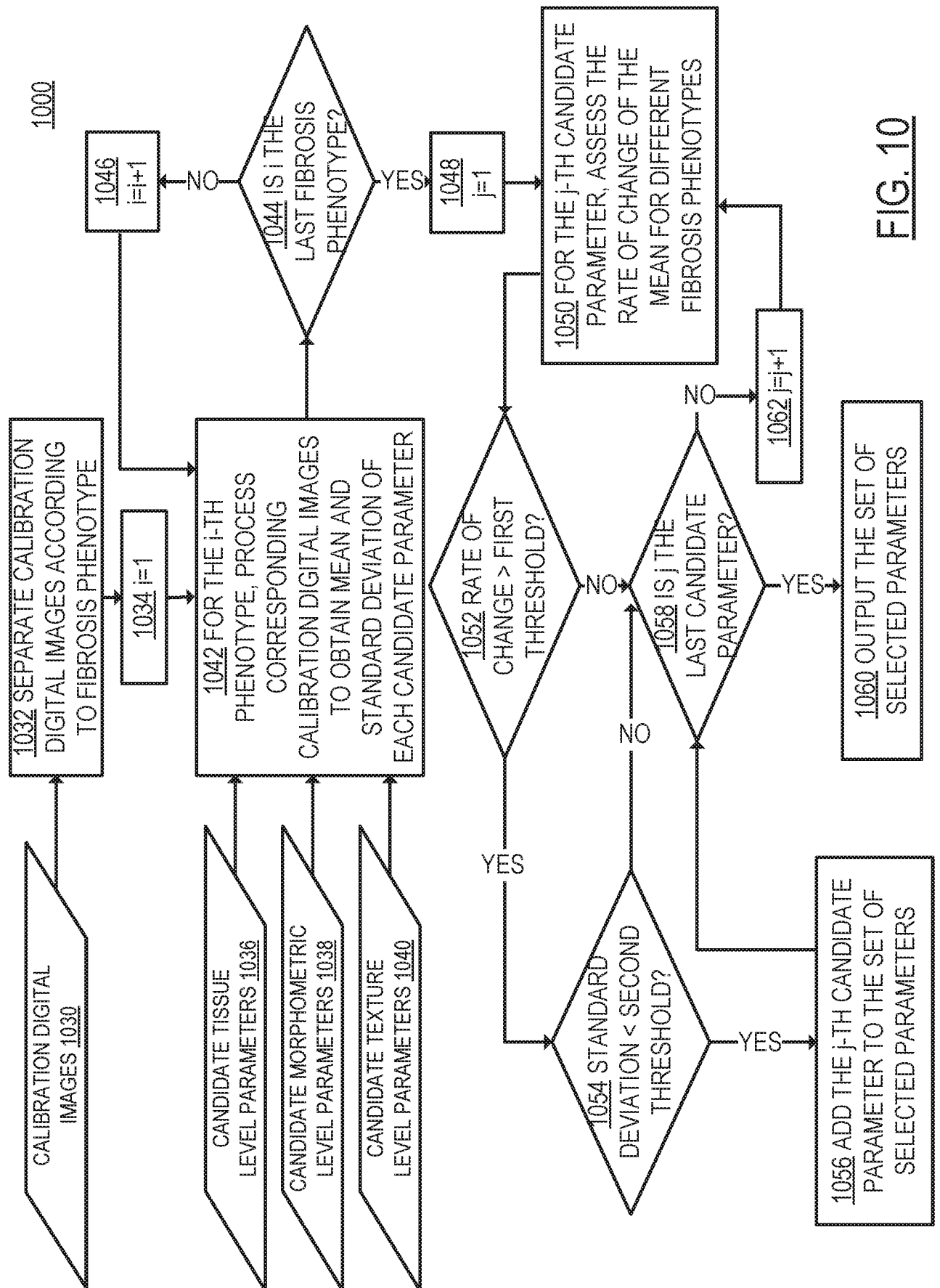


FIG. 10

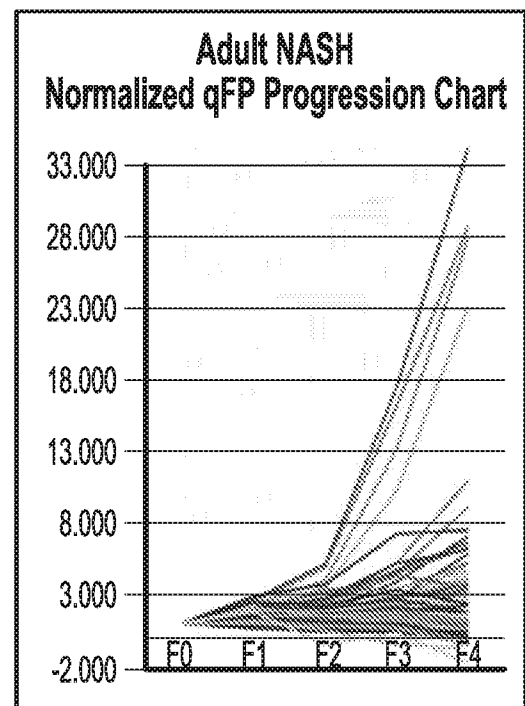
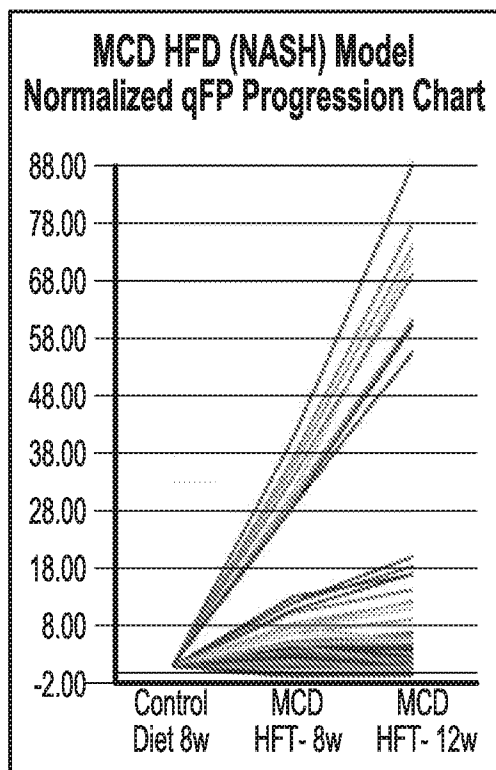
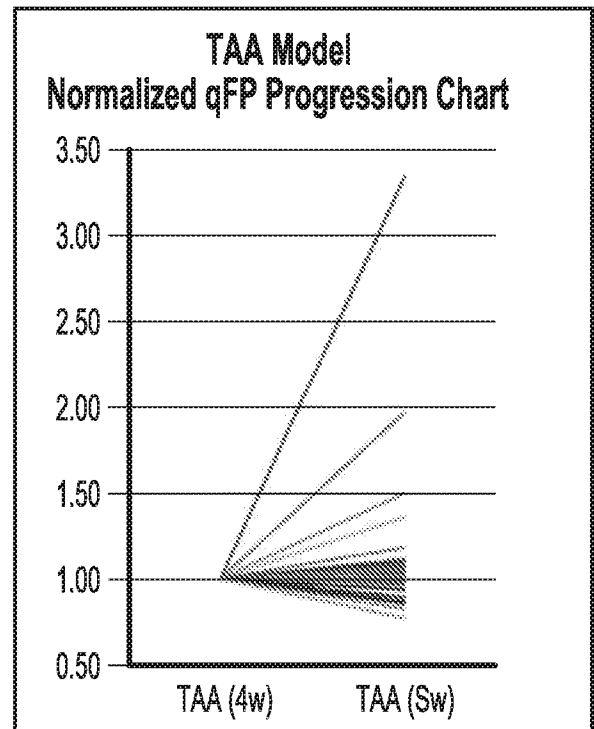
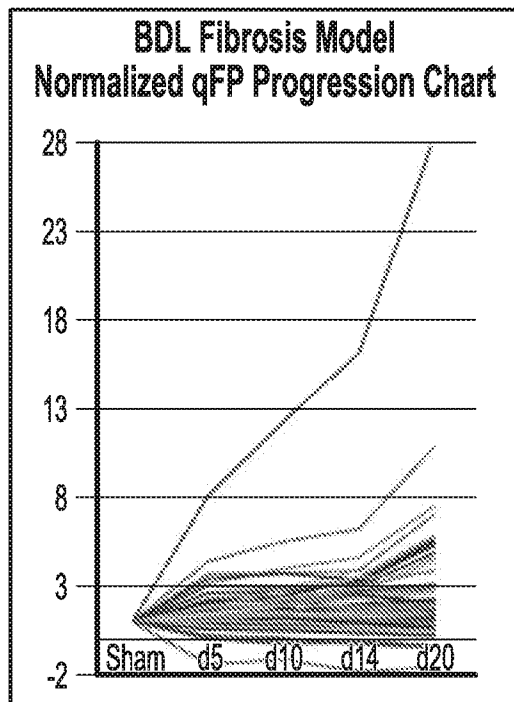


FIG. 11

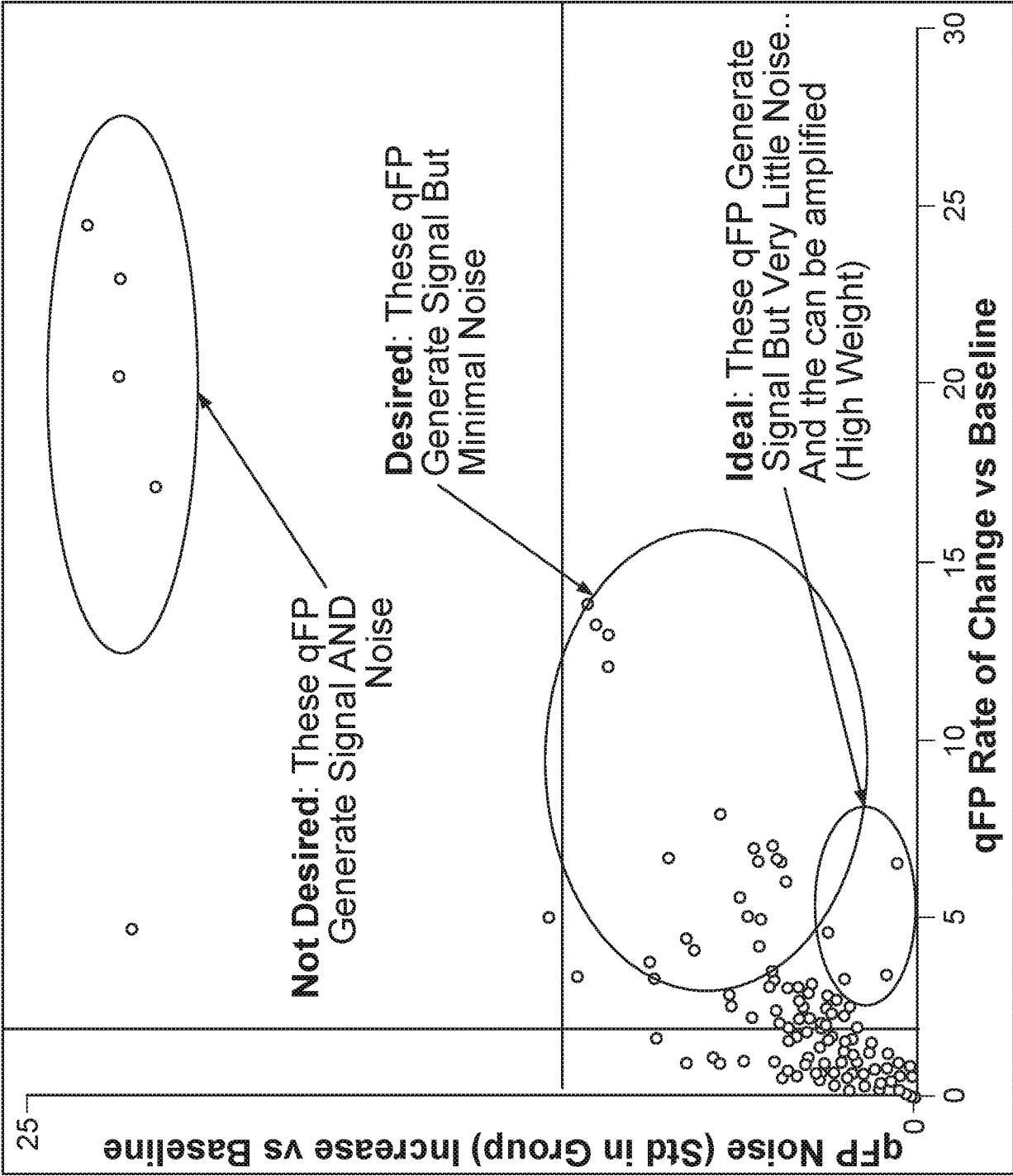
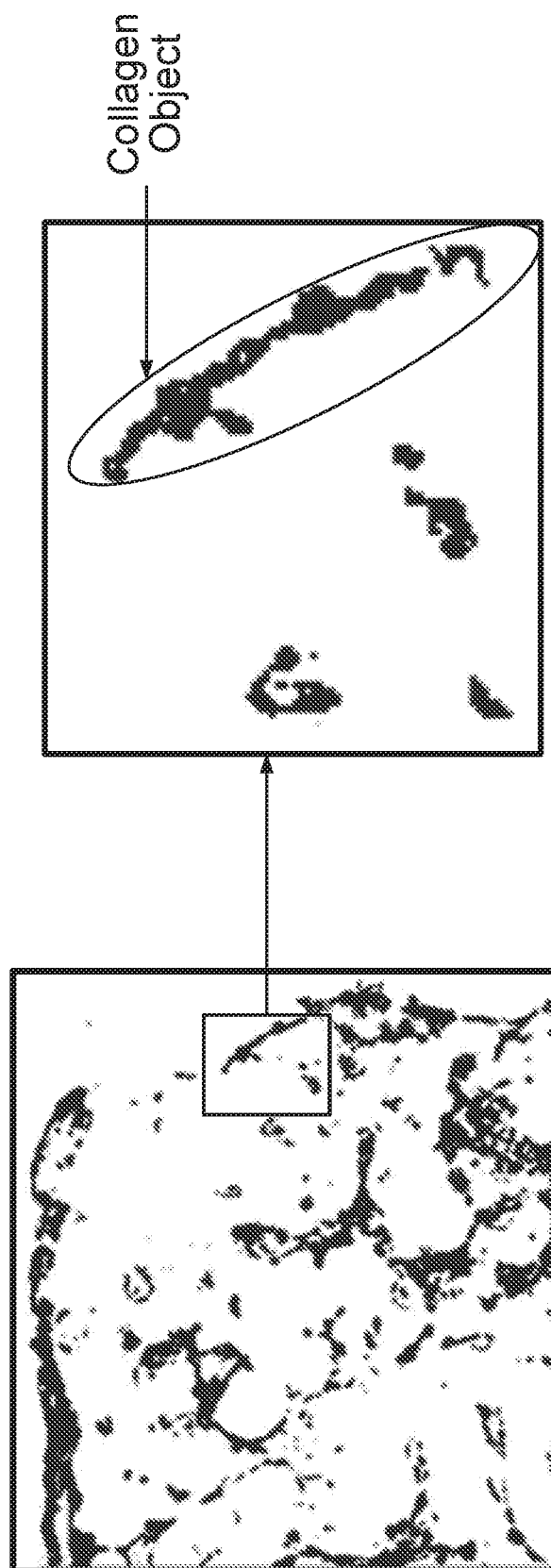


FIG. 12



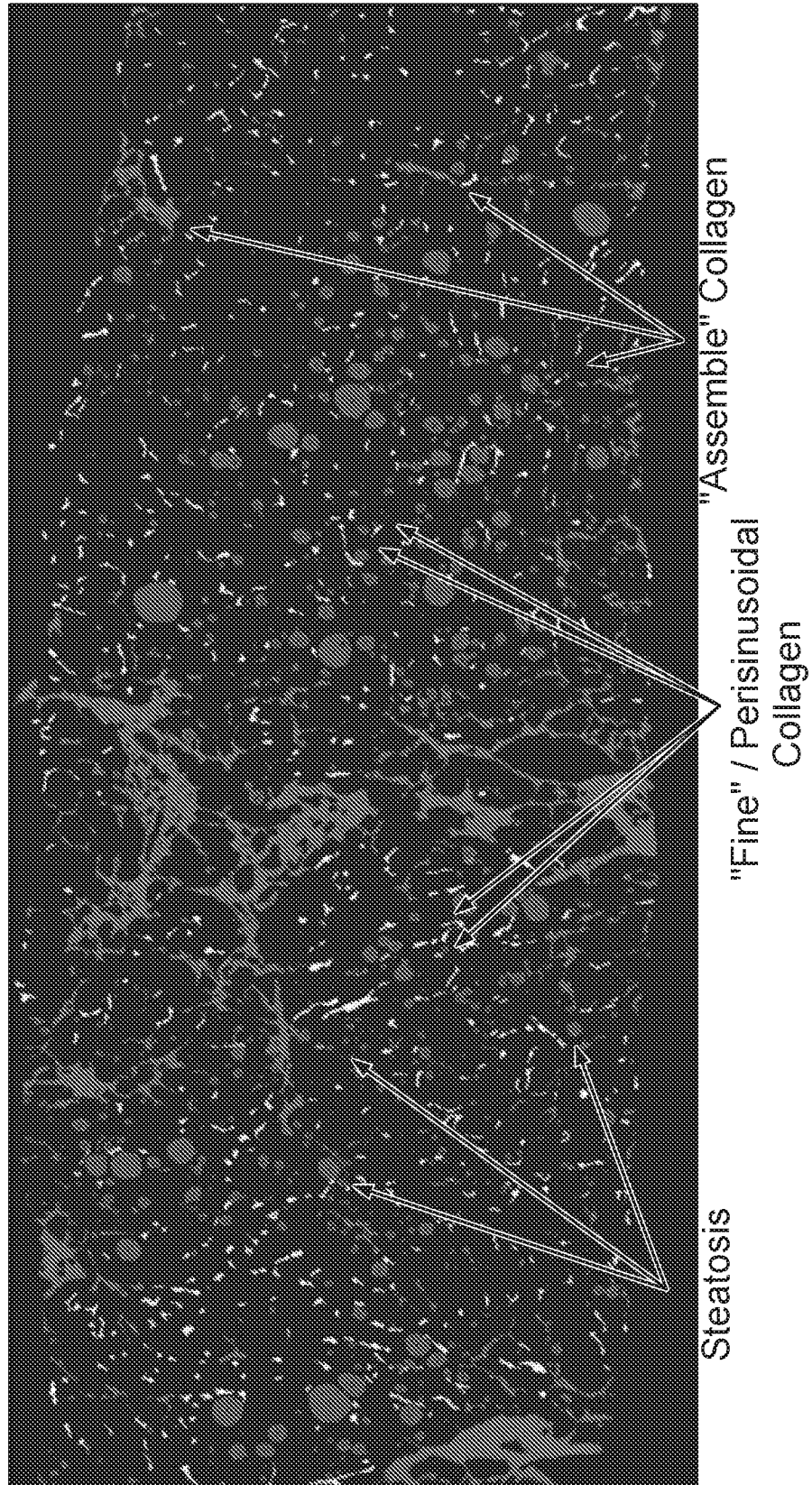


FIG. 14

Study Composite Score Template Selected qFPs Tissue & Morpho & Texture					
Untreated CTRL	Untreated Pre	Vehicle	10mg/kg	30mg/kg	100mg/kg
2.54	3.87	7.18	6.30	7.84	4.68
2.51	4.31	6.38	6.48	7.37	4.84
2.37	4.77	7.34	5.22	5.30	4.75
2.45	5.15	5.89	6.03	4.79	5.07
2.38		5.68	5.01	5.96	5.18
2.72		7.76	6.32	5.82	4.86
		6.66	6.98	5.09	3.60
		8.39	5.96	6.27	5.22
		6.53			

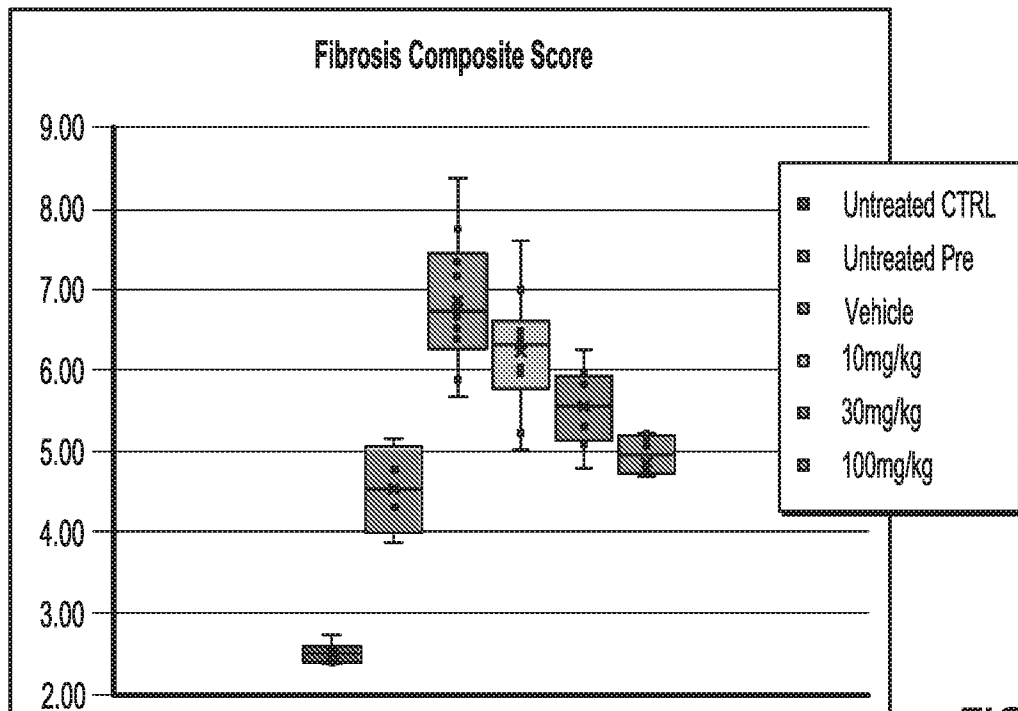
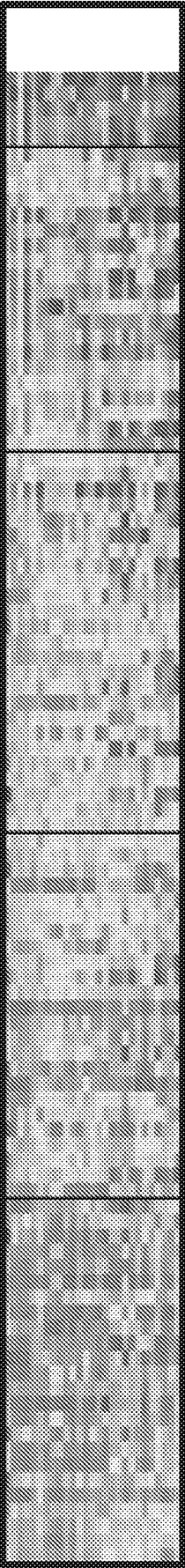
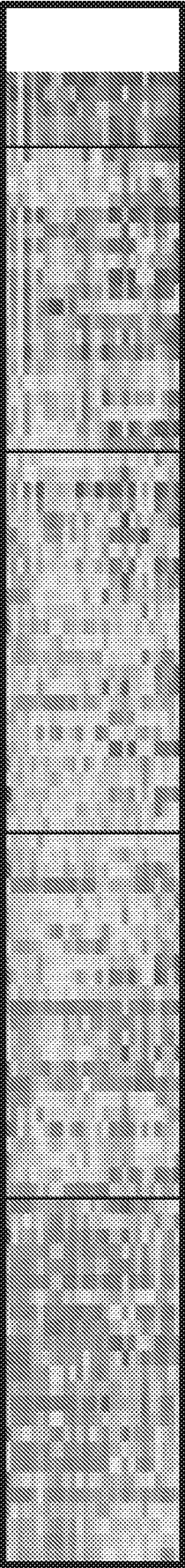
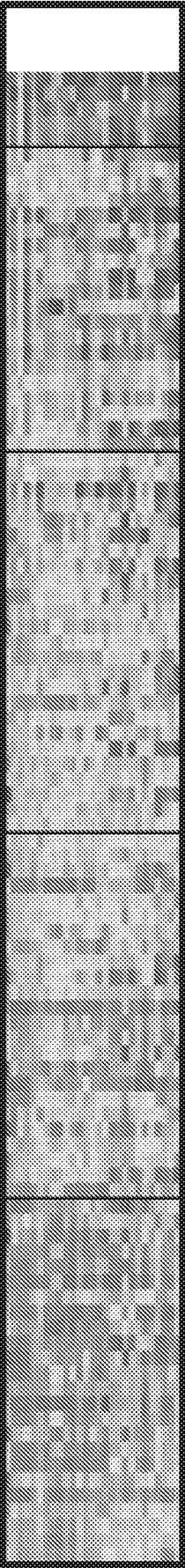
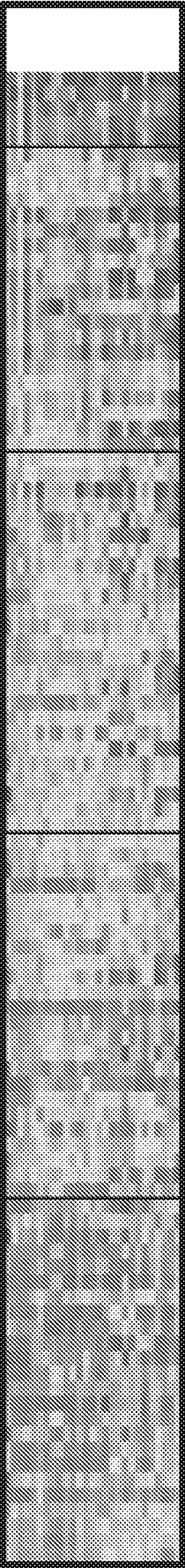
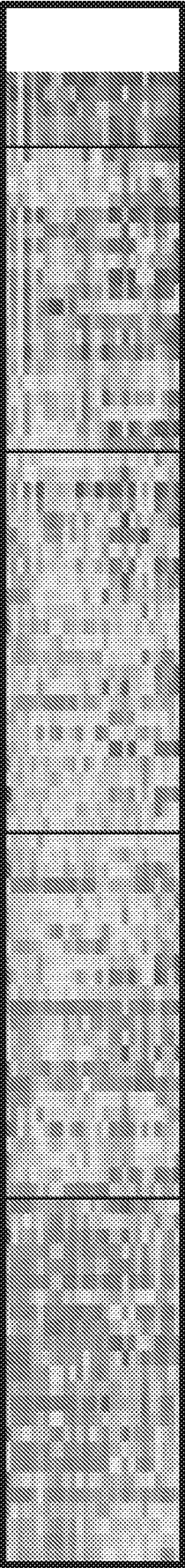


FIG. 15

Fibrosis 0	Fibrosis 1	Fibrosis 2	Fibrosis 3	Fibrosis 4
				

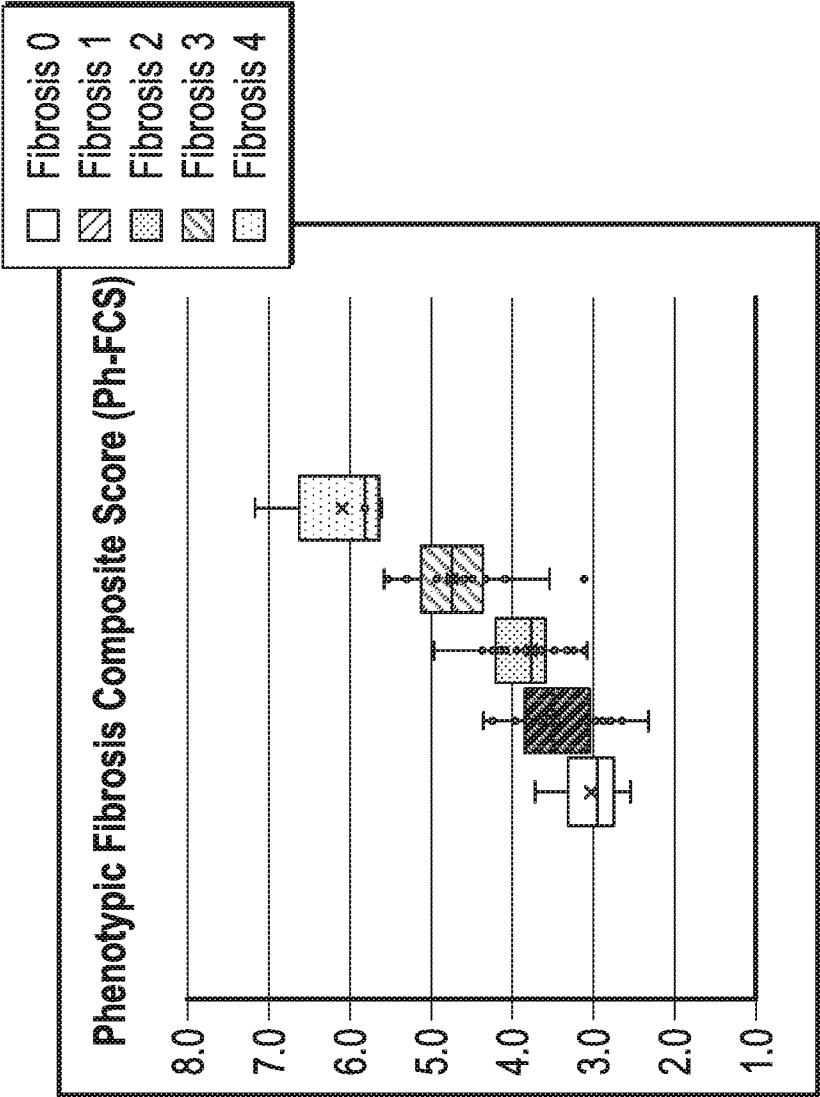


FIG. 16

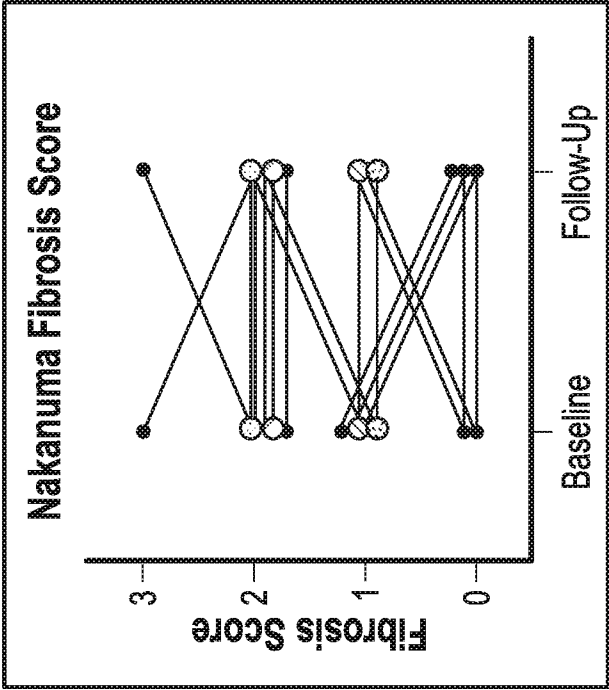


FIG. 17B

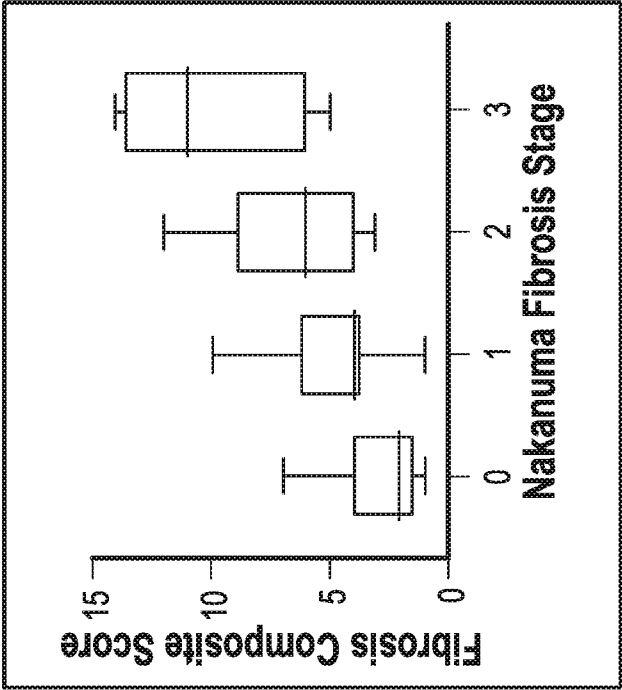


FIG. 17A

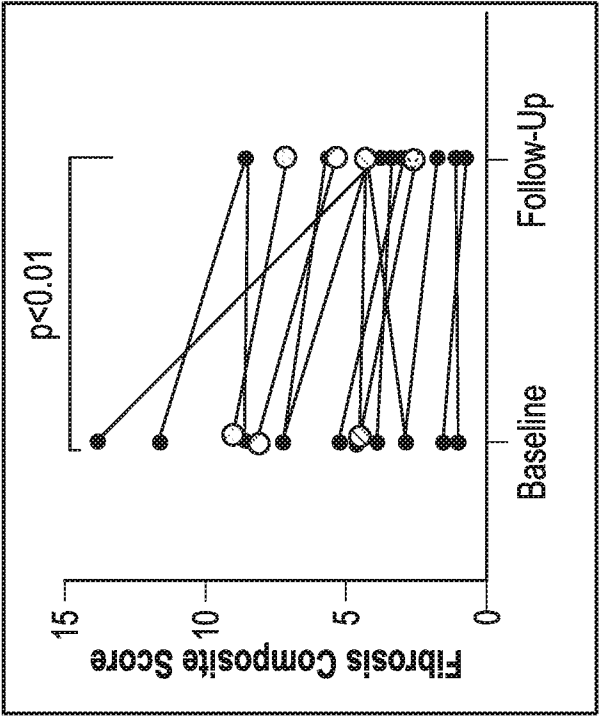


FIG. 17C

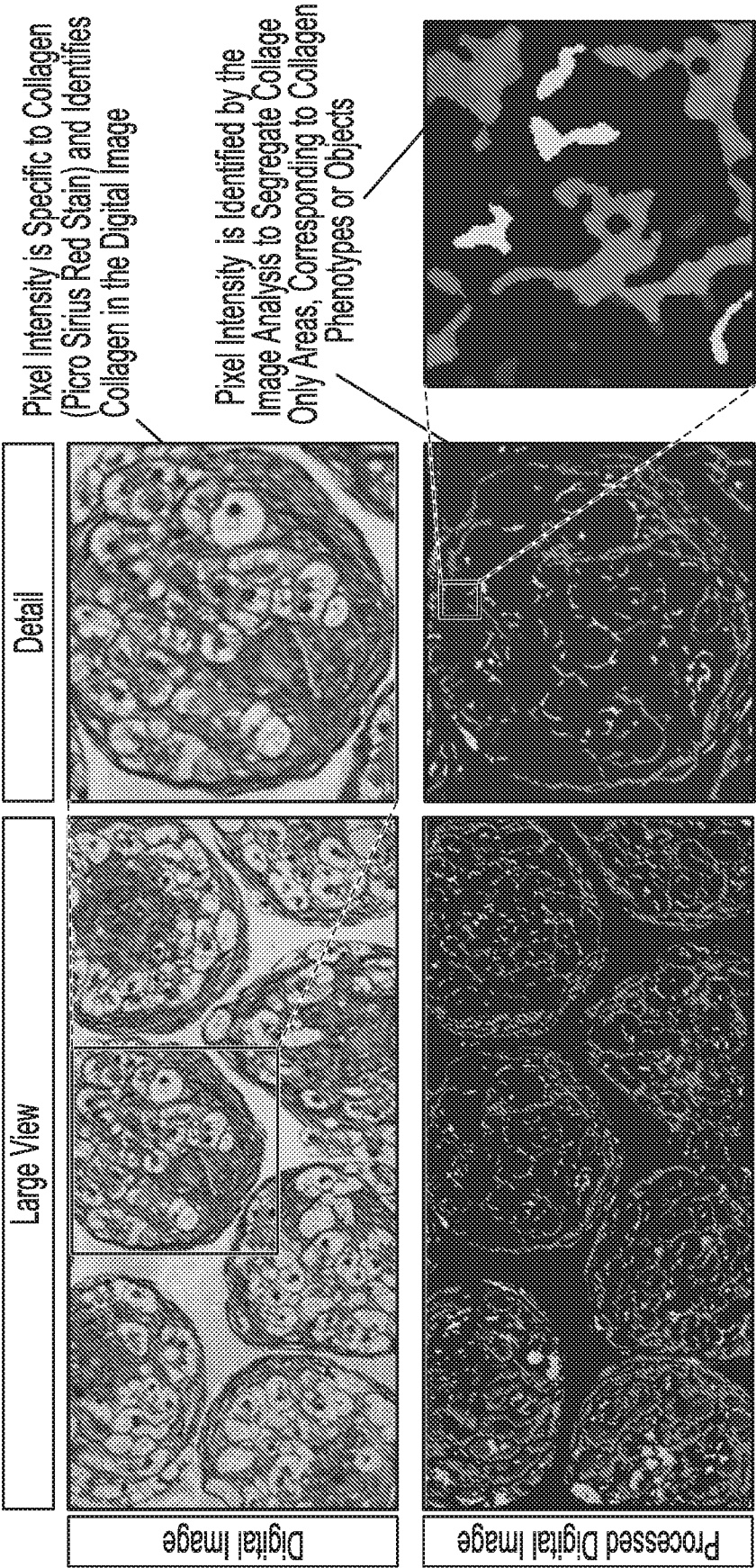


FIG. 18

Classifiers (Early Fib F-12, N=53)

NASH 1, F0-F2									
2PlaceboN1	2PlaceboN1	2PlaceboN1	2PlaceboN1	2PlaceboN1	2PlaceboN1	2PlaceboN1	2PlaceboN1	2PlaceboN1	2PlaceboN1
T2	T2	T2	T2	T2	T2	T2	T2	T2	T2
CU48 91	CU12 91	CU50 91	CU11 914	CU55 91	CU49 913	CU48 91	CU12 91	CU50 91	CU11 914
27 F52	42 21	32 22	2 11	44 22	2 11	27 F52	42 21	32 22	2 11
24	35	34	33	38	33	24	35	34	33
14	24	21	18	24	21	14	24	21	18
08	11	13	13	17	17	08	11	13	13
66	59	65	54	57	62	66	59	65	54
70	59	69	61	55	61	70	59	69	61
62	58	61	59	60	58	62	58	61	59
141	153	152	164	154	174	141	153	152	164
2100	2100	2500	2500	2400	4000	2100	2100	2500	2500
280	280	430	410	530	330	280	280	430	410
1900	1800	2400	2100	2800	3300	1900	1800	2400	2100
540	460	710	530	730	830	540	460	710	530
80	80	80	80	80	80	80	80	80	80
540	460	710	530	730	830	540	460	710	530
38	37	32	34	37	34	38	37	32	34
2100	2100	2700	2400	3300	4000	2100	2100	2700	2400
270	280	420	410	430	400	270	280	420	410
1800	1800	2300	2000	2800	3200	1800	1800	2300	2000
610	460	730	590	730	900	610	460	730	590
88	88	88	88	88	88	88	88	88	88
610	460	730	590	730	900	610	460	730	590
3600	3600	5600	5300	6400	6300	3600	3600	5600	5300
1800	1700	2300	3300	3400	4800	1800	1700	2300	3300
2000	1900	2700	2200	3000	3300	2000	1900	2700	2200
13	13	13	13	13	11	13	13	13	11
170	160	200	190	240	300	170	160	200	190
2500	2400	3300	2900	3800	4600	2500	2400	3300	2900
93	92	93	112	101	99	93	92	93	112
677	1364	655	2143	1831	1519	677	1364	655	2143
432	530	481	710	577	629	432	530	481	710
1803	1616	1204	635	2112	1945	1803	1616	1204	635
28	28	28	32	32	24	28	28	28	32
433	157	153	159	175	175	433	157	153	159
72	79	75	81	80	85	72	79	75	81
202	239	218	348	273	278	202	239	218	348
380	870	1200	2400	2810	1400	380	870	1200	2400
1800	4000	12000	47000	12000	14000	1800	4000	12000	47000
35	36	50	55	64	55	35	36	50	55
88	86	120	112	143	92	88	86	120	112
38	39	53	56	69	63	38	39	53	56
540	603	771	1023	1124	1373	540	603	771	1023

FIG. 19

Patient Fibrosis Morphometric Phenotypes

Steatosis | Ballooning degeneration Perisinusoidal Fibrosis in absence of portal features | Male+Caucasian+

VS Steatosis | Portal inflammation|portal Fibrosis| No Ballooning |degeneration| Mild Perisin. Fibrosis| Younger ++|Obesity++| Female+| Asian, Ntv Amer., Hispanic +

