

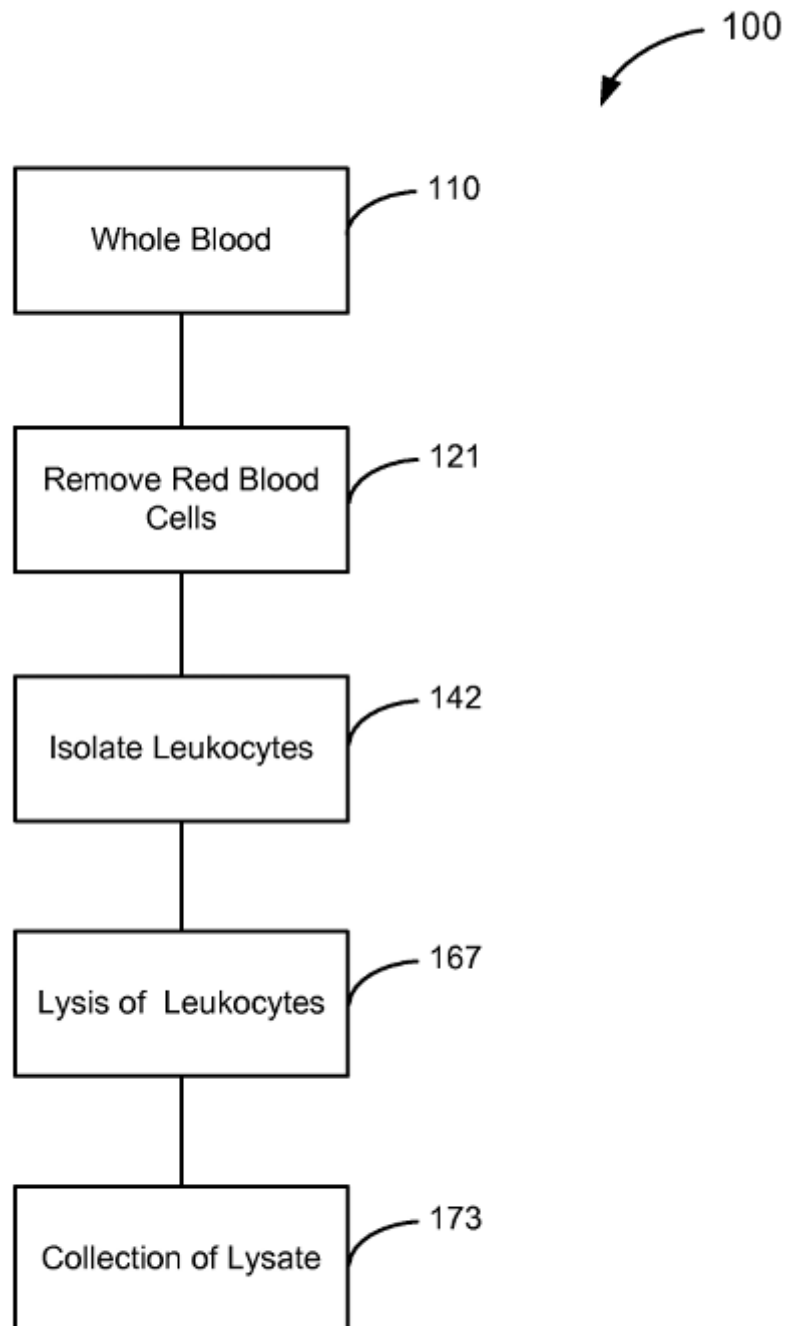


FIG. 1

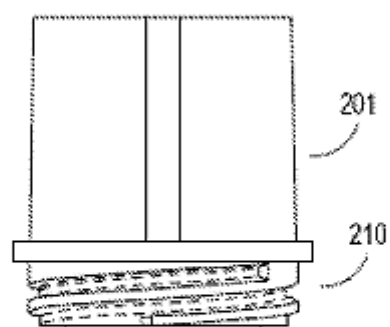


FIG. 2A

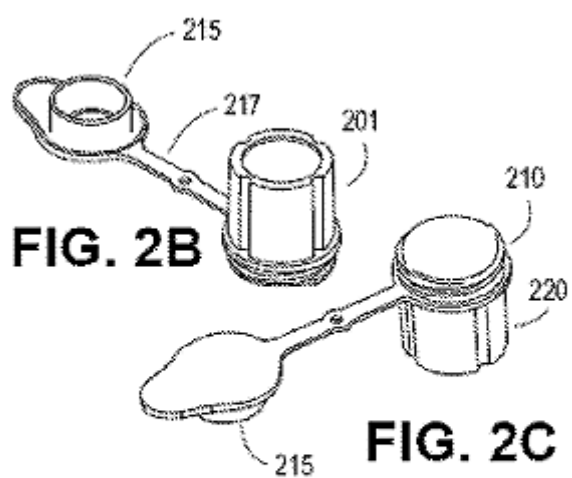


FIG. 2B

FIG. 2C

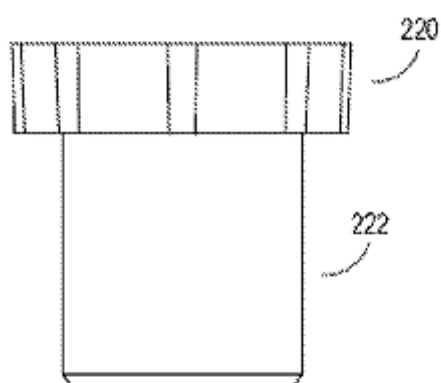


FIG. 2D

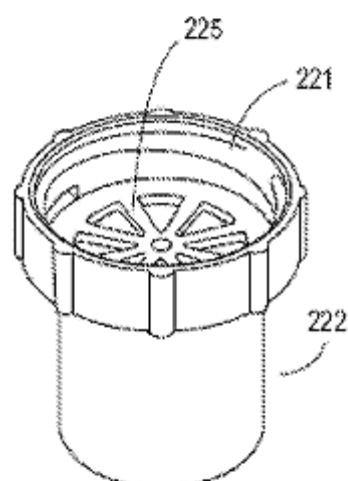


FIG. 2E

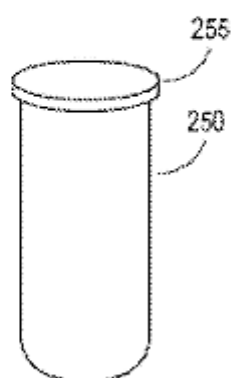


FIG. 2F

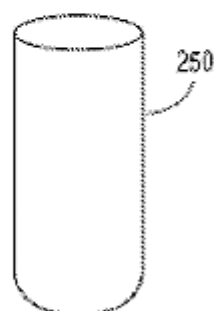


FIG. 2G

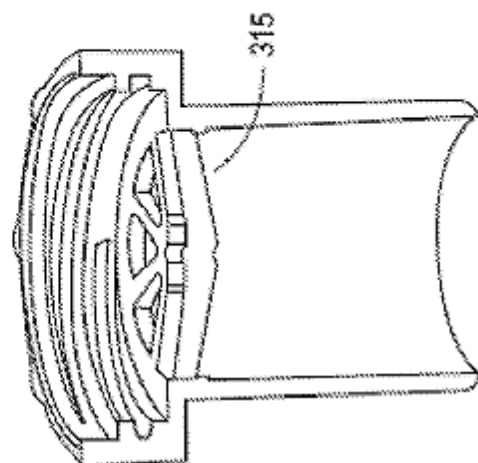


FIG. 3C

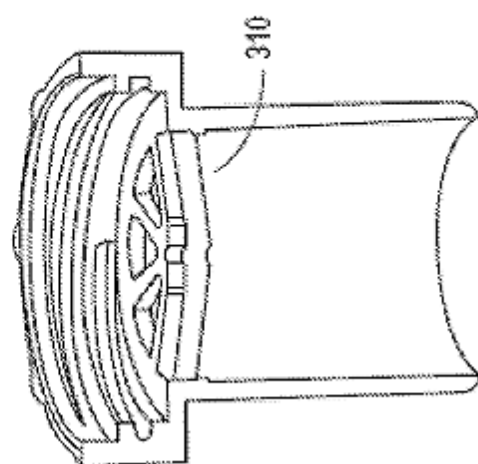


FIG. 3B

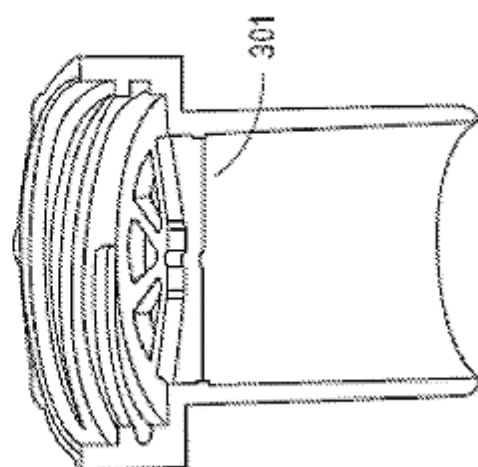


FIG. 3A

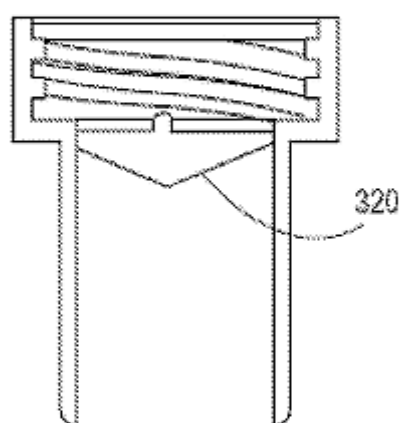


FIG. 3D

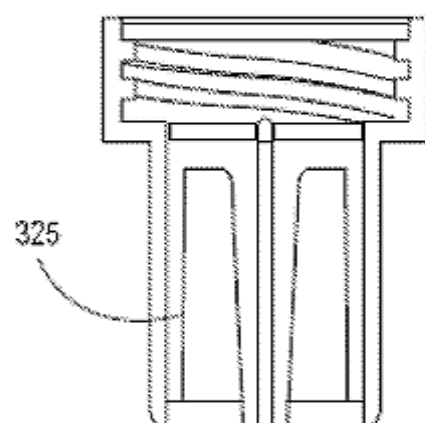


FIG. 3F

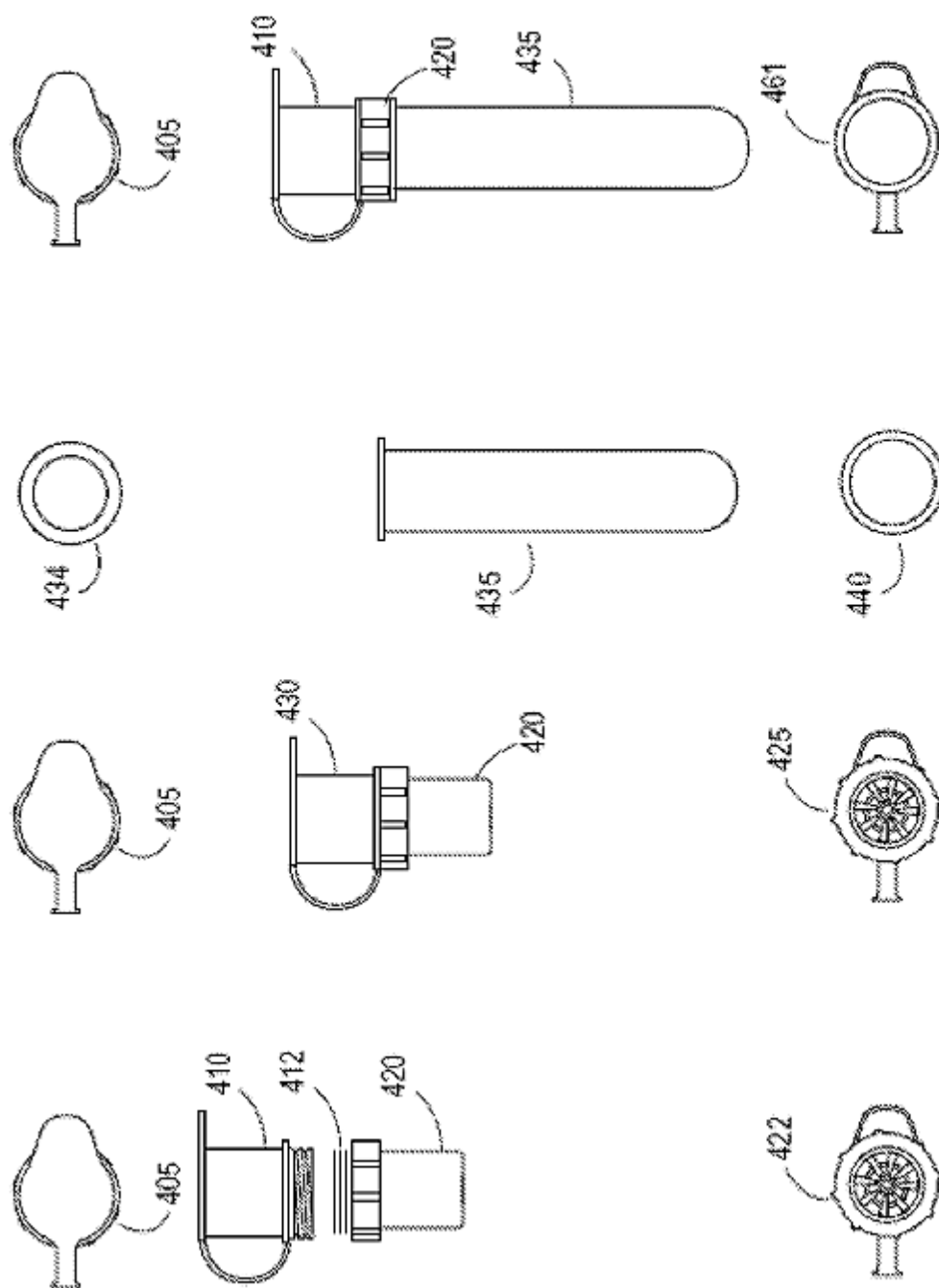
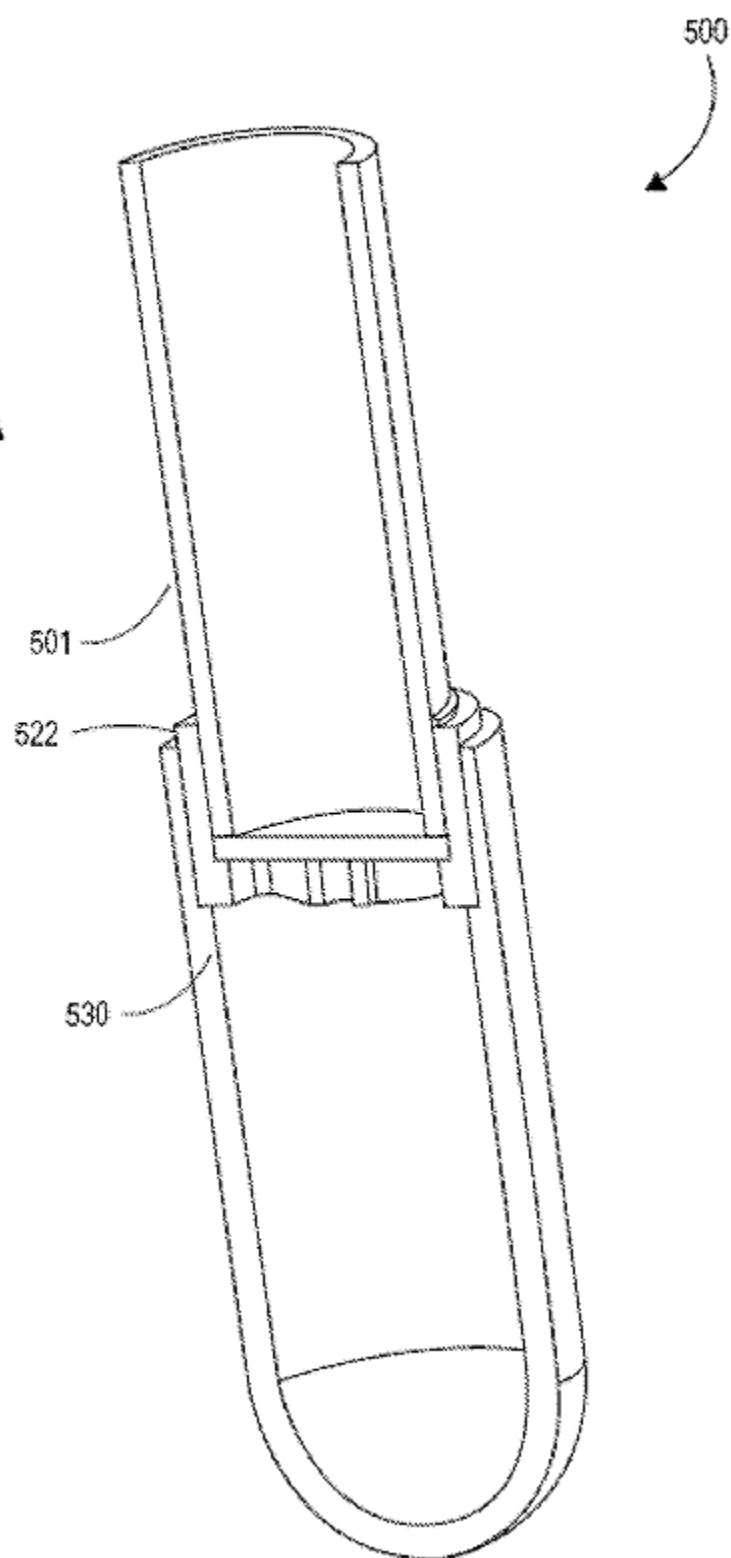


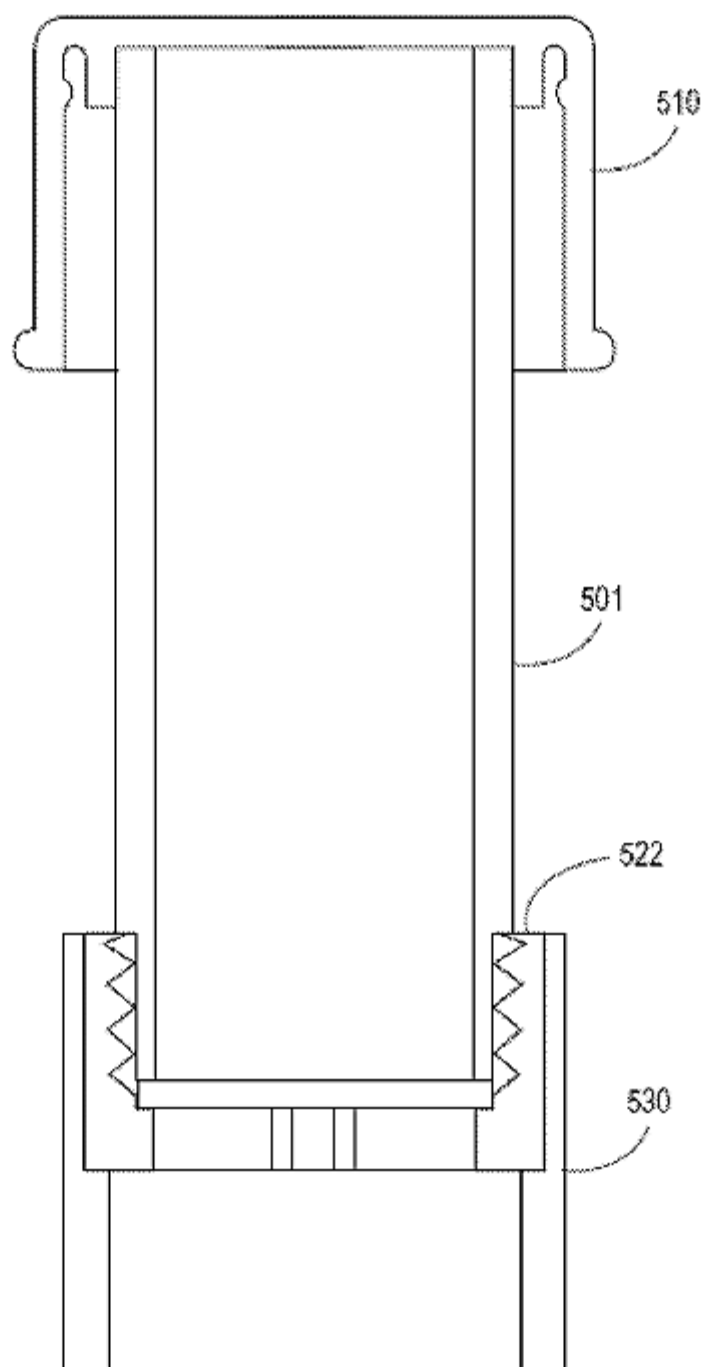
FIG. 4D

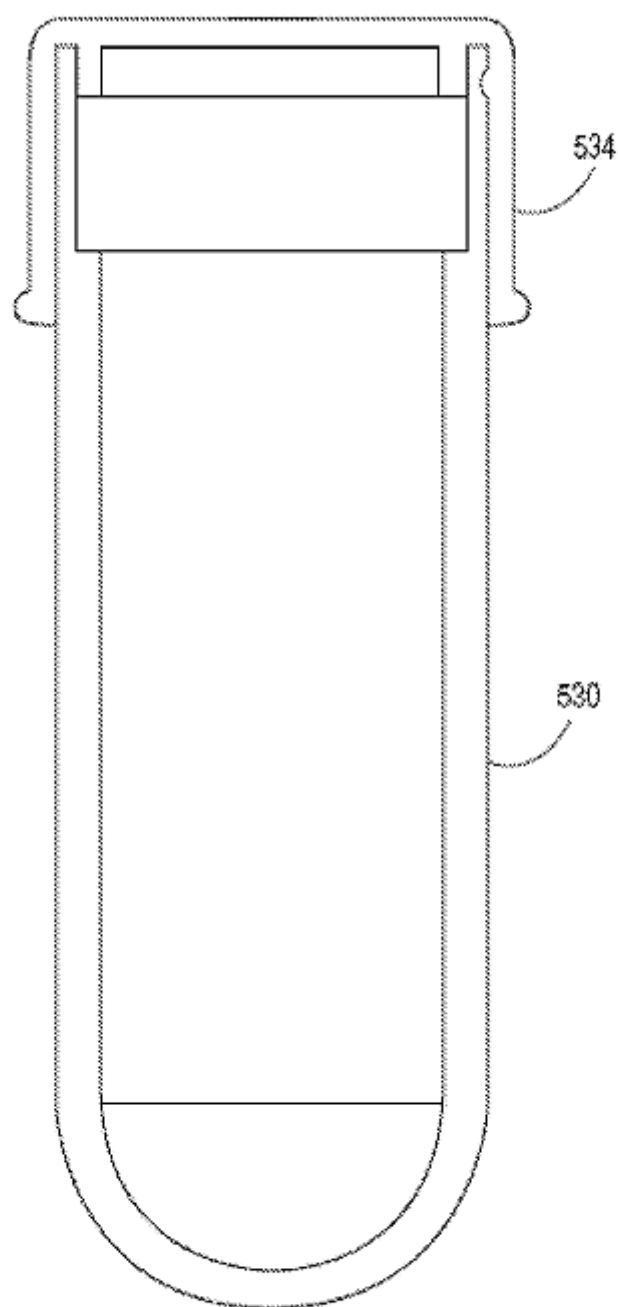
FIG. 4C

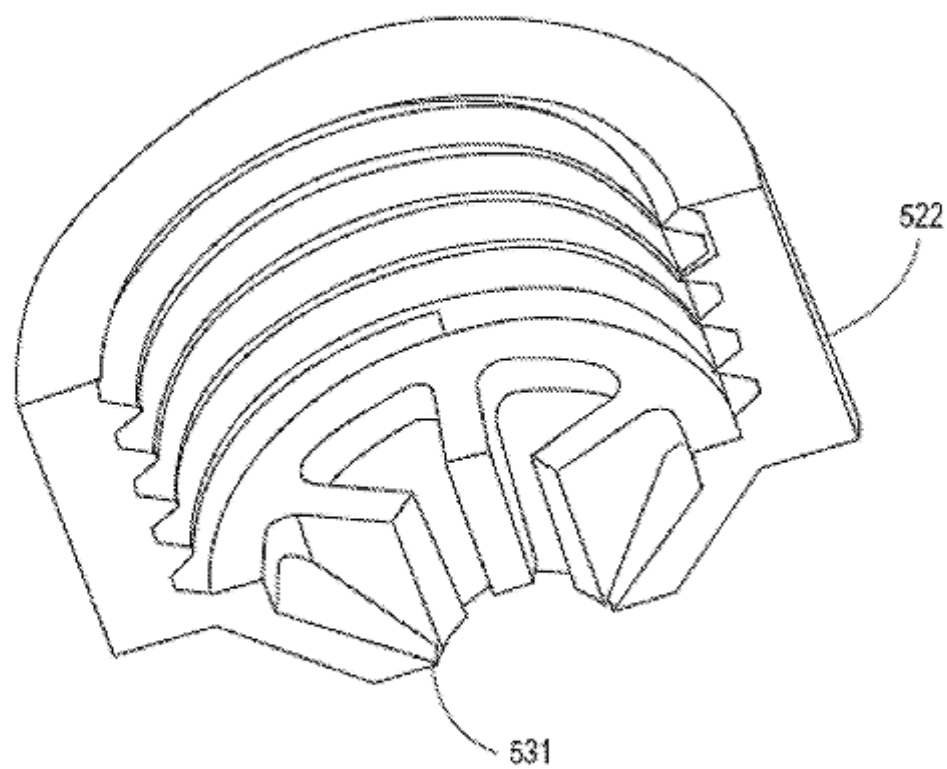
FIG. 4B

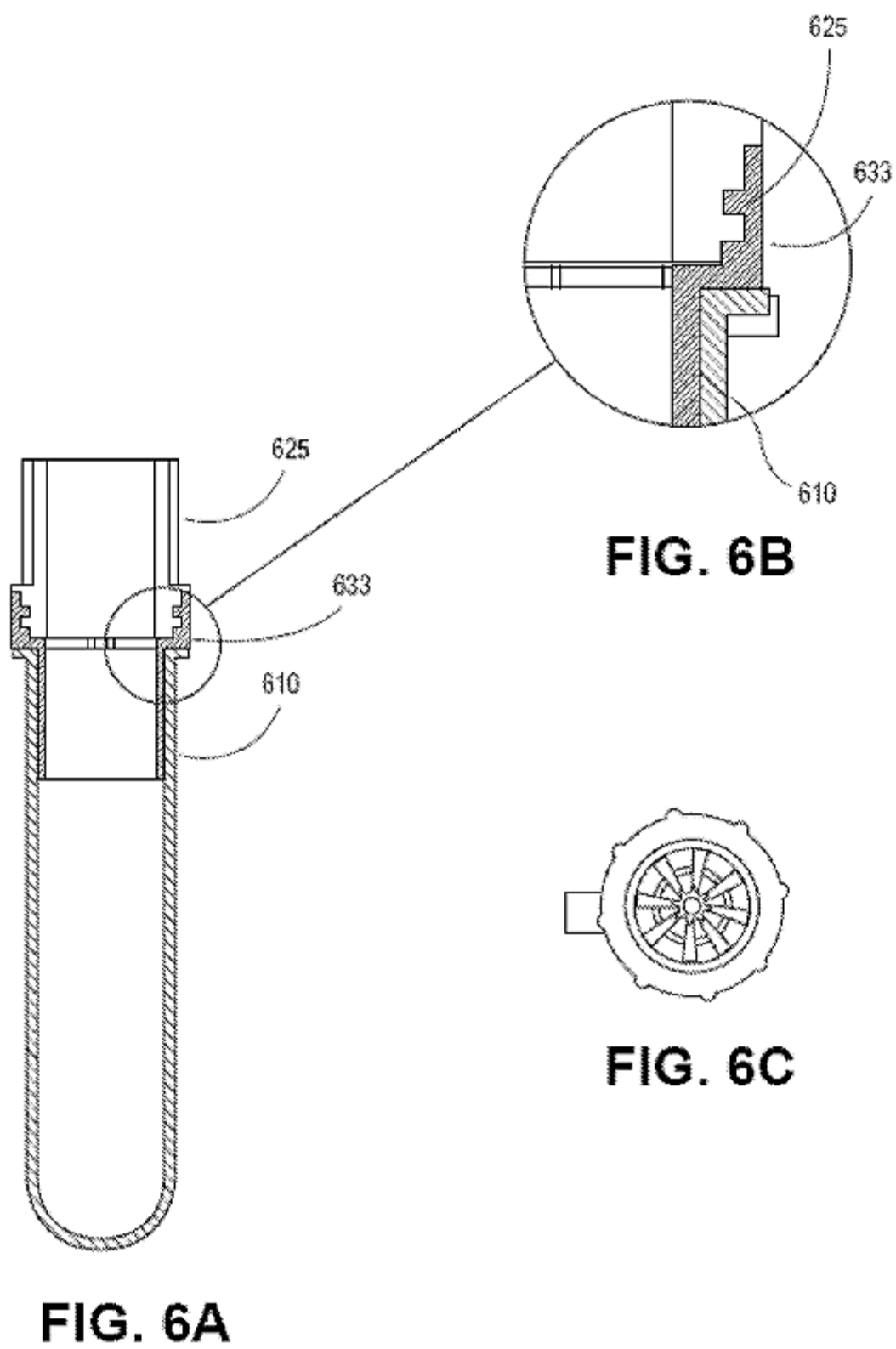
FIG. 4A

FIG. 5A

**FIG. 5B**

**FIG. 5C**

**FIG. 5D**



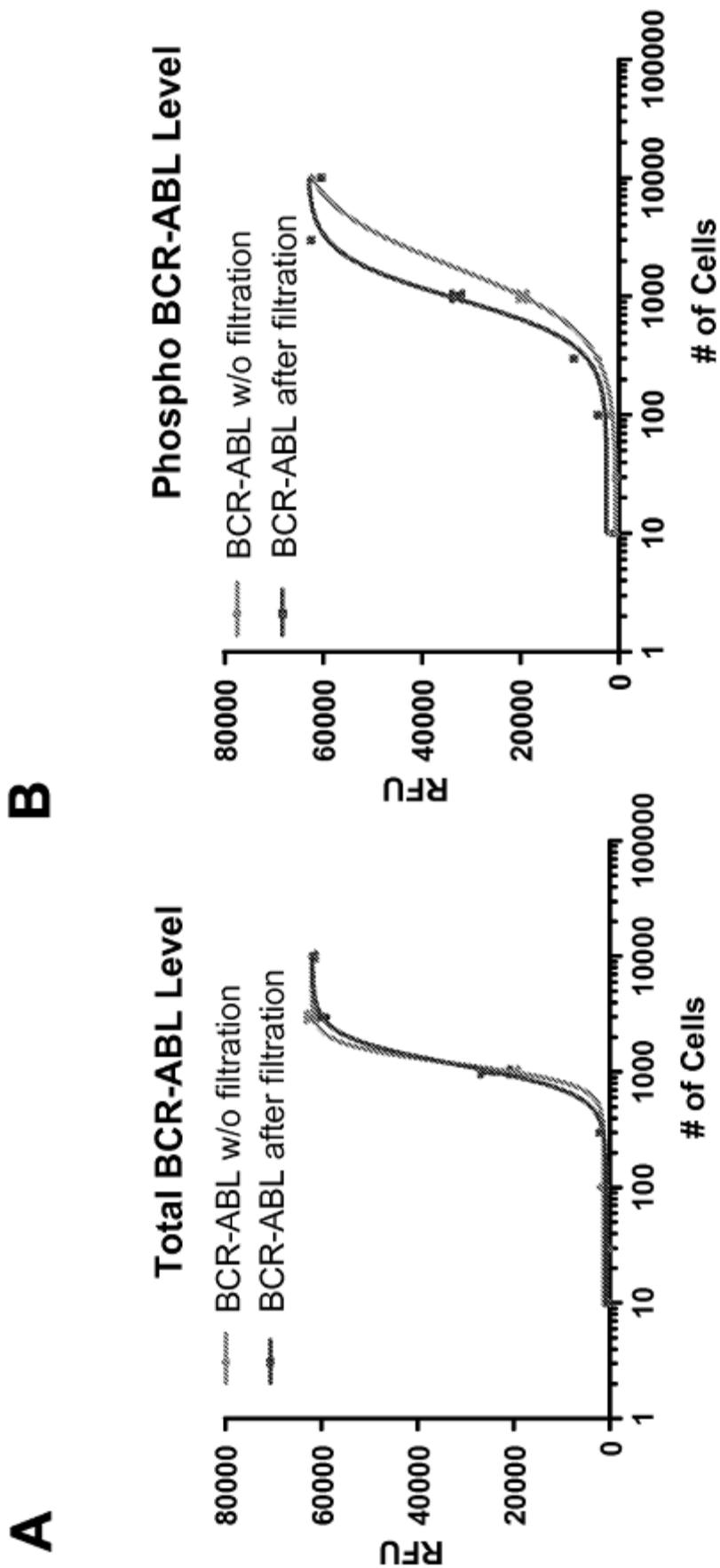
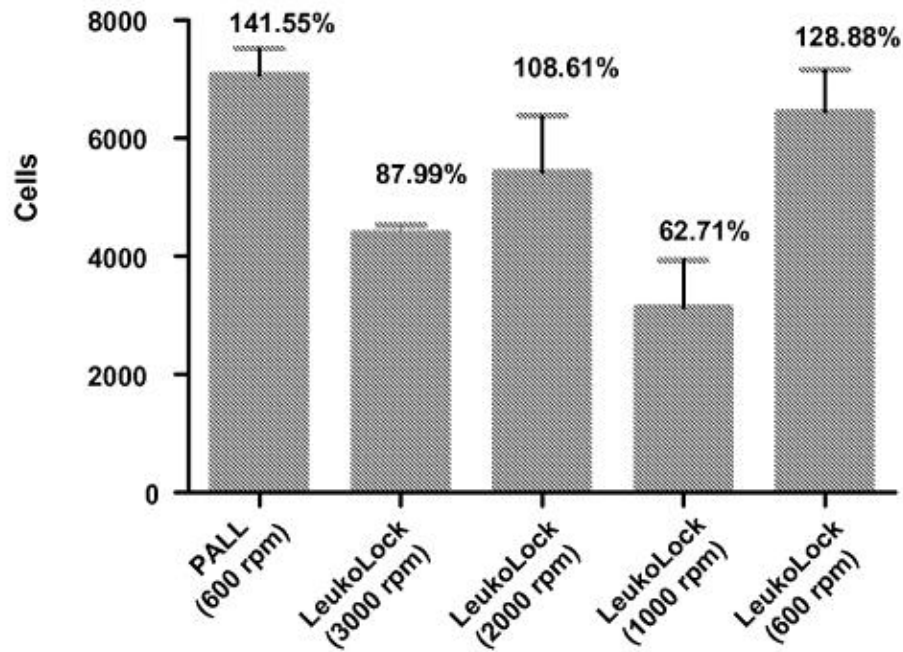
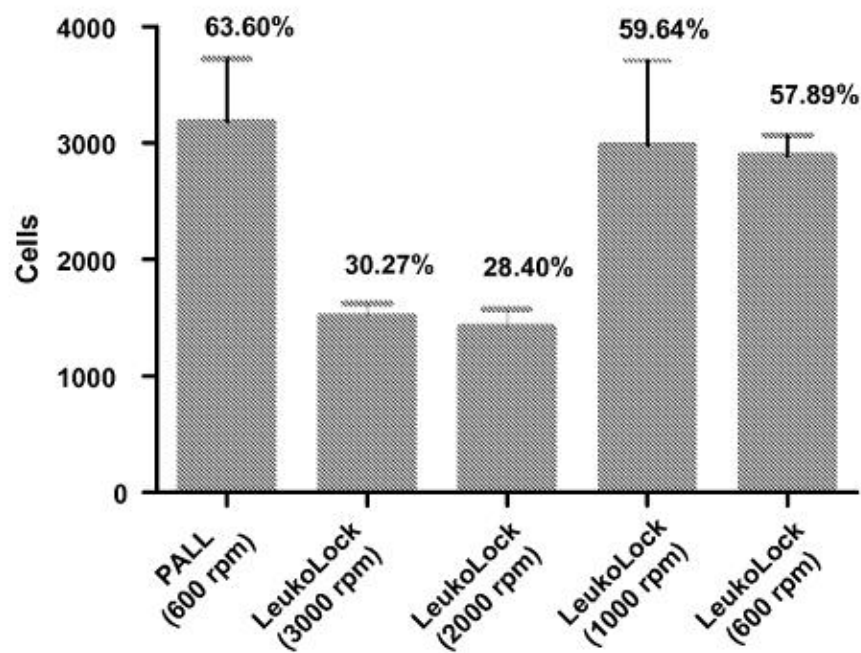
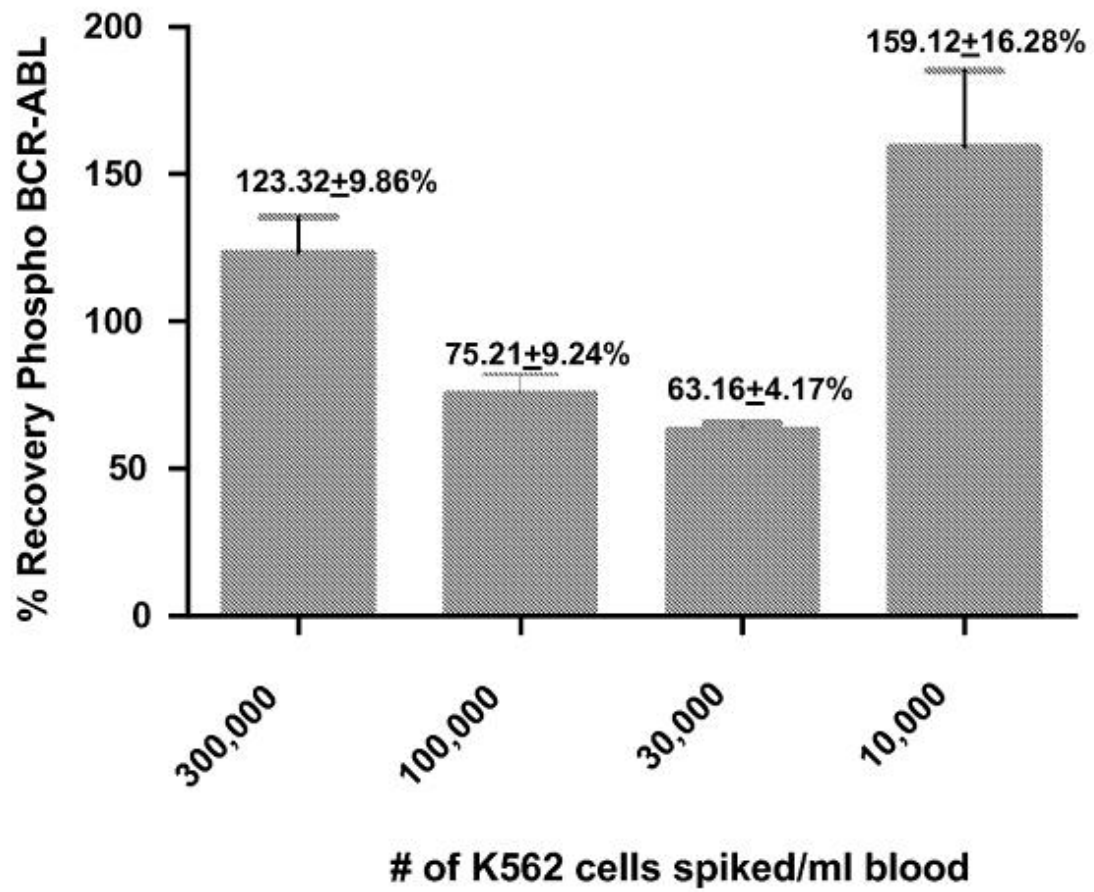
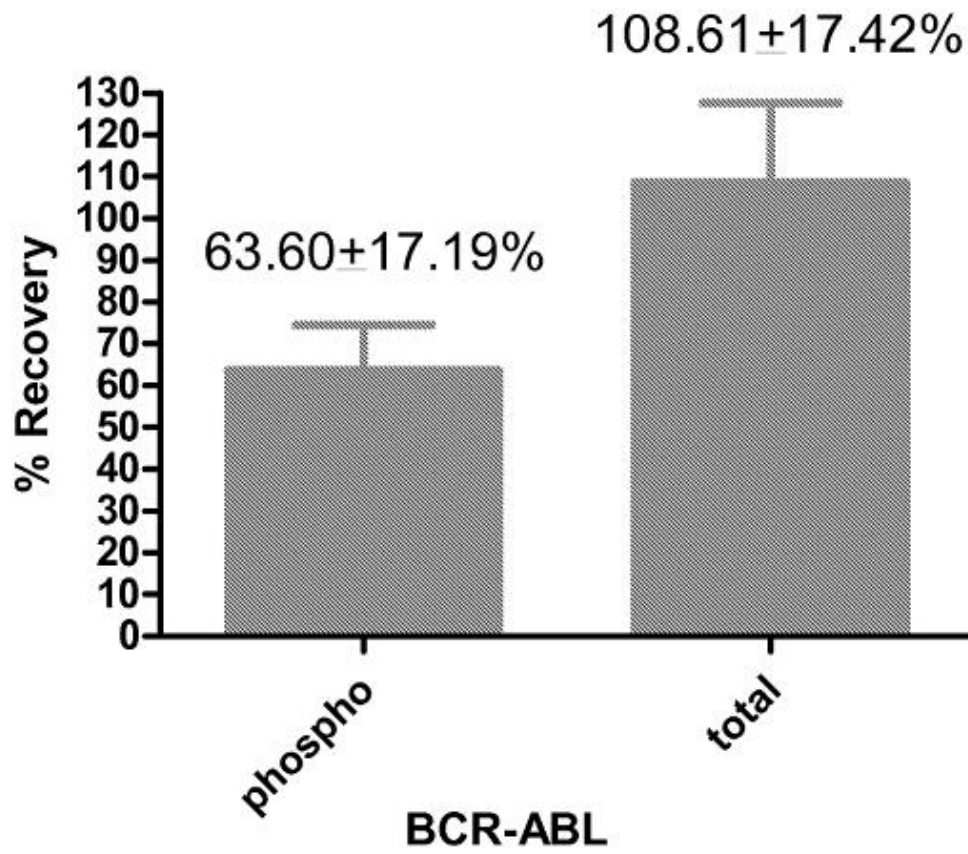


FIG. 7

A**Total BCR-ABL Recovery (% Signal) After Cell Isolation Method****B****Phospho BCR-ABL Recovery (% Signal) After Cell Isolation Method****FIG. 8**

**FIG. 9A**

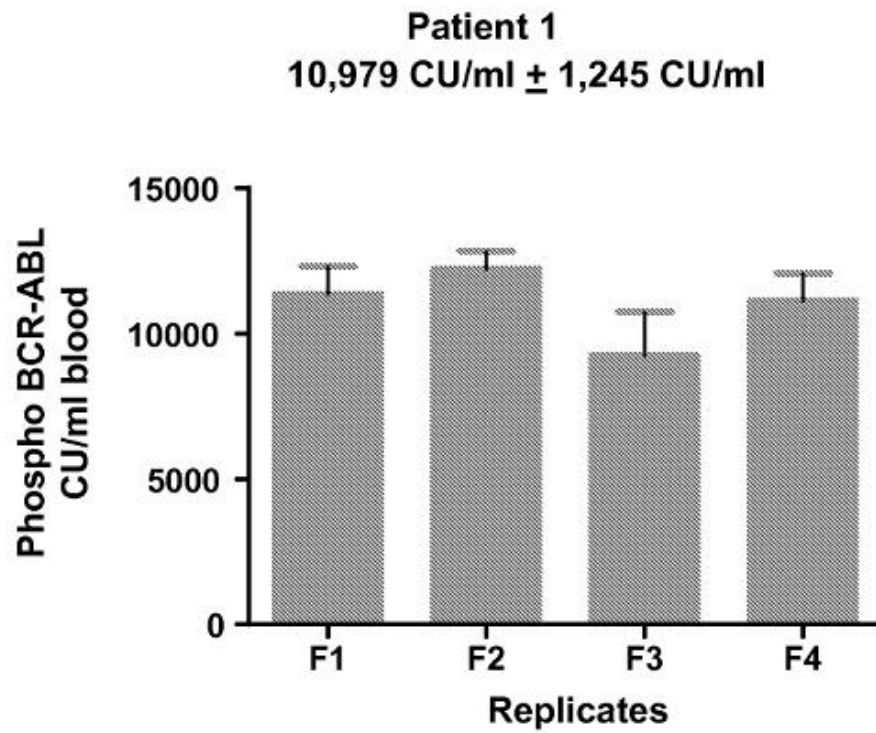
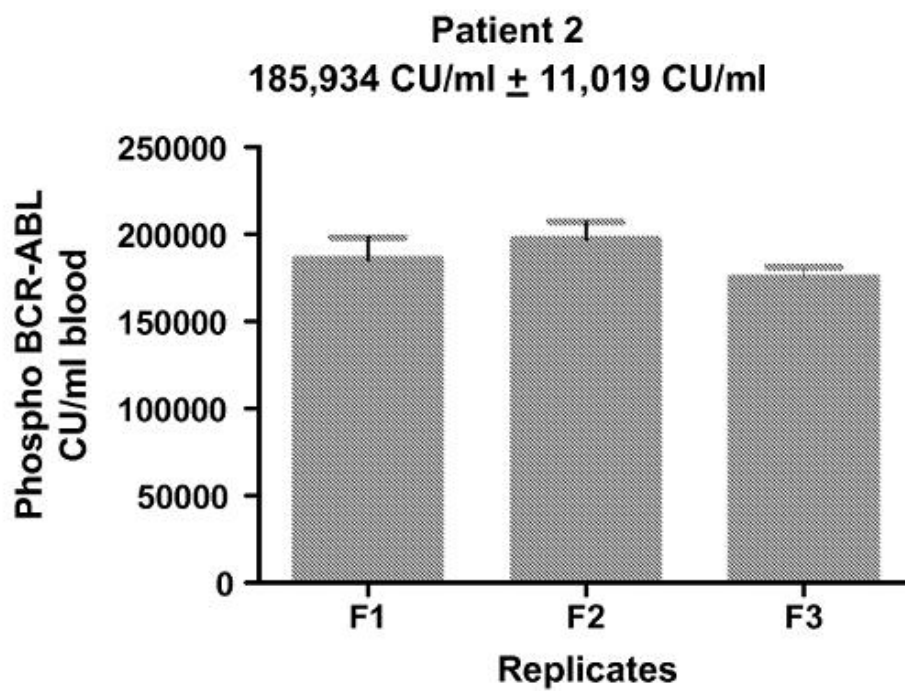


1,000,000 K562 cells spiked in 1ml of blood from normal donor

FIG. 9B

Patient ID	1	2		
Gender	Female	Male	Male	Male
Race	White	White	White	White
Smoking history	Current cigarette	Current cigarette	Current cigarette	Previous use
Alcohol history	No history	No history	No history	Current use
Primary diagnosis	CML	CML	CML	CML
Treatment status	Active	Active	Active	Active
Treatment	imatinib	imatinib	dasatinib	imatinib
Date of collection	1/31	2/2	2/7	2/15
WBC: Total cell count	5,600,000	15,000,000	4,000,000	-----
WBC: Phospho BCR-ABL	11,000	156,000	-----	-----
Phospho signal with imatinib ratio	0.0019	0.0124	-----	-----
Assuming 90% inhibition	0.019	0.124	-----	-----

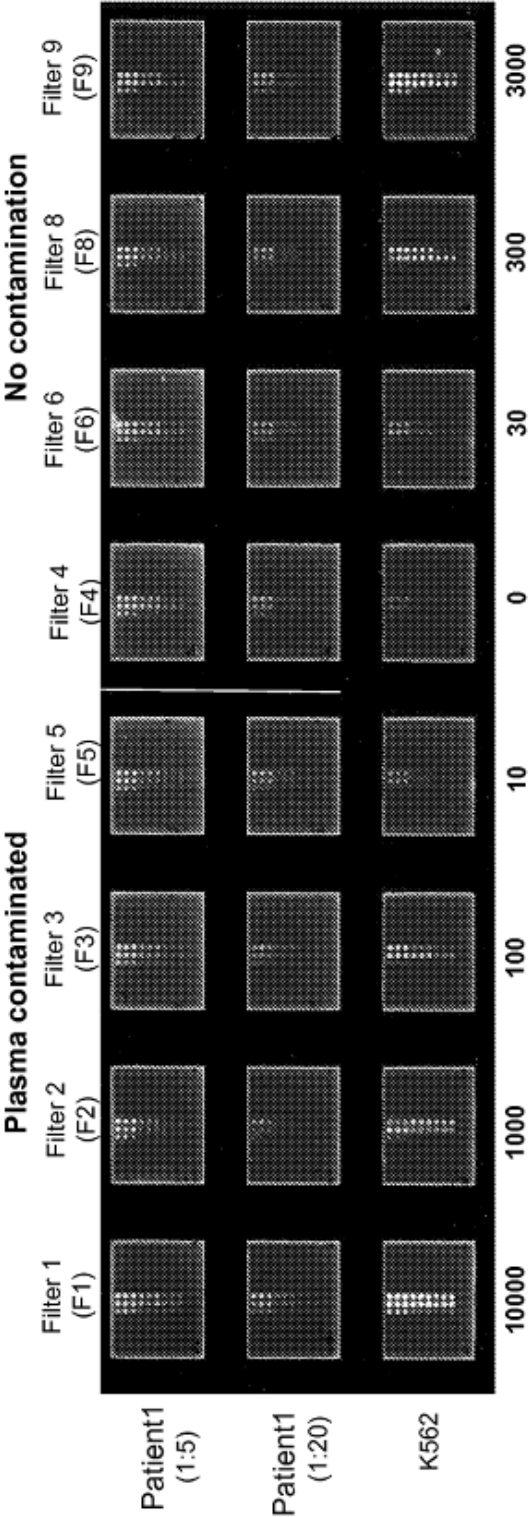
FIG. 10

A**B**

Without subtracted blood background

FIG. 11

Phospho BCR-ABL Profile



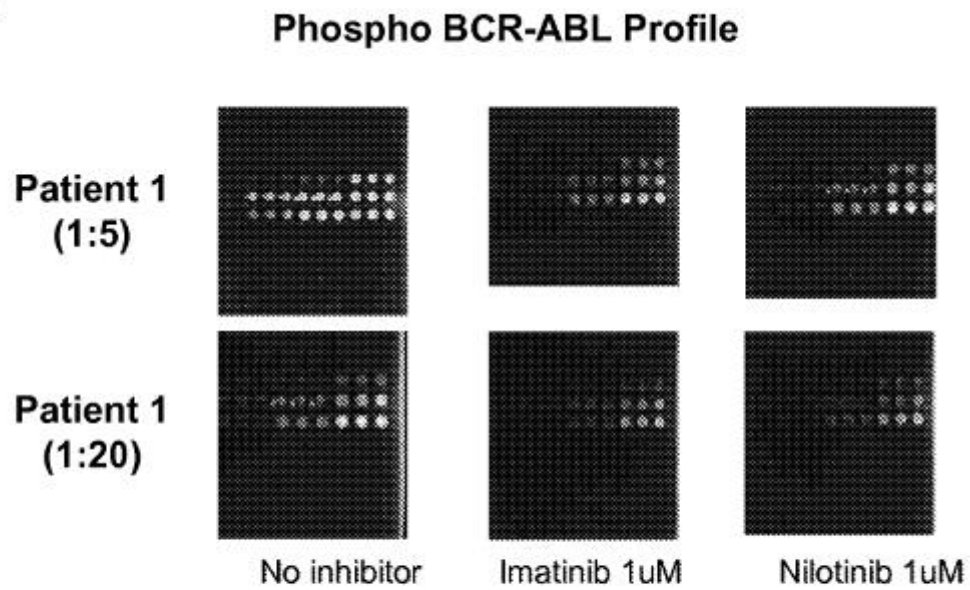
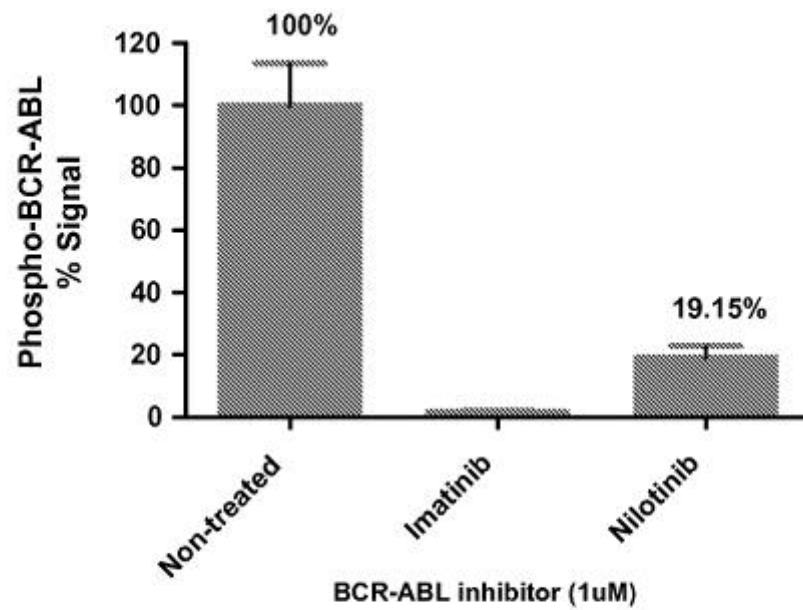
sample	CU		mean	%CV	mean	%CV	CU/ml blood
F1 1:5	206.05	204.55	205.53	0.37	205.37	144.92	9,057
F2 1:5			141.93	-	141.93		
F3 1:5	74.39	105.16	117.36	22.37	98.97		
F5 1:5		120.69	146.11	13.47	133.40		
F4 1:5	164.29	185.51	194.30	8.51	181.37	175.66	10,979
F6 1:5	190.93	188.77	206.44	4.93	195.38		
F8 1:5	127.32	142.58	174.13	16.13	148.01		
F9 1:5	162.00	179.79	191.83	8.44	177.87		

FIG. 12A

Phospho BCR-ABL Profile of Patient 1

Sample	Average	CV%	Ratio	Sample	Average	CV%	Ratio	Sample	Average	CV%	Ratio
Standard 10,000	62316	0.18	77.77	S1 1:20	2258.7	10.9	2.8	S1 1:5	6381.7	0.7	8.0
1000	60249	1.16	75.19	S2 1:20	1146.3	7.9	1.4	S2 1:5	3411.3	15.5	4.3
100	6291.33333	0.81	7.85	S3 1:20	1302.0	10.2	1.6	S3 1:5	3457.3	4.7	4.3
10	1519.33333	6.65	1.90	S5 1:20	1602.3	3.7	2.0	S5 1:5	3622.0	14.1	4.5
0	801.333333	5.79	1.00	S4 1:20	1587.3	4.0	2.0	S4 1:5	5272.7	11.5	6.6
30	2157.66667	12.69	2.69	S6 1:20	1538.7	2.2	1.9	S6 1:5	5877.3	8.3	7.3
300	14526.3333	12.84	18.13	S8 1:20	1509.3	7.1	1.9	S8 1:5	4245.3	14.7	5.3
3000	62260.6667	0.07	77.70	S9 1:20	1885.0	3.4	2.4	S9 1:5	5130.3	11.2	6.4

FIG. 12B

A**B****FIG. 13**

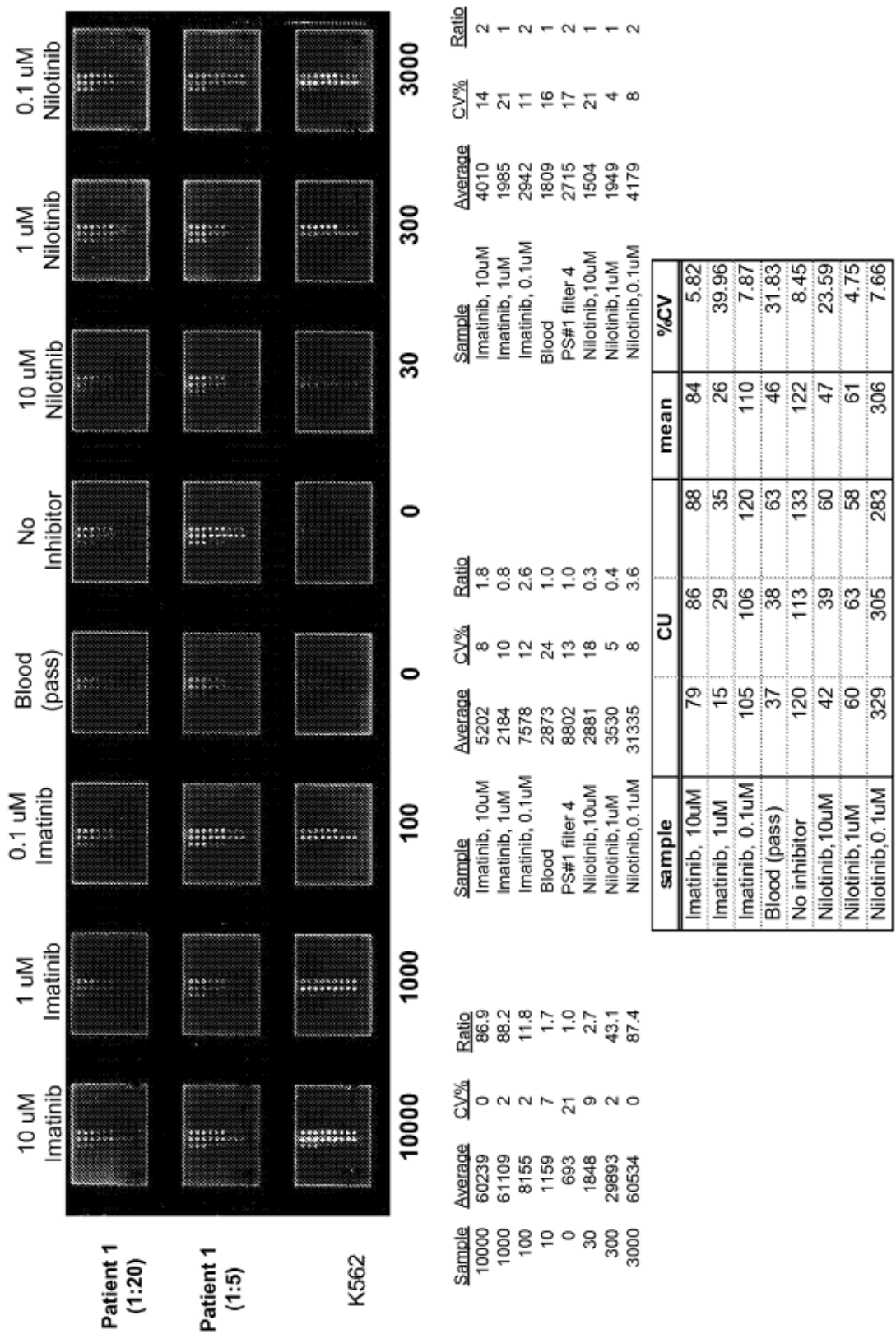
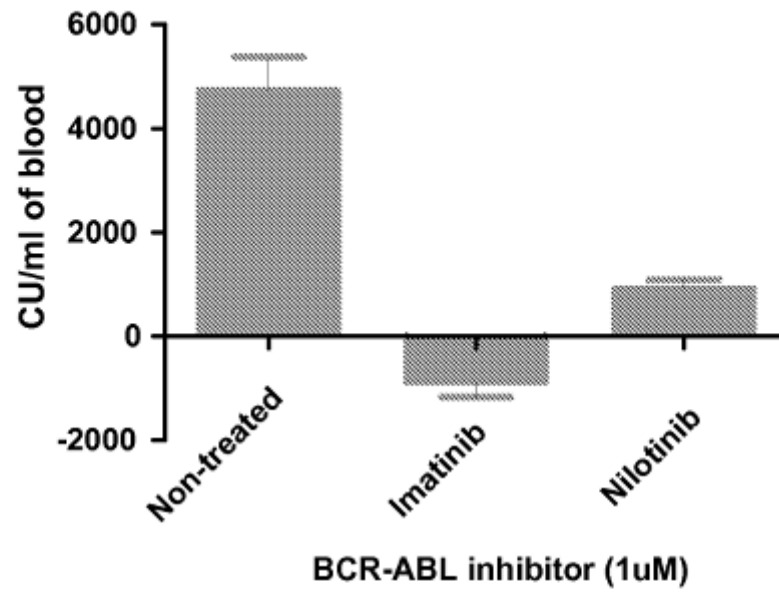
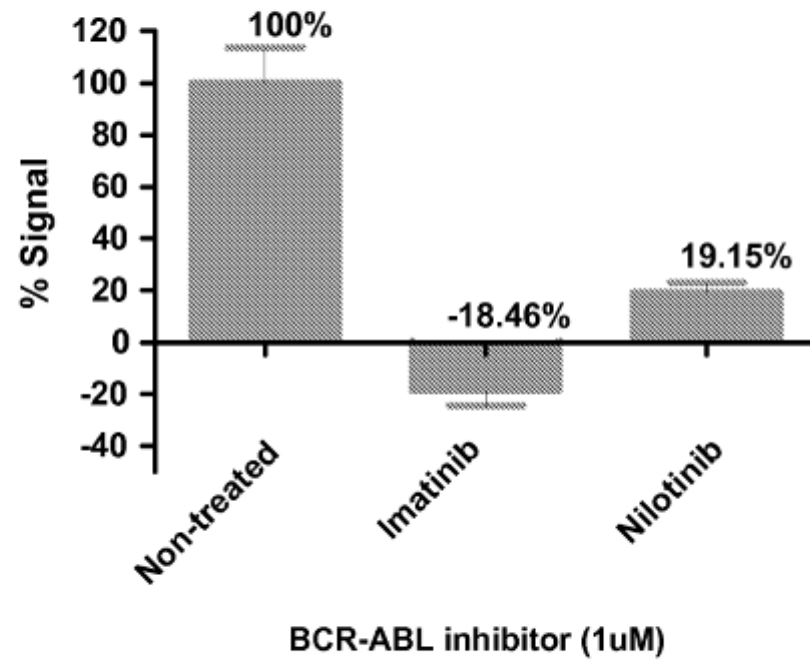


FIG. 14

A**B**

After subtracted blood background

FIG. 15

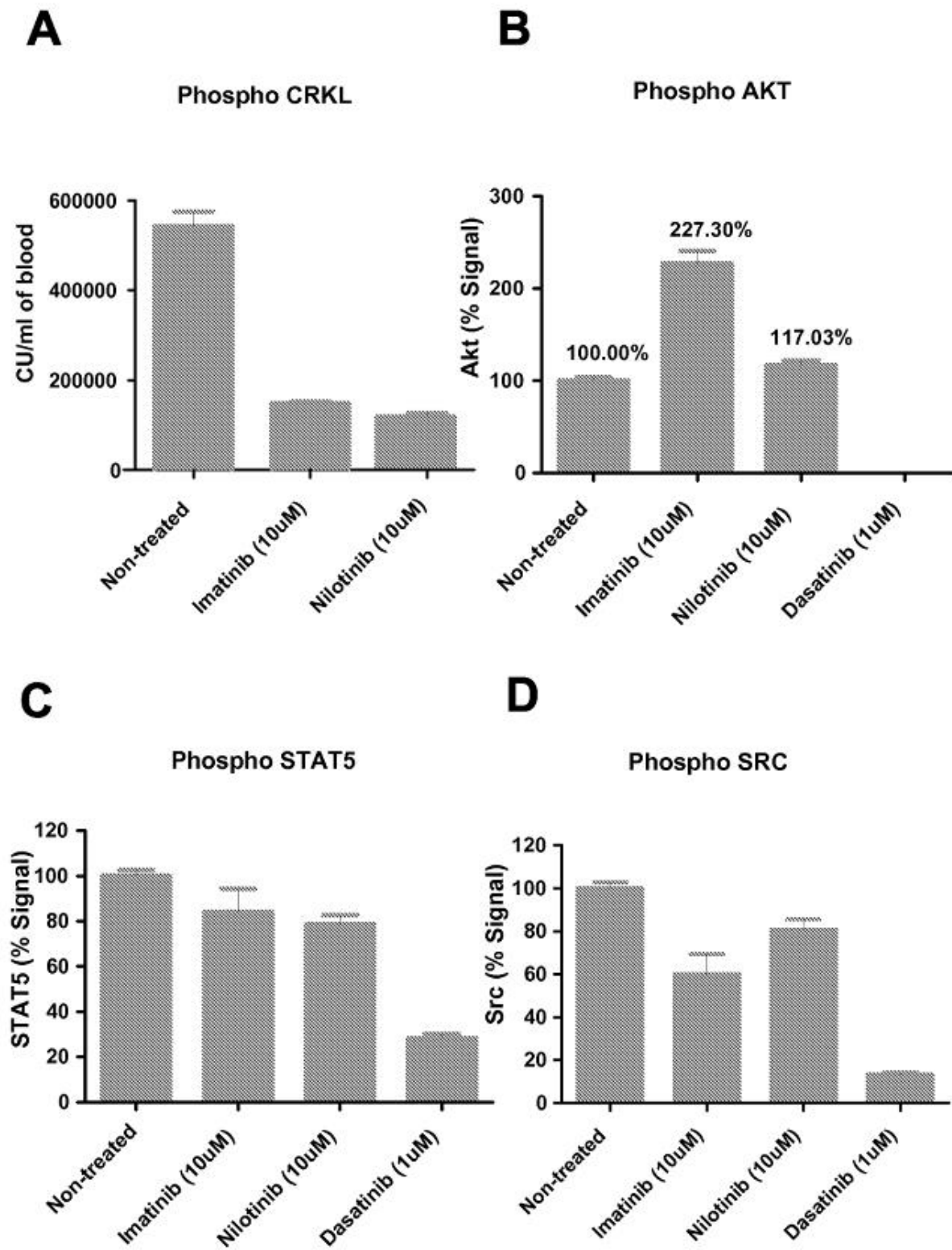


FIG. 16

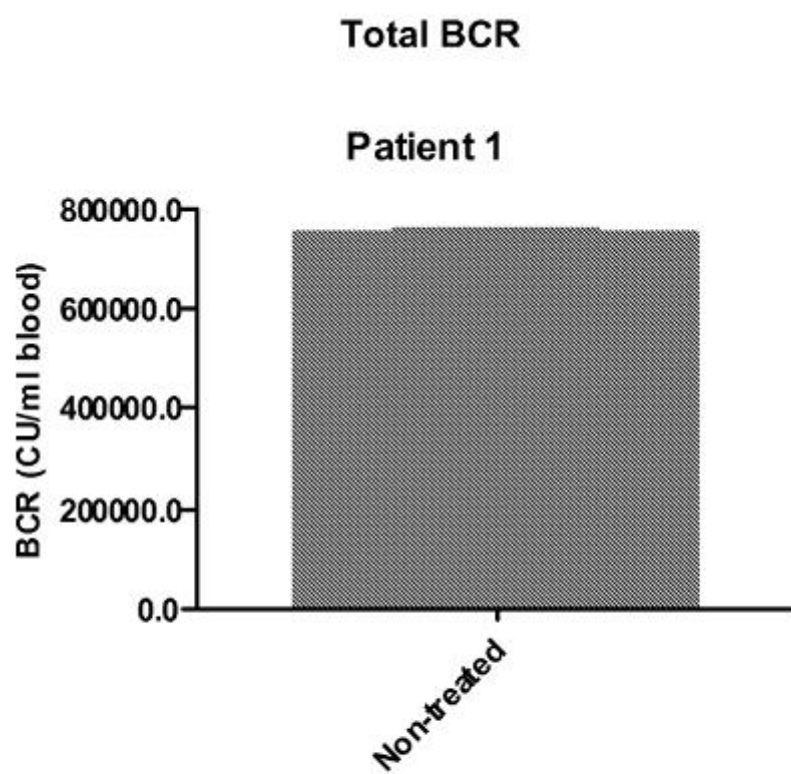
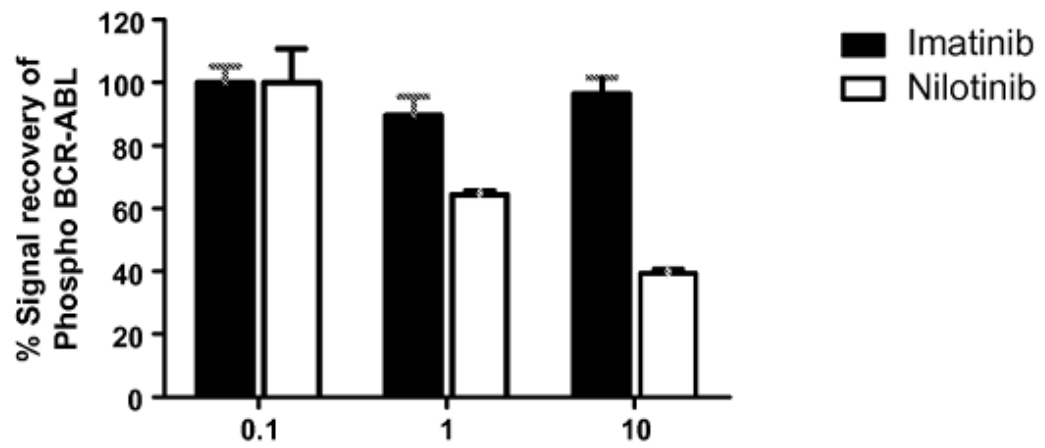
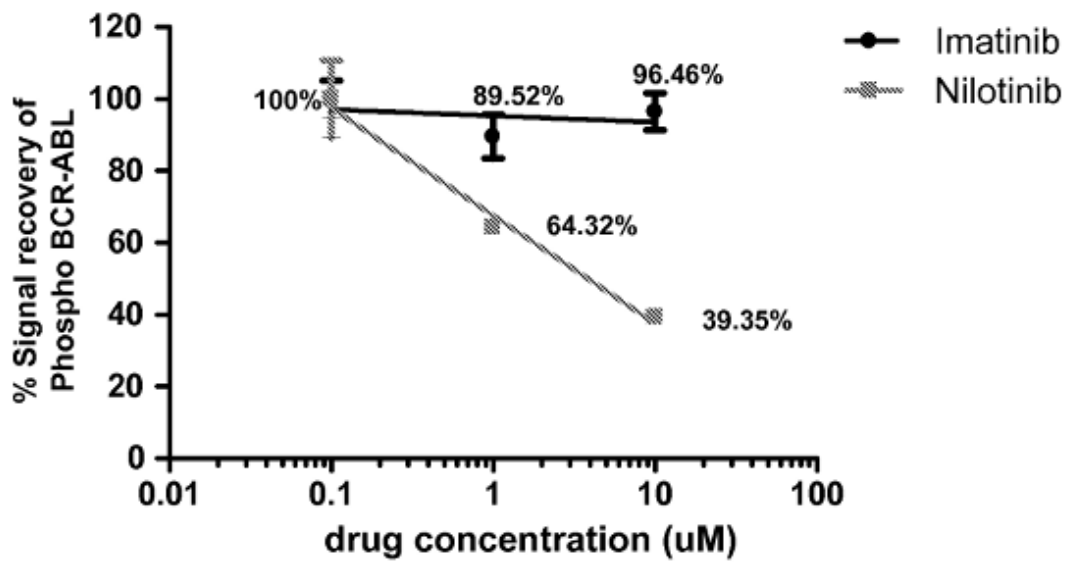


FIG. 17

A**B****FIG. 18**

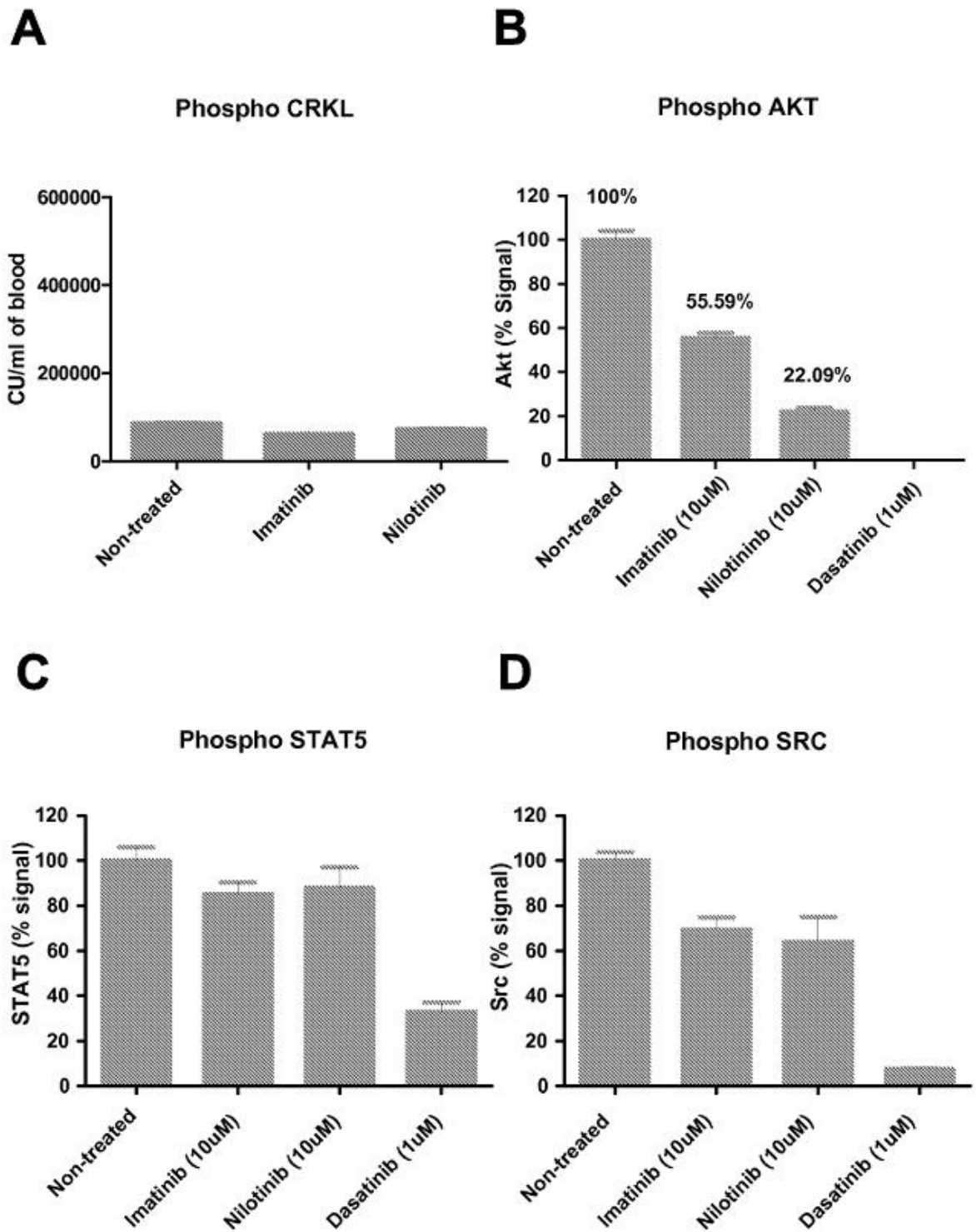
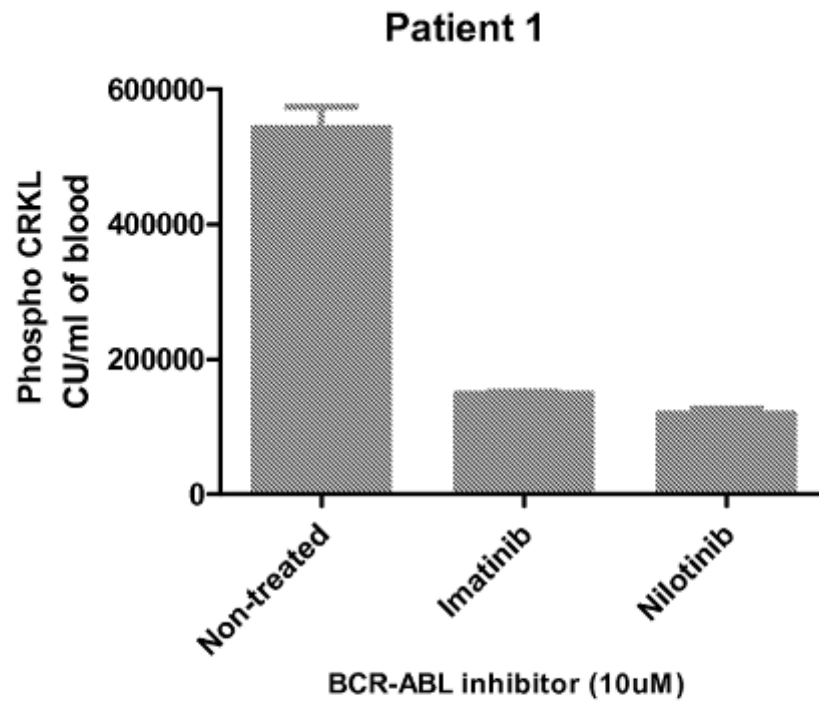
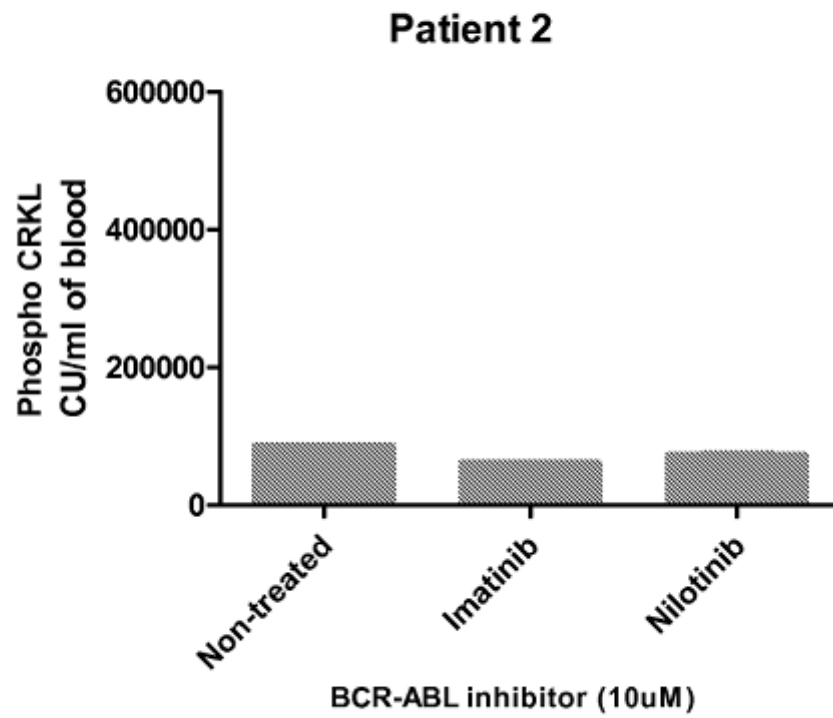
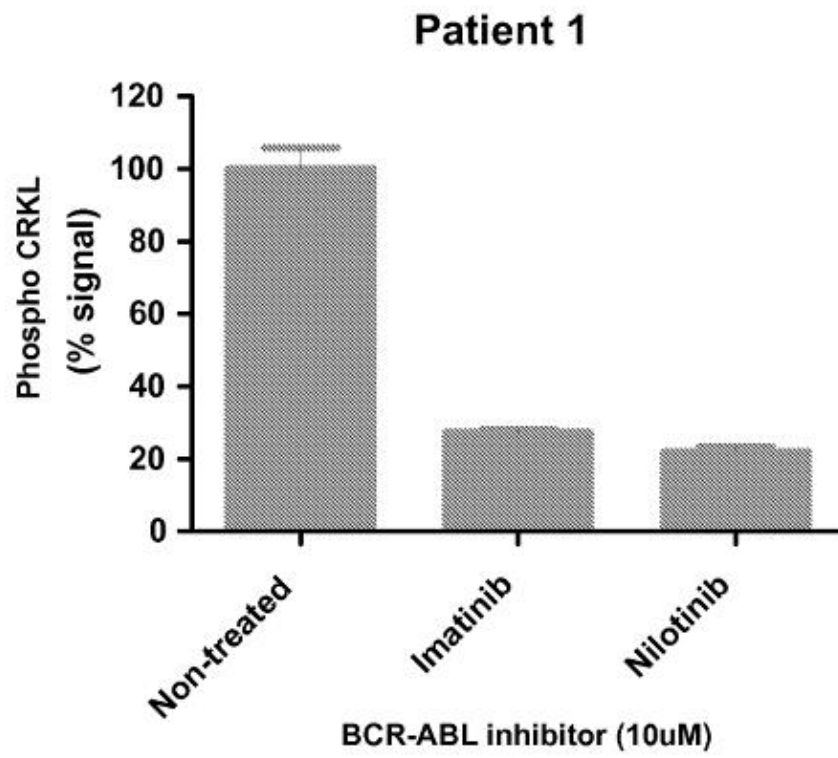
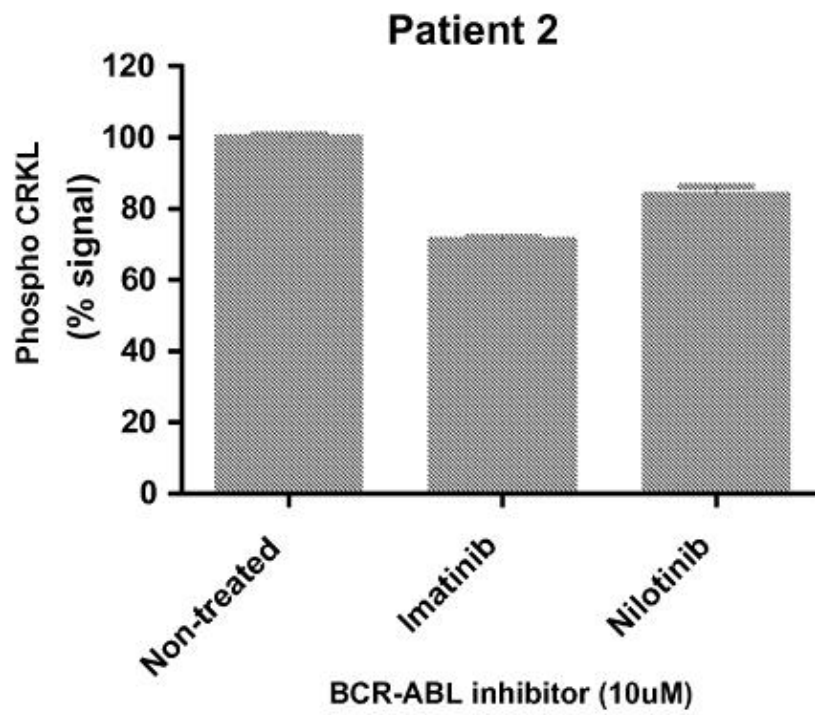
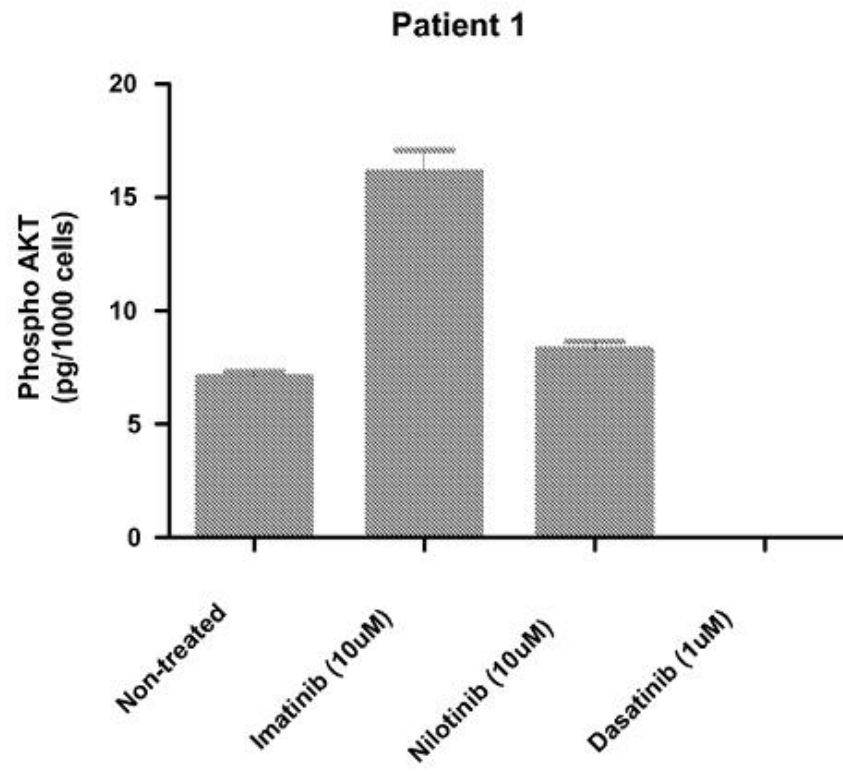
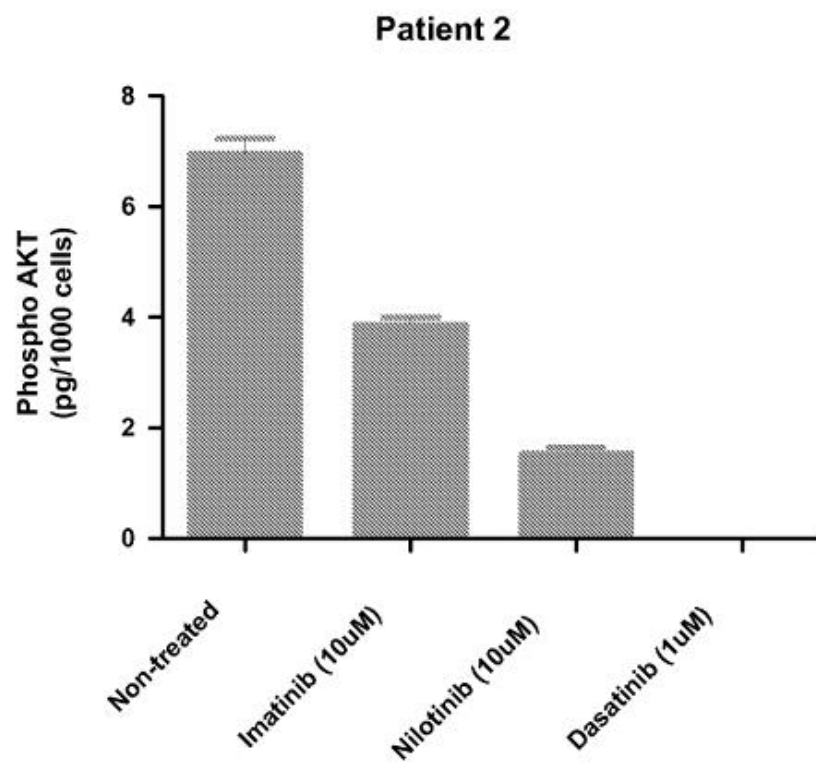
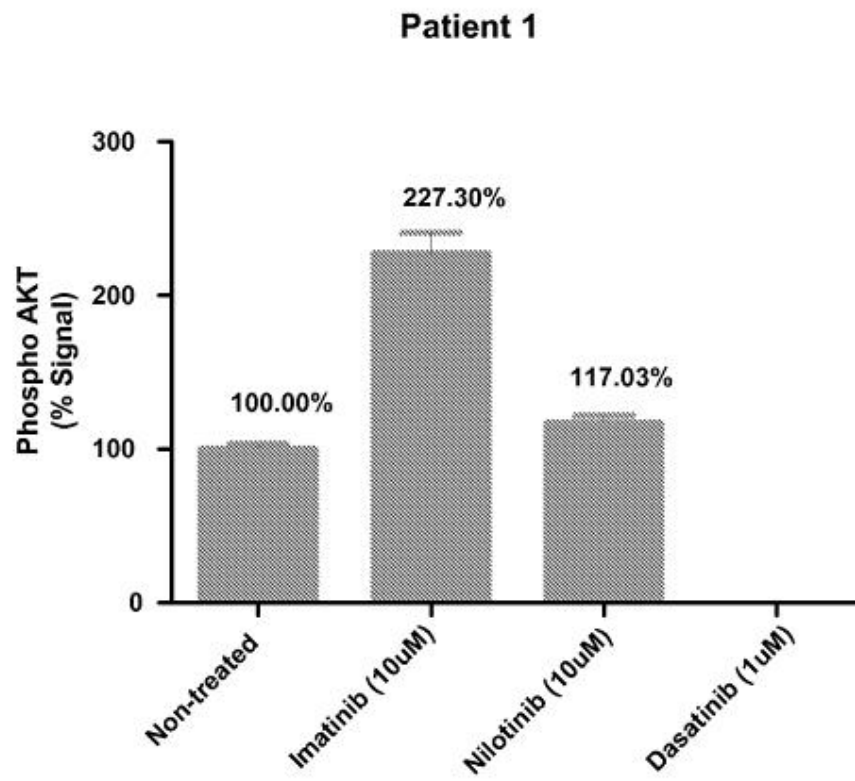
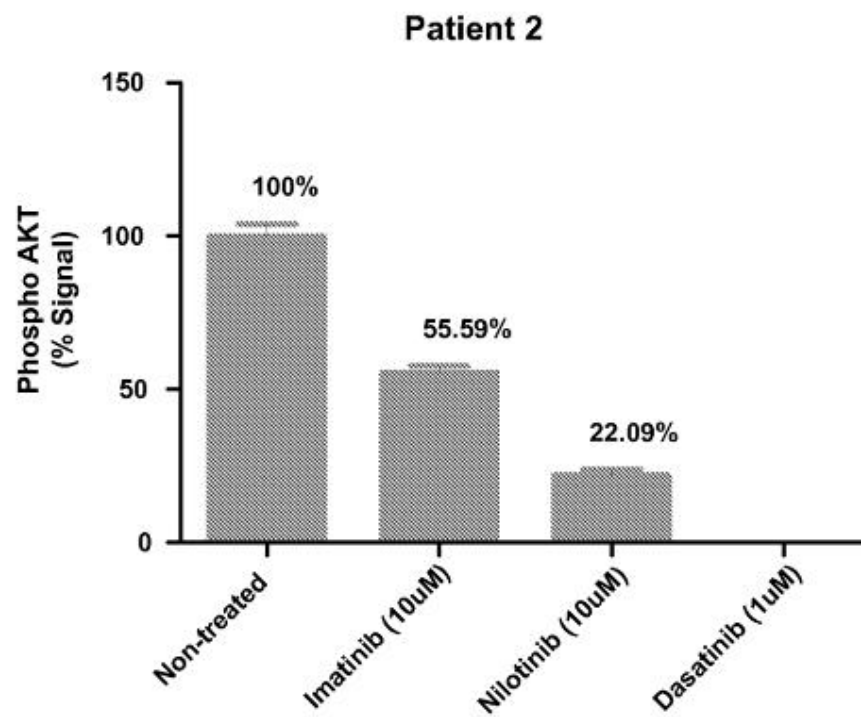


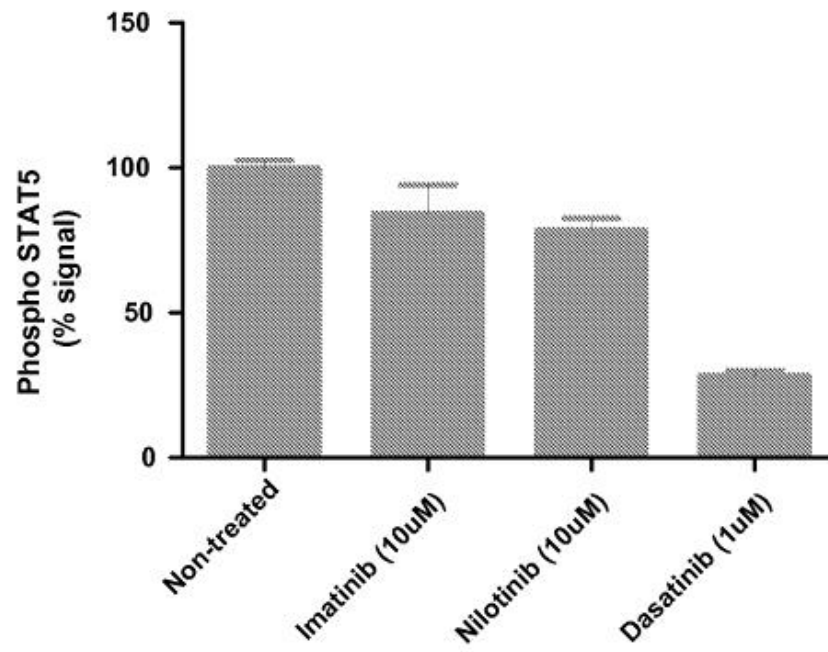
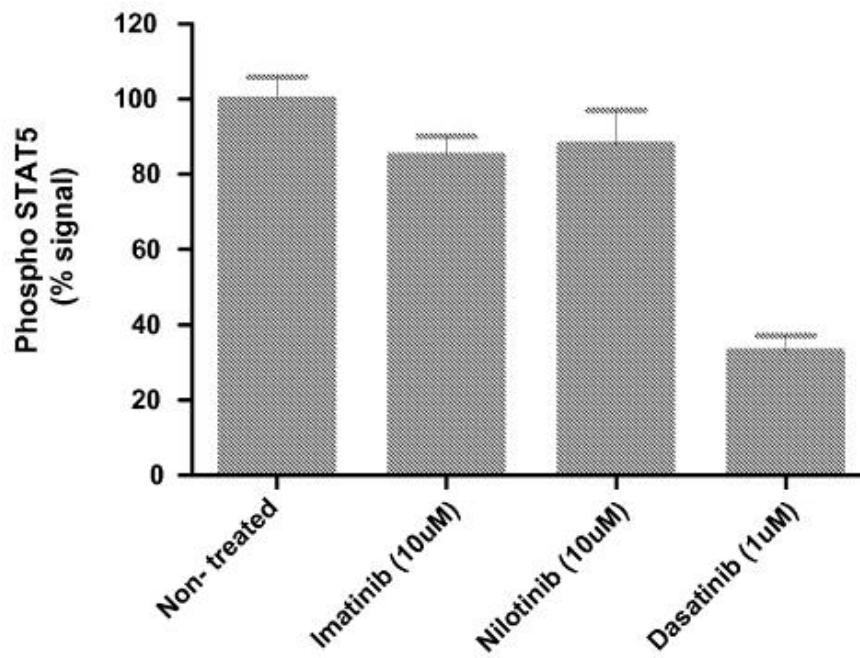
FIG. 19

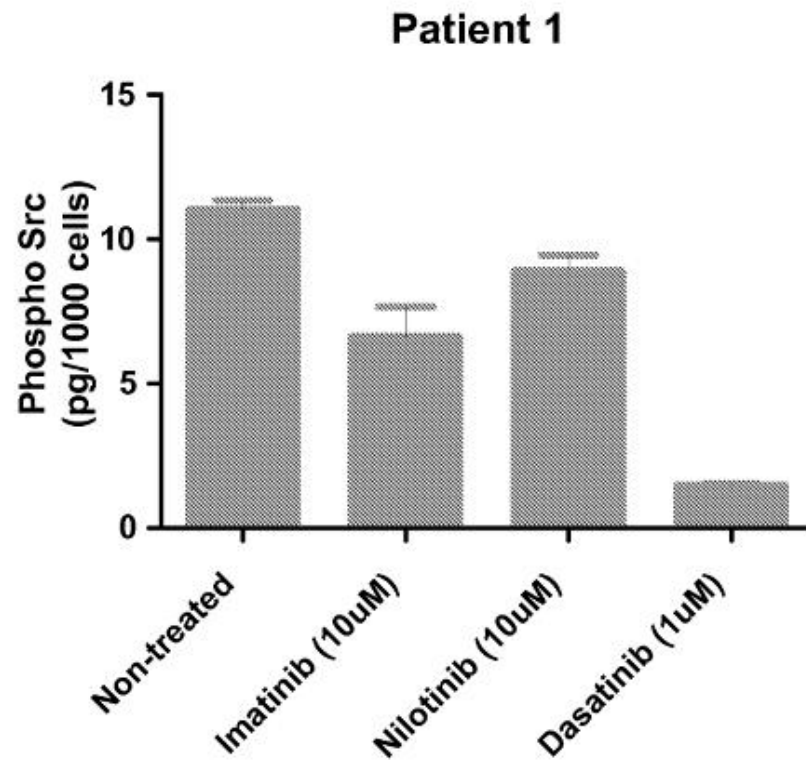
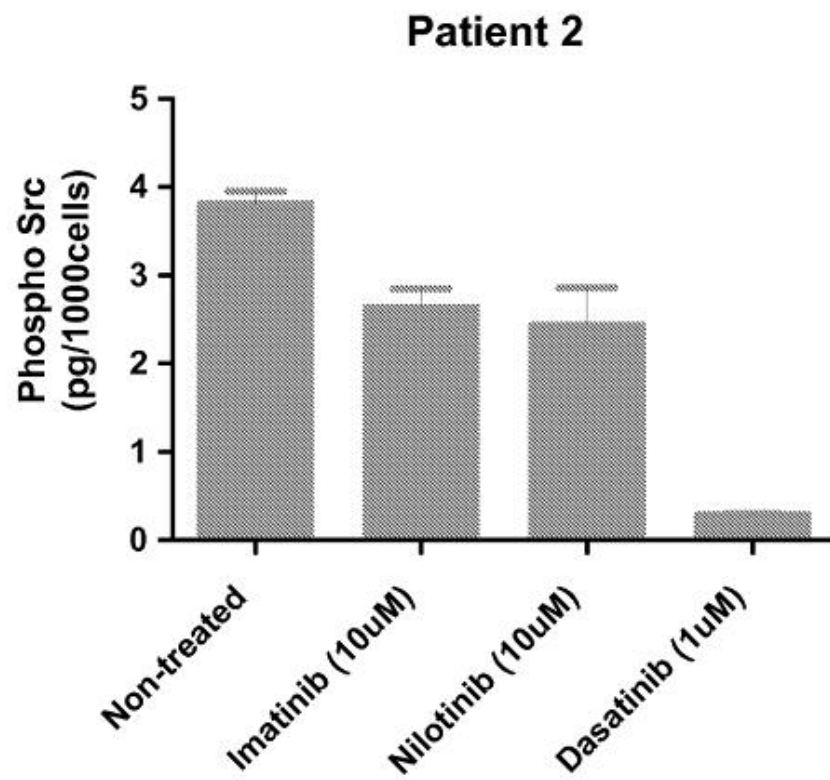
A**B****FIG. 20**

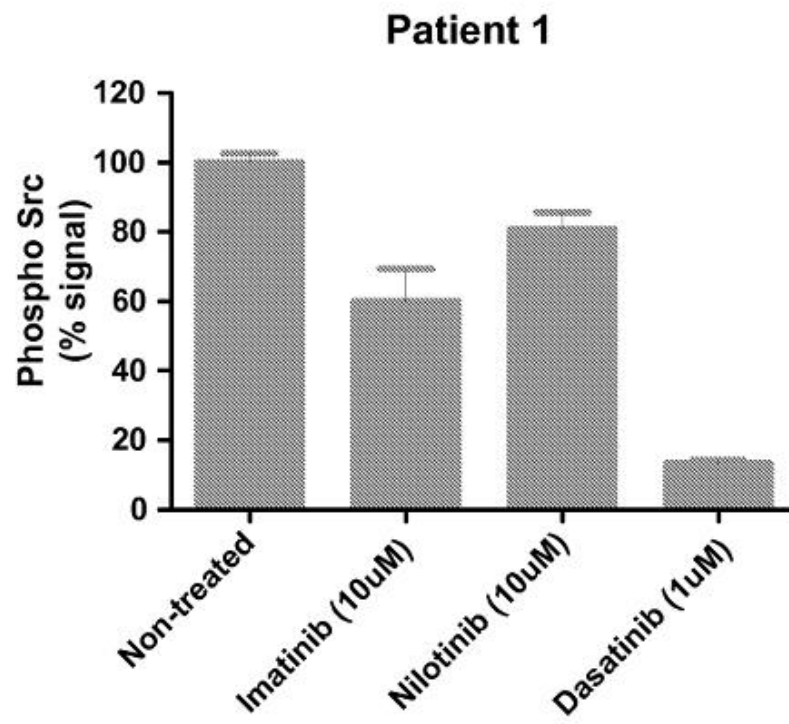
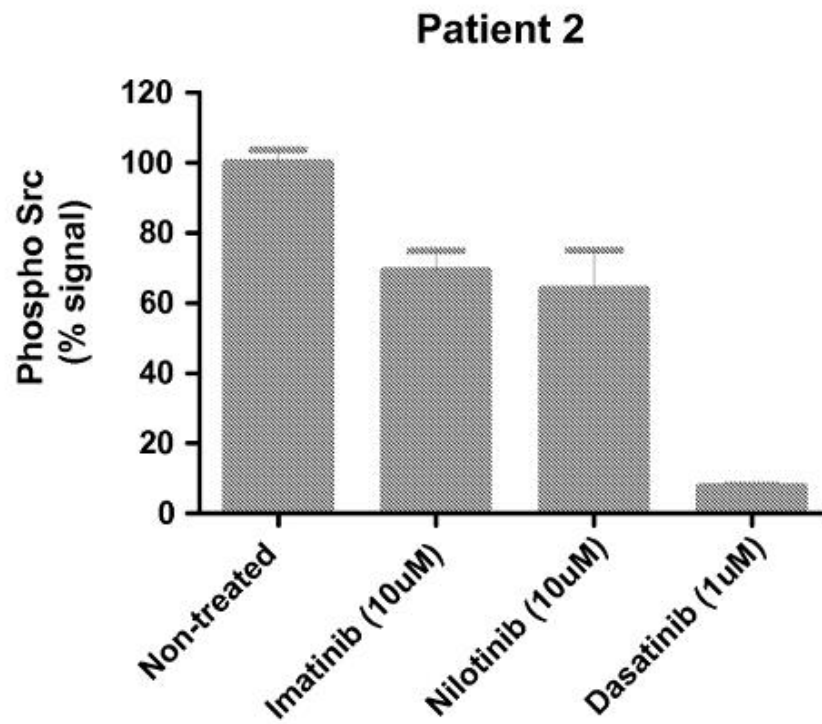
C**D****FIG. 20**

A**B****FIG. 21**

C**D****FIG. 21**

A**Patient 1****B****Patient 2****FIG. 22**

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

C**D****FIG. 23**

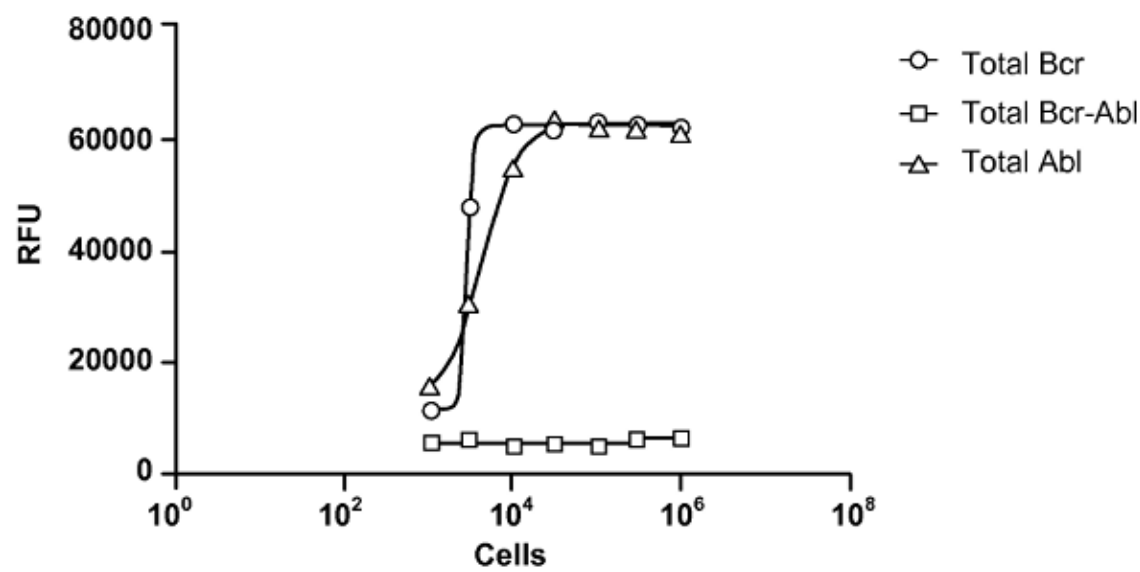
Patient	Blood draws	Treatment	Notes
1	3	Gleevec	
2	6	Gleevec	Recent Diagnosis
3	7	Sprycel	
4	4	Gleevec	
5	5	Gleevec	
6	12	Gleevec	
7	6	Gleevec	
8	5	Possible Progression	Switched to Sprycel
9	1	Gleevec	
10	3	Gleevec	
11	3	Gleevec	
12	3	Gleevec	
13	1	Gleevec	
14	9	Sprycel	New Diagnosis
15	1	Gleevec	
16	1	Post-treatment	
17	4	Sprycel	
18	5	Posatinib	
19	3	Tasigna	New Diagnosis
20	6	Sprycel	New Diagnosis
21	2	Hydroxyurea	
22	1	Gleevec	
23	2	Gleevec	Recent Diagnosis
24	1	Gleevec	Recent Diagnosis
25	3	Tasigna	Recent Diagnosis
26	1	Gleevec	Recent Diagnosis
27	1	Gleevec	New Diagnosis

FIG. 24

Patient	Sample	Draw	Cell count	mRNA ratio	pBcr-Abl	P / WBC (%)	tBcr-Abl	t / WBC (%)	p/t	Notes
2	2	2/2	1.49E+07	47.53%	128,592	0.866	not determined			Gleevec
	5	3/2	6.00E+06	17.92%	49,101	0.820	42,062	0.701	1.17	
	16	5/11	3.45E+06	0.00%	1,517	0.044	15,177	0.440	0.09	
	20	6/1	5.55E+06	5.46%	3,340	0.060	10,217	0.180	0.33	
	60 *	10/12	6.75E+06	4.84%	17,084	0.253	16,316	0.242	1.05	
	89 *	12/21	5.50E+06	2.21%	13,666	0.248	11,508	0.209	1.19	
3	3	2/7	4.00E+06	0.00%	6,057	0.151	2,547	0.063	2.38	Sprycel
	9	4/4	8.50E+06	0.00%	7,823	0.092	1,836	0.022	4.26	
	35 *	7/25	7.65E+06	0.00%	2,657	0.035	2,777	0.036	0.96	
	45 *	8/22	4.90E+06	0.01%	8,615	0.176	9,370	0.191	0.92	
4	4	2/15	6.30E+06	1.72%	6,142	0.097	2,454	0.039	2.50	Gleevec
	7	3/22	4.40E+06	0.57%	2,008	0.046	3,132	0.071	0.64	
	27	6/28	3.55E+06	0.19%	7,011	0.197	5,770	0.1625	1.22	
	55 *	9/27	3.00E+06	0.13%	9,065	0.302	2,554	0.085	3.55	
8	18	5/18	6.90E+06	4.53%	5,353	0.077	45,644	0.662	0.12	Possible Progression Sprycel
	25	6/20	7.10E+06	1.32%	4,360	0.061	33,809	0.476	0.13	
	31 *	7/18	3.40E+06	0.35%	2,263	0.067	14,369	0.423	0.16	
	44 *	8/18	5.50E+06	0.04%	2,421	0.044	2,996	0.054	0.81	
	61 *	10/13	7.50E+06	0.01%	1,887	0.025	4,825	0.640	0.39	
14	28	6/28	1.36E+07	51.18%	83,761	0.616	115,074	0.846	0.73	Hydroxyurea Sprycel
	48 *	8/29	5.25E+06	1.17%	8,257	0.157	32,735	0.624	0.25	
	57 *	10/3	6.75E+06	0.08%	5,616	0.083	3,585	0.053	1.56	
18	38 *	7/28	1.53E+07	36.19%	123,992	0.810	447,903	2.930	0.28	Tasigna Ponatinib
	41 *	8/11	1.65E+07	51.30%	104,505	0.630	286,432	1.740	0.36	
	50 *	9/7	2.60E+07	52.35%	95,679	0.370	705,569	2.710	0.14	
	71 *	11/9	5.25E+06	1.03%	12,157	0.232	24,805	0.472	0.49	

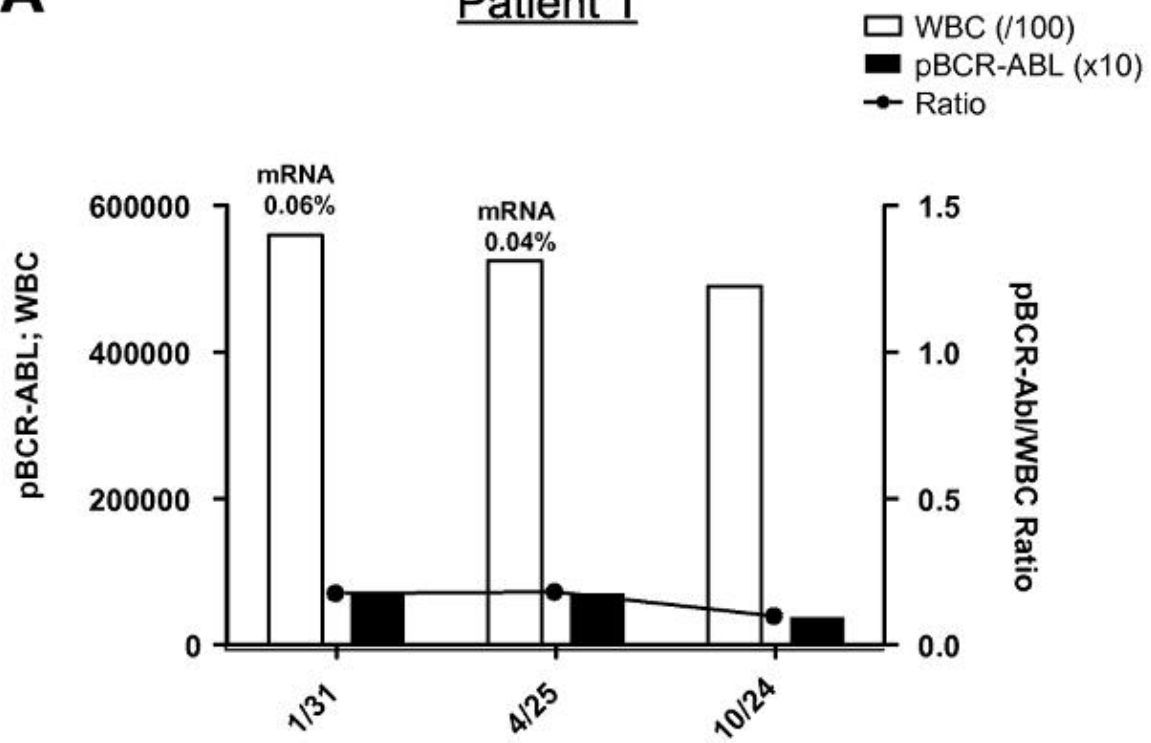
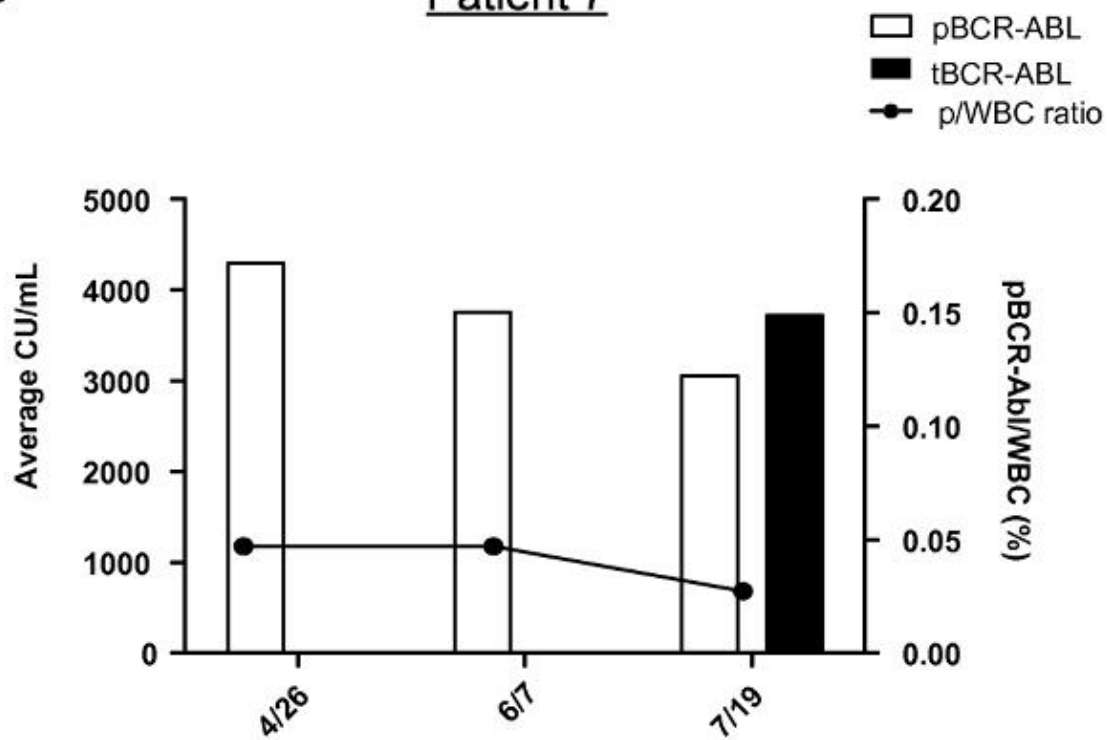
FIG. 25

From White Blood Cells of a Normal, Healthy Subject



	BCR	BCR-ABL	ABL
EC50	~ 2744	~275875	4076

FIG. 26

A**Patient 1****B****Patient 7****FIG. 27**

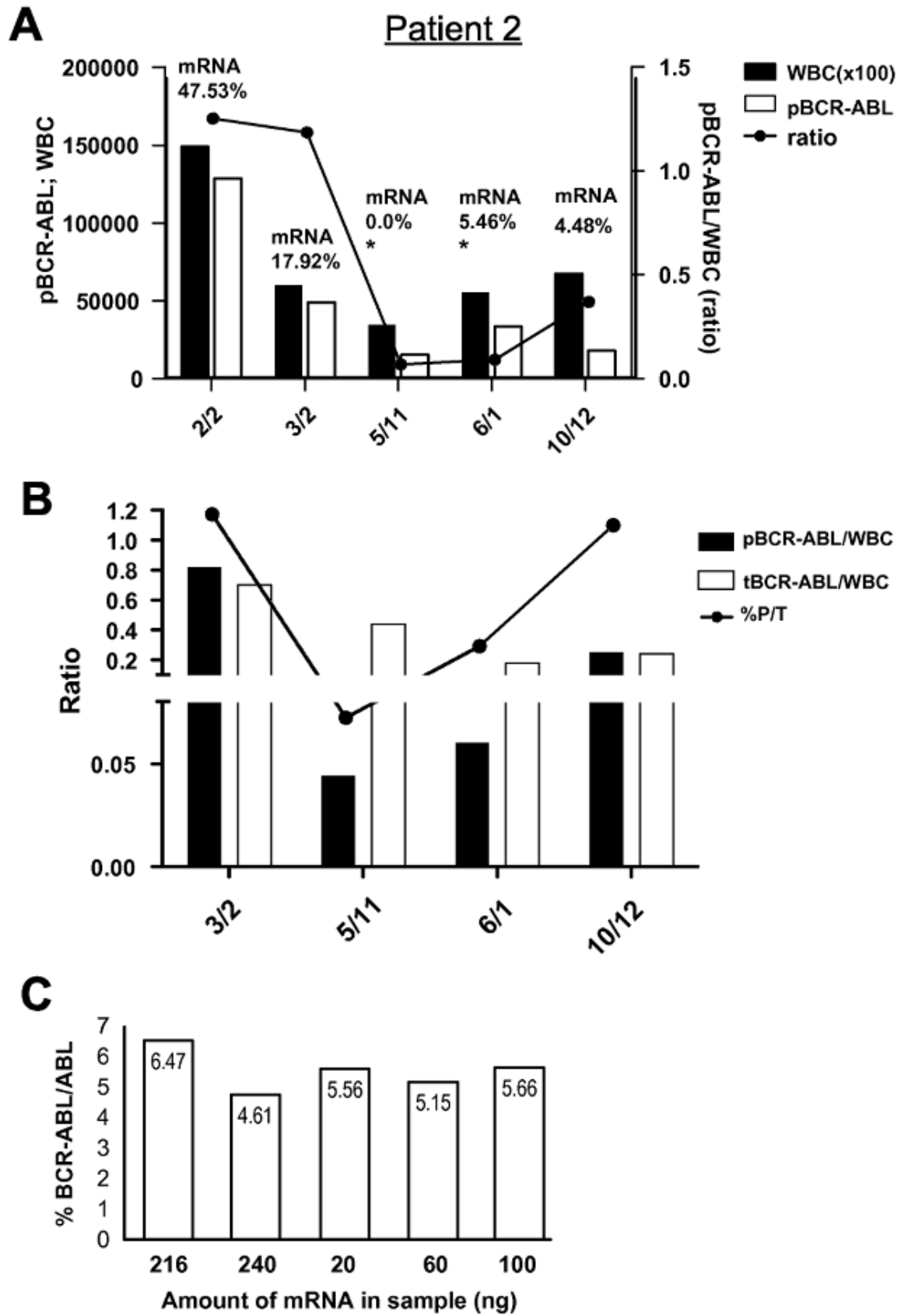
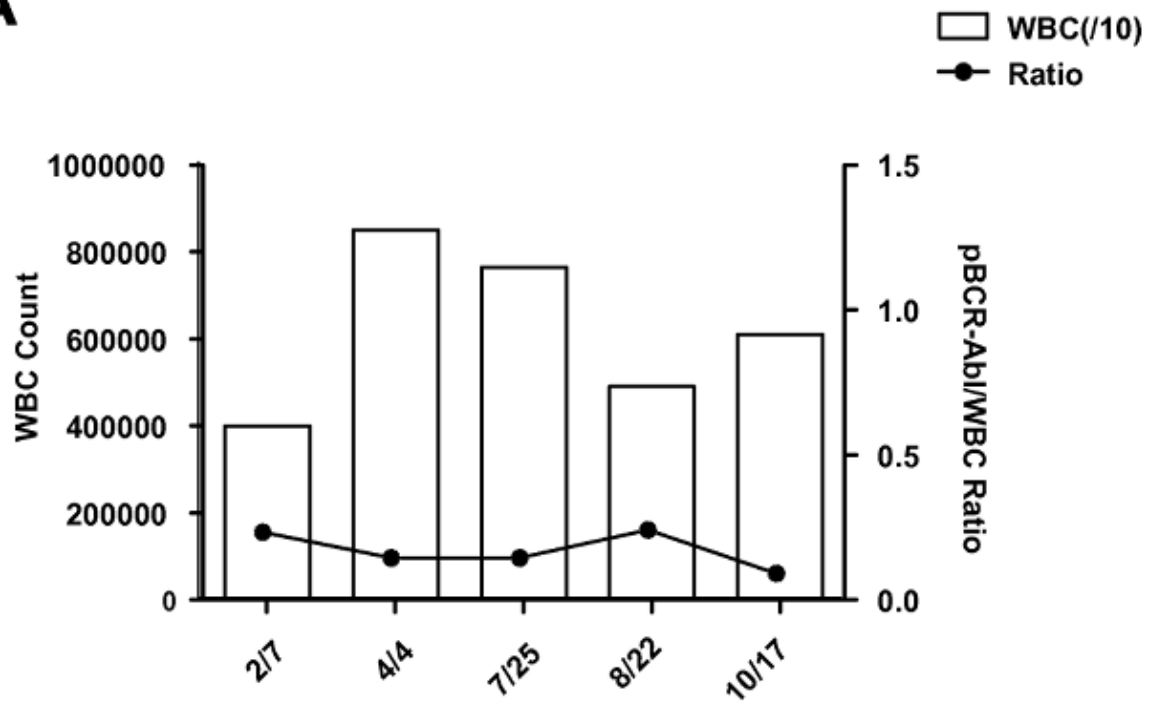


FIG. 28

38/41

Patient 3

A



B

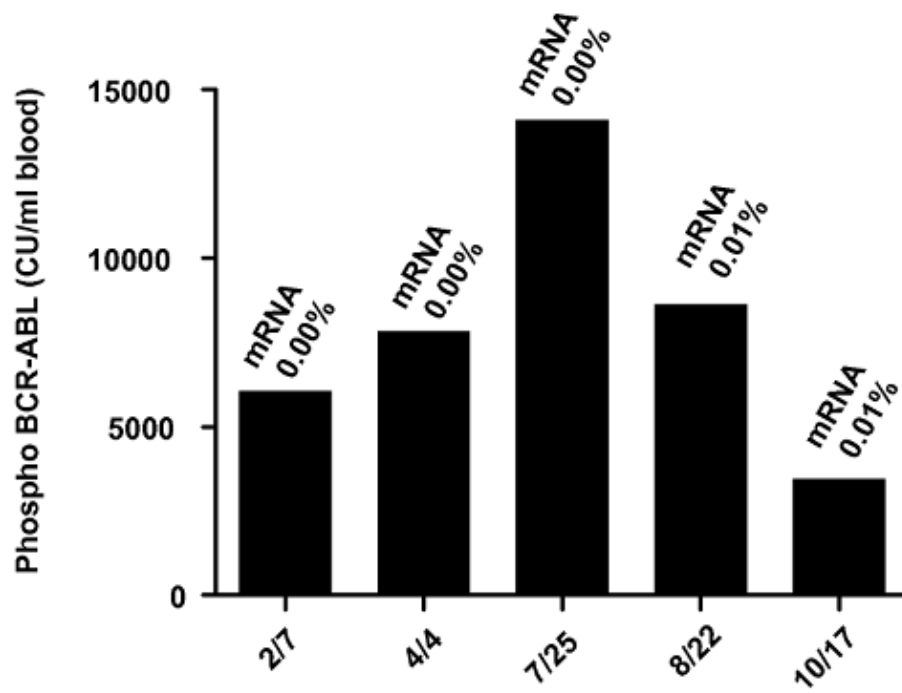
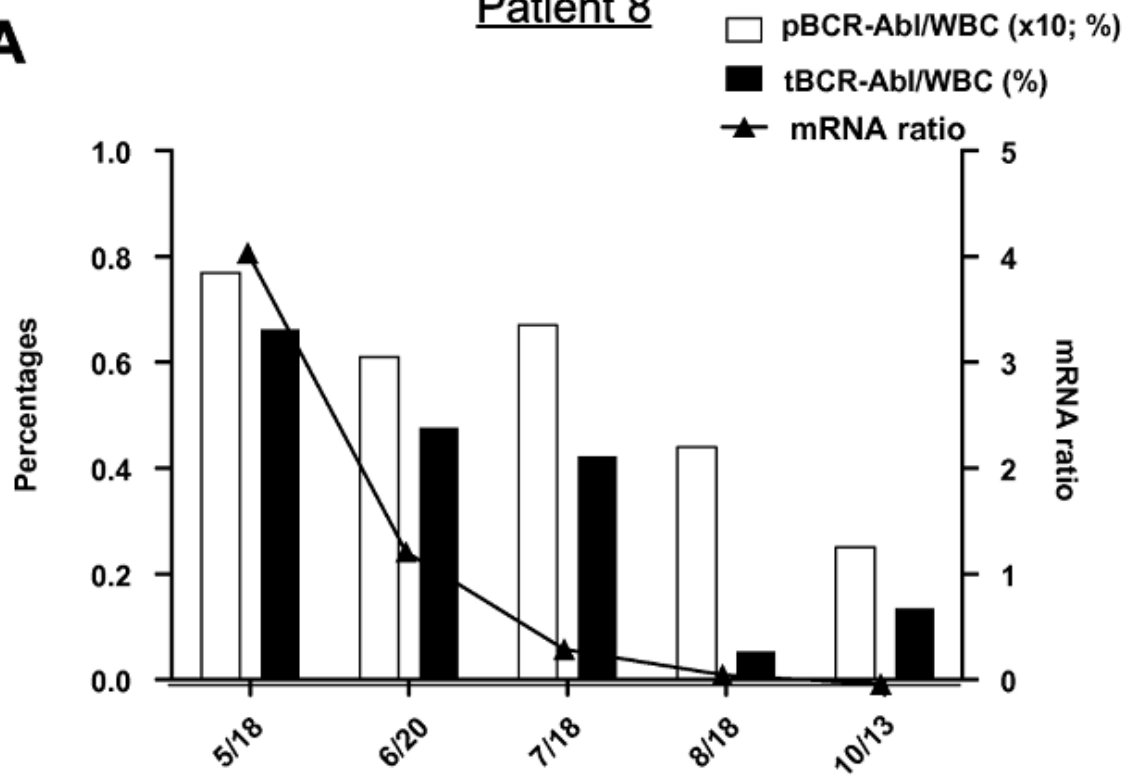
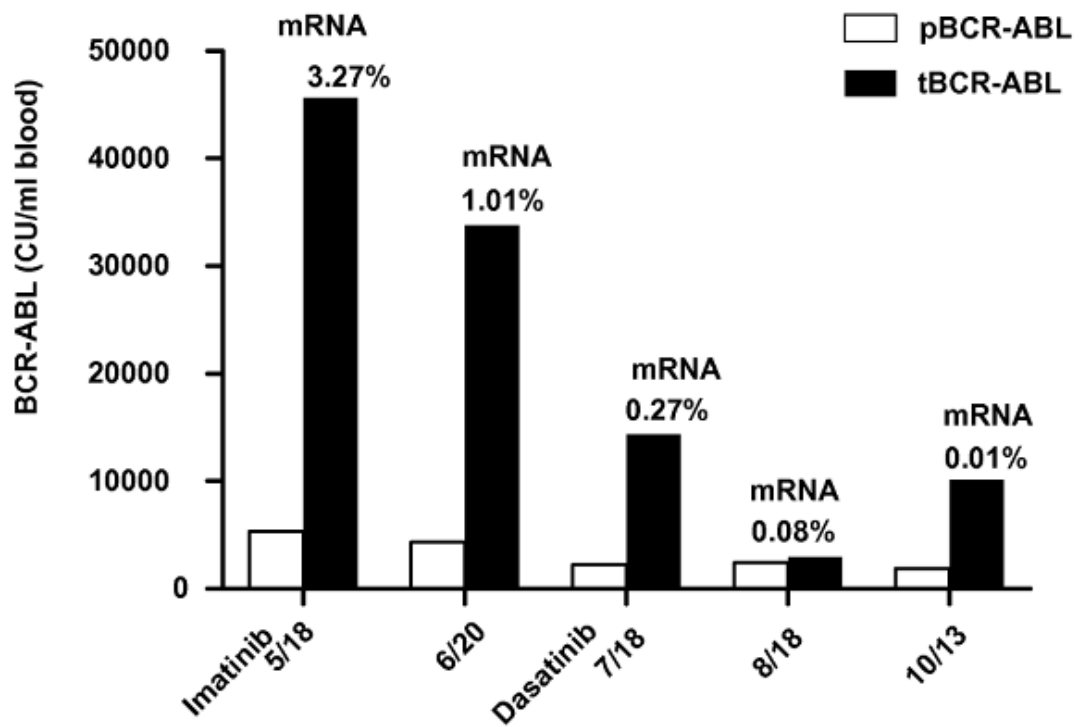


FIG. 29

A**Patient 8****B****FIG. 30**

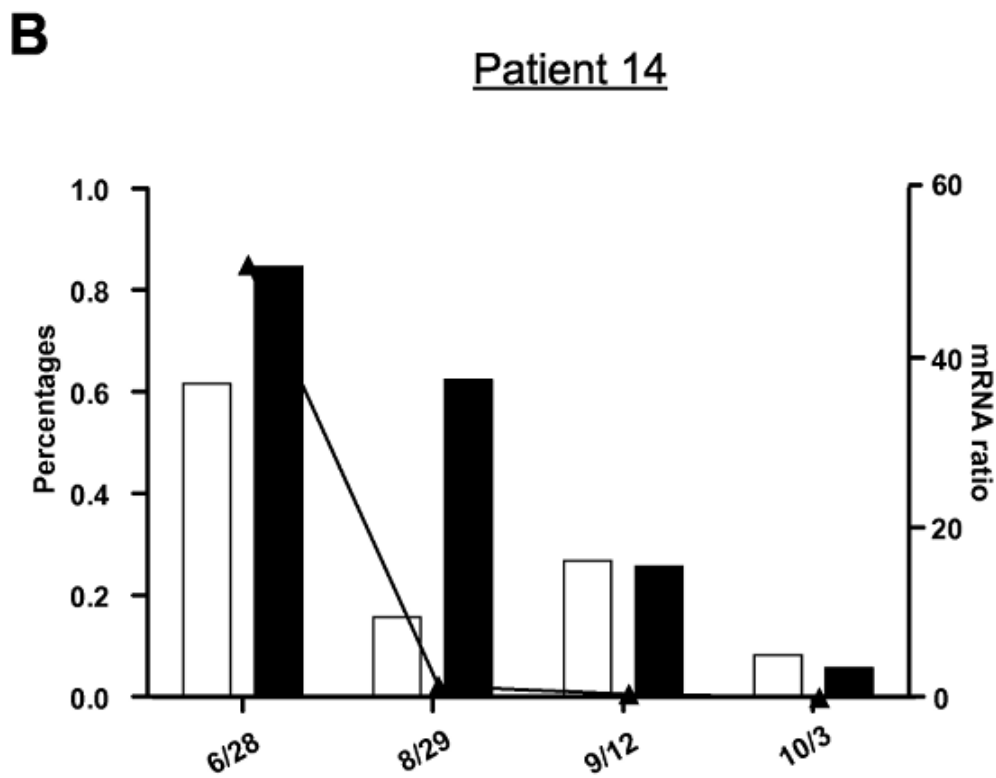
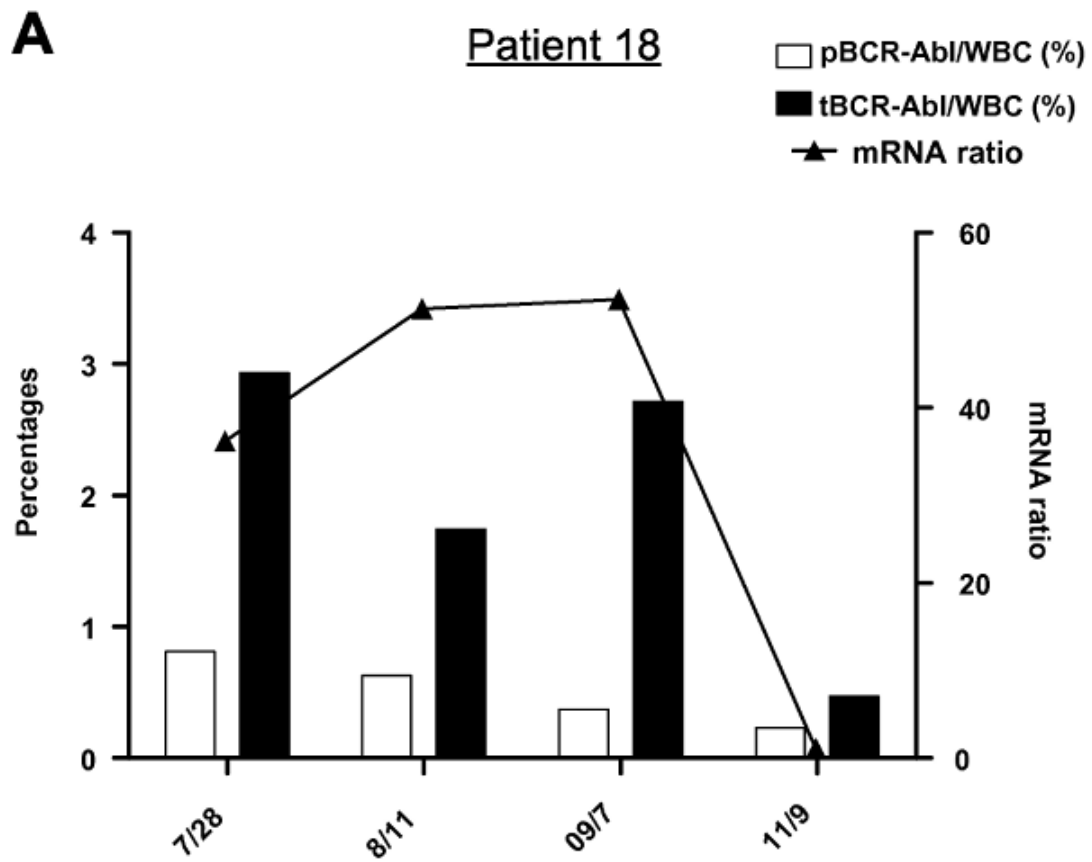
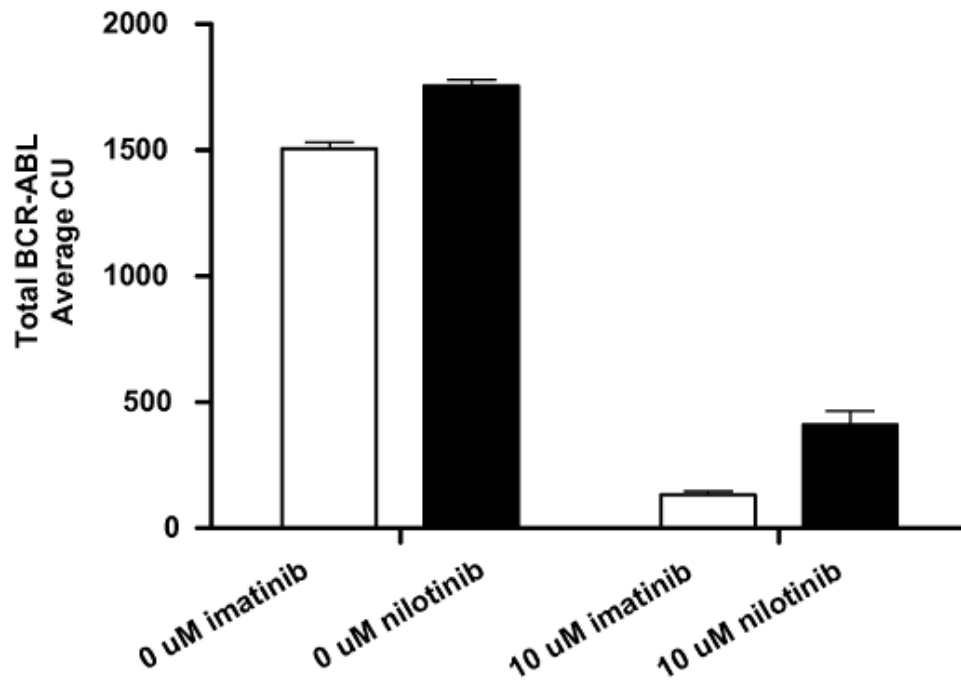
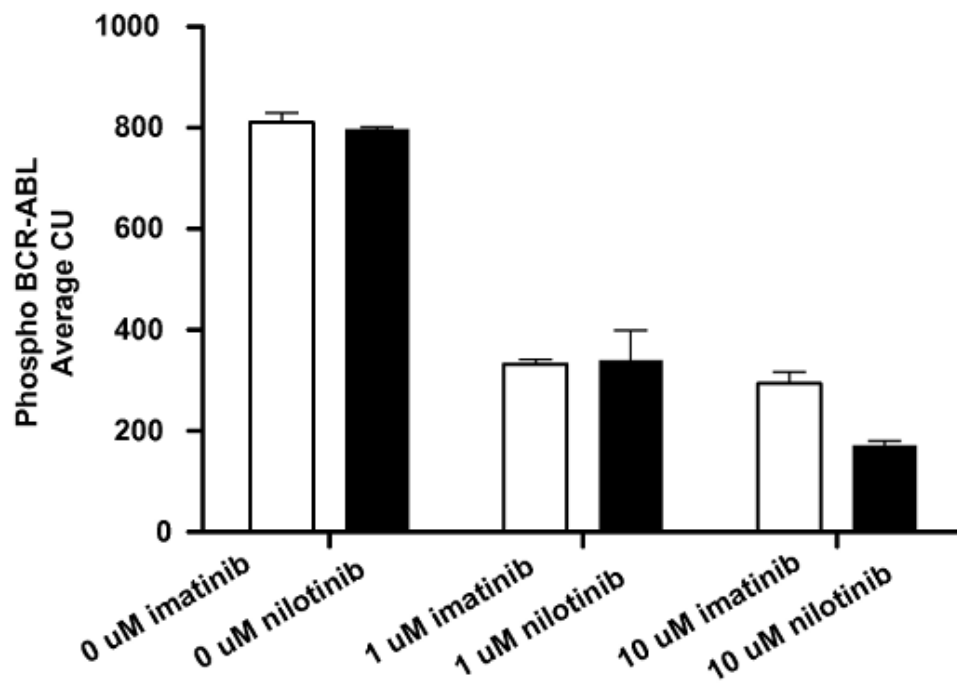


FIG. 31

APatient 14**B****FIG. 32**