Supplementary Table 4. Significant STAC regions identified in breast cancer dataset. STAC results were first filtered to exclude those locations with stac size <= 3. Regions reported have *p*-value <= 0.05 at all locations for at least one of the statistics. **a) Gains** STAC analysis identifies 149 distinct regions of gain covering 525 Mb of genomic sequence. Average region size: 3.43 Mb. **b) Losses.** STAC analysis identifies 124 distinct regions of loss covering 383 Mb of genomic sequence. Average region size: 3.10 Mb. [a]genomic coordinates based on UCSC build 16 of human genome.

Supplementary Table 4a.
Statistically significant regions of gain identified by STAC: Breast Cancer

Genomic Change	Start[a]	Stop[a]	Footprint *p*-value	Frequency *p*-value
chr1p+	1	7000000	0.0003	0.0002
chr1p+	26000001	27000000	0.0016	0.0002
chr1p+	36000001	42000000	0.0003	0.0001
chr1p+	50000001	52000000	0.0003	0.5917
chr1p+	53000001	58000000	0.0003	0.0046
chr1p+	54000001	55000000	0.0062	1.0000
chr1p+	78000001	80000000	0.0003	0.0002
chr1p+	84000001	86000000	0.0016	0.5917
chr1p+	96000001	99000000	0.0003	0.9990
chr1p+	107000001	111000000	0.0134	1.0000
chr1p+	114000001	119000000	0.0003	0.0217
chr1q+	158000001	160000000	0.0005	0.0001
chr1q+	160000001	165000000	0.0005	0.0124
chr1q+	168000001	172000000	0.0005	1.0000
chr1q+	174000001	180000000	0.0005	1.0000
chr1q+	198000001	201000000	0.0005	0.0003
chr1q+	202000001	203000000	0.0005	0.0001
chr1q+	220000001	227000000	0.0005	0.0001
chr1q+	229000001	230000000	0.0005	1.0000
chr1q+	241000001	242000000	0.0182	1.0000
chr2p+	1	9000000	0.0005	0.0001
chr2p+	10000001	12000000	0.0005	0.0106
chr2p+	17000001	22000000	0.0005	0.0001
chr2p+	26000001	29000000	0.0005	0.0019
chr2p+	71000001	76000000	0.0005	0.0455
chr2p+	84000001	87000000	0.0005	0.1612
chr2q+	95000001	99000000	0.0003	0.0001
chr2q+	114000001	123000000	0.0017	0.2851
chr2q+	218000001	225000000	0.0003	0.0001
chr2q+	232000001	244000000	0.0003	0.0001
chr3p+	10000001	12000000	0.0005	0.0002
chr3p+	30000001	33000000	0.0010	0.6986
chr3p+	58000001	59000000	0.0005	0.6986
chr3q+	140000001	143000000	0.0005	0.0001
chr3q+	183000001	189000000	0.0005	0.0001
chr4p+	1	2000000	0.0004	0.0001
chr4p+	6000001	13000000	0.0004	0.0001
chr5p+	1	7000000	0.0001	0.0001
chr5q+	148000001	150000000	0.0001	0.1391
chr5q+	177000001	181000000	0.0001	0.0001
chr6p+	32000001	34000000	0.0020	0.0006
chr6p+	41000001	42000000	0.0006	0.0001

chr6p+	43000001	47000000	0.0025	0.0094
chr6q+	81000001	91000000	0.0003	0.0467
chr6q+	159000001	161000000	0.0313	0.9999
chr6q+	169000001	171000000	0.0003	0.0001
chr7p+	1	3000000	0.0001	0.0001
chr7p+	4000001	7000000	0.0001	0.2160
chr7p+	30000001	32000000	0.0001	0.0589
chr7p+	47000001	49000000	0.0084	0.0589
chr7p+	54000001	56000000	0.0001	0.0001
chr7p+	57000001	58000000	0.0089	0.2160
chr7q+	73000001	75000000	0.0007	0.0243
chr7q+	96000001	102000000	0.0493	0.7650
chr7q+	122000001	124000000	0.0244	1.0000
chr7q+	138000001	144000000	0.0007	0.0243
chr7q+	150000001	154000000	0.0007	0.0003
chr8p+	6000001	9000000	0.0003	0.9915
chr8p+	17000001	18000000	0.0003	0.4005
chr8p+	21000001	23000000	0.0003	0.8011
chr8p+	41000001	43000000	0.0003	0.0001
chr8q+	49000001	54000000	0.0002	1.0000
chr8q+	127000001	128000000	0.0002	0.0040
chr8q+	139000001	147000000	0.0002	0.0001
chr9p+	1	1000000	0.0003	0.0001
chr9p+	37000001	45000000	0.0003	0.0079
chr9q+	67000001	68000000	0.0007	0.9999
chr9q+	70000001	75000000	0.0007	0.8482
chr9q+	86000001	89000000	0.0007	0.9999
chr9q+	119000001	121000000	0.0007	0.0099
chr9q+	124000001	130000000	0.0007	0.0001
chr9q+	133000001	134000000	0.0007	0.0001
chr10p+	1	9000000	0.0004	0.0001
chr10q+	42000001	45000000	0.0003	0.7170
chr10q+	50000001	52000000	0.0003	0.0278
chr10q+	78000001	80000000	0.0085	0.3318
chr10q+	96000001	98000000	0.0085	1.0000
chr10q+	104000001	108000000	0.0003	0.0009
chr10q+	120000001	124000000	0.0003	0.0001
chr10q+	128000001	136000000	0.0003	0.0001
chr10q+	129000001	130000000	0.0003	0.0009
chr11p+	1	7000000	0.0003	0.0124
chr11p+	44000001	47000000	0.0003	0.0001
chr11q+	60000001	63000000	0.0153	0.0025
chr11q+	65000001	66000000	0.0583	0.0155
chr11q+	77000001	79000000	0.0127	0.0610
chr11q+	118000001	121000000	0.0006	0.0155
chr11q+	124000001	131000000	0.0006	0.0001
chr11q+	133000001	134000000	0.0097	0.8944

chr12p+	1	4000000	0.0004	0.0018
chr12p+	5000001	7000000	0.0004	0.0001
chr12p+	19000001	21000000	0.0004	0.0097
chr12p+	32000001	34000000	0.0004	0.0385
chr12q+	49000001	53000000	0.0039	0.6734
chr12q+	63000001	65000000	0.0004	0.0003
chr12q+	94000001	96000000	0.0111	1.0000
chr12q+	102000001	103000000	0.0003	0.0202
chr12q+	106000001	111000000	0.0004	0.0001
chr12q+	112000001	115000000	0.0004	0.0001
chr12q+	129000001	132000000	0.0004	0.0001
chr13q+	27000001	29000000	0.0018	0.8505
chr13q+	96000001	100000000	0.0003	0.0021
chr13q+	108000001	114000000	0.0003	0.0001
chr14q+	72000001	76000000	0.0002	0.0001
chr14q+	78000001	80000000	0.0002	0.4557
chr14q+	90000001	92000000	0.0002	0.0001
chr14q+	94000001	106000000	0.0002	0.0001
chr15q+	21000001	24000000	0.0057	0.8202
chr15q+	64000001	66000000	0.0002	0.0002
chr15q+	74000001	76000000	0.0997	0.0312
chr15q+	82000001	85000000	0.0002	0.0064
chr15q+	86000001	90000000	0.0002	0.0009
chr15q+	97000001	100000000	0.0053	0.9939
chr16p+	1	4000000	0.0002	0.0001
chr16p+	11000001	12000000	0.0002	0.0859
chr16p+	27000001	30000000	0.0002	0.0263
chr16q+	57000001	58000000	0.0004	0.0046
chr16q+	68000001	73000000	0.0004	0.0607
chr16q+	84000001	85000000	0.0015	0.0143
chr16q+	85000001	90000000	0.0004	0.0001
chr17p+	1000001	6000000	0.0002	0.0001
chr17p+	16000001	18000000	0.0002	0.0156
chr17q+	29000001	31000000	0.0006	1.0000
chr17q+	34000001	38000000	0.0006	0.0176
chr17q+	48000001	50000000	0.0006	0.0582
chr17q+	60000001	63000000	0.0017	0.9165
chr17q+	73000001	76000000	0.0006	0.0002
chr17q+	77000001	82000000	0.0006	0.0001
chr18p+	12000001	13000000	0.0003	0.0001
chr18q+	40000001	47000000	0.0003	0.0001
chr18q+	54000001	59000000	0.0003	0.0001
chr18q+	72000001	75000000	0.0003	0.0040
chr19p+	1	1000000	0.0054	1.0000
chr19p+	5000001	6000000	0.0001	0.4473
chr19p+	7000001	9000000	0.0001	0.0030
chr19q+	37000001	42000000	0.0006	0.0040

chr19q+	44000001	48000000	0.0006	0.0001
chr19q+	61000001	64000000	0.0006	0.0001
chr20p+	1	4000000	0.0002	0.9521
chr20p+	22000001	26000000	0.0002	0.0001
chr20q+	31000001	34000000	0.0001	0.0502
chr20q+	50000001	51000000	0.0273	0.9889
chr20q+	59000001	62000000	0.0010	0.4684
chr21q+	25000001	27000000	0.0001	1.0000
chr21q+	44000001	47000000	0.0001	0.0001
chr22q+	17000001	18000000	0.0123	0.1800
chr22q+	20000001	21000000	0.0252	0.4759
chr22q+	43000001	44000000	0.0148	0.8496
chr22q+	48000001	50000000	0.0011	0.4759

Supplementary Table 4b.
Statistically significant regions of loss identified by STAC: Breast Cancer

Genomic Change	Start[a]	Stop[a]	Footprint *p*-value	Frequency *p*-value
chr1p-	63000001	66000000	0.0004	0.0001
chr1p-	74000001	75000000	0.0303	0.2303
chr1p-	82000001	83000000	0.0051	0.0011
chr1p-	96000001	97000000	0.0369	0.0545
chr1q-	229000001	230000000	0.0001	0.0001
chr2p-	1	1000000	0.0005	0.0001
chr2p-	50000001	54000000	0.0005	0.0001
chr2p-	75000001	78000000	0.0005	0.0105
chr2q-	96000001	97000000	0.0001	1.0000
chr2q-	152000001	156000000	0.0001	0.4821
chr2q-	162000001	164000000	0.0001	0.1380
chr2q-	180000001	186000000	0.0001	0.0004
chr2q-	192000001	197000000	0.0001	0.0246
chr2q-	210000001	216000000	0.0010	0.1380
chr2q-	230000001	232000000	0.0001	0.0031
chr3p-	2000001	3000000	0.0336	0.9853
chr3p-	42000001	43000000	0.0004	0.2387
chr3p-	54000001	58000000	0.0397	0.9853
chr3p-	60000001	65000000	0.0015	0.2387
chr3p-	71000001	75000000	0.0279	0.2387
chr3q-	99000001	101000000	0.0079	0.7746
chr3q-	124000001	126000000	0.0079	0.9960
chr3q-	130000001	136000000	0.0013	0.7746
chr3q-	137000001	138000000	0.0004	0.0001
chr3q-	145000001	147000000	0.0087	0.3063
chr4p-	21000001	23000000	0.0032	0.0067
chr4p-	41000001	49000000	0.0011	1.0000
chr4q-	54000001	57000000	0.0008	0.9718
chr4q-	106000001	110000000	0.0008	1.0000
chr4q-	141000001	144000000	0.0008	0.0003
chr4q-	156000001	157000000	0.0017	0.0003
chr5p-	19000001	20000000	0.0196	0.0473
chr5p-	37000001	40000000	0.0013	0.2060
chr5p-	41000001	42000000	0.0026	0.5812
chr5q-	51000001	55000000	0.0004	0.0118
chr5q-	58000001	60000000	0.0004	0.2703
chr5q-	67000001	68000000	0.0078	0.0118
chr5q-	72000001	74000000	0.0017	0.0018
chr5q-	83000001	84000000	0.0119	0.2704
chr5q-	88000001	94000000	0.0217	1.0000
chr5q-	111000001	123000000	0.0247	0.0118
chr6p-	21000001	25000000	0.0176	0.6054

chr6p-	46000001	50000000	0.0008	0.0119
chr6p-	56000001	57000000	0.0135	0.2183
chr6q-	63000001	65000000	0.0005	1.0000
chr6q-	66000001	70000000	0.0016	1.0000
chr6q-	79000001	80000000	0.0334	0.5098
chr6q-	90000001	92000000	0.0005	0.0028
chr6q-	100000001	106000000	0.0005	0.0003
chr6q-	125000001	129000000	0.0005	0.0529
chr6q-	130000001	137000000	0.0005	0.0115
chr6q-	146000001	147000000	0.0323	0.1882
chr7p-	18000001	19000000	0.0047	0.0006
chr7p-	49000001	51000000	0.0040	0.0393
chr7q-	92000001	95000000	0.0003	0.0127
chr7q-	125000001	126000000	0.0355	0.2673
chr7q-	142000001	144000000	0.0003	0.7159
chr8p-	4000001	7000000	0.0010	0.0463
chr8p-	9000001	13000000	0.0010	0.0463
chr8p-	17000001	20000000	0.0001	0.0463
chr8q-	68000001	71000000	0.0008	0.4280
chr8q-	79000001	82000000	0.0001	0.0001
chr9p-	8000001	9000000	0.0156	0.0931
chr9p-	10000001	11000000	0.0006	0.0034
chr9p-	14000001	15000000	0.0006	0.0222
chr9p-	27000001	31000000	0.0006	0.0034
chr9p-	32000001	34000000	0.0015	1.0000
chr9q-	74000001	75000000	0.0053	0.0321
chr9q-	77000001	82000000	0.0053	0.0047
chr9q-	98000001	99000000	0.0475	0.1696
chr10q-	51000001	53000000	0.0005	0.0038
chr10q-	64000001	71000000	0.0276	0.4707
chr10q-	101000001	102000000	0.0005	0.9158
chr10q-	103000001	105000000	0.0005	0.0262
chr10q-	108000001	112000000	0.0246	0.4707
chr10q-	118000001	121000000	0.0005	0.0262
chr11p-	9000001	14000000	0.0050	0.5114
chr11p-	22000001	23000000	0.0031	0.0059
chr11p-	27000001	32000000	0.0005	0.0001
chr11p-	34000001	37000000	0.0012	1.0000
chr11q-	58000001	59000000	0.0005	1.0000
chr11q-	74000001	83000000	0.0005	0.0015
chr11q-	92000001	94000000	0.0644	0.0354
chr11q-	101000001	108000000	0.0112	1.0000
chr11q-	111000001	118000000	0.0013	0.7800
chr11q-	120000001	123000000	0.0005	0.3916
chr11q-	131000001	133000000	0.0058	0.0354
chr12p-	4000001	6000000	0.0021	0.9944
chr12q-	44000001	45000000	0.0013	0.9743

chr12q-	58000001	59000000	0.0013	0.6781
chr12q-	73000001	74000000	0.0101	0.0030
chr12q-	80000001	81000000	0.0090	0.0030
chr12q-	83000001	85000000	0.0007	0.0001
chr12q-	88000001	89000000	0.0151	0.0030
chr12q-	95000001	98000000	0.0007	0.0746
chr12q-	99000001	103000000	0.0007	0.6781
chr13q-	23000001	24000000	0.0329	1.0000
chr13q-	28000001	35000000	0.0005	0.0001
chr13q-	44000001	45000000	0.0764	0.0265
chr13q-	51000001	52000000	0.0208	0.0061
chr13q-	60000001	61000000	0.0038	0.2685
chr13q-	75000001	78000000	0.0100	0.2685
chr13q-	99000001	105000000	0.0005	0.5923
chr14q-	22000001	27000000	0.0005	0.0002
chr14q-	28000001	29000000	0.0105	0.0049
chr14q-	31000001	33000000	0.0005	0.0263
chr14q-	43000001	47000000	0.0005	0.9952
chr14q-	68000001	72000000	0.0005	0.9952
chr14q-	78000001	79000000	0.0005	0.0001
chr14q-	84000001	86000000	0.0005	0.0049
chr15q-	33000001	38000000	0.0003	0.0001
chr15q-	41000001	49000000	0.0003	0.0001
chr15q-	89000001	90000000	0.0003	0.9742
chr16q-	46000001	54000000	0.0009	0.1564
chr16q-	57000001	64000000	0.0009	0.0004
chr16q-	77000001	84000000	0.0009	0.1564
chr17p-	8000001	16000000	0.0002	0.0001
chr17q-	61000001	63000000	0.0429	0.8161
chr18p-	6000001	8000000	0.0006	0.0001
chr18q-	37000001	39000000	0.0009	0.0001
chr18q-	40000001	41000000	0.0748	0.0350
chr21q-	13000001	22000000	0.0006	0.0001
chr22q-	20000001	21000000	0.0010	0.9803
chr22q-	32000001	36000000	0.0077	0.1322