SUPPLEMENTARY MATERIALS

Supplementary Methods

Gene Expression Data and Signature Scores.

1. ***MK0646 PN004 WT KRAS CRCs (n=44)*** were selected from the control arm (cetuximab + irinotecan) of a Merck prospective clinical trial (MK0646)(1) followed by Affymetrix gene expression analysis. The calculated CTX-S scores, along with other molecular and clinical parameters, of these CRC patients are shown in Supplementary Table S1. **2.** ***BMS cetuximab-treated CRCs (n=80, Khambata-Ford et al(2)).*** Affymetrix gene expression data of 80 metastatic patient samples were downloaded via GEO with accession number GSE5851. The calculated signature scores were merged with other molecular and clinical parameters adopted from "Online Table 1"(2), which is shown in Supplementary Table S2. **3.** ***In vitro cetuximab-treated CRC cell lines (n=147, Medico et al.(3)).*** Affymetrix gene expression data of 154 cell lines were downloaded via GEO with accession number GSE59857. Seven cell lines without cetuximab-treated data were excluded from further analysis. The signature scores were then merged with the molecular and pharmacological annotation of the cell lines adopted from "Supplementary Data 1"(3), resulting in Supplementary Table S3A. Note that only the results of 10 μg/ml of cetuximab are shown in **Fig. 1E**, since the results for the other doses of cetuximab (1, 25, 50 and 100μg/ml) were similar, as 10 μg/ml had a 0.945 or higher (Pearson) correlation with these doses for *in vitro* growth inhibition (Supplementary Table S3B). **4.** ***Moffitt CRC dataset (n=468).*** The scores were calculated as described previously(4, 5) or above (see Supplementary Table S4). **5.** ***TCGA CRCs (n=624/n=221(6)).*** TCGA COADREAD Level 3 RNAseq data as well as the clinical Level 1 data were downloaded from the NCI GDC portal(7) (gdac.broadinstitute.org_COADREAD.Merge_rnaseqv2__illuminahiseq_rnaseqv2__unc_edu__Level_3__RSEM_genes_normalized__data.Level_3.2016012800.0.0.tar; gdac.broadinstitute.org_COADREAD.Merge_rnaseqv2__illuminaga_rnaseqv2__unc_edu__Level_3__RSEM_genes_normalized__data.Level_3.2016012800.0.0.tar; gdac.broadinstitute.org_COADREAD.Merge_Clinical.Level_1.2016012800.0.0 (1).tar). These data were merged according to patient barcodes, resulting in gene expression values as well as stages and MSI status for total 624 patients. In addition, mutation data of *APC*, *TP53*, *KRAS*, *NRAS* and *BRAF* of 224 CRCs reported by TCGA (2012)(6) were obtained from cBioPortal

(http://www.cbioportal.org/index.do?session_id=59ef9a1e498e5df2e2972472&show_samples=false&). The mutation data of 224 CRCs were then merged with those of 624 CRCs, resulting in 221 tumors that had both mutation and expression data (Supplementary Table S5). **6. *Stages I-IV CRC patients samples (n=566, Marisa et al.(8))***. Affymetrix gene expression data, along with molecular and clinical parameters, of 566 Stage I-IV patient samples were downloaded via GEO with accession number GSE39582. The signature scores were calculated as described above and is shown in Supplementary Table S6. Note that of 566 patient samples, 557 had approximate relapse free survival (RFS) data.

Frequencies of *APC* and *TP53* mutations in CTX-PDX datasets

The data were obtained from two reported cetuximab-treated CRC PDX studies(9, 10) for analysis of mutations in ***AP***, ***A*** or ***P*** and WT AP. In Julien et al. 52 PDX models(9), the mutation status of *APC* and *TP53* was adopted from "Figure 2"(9) (see Supplementary Table S7). For illustration purposes, the antitumor activities "+++", "++" and "+"/"-" in Julien et al. PDX models were re-expressed as "CR/PR", "SD" and "PD", respectively, according to the pharmacological annotation as described(9). In Bertotti et al. 98 PDX models with wild-type *KRAS*, *NRAS*, *BRAF* and *PI3KCA*(10), the mutation status of *APC* and *TP53* was adopted from "Supplementary Table 4"(10) and then merged with cetuximab response (CR/PR/SD/PD) data were adopted from "Supplementary Table 10"(10) (see Supplementary Table S8).

Statistical Methods

The statistical tests used in the article were given unadjusted *p* values for multiple testing, with an $\alpha = 0.05$ chosen as the significance level, except for the mutation ranking analyses which use the Benjamini and Hochberg false discovery rate method(11). In addition, for the Welch *t* test in comparison among 7 or 5 MSI/MSS subgroups, those unadjusted *p* values remaining significant after adjustments for multi-comparisons by Holm-Bonferroni method(12) were highlighted by a maroon color. All tests were two-sided unless noted otherwise. Below is a summary of the statistical approaches used.

(1) Survival Analysis, Correlation Analysis, and the t Test. We performed Kaplan Meier survival analysis on various datasets as indicated, and Spearman correlation analyses as well as two-tailed Welch *t* tests on various datasets using GraphPad Prism version 6.00 (La Jolla, CA). The Tarone logrank trend test was used to test for a trend across the CTX-S quartiles for Fig. 1C and 1D and Supplementary Fig. S5 and S6.

(2) Mutation Ranking Analysis of Moffitt 468 CRCs. We first stratified the 468 CRCs by CTX-S score. A mutated gene list was constructed by ranking the CTX-S scores of tumors with and without a mutation in the given gene using the *p*-value coming from one-sided Wilcoxon rank sum test with normal scores (SAS 9.4, Cary, NC), where the mutated tumors give rise to higher CTX-S scores. The ranking order is given according to the adjusted *p* values that were obtained using the Benjamini and Hochberg method(11) (see Supplementary Tables S11 and S12 for all patients (n=468) and MSS patients (n=407), respectively).

(3) Cochran-Mantel-Haenszel (CMH) Test, Barnard Test, and distribution analysis. The Barnard's test was used for all 2×2 tables and for all larger tables the CMH test for trend was used, as the rows and columns are ordinal data; results were obtained using SAS 9.4 (Cary, NC) (see **Table 3**, Supplementary Tables S10, S13-S19, and S22). The distribution and the individual chi-square (X^2) contribution analysis of stages and histotypes as well as other clinic-pathological parameters were also performed on Moffitt CRCs. There is significantly higher or lower observation than expectation: ↑(↓) for $p<0.05$; ↑↑(↓↓) for $p<0.01$; ↑↑↑(↓↓↓) for $p<0.001$; based on individual chi-square (X^2) contribution from the table cell. Critical chi-square values are 3.84 for $p<0.05$; 6.63 for $p<0.01$; 10.83 for $p<0.001$. Note that Nonparametric multiple comparison Dunn test was applied for age across the groups.

(4) CMS classification. Moffitt 458 CRCs were classified by combining the Random Forest classification (RF) and the single sample predictor (SSP) classification methods as described in Guinney et al(5, 13). The method for resolving discrepant classifications between the two methods is detailed below (also see Supplementary Table S21).

Rules for Resolving Two Classification Methods, with Rationale

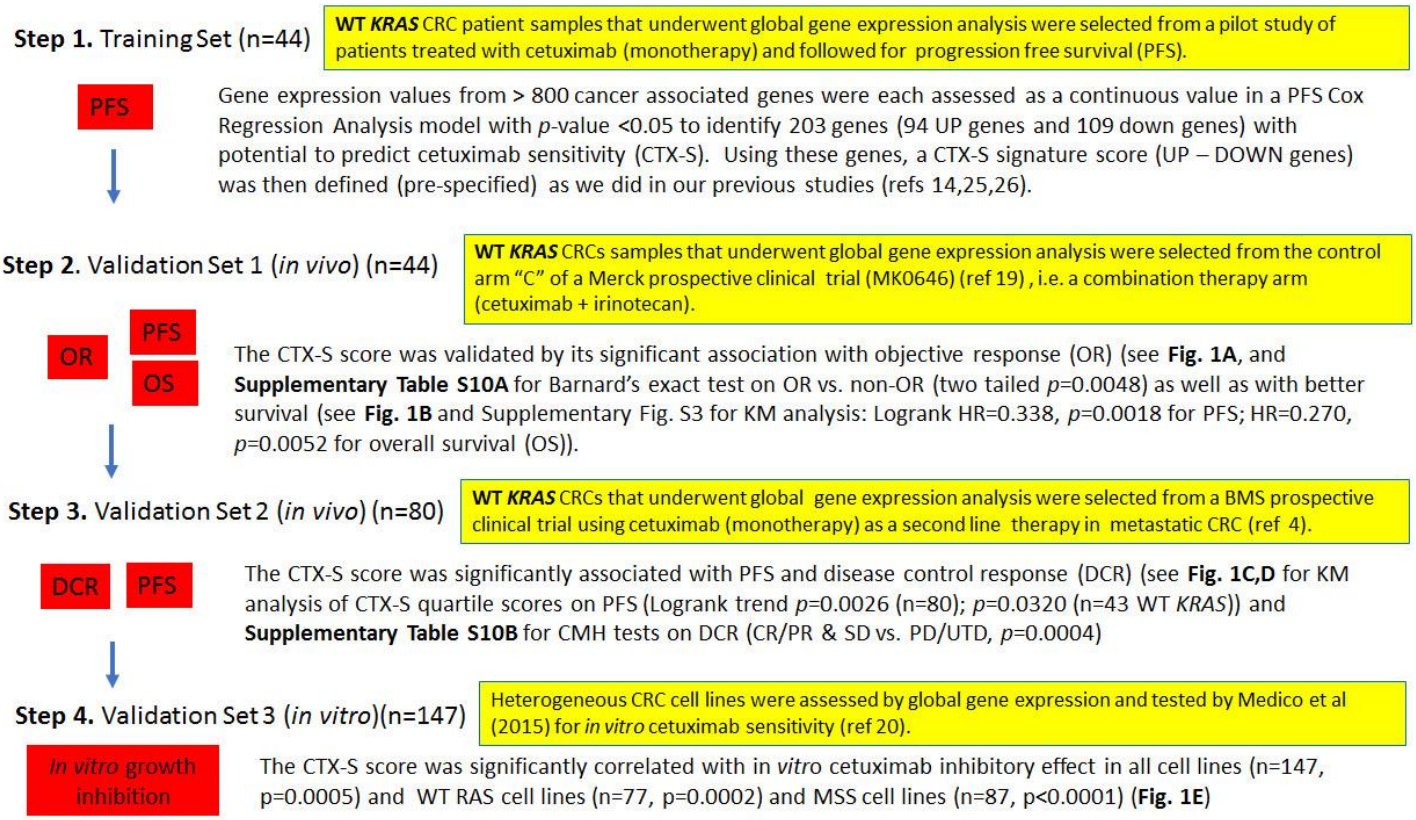
1. 10 patients lacked data for classification. Percentages below based on 458 evaluable samples
2. If both RF and SSP agree, that is the CMS classification (N=331, 72%)
3. If one method classified the sample into CMS1-CMS3 and the other method was NA, then use the CMS1-3 selection; N=47 (10%), classification determined by RF for this rule, N=35 (8%), classification determined by SSP method
4. If RF=CMS4 and SSP = NA, then classify the 17 samples (4%) as NA. 64/116 of our CMS2-classified patients have TP53 mutations with alternate allele rates ≥ 50% (likely allelic loss), compared to 2/17 of these patients

5. There are N=28 (6%) samples for which there were direct CMS classification conflicts. Reasons for selections above:

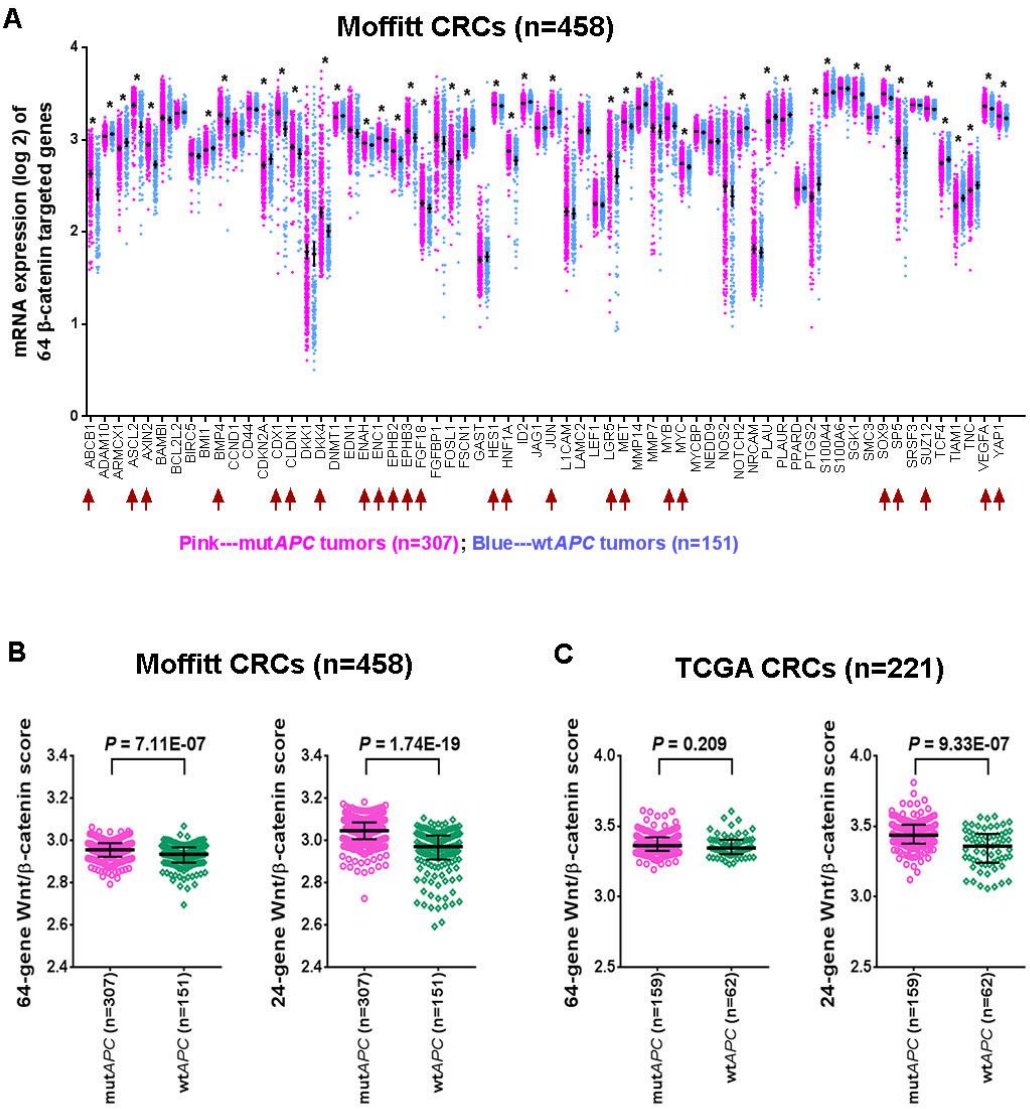
- CMS1 when RF = CMS3, SSP = CMS1; 8/9 patients were MSI-H, and 5/9 had BRAF mutations, and these are highly CMS1-associated features
- CMS3, when RF = CMS3 and SSP = CMS2; 10/15 of the patients have KRAS mutations
- CMS1, when RF=CMS4, and SSP = CMS1; all 3 patients are BRAF-mutated MSI-H patients
- CMS2, when RF=CMS4, and SSP = CMS2; this patient could have been classified either way

List of Supplementary Figures

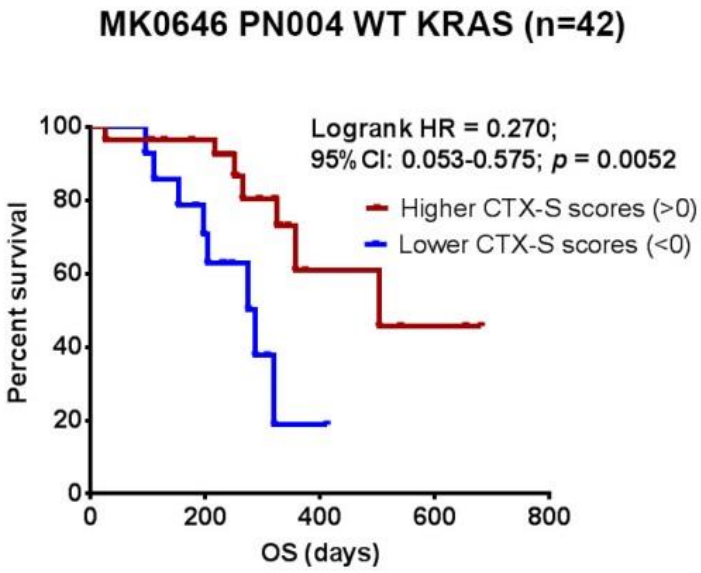
List of Supplementary Tables



Supplementary Fig. S1. Summary of derivation and validation of the cetuximab sensitivity (CTX-S) signature score. Note: ref numbers indicated here are from the main mauscript references.

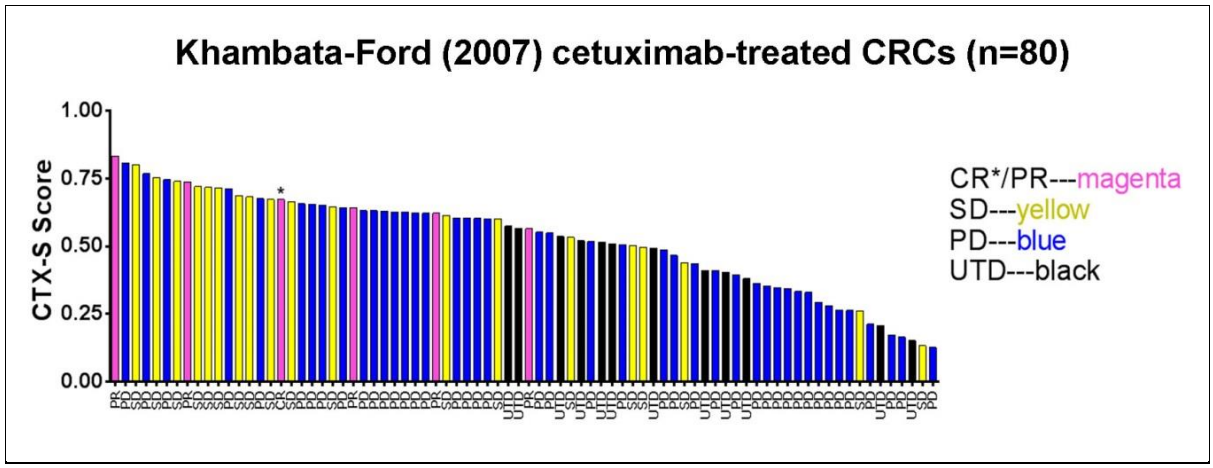


Supplementary Fig. S2. A. Development of the 24-gene *APC* mutation-specific Wnt pathway score on Moffitt458 CRCs. Note: Of 468 Moffitt CRCs, 10 samples without appropriate microarray data of gene expression values were excluded. Bars represent Mean with 95% CI; *, *P*<0.05 for two-tailed Welch *t* test for comparison between mutant (mut) and wild-type (wt) *APC* tumors. Of 64 β-catenin targeted (up) genes(14), the maroon allows represent 24 genes whose mean (and median) expression in mut *APC* tumors is significantly higher (*P*<0.05) than that in wt *APC* tumors. **Comparison of 64-gene or 24-gene Wnt pathway scores between mut and wt*APC* tumors in Moffitt (n=458) (B) and TCGA (n=221) (C) CRCs.** Bars represent Median with interquartile range; *P* values are for two-tailed Welch *t* test.

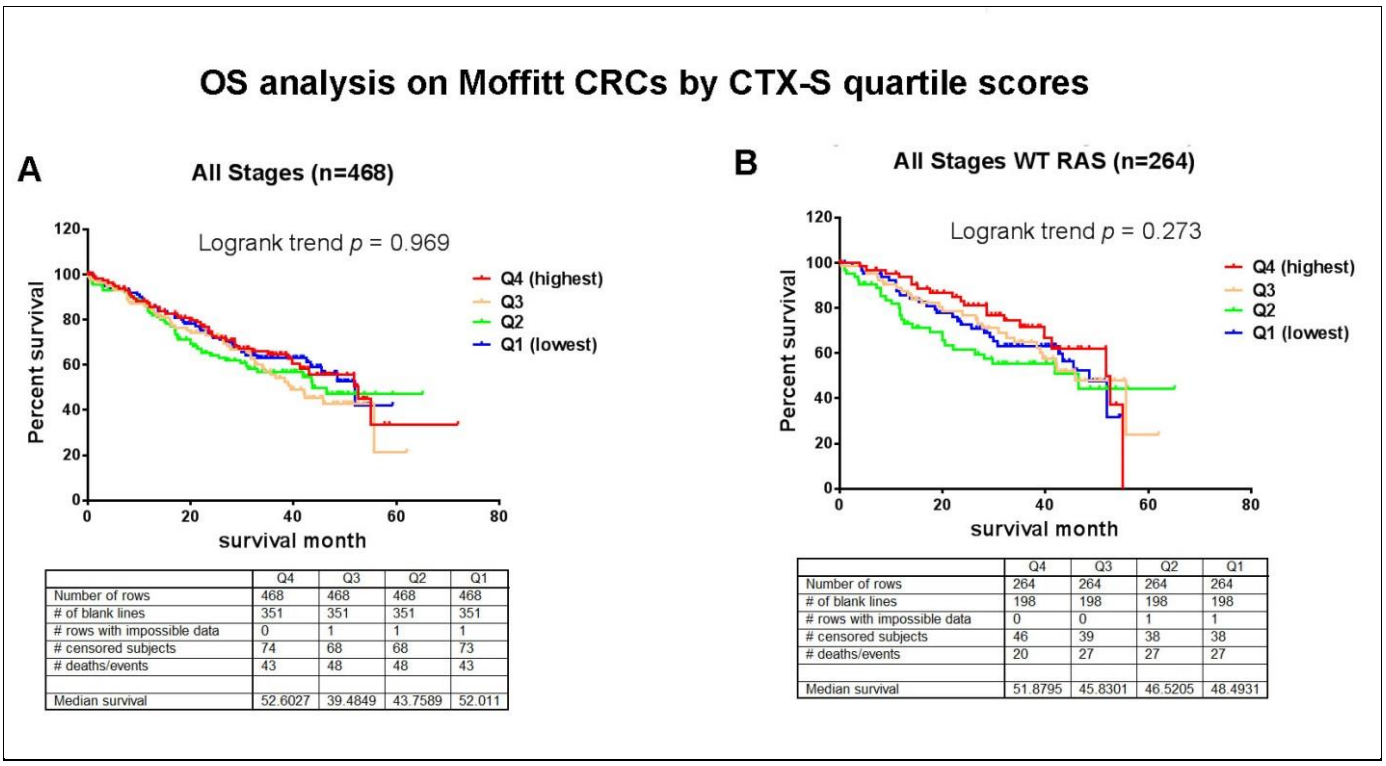


CTX-S Score	N	# deaths	# censored	Median survival (days)
Higher scores (>0)	28	7	21	503
Lower scores (<0)	14	8	6	287

Supplementary Fig. S3. Kaplan Meier (KM) survival (PFS) analysis by higher vs. lower CTX-S scores in MK0646-PN004 CRCs (n=42). See Supplementary Table S1 for detailed data description. Note: of 44 CRCs, two samples with adjusted CTX-S scores near 0.00 as shown in **Fig. 1A** were excluded from KM analysis.



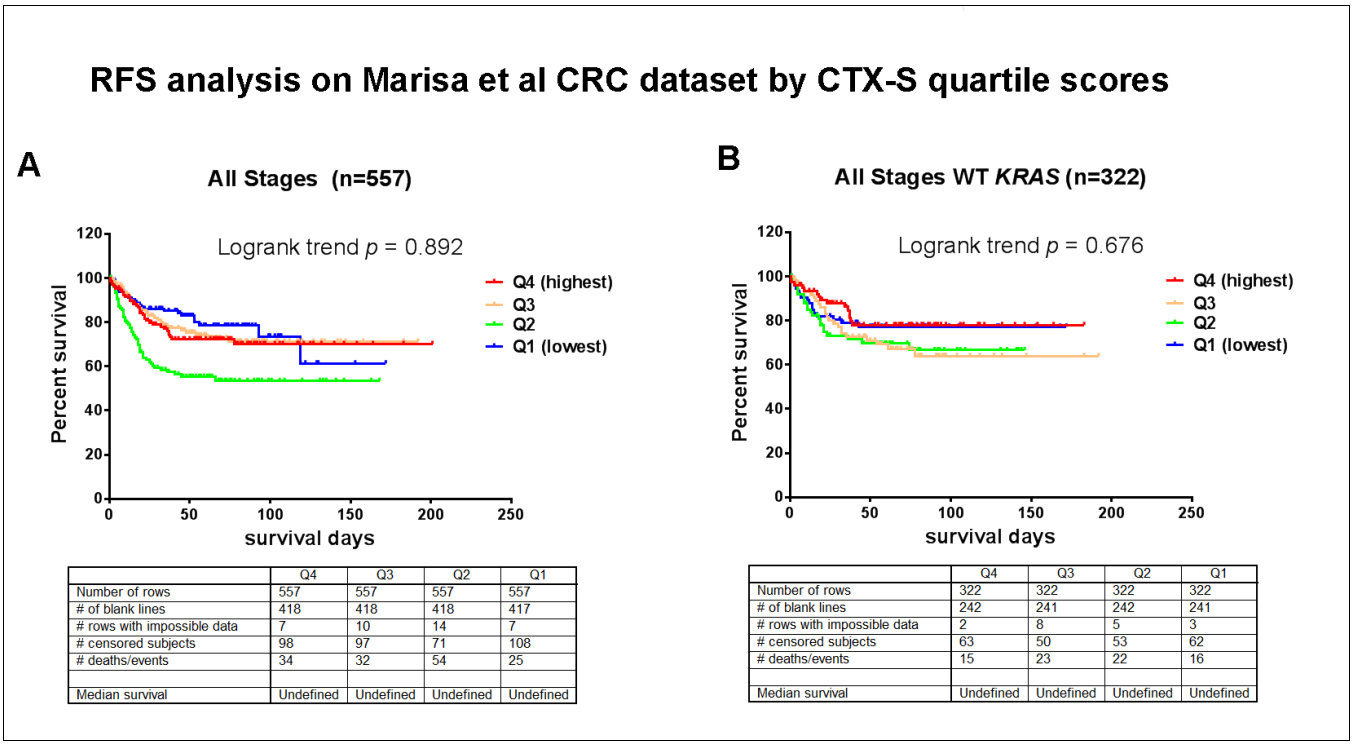
Supplementary Fig. S4. A diagram of the CTX-S scores (from high to low) vs. cetuximab responses (CR/PR, SD, PD or UTD) in Khambata-Ford et al. (2007) cetuximab-treated CRCs (n=80) (2). *****CR – complete response; PR – partial response; SD – stable disease; PD – progressed disease; UTD – undetermined. The significant association of the CTX-S score with improved response (CR/PR and SD) was supported by the Cochran-Mantel-Haenszel test (see Supplementary Table S10B,C).



	Q4	Q3	Q2	Q1
Number of rows	468	468	468	468
# of blank lines	351	351	351	351
# rows with impossible data	0	1	1	1
# censored subjects	74	68	68	73
# deaths/events	43	48	48	43
Median survival	52.6027	39.4849	43.7589	52.011

	Q4	Q3	Q2	Q1
Number of rows	264	264	264	264
# of blank lines	198	198	198	198
# rows with impossible data	0	0	1	1
# censored subjects	46	39	38	38
# deaths/events	20	27	27	27
Median survival	51.8795	45.8301	46.5205	48.4931

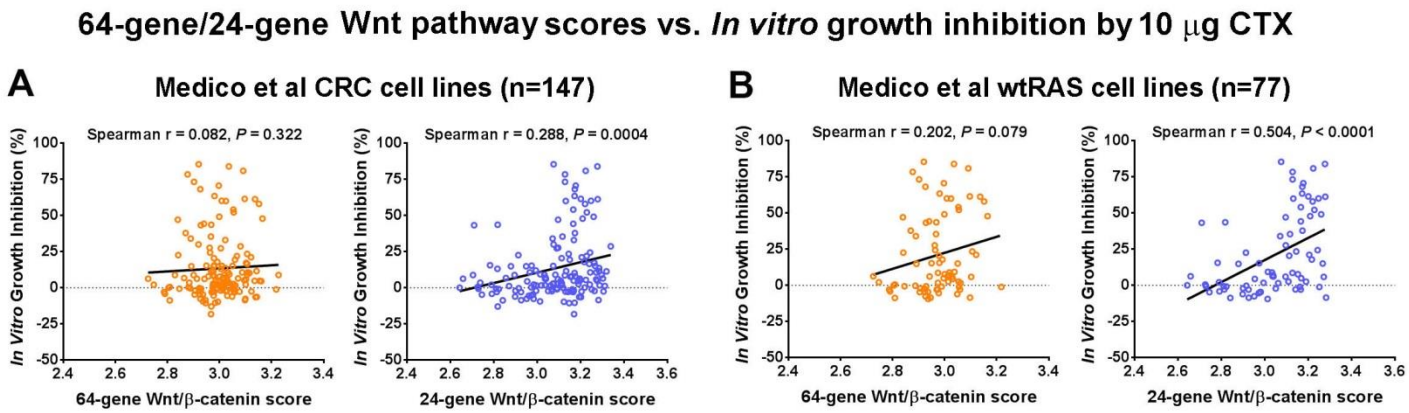
Supplementary Fig S5. Kaplan Meier survival (OS) analysis by the CTX-S quartile scores was performed in Moffitt all stage CRC patients (n=468) (5) (**A**) and wild-type (WT) RAS patients (n=264) (**B**). OS − overall survival.



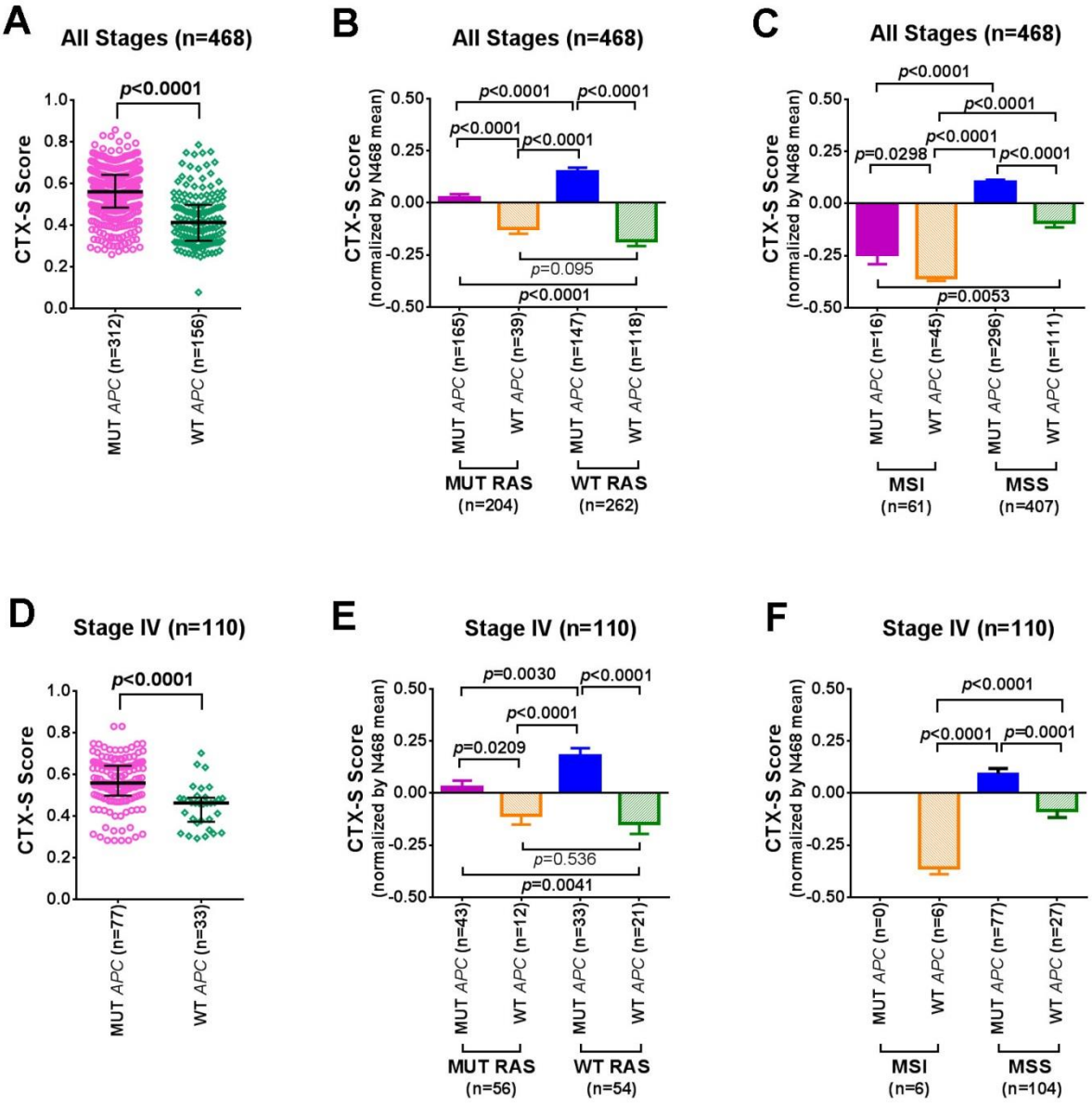
	Q4	Q3	Q2	Q1
Number of rows	557	557	557	557
# of blank lines	418	418	418	417
# rows with impossible data	7	10	14	7
# censored subjects	98	97	71	108
# deaths/events	34	32	54	25
Median survival	Undefined	Undefined	Undefined	Undefined

	Q4	Q3	Q2	Q1
Number of rows	322	322	322	322
# of blank lines	242	241	242	241
# rows with impossible data	2	8	5	3
# censored subjects	63	50	53	62
# deaths/events	15	23	22	16
Median survival	Undefined	Undefined	Undefined	Undefined

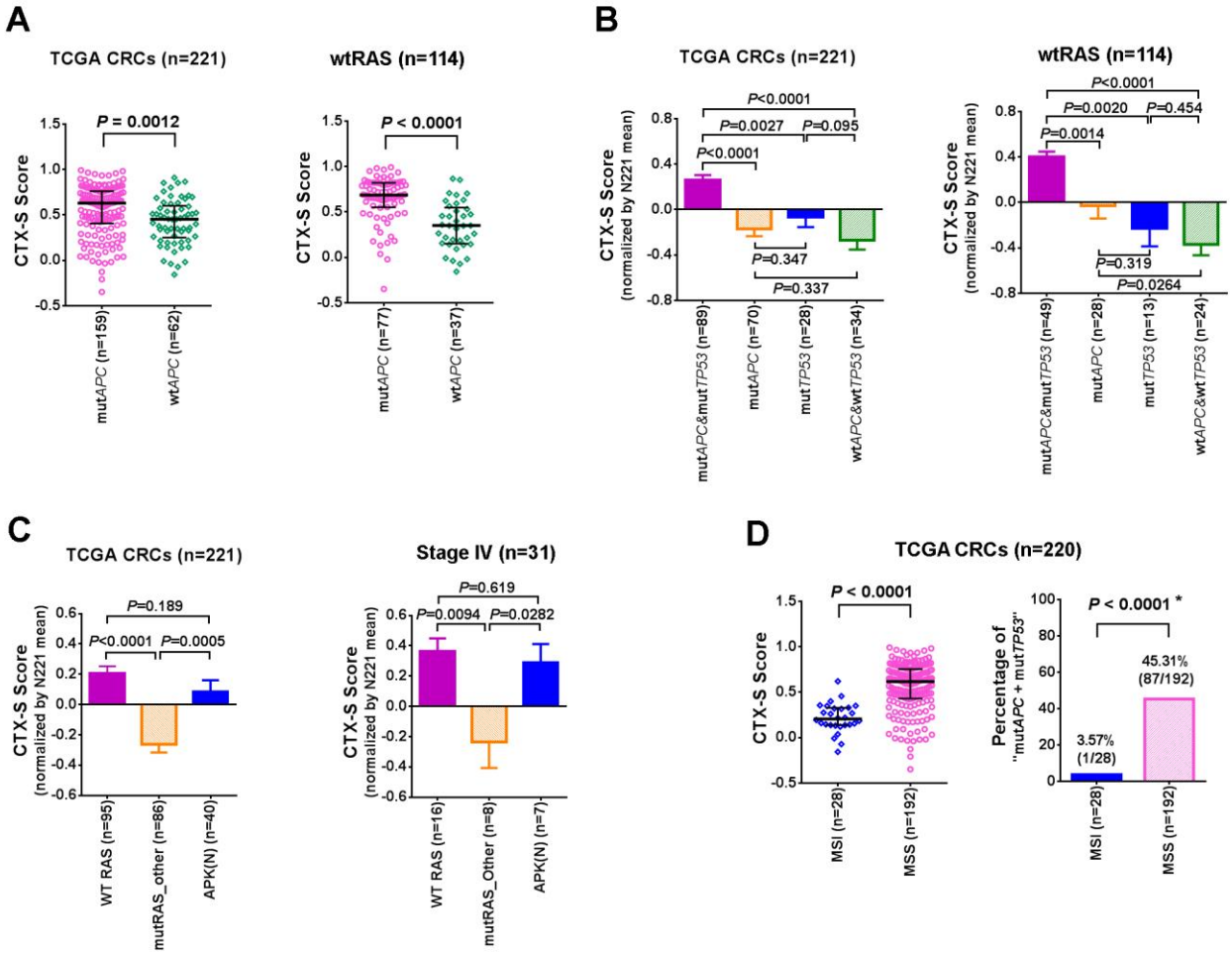
Supplementary Fig S6. Kaplan Meier survival (RFS) analysis by the CTX-S quartile scores was performed in Marisa et al. (8) all stage CRC patients (n=557) (**A**) and wild-type (WT) RAS patients (n=322) (**B**). RFS – relapse free survival. Note: Of 566 Marisa et al. CRCs, 557 patients who had appropriate RFS data were included in the KM analysis.



Supplementary Fig. S7. The 24-gene Wnt pathway score was significantly correlated with *in vitro* cetuximab effect. Correlation analysis of the 64-gene or 24-gene Wnt pathway scores with *in vitro* growth inhibition (%) by 10 μg/ml cetuximab on all cetuximab-treated cell lines (n=147) (**A**) and those with wild-type RAS (n=77) (**B**), respectively. Note: Similar correlations were also at 1, 25, 50 and 100μg/ml of cetuximab, respectively. wtRAS ─ patients with wild-type *KRAS*/*NRAS*.

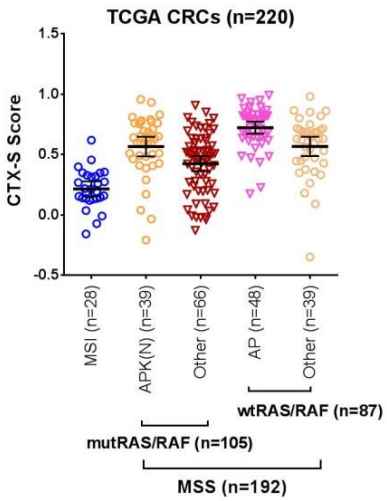


Supplementary Fig. S8. The cetuximab sensitivity (CTX-S) score was significantly higher in MUT *APC* than WT *APC* tumors in the Moffitt CRCs. Comparison between MUT *APC* and WT *APC* tumors was performed for all stage patients (n=468) and Stage IV patients (n=110), respectively (**A** and **D**). Bars represent Median with interquartile range. Comparison was also made when MUT *APC* and WT *APC* tumors were further divided into MUT RAS and WT RAS (**B** and **E**) or MSI and MSS (**C** and **F**) subgroups. Note: MUT ─ mutant; WT ─ wild-type; WT *RAS* ─ patients with wild-type *KRAS/NRAS*. In **B**, **C**, **E**, and **F**, the CTX-S scores were normalized by the mean of 468 CRCs, and bars represent Mean with standard errors (SEM). All *p* values shown in **A**-**F** are for two-tailed Welch *t* test.



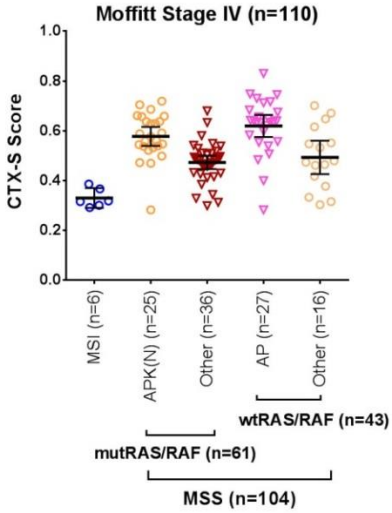
Supplementary Fig. S9. A. The cetuximab sensitivity (CTX-S) score was significantly higher in mutant than wt*APC* tumors in the TCGA CRC dataset (either all patients or wtRAS patients). Bars represent Median with interquartile range. **B.** The CTX-S scores were also significantly higher in "mut*APC*+mut*TP53*" tumors than "mut*APC"*, "mut*TP53*" or "wt*APC*+wt*TP53*" tumors. **C**. Comparison of the scores were also performed between wtRAS, APK(N) (mut*APC*+mut*TP53*+mut*KRAS(NRAS)*) and other mutRAS tumors without APK(N). In **B** and **C**, the CTX-S scores were normalized by the mean of 221 CRCs, and bars represent Mean with standard errors (SEM). **D**. The CTX-S scores were compared between MSI (MSI-H) and MSS tumors (left panel). Bars represent Median with interquartile range. The comparison was also made for the percentage of "mut*APC*+mut*TP53*", with "*' representing a significant difference by Barnard's exact test (right panel) (see Supplementary Table S14)**.** All *P* values shown in **A-D** are for two-tailed Welch *t* test.

A



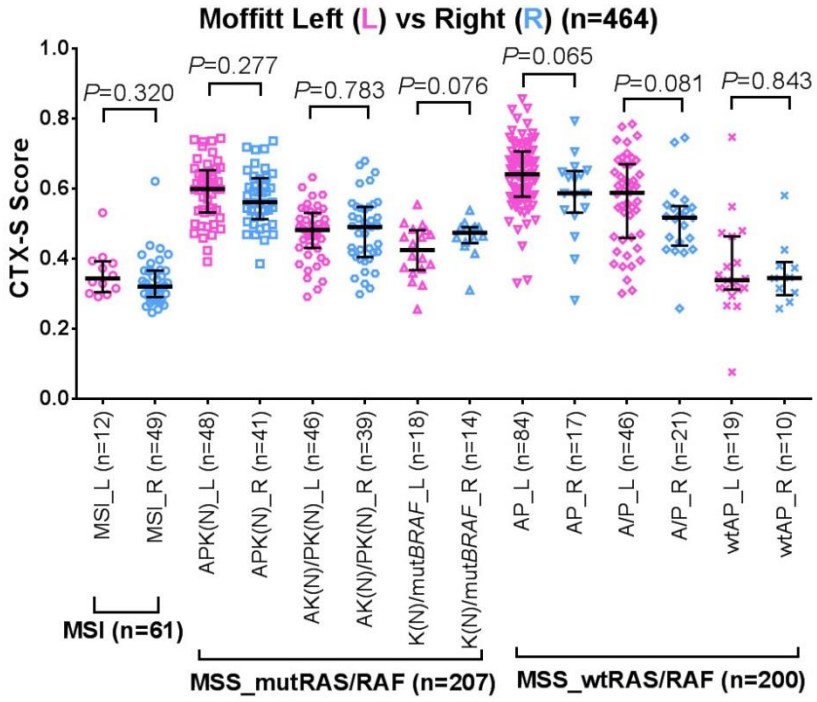
		MSS(192)			
***P* value (*t* test)**	MSI (n=28)	APK(N) (n=39)	mutRAS/RAF_other (n=66)	AP (n=48)	wtRAS/RAF_other (n=39)
MSI (n=28)		< 0.0001	< 0.0001	< 0.0001	< 0.0001
MSS_ APK(N) (n=39)	< 0.0001		0.0069	0.0015	0.975
MSS_mutRAS/RAF_other (n=66)	< 0.0001	0.0069		< 0.0001	0.0057
MSS_AP (n=48)	< 0.0001	0.0015	< 0.0001		0.0015
MSS_wtRAS/RAF_other (n=39)	< 0.0001	0.975	0.0057	0.0015	

B



		MSS(104)			
***P* value (*t* test)**	MSI (n=6)	APK(N) (n=25)	mutRAS/RAF_other (n=36)	AP (n=27)	wtRAS/RAF_other (n=16)
MSI (n=6)		<0.0001	<0.0001	<0.0001	0.0002
MSS_ APK(N) (n=25)	<0.0001		<0.0001	0.1471	0.0295
MSS_mutRAS/RAF_other (n=36)	<0.0001	<0.0001		<0.0001	0.5575
MSS_AP (n=27)	<0.0001	0.1471	<0.0001		0.0025
MSS_wtRAS/RAF_other (n=16)	0.0002	0.0295	0.5575	0.0025	

Supplementary Fig. S10. A. Comparison of the cetuximab sensitivity (CTX-S) scores among 1 MSI and 4 MSS subgroups in TCGA CRCs (n=220). Note: one sample without MSI status information was excluded from TCGA dataset (n=221). Bars represent Median with interquartile range. **B**. Comparison of the CTX-S scores among the five MSI/MSS subgroups in Moffitt Stage IV (n=110) CRCs. Bars represent Median with interquartile range. *P* values are for two-tailed Welch *t* test. *P* values that are significant after adjustments for multi-comparisons by Holm-Bonferroni Method are highlighted by maroon color.



Supplementary Fig. S11. The Left (L) vs. Right (R) comparison of the cetuximab sensitivity (CTX-S) scores in among the seven MSI/MSS subgroups in Moffitt (n=464) CRCs. Bars represent Median with interquartile range. Unadjusted *P* values are for two-tailed Welch *t* test.

Supplementary Table S1. MK0646-PN004 WT *KRAS* cetuximab & irinotecan-treated CRCs (n=44) --- objective response (OR), progression free survival (PFS), overall survival (OS) and CTX-S scores

AGE	SEX	RACE	ECOG	diagnosis	KRAS	treatment	OR	PFS, days	PFS, censor	PFS, event	OS, days	OS, censor	OS, event	CTX-S Score
44	M	WHITE	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	26	0	Death	26	0	Death	0.58694
48	M	ASIAN	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	111	0	Death	111	0	Death	0.22217
53	M	WHITE	1	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	36	1	No Progression	174	1	No Death	0.36834
68	M	WHITE	0	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	168	1	No Progression	232	1	No Death	0.34189
73	M	ASIAN	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	85	1	No Progression	176	1	No Death	0.43578
51	F	ASIAN	1	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	126	1	No Progression	246	1	No Death	0.20215
71	M	ASIAN	0	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	251	1	No Progression	330	1	No Death	0.45171
56	M	ASIAN	0	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	81	1	No Progression	106	1	No Death	0.38315
71	M	ASIAN	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	169	1	No Progression	218	1	No Death	0.52523
58	M	ASIAN	1	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	129	1	No Progression	223	1	No Death	0.4585
58	M	ASIAN	0	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	206	1	No Progression	654	1	No Death	0.45008
35	F	ASIAN	0	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	289	1	No Progression	503	0	Death	0.39062
57	F	WHITE	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	160	1	No Progression	246	1	No Death	0.44322
77	M	WHITE	1	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	1	1	No Progression	183	1	No Death	0.21684
77	F	WHITE	0	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	91	1	No Progression	232	1	No Death	0.48539
44	M	WHITE	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	64	1	No Progression	288	1	No Death	0.3604
60	M	WHITE	1	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	250	1	No Progression	321	1	No Death	0.40955
60	F	WHITE	1	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	293	1	No Progression	344	1	No Death	0.51645
64	M	WHITE	0	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	169	0	Progressive Disease	246	1	No Death	0.37565
64	M	WHITE	0	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	324	0	Progressive Disease	540	1	No Death	0.43803
71	F	WHITE	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	35	0	Progressive Disease	95	0	Death	0.25557
73	M	WHITE	0	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	240	0	Progressive Disease	344	1	No Death	0.46057
51	M	ASIAN	0	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	77	0	Progressive Disease	412	1	No Death	0.33283
49	M	WHITE	0	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	46	0	Progressive Disease	240	1	No Death	0.40529
45	M	ASIAN	0	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	208	0	Progressive Disease	344	1	No Death	0.38804
76	F	ASIAN	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	126	0	Progressive Disease	204	0	Death	0.28458
63	M	ASIAN	1	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	120	0	Progressive Disease	325	0	Death	0.46345
38	F	ASIAN	1	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	83	0	Progressive Disease	265	0	Death	0.53427
48	F	ASIAN	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	40	0	Progressive Disease	128	1	No Death	0.41484
54	M	ASIAN	0	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	505	0	Progressive Disease	681	1	No Death	0.50694
52	F	MULTI-RACIAL	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	74	0	Progressive Disease	287	0	Death	0.33111
78	F	WHITE	1	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	35	0	Progressive Disease	230	1	No Death	0.26912

67	M	WHITE	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	38	0	Progressive Disease	254	1	No Death	0.4478
75	F	MULTI-RACIAL	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	166	0	Progressive Disease	308	1	No Death	0.33989
63	M	WHITE	1	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	33	0	Progressive Disease	153	0	Death	0.29138
45	M	WHITE	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	40	0	Progressive Disease	197	0	Death	0.32712
32	M	BLACK OR AFRICAN AMERICAN	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	217	0	Progressive Disease	357	0	Death	0.43165
58	F	WHITE	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	35	0	Progressive Disease	217	0	Death	0.48034
60	M	WHITE	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	172	0	Progressive Disease	250	0	Death	0.43034
67	M	WHITE	1	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	119	0	Progressive Disease	320	0	Death	0.34573
66	M	ASIAN	0	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	125	0	Progressive Disease	239	1	No Death	0.47834
66	M	WHITE	1	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	122	0	Progressive Disease	294	1	No Death	0.48044
64	M	WHITE	0	RECTAL CANCER	Wild-type	Placebo + cetuximab + irinotecan	1	178	0	Progressive Disease	374	1	No Death	0.58014
76	F	WHITE	0	COLON CANCER	Wild-type	Placebo + cetuximab + irinotecan	0	83	0	Progressive Disease	275	0	Death	0.20185

Supplementary Table S2. Khambata-Ford et al. cetuximab-treated CRCs (n=80) (2)---cetuximab response (CR/PR/SD/PD), progression-free survival, *KRAS* mutation, and signature scores

Note: The signature scores were calculated as described in Methods and merged with other clinical parameters adopted from "Online Table 1" **(2)**. PFS---progression free survival; CR---complete response; PR---partial response; SD---stable disease; PD---progressed disease; UTD---undetermined..

Affymetrix ID	Biopsy tissue	Best Clinical Response Assessment	Progression-free survival (PFS) # of days	*KRAS* Mutation	Cetuximab Sensitivity Score	18-gene RAS pathway score	64-gene Wnt pathway score	24-gene Wnt pathway score	EREG (Log10)	AREG (log10)
045_01_01	Liver	PD	57	WT	0.6308438	3.295771	3.1914747	3.14019011	2.79379737	3.03539371
045_01_03	Rectum	PD	67	c.35G>T	0.3621764	3.451521	3.2203704	3.20403575	2.00207963	3.06564319
045_01_04	Liver	PD	56	WT	0.6261061	3.410118	3.1936558	3.11184874	1.85223594	2.21149431
045_01_05	Liver	PD	59	c.35G>T	0.6212725	3.337681	3.2866264	3.15043067	2.89474239	3.36567514
045_01_07	Liver	SD	121	WT	0.4961696	3.301994	3.1762286	3.14315135	3.04684231	3.41757465
045_01_08	Lung	UTD	7		0.5357388	3.346075	3.0416523	3.09849995	2.34470658	2.88085931
045_01_09	Liver	SD	116	na	0.5032093	3.245328	3.1047223	3.03094373	2.80113605	3.14135883
045_01_10	Liver	PD	57	WT	0.4656079	3.481764	3.3025025	3.18377399	2.81626782	3.40662363
045_01_11	Abdomen	PD	61	WT	0.2922783	3.386407	2.9874999	3.16092417	2.9342004	3.00785442
045_02_01	Liver	PD	56	c.35G>T	0.5164958	3.365319	3.1320439	3.1500936	2.82532224	3.21135285
045_02_02	Liver	SD	185	WT	0.7199774	3.324779	3.1656779	3.16705	2.64551069	3.20702814
045_02_03	Liver	SD	115	WT	0.8015893	3.185325	3.3574188	3.00898925	3.29674634	3.76568867
045_02_04	Liver	PD	61	WT	0.5514157	3.155777	3.1362644	2.92696289	2.48791573	2.52053593
045_02_05	Liver	PD	22		0.2641464	3.370137	2.8194828	3.02615502	1.56181666	2.67364746
045_02_06	Lung	PD	62	c.35G>A	0.3470922	3.36651	3.140634	3.1761966	1.45818444	2.12060683
045_02_08	Lung	PR	245	WT	0.6421869	3.266625	3.0278171	3.06575027	3.16061557	3.53085129
045_02_09	Liver	PD	57	WT	0.3321488	3.387553	2.8742899	3.02032764	2.65345372	2.97763674
045_02_10	Liver	PD	63	c.35G>T	0.5479819	3.419364	3.2248256	3.20688283	2.95714258	3.32924122
045_03_01	Liver	PD	51	c.35G>A	0.8064543	3.352584	3.214312	3.0266162	2.7242349	2.91021873
045_03_02	Liver	PD	60	c.35G>A	0.6046653	3.37904	3.0800974	3.10996727	2.80212351	3.35628789
045_03_03	Liver	PD	60	WT	0.7672783	3.344336	3.3198718	3.10193324	2.68681495	2.90384392
045_03_04	Bone	SD	120	c.35G>A	0.4394358	3.357137	3.1301928	3.13304019	1.79906472	2.78502359
045_03_05	Liver	PD	54	na	0.6238737	3.395293	3.2711488	3.15153951	2.76893394	3.27394758
045_03_06	Colon	PD	70	c.35G>A	0.6044965	3.29304	3.2571651	3.06976475	2.74093085	2.85682552
045_03_08	Liver	SD	123	WT	0.6459192	3.153931	3.2947895	2.99786965	3.12437705	3.64489825
045_03_09	Liver	SD	50	WT	0.2621615	3.109921	2.6429097	2.77872665	1.95051089	2.02456776
045_03_10	Liver	UTD	34	c.35G>A	0.5093938	3.360753	3.1517305	3.15246549	2.78051173	3.19908018
045_04_01	Liver	PD	60	WT	0.6514763	3.214303	2.9327508	2.91344142	2.03273961	2.0489853
045_04_03	Liver	PD	61	WT	0.674892	3.20719	3.0063893	2.97514542	2.84149712	3.2399873
045_04_04	Liver	UTD	52	WT	0.5741422	3.356466	3.1688816	3.09398452	2.38210714	2.47908561
045_04_05	Pancreas	PD	58	c.35G>C	0.4343117	3.409176	3.1924013	3.13715466	2.23355449	2.72636039
045_04_06	Liver	PR	248	WT	0.7369154	3.385828	3.2970586	3.0959575	3.0448963	3.59933495
045_04_07	Liver	SD	159	WT	0.7389217	3.303479	3.2849261	3.13320065	3.14486986	3.40275302
045_04_09	Liver	SD	156	WT	0.6651334	3.262224	3.1910285	3.10790254	2.90575811	3.44857648
045_04_10	Liver	PD	59	c.35G>T	0.4864789	3.322414	3.0965964	3.07189718	2.35181563	2.6898148
045_05_01	Liver	UTD	123	c.38G>A	0.5143725	3.312524	3.0880836	3.04133916	2.82282818	3.2192596
045_05_02	Liver	PD	50	WT	0.6429032	3.318996	3.1528058	3.05409651	2.75865457	2.78663787
045_05_03	Liver	PD	49	WT	0.3518377	3.213691	3.0253516	2.87351756	1.89602991	1.62355939

045_05_04	Abdomen	PD	59	c.35G>A	0.280383	3.362337	3.0337656	3.03526045	1.8909796	2.64570712
045_05_05	Liver	CR	308		0.6717122	3.265554	3.1657562	3.04875481	3.22008454	3.41056467
045_05_07	Liver	PD	58	c.34G>A	0.3950595	3.246949	3.0462116	2.99599596	1.88456881	3.07279013
045_05_09	Liver	PD	57	WT	0.7116182	3.259722	3.2867719	3.07879945	2.47523522	3.16567455
045_05_10	Liver	PD	59	c.35G>A	0.6301311	3.253701	3.253226	3.05528409	2.93958913	3.26905973
045_06_01	Liver	PD	42	WT	0.6022833	3.387102	3.1786319	3.20208532	2.58441039	3.01465492
045_06_02	Liver	PR	165	WT	0.5640866	3.223291	3.1131045	2.97867606	3.31025136	3.52273236
045_06_03	Abdomen	PD	58		0.2129094	3.311748	3.0392212	3.02540366	1.62930764	2.3743817
045_06_05	Liver	SD	120	WT	0.7154486	3.235722	3.1603049	3.03420913	3.06254438	3.39466527
045_06_06	Liver	PD	15	WT	0.1717673	2.871212	2.5360124	2.59309046	0.91115761	1.5940609
045_06_07	Adrenal gland; Kidney	PR	197	WT	0.621088	3.271639	3.1624457	3.03775312	3.06676559	3.70613036
045_06_08	Liver	PD	57	WT	0.1264623	2.791587	2.4460524	2.55042597	0.0211893	1.44263653
045_06_10	Rectal	SD	147	WT	0.6863162	3.259713	3.1529809	3.03671928	3.24672256	3.54862033
045_07_01	Liver	PD	60	WT	0.6542216	3.239838	3.2116574	3.16679669	3.05208959	3.21657492
045_07_02	Abdomen (soft tissue mass)	PD	58		0.3436094	3.238336	2.7033689	2.97817657	1.66614343	2.08742646
045_07_03	Liver	PD	59	na	0.6015249	3.272282	3.3844805	3.05037107	2.31428866	2.70202535
045_07_04	Liver	SD	45	WT	0.6729239	3.224736	3.253089	3.10924309	2.46587339	2.9801125
045_07_06	Cervical-Neck node	SD	208	WT	0.6120517	3.366985	3.2243935	3.12065342	2.90305198	3.17005039
045_07_08	Liver	SD	180	na	0.6815711	3.249404	3.2108327	3.12208782	3.34884982	3.7429748
045_07_10	Liver	UTD	56	WT	0.1512897	3.055257	2.5672711	2.7282001	1.06032003	1.73343803
045_08_01	Liver	PD	59	c.35G>C	0.504556	3.085112	2.8712721	2.86390413	2.84709739	3.19224398
045_08_02	Abdomen	SD	199	WT	0.7166929	3.285815	3.2705342	3.11278327	3.48840123	3.80552329
045_08_03	Liver	PD	52		0.2630653	3.075687	2.7218902	2.84664894	1.70739983	1.87875152
045_08_04	Scalp	UTD	40	c.35G>A	0.5195852	3.433042	3.247068	3.22625098	1.75273969	2.50719449
045_08_07	Liver	UTD	42	WT	0.3801196	3.346192	3.0142465	3.10509918	2.05361617	3.03602174
045_08_08	Liver	PD	41	c.35G>A	0.6250567	3.387064	3.2115446	3.07713656	2.62249379	2.60479825
045_08_09	Liver	PD	66	WT	0.1648949	2.856181	2.4728141	2.57901124	1.13417711	1.09447113
045_08_10	Liver	SD	253	WT	0.5329852	3.195504	3.0997436	2.96822318	2.9137344	3.15127176
045_09_01	Liver	UTD	57	c.35G>A	0.4926925	3.214645	3.0511974	3.03660423	2.67187603	2.94087493
045_09_03	Abdomen	PD	62	c.35G>T	0.6568569	3.378347	3.2409564	3.13190651	2.95322313	3.29769925
045_09_04	Liver	UTD	1	WT	0.2077852	2.872962	2.4264969	2.5091055	1.18949031	1.3834563
045_09_05	Liver	PD	24	WT	0.4087922	3.332044	2.9800384	3.08547395	1.80949238	2.97160516
045_09_06	Liver	PD	61	c.38G>A	0.6307846	3.387723	3.2943318	3.1518811	2.67095981	3.03967581
045_09_08	Liver	PD	29	c.35G>A	0.329242	3.136697	2.8453104	2.86931626	2.11008442	2.25029799
045_10_01	Liver	PD	58	WT	0.744613	3.260537	3.1559417	3.05239882	2.66238002	2.95513913
045_10_02	Liver	SD	122	WT	0.6011891	3.21304	3.1033804	2.94814413	2.81036695	3.19161028
045_10_03	Abdomen (possibly rectal)	SD	183	WT	0.1332605	2.991302	2.7157569	2.80850889	0.34242268	1.27600199
045_10_04	Liver	SD	92	c.35G>T	0.7535501	3.221559	3.0554607	2.96412805	3.36862154	3.52555399
045_10_05	Liver	PR	250	WT	0.8325874	3.278112	3.2330528	3.0289824	3.38222423	3.15190587
045_10_06	Liver	UTD	391	c.35G>A	0.4088428	3.370011	3.187272	3.20166989	1.10890313	2.10704029
045_10_09	Liver	UTD	1	c.38G>A	0.4045979	3.134833	3.18676	3.03583915	2.38111508	3.2891406
045_10_10	Rib	UTD	59	c.34G>A	0.5664386	3.277043	2.9767584	3.10243214	2.41246055	2.93702615

Supplementary Table S3

A. Medico et al. CRC cell lines (n=147) (3)---MSI status, *KRAS/NRAS/BRAF* mutations, *in vitro* cetuximab effect (%), and signature scores

Note: The signature scores were calculated as described in Methods and merged with the molecular and pharmacological annotation of the cell lines adopted from "Supplementary Data 1" **(3)**; mut RAS---mut *KRAS*/*NRAS* (1 — mut; 0 — wt).

	MSI and RAS/RAF mutation					*In vitro* Growth Inhibition (%)					Signature Scores (gene expression)					
CRC Cell Line	MSI / MSS	Mut *KRAS*	Mut *NRAS*	Mut RAS	Mut *BRAF* (V600E)	1µg/ml Cetux	10µg/ml Cetux	25µg/ml Cetux	50µg/ml Cetux	100µg/ml Cetux	Cetuximab Sensitivity Score	18-gene RAS pathway score	64-gene Wnt pathway score	24-gene Wnt pathway score	EREG (Log10)	AREG (log10)
C10	MSI	WT	WT	0	WT	-1.41	-0.97	1.05	6.62	-0.71	0.185	2.988	2.823	3.278	2.456	2.102
C106	MSS	p.G12C	WT	1	WT	12.46	19.31	20.78	24.39	30.06	0.408	3.059	3.151	3.109	2.441	2.096
C125PM	MSS	p.K117N	WT	1	WT	9.18	17.15	0.28	4.83	6.65	0.284	3.102	3.264	3.095	2.500	2.100
C146	MSI	p.G13D	WT	1	WT	-1.41	1.75	2.13	3.85	3.32	0.276	3.007	3.114	3.283	2.808	2.069
C170	MSI	p.G13D	WT	1	WT	3.40	-1.09	3.35	5.29	6.90	0.227	3.013	3.066	3.229	2.615	2.138
C32	MSS	WT	p.G12D	1	WT	-3.28	-2.73	-4.12	7.41	1.50	0.403	3.077	3.160	3.091	2.898	2.074
C70	MSS	WT	WT	0	WT	44.51	52.09	60.04	67.78	66.81	0.429	3.055	3.229	3.073	2.626	2.083
C75	MSS	WT	WT	0	WT	66.86	78.34	77.90	77.63	74.94	0.410	2.877	3.128	3.005	2.481	2.178
C80	MSS	p.A146V	WT	1	WT	2.01	6.20	4.44	15.03	24.44	0.386	2.913	3.197	3.107	2.485	2.107
C84	MSS	p.G12A	WT	1	WT	23.47	27.20	37.18	36.78	33.64	0.334	3.005	3.091	3.123	2.431	2.153
C99	MSS	WT	WT	0	WT	59.43	68.08	72.40	76.18	78.64	0.336	2.926	3.174	3.108	2.507	2.087
CACO2	MSS	WT	WT	0	WT	13.94	15.20	11.60	15.94	14.05	0.389	2.950	2.974	2.884	2.449	2.074
CAR1	MSS	WT	WT	0	WT	10.52	15.53	22.83	24.39	29.19	0.242	2.980	2.783	3.037	2.315	2.112
CCK81	MSI	WT	WT	0	WT	67.99	73.21	73.29	77.69	80.15	0.321	2.902	3.128	2.945	2.623	2.074
CL11	MSS	p.Q61H	WT	1	WT	2.18	4.67	5.59	6.00	4.89	0.239	3.154	3.109	3.287	2.468	2.149
CL14	MSS	WT	WT	0	WT	40.43	47.75	48.51	55.50	55.72	0.368	3.165	3.210	3.082	2.860	2.153
CL34	MSI	WT	WT	0	p.V600E	7.86	7.56	7.20	12.61	11.49	0.224	3.000	3.153	3.188	2.528	2.080
CL40	MSI	p.G12D	WT	1	WT	4.63	16.40	17.32	24.01	30.39	0.248	3.106	3.240	3.259	2.377	2.104
COCM1	MSS	WT	WT	0	WT	58.39	70.60	74.39	78.79	84.87	0.525	2.997	3.178	3.046	2.604	2.138
COGA1	MSI	WT	WT	0	WT	53.44	59.94	67.64	66.21	68.21	0.161	3.024	3.132	3.143	2.678	2.167
COGA12	MSI	WT	WT	0	WT	39.15	46.98	53.12	55.49	60.62	0.309	2.840	3.096	3.009	2.363	2.109
COGA2	MSS	p.G12S	WT	1	WT	24.15	28.59	33.95	37.75	46.69	0.275	3.080	3.339	3.186	2.329	1.978
COGA3	MSI	p.G13D	WT	1	WT	-1.02	-2.69	0.21	4.79	3.70	0.283	2.980	3.131	2.983	2.536	2.043
COGA5	MSS	p.G13D	WT	1	WT	2.29	-5.62	-1.58	9.13	0.90	0.344	3.030	2.962	3.218	2.647	2.121
COGA5L	MSS	p.G13D	WT	1	WT	-2.05	-2.75	1.24	2.14	1.59	0.341	3.055	3.204	3.231	2.290	2.048
COGA8	MSS	WT	WT	0	WT	-2.73	-1.19	-0.01	5.60	20.61	0.304	3.055	3.162	3.106	2.828	2.084
COLO201	MSS	WT	WT	0	p.V600E	2.40	1.45	2.37	6.04	3.38	0.419	3.061	3.062	3.290	3.116	2.122
COLO205	MSS	WT	WT	0	p.V600E	6.59	6.03	3.82	12.52	13.49	0.348	2.942	3.040	3.236	2.385	2.093
COLO320	MSS	WT	WT	0	WT	-1.27	2.04	-1.41	0.34	1.56	0.203	2.747	2.789	2.563	2.236	2.101
COLO320DM	MSS	WT	WT	0	WT	-9.16	-8.77	-4.25	-3.23	-5.58	0.208	2.809	2.841	2.536	2.232	2.106
COLO320HSR	MSS	WT	WT	0	WT	-2.33	-2.90	-1.04	6.72	9.21	0.215	2.787	2.814	2.650	2.273	2.071
COLO60H	MSI	p.A146T	WT	1	WT	-0.40	-2.30	-1.90	-0.68	0.95	0.276	3.024	3.265	3.215	2.377	2.186

COLO678	MSS	p.G12D	WT	1	WT	-1.66	6.69	-3.44	-5.15	-3.69	0.294	2.864	2.856	3.115	2.312	2.050
COLO94H	MSS	p.G12D	WT	1	WT	2.43	1.69	4.05	5.71	3.95	0.383	2.981	3.288	3.221	2.332	2.122
CX1	MSS	WT	WT	0	p.V600E	-1.64	1.63	4.91	7.89	16.46	0.210	2.974	2.995	3.135	2.575	2.129
DIFI	MSS	WT	WT	0	WT	78.26	80.82	81.32	80.82	80.33	0.402	3.091	3.224	3.062	2.331	2.127
DLD1	MSI	p.G13D	WT	1	WT	0.36	-2.43	0.65	1.34	-0.25	0.309	2.978	3.068	3.171	3.038	2.134
FET	MSS	p.G12D	WT	1	WT	2.21	2.92	4.26	8.76	6.44	0.315	3.027	3.077	3.149	2.591	2.116
Gp5D	MSI	p.G12D	WT	1	WT	26.25	29.89	31.03	34.64	40.35	0.303	2.919	3.076	3.079	2.298	2.091
HCA24	MSS	WT	WT	0	WT	19.46	24.27	27.63	28.52	33.03	0.339	2.964	3.244	3.136	2.709	2.064
HCA46	MSS	WT	WT	0	WT	48.26	60.06	74.20	78.20	78.51	0.423	3.008	3.248	3.107	2.375	2.106
HCA7	MSI	WT	WT	0	WT	30.46	43.52	46.98	45.85	55.85	0.185	2.968	2.818	3.136	2.239	2.131
HCC2998	MSS	p.A146T	WT	1	WT	-1.20	2.07	0.48	5.55	5.14	0.283	2.978	3.113	3.026	2.477	2.119
HCT116	MSI	p.G13D	WT	1	WT	9.09	8.75	6.93	7.40	10.16	0.218	2.829	2.704	3.134	2.385	2.100
HCT15	MSI	p.G13D	WT	1	WT	-0.79	0.25	0.70	-3.88	-2.20	0.263	2.880	2.973	3.038	2.448	2.086
HCT8	MSI	p.G13D	WT	1	WT	-6.03	8.74	-2.35	8.38	10.64	0.284	2.900	2.896	3.015	2.338	2.118
HDC114	MSS	WT	WT	0	WT	21.71	23.35	25.44	25.38	28.71	0.241	3.106	3.145	3.065	2.683	2.152
HDC135	MSI	WT	WT	0	p.V600E	3.93	5.90	8.65	9.44	4.73	0.228	3.028	3.096	3.228	2.861	2.116
HDC142	MSS	WT	WT	0	WT	47.06	57.97	57.17	59.84	66.77	0.357	3.151	3.221	3.059	2.574	2.165
HDC143	MSI	WT	WT	0	WT	3.67	-2.94	-3.79	-1.53	2.92	0.240	2.973	3.142	3.014	2.426	2.170
HDC54	MSS	WT	WT	0	WT	31.80	37.72	35.53	35.71	45.55	0.319	2.869	3.174	2.893	2.426	2.150
HDC8	MSS	p.G12D	WT	1	WT	0.40	1.06	0.75	5.61	8.82	0.262	3.034	2.871	3.140	2.633	2.116
HDC82	MSS	WT	WT	0	WT	56.07	63.37	71.55	71.34	71.69	0.391	2.980	3.172	3.026	2.602	2.096
HDC9	MSI	WT	WT	0	WT	6.25	8.48	6.91	12.34	5.91	0.147	2.974	3.128	3.066	2.289	2.172
HRA16	MSS	WT	WT	0	WT	58.48	61.22	60.77	63.53	60.11	0.461	3.136	3.279	3.101	2.529	2.100
HROC18	MSS	p.A146V	WT	1	WT	6.20	8.74	0.90	24.82	19.99	0.352	3.226	3.297	3.142	2.876	2.109
HROC24	MSI	WT	WT	0	p.V600E	1.51	2.41	7.05	2.89	0.29	0.189	3.014	3.190	3.270	2.494	2.141
HROC32	MSS	p.G12A	WT	1	WT	20.26	21.87	24.55	40.69	37.10	0.461	3.067	3.228	3.156	2.726	2.076
HROC39	MSS	p.A146T	WT	1	WT	17.42	10.53	15.73	19.85	14.50	0.402	3.108	3.273	3.147	2.498	2.143
HROC46	MSS	p.G12V	WT	1	WT	13.69	4.71	12.81	9.58	-3.27	0.404	3.135	3.277	3.154	2.714	2.141
HROC69	MSS	WT	WT	0	WT	16.15	14.76	17.76	17.66	22.07	0.343	2.892	2.879	2.901	2.313	2.100
HROC80	MSS	p.G12V	WT	1	WT	-7.38	-6.47	-3.96	-7.83	-13.39	0.325	3.143	3.194	3.155	2.828	2.065
HROC87	MSI	WT	WT	0	p.V600E	7.15	8.78	6.31	10.26	12.89	0.196	3.018	3.034	3.222	2.709	2.095
HT115	MSS	WT	WT	0	WT	13.60	21.04	25.20	30.73	45.06	0.246	3.121	3.205	3.066	2.651	2.126
HT29	MSS	WT	WT	0	p.V600E	-0.76	-2.13	0.83	8.72	8.47	0.297	2.906	2.900	3.104	2.499	2.119
HT55	MSS	WT	WT	0	WT	12.38	17.77	16.83	23.44	22.03	0.477	2.991	3.217	3.106	2.370	2.089
HUTU80	MSS	WT	WT	0	WT	-2.56	-4.30	-4.68	-5.35	-2.10	0.207	2.790	2.791	2.807	2.358	2.161
KM12	MSI	WT	WT	0	WT	-4.36	-4.80	-4.90	-4.05	-2.64	0.193	2.904	2.980	3.253	2.668	2.022
KM12C	MSI	WT	WT	0	WT	-5.25	-4.72	-5.11	0.42	2.48	0.182	2.936	2.981	3.243	2.385	2.159
KM12L4	MSI	WT	WT	0	WT	-3.13	-0.41	-3.48	0.16	4.92	0.189	2.887	2.915	3.264	2.519	2.151
KM12SM	MSI	WT	WT	0	WT	-9.63	-7.66	-6.60	-2.08	7.77	0.195	2.926	2.952	3.296	2.674	2.176
KM20	MSS	WT	WT	0	p.V600E	-10.24	-9.51	-14.25	-13.25	-5.98	0.300	2.937	3.014	3.120	2.525	2.122
LIM1215	MSI	WT	WT	0	WT	59.05	61.42	60.12	59.67	60.42	0.290	3.097	3.201	3.045	2.709	2.127
LIM1899	MSI	p.G12A	WT	1	WT	0.47	1.17	7.36	7.25	12.86	0.257	3.059	3.312	3.188	2.372	2.151
LIM2099	MSS	p.G12C	WT	1	WT	3.01	13.04	4.45	4.74	6.98	0.200	3.005	2.817	3.196	2.908	2.181
LIM2405	MSI	WT	WT	0	p.V600E	5.01	-0.03	1.18	2.70	1.25	0.316	2.804	2.643	3.278	2.609	2.066
LIM2412	MSI	WT	WT	0	p.V600E	3.12	-0.73	-3.69	-1.19	-3.22	0.356	2.929	2.811	3.345	2.600	2.155

LIM2537	MSI	WT	WT	0	p.V600E	-10.99	-8.65	-11.34	-6.00	4.91	0.295	2.946	2.927	3.276	3.399	2.082
LIM2550	MSI	p.Q61K	WT	1	WT	10.05	14.77	11.95	5.43	5.95	0.266	2.978	2.950	3.088	2.988	2.098
LIM2551	MSI	WT	WT	0	p.V600E	0.45	-2.97	-0.88	-1.37	5.26	0.184	3.059	3.166	3.199	2.590	2.075
LOVO	MSI	p.G13D	WT	1	WT	-2.45	1.56	6.62	14.27	11.55	0.170	3.014	3.020	3.167	2.718	2.180
LS1034	MSS	p.A146T	WT	1	WT	1.88	2.17	3.70	0.98	5.22	0.383	3.003	3.243	3.117	2.690	2.119
LS123	MSS	p.G12S	WT	1	WT	-4.66	-7.76	-5.77	-4.80	-4.74	0.302	3.099	2.984	3.272	2.311	2.132
LS174T	MSI	p.G12D	WT	1	WT	7.94	7.77	8.93	9.72	6.18	0.167	2.957	3.159	3.208	2.454	2.132
LS180	MSI	p.G12D	WT	1	WT	0.20	-10.51	-5.57	-4.68	-0.90	0.181	2.983	3.172	3.204	2.551	2.068
LS411N	MSI	WT	WT	0	p.V600E	-4.00	-2.32	-4.96	-6.12	-3.59	0.239	2.922	3.051	3.213	2.332	2.107
LS513	MSS	p.G12D	WT	1	WT	4.57	6.39	7.28	8.41	10.37	0.200	3.071	3.303	3.191	2.437	2.111
MDST8	MSS	WT	WT	0	p.V600K	-6.12	-4.81	4.91	7.89	16.46	0.125	2.925	2.745	3.053	2.546	2.108
MIP101	MSI	p.G13D	WT	1	WT	-0.64	-0.33	2.04	2.38	2.27	0.236	2.922	3.091	3.107	2.424	2.120
NCIH498	MSS	p.Q61K	WT	1	WT	-0.54	-2.01	0.48	-4.65	-2.56	0.364	3.004	3.169	3.200	3.009	2.192
NCIH508	MSS	WT	WT	0	WT	80.64	85.36	82.92	83.42	84.31	0.366	2.920	3.076	3.096	2.338	2.107
NCIH630	MSI	WT	WT	0	WT	2.43	4.87	4.68	4.97	7.01	0.426	2.996	3.168	3.029	2.591	2.162
NCIH684	MSS	p.G12D	WT	1	WT	7.65	10.15	15.84	17.88	20.40	0.327	3.115	3.172	3.119	2.634	2.046
NCIH716	MSS	WT	WT	0	WT	-7.77	0.44	-7.13	9.69	15.72	0.121	2.809	2.726	2.995	2.321	2.090
NCIH747	MSI	p.G13D	WT	1	WT	-9.20	-13.02	-12.32	-1.20	8.11	0.323	2.968	2.819	3.175	2.440	2.115
OUMS23	MSS	WT	WT	0	p.V600E	1.07	-3.04	0.88	13.81	6.49	0.269	2.969	2.926	3.084	2.310	2.102
OXCO1	MSS	WT	WT	0	p.V600E	-6.98	-6.16	-3.71	-0.44	16.06	0.260	3.048	2.898	3.307	3.134	2.143
OXCO2	MSI	WT	WT	0	WT	79.30	83.85	88.16	86.17	89.89	0.375	3.035	3.278	3.124	2.740	2.067
OXCO3	MSS	p.Q61H	WT	1	WT	4.54	8.96	5.30	2.01	9.76	0.404	3.106	3.084	3.081	3.227	2.093
RCM1	MSS	p.G12V	WT	1	WT	6.01	10.58	12.99	16.51	21.62	0.400	3.087	3.245	3.169	2.644	2.160
RKO	MSI	WT	WT	0	p.V600E	8.36	6.16	3.31	0.36	-2.68	0.213	2.726	2.658	3.081	2.350	2.097
RW7213	MSS	p.G12C	WT	1	WT	11.64	13.50	14.73	15.81	14.34	0.344	3.022	3.286	3.290	2.350	2.100
SKCO1	MSS	p.G12V	WT	1	WT	-7.41	-6.52	-7.74	-7.30	2.51	0.204	3.138	3.202	3.262	2.297	2.153
SNU1033	MSS	p.G12D	WT	1	WT	2.06	4.51	3.03	1.21	5.55	0.322	3.160	3.188	3.184	2.552	2.145
SNU1040	MSI	WT	WT	0	WT	22.59	27.56	21.95	33.65	32.57	0.216	2.962	3.097	3.022	2.476	2.124
SNU1047	MSI	WT	WT	0	WT	-7.13	-8.55	-8.17	-6.48	-6.25	0.335	3.097	3.283	3.252	2.274	2.200
SNU1181	MSS	p.G12S	WT	1	WT	8.30	11.50	7.23	19.44	14.39	0.459	3.142	3.134	3.173	2.688	2.166
SNU1235	MSS	WT	WT	0	p.V600E	0.50	9.24	-5.64	-11.81	-18.04	0.196	3.038	3.015	3.213	2.648	2.109
SNU1411	MSS	p.G12C	WT	1	WT	-4.55	-2.16	0.28	4.83	6.65	0.329	3.028	2.995	3.190	2.526	2.048
SNU1460	MSS	WT	WT	0	WT	48.33	53.98	58.27	57.70	67.51	0.408	3.053	3.166	3.031	2.553	2.085
SNU1544	MSI	WT	WT	0	WT	0.04	2.48	7.12	13.29	18.10	0.236	3.054	3.110	3.207	2.556	2.124
SNU1684	MSI	p.G13D	WT	1	WT	31.19	32.95	29.42	37.77	38.14	0.291	3.022	3.169	3.169	2.933	2.113
SNU1746	MSI	p.G13D	WT	1	WT	0.42	-18.35	-18.02	-8.84	-13.65	0.131	2.967	3.170	3.088	2.267	2.139
SNU175	MSI	WT	WT	0	WT	20.70	22.47	24.77	25.53	28.18	0.104	2.841	2.913	2.940	2.274	2.141
SNU254	MSS	p.G12D	WT	1	WT	-1.91	2.18	-0.66	8.25	12.10	0.242	3.100	2.984	3.123	2.960	2.148
SNU283	MSS	WT	WT	0	WT	44.43	44.14	48.30	51.53	54.37	0.413	2.940	3.167	2.988	2.659	2.074
SNU407	MSI	p.G12D	WT	1	WT	14.23	15.01	20.15	20.97	24.13	0.176	3.009	3.074	3.051	2.350	2.139
SNU479	MSS	WT	WT	0	WT	39.19	49.04	37.70	53.56	40.90	0.451	2.999	3.260	2.978	2.409	2.171
SNU503	MSS	WT	WT	0	WT	37.89	43.18	46.83	54.14	51.75	0.272	2.928	2.710	2.977	2.325	2.167
SNU61	MSS	p.G12D	WT	1	WT	5.64	3.17	5.59	11.37	12.80	0.281	3.039	3.113	3.109	2.268	2.073
SNU769B	MSI	WT	WT	0	WT	4.06	33.93	55.25	58.14	58.52	0.215	2.889	3.071	2.862	2.419	2.166
SNU81	MSS	p.A146T	WT	1	WT	-2.86	-1.10	-1.19	6.26	3.11	0.216	3.051	3.092	3.132	2.399	2.104

SNU977	MSS	WT	WT	0	WT	2.09	4.32	6.72	19.90	15.63	0.337	3.031	2.954	2.891	2.339	2.177
SNUC1	MSS	WT	WT	0	WT	5.36	5.73	3.37	8.68	11.71	0.424	3.102	3.272	3.105	2.606	2.088
SNUC2A	MSI	p.G12D	WT	1	WT	1.16	3.41	1.31	-2.73	-7.28	0.155	2.884	2.738	3.072	2.293	2.165
SNUC2B	MSI	p.G12D	WT	1	WT	4.65	11.92	13.14	16.61	18.35	0.142	2.975	2.994	3.073	2.288	2.107
SNUC4	MSI	WT	WT	0	WT	33.14	35.35	44.69	48.32	47.80	0.187	2.967	3.117	3.115	2.382	2.238
SNUC5	MSI	WT	WT	0	p.V600E	-0.83	-0.73	-3.68	4.94	4.72	0.258	2.846	2.729	3.247	2.756	2.150
SW1116	MSS	p.G12A	WT	1	WT	-3.47	-2.57	-1.16	2.00	2.42	0.453	3.122	3.306	3.084	2.694	2.063
SW1222	MSS	p.A146V	WT	1	WT	5.25	5.34	6.47	7.09	6.11	0.340	2.986	3.225	2.996	2.320	2.125
SW1417	MSS	WT	WT	0	p.V600E	-0.58	-1.27	-1.94	8.32	8.71	0.409	3.217	3.252	3.206	2.569	2.165
SW1463	MSS	p.G12C	WT	1	WT	1.68	11.23	-0.38	13.19	13.18	0.438	2.968	3.319	3.061	2.681	2.115
SW403	MSS	p.G12V	WT	1	WT	7.69	11.45	17.40	18.75	27.30	0.450	2.976	3.286	3.175	2.697	2.106
SW48	MSI	WT	WT	0	WT	0.50	6.23	7.12	5.32	6.66	0.174	3.012	3.036	3.123	2.372	2.139
SW480	MSS	p.G12V	WT	1	WT	3.80	1.70	5.60	3.42	8.18	0.302	3.018	3.036	3.149	2.286	2.143
SW620	MSS	p.G12V	WT	1	WT	-8.96	-9.77	-9.12	-0.25	2.88	0.305	2.994	3.123	3.166	2.319	2.143
SW837	MSS	p.G12C	WT	1	WT	8.45	10.55	11.82	7.90	9.43	0.268	3.032	2.967	3.030	2.488	2.164
SW948	MSS	p.Q61L	WT	1	WT	1.08	0.06	-0.92	0.07	1.38	0.330	2.974	3.219	3.126	2.502	2.117
T84	MSS	p.G13D	WT	1	WT	5.29	5.14	6.96	15.59	10.60	0.358	3.095	3.199	3.154	2.563	2.109
V411	MSS	p.G13D	WT	1	WT	-1.90	2.74	2.84	4.46	4.68	0.260	2.975	3.072	3.021	2.342	2.069
V457	MSI	p.G12D	WT	1	WT	2.24	-0.29	-4.57	-0.38	-3.12	0.224	3.008	3.121	3.146	2.546	2.121
V481	MSI	p.G12C	WT	1	WT	-8.04	-10.72	-10.22	-13.27	-17.06	0.208	2.947	3.148	3.196	2.582	2.133
V703	MSI	p.G12D	WT	1	WT	6.51	7.85	9.04	11.93	13.41	0.299	2.979	3.175	3.155	2.497	2.162
VACO432	MSI	WT	WT	0	p.V600E	8.55	15.00	14.11	9.25	5.09	0.227	3.050	3.267	3.255	2.810	2.160
VACO5	MSI	WT	WT	0	p.V600E	4.74	6.94	6.55	7.99	8.42	0.253	3.017	3.038	3.201	3.517	2.073
VACO6	MSI	WT	WT	0	p.V600E	16.16	20.34	14.28	18.95	19.21	0.193	2.978	3.113	3.101	2.203	2.186
WIDR	MSS	WT	WT	0	p.V600E	-6.12	-5.45	-6.32	-4.01	2.36	0.288	2.977	2.973	3.165	2.677	2.051

B. Medico et al. CRC cell lines (n=147) (3)---Pearson correlation analysis of *in vitro* growth inhibition (%) by 1, 10, 25, 50 and 100 μg/ml cetuximab

Pearson r	1 ug/ml Cetux	10 ug/ml Cetux	25 ug/ml Cetux	50 ug/ml Cetux	100ug/ml Cetux
1 ug/ml Cetux		0.976657	0.9621953	0.945606	0.9188743
10 ug/ml Cetux	0.976657		0.9797904	0.9662887	0.9488678
25 ug/ml Cetux	0.9621953	0.9797904		0.9788592	0.9645643
50 ug/ml Cetux	0.945606	0.9662887	0.9788592		0.9798188
100 ug/ml Cetux	0.9188743	0.9488678	0.9645643	0.9798188	
p value	1ug/ml Cetux	10ug/ml Cetux	25ug/ml Cetux	50ug/ml Cetux	100ug/ml Cetux
1 ug/ml Cetux		0.00000	0.00000	0.00000	0.00000
10 ug/ml Cetux	0.00000		0.00000	0.00000	0.00000
25 ug/ml Cetux	0.00000	0.00000		0.00000	0.00000
50 ug/ml Cetux	0.00000	0.00000	0.00000		0.00000
100 ug/ml Cetux	0.00000	0.00000	0.00000	0.00000	

Supplementary Table S4. Moffitt CRCs (n=468) (4, 5)---Stages, MSI status, driver mutations and signature scores

Note: The signature scores were calculated as described in Methods and merged with other molecular parameters as described previously **(4, 5)**; 1 — mut; 0 — wt; A — *APC* truncating mutation; P — *TP53* mutation; K — *KRAS* mutation; N — *NRAS* mutation; B — *BRAF*(V600E).

Barcode	Composite Staging	Tumor Location	Tumor Classification	Histotypes	MSI and Mutation Status							Signature Scores (gene expression)					
					MSI-high	APC	KRAS	NRAS	TP53	BRAF	A/P/K/N/B	Cetuximab Sensitivity Score	18-gene RASpathway score	64-gene Wnt pathway score	24-gene Wnt Pathway score	EREG (log2)	AREG (log2)
DS-33635	iv	Left	Metastatic	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.4744	2.8179	2.9483	3.0279	2.7303	3.0556
DS-40199	ii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.5690	2.6564	2.9509	3.0442	3.1742	3.1717
DS-40203	ii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4732	2.8222	3.0413	3.0781	2.7011	3.2021
DS-40207	iv	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.6482	2.7209	2.9615	3.0776	3.1242	3.2525
DS-44604	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5705	2.7745	3.0227	3.1025	2.7666	3.0331
DS-44863	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5990	2.7774	2.9850	3.0584	2.9497	3.0388
DS-44878	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6375	2.6496	2.9038	3.0219	3.3285	3.4525
DS-47369	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6955	2.6897	2.9552	3.0481	3.1728	3.3392
DS-48055	iii	Right	Metastatic	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.5371	2.7342	2.9801	3.0597	3.0236	3.2045
DS-48592	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6643	2.7005	2.9618	3.1296	2.8694	3.3777
DS-48595	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7106	2.5487	2.8774	3.0146	3.2418	3.2855
DS-48607	iv	Right	Metastatic	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4912	2.7637	3.0314	3.0849	2.9732	3.2393
DS-48639	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.3690	2.7810	2.8460	2.9092	0.9273	2.7037
DS-48645	iv	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	1	1	PB	0.3189	2.7521	2.9061	2.9099	1.7567	2.8797
DS-48649	iii	Right	Primary	Carcinoma, Signet Ring Cell (Greater Than 50% Signet Ring Cell)	0	1	0	0	0	0	A	0.2590	2.8413	2.8990	2.9585	1.5186	2.9077
DS-48655	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7083	2.6925	2.9839	3.0841	3.2791	3.4230
DS-48658	ii	Right	Primary	Adenocarcinoma, NOS	1	0	1	0	1	0	PK	0.3879	2.7444	2.8859	2.9992	0.7733	2.4750
DS-48670	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.5914	2.7159	2.9067	2.9896	3.1379	3.4056
DS-48682	iv	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6362	2.7011	2.9327	3.0550	3.2258	3.2758
DS-48712	iv	Right	Metastatic	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.3670	2.8376	2.8286	2.6778	3.4738	3.3860
DS-48717	iv	Left	Metastatic	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.4650	2.5774	2.8252	2.7094	1.4882	3.1044
DS-48725	iv	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5812	2.9097	2.8789	2.9680	3.2630	3.4163
DS-48739	i	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5835	2.7669	2.9837	3.0956	3.2325	3.3438
DS-48764	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.4374	2.7087	2.9448	2.9477	3.1919	3.4311
DS-48778	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5550	2.6598	2.9299	2.9975	3.2769	3.4198
DS-48788	ii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.7521	2.6918	2.9360	3.0598	3.4366	3.5287
DS-48789	iii	Right	Primary	Adenocarcinoma, NOS	1	1	0	0	0	0	A	0.4875	2.6708	2.9395	3.0508	3.2550	3.3339
DS-48795	iv	Right	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	1	APB	0.5035	2.7549	2.9207	2.8760	1.4004	2.8637
DS-48808	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5379	2.7438	2.9493	3.0405	2.4468	3.0653
DS-48823	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5987	2.8110	2.9615	3.0463	3.3899	3.4370
DS-48827	iv	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5188	2.8341	2.9879	3.0531	3.0079	3.0912
DS-48833	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6841	2.6895	2.9800	3.0535	3.3367	3.4111
DS-48857	iv	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5771	2.7784	3.0085	3.0906	3.2531	3.4790
DS-48888	iv	Right	Primary	Adenocarcinoma, NOS	0	0	1	0	0	0	K	0.4608	2.8598	2.9781	2.8721	3.2259	3.2416
DS-48893	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.5948	2.7434	2.9985	3.0723	3.2575	3.2112
DS-48894	i	Left	Metastatic	Adenocarcinoma, NOS	0	0	0	1	0	0	N	0.3343	2.7100	2.8945	2.8032	3.2231	2.7041

DS-48909	ii	Left	Primary	Adenocarcinoma, NOS	1	0	0	0	1	1	PB	0.3740	2.8764	2.9275	2.9266	2.4339	3.3261
DS-48913	iii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	0	WT	0.3247	2.8462	2.9998	3.0022	2.2892	3.0260
DS-48921	i	Right	Primary	Adenocarcinoma, NOS	0	1	0	1	1	0	APN	0.5930	2.8878	2.9631	3.1214	3.2626	3.4042
DS-48929	iii	Right	Primary	Adenocarcinoma, NOS	1	1	0	0	1	1	APB	0.2742	2.8743	2.9107	2.9009	2.8603	3.1139
DS-48937	ii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.7853	2.7001	2.8916	3.0266	2.9832	3.2793
DS-48957	ii	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.4230	2.7441	2.9737	2.9733	2.9403	3.1233
DS-49116	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7868	2.6407	2.9557	3.0574	3.3157	3.3934
DS-49127	ii	Left	Primary	Adenocarcinoma, NOS	1	0	0	0	1	1	PB	0.3302	2.8724	2.9562	3.0391	2.8879	3.2904
DS-49208	iv	Right	Primary	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.5422	2.8824	2.9561	2.9648	2.8292	2.9358
DS-49315	ii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.6085	2.7166	2.9314	3.0454	3.1016	3.1815
DS-49325	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4967	2.7646	2.9857	3.0886	2.7659	3.0447
DS-49373	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.3141	2.9576	2.8791	2.9427	2.0938	3.0552
DS-49375	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6326	2.8631	2.9997	3.1600	2.6603	2.9628
DS-49395	iii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6640	2.7092	2.9365	3.0843	3.1085	3.2325
DS-49417	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.6890	2.5759	2.8849	3.0413	2.8910	3.0601
DS-49422	iv	Right	Metastatic	Adenocarcinoma With Focal Mucinous Features	0	0	0	0	1	1	PB	0.5392	2.8848	2.9311	3.0155	1.3721	2.4763
DS-49425	i	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4890	2.8510	3.0088	3.0995	2.9795	3.3891
DS-49435	iv	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5620	2.7827	2.8357	2.7250	3.3134	3.3730
DS-49441	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.7443	2.7729	2.9456	3.1249	2.5828	3.0250
DS-49449	iii	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.5816	2.7023	2.9355	2.9697	3.2775	3.2998
DS-49454	iii	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	0	0	0	0	0	WT	0.3174	2.7521	3.0024	3.0295	3.0770	3.2865
DS-49459	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5606	2.8140	3.0281	3.1055	2.2651	2.8898
DS-49496	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	0	WT	0.4063	2.7500	2.9234	2.9630	2.0708	2.8583
DS-49498	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6410	2.7744	3.0066	3.0936	3.0395	3.2828
DS-49513	i	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.6096	2.6774	2.9201	3.0354	3.2507	3.3195
DS-49637	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4860	2.8164	3.0435	3.0940	3.1153	3.2461
DS-49639	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7456	2.6978	2.8208	3.0657	3.2974	3.4179
DS-49664	iv	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	0	0	0	0	0	WT	0.3334	2.6883	2.8151	2.6987	2.5060	3.0811
DS-49665	ii	Right	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	1	0	0	0	0	1	B	0.2644	2.8498	2.9044	2.8682	3.0610	3.1916
DS-49669	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.3312	2.7589	2.9393	2.9644	2.1457	2.8616
DS-49685	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6533	2.8131	2.9932	3.1443	3.2872	3.3989
DS-49695	iii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.6386	2.8029	2.9169	2.9931	3.0549	3.4326
DS-49699	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6069	2.8159	3.0267	3.1538	3.2470	3.3867
DS-49716	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.8272	2.6020	2.8813	3.0300	3.1153	3.2527
DS-49718	iii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.7215	2.7311	2.9547	3.0684	3.3891	3.4688
DS-49730	iv	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5379	2.8136	2.9282	3.0575	0.9206	2.5881
DS-49796	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5065	2.7351	2.9674	3.0790	2.8231	3.1607
DS-49826	iii	Right	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4990	2.9338	3.0236	3.0324	2.7742	2.9908
DS-49843	i	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.3163	2.7039	2.9705	2.9675	2.9851	3.0634
DS-49844	iv	Left	Metastatic	Adenocarcinoma, NOS	0	0	1	0	0	0	K	0.4628	2.8901	3.0183	3.0807	3.1493	3.3315
DS-50248	ii	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	1	0	0	0	AK	0.2924	2.8748	3.0021	3.1242	1.7804	3.1518
DS-50258	iv	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.3014	2.8667	2.9301	2.9265	1.7744	2.9474
DS-50283	iv	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4702	2.8083	2.9875	3.0870	3.1746	3.4172
DS-50521	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5897	2.8876	2.9459	3.0695	2.4481	2.6858
DS-50529	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7673	2.7295	2.9197	3.0405	3.2349	3.3457

DS-50536	iv	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4272	2.6596	2.9163	3.0102	1.0212	2.7620
DS-50544	ii	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.5260	2.6882	2.9336	3.0528	3.2256	3.4193
DS-50568	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.7776	2.7512	2.9317	3.0403	3.3214	3.3944
DS-50573	i	Right	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	1	0	0	0	AK	0.5157	2.6405	2.9247	3.1012	1.2478	2.6236
DS-50587	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	1	1	0	PN	0.4831	2.8812	2.9307	2.9941	1.7313	2.7414
DS-50597	ii	Right	Primary	Adenocarcinoma, NOS	0	0	1	0	0	0	K	0.4484	2.8092	3.0038	3.0438	2.9783	3.2182
DS-50607	iv	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	1	PB	0.4904	2.9158	2.9472	2.9894	1.9326	3.1054
DS-50613	ii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7939	2.6669	2.9632	3.1407	3.4763	3.5853
DS-50620	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	0	1	B	0.4693	2.7500	2.9373	3.0118	1.9252	2.9811
DS-50626	i	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.3998	2.7771	2.9703	3.0446	3.1061	3.2854
DS-50631	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.2671	2.6602	2.9251	2.8804	2.9662	3.3419
DS-50648	i	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5406	2.7653	2.9219	3.0184	2.3893	3.2773
DS-50652		Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5485	2.6954	2.9778	3.0342	2.8775	3.1400
DS-50685	ii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.3163	2.7956	3.0115	3.0680	2.1333	3.3056
DS-50687	ii	Right	Metastatic	Adenocarcinoma, NOS	0	1	0	1	1	0	APN	0.7369	2.7735	2.9971	3.1151	3.4485	3.4607
DS-50692	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7594	2.7346	2.9875	3.1545	3.3873	3.4544
DS-50698	ii	Right	Primary	Adenocarcinoma With Focal Mucinous Features	1	0	0	0	1	1	PB	0.2471	2.7591	2.9749	2.9290	2.4483	2.8846
DS-50712	ii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.3438	2.6647	2.9580	2.9382	2.8671	3.2192
DS-50720	iii	Right	Primary	Adenocarcinoma, NOS	1	1	0	0	0	1	AB	0.3236	2.9067	2.9196	2.9925	2.2355	2.9380
DS-50723	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7255	2.6713	2.8909	3.0479	3.4538	3.4628
DS-50725	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6466	2.6693	2.9284	3.0232	3.1129	3.2581
DS-50739	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6067	2.6721	3.0187	3.0883	3.3546	3.3932
DS-50740	ii	Right	Primary	Adenocarcinoma With Mucinous Differentiation	0	0	0	0	0	0	WT	0.2586	2.7404	3.0271	3.0195	2.9514	3.2736
DS-50754	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.2566	2.7673	2.8560	2.8142	2.6223	2.9908
DS-50760	i	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.3505	2.8131	2.9150	2.8905	3.0609	2.9946
DS-50772	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5211	2.7359	2.9526	3.0765	3.3374	3.2279
DS-50776	i	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.4495	2.6714	2.9405	3.0423	2.0831	3.0297
DS-50788	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7046	2.7600	3.0286	3.1335	3.1603	3.3870
DS-50796	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5850	2.6536	3.0100	3.1085	3.4312	3.4008
DS-50805	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6759	2.6285	2.9461	3.0433	3.4535	3.4195
DS-50812	ii	Right	Primary	Adenocarcinoma, NOS	0	1	0	1	0	0	AN	0.6679	2.7994	2.9688	3.0429	3.3070	3.3718
DS-50817	iii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.4303	2.9786	2.8681	2.7871	3.4550	3.3934
DS-50827	i	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4670	2.7360	3.0133	3.1008	3.0108	3.1431
DS-50851	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6342	2.6799	2.9513	3.0556	3.3854	3.3917
DS-50855	ii	Left	Primary	Adenocarcinoma, NOS	1	1	1	0	0	0	AK	0.3020	2.7811	2.9583	2.9091	2.9545	3.2374
DS-50877	ii	Right	Primary	Adenocarcinoma, NOS	1	1	1	0	0	0	AK	0.6221	2.8886	3.0287	3.1391	3.0301	3.4309
DS-50890	iv	Right	Primary	Adenocarcinoma, NOS	0	1	0	1	0	0	AN	0.5497	2.8137	2.8914	3.0442	1.3025	2.5515
DS-50896	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7308	2.6218	2.8626	2.9798	3.2349	3.3696
DS-50925	iii	Left	Primary	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.4557	2.8441	2.9893	2.9970	2.7957	3.2412
DS-50931	iv	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6592	2.7560	2.9278	3.0551	3.1463	3.3326
DS-51018	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5747	2.6373	2.9146	2.9870	3.1094	3.1587
DS-51020	i	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.3471	2.7246	2.9780	2.9732	2.2712	2.9802
DS-51028	iv	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4948	2.8325	2.8968	2.9576	2.7476	3.3246
DS-51043	iv	Left	Metastatic	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.6335	2.7759	2.9918	3.0536	3.3785	3.4548
DS-51050	i	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4595	2.7438	3.0294	3.0728	3.0292	3.0128
DS-51086	ii	Right	Primary	Adenocarcinoma, NOS	1	1	0	0	0	1	AB	0.2937	2.8508	2.9422	2.9717	2.2535	2.9468
DS-51087	iii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.7330	2.5839	2.9075	3.0415	3.0402	2.8373

DS-51088	iv	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5112	2.8348	3.0144	3.1725	3.2055	3.1213
DS-51121	ii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7061	2.6392	2.9606	3.0701	3.1396	3.3800
DS-51155	ii	Right	Primary	Adenocarcinoma, NOS	1	0	1	0	0	0	K	0.3693	2.8026	2.9374	2.8967	2.6785	3.2576
DS-51156	iii	Left	Primary	Adenocarcinoma, NOS	1	1	1	0	0	0	AK	0.3951	2.7488	2.8911	2.9416	2.1866	2.9260
DS-51202	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6046	2.8489	2.9372	3.0484	2.8784	3.2595
DS-51215	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.3106	2.8366	2.9703	2.9673	2.1138	2.9828
DS-51220	ii	Right	Primary	Adenocarcinoma, NOS	1	1	0	0	0	0	A	0.4120	2.7617	2.9745	3.0649	2.5152	3.3310
DS-51527	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6075	2.7078	3.0296	3.0980	3.2595	3.3643
DS-51528	iv	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.3447	2.8273	2.9348	2.9822	1.7128	2.9332
DS-51531	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5178	2.8130	3.0084	3.1110	2.9573	3.1647
DS-51584	ii	Right	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	1	0	0	0	1	0	P	0.2645	2.8795	2.9287	2.9919	2.1728	2.8264
DS-51610	ii	Left	Primary	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.4327	2.8582	2.9491	3.0118	3.1903	3.3255
DS-51630	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.3791	2.6056	2.9212	2.9609	3.0113	3.1042
DS-51652	ii	Left	Metastatic	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.4728	2.8689	2.9696	3.0318	2.9939	3.0928
DS-51671	iii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.4388	2.8071	2.8113	2.6942	3.4502	3.5099
DS-51676	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5218	2.8277	2.9895	3.0608	2.8846	3.2703
DS-51679	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5548	2.6770	3.0091	3.0600	3.1930	3.2695
DS-51680	iv	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6616	2.8007	2.9982	3.1147	2.1453	2.9651
DS-51711	iii	Right	Primary	Adenocarcinoma With Signet Ring Cell Features	1	0	0	0	0	1	B	0.3419	2.8107	2.9273	2.9616	2.0505	2.6757
DS-51754	ii	Right	Primary	Adenocarcinoma, NOS	0	0	1	0	0	0	K	0.4261	2.8652	3.0675	3.0737	2.9941	3.1891
DS-51766	iii	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	0	0	0	0	A	0.3397	2.8072	3.0413	3.0295	2.6596	3.1402
DS-51769	iii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	1	APB	0.4652	2.8740	2.9194	2.8536	3.1165	3.1705
DS-51783	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.3173	2.7905	2.9606	2.9942	2.2955	3.0044
DS-51797	iv	Right	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4991	2.7545	2.9836	3.0731	3.1896	3.2047
DS-51798	ii	Right	Primary	Carcinoma, Signet Ring Cell (Greater Than 50% Signet Ring Cell)	1	0	0	0	0	1	B	0.3012	2.7649	2.9074	2.9343	1.4966	2.3192
DS-51803	iv	Right	Metastatic	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.4183	2.7235	3.0051	2.9555	3.0883	3.1533
DS-51809	iii	Left	Metastatic	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.4094	2.6099	2.8473	2.8123	2.4499	2.7518
DS-51821	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.7050	2.5801	2.9542	3.1302	3.2503	3.3581
DS-51827	i	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	1	0	P	0.2918	2.8226	2.9556	3.0130	2.1948	3.1346
DS-51875	iv	Right	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5475	2.8837	3.0626	3.0901	3.1503	3.2968
DS-51877	iv	Left	Metastatic	Adenocarcinoma, NOS	0	0	1	0	0	0	K	0.4626	2.7489	2.9720	3.0832	2.6858	3.2736
DS-51878	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6339	2.6957	2.9585	3.0734	3.2414	3.4201
DS-51886	ii	Right	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	1	0	0	0	0	0	WT	0.3799	2.9067	2.8884	2.9569	0.7556	2.7982
DS-51893	iv	Left	Primary	Adenocarcinoma, NOS	1	0	1	0	0	0	K	0.3164	2.7982	2.7827	2.6810	3.3670	3.2207
DS-51918	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7174	2.6720	2.8998	2.9915	3.3378	3.4144
DS-51923	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5788	2.4915	2.8513	2.9673	2.7995	2.8426
DS-51932	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6331	2.6169	2.9563	3.0712	3.2238	3.3868
DS-51948	ii	Left	Primary	Carcinoma, NOS	0	0	1	0	0	0	K	0.3251	2.7072	2.8357	2.5921	3.1286	2.3582
DS-51952	iii	Left	Primary	Adenocarcinoma, NOS	1	1	1	0	0	0	AK	0.3538	2.8744	2.9398	2.8931	3.2141	3.3039
DS-51972	iii	Right	Metastatic	Adenocarcinoma, NOS	0	0	1	0	0	0	K	0.4861	2.7805	3.0008	2.9851	3.1965	3.3233
DS-51977	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6704	2.8194	2.9553	3.0971	3.0530	3.2814
DS-51982	ii	Right	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	1	0	0	0	1	1	PB	0.2808	2.8683	2.9037	2.8738	2.7814	3.1992
DS-51984	iv	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6576	2.7436	2.9716	3.1039	3.0107	3.3532

DS-51995	i	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.3748	2.7478	2.9366	2.8212	2.4224	3.0595
DS-51997	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.6411	2.6317	2.9688	3.0294	3.3351	3.4480
DS-51998	i	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.3449	2.8491	2.9349	2.9834	1.2946	3.2177
DS-52005	iii	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	1	PB	0.4903	2.9035	3.0022	3.0710	2.9269	3.0227
DS-52022	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6793	2.6972	2.9835	3.0545	3.1919	3.3732
DS-52095	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.4135	2.8539	2.9349	2.9281	2.8187	3.0216
DS-52111	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5136	2.7631	2.9847	3.0634	2.6905	3.3404
DS-52121	0	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.3590	2.6835	2.9865	3.1066	2.2596	2.9190
DS-52122	iii	Right	Primary	Adenocarcinoma With Signet Ring Cell Features	0	1	0	1	1	0	APN	0.3870	2.8084	2.9808	3.0106	2.9750	3.3114
DS-52126	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.5494	2.8808	2.9184	2.9769	1.9032	3.2182
DS-52131	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5680	2.7992	3.0012	3.0735	3.4325	3.5069
DS-52151	iv	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5573	2.7530	3.0352	3.0790	3.3179	3.4382
DS-52210	iv	Right	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	0	0	1	0	AP	0.2827	2.8366	2.9121	2.9198	2.8044	3.0815
DS-52232	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6945	2.6557	2.9086	2.9719	3.2827	3.3990
DS-52320	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6288	2.7995	3.0028	3.1137	3.1811	3.3688
DS-52359	i	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5438	2.6491	2.9099	2.9872	2.6238	3.0061
DS-52367		Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.5146	2.6434	2.9625	2.8885	3.1999	3.4913
DS-52369	iv	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6836	2.6718	2.9415	3.0307	3.2841	3.4381
DS-52569	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	1	1	0	APN	0.7346	2.7355	2.9336	3.0795	3.4845	3.4885
DS-52681	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5352	2.7972	2.9612	3.0931	3.1266	3.2721
DS-52756	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4490	2.7246	2.9870	2.9988	3.0745	3.2509
DS-52771	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.7405	2.7124	2.8712	2.9722	2.7716	2.8465
DS-52790	ii	Right	Metastatic	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4430	2.8074	2.9951	2.9871	2.9847	3.1808
DS-52815	iii	Left	Primary	Adenocarcinoma, NOS	1	1	1	0	1	0	APK	0.3882	2.7234	2.8524	2.9433	1.4651	2.8613
DS-52837	iii	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	1	0	0	0	AK	0.3787	2.7702	3.0296	2.9813	3.0000	3.2885
DS-52838	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6242	2.7306	2.9722	3.0446	3.3957	3.4478
DS-52847	iii	Right	Primary	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.6246	2.7036	2.9379	3.0536	3.1966	3.2176
DS-52853	iv	Right	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6407	2.7303	2.9637	3.0395	3.2521	3.2933
DS-52864	iii	Right	Primary	Adenocarcinoma, NOS	1	0	1	0	0	0	K	0.4123	2.7648	2.8873	3.0022	2.5397	3.2041
DS-52871	ii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4191	2.7960	2.9345	2.9636	2.6841	3.2251
DS-52882	iii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6430	2.7785	2.9738	3.1090	3.1208	3.3015
DS-52888	i	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4055	2.7772	2.9344	3.0868	1.6396	2.9577
DS-52889	ii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6030	2.7535	2.8852	2.9874	2.7576	3.0840
DS-52912	ii	Right	Primary	Adenocarcinoma, NOS	1	1	0	0	0	0	A	0.3971	2.7727	2.9361	3.0014	3.3100	3.2688
DS-52925	ii	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	1	PB	0.4920	2.8294	2.9856	3.0223	2.7844	2.9121
DS-52929	iv	Left	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.2925	2.8962	2.9438	2.9220	2.7529	3.0028
DS-52940	iii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4989	2.7550	2.9976	3.0585	2.8163	2.9664
DS-52942	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6941	2.6760	2.8814	2.9729	3.1199	3.3271
DS-52979	ii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.3628	2.8368	3.0180	3.1429	2.2936	3.0113
DS-52992	iv	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4687	2.8292	3.0184	3.0254	3.1928	3.2966
DS-53052	iii	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	1	0	0	0	AK	0.4373	2.7360	2.8848	2.9472	2.4390	3.0656
DS-53053	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	1	PB	0.4431	2.8142	2.9018	2.9348	2.0033	2.8316
DS-53055	iii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5831	2.7525	2.9406	3.0178	2.0818	2.5758
DS-53059	iv	Left	Metastatic	Adenocarcinoma, NOS	0	0	0	0	1	1	PB	0.4972	2.7505	2.9238	2.9342	2.7238	3.2128
DS-53095	ii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6285	2.7438	2.9538	3.0358	3.0697	3.3226
DS-53114	iv	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.5330	2.7182	2.9888	3.0114	3.2090	3.3571

DS-53115	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6563	2.7384	2.9772	3.0881	3.4529	3.5140
DS-53116	ii	Right	Primary	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.5625	2.7539	2.9698	3.0297	3.3721	3.4601
DS-53117	i	Left	Primary	Adenocarcinoma, Mucinous	0	0	0	0	0	1	B	0.3596	2.8048	2.9373	2.9179	1.9745	3.3521
DS-53121	iv	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6406	2.6606	2.9687	3.1231	3.3359	3.2412
DS-53129	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6807	2.8303	2.9631	3.0258	2.6091	3.2237
DS-53132	ii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.5445	2.7717	2.9590	2.9351	3.3223	3.4460
DS-53138	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	1	1	0	APN	0.5994	2.6881	2.9317	3.0688	3.1579	3.3328
DS-53139	iv	Right	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	1	0	0	0	AK	0.2994	2.8452	2.9247	3.0083	1.2097	2.6060
DS-53143	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5371	2.7142	2.9600	3.0706	3.2387	3.4550
DS-53146	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4854	2.7820	2.9620	2.9787	3.0193	3.1767
DS-53156	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6116	2.8696	2.9996	3.1242	3.3780	3.4159
DS-53168	i	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.4597	2.6697	2.9378	2.9990	3.2711	3.2919
DS-53189	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.7141	2.8041	2.9035	3.0716	3.2584	3.2020
DS-53191	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7481	2.6288	2.8649	2.9915	3.1832	3.3527
DS-53198	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5936	2.6935	2.8718	2.9840	3.1597	3.1537
DS-53211	iv	Left	Metastatic	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.4645	2.7279	2.9346	3.0084	2.5155	2.6615
DS-53230	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	1	PB	0.3847	2.7873	2.9428	2.9548	2.8529	2.9901
DS-53232	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	1	1	PB	0.3068	2.7872	2.9156	2.9821	1.7668	2.9022
DS-53246	ii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5245	2.6315	2.9061	2.9669	3.0621	3.1898
DS-53249	ii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6083	2.7202	2.8968	3.0328	2.9521	3.1668
DS-53272	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5539	2.6839	2.9954	3.0063	3.1616	3.3350
DS-53295	ii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.5472	2.6893	2.9513	3.0462	2.1408	3.0715
DS-53298	ii	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5776	2.6787	3.0098	3.0444	3.2373	3.0729
DS-53303	i		Metastatic	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.6970	2.6658	2.9285	3.0665	3.2529	3.3522
DS-53317	iii	Right	Primary	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.5453	2.7867	2.9342	3.0025	3.5240	3.5999
DS-53324	iv	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	1	PB	0.4574	2.8497	2.9278	3.0331	2.5189	3.0361
DS-53359	ii	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	0	1	B	0.3113	2.8810	2.8410	2.7247	2.0538	2.6867
DS-53382	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	1	1	PB	0.3074	2.8329	2.9381	2.9399	2.5678	3.0729
DS-53385	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.6475	2.9338	2.9847	3.1567	3.2916	3.4291
DS-53408	iv	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4328	2.8336	2.9868	2.9811	2.3462	3.2341
DS-53424	ii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5468	2.7316	2.9477	3.0420	3.4481	3.5344
DS-53453	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5070	2.7225	2.9222	2.9778	2.8133	3.1153
DS-53460	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.5860	2.6238	2.8797	3.0255	2.6332	2.8982
DS-53481	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.5401	2.7160	2.8968	3.0120	3.2680	3.4103
DS-53482	iv	Right	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	1	0	1	0	APK	0.5916	2.7600	2.9181	3.0352	2.7371	3.1525
DS-53487	iii	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	0	0	1	0	AP	0.3401	2.7235	2.9378	2.9534	2.5017	3.0404
DS-53489	ii	Right	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	0	1	0	1	0	PK	0.5034	2.8642	2.9627	3.0485	3.1191	3.3051
DS-53494	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.8573	2.6083	2.9310	3.1046	3.4353	3.2491
DS-53505	iii	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	0	0	0	0	A	0.3960	2.6902	2.8793	2.8979	2.3249	3.1355
DS-53516	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.4210	2.8066	2.9335	2.8974	3.3327	3.3636
DS-53528	ii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.6822	2.5734	2.8885	3.0226	3.2876	3.4191
DS-53644	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6581	2.7610	2.9686	3.1080	3.3757	3.3013
DS-53661	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4679	2.7703	2.9743	3.0339	2.3339	3.1879
DS-53664	iv	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6294	2.6999	2.8977	3.0351	2.7008	2.8176
DS-53679	iv	Right	Primary	Adenocarcinoma, NOS	0	0	1	0	0	0	K	0.4159	2.8694	2.9277	3.0010	1.4584	3.1854

DS-53682	ii	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.5551	2.7649	2.9041	3.0266	2.7316	2.9270
DS-53687	iii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	0	WT	0.3029	2.8069	2.8930	2.9346	2.0399	2.8534
DS-53710	i	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4203	2.7279	2.9310	3.0085	2.2380	3.1602
DS-53725	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.5599	2.6580	2.8951	2.9931	3.2639	3.4498
DS-53728	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.5645	2.6762	2.9604	3.0389	3.2872	3.4031
DS-53730	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.3162	2.7592	2.8963	2.9951	1.4628	2.1897
DS-53731	i	Left	Primary	Adenocarcinoma, NOS	1	0	0	0	1	1	PB	0.2987	2.7386	2.9575	2.9361	2.7683	3.1495
DS-53736	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4934	2.7827	3.0315	3.1316	3.2507	3.4127
DS-53750	i	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.2773	2.5901	2.8361	2.8350	2.8713	3.0728
DS-53783	iii	Right	Primary	Adenocarcinoma, NOS	0	0	0	1	1	0	PN	0.5562	2.8287	2.9430	2.9384	3.2502	3.2677
DS-53800	iii	Left	Primary	Adenocarcinoma, NOS	0	0	1	0	0	0	K	0.3758	2.8351	2.8344	2.8574	2.7005	3.2533
DS-53835	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6368	2.8797	2.9648	3.0028	3.3857	3.4524
DS-53945	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.2752	2.8462	2.8956	2.8928	2.5379	3.2575
DS-53957	ii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.7398	2.6580	2.9409	3.0577	2.9822	3.1827
DS-53969	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	1	1	0	APN	0.7372	2.7711	2.9165	3.1184	3.4374	3.5152
DS-53972	i	Right	Primary	Adenocarcinoma, NOS	1	1	0	0	0	1	AB	0.3645	2.8497	2.8581	2.8780	1.5326	2.6579
DS-54009	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.5518	2.7650	3.0228	3.0560	2.4005	3.0227
DS-54013	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5986	2.7180	2.9359	3.0271	3.2418	3.4005
DS-54015	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.3784	2.7062	2.9348	2.9979	1.3732	2.9973
DS-54031	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.6888	2.7080	2.9432	3.0111	2.9543	3.1216
DS-54041	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5303	2.8822	2.9876	3.0646	3.3273	3.4827
DS-54043	iv	Left	Primary	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.3851	2.7863	2.9900	3.0219	3.1767	3.3217
DS-54051	iv	Left	Primary	Adenocarcinoma, NOS	0	0	1	0	0	0	K	0.4849	2.7964	2.9535	3.0092	2.9744	3.2959
DS-54054	ii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.5251	2.7030	2.9624	3.0379	3.0903	3.3260
DS-54062	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6874	2.6994	2.9505	3.0368	3.2934	3.3432
DS-54072	iv	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5984	2.7020	2.9910	3.0688	0.6317	3.4157
DS-54089	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4784	2.7676	2.9371	3.0991	2.9039	3.2312
DS-54129	iii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5574	2.7453	2.9399	3.0191	2.9640	3.1573
DS-54148	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4912	2.7995	2.9959	3.0790	2.9647	3.2697
DS-54160	iii	Left	Primary	Adenocarcinoma, NOS	1	1	0	0	0	0	A	0.3348	2.8353	2.9924	2.9956	3.4466	3.4889
DS-54189		Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.3862	2.4822	2.7718	2.7254	1.0512	1.6855
DS-54195	i	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5411	2.7297	2.9769	3.1085	2.9940	3.3042
DS-54223	iii	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.5212	2.7527	2.9583	3.0599	3.2308	3.4254
DS-54255	iv	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5398	2.8255	2.9594	3.1002	3.2656	3.4214
DS-54289	iv	Left	Metastatic	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.3157	2.8373	2.9190	2.8116	3.1662	3.3805
DS-54307	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.3357	2.9470	2.9974	3.0920	2.4493	3.2863
DS-54327	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5527	2.7522	2.8734	3.0789	3.2711	3.3613
DS-54355	iii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4996	2.8184	2.9821	3.0368	1.6358	2.8535
DS-54362	iii	Left	Primary	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.5149	2.6805	2.9178	3.0011	2.6428	3.1507
DS-54363	ii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.3937	2.7383	2.9467	3.0188	3.2212	3.3377
DS-54391	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5115	2.7193	2.9284	3.0325	3.2756	3.3895
DS-54393	iv	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6376	2.7694	2.9424	3.0971	3.0168	3.1911
DS-54405	ii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.3892	2.7897	2.9679	3.0611	2.9828	3.3293
DS-54437	iii	Right	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	0	0	1	1	APB	0.4371	2.7735	3.0406	3.0325	3.2708	3.2808
DS-54439	iv	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5396	2.7995	2.9671	3.0217	3.1914	3.2120
DS-54452	iv	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.8305	2.6090	2.9229	3.0816	3.4196	3.4305
DS-54503	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7347	2.6505	2.9397	3.0652	3.3395	3.5040
DS-54552	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.6111	2.6738	2.9590	3.0463	3.1819	3.1391

DS-54556	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5706	2.6720	2.9412	3.0411	3.1129	3.3448
DS-54564	iii	Left	Metastatic	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.4545	2.7728	2.9603	2.9546	3.2664	3.4375
DS-54569	ii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5881	2.6858	2.9699	3.0456	3.1369	3.2887
DS-54589	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7307	2.7038	2.9400	3.0557	3.2494	3.3589
DS-54674	iii	Right	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	0	0	0	0	A	0.4277	2.7160	2.9686	3.1017	3.1733	3.3045
DS-54679	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5597	2.8361	2.9847	3.1074	3.0166	3.0894
DS-54697	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5412	2.6111	2.9908	3.0449	3.0123	3.1686
DS-54724	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6363	2.7383	2.9590	3.0366	3.1894	3.2238
DS-54730	iii	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.4275	2.5894	2.8938	2.9455	2.3973	2.8997
DS-54737	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4700	2.8540	3.0178	3.0203	3.0110	3.0996
DS-54750	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	1	1	PB	0.3373	2.7884	2.9014	3.0585	2.0287	2.7445
DS-54751	i	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5365	2.7291	2.9426	3.0392	3.1431	3.3100
DS-54758	ii	Right	Primary	Adenocarcinoma, NOS	1	1	1	0	0	0	AK	0.3321	2.7383	2.9315	2.9995	1.8512	3.0677
DS-54782	iii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4241	2.7227	2.9468	3.0370	2.8697	3.2555
DS-54783	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.6239	2.6946	2.9668	3.0354	3.2190	3.3828
DS-54833	i	Left	Primary	Adenocarcinoma, NOS	0	0	1	0	0	0	K	0.4018	2.8258	2.9765	3.0674	2.8769	3.2230
DS-54841	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5960	2.8821	3.0299	3.0664	3.1713	3.4074
DS-54845	iv	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6867	2.7639	2.9366	3.0843	3.1279	3.1472
DS-54925	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5808	2.7711	2.9478	2.9663	3.1966	3.2962
DS-54926	i	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.4962	2.6732	2.9735	3.0032	3.1183	3.3798
DS-54928	iv	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6336	2.7032	2.9312	3.0789	2.9144	3.0079
DS-55003	ii	Left	Primary	Adenocarcinoma, NOS	1	1	1	0	0	0	AK	0.4052	2.7946	2.9149	2.8479	2.8848	3.3243
DS-55324	iv	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5583	2.7748	2.9675	3.0379	3.1282	3.3825
DS-55343	ii	Left	Primary	Adenocarcinoma, NOS	0	0	1	0	0	0	K	0.5555	2.7803	2.9465	3.1060	3.2358	3.3568
DS-55355	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5595	2.8365	2.9943	3.1539	2.6903	3.2503
DS-55364	ii	Left	Primary	Adenocarcinoma With Focal Mucinous Features	0	1	1	0	0	0	AK	0.5363	2.8541	3.0105	3.1819	2.3676	2.9500
DS-55377	iv	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5448	2.7958	2.9300	3.0602	3.2761	3.4382
DS-55379	iv	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5321	2.7828	3.0008	3.0177	3.0225	3.1700
DS-55383	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4300	2.7830	2.9728	3.0246	2.4653	2.9507
DS-55384	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6804	2.7926	2.9118	3.0861	3.2077	3.4489
DS-55388	i	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.4639	2.6783	2.8460	2.9652	3.1507	3.1340
DS-55390	ii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.3499	2.8234	2.8656	2.9221	2.0305	3.1009
DS-55398	i	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.5874	2.6906	2.8691	2.9721	2.2999	3.1198
DS-55407	i	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4536	2.7300	2.8767	2.9573	1.4306	2.9890
DS-55411	ii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.7478	2.6966	2.9788	3.0409	3.2288	3.3472
DS-56069	iv	Left	Metastatic	Adenocarcinoma, Mucinous	0	0	0	0	1	1	PB	0.4815	2.7624	2.9721	3.0177	3.0979	3.3694
DS-56080	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.6163	2.7047	2.9554	3.0979	3.3936	3.4951
DS-56094	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.6213	2.6524	2.9478	3.0415	1.8800	2.8878
DS-56101	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5322	2.7490	2.9951	3.0947	3.3863	3.4782
DS-56118	i	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	1	0	0	0	AK	0.5458	2.8019	3.0017	3.1666	3.2085	3.2908
DS-56140	ii	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.6828	2.6451	2.9581	3.0685	3.3676	3.4396
DS-56142	ii	Right	Primary	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.4946	2.7025	3.0036	2.9634	2.9365	3.2108
DS-56176	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5758	2.6587	2.9116	2.9734	3.4270	3.3587
DS-56293	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7571	2.6280	2.8983	3.0466	3.2744	3.3695
DS-56302	i	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4942	2.7529	3.0188	3.0802	3.1949	3.4257
DS-56309	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6145	2.8004	2.9964	3.1413	3.2408	3.3913
DS-56310	iv	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6751	2.8118	2.9674	3.0755	2.9127	3.1394

DS-56326	ii	Right	Primary	Adenocarcinoma, Mucinous	1	0	0	0	0	1	B	0.2821	2.8206	2.8668	2.9051	1.5213	2.9149
DS-56330	iv	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.3780	2.7062	2.8973	2.7384	3.0890	3.1464
DS-56334	ii	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	0	0	0	0	0	WT	0.3181	2.7027	2.8921	2.8803	2.6466	3.2083
DS-56348	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6740	2.6456	2.8591	2.9592	3.2453	3.2936
DS-56351	i	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	0	WT	0.3367	2.8502	2.8948	2.9509	1.2308	2.6620
DS-56376	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5837	2.8035	2.9947	2.9984	3.4506	3.4789
DS-56384	iii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.3672	2.8189	2.9710	3.0485	2.1823	2.9288
DS-56397	iv	Right	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5220	2.7238	2.9641	3.0574	2.8144	2.9150
DS-56421	i	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6211	2.7663	2.9803	3.0731	3.3137	3.3980
DS-56551	iv	Right	Metastatic	Adenocarcinoma, Mucinous	0	0	0	0	0	0	WT	0.3039	2.7192	2.8651	2.7584	2.4967	2.8150
DS-56604	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.2946	2.7001	2.9052	2.8302	2.5572	3.1464
DS-56608	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5378	2.8346	2.8778	3.0375	3.3243	3.3974
DS-56626	iv	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6227	2.6846	2.9099	3.0210	2.9276	3.2692
DS-56635	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.3107	2.7718	2.9833	2.8418	2.9123	3.1994
DS-56647	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.8021	2.6942	2.8524	3.0086	3.3867	3.4915
DS-56660	iv	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.3295	2.8081	2.9707	3.0542	2.3156	3.2690
DS-56668	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6679	2.6065	2.9501	3.0513	3.2868	3.3099
DS-56678	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6026	2.6757	2.8963	2.9897	3.2315	3.2682
DS-56683	iv	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.3130	2.7734	2.9711	2.9347	3.0741	3.2584
DS-56740	iii	Left	Metastatic	Adenocarcinoma, Mucinous	0	1	1	0	0	0	AK	0.3923	2.7912	2.9662	3.0052	2.2369	3.1738
DS-56796	iii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.4308	2.6928	2.9328	2.9493	3.1176	3.3762
DS-56803	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.4996	2.6778	3.0098	3.0910	3.3336	3.4196
DS-56820	ii	Right	Primary	Adenocarcinoma With Focal Mucinous Features	1	0	1	0	0	0	K	0.2682	2.8611	2.9121	2.9208	2.4857	3.1178
DS-56829	0	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4697	2.7187	2.9435	3.0959	2.6451	3.1314
DS-56830	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	1	0	0	AN	0.4932	2.7838	2.9512	3.1015	3.2684	3.4092
DS-56842	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.4712	2.6311	2.9489	2.9969	3.0896	3.3382
DS-56858	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6341	2.7538	2.9507	3.0337	3.0463	3.3040
DS-56867	ii	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6536	2.6847	2.9080	3.0241	3.2594	3.3410
DS-56888	i	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	1	1	PB	0.3664	2.8174	2.9307	2.9922	2.6506	3.2610
DS-56894	i	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	1	APB	0.5026	2.9285	2.9587	2.9251	3.2503	3.3407
DS-56949	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.5474	2.6985	2.9189	3.0156	3.2079	3.3576
DS-56962	iv		Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7170	2.6956	3.0123	3.1468	3.4338	3.4642
DS-56963	iv	Right	Metastatic	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4308	2.8464	2.9883	3.0102	2.7069	3.2092
DS-56964	iii	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.3981	2.8388	2.9499	3.0095	2.1303	3.1476
DS-56979	iv	Left	Metastatic	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.7019	2.6659	2.8486	2.9660	3.3707	3.4056
DS-56998	iii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4923	2.7982	2.9856	3.0711	3.2699	3.4865
DS-57006	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.7338	2.6135	2.9148	3.0912	2.8715	3.2566
DS-57008	i	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6728	2.7809	2.9739	3.1160	3.0508	3.2877
DS-57013	i	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5870	2.6943	2.9592	3.0693	3.3270	3.4539
DS-57026	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.5712	2.7209	3.0029	3.1344	3.3987	3.4948
DS-57035	i	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6438	2.7292	2.9362	3.0350	3.3405	3.3628
DS-57041	i	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4192	2.6782	2.9341	3.0577	2.5813	2.9436
DS-57046	iii	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.5179	2.7087	3.0039	3.0975	3.1570	3.3468
DS-57048	ii	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.7465	2.6496	2.8821	3.0180	3.2570	3.3939
DS-57052	iii	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.3805	2.5186	2.8785	2.9103	2.5815	3.2170
DS-57055	iv	Right	Primary	Adenocarcinoma, NOS	0	0	1	0	0	0	K	0.4846	2.7501	2.9959	3.0064	3.0121	3.1405
DS-57060	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6764	2.6869	2.9603	3.0060	3.1251	3.2870
DS-57433	iv	Left	Primary	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.4123	2.6189	2.8924	2.7536	2.5551	2.9675

DS-57472	iii	Left	Primary	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.4867	2.7747	2.9719	3.0321	3.1338	3.2177
DS-57616	ii	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	0	0	0	1	1	PB	0.4084	2.7897	2.9748	2.9446	2.9737	3.2263
DS-57686	iii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6155	2.7538	2.9600	3.0538	3.3390	3.3573
DS-57829	iv		Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5884	2.8513	2.9150	3.1188	1.6591	2.7668
DS-57927	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4824	2.7586	2.9590	2.9991	3.1315	3.2015
DS-57955	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6411	2.6789	2.9517	3.1126	2.9869	3.3493
DS-58141	ii	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6183	2.8241	2.9987	3.0351	2.9177	3.1569
DS-58234	iv	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5101	2.8143	2.9934	3.0554	2.5442	3.1154
DS-58258	i	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	1	0	0	1	0	AP	0.3317	2.6470	2.9015	2.8735	2.8094	3.2591
DS-58275	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5431	2.7625	2.9662	3.0565	2.3706	3.0750
DS-58341	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.4729	2.7659	2.9074	2.9833	2.5804	3.0711
DS-58440		Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5849	2.7434	2.8892	2.9578	3.3105	3.4040
DS-58478	ii	Right	Primary	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.3449	2.7094	2.9210	2.9123	3.1206	3.2836
DS-58510	ii	Left	Primary	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.4622	2.7097	2.9738	2.9938	2.8020	3.2804
DS-58532	iii	Left	Primary	Carcinoma, Signet Ring Cell (Greater Than 50% Signet Ring Cell)	0	0	0	0	0	0	WT	0.3548	2.5731	2.6950	2.6125	1.5298	2.9025
DS-58548	iv	Right	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.7193	2.7466	2.9859	3.1397	3.1956	3.1641
DS-58694	iv	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.4841	2.7562	2.9565	3.0284	3.2879	3.4311
DS-58843	iii	Right	Metastatic	Adenocarcinoma, NOS	0	0	1	0	1	0	PK	0.5484	2.7649	2.9356	3.0254	1.7828	2.9609
DS-59213	iii	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	0	0	0	0	1	B	0.2571	2.7178	2.9321	2.9351	1.7976	2.8795
DS-59550	i	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	0	0	0	0	0	WT	0.3126	2.7336	2.8274	2.7039	3.3345	3.3265
DS-59556	iv	Right	Metastatic	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.4622	2.7817	2.9457	2.8694	3.0797	3.2099
DS-59919	ii	Left	Primary	Adenocarcinoma, NOS	1	1	0	0	0	0	A	0.5323	2.5690	2.8291	2.9108	3.0890	3.2426
DS-59932	iv	Right	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.4000	2.6441	2.9456	2.9867	2.9872	3.0954
DS-60252	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.5006	2.9064	3.0301	3.1487	3.1872	3.1070
DS-60296	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6067	2.8621	3.0190	3.1035	3.3198	3.4724
DS-60313	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7307	2.7075	2.9418	3.0504	3.2218	3.3515
DS-60341	i	Right	Metastatic	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.6162	2.7168	2.9135	3.0892	3.1803	3.2987
DS-60353	iii	Right	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5932	2.7597	2.9398	3.0641	3.0849	3.3071
DS-61202		Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.6051	2.7634	2.9444	3.0311	3.3014	3.2261
DS-67013	ii	Right	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.7118	2.8388	2.9444	3.0325	3.1973	3.2701
DS-67027	iii	Right	Metastatic	Adenocarcinoma, NOS	1	0	1	0	1	0	PK	0.2849	2.8679	2.7912	2.6881	1.6527	3.3975
DS-67030	iv	Right	Metastatic	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.6802	2.8689	2.9690	3.0843	3.2722	3.4324
DS-67065	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6727	2.7539	2.8775	3.0013	3.2942	3.4145
DS-67098	ii	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	0	0	0	0	0	WT	0.3395	2.7080	2.8910	2.8074	2.7698	3.1939
DS-67162	iii	Right	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.6295	2.8871	3.0270	3.1304	3.0611	3.3157
DS-67827	ii	Left	Metastatic	Adenocarcinoma, Mucinous	0	1	1	0	0	0	AK	0.4034	2.7204	2.9165	2.9290	2.4685	3.0302
DS-67844	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7130	2.6030	2.7928	2.8821	1.5258	2.6115
DS-67914	iv		Metastatic	Adenocarcinoma, Mucinous	0	1	1	0	1	0	APK	0.2831	2.8444	2.9108	2.8569	2.5882	3.1850
DS-67931	iii	Left	Metastatic	Adenocarcinoma, NOS	0	0	1	0	0	0	K	0.3713	2.7594	2.9805	2.9543	2.7154	3.0923
DS-67949	ii	Left	Metastatic	Adenocarcinoma, Mucinous	0	1	1	0	1	0	APK	0.6009	2.7012	2.9676	3.0484	2.9988	2.9860
DS-67955	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.3931	2.8806	3.0234	2.9854	2.5176	3.5684
DS-67956	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7368	2.6457	2.9390	3.0961	3.1605	3.3649
DS-67980	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.6341	2.7111	2.9783	3.0413	3.3397	3.4263

DS-67984	iii	Left	Metastatic	Adenocarcinoma, NOS	0	0	0	0	1	0	P	0.6706	2.5812	2.9184	2.9746	3.3809	3.2585
DS-68634	iii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4666	2.7949	2.9549	3.0305	3.2086	3.2950
DS-68849	iv	Right	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6483	2.7163	2.9726	3.0204	3.2336	3.2778
DS-68891	iv	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.6715	2.6648	2.8955	2.9923	3.2896	3.4131
DS-69122	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6427	2.6296	2.8676	3.0525	3.4329	3.5241
DS-69164	i	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6024	2.7252	2.9529	3.0529	3.4263	3.5483
DS-69689	iv	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.5477	2.7066	2.9396	3.0070	3.0572	3.2948
DS-70294	iv	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.7476	2.6123	2.8521	3.0669	3.1485	3.3080
DS-87902	iii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	1	0	APK	0.5459	2.8021	2.9823	3.0524	2.6503	3.1622
DS-87910	ii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.3019	2.7861	2.9932	2.9469	3.0166	3.3783
DS-49521	iv	Right	Metastatic	Adenocarcinoma, NOS	1	0	0	0	0	0	WT	0.3864	3.0012				
DS-51941	iii	Left	Metastatic	Adenocarcinoma, NOS	0	1	0	0	0	0	A	0.4635	2.5273				
DS-51942	iii	Right	Primary	Adenocarcinoma, NOS	1	0	0	0	0	1	B	0.3977	2.8139				
DS-54038	ii	Left	Primary	Adenocarcinoma, Mucinous (Greater Than 50% Mucinous)	0	0	0	0	0	0	WT	0.2650	2.6637				
DS-54429	iii	Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6509	2.6660				
DS-54718	iv	Left	Metastatic	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.4801	2.6093				
DS-59974	ii	Left	Metastatic	Adenocarcinoma, NOS	0	0	0	0	0	0	WT	0.0775	2.3226				
DS-61205	ii	Left	Primary	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4875	2.7058				
DS-67953	iv	Right	Metastatic	Adenocarcinoma, NOS	0	1	1	0	0	0	AK	0.4724	2.6038				
DS-67994		Left	Primary	Adenocarcinoma, NOS	0	1	0	0	1	0	AP	0.6574	2.5903				

Supplementary Table S5. TCGA CRCs (n=624 including 221 DNA-sequenced samples from TCGA (2012) (6))---Stages, MSI status, driver mutations and signature scores

Note: The signature scores were calculated as described in Methods and merged with other TCGA clinical and molecular parameters adopted from NCI GDC databases; 1 — mut; 0 — wt; A — *APC* truncating mutation; P — *TP53* mutation; K — *KRAS* mutation; N — *NRAS* mutation; B — *BRAF*(V600E).

Barcode	COAD/READ	Composite Staging	Tumor Location	MSI and Mutation Status							Signature Scores (gene expression)					
				MSI-high	APC	KRAS	NRAS	TP53	BRAF	A/P/K/N/B	Cetuximab Sensitivity Score	18-gene AZ score	64-gene Wnt/β-catenin score	24-gene Wnt/β-catenin score	EREG (log10)	AREG (log10)
TCGA-A6-2672	COAD	stage iiib		1	0	0	0	0	1	B	0.4569	3.6783	3.4128	3.3222	1.9180	2.7660
TCGA-A6-2674	COAD	stage iv	Left	0	1	1	0	0	0	AP	0.2289	3.6898	3.4672	3.3015	2.2858	2.4531
TCGA-A6-2676	COAD	stage iib	Right	1	0	1	0	0	1	B	-0.0079	3.5928	3.2705	3.1081	1.6849	2.2120
TCGA-A6-2677	COAD	stage iiic	Right	0	1	0	0	0	0	A	0.7160	3.5552	3.3780	3.5403	3.3054	3.4381
TCGA-A6-2678	COAD	stage iiib	Right	0	0	1	0	1	0	PN	0.4952	3.5690	3.2790	3.2740	3.0516	3.2989
TCGA-A6-2683	COAD	stage iv	Right	0	0	1	1	0	0	PK	0.5233	3.6226	3.3312	3.4036	1.7513	2.0844
TCGA-A6-3807	COAD	stage iiic	Left	0	1	1	0	0	0	AP	0.8504	3.7501	3.4562	3.4220	3.3852	3.6580
TCGA-A6-3808	COAD	stage iia	Right	0	1	0	1	0	0	AK	0.1814	3.6000	3.4031	3.4751	3.3093	3.3228
TCGA-A6-3810	COAD	stage iia	Left	0	1	1	0	0	0	AP	0.8837	3.5999	3.3548	3.3577	3.2414	3.2244
TCGA-AA-3514	COAD	stage i	Right	0	0	0	0	0	0	WT	0.6326	3.5548	3.3371	3.3604	2.5959	2.8519
TCGA-AA-3516	COAD	stage iii	Right	1	0	0	0	0	1	B	0.3999	3.8848	3.4523	3.1097	3.5270	3.3125
TCGA-AA-3517	COAD	stage iia	Left	0	0	1	0	0	0	P	0.5325	3.5492	3.2704	3.2609	2.4864	2.3374
TCGA-AA-3518	COAD	stage iia	Right	1	0	0	0	0	0	WT	0.2612	3.6750	3.2798	3.2529	1.6173	2.2499
TCGA-AA-3519	COAD	stage iii	Left	0	2	1	0	0	0	AP	0.4886	3.4928	3.3351	3.4922	3.1617	3.5165
TCGA-AA-3520	COAD	stage ii	Right	0	0	1	1	0	0	PK	0.4714	3.6300	3.2953	3.2779	2.8982	3.2086
TCGA-AA-3521	COAD	stage ii	Left	0	1	0	1	0	0	AK	0.6025	3.6260	3.4004	3.4735	2.6566	2.4830
TCGA-AA-3522	COAD	stage iia	Right	0	1	0	1	0	0	AK	0.3375	3.7144	3.2872	3.2707	2.1129	2.7765
TCGA-AA-3524	COAD	stage ii	Left	0	1	1	0	0	0	AP	0.7242	3.6732	3.3548	3.4493	3.7302	3.6990
TCGA-AA-3525	COAD	stage iiib	Right	1	0	0	0	0	1	B	0.1862	3.6762	3.2498	3.1072	1.6483	2.3511
TCGA-AA-3526	COAD	stage i	Left	0	0	1	0	0	0	P	0.5939	3.7259	3.4825	3.4410	3.3870	3.4531
TCGA-AA-3527	COAD	stage iia	Right	0	1	0	0	0	0	A	0.4471	3.5824	3.3845	3.4332	2.2049	2.5133
TCGA-AA-3529	COAD	stage iiic	Left	0	0	0	0	0	0	WT	0.2641	3.5016	3.3533	3.4313	3.3166	3.6601
TCGA-AA-3530	COAD	stage i	Right	0	1	0	1	0	0	AK	0.5303	3.4644	3.3476	3.5045	3.0999	3.4725
TCGA-AA-3531	COAD	stage iia	Left	0	2	1	0	0	0	AP	0.4861	3.6059	3.2937	3.3267	2.6342	3.0674
TCGA-AA-3532	COAD	stage iia	Left	0	1	0	1	0	0	AK	0.7229	3.5094	3.3841	3.4363	3.0975	3.0032
TCGA-AA-3534	COAD	stage iia	Right	0	0	0	0	0	0	WT	0.4740	3.4813	3.2735	3.3341	2.4266	3.0376
TCGA-AA-3538	COAD	stage i	Left	0	1	0	0	0	0	A	0.6904	3.4280	3.3030	3.4512	3.4628	3.6534
TCGA-AA-3542	COAD	stage iiic	Left	0	1	1	0	0	0	AP	0.8214	3.9118	3.4468	3.4072	2.7611	3.2553
TCGA-AA-3543	COAD	stage i	Right	1	0	0	0	0	1	B	0.3167	3.7578	3.3892	3.2276	1.2962	2.2369
TCGA-AA-3544	COAD	stage i	Left	0	2	0	0	0	0	A	0.6799	3.5850	3.3279	3.4192	2.2792	3.1092
TCGA-AA-3548	COAD	stage iiic	Right	0	1	0	1	0	0	AK	0.7229	3.6894	3.3518	3.4065	2.6405	2.9355
TCGA-AA-3549	COAD	stage i	Right	0	0	1	0	1	0	PN	0.7592	3.6257	3.4016	3.4615	2.3185	2.6559
TCGA-AA-3552	COAD	stage iiic	Right	0	1	1	0	0	0	AP	0.6497	3.4250	3.2500	3.3479	2.5396	2.9729
TCGA-AA-3553	COAD	stage i	Left	0	1	1	0	0	0	AP	0.7874	3.5615	3.3807	3.4369	3.7368	3.6233
TCGA-AA-3554	COAD	stage iia	Right	1	0	0	0	0	0	WT	0.3485	3.7141	3.4492	3.2435	1.7984	2.9949
TCGA-AA-3555	COAD	stage iia	Right	0	3	0	1	0	0	AK	-0.0190	3.6594	3.3979	3.3734	1.8721	2.5944
TCGA-AA-3556	COAD	stage i	Left	0	1	1	1	0	0	APK	0.2918	3.7064	3.4695	3.4271	1.6508	3.4943

TCGA-AA-3560	COAD	stage iiic	Left	0	0	1	1	0	0	PK	0.3585	3.6130	3.3200	3.2864	2.5192	3.1824
TCGA-AA-3561	COAD	stage iia	Right	0	1	1	1	0	0	APK	0.7567	3.7337	3.3653	3.3373	3.2871	3.3922
TCGA-AA-3562	COAD	stage iiic	Left	0	1	1	0	0	0	AP	0.6818	3.3945	3.2919	3.4554	2.0080	2.4944
TCGA-AA-3664	COAD	stage ii	Right	0	0	0	0	0	1	B	0.4552	3.5078	3.3349	3.3816	2.3023	2.7891
TCGA-AA-3666	COAD	stage iii	Right	0	1	1	0	1	0	APN	0.6606	3.5926	3.2627	3.2807	2.0448	2.6803
TCGA-AA-3667	COAD	stage i	Left	0	2	1	0	0	0	AP	0.8235	3.5484	3.3873	3.5372	2.8113	3.0992
TCGA-AA-3672	COAD	stage iii	Right	1	0	0	1	0	0	K	0.3298	3.5672	3.3976	3.4431	0.8083	1.6212
TCGA-AA-3673	COAD	stage ii	Right	0	1	1	1	0	0	APK	0.4651	3.5016	3.3574	3.4872	3.2052	2.8706
TCGA-AA-3678	COAD	stage iii	Left	0	1	0	0	0	0	A	0.6310	3.4821	3.3405	3.4119	3.5549	3.8888
TCGA-AA-3679	COAD	stage iv	Left	0	2	1	0	0	0	AP	0.7877	3.6999	3.2320	3.3120	3.3880	3.7459
TCGA-AA-3680	COAD	stage iv	Right	0	2	0	1	0	0	AK	0.2055	3.6164	3.3612	3.4710	1.6491	2.3915
TCGA-AA-3681	COAD	stage iii	Right	0	2	1	1	0	0	APK	0.5109	3.6308	3.3861	3.4199	1.9411	2.8213
TCGA-AA-3684	COAD	stage iv	Right	0	1	0	0	0	1	AB	-0.0213	3.6525	3.4369	3.4157	2.0343	2.8836
TCGA-AA-3685	COAD	stage ii	Left	0	2	1	0	0	0	AP	0.6571	3.8000	3.4420	3.3928	3.4069	3.4341
TCGA-AA-3688	COAD	stage iv	Left	0	1	0	0	0	0	A	0.8216	3.4878	3.3198	3.4800	2.8321	3.0323
TCGA-AA-3692	COAD	stage iv	Left	0	2	0	0	0	0	A	0.4289	3.5307	3.3769	3.5445	3.0345	3.3846
TCGA-AA-3693	COAD	stage iv	Left	0	1	1	0	0	0	AP	0.8156	3.6085	3.3216	3.4114	3.5125	3.7928
TCGA-AA-3696	COAD	stage iv	Left	0	1	0	1	0	0	AK	0.5305	3.3820	3.2378	3.3621	2.4117	2.7874
TCGA-AA-3710	COAD	stage iia	Right	1	0	0	0	0	0	WT	0.1373	3.6757	3.3025	3.0702	2.7155	2.6230
TCGA-AA-3715	COAD	stage ii	Right	1	0	0	1	0	1	KB	0.2693	3.8285	3.5594	3.0944	2.6807	2.7725
TCGA-AA-3811	COAD	stage iii	Right	1	0	1	0	0	0	P	0.1426	3.5832	3.3197	3.3354	1.6528	2.8123
TCGA-AA-3812	COAD	stage iia	Left	0	1	0	0	0	0	A	0.1822	3.6118	3.4205	3.4292	2.5168	2.7950
TCGA-AA-3814	COAD	stage iia	Right	0	1	1	1	0	0	APK	0.7617	3.6583	3.3734	3.4172	3.2225	3.2631
TCGA-AA-3818	COAD	stage iia	Right	0	2	0	1	0	0	AK	0.5352	3.8019	3.4472	3.4919	2.6963	3.0283
TCGA-AA-3819	COAD	stage iia	Left	0	0	0	0	1	0	N	0.3421	3.5712	3.3230	3.3859	3.1847	3.5314
TCGA-AA-3821	COAD	stage i	Right	1	0	0	0	0	1	B	-0.1566	3.5566	3.2728	3.2284	1.7935	2.5585
TCGA-AA-3831	COAD	stage iia	Left	0	0	0	0	0	0	WT	0.7081	3.5769	3.4122	3.5648	3.3481	3.6226
TCGA-AA-3833	COAD	stage iia	Right	1	0	0	0	0	1	B	0.2164	3.8616	3.5086	3.2605	3.0187	2.9663
TCGA-AA-3837	COAD	stage iia	Right	0	2	0	1	0	0	AK	0.6377	3.6656	3.4669	3.5771	2.5783	2.8814
TCGA-AA-3842	COAD	stage iiia	Left	0	0	1	1	0	0	PK	0.5112	3.5090	3.2305	3.2804	2.4191	2.8471
TCGA-AA-3844	COAD	stage iiic	Left	0	0	1	1	0	0	PK	0.6782	3.5977	3.3065	3.3830	2.7271	3.1924
TCGA-AA-3845	COAD	stage iia	Right	1	0	0	1	0	0	K	0.3214	3.8476	3.4290	3.1969	3.5770	2.8944
TCGA-AA-3846	COAD	stage iia	Left	0	1	0	0	0	0	A	0.7179	3.5109	3.3604	3.4788	3.8909	3.7093
TCGA-AA-3848	COAD	stage iiic	Left	0	1	1	1	0	0	APK	0.5036	3.5168	3.4691	3.6868	3.0666	3.2411
TCGA-AA-3850	COAD	stage i	Right	0	0	0	0	1	0	N	0.5074	3.6669	3.3980	3.4566	2.8891	3.1665
TCGA-AA-3851	COAD	stage iia	Right	0	1	1	1	0	0	APK	0.5117	3.7379	3.3436	3.2790	1.5607	2.5149
TCGA-AA-3852	COAD	stage iia	Right	0	1	0	1	0	0	AK	0.0433	3.7266	3.4329	3.4147	1.3963	2.5018
TCGA-AA-3854	COAD	stage i	Left	0	1	0	1	0	0	AK	0.0330	3.8108	3.5035	3.4143	1.2808	2.6964
TCGA-AA-3855	COAD	stage i	Left	0	1	0	0	0	0	A	0.3334	3.6523	3.3488	3.4485	2.9309	3.3378
TCGA-AA-3856	COAD	stage iia	Left	0	1	1	0	0	0	AP	0.6446	3.6206	3.4086	3.5360	2.8506	3.3332
TCGA-AA-3858	COAD	stage i	Left	0	1	1	0	0	0	AP	0.6378	3.7202	3.4765	3.5763	3.1032	3.2709
TCGA-AA-3860	COAD	stage iiib	Left	0	2	1	0	0	0	AP	0.8691	3.6353	3.3902	3.3830	2.2762	2.9497
TCGA-AA-3864	COAD	stage ii	Right	1	3	0	1	1	0	AKN	0.1215	3.5911	3.2911	3.2155	2.1197	2.5014
TCGA-AA-3866	COAD	stage i	Right	0	1	1	0	0	0	AP	0.8019	3.4195	3.3911	3.4923	3.0480	3.2431
TCGA-AA-3867	COAD	stage iv	Left	0	0	1	0	0	0	P	0.7043	3.5698	3.4017	3.5025	2.2040	2.5162
TCGA-AA-3869	COAD	stage iv	Right	0	1	1	0	0	0	AP	0.6690	3.6054	3.3497	3.3420	2.9242	3.1168
TCGA-AA-3870	COAD	stage iv	Right	0	1	0	1	0	0	AK	0.2821	3.8179	3.6027	3.4518	2.5692	3.2876
TCGA-AA-3872	COAD	stage iv	Left	0	1	0	0	0	0	A	0.6512	3.6433	3.4253	3.3754	1.9306	2.4925
TCGA-AA-3875	COAD	stage i	Right	0	0	1	0	0	0	P	0.4513	3.5652	3.3554	3.4659	3.4999	3.3924
TCGA-AA-3877	COAD	stage i	Right	1	0	0	0	0	1	B	-0.0712	3.6685	3.3364	3.1725	2.4883	2.8359

TCGA-AA-3930	COAD	stage iv	Right	0	2	1	1	0	0	APK	0.4284	3.6558	3.3241	3.2738	2.7556	2.8982
TCGA-AA-3939	COAD	stage iia	Right	0	2	0	1	0	0	AK	0.6329	3.9867	3.5723	3.4159	3.3707	3.3019
TCGA-AA-3941	COAD	stage iva	Right	0	1	1	1	0	0	APK	0.5885	3.8705	3.4244	3.3577	2.3643	2.7669
TCGA-AA-3947	COAD	stage iib	Right	1	1	0	0	0	1	AB	0.1606	3.6855	3.3513	3.2962	2.3811	2.9898
TCGA-AA-3949	COAD	stage iiib	Right	1	0	1	0	0	1	PB	0.1560	3.8622	3.4505	3.0579	2.3418	2.4284
TCGA-AA-3952	COAD	stage iiic	Left	0	1	0	0	0	0	A	0.6306	3.7830	3.4159	3.3604	2.0863	3.0113
TCGA-AA-3955	COAD	stage iiib	Left	0	1	1	0	0	0	AP	0.7951	3.5602	3.2609	3.3181	3.6552	3.6873
TCGA-AA-3956	COAD	stage iia	Right	0	0	1	0	0	0	P	0.6226	3.4837	3.3098	3.4353	3.4406	3.4602
TCGA-AA-3966	COAD	stage iia	Right	1	0	0	0	0	1	B	0.1946	3.9186	3.5444	3.3182	2.6237	2.6026
TCGA-AA-3971	COAD	stage iii	Left	0	0	0	0	0	0	WT	0.3505	3.5212	3.3065	3.4350	3.2679	3.4670
TCGA-AA-3972	COAD	stage iv	Left	0	1	1	0	1	0	APN	0.7827	3.6772	3.3618	3.3862	3.3159	3.1977
TCGA-AA-3973	COAD	stage iv	Left	0	2	0	0	1	0	AN	0.8088	3.6118	3.4391	3.5328	2.1122	2.7933
TCGA-AA-3975	COAD	stage i	Left	0	2	1	1	0	0	APK	0.4111	3.4456	3.3359	3.5261	2.8986	3.2530
TCGA-AA-3976	COAD	stage iiia	Left	0	2	1	0	1	0	APN	0.7611	3.5929	3.3383	3.4415	3.5292	3.6072
TCGA-AA-3977	COAD	NA	Left	0	2	1	1	0	0	APK	0.4920	3.6094	3.3531	3.3487	2.5870	3.3711
TCGA-AA-3979	COAD	stage iia	Left	0	1	1	1	0	0	APK	0.7921	3.7153	3.3784	3.4211	3.8089	3.7705
TCGA-AA-3980	COAD	stage i	Left	0	1	1	0	0	0	AP	0.6133	3.5057	3.3628	3.4844	3.3603	3.3785
TCGA-AA-3982	COAD	stage iiib	Left	0	2	1	0	0	0	AP	0.6185	3.5802	3.3160	3.3598	3.5792	3.7450
TCGA-AA-3984	COAD	stage iia	Left	0	1	0	0	0	0	A	0.8026	3.5089	3.3721	3.4341	3.2028	3.4850
TCGA-AA-3986	COAD	stage i	Right	0	0	0	1	0	0	K	0.5387	3.4938	3.3707	3.5158	2.3729	3.1539
TCGA-AA-3989	COAD	stage iv	Right	0	1	0	0	0	0	A	0.8627	3.5576	3.3620	3.4788	2.8799	3.2334
TCGA-AA-3994	COAD	stage iiib	Right	0	2	0	1	0	0	AK	-0.0064	4.0332	3.6061	3.3731	2.3971	3.3648
TCGA-AA-A004	COAD	stage iia	Left	0	0	1	0	0	0	P	0.0933	3.3541	3.3291	3.4287	#NUM!	2.3979
TCGA-AA-A00A	COAD	stage iia	Right	1	3	0	1	0	0	AK	0.6204	3.5449	3.3593	3.4288	1.1725	1.9995
TCGA-AA-A00D	COAD	stage i	Right	0	2	1	0	0	1	APB	0.5688	3.4599	3.3420	3.4313	1.8726	2.9083
TCGA-AA-A00E	COAD	stage iia	Right	1	0	1	0	0	0	P	0.1464	3.5453	3.2376	3.2184	0.9431	1.8639
TCGA-AA-A00F	COAD	stage iiic	Left	0	0	1	0	1	0	PN	0.4658	3.5832	3.3592	3.3575	3.0848	2.7135
TCGA-AA-A00J	COAD	stage iiib	Right	1	1	0	0	0	1	AB	0.0370	3.5577	3.3258	3.3763	1.2572	2.1867
TCGA-AA-A00K	COAD	stage iia	Left	0	1	0	1	0	0	AK	0.5217	3.6086	3.3893	3.5098	2.6696	2.9856
TCGA-AA-A00L	COAD	stage iia	Right	0	1	1	0	0	0	AP	0.8341	3.4850	3.3353	3.4922	3.0823	3.4141
TCGA-AA-A00N	COAD	stage iib	Right	0	2	0	1	1	0	ANB	0.2596	3.5938	3.3756	3.3316	1.7647	2.5366
TCGA-AA-A00O	COAD	stage iiic	Left	0	1	1	0	0	0	AP	0.6519	3.2386	3.3272	3.4788	2.5751	2.8890
TCGA-AA-A00Q	COAD	stage iiib	Left	0	0	0	1	0	0	K	0.8537	3.7017	3.3754	3.4133	3.1913	3.1807
TCGA-AA-A00R	COAD	stage i	Right	1	1	0	0	0	0	A	0.2751	3.3532	3.1925	3.1210	1.1259	2.6242
TCGA-AA-A00U	COAD	stage iiib	Right	0	2	0	0	0	0	A	0.4790	3.4893	3.3944	3.5580	3.4216	3.6807
TCGA-AA-A00W	COAD	stage i	Left	0	1	1	0	0	0	AP	0.8011	3.5613	3.3896	3.5418	3.4406	3.5819
TCGA-AA-A00Z	COAD	stage iia	Left	0	1	0	0	0	0	A	0.7513	3.4457	3.3831	3.5453	3.4898	3.7479
TCGA-AA-A010	COAD	stage iib	Right	0	1	1	0	0	0	AP	0.4382	3.4080	3.2705	3.3915	1.2596	2.6829
TCGA-AA-A017	COAD	stage iia	Left	0	1	0	0	0	0	A	0.9822	3.4535	3.2857	3.3706	2.7229	2.9749
TCGA-AA-A01D	COAD	stage iiic	Left	0	0	1	0	0	1	PB	-0.0188	3.5202	3.2803	3.2969	1.8453	2.5008
TCGA-AA-A01F	COAD	stage iiib	Left	0	0	1	1	0	0	PK	0.8024	3.6272	3.3475	3.4269	2.3661	2.3794
TCGA-AA-A01G	COAD	stage iia	Right	0	0	1	1	0	0	PK	0.6972	3.5342	3.3781	3.5304	3.1578	3.3678
TCGA-AA-A01I	COAD	stage i	Left	0	1	0	1	0	0	AK	0.7704	3.6416	3.3354	3.3815	3.1750	3.3330
TCGA-AA-A01K	COAD	stage iiic	Left	0	2	1	1	0	0	APK	0.6516	3.4729	3.3130	3.3305	1.5639	2.7064
TCGA-AA-A01P	COAD	stage iii	Right	1	0	0	0	0	1	B	0.3503	3.8028	3.4805	3.3127	1.3984	1.8538
TCGA-AA-A01Q	COAD	stage ii	Right	1	1	0	0	0	0	A	0.1321	3.5003	3.2553	3.3341	0.9659	2.1964
TCGA-AA-A01R	COAD	stage iii	Right	1	2	0	1	0	0	AK	0.3567	3.5367	3.4095	3.4952	2.0450	2.5463
TCGA-AA-A01S	COAD	stage iii	Left	0	2	1	0	0	0	AP	0.7476	3.5554	3.4054	3.6106	2.8920	3.0063
TCGA-AA-A01T	COAD	stage iii	Left	0	1	1	0	0	0	AP	0.8223	3.7881	3.4232	3.4364	2.7911	3.3624

TCGA-AA-A01V	COAD	stage i	Right	0	1	0	0	1	0	AN	0.2730	3.5370	3.4811	3.6592	1.6849	2.7780
TCGA-AA-A01X	COAD	stage iii	Left	0	0	0	1	0	0	K	0.3775	3.4859	3.3711	3.4976	2.5877	2.9751
TCGA-AA-A01Z	COAD	stage ii	Right	0	1	1	1	0	0	APK	0.6548	3.6334	3.4797	3.6612	3.0408	3.2638
TCGA-AA-A022	COAD	stage ii	Right	1	0	0	0	0	1	B	0.2198	3.5671	3.2703	3.0761	1.2020	2.5536
TCGA-AA-A024	COAD	stage ii	Left	0	1	0	0	1	0	AN	0.0924	3.7792	3.4890	3.5645	2.4695	3.3307
TCGA-AA-A029	COAD	stage ii	Right	0	1	0	1	0	0	AK	0.0936	3.9126	3.4566	3.4702	2.4278	3.5392
TCGA-AA-A02F	COAD	stage iv	Left	0	2	1	0	1	0	APN	0.6884	3.5962	3.3927	3.5703	2.7733	2.7381
TCGA-AA-A02H	COAD	stage iv	Left	0	1	1	0	0	0	AP	0.8193	3.4190	3.3445	3.5252	2.8550	3.3599
TCGA-AA-A02J	COAD	stage iv	Left	0	2	1	0	0	0	AP	0.7396	3.3688	3.3482	3.5997	3.5104	3.8178
TCGA-AA-A02O	COAD	stage ii	Right	0	1	0	1	0	0	AK	0.2402	3.7497	3.4947	3.5805	2.6640	3.0567
TCGA-AA-A02W	COAD	stage i	Left	0	2	1	1	0	0	APK	0.8107	3.4211	3.3833	3.5871	3.2901	3.4893
TCGA-AA-A02Y	COAD	stage i	Right	0	0	0	1	0	0	K	0.5103	3.7891	3.4378	3.4227	1.8901	2.7241
TCGA-AA-A03F	COAD	stage iii	Right	0	2	0	1	0	0	AK	-0.1259	3.6340	3.3381	3.4203	1.4029	2.7518
TCGA-AA-A03J	COAD	stage i	Left	0	0	1	1	0	0	PK	0.6366	3.6557	3.4074	3.5021	2.9269	3.0061
TCGA-AF-2689	READ	stage iv	Left	0	0	1	1	0	0	PK	0.4125	3.6632	3.2951	3.1613	2.4075	2.8876
TCGA-AF-2691	READ	stage i	Left	0	1	1	1	1	0	APK N	0.4075	3.6491	3.3278	3.2853	2.6327	3.0826
TCGA-AF-2692	READ	stage iia		0	1	0	1	0	0	AK	0.2801	3.5862	3.3557	3.3276	2.9619	3.3730
TCGA-AF-3400	READ	stage iia	Left	0	1	1	0	0	0	AP	0.1768	3.6167	3.3568	3.1744	2.5858	2.9595
TCGA-AF-3913	READ	stage iv	Left	0	1	1	0	1	0	APN	0.9588	3.5307	3.3019	3.4342	3.2542	3.3578
TCGA-AG-3574	READ	stage ii	Left	0	0	0	0	0	0	WT	0.6877	3.5469	3.3663	3.5703	2.7847	3.2863
TCGA-AG-3575	READ	stage ii	Left	0	0	1	1	0	0	PK	0.2000	3.8440	3.6071	3.2330	2.9552	3.0931
TCGA-AG-3578	READ	stage iia	Left	0	0	1	0	0	1	PB	-0.0379	3.5690	3.2762	3.2775	1.3918	2.4304
TCGA-AG-3580	READ	stage i	Left	0	1	0	1	0	0	AK	0.6137	3.4828	3.4081	3.5143	3.1008	3.4581
TCGA-AG-3581	READ	stage i	Left	0	1	1	1	0	0	APK	0.3877	3.5248	3.3045	3.4152	2.7100	2.9883
TCGA-AG-3582	READ	stage iv	Left	0	0	0	0	0	0	WT	0.8537	3.3919	3.3436	3.4731	2.8932	3.3661
TCGA-AG-3583	READ	stage iv	Left	0	1	0	1	0	0	AK	0.3985	3.6298	3.3024	3.3978	2.9075	3.1371
TCGA-AG-3584	READ	stage iv	Left	0	1	0	0	0	0	A	0.5470	3.6232	3.2643	3.3355	2.2979	3.1187
TCGA-AG-3586	READ	stage iii	Left	0	1	0	1	0	0	AK	0.5253	3.5970	3.3912	3.5475	2.9435	3.2129
TCGA-AG-3587	READ	stage i	Left	0	2	1	0	0	0	AP	0.8975	3.5090	3.3191	3.4336	3.2080	3.7952
TCGA-AG-3593	READ	stage iia	Left	0	1	0	0	0	0	A	0.6936	3.3447	3.3048	3.4882	3.3232	3.3343
TCGA-AG-3594	READ	stage iia	Left	0	1	1	1	0	0	APK	-0.2074	3.6010	3.2855	3.2294	2.0804	2.9703
TCGA-AG-3598	READ	stage iia	Left	0	2	1	0	0	0	AP	0.6545	3.5633	3.3949	3.4904	3.1046	3.2361
TCGA-AG-3599	READ	stage i	Left	0	2	0	1	0	0	AK	0.4231	3.8316	3.4859	3.5503	2.5844	3.6018
TCGA-AG-3600	READ	stage iiic	Left	0	0	0	0	0	0	WT	0.3594	3.6633	3.3292	3.2112	1.2414	2.3291
TCGA-AG-3601	READ	stage iiib	Left	0	2	1	0	0	0	AP	0.9510	3.7217	3.4120	3.4297	3.5129	2.9657
TCGA-AG-3602	READ	stage iiic	Left	0	1	1	1	0	0	APK	0.5992	4.0347	3.5474	3.3425	3.3131	3.3105
TCGA-AG-3605	READ	stage iv	Left	0	1	1	1	0	0	APK	0.5991	3.5545	3.3479	3.5586	3.0795	3.5349
TCGA-AG-3608	READ	stage iia	Left		0	1	0	0	0	P	0.5089	3.5592	3.3437	3.5128	2.9603	3.3068
TCGA-AG-3609	READ	stage iiic	Left	0	2	1	0	0	0	AP	0.9353	3.7393	3.4329	3.3883	2.9458	3.5018
TCGA-AG-3611	READ	stage iia	Left	0	1	1	1	0	0	APK	-0.0325	3.7617	3.3437	3.2500	0.7825	1.5422
TCGA-AG-3612	READ	stage iiib	Left	0	1	1	0	0	0	AP	0.8324	3.5437	3.3427	3.4518	3.6058	3.9062
TCGA-AG-3726	READ	stage i	Left	0	2	1	1	0	0	APK	0.8316	3.5058	3.5761	3.8101	3.4381	3.7468
TCGA-AG-3727	READ	stage iii	Left	0	1	0	1	0	0	AK	0.4372	3.5287	3.4820	3.6626	1.9785	2.5661
TCGA-AG-3878	READ	stage i	Left	0	1	0	1	0	0	AK	0.0651	3.5939	3.5307	3.6253	2.7924	3.0241
TCGA-AG-3881	READ	stage iia	Left	0	1	0	0	0	0	A	-0.3472	3.9791	3.6120	3.3712	1.7872	2.5750
TCGA-AG-3882	READ	stage i	Left	0	1	1	0	0	0	AP	0.9663	3.5289	3.3985	3.5737	2.6928	3.0635
TCGA-AG-3883	READ	stage i	Left	0	1	0	0	0	0	A	0.6864	3.7325	3.4913	3.4747	3.0757	3.4318
TCGA-AG-3887	READ	stage iia	Left	0	2	0	1	0	0	AK	0.4629	3.5174	3.3840	3.5445	2.9733	2.7829
TCGA-AG-3890	READ	stage i	Left	0	1	1	0	0	0	AP	0.6848	3.3652	3.3332	3.5120	2.7936	3.3134

TCGA-AG-3892	READ	stage i	Left	0	1	0	1	1	0	AKN	0.4628	3.7738	3.4685	3.4502	2.3822	3.3106
TCGA-AG-3893	READ	stage iiib	Left	0	1	1	0	0	0	AP	0.5921	3.4925	3.2786	3.3439	2.5615	3.2651
TCGA-AG-3894	READ	stage iia	Left	0	1	0	0	1	0	AN	0.6334	3.6595	3.4658	3.5796	2.6081	3.1479
TCGA-AG-3896	READ	stage i	Left	0	1	1	1	0	0	APK	0.6334	3.5301	3.3429	3.4777	2.3603	2.6899
TCGA-AG-3898	READ	stage iia	Left	0	2	1	0	0	0	AP	0.8237	3.5407	3.4006	3.4839	3.1882	3.1914
TCGA-AG-3901	READ	stage iiib	Left	0	1	0	1	0	0	AK	0.1956	3.4925	3.3739	3.3846	2.7081	2.9611
TCGA-AG-3902	READ	stage iia	Left	0	1	1	1	0	0	APK	0.4845	3.6578	3.4322	3.5504	3.2886	3.6830
TCGA-AG-3909	READ	stage iiib	Left	0	2	1	1	0	0	APK	0.6416	3.6681	3.3137	3.4060	3.1633	3.2779
TCGA-AG-3999	READ	stage iiic	Left	0	1	1	1	0	0	APK	0.6952	3.6841	3.4518	3.5256	2.5064	3.1931
TCGA-AG-4001	READ	stage iia	Left	0	1	1	0	0	0	AP	0.8955	3.4113	3.3463	3.4024	3.5576	3.3425
TCGA-AG-4005	READ	stage iv	Left	0	2	1	1	0	0	APK	0.5875	3.5834	3.3926	3.4693	2.5778	2.9000
TCGA-AG-4007	READ	stage iv	Left	0	2	1	0	0	0	AP	0.7710	3.6457	3.3796	3.4590	3.0259	3.4257
TCGA-AG-4008	READ	stage iia	Left	0	0	1	1	0	0	PK	0.5753	3.4791	3.4040	3.4876	2.9685	3.3920
TCGA-AG-4015	READ	stage iia	Left	0	1	1	0	0	0	AP	0.7860	3.5235	3.3190	3.4595	3.1189	3.4116
TCGA-AG-A002	READ	stage i	Left	0	2	0	0	0	0	A	0.3779	3.5688	3.3228	3.2922	0.6661	2.9477
TCGA-AG-A008	READ	stage i	Left	0	1	0	1	0	0	AK	0.1713	3.5055	3.3887	3.5236	1.8507	2.7382
TCGA-AG-A00C	READ	stage iiib	Left	0	2	1	1	0	0	APK	0.9339	3.4948	3.3489	3.5136	3.1079	3.3604
TCGA-AG-A00H	READ	stage iia	Left	0	0	0	1	0	0	K	0.9103	3.5929	3.4003	3.4005	2.9660	3.2990
TCGA-AG-A00Y	READ	stage iia	Left	0	0	1	1	0	0	PK	0.7136	3.5265	3.4051	3.5552	2.4577	2.5962
TCGA-AG-A011	READ	stage iia	Left	0	2	1	0	0	0	AP	0.4748	3.3695	3.2423	3.4006	3.4183	3.8780
TCGA-AG-A014	READ	stage i	Left	0	1	1	1	0	0	APK	0.7722	3.4382	3.3078	3.4193	1.7969	2.2637
TCGA-AG-A015	READ	stage i	Left	0	1	0	1	0	0	AK	0.4856	3.5912	3.3510	3.4711	2.4623	2.6449
TCGA-AG-A016	READ	stage iv	Left	0	0	1	0	0	0	P	0.8667	3.4054	3.3011	3.5177	3.2846	3.3431
TCGA-AG-A01J	READ	stage iia	Left	0	1	1	0	1	0	APN	0.7126	3.6207	3.3191	3.4461	3.5787	3.5502
TCGA-AG-A01W	READ	stage ii	Left	0	1	1	1	0	0	APK	0.5959	3.5030	3.3008	3.4170	3.0216	3.1799
TCGA-AG-A01Y	READ	stage ii	Left	0	1	1	0	0	0	AP	0.5544	3.4215	3.4106	3.5797	3.2991	3.3252
TCGA-AG-A020	READ	stage iii	Left	0	2	1	1	0	0	APK	0.0406	3.4899	3.2900	3.4140	2.7693	3.4371
TCGA-AG-A025	READ	stage i	Left	0	1	0	1	0	0	AK	0.7388	3.5939	3.5091	3.7324	3.1116	3.3955
TCGA-AG-A026	READ	stage ii	Left	0	1	1	0	0	0	AP	0.8353	3.5843	3.4555	3.5879	3.4314	3.6139
TCGA-AG-A02G	READ	stage iv	Left	0	1	0	0	0	0	A	0.6571	3.4016	3.2961	3.5148	2.9083	3.0708
TCGA-AG-A02N	READ	stage ii	Left	1	2	1	1	0	0	APK	0.1378	3.5677	3.2939	3.3457	2.4471	2.7588
TCGA-AG-A02X	READ	stage i	Left	0	1	1	1	0	0	APK	0.1729	3.5474	3.3261	3.4385	1.2070	2.8748
TCGA-AG-A032	READ	stage iiib	Left	0	2	1	1	0	0	APK	0.7742	3.7370	3.4343	3.4782	2.8326	3.0601
TCGA-AG-A036	READ	stage iii	Left	0	2	1	0	0	0	AP	0.7179	3.4409	3.3127	3.4626	3.4216	3.4173
TCGA-AY-4070	COAD	stage iiic	Right	0	0	1	0	0	0	P	0.5640	3.5292	3.3423	3.4039	2.5353	2.8855
TCGA-AY-4071	COAD	stage i		0	1	1	0	0	0	AP	0.9928	3.5689	3.2325	3.2959	3.1625	3.2889
TCGA-3L-AA1B	COAD										0.5473	3.5399	3.4299	3.6193	3.1647	3.3496
TCGA-4N-A93T	COAD										0.8340	3.7867	3.3797	3.3464	1.2032	2.2932
TCGA-4T-AA8H	COAD										0.6261	3.7493	3.3923	3.3609	2.5201	2.7391
TCGA-5M-AAT4	COAD										0.7540	3.6991	3.4643	3.5430	3.1370	3.4801
TCGA-5M-AAT5	COAD										0.7838	3.7084	3.4787	3.5754	3.4378	3.5379
TCGA-5M-AAT6	COAD										0.1480	3.6021	3.4101	3.3075	2.7511	2.4674
TCGA-5M-AATA	COAD										0.6783	3.5807	3.4068	3.4702	3.9096	3.8469
TCGA-5M-AATE	COAD										0.7403	3.5662	3.4067	3.5461	3.1428	3.0182
TCGA-A6-2671	COAD										0.5323	3.5586	3.3490	3.3930	3.1119	3.3294
TCGA-A6-2675	COAD										0.4301	3.5327	3.3449	3.2847	2.5213	2.4448
TCGA-A6-2679	COAD										0.5248	3.6740	3.3147	3.2404	2.0877	2.4510
TCGA-A6-2680	COAD										0.3302	3.6256	3.3226	3.3509	2.8252	2.8719
TCGA-A6-2681	COAD										0.6484	3.5218	3.3720	3.4763	2.8737	3.2802
TCGA-A6-2682	COAD										0.5634	3.6846	3.3476	3.3339	2.9286	3.0980
TCGA-A6-2684	COAD										0.5971	3.6515	3.3883	3.3816	2.7727	2.8604

TCGA-A6-2685	COAD										0.4170	3.6962	3.3941	3.3534	3.2953	3.1955
TCGA-A6-2686	COAD										0.4459	3.6509	3.2734	3.1645	1.6668	2.4061
TCGA-A6-3809	COAD										0.4192	3.5696	3.3425	3.3821	2.8464	3.0648
TCGA-A6-4105	COAD										0.6544	3.6042	3.4384	3.5277	3.4743	3.5507
TCGA-A6-4107	COAD										0.6369	3.7608	3.4863	3.4606	2.8438	2.7963
TCGA-A6-5656	COAD										0.9951	3.5207	3.3421	3.4850	3.2401	3.4699
TCGA-A6-5657	COAD										0.5483	3.6805	3.5360	3.4980	3.3281	3.5440
TCGA-A6-5659	COAD										0.7014	3.5734	3.3348	3.3822	3.2620	3.4316
TCGA-A6-5660	COAD										0.8422	3.6355	3.4131	3.4895	3.2168	2.9725
TCGA-A6-5661	COAD										0.3773	3.7704	3.4028	3.3002	2.5538	3.2263
TCGA-A6-5662	COAD										0.5799	3.5772	3.2880	3.2341	3.0789	2.9233
TCGA-A6-5664	COAD										0.3939	3.6073	3.4891	3.5035	2.5767	3.1611
TCGA-A6-5665	COAD										0.3955	3.8046	3.3915	3.2233	2.2329	2.8307
TCGA-A6-5666	COAD										0.7513	3.7187	3.4913	3.5997	3.5003	3.6861
TCGA-A6-5667	COAD										0.6801	3.5784	3.3124	3.3547	3.3249	3.2146
TCGA-A6-6137	COAD										0.7918	3.4904	3.4050	3.5633	3.0358	3.1869
TCGA-A6-6138	COAD										0.7679	3.5195	3.3611	3.4414	3.5731	3.6430
TCGA-A6-6140	COAD										0.8765	3.4419	3.3438	3.5157	3.3364	3.0285
TCGA-A6-6141	COAD										0.2717	3.5918	3.3839	3.4695	2.4393	2.7305
TCGA-A6-6142	COAD										0.9452	3.5358	3.5055	3.5226	3.4204	3.4765
TCGA-A6-6648	COAD										0.5309	3.4322	3.3973	3.5841	3.5926	3.1904
TCGA-A6-6649	COAD										0.1760	3.6827	3.3686	3.2254	2.2854	2.4918
TCGA-A6-6650	COAD										0.8386	3.4710	3.2592	3.4137	3.5339	3.1694
TCGA-A6-6651	COAD										0.5197	3.3519	3.3385	3.2824	2.6289	3.1901
TCGA-A6-6652	COAD										0.7026	3.4653	3.4478	3.6278	3.4345	3.6064
TCGA-A6-6653	COAD										0.3057	3.6108	3.3733	3.4033	1.4105	2.3189
TCGA-A6-6654	COAD										0.6744	3.5346	3.5967	3.5034	2.6188	2.4864
TCGA-A6-6780	COAD										0.5536	3.5603	3.2835	3.2574	2.7397	2.7629
TCGA-A6-6781	COAD										-0.0559	3.6441	3.4688	3.1500	1.3698	2.5524
TCGA-A6-6782	COAD										0.9206	3.5559	3.3666	3.4418	3.2199	3.3337
TCGA-A6-A565	COAD										0.2126	3.7662	3.4055	3.1154	1.8373	2.9175
TCGA-A6-A566	COAD										0.3702	3.5470	3.3832	3.2221	3.0827	2.6400
TCGA-A6-A567	COAD										0.6876	3.5319	3.3727	3.4253	2.9107	3.1003
TCGA-A6-A56B	COAD										0.7503	3.5948	3.4367	3.4743	3.5602	3.7406
TCGA-A6-A5ZU	COAD										0.7944	3.5432	3.3717	3.4288	2.9221	3.0516
TCGA-AA-3488	COAD										0.8361	3.5268	3.3186	3.4706	2.7514	3.3715
TCGA-AA-3489	COAD										0.4487	3.5533	3.3283	3.2217	3.0129	3.2622
TCGA-AA-3492	COAD										0.3718	3.7024	3.3160	3.3550	1.5963	2.7957
TCGA-AA-3494	COAD										0.8468	3.4507	3.3490	3.5016	3.5277	3.9083
TCGA-AA-3495	COAD										0.7566	3.6102	3.3289	3.4052	3.2207	3.3155
TCGA-AA-3496	COAD										0.5819	3.4350	3.2945	3.2944	1.5779	2.1966
TCGA-AA-3502	COAD										0.0293	3.7330	3.4018	3.3724	1.0088	2.1926
TCGA-AA-3506	COAD										0.4934	3.6680	3.4094	3.4827	2.2331	2.7960
TCGA-AA-3509	COAD										0.6525	3.6948	3.4017	3.4683	1.4772	1.9412
TCGA-AA-3510	COAD										0.3651	3.4963	3.3823	3.5752	1.1518	2.8157
TCGA-AA-3511	COAD										0.4971	3.6278	3.2950	3.2338	3.2211	3.1912
TCGA-AA-3655	COAD										0.3985	3.6691	3.3034	3.2658	3.0241	2.9670
TCGA-AA-3660	COAD										0.3887	3.6504	3.3142	3.3324	2.4317	2.7245
TCGA-AA-3662	COAD										0.4028	3.6146	3.2922	3.3185	2.8496	2.9558

TCGA-AA-3663	COAD										0.2382	3.7522	3.3732	3.3026	1.7159	2.5555
TCGA-AA-3675	COAD										0.6102	3.8737	3.5692	3.5492	2.7437	2.6595
TCGA-AA-3697	COAD										0.6504	3.7197	3.3714	3.2568	3.3945	3.3589
TCGA-AA-3712	COAD										0.4512	3.6128	3.3534	3.3241	2.6869	3.0296
TCGA-AA-3713	COAD										0.2639	3.7312	3.2774	3.1299	2.2985	3.0416
TCGA-AA-3815	COAD										0.3547	3.3388	3.3142	3.4365	1.3867	2.3867
TCGA-AA-3841	COAD										0.5922	3.5142	3.3448	3.4412	2.1134	2.4510
TCGA-AA-3861	COAD										0.3020	3.7161	3.3848	3.4163	1.6816	2.4802
TCGA-AA-3862	COAD										0.5707	3.5637	3.2387	3.2646	2.7014	3.0648
TCGA-AA-3950	COAD										0.3288	3.5122	3.2849	3.2264	2.1948	2.3872
TCGA-AA-3968	COAD										0.6955	3.4114	3.2958	3.3910	3.2227	3.0976
TCGA-AA-3970	COAD										0.5507	3.5914	3.3600	3.4769	4.0565	3.8944
TCGA-AA-A01C	COAD										0.8696	3.5047	3.3746	3.5299	2.7868	2.9810
TCGA-AA-A02E	COAD										0.7082	3.5806	3.3682	3.4754	2.1361	3.2788
TCGA-AA-A02K	COAD										0.7413	3.5519	3.2832	3.4109	2.9242	3.0725
TCGA-AA-A02R	COAD										0.1625	3.4337	3.2958	3.2234	0.5354	2.1094
TCGA-AD-5900	COAD										0.0984	3.5582	3.3152	3.2484	0.7941	2.1682
TCGA-AD-6548	COAD										0.6727	3.5990	3.4985	3.5968	3.3640	3.5395
TCGA-AD-6888	COAD										0.8359	3.7773	3.4767	3.4296	3.0839	3.0996
TCGA-AD-6889	COAD										0.4755	3.9360	3.5671	3.4760	1.4169	2.9218
TCGA-AD-6890	COAD										0.7641	3.6517	3.4692	3.5974	3.3939	3.4868
TCGA-AD-6895	COAD										0.3763	3.9117	3.5464	3.3452	2.0489	3.0855
TCGA-AD-6899	COAD										0.7184	3.5306	3.4093	3.4008	2.6494	2.9299
TCGA-AD-6901	COAD										0.6841	3.7280	3.5372	3.5454	2.8063	2.8622
TCGA-AD-6963	COAD										0.8408	3.6402	3.3963	3.4125	3.4922	3.2511
TCGA-AD-6964	COAD										0.3941	3.4883	3.3376	3.3253	1.1286	1.8690
TCGA-AD-6965	COAD										0.6772	3.5824	3.3844	3.5439	2.8932	3.0349
TCGA-AD-A5EJ	COAD										0.1048	3.7628	3.4492	3.2353	1.1350	2.4337
TCGA-AD-A5EK	COAD										0.6545	3.4011	3.4002	3.6253	3.8653	3.9724
TCGA-AF-2687	READ										0.5884	3.4097	3.3948	3.3153	2.9836	3.2738
TCGA-AF-2690	READ										0.6062	3.4649	3.3816	3.4353	2.8529	2.8383
TCGA-AF-2693	READ										0.7353	3.7660	3.4153	3.4211	2.4813	3.0512
TCGA-AF-3911	READ										0.8174	3.6348	3.4042	3.4426	3.5326	3.6132
TCGA-AF-4110	READ										0.4239	3.6945	3.4075	3.3918	2.4500	2.5741
TCGA-AF-5654	READ										0.7257	3.6913	3.3703	3.3433	2.1925	2.9084
TCGA-AF-6136	READ										0.4896	3.7183	3.3211	3.2507	1.7665	2.1013
TCGA-AF-6655	READ										0.7307	3.5214	3.4698	3.5435	3.4311	3.5711
TCGA-AF-6672	READ										0.1099	3.7876	3.5095	3.5728	1.5118	2.8337
TCGA-AF-A56K	READ										0.7999	3.4824	3.4297	3.5480	3.2723	3.2668
TCGA-AF-A56L	READ										0.8192	3.5444	3.4096	3.5339	3.5786	3.4346
TCGA-AF-A56N	READ										0.8459	3.5389	3.4322	3.5252	3.6060	3.7100
TCGA-AG-3591	READ										0.1342	3.9996	3.5608	3.3301	1.8786	2.8123
TCGA-AG-3592	READ										0.8686	3.4548	3.3489	3.4617	3.1881	3.3204
TCGA-AG-3725	READ										0.4947	3.8078	3.3699	3.2576	1.9982	2.4343
TCGA-AG-3728	READ										0.4967	3.4550	3.3479	3.4083	2.3694	2.6429
TCGA-AG-3731	READ										0.3349	3.5058	3.3100	3.2936	3.0747	3.2686
TCGA-AG-3732	READ										0.1787	3.3610	3.2343	3.1987	1.6663	2.2737
TCGA-AG-3742	READ										0.5142	3.5584	3.3087	3.2847	3.4286	3.5354
TCGA-AG-3885	READ										0.4623	3.6082	3.3432	3.4579	1.2233	2.1154
TCGA-AG-4021	READ										0.7909	3.6112	3.4152	3.4568	3.8707	3.7874
TCGA-AG-4022	READ										0.6797	3.5902	3.3548	3.4084	3.3420	3.0301

TCGA-AG-A01L	READ										0.5477	3.6337	3.3362	3.4878	2.5449	2.4578
TCGA-AG-A01N	READ										0.7851	3.5500	3.2963	3.4253	3.6544	3.4987
TCGA-AG-A023	READ										0.7360	3.5517	3.4705	3.6759	2.1799	2.8441
TCGA-AH-6544	READ										0.6657	3.7589	3.4443	3.4514	2.5872	2.8920
TCGA-AH-6547	READ										0.2102	3.5803	3.3021	3.2483	2.8650	3.2090
TCGA-AH-6549	READ										0.8160	3.5372	3.4208	3.4497	2.9847	3.4626
TCGA-AH-6643	READ										0.5209	3.6380	3.3666	3.3221	2.8622	2.7561
TCGA-AH-6644	READ										0.6204	3.6098	3.4933	3.5652	3.9128	3.7619
TCGA-AH-6897	READ										0.9152	3.5865	3.3802	3.3974	3.1374	3.7077
TCGA-AH-6903	READ										0.5676	3.5700	3.3941	3.5381	3.3765	3.2801
TCGA-AM-5820	COAD										0.5817	3.8357	3.4262	3.3872	3.0537	3.2975
TCGA-AM-5821	COAD										0.4277	3.9371	3.6409	3.2813	3.7803	3.6259
TCGA-AU-3779	COAD										0.9623	3.6395	3.3595	3.3521	2.9618	3.0292
TCGA-AU-6004	COAD										0.3479	3.6766	3.4156	3.3456	2.4456	2.8890
TCGA-AY-5543	COAD										0.8712	3.7583	3.4430	3.5397	3.4470	3.5918
TCGA-AY-6196	COAD										0.2536	3.4452	3.2901	3.1515	1.3804	2.0189
TCGA-AY-6197	COAD										0.3978	3.6090	3.4613	3.5282	2.7561	3.2109
TCGA-AY-6386	COAD										0.5616	3.7005	3.4248	3.4384	2.8268	2.9242
TCGA-AY-A54L	COAD										0.5833	3.7632	3.4532	3.5188	3.6215	3.7470
TCGA-AY-A69D	COAD										0.7061	3.6010	3.4513	3.5527	2.8330	3.4658
TCGA-AY-A71X	COAD										0.0500	3.8590	3.4975	3.4575	1.1162	2.4757
TCGA-AY-A8YK	COAD										0.8256	3.5509	3.3312	3.4025	3.3119	3.3651
TCGA-AZ-4308	COAD										0.6607	3.7137	3.4337	3.3673	2.5369	2.8235
TCGA-AZ-4313	COAD										0.0073	3.7954	3.3813	3.1985	1.5323	2.7743
TCGA-AZ-4315	COAD										0.5591	3.9593	3.4374	3.3231	2.7491	2.9577
TCGA-AZ-4323	COAD										0.3356	3.2717	3.1972	2.9741	0.9793	1.9436
TCGA-AZ-4614	COAD										0.5011	3.6853	3.3918	3.2864	2.1499	2.4020
TCGA-AZ-4615	COAD										0.3212	3.7470	3.3810	3.2961	0.8312	2.1247
TCGA-AZ-4616	COAD										0.6014	3.8483	3.5285	3.3945	2.7276	2.8519
TCGA-AZ-4681	COAD										0.6051	3.7034	3.3851	3.5139	2.9382	3.0523
TCGA-AZ-4682	COAD										0.6909	3.8120	3.4488	3.4448	3.6953	3.7116
TCGA-AZ-4684	COAD										0.6798	3.6368	3.3388	3.3322	3.4182	3.4733
TCGA-AZ-5403	COAD										0.8556	3.7228	3.3815	3.2672	3.5176	3.3306
TCGA-AZ-5407	COAD										0.3350	3.8243	3.4472	3.3910	1.9737	2.8130
TCGA-AZ-6598	COAD										0.4035	3.5815	3.3161	3.2861	1.4452	2.0259
TCGA-AZ-6599	COAD										-0.0148	3.5350	3.2973	3.3418	1.2931	2.0929
TCGA-AZ-6600	COAD										0.4368	3.6139	3.2606	3.1830	2.0460	2.8786
TCGA-AZ-6601	COAD										0.2951	3.6107	3.3389	3.2541	1.7806	2.1758
TCGA-AZ-6603	COAD										0.4684	3.4775	3.2978	3.2523	3.0181	2.9914
TCGA-AZ-6605	COAD										0.2754	3.4738	3.3612	3.1186	2.8979	2.6809
TCGA-AZ-6606	COAD										0.5493	3.9481	3.5296	3.3946	2.8184	2.9112
TCGA-AZ-6607	COAD										0.3645	3.6864	3.6578	3.3022	3.4216	3.2629
TCGA-AZ-6608	COAD										0.8378	3.6779	3.4462	3.5490	3.1507	2.9412
TCGA-BM-6198	READ										0.5358	3.6917	3.4250	3.3264	2.4271	2.7902
TCGA-CA-5254	COAD										0.5369	3.7368	3.4820	3.3296	0.1805	1.6788
TCGA-CA-5255	COAD										0.3608	4.0791	3.6034	3.3315	2.6386	3.0980
TCGA-CA-5256	COAD										0.7540	3.7977	3.3907	3.4246	3.2013	3.3183
TCGA-CA-5796	COAD										0.1538	3.7569	3.3218	3.1890	1.6250	2.7612
TCGA-CA-5797	COAD										0.8244	3.4958	3.2964	3.4114	3.6164	3.4818
TCGA-CA-6715	COAD										0.7789	3.4403	3.3591	3.5398	3.6273	3.7342

TCGA-CA-6716	COAD										0.7312	3.5284	3.4742	3.6448	3.0476	3.0565
TCGA-CA-6717	COAD										0.3573	3.5481	3.3743	3.3635	2.4973	2.5746
TCGA-CA-6718	COAD										0.5006	3.5476	3.3680	3.2588	1.4060	2.5445
TCGA-CA-6719	COAD										0.8250	3.4761	3.4891	3.6431	3.0982	3.0967
TCGA-CI-6619	READ										0.3932	3.5155	3.3892	3.4196	3.0885	3.4903
TCGA-CI-6620	READ										0.6952	3.4468	3.3396	3.3876	2.0554	2.5015
TCGA-CI-6621	READ										0.5859	3.5140	3.3973	3.4188	3.6887	3.4448
TCGA-CI-6622	READ										0.7266	3.7434	3.4139	3.4694	3.3519	3.2358
TCGA-CI-6623	READ										0.8746	3.5182	3.3204	3.3293	3.3344	2.9812
TCGA-CI-6624	READ										0.5859	3.6728	3.3681	3.2877	3.4923	3.3407
TCGA-CK-4947	COAD										0.5667	3.5702	3.3916	3.4921	3.4099	3.3523
TCGA-CK-4948	COAD										0.5856	3.5880	3.4333	3.4463	2.6938	3.1808
TCGA-CK-4950	COAD										0.4582	3.7379	3.4105	3.4321	2.8033	3.0979
TCGA-CK-4951	COAD										0.3384	3.6404	3.4197	3.3422	2.3198	2.5314
TCGA-CK-4952	COAD										0.0900	3.5562	3.3261	3.3581	1.7392	2.6220
TCGA-CK-5912	COAD										0.8312	3.2693	3.2867	3.4897	0.9534	1.4905
TCGA-CK-5913	COAD										0.4998	3.6463	3.4317	3.3339	1.4813	2.4944
TCGA-CK-5914	COAD										0.8172	3.5131	3.3993	3.5196	3.5285	3.4418
TCGA-CK-5915	COAD										0.8043	3.4398	3.4518	3.6382	3.6404	2.8094
TCGA-CK-5916	COAD										0.5369	3.5454	3.3866	3.3960	1.4722	2.4894
TCGA-CK-6746	COAD										0.0842	3.5684	3.3084	3.0847	1.7199	2.4910
TCGA-CK-6747	COAD										0.5573	3.7106	3.5222	3.6403	3.1329	3.1470
TCGA-CK-6748	COAD										0.9233	3.6876	3.5020	3.5071	3.2190	3.1727
TCGA-CK-6751	COAD										0.1975	3.7113	3.4889	3.5883	2.5550	3.0232
TCGA-CL-4957	READ										0.6244	3.4424	3.3183	3.4288	3.2003	3.2628
TCGA-CL-5917	READ										0.8138	3.4985	3.3693	3.4711	2.9860	2.9201
TCGA-CL-5918	READ										0.9087	3.5671	3.3774	3.5000	3.4132	3.5156
TCGA-CM-4743	COAD										0.3526	4.2513	3.7119	3.1514	3.4730	3.2707
TCGA-CM-4744	COAD										0.4851	4.0857	3.6305	3.4259	2.1935	2.9327
TCGA-CM-4746	COAD										-0.2365	3.8919	3.5051	3.4376	1.6963	2.7080
TCGA-CM-4747	COAD										0.8353	3.7033	3.4355	3.5395	2.8009	3.1211
TCGA-CM-4748	COAD										0.5519	3.5918	3.3368	3.3917	2.9009	3.5403
TCGA-CM-4750	COAD										0.9247	3.5648	3.3817	3.4362	3.1535	3.4680
TCGA-CM-4751	COAD										0.3982	3.8250	3.4344	3.2772	3.0405	3.1104
TCGA-CM-4752	COAD										0.8341	3.5309	3.2831	3.3340	2.6654	2.9727
TCGA-CM-5341	COAD										0.8683	3.9073	3.4268	3.1974	3.3498	3.4026
TCGA-CM-5344	COAD										0.8840	3.7408	3.4024	3.3984	3.3369	3.4259
TCGA-CM-5348	COAD										0.6103	3.5881	3.3974	3.2823	2.6080	2.8123
TCGA-CM-5349	COAD										0.6882	3.5955	3.3943	3.4515	2.6438	2.7964
TCGA-CM-5860	COAD										0.6958	3.6260	3.4352	3.4090	3.3891	3.3360
TCGA-CM-5861	COAD										-0.1609	3.8735	3.5097	3.1877	1.7005	2.3908
TCGA-CM-5862	COAD										0.5976	3.5102	3.2958	3.3826	2.5985	2.9129
TCGA-CM-5863	COAD										0.2208	3.8199	3.4844	3.3835	1.6949	3.0579
TCGA-CM-5864	COAD										0.6658	3.5828	3.3669	3.4816	2.6143	2.8992
TCGA-CM-5868	COAD										0.7656	3.5430	3.3410	3.4024	2.9910	2.9638
TCGA-CM-6161	COAD										0.5873	3.4464	3.3712	3.5128	2.9658	3.4444
TCGA-CM-6162	COAD										0.1084	3.5668	3.4530	3.3158	2.9700	3.2737
TCGA-CM-6163	COAD										0.6886	3.5938	3.2968	3.3015	3.0549	3.0528
TCGA-CM-6164	COAD										0.9826	3.5261	3.4195	3.5599	3.4881	3.5801
TCGA-CM-6165	COAD										0.5922	3.5413	3.2969	3.3179	3.2213	3.0641

TCGA-CM-6166	COAD										0.7848	3.5014	3.4330	3.5844	3.5595	3.6199
TCGA-CM-6167	COAD										0.4356	3.5067	3.3226	3.2038	1.9890	2.1955
TCGA-CM-6168	COAD										0.5400	3.5385	3.4223	3.3745	3.5677	3.4851
TCGA-CM-6169	COAD										0.7468	3.3795	3.3871	3.5021	2.7695	3.0915
TCGA-CM-6170	COAD										0.9958	3.5085	3.3862	3.4779	3.0834	3.2134
TCGA-CM-6171	COAD										0.1734	3.5062	3.3637	3.3795	1.3159	2.5971
TCGA-CM-6172	COAD										0.5805	3.3911	3.2446	3.3289	1.4710	2.1135
TCGA-CM-6674	COAD										-0.0926	3.7261	3.3758	3.2906	2.1226	2.4319
TCGA-CM-6675	COAD										0.5498	3.5532	3.3471	3.2714	2.4895	2.8844
TCGA-CM-6676	COAD										0.8627	3.6043	3.4187	3.5682	3.7974	3.9823
TCGA-CM-6677	COAD										0.8861	3.6046	3.3989	3.4672	3.0971	3.3253
TCGA-CM-6678	COAD										0.6681	3.8543	3.4618	3.4408	2.3538	2.8000
TCGA-CM-6679	COAD										1.0032	3.4336	3.3993	3.4576	2.9372	2.7546
TCGA-CM-6680	COAD										0.2615	3.5356	3.5089	3.6753	2.3944	2.6716
TCGA-D5-5537	COAD										0.7716	3.6565	3.4500	3.5650	2.3280	2.7351
TCGA-D5-5538	COAD										0.7630	3.5182	3.3810	3.4467	3.1344	3.1446
TCGA-D5-5539	COAD										0.1929	3.6900	3.4560	3.4308	2.3084	2.6927
TCGA-D5-5540	COAD										0.6209	3.6122	3.3969	3.4500	3.8153	3.9584
TCGA-D5-5541	COAD										0.7994	3.4702	3.3919	3.5573	3.4094	3.3953
TCGA-D5-6529	COAD										0.7705	3.7205	3.5161	3.4610	1.4954	2.1529
TCGA-D5-6530	COAD										0.1049	3.5330	3.3771	3.4108	2.2502	2.3799
TCGA-D5-6531	COAD										0.6567	3.5139	3.4158	3.5503	3.0722	3.3281
TCGA-D5-6532	COAD										0.8261	3.5316	3.3576	3.5461	3.4391	3.4778
TCGA-D5-6533	COAD										0.9219	3.3486	3.2840	3.4290	3.4854	3.3416
TCGA-D5-6534	COAD										0.3973	3.5662	3.4635	3.2320	1.5290	2.4696
TCGA-D5-6535	COAD										0.7028	3.7228	3.4813	3.5406	2.8800	2.8508
TCGA-D5-6536	COAD										0.4442	3.6201	3.4446	3.4505	1.9979	1.8206
TCGA-D5-6537	COAD										0.8300	3.6365	3.4661	3.5465	3.1208	2.8450
TCGA-D5-6538	COAD										0.5957	3.4859	3.3523	3.5281	2.1365	1.9966
TCGA-D5-6539	COAD										0.4787	3.6361	3.2812	3.2389	2.3968	2.6580
TCGA-D5-6540	COAD										0.1595	3.7894	3.5165	3.2170	1.8754	2.9725
TCGA-D5-6541	COAD										0.6917	3.6123	3.4284	3.4321	2.6629	2.7082
TCGA-D5-6898	COAD										0.7738	3.5975	3.4308	3.5125	3.8111	3.5053
TCGA-D5-6920	COAD										0.5597	3.5756	3.4866	3.5638	3.2897	3.2674
TCGA-D5-6922-	COAD										0.7609	3.4824	3.3677	3.4166	3.1819	3.1264
TCGA-D5-6923	COAD										0.7906	3.5369	3.4655	3.5042	3.5607	3.5609
TCGA-D5-6924	COAD										0.7362	3.4016	3.3773	3.4728	3.3355	3.5849
TCGA-D5-6926	COAD										0.8656	3.4611	3.4493	3.4784	2.7694	2.8955
TCGA-D5-6927	COAD										0.4165	3.5038	3.3874	3.3629	3.6581	3.4168
TCGA-D5-6928	COAD										0.1421	3.4160	3.3325	3.2695	0.5835	1.6336
TCGA-D5-6929	COAD										0.9425	3.5142	3.3845	3.4869	3.2100	3.0808
TCGA-D5-6930	COAD										-0.1128	3.6960	3.4346	3.2455	1.1039	2.4525
TCGA-D5-6931	COAD										0.5520	3.7187	3.4580	3.4690	1.7307	2.6969
TCGA-D5-6932	COAD										0.8222	3.5777	3.4383	3.5334	3.2982	3.5129
TCGA-D5-7000	COAD										0.3364	3.6988	3.4356	3.4020	1.8388	2.4893
TCGA-DC-4745	READ										0.6845	3.6581	3.3516	3.4600	3.1754	3.4221
TCGA-DC-4749	READ										0.8914	3.6808	3.3862	3.3614	3.4392	3.0345
TCGA-DC-5337	READ										0.9290	3.7641	3.4374	3.4205	2.4256	2.8685
TCGA-DC-5869	READ										0.8081	3.4959	3.3366	3.4146	3.7891	3.8595
TCGA-DC-6154	READ										0.9834	3.6266	3.4392	3.5461	3.0965	3.0325
TCGA-DC-6155	READ										0.6543	3.9453	3.5012	3.2080	3.3449	3.2654

TCGA-DC-6156	READ										0.8009	3.4746	3.4145	3.4047	2.8339	2.9970
TCGA-DC-6157	READ										0.8216	3.3234	3.3256	3.5300	3.6050	3.6368
TCGA-DC-6158	READ										0.7366	3.3756	3.3921	3.4172	3.3273	3.1916
TCGA-DC-6160	READ										0.7864	3.5803	3.3607	3.4364	2.5666	2.5153
TCGA-DC-6681	READ										0.6286	3.7217	3.4560	3.5735	3.3447	3.5228
TCGA-DC-6682	READ										0.7992	3.5262	3.3704	3.4653	3.7970	3.9742
TCGA-DC-6683	READ										0.9628	3.7073	3.3799	3.4747	3.7084	3.5802
TCGA-DM-A0X9	COAD										0.6597	3.6436	3.4070	3.4731	2.1012	2.9327
TCGA-DM-A0XD-	COAD										0.7480	3.7242	3.4835	3.3949	2.1798	2.5663
TCGA-DM-A0XF	COAD										0.7368	3.6651	3.4154	3.4260	3.9644	3.8351
TCGA-DM-A1D0	COAD										0.8659	3.8281	3.4150	3.4225	3.0910	2.5718
TCGA-DM-A1D4	COAD										0.5084	3.8079	3.4214	3.4813	2.8791	2.9480
TCGA-DM-A1D6	COAD										0.1167	3.8957	3.4433	3.3040	1.5407	2.5453
TCGA-DM-A1D7	COAD										0.7971	3.7672	3.3987	3.4522	3.1247	2.8580
TCGA-DM-A1D8	COAD										0.5651	3.5649	3.3544	3.4799	3.3438	3.6501
TCGA-DM-A1D9	COAD										0.5870	3.6350	3.4186	3.5316	3.7762	3.8799
TCGA-DM-A1DA	COAD										0.4232	3.6191	3.3080	3.4126	0.9651	2.8140
TCGA-DM-A1DB	COAD										0.8158	3.3259	3.2526	3.4614	3.3031	3.6351
TCGA-DM-A1HA	COAD										0.5759	3.7852	3.4970	3.5310	2.4580	2.9997
TCGA-DM-A1HB-	COAD										0.1306	3.6558	3.3702	3.3197	1.4918	2.9626
TCGA-DM-A280	COAD										0.2748	3.9003	3.4788	3.3506	2.3278	2.8877
TCGA-DM-A282	COAD										0.8012	3.6649	3.4037	3.4653	3.1122	3.5929
TCGA-DM-A285	COAD										0.7256	3.3927	3.3487	3.4342	1.5305	3.2284
TCGA-DM-A288	COAD										0.4018	3.6510	3.3261	3.4146	1.9065	2.8530
TCGA-DM-A28A	COAD										0.8474	3.6400	3.4725	3.5875	2.6648	2.6429
TCGA-DM-A28C	COAD										0.5816	3.5860	3.4702	3.6693	3.4199	3.6292
TCGA-DM-A28E	COAD										0.9284	3.6038	3.3595	3.4933	2.8490	2.4369
TCGA-DM-A28F	COAD										0.8683	3.7514	3.4043	3.3292	3.3519	3.6368
TCGA-DM-A28G	COAD										0.5121	3.6784	3.4397	3.5063	2.6333	3.0710
TCGA-DM-A28H	COAD										0.5672	3.4355	3.2544	3.4283	3.3112	3.2091
TCGA-DM-A28K	COAD										-0.2397	3.8666	3.4793	3.4149	0.7149	2.1891
TCGA-DM-A28M	COAD										0.5411	3.7954	3.4610	3.5631	2.1703	2.8385
TCGA-DT-5265	READ										0.4248	3.8429	3.5737	3.3590	1.4014	2.2130
TCGA-DY-A0XA	READ										0.8085	3.4855	3.4158	3.6428	3.1244	2.9319
TCGA-DY-A1DC	READ										0.8236	3.6704	3.4027	3.4618	3.7175	3.7555
TCGA-DY-A1DD	READ										0.7117	3.4169	3.3233	3.4985	3.1145	3.2493
TCGA-DY-A1DE	READ										0.7809	3.6413	3.3587	3.3978	2.5655	2.7541
TCGA-DY-A1DF	READ										0.5324	3.7819	3.4613	3.5100	1.7137	2.6148
TCGA-DY-A1DG	READ										0.8807	3.6762	3.3982	3.4840	3.4717	3.3888
TCGA-DY-A1H8	READ										0.6892	3.8225	3.5318	3.6189	2.7617	3.2855
TCGA-EF-5830	READ										0.7264	3.5795	3.3951	3.5479	3.1551	3.6324
TCGA-EF-5831	READ										0.8540	3.6151	3.3973	3.4795	3.0122	2.7479
TCGA-EI-6506	READ										0.4743	3.5814	3.3774	3.3604	3.3599	3.2535
TCGA-EI-6507	READ										0.0763	3.8120	3.5254	3.3328	1.6262	2.7195
TCGA-EI-6508	READ										0.6824	3.4839	3.4002	3.5763	3.2702	3.6467
TCGA-EI-6509	READ										0.7702	3.5722	3.3807	3.5475	2.4292	2.2029
TCGA-EI-6510	READ										0.3138	3.5111	3.3993	3.5844	1.4009	2.0483
TCGA-EI-6511	READ										0.8072	3.5012	3.3294	3.3979	2.9367	3.2635
TCGA-EI-6512	READ										0.6798	3.6207	3.3653	3.4101	2.5046	2.6988
TCGA-EI-6513	READ										0.8066	3.3608	3.3376	3.4973	3.4368	3.3824
TCGA-EI-6514	READ										0.9694	3.5729	3.3789	3.4700	3.3839	3.5824
TCGA-EI-6881	READ										0.8413	3.6773	3.4220	3.4426	3.3872	3.1799
TCGA-EI-6882	READ										-0.0064	3.5331	3.4062	3.4463	2.3050	2.7090

TCGA-EI-6883	READ										0.7093	3.4964	3.3523	3.5527	3.0618	3.4640
TCGA-EI-6884	READ										0.6210	3.5652	3.3769	3.4287	2.8840	3.0077
TCGA-EI-6885	READ										0.8029	3.4783	3.4783	3.6182	3.7889	3.6946
TCGA-EI-6917	READ										0.3485	3.5355	3.4246	3.4913	1.6876	2.8471
TCGA-EI-7002	READ										0.9135	3.6229	3.4203	3.5100	2.6320	3.1279
TCGA-EI-7004	READ										0.0132	3.5304	3.4237	3.2011	1.8769	2.0789
TCGA-F4-6459	COAD										0.8531	3.5204	3.3539	3.3449	3.0205	3.0409
TCGA-F4-6460	COAD										0.3257	3.4877	3.3341	3.4241	2.4414	2.8374
TCGA-F4-6461	COAD										0.4416	3.8347	3.5742	3.5070	1.1439	3.1720
TCGA-F4-6463	COAD										0.4894	3.4990	3.4287	3.5426	2.4322	2.9919
TCGA-F4-6569	COAD										0.5649	3.5050	3.4642	3.4902	3.0567	2.7355
TCGA-F4-6570	COAD										0.2570	3.6737	3.4384	3.3406	0.1198	2.2597
TCGA-F4-6703	COAD										0.4613	3.5936	3.4838	3.2296	2.0012	2.2776
TCGA-F4-6704	COAD										0.1143	3.4684	3.2403	3.0567	1.9809	2.7360
TCGA-F4-6805	COAD										0.5054	3.6266	3.5099	3.4618	3.3141	3.0177
TCGA-F4-6806	COAD										0.5943	3.6725	3.4613	3.5344	1.7554	2.6692
TCGA-F4-6807	COAD										0.6992	3.5691	3.4776	3.5372	2.9593	3.2382
TCGA-F4-6808	COAD										0.8267	3.6168	3.3073	3.3534	3.5080	3.6571
TCGA-F4-6809	COAD										0.6724	3.6267	3.3988	3.4641	3.1038	3.1281
TCGA-F4-6854	COAD										0.7127	3.4986	3.3319	3.4369	3.1481	3.2410
TCGA-F4-6855	COAD										0.4674	3.6607	3.4910	3.5149	2.4277	2.6617
TCGA-F4-6856	COAD										-0.1416	3.6928	3.3668	3.2227	1.1868	2.0697
TCGA-F5-6464	READ										0.5250	3.7846	3.5745	3.2919	2.2267	2.9485
TCGA-F5-6465	READ										0.8923	3.4117	3.4411	3.6081	3.2122	2.8204
TCGA-F5-6571	READ										0.8934	3.4840	3.3391	3.4126	2.5809	2.5222
TCGA-F5-6702	READ										0.5980	3.5091	3.5045	3.3669	2.7460	2.6566
TCGA-F5-6810	READ										0.7197	3.5029	3.3820	3.4495	3.3601	3.5450
TCGA-F5-6811	READ										0.7962	3.6757	3.4680	3.3871	2.7779	2.6160
TCGA-F5-6812	READ										0.7761	3.5922	3.3648	3.3322	2.2643	2.2904
TCGA-F5-6813	READ										0.8371	3.6925	3.3859	3.4033	1.2086	2.0749
TCGA-F5-6814	READ										0.4598	3.4362	3.3192	3.4007	3.0779	3.1105
TCGA-F5-6861	READ										0.5776	3.6810	3.4401	3.4837	2.8357	2.8980
TCGA-F5-6863	READ										0.7329	3.5727	3.4355	3.5375	2.8609	3.0350
TCGA-F5-6864	READ										0.7723	3.4781	3.3414	3.4061	1.5648	1.9812
TCGA-G4-6293	COAD										0.7917	3.6829	3.5099	3.5462	2.8634	2.8567
TCGA-G4-6294	COAD										0.9797	3.5245	3.3033	3.4104	2.4016	2.5227
TCGA-G4-6295	COAD										0.7179	3.2819	3.3512	3.5599	3.2995	3.4524
TCGA-G4-6297	COAD										0.7842	3.6854	3.4917	3.3564	3.3083	2.8807
TCGA-G4-6298	COAD										0.7735	3.5509	3.4181	3.5048	3.2585	3.3564
TCGA-G4-6299	COAD										0.3843	3.5833	3.3849	3.2875	2.0763	2.5207
TCGA-G4-6302	COAD										0.0929	3.6138	3.4843	3.3187	2.1551	2.4817
TCGA-G4-6303	COAD										0.9061	3.5521	3.3918	3.5301	3.3324	2.9060
TCGA-G4-6304	COAD										0.5106	3.5674	3.3340	3.4695	1.8220	2.4436
TCGA-G4-6306	COAD										0.7426	3.7474	3.4079	3.4349	3.0927	2.8623
TCGA-G4-6307	COAD										0.9181	3.7236	3.4256	3.5304	3.3746	3.0855
TCGA-G4-6309	COAD										0.1592	3.7408	3.3388	3.2574	2.4657	3.0415
TCGA-G4-6310	COAD										0.6960	3.4508	3.2965	3.3905	2.8087	2.6494
TCGA-G4-6311	COAD										0.7398	3.6151	3.5002	3.4781	3.5585	3.2617
TCGA-G4-6314	COAD										0.6827	3.5154	3.4569	3.5076	3.1341	2.9898
TCGA-G4-6315	COAD										0.6524	3.5461	3.3246	3.4401	3.4014	3.5065
TCGA-G4-6317-	COAD										0.9783	3.6015	3.3249	3.4190	3.5842	3.5202
TCGA-G4-6320	COAD										0.1063	3.9466	3.5165	3.3520	1.2868	2.2744
TCGA-G4-6321	COAD										-0.0064	4.0763	3.5204	3.1644	2.4240	3.4071

TCGA-G4-6322	COAD										0.1747	3.5214	3.3930	3.5294	1.1112	2.6082
TCGA-G4-6323	COAD										0.4423	3.6980	3.4474	3.4612	2.0522	2.7433
TCGA-G4-6586	COAD										0.4000	3.7714	3.2917	3.2379	1.3769	2.3793
TCGA-G4-6588	COAD										0.1655	3.4692	3.2997	3.2294	1.3229	2.1027
TCGA-G4-6625	COAD										0.6452	3.4810	3.3262	3.4217	3.3903	3.2934
TCGA-G4-6626	COAD										0.8045	3.5517	3.4423	3.6381	3.4622	3.6713
TCGA-G4-6627	COAD										0.4671	3.7935	3.5005	3.4314	3.1539	3.2807
TCGA-G4-6628	COAD										0.2424	3.4473	3.3196	3.3058	1.7638	2.1787
TCGA-G5-6233	READ										0.5262	3.7030	3.3520	3.2888	1.5468	2.5924
TCGA-G5-6235	READ										0.6527	3.6137	3.3225	3.3752	3.1818	3.1957
TCGA-G5-6572	READ										0.6044	3.5710	3.3901	3.4778	2.9846	2.7932
TCGA-G5-6641	READ										0.4379	3.6490	3.3934	3.4518	1.8437	2.6611
TCGA-NH-A50T	COAD										0.7343	3.5939	3.3797	3.5056	2.9135	3.0067
TCGA-NH-A50U	COAD										0.5045	3.6076	3.3835	3.4746	1.3399	2.1859
TCGA-NH-A50V	COAD										0.6687	3.4956	3.3581	3.4148	1.9194	2.8231
TCGA-NH-A5IV	COAD										0.0886	3.5655	3.3634	3.3877	1.1260	2.0859
TCGA-NH-A6GA	COAD										0.5706	3.6170	3.4328	3.4766	2.5312	2.6143
TCGA-NH-A6GB	COAD										0.7815	3.4793	3.3741	3.4720	2.9458	3.0709
TCGA-NH-A6GC	COAD										0.1970	3.6563	3.3640	3.3789	1.3572	1.8861
TCGA-NH-A8F7	COAD										0.8034	3.3949	3.3164	3.4941	2.9908	3.1429
TCGA-NH-A8F8	COAD										0.8715	3.6496	3.4380	3.4787	2.7986	2.9086
TCGA-QG-A5YV	COAD										0.7004	3.6514	3.4387	3.5361	3.0392	2.9036
TCGA-QG-A5YW	COAD										0.6142	3.6593	3.4555	3.4776	2.5699	2.8454
TCGA-QG-A5YX	COAD										0.6620	3.6137	3.2997	3.3563	2.0652	2.5632
TCGA-QG-A5Z1	COAD										0.8110	3.5339	3.4604	3.6187	1.9803	2.5827
TCGA-QG-A5Z2	COAD										0.0912	3.5955	3.3365	3.3730	1.5995	2.4691
TCGA-QL-A97D	COAD										0.7216	3.6360	3.3549	3.3781	3.0992	3.2589
TCGA-RU-A8FL	COAD										0.7987	3.6070	3.3692	3.4954	3.5177	3.3476
TCGA-SS-A7HO	COAD										0.6541	3.3313	3.3065	3.5217	2.4394	2.7289
TCGA-T9-A92H	COAD										0.8956	3.6355	3.4128	3.5090	3.6903	3.6006
TCGA-WS-AB45	COAD										-0.4388	3.4152	3.5856	2.9955	2.3000	2.5740

Supplementary Table S6. Marisa et al (n=566) (8)---Stages, driver mutations and signature scores

Note: The signature scores were calculated as described in Methods and merged with other molecular parameters as described previously**(8).**

id	TNM.Stage	Tumor.Location	TP53.Mutation	KRAS.Mutation	BRAF.Mutation	203-gene CTX-S scores	64-gene Wnt scores	24-gene Wnt scores	18-gene RAS scores	EREG (log2)	AREG (log2)
CIT035	2	distal	M	WT	WT	0.5560	2.7203	2.9038	2.8114	2.9027	2.5673
CIT044	3	distal	WT	WT	WT	0.5518	2.6860	2.8801	2.7575	2.3285	2.1944
CIT234	2	distal	M	WT	WT	0.5412	2.7165	2.8813	2.7808	2.8751	2.4841
CIT068	3	distal	NA	WT	WT	0.5405	2.7168	2.8713	2.7960	2.9948	2.6113
CIT332	4	distal	NA	WT	WT	0.5366	2.6721	2.8721	2.7976	3.2248	2.5609
CIT082	2	distal	NA	WT	WT	0.5276	2.7861	2.9887	2.7715	3.1132	2.7269
CIT019	2	distal	WT	WT	WT	0.5270	2.7772	2.8984	2.8534	3.0082	2.6705
CIT020	2	distal	M	WT	WT	0.5256	2.7202	2.8937	2.7647	2.9800	2.6544
CIT079	2	proximal	NA	WT	WT	0.5249	2.7352	2.9190	2.7450	3.0060	2.7292
CIT417	3	proximal	M	WT	WT	0.5245	2.6925	2.8684	2.7827	2.9021	2.6009
CIT058	4	distal	M	WT	WT	0.5211	2.7746	2.9146	2.7938	3.2529	2.8322
CIT174	2	distal	NA	WT	WT	0.5197	2.7311	2.9192	2.7536	3.0034	2.6757
CIT143	3	distal	NA	WT	WT	0.5074	2.6785	2.9003	2.7571	2.6420	2.3436
CIT183	3	distal	M	WT	NA	0.5071	2.6878	2.8632	2.7718	2.7475	2.3817
CIT347	1	distal	M	WT	WT	0.5036	2.7219	2.8712	2.7850	3.1202	2.6857
CIT412	3	distal	M	WT	WT	0.5019	2.7627	2.9324	2.7914	2.5985	2.5046
CIT391	2	distal	M	WT	WT	0.5019	2.7323	2.8672	2.8095	3.0054	2.6613
CIT280	4	distal	NA	WT	WT	0.5011	2.7199	2.8370	2.7983	2.9239	2.4981
CIT356	2	distal	M	WT	WT	0.4995	2.6851	2.8765	2.7747	3.0864	2.7153
CIT036	2	distal	WT	WT	WT	0.4941	2.7505	2.8770	2.8136	2.4545	2.3395
CIT208	3	distal	WT	WT	NA	0.4937	2.8018	2.9108	2.8036	2.9919	2.5934
CIT223	2	distal	M	WT	WT	0.4920	2.7372	2.8100	2.8223	2.3842	2.1651
CIT097	2	proximal	NA	WT	WT	0.4890	2.7726	2.9174	2.8228	3.1398	2.7530
CIT291	2	distal	NA	WT	WT	0.4865	2.7090	2.8058	2.8054	2.5899	2.4549
CIT104	2	distal	NA	WT	WT	0.4844	2.7162	2.8540	2.8242	2.2321	1.9398
CIT443	3	distal	M	WT	WT	0.4828	2.7769	2.8635	2.8358	2.1934	2.1255
CIT005	4	distal	M	WT	WT	0.4828	2.7514	2.8009	2.8408	2.8790	2.3972
CIT187	2	distal	WT	WT	WT	0.4820	2.7599	2.9125	2.7767	2.9115	2.5970
CIT204	2	distal	M	WT	NA	0.4815	2.7066	2.8452	2.7986	2.7723	2.5145
CIT343	4	distal	NA	WT	WT	0.4807	2.7115	2.8170	2.7767	2.9926	2.6507
CIT213	2	distal	WT	WT	NA	0.4779	2.7668	2.8627	2.8358	3.1319	2.8183
CIT105	2	distal	NA	WT	WT	0.4776	2.7183	2.9022	2.7616	2.1716	2.2320
CIT076	2	proximal	NA	WT	WT	0.4769	2.7769	2.9206	2.8368	3.0945	2.6457
CIT238	3	distal	M	WT	WT	0.4754	2.7745	2.8997	2.7837	2.7677	2.4622
CIT382	2	distal	M	WT	WT	0.4745	2.7045	2.8300	2.8039	2.6206	2.2449
CIT062	3	distal	NA	WT	WT	0.4740	2.7609	2.8906	2.8179	3.1078	2.5135
CIT115	2	distal	NA	WT	WT	0.4721	2.8055	2.9395	2.8333	3.0779	2.7380
CIT422	3	proximal	WT	WT	WT	0.4693	2.7468	2.8410	2.8738	2.7387	2.3263
CIT188	2	distal	M	WT	WT	0.4683	2.7441	2.9456	2.7861	2.9795	2.7513
CIT101	2	distal	NA	WT	WT	0.4682	2.7206	2.9050	2.8026	2.5290	2.2308
CIT281	1	distal	NA	WT	WT	0.4672	2.7417	2.8554	2.8003	2.9010	2.3840
CIT149	3	distal	NA	WT	WT	0.4648	2.7244	2.8250	2.7531	2.8421	2.4002
CIT282	3	distal	NA	WT	WT	0.4646	2.7740	2.8298	2.8163	2.9469	2.4968
CIT251	3	distal	M	WT	WT	0.4610	2.7979	2.8817	2.8230	3.1516	2.7381
CIT137	2	distal	NA	WT	WT	0.4596	2.7627	2.8934	2.8399	3.1777	2.8267
CIT134	2	distal	NA	WT	WT	0.4574	2.7071	2.8651	2.8286	2.8409	2.5120
CIT420	3	distal	M	WT	WT	0.4562	2.8209	2.8889	2.8761	2.9638	2.3465

CIT211	2	distal	WT	WT	WT	0.4552	2.7314	2.8675	2.7786	2.8553	2.4822
CIT243	3	distal	M	WT	WT	0.4533	2.7404	2.9050	2.8231	2.6828	2.4923
CIT131	2	proximal	NA	WT	WT	0.4533	2.7482	2.8703	2.8445	2.9030	2.4283
CIT388	2	distal	M	WT	WT	0.4512	2.8293	2.9149	2.7925	2.4137	2.1864
CIT030	2	proximal	M	WT	WT	0.4496	2.7838	2.9001	2.8394	2.6969	2.4804
CIT191	2	distal	M	WT	WT	0.4487	2.7884	2.8588	2.8235	3.2157	2.7433
CIT400	2	distal	M	WT	WT	0.4485	2.7455	2.9192	2.7586	3.1583	2.8454
CIT129	2	proximal	NA	WT	WT	0.4461	2.7238	2.7846	2.8359	2.6373	2.2128
CIT071	3	proximal	NA	WT	WT	0.4455	2.7661	2.9501	2.8042	2.2828	2.3585
CIT357	1	distal	M	WT	WT	0.4427	2.7093	2.8737	2.8225	2.9527	2.7699
CIT057	4	distal	WT	WT	WT	0.4423	2.7649	2.9206	2.8162	2.8868	2.5609
CIT375	2	distal	WT	WT	WT	0.4409	2.7592	2.8318	2.8091	3.1121	2.7469
CIT274	3	distal	NA	WT	WT	0.4408	2.7568	2.8693	2.8744	2.9940	2.6889
CIT432	2	distal	M	WT	WT	0.4400	2.7758	2.9352	2.8033	3.0114	2.7324
CIT118	2	distal	NA	WT	WT	0.4386	2.7331	2.8915	2.7909	2.8150	2.2629
CIT249	2	distal	WT	WT	WT	0.4357	2.7439	2.8776	2.8101	2.6724	2.3767
CIT372	3	distal	WT	WT	WT	0.4353	2.7985	2.9047	2.7995	2.8519	2.4573
CIT350	2	distal	M	WT	WT	0.4352	2.7239	2.8767	2.8082	2.8034	2.1822
CIT254	4	distal	M	WT	WT	0.4344	2.7645	2.9084	2.7983	3.1168	2.5701
CIT127	2	distal	NA	WT	WT	0.4342	2.7606	2.8381	2.7924	2.8469	2.4049
CIT351	2	proximal	WT	WT	WT	0.4339	2.6975	2.8323	2.7560	2.6916	2.3991
CIT302	2	distal	NA	WT	WT	0.4332	2.6933	2.7955	2.7635	2.9460	2.6443
CIT260	4	distal	M	WT	WT	0.4324	2.7537	2.8976	2.7858	2.8038	2.5212
CIT185	3	distal	M	WT	NA	0.4308	2.7766	2.8409	2.8052	3.0115	2.5799
CIT255	3	distal	M	WT	WT	0.4293	2.7203	2.8575	2.8067	2.5629	2.1840
CIT181	2	distal	M	WT	NA	0.4288	2.7201	2.9172	2.7398	2.9783	2.7586
CIT380	3	distal	M	WT	WT	0.4285	2.7045	2.8341	2.7691	2.7213	2.1265
CIT248	2	distal	M	WT	WT	0.4281	2.7356	2.8279	2.8342	2.7943	2.3725
CIT084	2	distal	NA	WT	WT	0.4259	2.7701	2.9354	2.8535	3.0270	2.7730
CIT367	3	distal	M	WT	WT	0.4255	2.7070	2.8945	2.7735	3.0354	2.7623
CIT247	3	distal	M	WT	WT	0.4233	2.7686	2.8957	2.8454	2.7937	2.4744
CIT414	3	distal	M	WT	WT	0.4217	2.6998	2.8443	2.8080	2.7581	2.4254
CIT386	1	distal	WT	WT	WT	0.4212	2.7401	2.8789	2.8702	2.4797	2.1913
CIT229	3	distal	M	WT	WT	0.4210	2.7362	2.9016	2.7609	2.2865	2.0857
CIT297	4	proximal	NA	WT	WT	0.4191	2.7475	2.8880	2.8137	2.7423	2.1735
CIT425	2	distal	M	WT	WT	0.4190	2.6702	2.8123	2.8469	2.1260	2.0176
CIT130	2	distal	NA	WT	WT	0.4180	2.7454	2.8793	2.7595	2.7300	2.4173
CIT252	4	distal	M	WT	WT	0.4165	2.7753	2.8625	2.8601	3.0889	2.5498
CIT429	2	distal	M	WT	WT	0.4153	2.7414	2.8046	2.8736	2.6780	2.4198
CIT311	2	distal	NA	WT	WT	0.4145	2.6773	2.8226	2.7959	3.0767	2.6071
CIT245	3	proximal	WT	WT	WT	0.4141	2.7443	2.8177	2.8865	2.6606	2.3908
CIT353	2	proximal	WT	WT	WT	0.4138	2.7217	2.9093	2.8694	2.6813	2.2593
CIT277	2	distal	NA	WT	WT	0.4123	2.7223	2.8075	2.7932	2.8622	2.4205
CIT385	3	distal	M	WT	WT	0.4111	2.7653	2.9008	2.8712	2.9241	2.4861
CIT300	4	distal	NA	WT	WT	0.4102	2.7542	2.9107	2.9043	2.8773	2.5032
CIT290	3	distal	NA	WT	WT	0.4094	2.7938	2.9255	2.8796	2.3068	1.7492
CIT110	4	distal	NA	WT	WT	0.4084	2.7482	2.8953	2.7947	2.8324	2.4451
CIT087	4	distal	NA	WT	WT	0.4082	2.7962	2.9523	2.8512	3.0726	2.7506
CIT197	2	distal	M	WT	WT	0.4073	2.7656	2.8572	2.8041	3.0836	2.7422
CIT384	2	distal	WT	WT	WT	0.4052	2.7733	2.8747	2.8122	2.8678	2.4027
CIT421	3	distal	WT	WT	WT	0.4041	2.7630	2.8393	2.8647	2.0422	1.9868
CIT431	2	distal	M	WT	WT	0.4016	2.7744	2.9104	2.8203	2.9634	2.5958
CIT427	2	distal	M	WT	WT	0.4016	2.6836	2.8245	2.8026	2.8043	2.5363
CIT200	3	distal	WT	WT	NA	0.4014	2.7059	2.7888	2.8153	2.9805	2.4971
CIT140	3	distal	NA	WT	WT	0.4009	2.7366	2.8958	2.8804	2.6778	2.3581
CIT246	3	distal	M	WT	WT	0.4006	2.7988	2.9296	2.8375	3.1720	2.5257
CIT172	2	distal	NA	WT	WT	0.4002	2.7827	2.8720	2.8447	2.7907	2.4521
CIT298	4	distal	NA	WT	WT	0.4002	2.7856	2.8876	2.8341	2.6223	2.4109
CIT415	3	proximal	M	WT	WT	0.4000	2.7702	2.8966	2.8535	2.0820	2.2215

CIT299	2	proximal	NA	WT	WT	0.3996	2.7765	2.8170	2.8026	3.1160	2.8029
CIT233	3	proximal	M	WT	WT	0.3974	2.7364	2.8791	2.7838	2.6292	2.4533
CIT379	1	distal	M	WT	WT	0.3954	2.7209	2.8169	2.7725	3.0575	2.7476
CIT398	3	proximal	M	WT	WT	0.3926	2.7701	2.8646	2.8423	3.0306	2.6647
CIT413	3	distal	M	WT	WT	0.3915	2.7727	2.7659	2.8441	2.8280	2.3163
CIT439	3	distal	M	WT	WT	0.3910	2.7422	2.8304	2.8239	2.8965	2.4531
CIT218	3	distal	M	WT	WT	0.3892	2.7446	2.8949	2.8112	2.9282	2.5160
CIT402	2	distal	M	WT	WT	0.3884	2.7550	2.8707	2.8024	2.9995	2.6889
CIT111	2	distal	NA	WT	WT	0.3882	2.8355	2.9076	2.8786	2.5842	2.3931
CIT004	1	distal	M	WT	WT	0.3873	2.7480	2.9286	2.7635	2.5317	2.3215
CIT122	2	distal	NA	WT	WT	0.3869	2.8277	2.9510	2.8364	2.9086	2.5926
CIT193	2	distal	WT	WT	NA	0.3864	2.7120	2.8397	2.7904	2.7024	2.4734
CIT201	3	distal	WT	WT	NA	0.3840	2.7561	2.8587	2.8000	3.1200	2.6424
CIT220	3	proximal	M	WT	WT	0.3817	2.7802	2.8903	2.8609	2.1266	2.2162
CIT442	2	distal	M	WT	WT	0.3817	2.7175	2.8309	2.7667	2.7178	2.4715
CIT109	2	distal	NA	WT	WT	0.3810	2.7863	2.9129	2.8376	3.0871	2.7049
CIT045	3	distal	M	WT	WT	0.3755	2.7305	2.8824	2.7568	2.8199	2.4613
CIT214	3	distal	WT	WT	NA	0.3703	2.7753	2.8535	2.7364	2.6072	2.3428
CIT180	3	distal	WT	WT	WT	0.3689	2.7453	2.8586	2.8080	2.9826	2.8580
CIT334	1	distal	NA	WT	WT	0.3666	2.7922	2.8720	2.8617	3.0744	2.7390
CIT151	3	distal	NA	WT	WT	0.3630	2.7736	2.8373	2.8252	2.7406	2.3866
CIT016	1	distal	WT	WT	WT	0.3629	2.7816	2.9149	2.8628	2.8339	2.5859
CIT244	2	distal	WT	WT	WT	0.3610	2.7754	2.9372	2.8377	2.2684	2.5331
CIT008	3	distal	M	WT	WT	0.3609	2.7455	2.8252	2.8715	3.0879	2.7263
CIT377	2	distal	M	WT	WT	0.3594	2.7752	2.9331	2.8129	2.8527	2.5533
CIT194	3	distal	M	WT	NA	0.3588	2.6944	2.7908	2.7782	2.7860	2.6649
CIT275	4	distal	NA	WT	WT	0.3552	2.7588	2.8162	2.8249	3.1048	2.5099
CIT159	3	distal	NA	WT	WT	0.3549	2.7237	2.8260	2.7983	2.4865	2.3050
CIT288	1	distal	NA	WT	WT	0.3510	2.6853	2.7730	2.7526	2.6543	2.2634
CIT069	3	distal	NA	WT	WT	0.3489	2.7290	2.8553	2.8176	2.6161	2.4151
CIT182	2	distal	WT	WT	NA	0.3479	2.6571	2.8163	2.7649	2.1384	1.9622
CIT153	3	proximal	NA	WT	WT	0.3454	2.8037	2.9010	2.9365	2.2028	2.2137
CIT395	2	distal	NA	WT	WT	0.3449	2.7408	2.8461	2.8419	3.1851	2.7667
CIT396	3	distal	M	WT	WT	0.3393	2.7938	2.8531	2.9150	2.5827	2.5644
CIT206	3	distal	M	WT	NA	0.3386	2.7883	2.8396	2.8369	2.8535	2.4712
CIT189	3	distal	M	WT	NA	0.3372	2.7035	2.7966	2.7638	2.2410	2.1947
CIT050	4	distal	WT	WT	WT	0.3333	2.7817	2.8890	2.8744	3.1026	2.8020
CIT226	2	distal	WT	WT	WT	0.3330	2.7790	2.8958	2.8245	2.6627	2.3404
CIT428	2	distal	M	WT	WT	0.3310	2.7856	2.8560	2.7923	2.1991	2.0567
CIT038	2	proximal	M	WT	WT	0.3301	2.8141	2.9741	2.8660	2.2632	2.4920
CIT073	3	distal	NA	WT	WT	0.3300	2.7492	2.8163	2.8531	2.9887	2.6478
CIT168	2	distal	NA	WT	WT	0.3289	2.7217	2.8472	2.8178	3.0044	2.5118
CIT365	3	distal	M	WT	WT	0.3279	2.7490	2.8399	2.8014	2.4080	2.2293
CIT269	2	distal	NA	WT	WT	0.3261	2.8003	2.8553	2.8869	2.7437	2.6464
CIT231	2	proximal	M	WT	WT	0.3233	2.7666	2.8482	2.8521	2.7284	2.6010
CIT003	2	proximal	M	WT	WT	0.3200	2.7804	2.8919	2.9153	2.3201	2.4781
CIT418	3	distal	WT	WT	WT	0.3182	2.7664	2.9003	2.8410	2.8967	2.5646
CIT404	3	distal	M	WT	WT	0.3182	2.7712	2.8661	2.8152	2.6954	2.4259
CIT002	4	distal	WT	WT	WT	0.3173	2.8149	2.8893	2.8327	2.8688	2.6250
CIT028	2	proximal	WT	WT	M	0.3141	2.7381	2.8191	2.8732	2.1012	2.1448
CIT043	3	distal	M	WT	WT	0.3139	2.7824	2.8471	2.8515	3.0229	2.6168
CIT090	2	distal	NA	WT	WT	0.3135	2.7406	2.8418	2.8212	2.8166	2.4363
CIT065	3	distal	NA	WT	WT	0.3130	2.7162	2.7726	2.6915	1.9867	1.8239
CIT310	4	distal	NA	WT	WT	0.3123	2.7450	2.9397	2.8825	2.9014	2.4829
CIT224	2	distal	M	WT	WT	0.3122	2.6891	2.7368	2.8846	2.4803	2.1222
CIT064	3	distal	NA	WT	WT	0.3107	2.8136	2.8735	2.8621	2.8689	2.5120
CIT325	1	distal	NA	WT	WT	0.3105	2.8247	2.8809	2.8219	2.8133	2.3654
CIT285	2	distal	NA	WT	WT	0.3086	2.7165	2.7771	2.8647	2.9477	2.5286
CIT207	2	distal	M	WT	NA	0.3083	2.7091	2.7915	2.7941	2.6025	2.3973
CIT308	2	proximal	NA	WT	WT	0.3044	2.7679	2.8294	2.9394	2.6545	2.2982
CIT352	3	proximal	WT	WT	WT	0.3006	2.6675	2.6940	2.9167	1.9249	1.8778

CIT283	2	distal	NA	WT	WT	0.3002	2.6893	2.7894	2.7414	2.5073	2.4503
CIT278	4	proximal	NA	WT	WT	0.2952	2.7813	2.8126	2.7915	2.5037	2.0219
CIT039	2	distal	WT	WT	WT	0.2945	2.6707	2.7525	2.7591	2.6469	2.3084
CIT099	2	distal	NA	WT	WT	0.2943	2.7873	2.9415	2.8725	1.8345	2.0962
CIT373	2	distal	WT	WT	WT	0.2920	2.7237	2.8158	2.8040	2.3768	2.5187
CIT013	1	distal	WT	WT	WT	0.2918	2.6654	2.7348	2.7621	1.9607	1.8991
CIT209	2	proximal	M	WT	NA	0.2906	2.7758	2.8618	2.8500	2.2190	2.2312
CIT253	4	proximal	M	WT	M	0.2863	2.7487	2.7627	2.8897	2.0676	2.0051
CIT266	2	proximal	NA	WT	WT	0.2820	2.7041	2.7148	2.7682	2.5702	2.1958
CIT358	3	proximal	WT	WT	M	0.2811	2.6791	2.7020	2.7845	2.0676	1.8122
CIT052	4	distal	M	WT	M	0.2776	2.7758	2.6602	2.8933	2.5450	2.3154
CIT055	4	distal	WT	WT	M	0.2739	2.7805	2.7896	2.9237	2.1495	1.9172
CIT017	2	distal	WT	WT	WT	0.2731	2.7639	2.8675	2.8378	2.0070	1.6039
CIT394	3	distal	WT	WT	WT	0.2730	2.7480	2.8840	2.8463	2.6623	2.4614
CIT103	2	distal	NA	WT	M	0.2726	2.7439	2.7466	2.8938	2.3452	2.1102
CIT307	3	distal	NA	WT	WT	0.2667	2.6893	2.6870	2.7847	2.4371	2.1868
CIT100	2	proximal	NA	WT	M	0.2652	2.7492	2.8174	2.9184	2.4928	2.2931
CIT063	3	proximal	NA	WT	M	0.2640	2.7894	2.7776	2.8669	2.3729	2.2052
CIT169	2	distal	NA	WT	WT	0.2627	2.7375	2.7630	2.7981	2.7088	2.4020
CIT070	3	distal	NA	WT	NA	0.2605	2.7677	2.6908	2.8911	2.4444	2.1017
CIT177	3	distal	M	WT	NA	0.2592	2.7240	2.7354	2.8278	2.8807	2.5130
CIT060	2	proximal	M	WT	WT	0.2546	2.7025	2.6995	2.8022	2.5264	2.0076
CIT032	4	proximal	M	WT	M	0.2542	2.7381	2.7978	2.8422	2.3086	2.1619
CIT319	2	proximal	NA	WT	M	0.2509	2.7460	2.5960	2.9380	2.7978	2.1986
CIT178	3	distal	M	WT	NA	0.2488	2.7716	2.8675	2.8933	2.2158	2.1604
CIT123	2	distal	NA	WT	WT	0.2466	2.7849	2.8345	2.8584	2.3090	2.2546
CIT327	2	proximal	NA	WT	WT	0.2464	2.7573	2.7203	2.9357	2.3154	2.2200
CIT435	2	proximal	WT	WT	M	0.2406	2.7392	2.7947	2.8475	2.2049	2.0831
CIT040	3	proximal	WT	WT	WT	0.2403	2.7835	2.7528	2.8672	2.2682	2.3698
CIT401	2	distal	WT	WT	WT	0.2386	2.5758	2.5673	2.6898	2.0924	2.1560
CIT338	2	distal	NA	WT	M	0.2361	2.7060	2.6882	2.8549	2.3772	2.1169
CIT119	2	distal	NA	WT	WT	0.2324	2.7263	2.8483	2.8277	2.1943	2.3786
CIT024	3	proximal	WT	WT	M	0.2308	2.7350	2.6854	2.8525	2.8557	2.5585
CIT041	3	proximal	M	WT	M	0.2284	2.6789	2.6892	2.8672	2.0318	1.9617
CIT083	4	distal	NA	WT	WT	0.2273	2.7056	2.6436	2.8033	2.8300	2.4684
CIT088	2	proximal	NA	WT	WT	0.2267	2.7226	2.8247	2.8841	2.1643	2.0499
CIT161	3	proximal	NA	WT	M	0.2251	2.6973	2.7300	2.8292	2.1920	2.2019
CIT349	3	proximal	WT	WT	M	0.2186	2.7178	2.6841	2.8799	2.4264	2.3573
CIT345	3	distal	M	WT	WT	0.2172	2.6996	2.6799	2.7813	2.3836	2.4154
CIT158	3	proximal	NA	WT	M	0.2162	2.7913	2.9131	2.8934	2.3797	2.4607
CIT007	2	proximal	WT	WT	WT	0.2159	2.7330	2.7411	2.8503	2.5063	1.8936
CIT284	4	distal	NA	WT	WT	0.2152	2.7777	2.7166	2.8537	2.0796	1.8839
CIT241	2	proximal	WT	WT	M	0.2115	2.7336	2.7869	2.8398	1.9846	2.1260
CIT329	2	distal	NA	WT	WT	0.2102	2.7702	2.7615	2.9600	2.6645	2.1800
CIT160	3	distal	NA	WT	WT	0.2100	2.6429	2.6693	2.7027	2.1495	2.1322
CIT027	3	proximal	M	WT	M	0.2075	2.7299	2.7520	2.8996	2.2253	1.9743
CIT381	3	proximal	WT	WT	M	0.2071	2.7130	2.7323	2.8588	2.1610	2.1316
CIT051	4	proximal	WT	WT	M	0.2039	2.7443	2.7475	2.8662	1.9457	1.9691
CIT215	3	proximal	WT	WT	NA	0.2026	2.7533	2.7444	2.8426	2.9947	2.3262
CIT314	2	proximal	NA	WT	M	0.2009	2.7012	2.7322	2.8430	1.9258	1.8446
CIT336	2	proximal	NA	WT	M	0.1986	2.7471	2.7965	2.9334	1.9929	2.2422
CIT318	3	proximal	NA	WT	M	0.1973	2.7669	2.7695	2.9218	2.0059	2.0818
CIT355	2	distal	WT	WT	WT	0.1972	2.5460	2.6181	2.6157	1.9270	1.5317
CIT361	2	proximal	WT	WT	M	0.1971	2.7395	2.7721	2.8939	2.3634	2.2389
CIT390	3	distal	M	WT	M	0.1963	2.6714	2.7052	2.9204	2.1761	2.1597
CIT272	2	proximal	NA	WT	M	0.1953	2.7440	2.8684	2.8627	1.9064	2.1652
CIT403	2	proximal	WT	WT	WT	0.1950	2.6965	2.7345	2.7641	2.3600	2.1811
CIT378	3	proximal	WT	WT	M	0.1944	2.7964	2.8242	2.8738	2.2925	2.2083
CIT305	3	proximal	NA	WT	M	0.1922	2.7512	2.7632	2.9259	1.9215	2.4014
CIT102	2	proximal	NA	WT	M	0.1914	2.7640	2.7815	2.9057	2.3239	2.0681
CIT006	3	proximal	WT	WT	WT	0.1912	2.7473	2.7432	2.8342	2.3437	1.9909

CIT128	2	distal	NA	WT	WT	0.1911	2.6875	2.7273	2.7707	2.1569	1.9808
CIT440	2	proximal	WT	WT	WT	0.1881	2.6922	2.8610	2.8476	2.0757	1.7813
CIT371	2	proximal	WT	WT	WT	0.1866	2.7218	2.6471	2.8640	2.6070	2.3902
CIT116	2	proximal	NA	WT	M	0.1855	2.7656	2.8036	2.8825	1.7789	2.1564
CIT074	3	proximal	NA	WT	M	0.1850	2.7330	2.7818	2.8890	2.2097	2.1456
CIT031	2	proximal	WT	WT	WT	0.1848	2.7033	2.8495	2.8011	1.9860	2.1698
CIT376	2	distal	M	WT	M	0.1791	2.7708	2.7436	2.9161	2.2517	2.1668
CIT132	2	distal	NA	WT	WT	0.1788	2.6906	2.7089	2.7769	2.3424	2.0795
CIT265	2	proximal	NA	WT	M	0.1786	2.7280	2.7674	2.8963	1.6883	1.9058
CIT323	3	proximal	NA	WT	M	0.1738	2.7211	2.7241	2.8540	2.3786	2.0742
CIT309	3	proximal	NA	WT	M	0.1620	2.7093	2.7761	2.9037	1.8030	1.9196
CIT023	2	proximal	WT	WT	WT	0.1609	2.7459	2.7085	2.9275	2.4875	2.3022
CIT264	3	proximal	NA	WT	M	0.1597	2.7042	2.7028	2.8943	1.7908	1.7425
CIT360	2	proximal	WT	WT	M	0.1554	2.7453	2.7827	2.9322	2.0208	2.1192
CIT258	4	proximal	M	WT	M	0.1506	2.7217	2.7418	2.8734	1.9456	2.1814
CIT212	3	proximal	WT	WT	NA	0.1437	2.7362	2.7414	2.8844	2.0775	2.2220
CIT331	2	proximal	NA	WT	WT	0.1408	2.7994	2.7480	2.9559	2.7764	2.4353
CIT133	2	proximal	NA	WT	WT	0.1394	2.7184	2.6729	2.7881	2.3909	2.2147
CIT228	2	proximal	WT	WT	M	0.1369	2.7352	2.6648	2.8935	2.5986	2.2363
CIT120	2	proximal	NA	WT	WT	0.1305	2.7418	2.7351	2.8497	2.0075	1.8835
CIT306	2	distal	NA	WT	M	0.1280	2.7278	2.7115	2.8729	1.9330	2.1189
CIT321	2	proximal	NA	WT	M	0.1237	2.6917	2.7107	2.9155	1.7627	1.9542
CIT322	1	proximal	NA	WT	M	0.1134	2.7413	2.7900	2.8822	1.8792	1.9326
CIT267	2	proximal	NA	WT	M	0.1096	2.7230	2.6869	2.8916	2.2135	2.0684
CIT512	2	distal	M	WT	WT	0.5577	2.7601	2.8584	2.8197	3.0696	2.6214
CIT535	2	distal	M	WT	WT	0.5347	2.7374	2.8435	2.8231	3.0419	2.5628
CIT539	3	proximal	WT	WT	WT	0.5119	2.7595	2.9540	2.8431	2.0780	2.3515
CIT527	2	distal	M	WT	WT	0.5047	2.7395	2.8813	2.7973	2.6647	2.4270
CIT451	2	distal	NA	WT	WT	0.5025	2.7791	2.9138	2.8260	2.7775	2.3723
CIT458	2	distal	WT	WT	WT	0.4975	2.7707	2.9008	2.7900	3.2343	2.8225
CIT508	1	distal	M	WT	WT	0.4962	2.7777	2.8822	2.8451	3.0095	2.7749
CIT558	3	distal	M	WT	WT	0.4795	2.7229	2.8466	2.7896	3.0554	2.7217
CIT534	2	distal	M	WT	WT	0.4787	2.7791	2.9243	2.8134	2.9228	2.5413
CIT494	2	distal	M	WT	WT	0.4717	2.7220	2.8189	2.8157	3.0032	2.4901
CIT528	2	distal	WT	WT	WT	0.4658	2.7929	2.8742	2.8237	2.8889	2.5278
CIT449	2	distal	NA	WT	WT	0.4596	2.7549	2.8942	2.8261	2.7731	2.5743
CIT545	3	distal	M	WT	WT	0.4591	2.7748	2.8716	2.8334	2.6632	2.3484
CIT471	2	distal	M	WT	WT	0.4578	2.7395	2.8771	2.7869	2.4958	2.2656
CIT559	2	distal	M	WT	WT	0.4577	2.7240	2.8139	2.8225	2.8758	2.6088
CIT525	3	distal	M	WT	WT	0.4538	2.7920	2.8516	2.8342	2.8124	2.3924
CIT536	1	proximal	M	WT	WT	0.4504	2.7491	2.8931	2.7697	2.9523	2.7750
CIT500	2	distal	M	WT	WT	0.4439	2.6778	2.8070	2.7367	2.7876	2.4448
CIT461	2	distal	WT	WT	WT	0.4423	2.7415	2.8844	2.7892	2.9170	2.4592
CIT462	2	distal	M	WT	WT	0.4418	2.7232	2.8431	2.8183	2.8495	2.4823
CIT555	3	proximal	M	WT	WT	0.4371	2.7507	2.8462	2.8334	3.0131	2.6642
CIT481	4	distal	WT	WT	WT	0.4362	2.7687	2.8689	2.8344	2.6067	2.3065
CIT465	3	distal	M	WT	WT	0.4301	2.7679	2.8320	2.8637	2.8429	2.4479
CIT542	3	distal	M	WT	WT	0.4262	2.7405	2.8353	2.8560	3.1405	2.6554
CIT505	2	distal	M	WT	WT	0.4220	2.7598	2.8993	2.8083	2.9603	2.5049
CIT454	2	distal	NA	WT	WT	0.4119	2.7896	2.8547	2.8589	2.7996	2.3393
CIT561	2	distal	M	WT	WT	0.4113	2.8273	2.8892	2.8204	2.8652	2.5464
CIT452	2	distal	NA	WT	WT	0.3997	2.7806	2.8247	2.8956	3.0555	2.4681
CIT553	1	distal	WT	WT	WT	0.3982	2.7474	2.9179	2.8182	2.4707	2.3576
CIT448	2	distal	NA	WT	WT	0.3950	2.7708	2.9126	2.8587	3.0849	2.6086
CIT463	3	distal	M	WT	WT	0.3938	2.7907	2.8539	2.8076	2.9660	2.5368
CIT453	2	distal	NA	WT	WT	0.3923	2.7452	2.7973	2.8073	2.6058	2.2999
CIT522	2	distal	M	WT	WT	0.3897	2.7266	2.8188	2.8264	3.0744	2.7701
CIT565	2	proximal	M	WT	WT	0.3756	2.7880	2.8753	2.8768	2.5999	2.1884
CIT457	3	distal	M	WT	WT	0.3755	2.7688	2.7941	2.8336	2.4668	2.1039
CIT495	2	distal	WT	WT	WT	0.3668	2.8146	2.9455	2.7978	2.7680	2.2169

CIT472	3	distal	M	WT	WT	0.3640	2.7492	2.8021	2.8193	2.0523	2.0172
CIT504	2	distal	WT	WT	WT	0.3638	2.7583	2.8331	2.8272	2.7079	2.4143
CIT468	2	distal	M	WT	WT	0.3614	2.7362	2.8684	2.7921	2.8473	2.5034
CIT478	2	distal	M	WT	WT	0.3582	2.7389	2.8681	2.8425	2.9660	2.6358
CIT540	1	distal	WT	WT	WT	0.3544	2.7477	2.8972	2.7944	1.8841	1.9405
CIT467	2	distal	M	WT	WT	0.3502	2.7017	2.8002	2.8366	2.7644	2.2975
CIT549	2	distal	WT	WT	WT	0.3434	2.7687	2.8252	2.8202	2.7770	2.3759
CIT479	3	distal	M	WT	WT	0.3409	2.7805	2.9442	2.8412	3.0091	2.5895
CIT550	2	distal	M	WT	WT	0.3351	2.7459	2.8649	2.8001	2.5892	2.3106
CIT563	2	distal	M	WT	WT	0.3328	2.7469	2.8115	2.8300	2.9716	2.6052
CIT518	3	distal	M	WT	WT	0.3303	2.8117	2.8538	2.8457	2.9608	2.4574
CIT520	3	distal	WT	WT	WT	0.3217	2.7772	2.7461	2.8239	2.1287	2.0989
CIT470	2	proximal	M	WT	WT	0.3178	2.7490	2.8096	2.8204	2.7332	2.4634
CIT564	3	distal	M	WT	WT	0.3062	2.7619	2.8086	2.8359	3.0533	2.6857
CIT485	4	distal	WT	WT	WT	0.3036	2.7432	2.7779	2.8180	2.6032	2.2146
CIT487	2	distal	NA	WT	WT	0.2974	2.7153	2.8235	2.8442	2.7245	2.6872
CIT538	1	distal	WT	WT	WT	0.2936	2.7744	2.8672	2.8242	2.5494	2.3968
CIT483	4	distal	M	WT	WT	0.2928	2.7313	2.8494	2.7471	2.4668	2.1925
CIT456	3	proximal	M	WT	NA	0.2916	2.7866	2.8475	2.9086	2.7700	2.5337
CIT546	2	distal	WT	WT	WT	0.2825	2.7210	2.8251	2.8852	1.9497	1.9577
CIT489	2	proximal	NA	WT	WT	0.2821	2.7671	2.8095	2.8631	2.7997	2.3482
CIT477	3	distal	WT	WT	WT	0.2801	2.8077	2.7929	2.8868	2.4347	2.1142
CIT547	2	distal	WT	WT	WT	0.2765	2.7535	2.7861	2.8320	2.8350	2.5240
CIT464	3	proximal	WT	WT	M	0.2604	2.7106	2.6748	2.8611	2.3189	2.2985
CIT544	2	proximal	NA	WT	WT	0.2356	2.6994	2.6883	2.8167	2.1274	2.1819
CIT492	2	proximal	WT	WT	M	0.2295	2.7068	2.6939	2.9413	1.7927	2.1131
CIT514	2	proximal	M	WT	WT	0.2266	2.7246	2.7328	2.8184	2.5973	2.2288
CIT515	1	proximal	WT	WT	M	0.2252	2.7204	2.7280	2.8574	2.6188	2.5599
CIT551	3	proximal	WT	WT	M	0.2159	2.7223	2.7536	2.8439	2.3160	2.2265
CIT499	3	proximal	WT	WT	M	0.2081	2.7494	2.7303	2.9051	2.4892	2.0845
CIT474	2	proximal	WT	WT	WT	0.1996	2.7900	2.7210	2.8591	2.6062	2.5007
CIT450	2	distal	NA	WT	WT	0.1942	2.7584	2.7866	2.8678	2.3076	2.3264
CIT543	3	proximal	WT	WT	WT	0.1918	2.7780	2.7809	2.8930	3.0567	2.4635
CIT503	2	proximal	WT	WT	WT	0.1844	2.8270	2.9317	2.8809	2.4666	2.4303
CIT554	2	distal	WT	WT	WT	0.1842	2.6798	2.8353	2.8791	1.8419	1.8963
CIT516	2	proximal	WT	WT	WT	0.1801	2.7432	2.7999	2.9119	1.9698	1.9787
CIT509	2	proximal	NA	WT	WT	0.1753	2.7808	2.8475	2.8892	1.7961	1.7529
CIT491	2	proximal	NA	WT	M	0.1739	2.7645	2.7390	2.9166	2.0024	2.3075
CIT496	3	proximal	WT	WT	M	0.1299	2.7487	2.7259	2.8878	1.8146	2.1753
CIT482	4	proximal	M	WT	WT	0.1243	2.7616	2.6367	2.8571	2.4380	2.0503
CIT075	2	distal	NA	NA	NA	0.5523	2.7265	2.8583	2.8152	2.5937	2.3071
CIT170	2	distal	NA	NA	NA	0.5429	2.7072	2.8675	2.7551	3.1008	2.7632
CIT163	3	distal	NA	NA	NA	0.5208	2.7292	2.9173	2.7504	2.9319	2.5502
CIT152	3	distal	NA	NA	NA	0.5115	2.7508	2.9016	2.8257	2.6982	2.3736
CIT167	2	proximal	NA	NA	NA	0.4488	2.7608	2.9244	2.7875	3.1348	2.7845
CIT166	3	proximal	NA	NA	NA	0.4437	2.6961	2.8586	2.7995	2.8334	2.4141
CIT077	2	distal	NA	NA	NA	0.4431	2.7344	2.9064	2.8123	3.0115	2.8072
CIT150	3	distal	NA	NA	NA	0.4104	2.8237	2.9741	2.9044	2.7464	2.3241
CIT164	3	proximal	NA	NA	NA	0.3769	2.7974	2.8571	2.8257	2.9811	2.7519
CIT292	2	proximal	NA	NA	NA	0.3747	2.7375	2.8705	2.8171	2.5957	2.2221
CIT080	2	proximal	NA	NA	NA	0.3140	2.7309	2.8188	2.8247	2.7133	2.2411
CIT157	3	proximal	NA	NA	NA	0.3083	2.7671	2.7780	2.8742	2.0330	2.1594
CIT155	3	distal	NA	NA	NA	0.2950	2.7312	2.7938	2.9019	2.4579	2.1590
CIT154	3	proximal	NA	NA	NA	0.2781	2.7490	2.8296	2.8526	2.2417	2.2790
CIT145	3	distal	NA	NA	NA	0.2535	2.6664	2.6862	2.7923	2.3255	2.2192
CIT146	3	distal	NA	NA	NA	0.2358	2.6726	2.6828	2.7687	2.0955	2.2461
CIT156	3	proximal	NA	NA	NA	0.1937	2.7878	2.7400	2.8471	1.9073	2.0250
CIT268	3	proximal	NA	NA	NA	0.1792	2.7664	2.7867	2.8771	1.8784	2.0534
CIT342	2	proximal	NA	NA	NA	0.1699	2.7719	2.8315	2.9274	2.2333	2.1742
CIT541	3	distal	M	NA	WT	0.4518	2.7148	2.8998	2.8244	2.6825	2.6293
CIT530	2	proximal	WT	NA	WT	0.3770	2.7729	2.9426	2.8953	2.1037	2.1390

CIT186	3	proximal	M	M	WT	0.5212	2.7343	2.8825	2.8314	2.6856	2.4961
CIT407	3	distal	M	M	WT	0.4838	2.7867	2.8568	2.8514	2.9144	2.4922
CIT061	3	proximal	NA	M	WT	0.4808	2.7080	2.8485	2.8280	2.9571	2.7046
CIT085	2	distal	NA	M	WT	0.4799	2.7608	2.8886	2.8527	3.0255	2.6399
CIT333	4	proximal	NA	M	WT	0.4794	2.7212	2.8404	2.8143	3.1613	2.8656
CIT315	3	proximal	NA	M	WT	0.4789	2.7504	2.9027	2.8665	2.9258	2.5356
CIT363	2	distal	M	M	WT	0.4772	2.6853	2.8212	2.8196	2.8730	2.2165
CIT436	2	proximal	WT	M	WT	0.4753	2.7627	2.8782	2.8835	2.7684	2.3800
CIT010	3	distal	M	M	WT	0.4672	2.8298	2.9412	2.8364	3.0034	2.6346
CIT113	2	proximal	NA	M	WT	0.4530	2.7732	2.8996	2.7697	2.3993	2.2139
CIT139	2	distal	NA	M	WT	0.4410	2.7948	2.8595	2.8921	3.1559	2.6839
CIT276	4	distal	NA	M	WT	0.4384	2.7653	2.8934	2.8279	2.8633	2.4612
CIT217	2	distal	WT	M	WT	0.4360	2.7525	2.8471	2.8276	2.6960	2.3618
CIT362	2	proximal	WT	M	WT	0.4344	2.7711	2.9362	2.8934	2.9732	2.5562
CIT001	4	distal	M	M	WT	0.4258	2.7904	2.9129	2.8622	2.5231	2.3224
CIT383	3	proximal	M	M	WT	0.4240	2.7899	2.9173	2.8731	2.9501	2.4922
CIT295	4	distal	NA	M	WT	0.4240	2.8300	2.8911	2.8855	2.3309	2.3848
CIT364	3	distal	M	M	WT	0.4213	2.7143	2.8557	2.8664	3.0903	2.4661
CIT287	2	distal	NA	M	WT	0.4202	2.7963	2.9434	2.8463	2.8941	2.6288
CIT237	3	distal	M	M	WT	0.4183	2.7685	2.9048	2.8613	2.5588	2.4181
CIT078	2	proximal	NA	M	WT	0.4178	2.6935	2.8042	2.8110	2.5366	2.4198
CIT175	2	proximal	NA	M	WT	0.4164	2.8107	2.8805	2.9032	2.9651	2.6610
CIT430	2	proximal	M	M	WT	0.4161	2.7406	2.8921	2.8249	2.7876	2.2025
CIT092	4	distal	NA	M	WT	0.4160	2.7451	2.8817	2.8673	2.9966	2.6249
CIT294	3	distal	NA	M	WT	0.4148	2.7795	2.9553	2.8602	2.7755	2.3144
CIT416	3	proximal	M	M	WT	0.4123	2.7454	2.8762	2.8537	2.7968	2.2609
CIT221	2	proximal	M	M	WT	0.4098	2.7010	2.8270	2.8225	2.3047	2.1887
CIT316	4	proximal	NA	M	WT	0.4081	2.7400	2.8856	2.8220	2.8590	2.5004
CIT406	3	proximal	M	M	WT	0.4074	2.7939	2.9121	2.8575	2.7956	2.2987
CIT296	4	proximal	NA	M	WT	0.4031	2.7835	2.8775	2.8614	2.5810	2.3622
CIT219	3	distal	WT	M	WT	0.4023	2.7528	2.9009	2.8221	2.6485	2.3774
CIT301	2	distal	NA	M	WT	0.3974	2.6968	2.7915	2.7898	2.9318	2.3972
CIT368	2	distal	WT	M	WT	0.3969	2.8048	2.9913	2.8483	2.5633	2.4512
CIT411	3	distal	M	M	WT	0.3967	2.7672	2.8314	2.8611	2.5025	2.1529
CIT328	4	distal	NA	M	WT	0.3967	2.7040	2.8652	2.7868	2.0659	1.9245
CIT261	4	distal	M	M	WT	0.3960	2.7994	2.9164	2.8804	2.4346	2.2184
CIT437	2	proximal	WT	M	WT	0.3957	2.8265	2.9948	2.8170	2.7255	2.5014
CIT279	3	distal	NA	M	WT	0.3946	2.8226	2.8944	2.8629	2.6220	2.3020
CIT387	2	proximal	M	M	WT	0.3940	2.7759	2.9581	2.8483	2.3734	2.4184
CIT192	3	distal	M	M	NA	0.3935	2.7088	2.8285	2.8108	2.4178	2.2376
CIT293	1	proximal	NA	M	WT	0.3919	2.7723	2.9271	2.8413	2.7906	2.4395
CIT242	3	distal	M	M	WT	0.3904	2.7382	2.8697	2.8363	3.1637	2.6803
CIT216	2	proximal	M	M	WT	0.3888	2.7679	2.9058	2.9118	2.5805	2.3473
CIT426	2	proximal	M	M	WT	0.3867	2.7878	2.9414	2.8357	2.7692	2.4554
CIT136	2	distal	NA	M	WT	0.3830	2.7911	2.8290	2.8805	2.7165	2.0646
CIT048	4	proximal	M	M	WT	0.3811	2.7851	2.9467	2.8997	3.0718	2.7128
CIT096	2	distal	NA	M	WT	0.3804	2.7716	2.8572	2.8160	2.7046	2.2782
CIT304	4	distal	NA	M	WT	0.3790	2.8008	2.8605	2.9043	2.8828	2.6193
CIT196	3	proximal	WT	M	NA	0.3783	2.7477	2.9267	2.7818	2.7485	2.3286
CIT441	2	distal	M	M	WT	0.3731	2.7281	2.8660	2.7658	2.7495	2.4619
CIT419	3	proximal	WT	M	WT	0.3731	2.7923	2.9212	2.8953	2.6849	2.3903
CIT171	2	distal	NA	M	WT	0.3729	2.7177	2.8151	2.8126	2.7611	2.2019
CIT202	3	proximal	M	M	NA	0.3654	2.7703	2.7925	2.8411	2.7736	2.3193
CIT346	3	proximal	WT	M	WT	0.3652	2.7181	2.8241	2.8104	2.7694	2.4293
CIT259	3	proximal	M	M	WT	0.3637	2.8095	2.8968	2.8807	2.7236	2.4547
CIT108	4	distal	NA	M	WT	0.3602	2.7775	2.8178	2.8980	2.0121	1.8401
CIT047	4	proximal	WT	M	WT	0.3600	2.7124	2.8340	2.8458	2.7752	2.3772
CIT072	3	proximal	NA	M	WT	0.3532	2.7609	2.9044	2.8713	2.7442	2.4241
CIT195	3	distal	WT	M	NA	0.3516	2.7542	2.8934	2.8060	2.4096	2.1819
CIT106	2	distal	NA	M	WT	0.3502	2.7510	2.8409	2.8411	2.8808	2.3839

CIT066	3	proximal	NA	M	WT	0.3498	2.7550	2.9331	2.8612	2.9299	2.3562
CIT198	3	distal	M	M	NA	0.3477	2.7811	2.9267	2.8682	2.1497	2.4200
CIT125	2	distal	NA	M	WT	0.3474	2.7608	2.9074	2.8156	2.8072	2.3186
CIT232	3	distal	WT	M	WT	0.3465	2.7140	2.8768	2.8207	2.4143	2.2530
CIT392	2	distal	WT	M	WT	0.3456	2.7977	2.9075	2.8424	2.3546	2.4247
CIT326	1	distal	NA	M	WT	0.3433	2.7814	2.8635	2.8887	2.5663	2.5009
CIT263	4	distal	M	M	WT	0.3414	2.7545	2.8960	2.8605	2.5632	2.4243
CIT236	2	proximal	M	M	WT	0.3393	2.7766	2.8389	2.8329	1.9671	1.9563
CIT399	2	distal	M	M	WT	0.3362	2.7574	2.8214	2.8603	2.5586	2.3663
CIT095	4	distal	NA	M	WT	0.3335	2.7789	2.7813	2.8300	2.9610	2.5427
CIT366	2	distal	WT	M	WT	0.3331	2.7520	2.9102	2.8651	1.8813	1.9347
CIT289	4	distal	NA	M	WT	0.3325	2.7532	2.8792	2.8214	2.1151	2.0177
CIT162	3	distal	NA	M	WT	0.3296	2.7564	2.8587	2.8508	2.2610	2.1246
CIT225	3	proximal	WT	M	WT	0.3286	2.8064	2.8181	2.9149	2.4254	1.9434
CIT112	2	distal	NA	M	WT	0.3286	2.8261	2.8441	2.9049	2.5935	2.2446
CIT138	2	proximal	NA	M	WT	0.3237	2.7967	2.8688	2.8224	2.6259	2.4035
CIT176	2	distal	NA	M	WT	0.3234	2.8208	2.9513	2.8946	2.6608	2.2480
CIT107	2	distal	NA	M	WT	0.3183	2.8005	2.9113	2.8516	2.6947	2.3651
CIT348	2	distal	WT	M	WT	0.3181	2.7261	2.8601	2.8604	2.6848	2.4155
CIT210	3	distal	WT	M	NA	0.3154	2.7700	2.8772	2.8775	2.7894	2.3270
CIT339	3	proximal	NA	M	WT	0.3120	2.7465	2.8481	2.8293	2.9040	2.5477
CIT098	2	proximal	NA	M	WT	0.3083	2.8271	2.9148	2.9214	2.6592	2.4048
CIT054	4	distal	WT	M	WT	0.3070	2.7887	2.8529	2.8500	2.8631	2.5869
CIT205	2	distal	WT	M	NA	0.3062	2.7587	2.8414	2.8671	2.6335	2.3303
CIT042	3	proximal	WT	M	WT	0.3059	2.6722	2.7390	2.7869	2.6597	2.1011
CIT424	3	proximal	M	M	WT	0.3057	2.8054	2.8790	2.8685	2.2606	2.3749
CIT121	2	distal	NA	M	WT	0.3055	2.7829	2.8592	2.8847	2.2223	2.2212
CIT423	3	distal	M	M	WT	0.3027	2.6932	2.8361	2.8735	1.8174	1.9310
CIT335	3	distal	NA	M	WT	0.3015	2.7206	2.8577	2.8913	2.5614	2.2022
CIT091	2	proximal	NA	M	WT	0.2992	2.8800	2.9915	2.8853	2.7466	2.5476
CIT354	3	proximal	M	M	WT	0.2985	2.7751	2.8226	2.8564	2.8727	2.5864
CIT009	2	distal	WT	M	WT	0.2932	2.7536	2.9083	2.8747	2.5130	2.1184
CIT397	2	proximal	WT	M	WT	0.2929	2.8300	2.8681	2.8250	2.9433	2.4724
CIT022	1	proximal	M	M	WT	0.2924	2.7967	2.9134	2.8676	2.9762	2.5542
CIT056	4	proximal	WT	M	WT	0.2911	2.7509	2.8803	2.8056	2.3424	2.2950
CIT239	2	proximal	WT	M	WT	0.2888	2.7202	2.8526	2.8469	2.0090	2.2451
CIT147	3	distal	NA	M	WT	0.2872	2.7759	2.8829	2.8654	2.3422	2.1998
CIT250	2	distal	WT	M	WT	0.2821	2.7853	2.8385	2.8166	2.1176	2.2962
CIT257	4	distal	M	M	WT	0.2805	2.7942	2.8812	2.8453	2.0534	2.1418
CIT033	1	proximal	WT	M	WT	0.2772	2.8013	2.9165	2.9149	1.9904	2.3127
CIT135	2	distal	NA	M	WT	0.2756	2.7449	2.8844	2.8587	2.4222	2.2628
CIT117	2	proximal	NA	M	WT	0.2704	2.8185	2.8877	2.8868	2.6694	2.3404
CIT018	4	distal	M	M	WT	0.2693	2.7622	2.8560	2.8623	2.2183	2.1459
CIT165	3	distal	NA	M	WT	0.2684	2.6844	2.7682	2.8575	2.0842	2.2080
CIT199	3	distal	M	M	NA	0.2672	2.7822	2.9208	2.8637	2.9251	2.6211
CIT081	2	proximal	NA	M	WT	0.2672	2.7814	2.8366	2.8717	2.8967	2.4073
CIT014	1	proximal	WT	M	WT	0.2665	2.7001	2.7903	2.8029	2.0416	1.8936
CIT049	4	proximal	M	M	WT	0.2657	2.6796	2.8003	2.8246	2.0757	2.1270
CIT046	3	distal	M	M	WT	0.2642	2.7441	2.7794	2.8814	2.2737	2.1986
CIT389	3	proximal	WT	M	WT	0.2630	2.7837	2.8942	2.9356	2.6080	2.5442
CIT240	2	proximal	WT	M	WT	0.2616	2.7936	2.8922	2.9557	1.9933	1.9769
CIT256	4	distal	M	M	WT	0.2598	2.7298	2.7988	2.9043	2.9505	2.6382
CIT144	3	proximal	NA	M	WT	0.2587	2.7263	2.7684	2.8896	2.4890	2.5293
CIT053	4	distal	M	M	WT	0.2547	2.7712	2.7990	2.8441	2.3078	2.4710
CIT067	3	distal	NA	M	WT	0.2540	2.7913	2.8859	2.8908	2.1877	2.3221
CIT114	2	distal	NA	M	WT	0.2530	2.6994	2.8034	2.8007	2.5050	2.2997
CIT141	3	proximal	NA	M	WT	0.2529	2.7100	2.6379	2.8720	2.0951	1.9765
CIT148	3	proximal	NA	M	WT	0.2500	2.8418	2.9130	2.9131	2.6386	2.3842
CIT086	2	proximal	NA	M	WT	0.2492	2.7288	2.8571	2.8387	2.2188	2.2983
CIT235	3	distal	WT	M	WT	0.2458	2.7511	2.8873	2.8617	2.5490	2.3567
CIT434	3	proximal	M	M	WT	0.2457	2.7066	2.7656	2.8797	2.2877	2.4141

CIT222	3	proximal	WT	M	WT	0.2436	2.7539	2.9372	2.8854	1.9350	1.8505
CIT438	3	distal	M	M	WT	0.2436	2.7788	2.8210	2.8559	2.5240	2.3600
CIT374	2	proximal	WT	M	WT	0.2435	2.7941	2.8865	2.8965	2.4132	2.2793
CIT089	4	proximal	NA	M	WT	0.2413	2.7424	2.8739	2.9029	2.2044	2.4430
CIT012	2	proximal	M	M	WT	0.2411	2.7557	2.6930	2.9384	2.0743	2.0036
CIT286	1	proximal	NA	M	WT	0.2409	2.8489	2.9836	2.8526	2.4194	2.1174
CIT034	1	proximal	WT	M	WT	0.2407	2.7539	2.8560	2.8518	2.8639	2.4234
CIT341	1	proximal	NA	M	WT	0.2360	2.7756	2.8122	2.8841	2.4260	2.4744
CIT230	3	proximal	WT	M	WT	0.2358	2.7829	2.7928	2.8881	1.8871	2.0755
CIT142	3	distal	NA	M	WT	0.2347	2.6577	2.7359	2.8512	2.0755	2.3180
CIT173	2	distal	NA	M	WT	0.2336	2.7178	2.7543	2.7984	2.8383	2.5263
CIT037	2	distal	WT	M	WT	0.2297	2.8113	2.8954	2.8747	2.4415	2.4740
CIT094	2	distal	NA	M	WT	0.2296	2.7314	2.8755	2.8793	2.0262	2.2662
CIT015	4	proximal	WT	M	WT	0.2279	2.7807	2.8823	2.8618	2.6996	2.4573
CIT370	2	distal	M	M	WT	0.2251	2.7528	2.8992	2.8890	2.2004	2.1027
CIT337	1	proximal	NA	M	WT	0.2244	2.8487	2.8911	2.8871	2.2511	2.5855
CIT025	2	proximal	WT	M	WT	0.2233	2.7263	2.7633	2.8315	1.9215	1.9867
CIT317	1	distal	NA	M	WT	0.2231	2.7018	2.8624	2.8407	1.9138	2.0325
CIT313	1	proximal	NA	M	WT	0.2223	2.7102	2.7738	2.7933	2.0933	2.0547
CIT359	1	distal	WT	M	WT	0.2218	2.7727	2.8595	2.9050	2.7045	2.5279
CIT026	3	proximal	M	M	WT	0.2215	2.8129	2.7738	2.9390	2.3423	2.2373
CIT179	2	distal	M	M	NA	0.2202	2.6298	2.7489	2.8503	1.8844	1.8742
CIT203	3	proximal	WT	M	WT	0.2193	2.7859	2.8748	2.8980	2.1978	2.3394
CIT184	2	distal	WT	M	NA	0.2132	2.8005	2.8725	2.8478	2.6433	2.2563
CIT369	3	proximal	WT	M	WT	0.2069	2.7940	2.8303	2.8524	2.4668	2.3556
CIT021	3	proximal	WT	M	WT	0.2039	2.7591	2.7482	2.8929	2.0864	2.1631
CIT093	2	proximal	NA	M	WT	0.2036	2.7596	2.8377	2.8785	1.9840	2.2148
CIT409	3	proximal	M	M	WT	0.2028	2.8132	2.7254	2.9461	2.6115	2.3498
CIT340	1	distal	NA	M	WT	0.2028	2.7615	2.8973	2.8745	2.0407	2.2272
CIT312	3	distal	NA	M	WT	0.1998	2.7156	2.7788	2.8130	2.0253	1.9486
CIT303	2	distal	NA	M	WT	0.1936	2.7042	2.7937	2.8261	1.9124	1.9104
CIT227	3	distal	M	M	WT	0.1878	2.7029	2.7846	2.8895	1.8567	1.9444
CIT273	2	distal	NA	M	WT	0.1867	2.7872	2.8557	2.8883	2.4983	2.4753
CIT011	2	proximal	WT	M	WT	0.1852	2.6954	2.7315	2.8745	2.0514	2.1803
CIT059	2	distal	WT	M	WT	0.1822	2.7526	2.7789	3.0129	2.4220	2.2704
CIT320	3	proximal	NA	M	WT	0.1815	2.7602	2.7263	2.9287	2.1169	2.1162
CIT029	1	proximal	WT	M	WT	0.1799	2.7496	2.9235	2.8423	1.9975	2.0480
CIT393	3	proximal	WT	M	WT	0.1770	2.7899	2.7191	2.8922	2.1994	2.0835
CIT324	2	proximal	NA	M	WT	0.1753	2.7700	2.7891	2.9262	2.1492	2.1248
CIT405	3	distal	M	M	WT	0.1721	2.8019	2.6569	2.9575	2.3173	2.0395
CIT410	3	proximal	WT	M	WT	0.1684	2.7429	2.8122	2.8601	1.9331	2.0288
CIT271	4	proximal	NA	M	WT	0.1597	2.7030	2.8033	2.7899	1.8360	2.1717
CIT262	4	proximal	WT	M	WT	0.1531	2.7373	2.8561	2.8864	2.1183	2.3460
CIT330	2	proximal	NA	M	WT	0.1521	2.7481	2.8242	2.9201	2.0326	2.1135
CIT126	2	distal	NA	M	WT	0.1513	2.7634	2.7825	2.8914	2.3145	2.1830
CIT124	2	distal	NA	M	WT	0.1406	2.7383	2.7413	2.8899	2.1722	2.1201
CIT433	2	proximal	WT	M	WT	0.1342	2.7277	2.8269	2.8133	2.0051	1.9752
CIT270	2	proximal	NA	M	WT	0.1298	2.7358	2.7919	2.8860	1.8262	2.1338
CIT408	3	proximal	M	M	WT	0.1217	2.7320	2.7863	2.8570	1.8827	1.9047
CIT344	1	proximal	NA	M	WT	0.1180	2.7135	2.7675	2.8291	1.8918	2.0791
CIT190	3	distal	M	M	NA	0.1089	2.7363	2.7845	2.8877	2.1742	2.3994
CIT455	3	distal	M	M	NA	0.5256	2.7508	2.8875	2.8404	2.9718	2.4265
CIT557	3	proximal	M	M	WT	0.4913	2.7127	2.8198	2.8570	2.6269	2.1633
CIT510	3	proximal	M	M	WT	0.4712	2.8278	2.9251	2.8306	3.0496	2.5260
CIT529	2	proximal	WT	M	WT	0.4619	2.7760	2.9674	2.8477	3.0782	2.6727
CIT506	1	distal	M	M	WT	0.4375	2.7967	2.9256	2.8697	2.5970	2.1448
CIT480	2	distal	M	M	WT	0.4296	2.7428	2.8620	2.9013	2.9806	2.3853
CIT513	1	distal	WT	M	WT	0.4075	2.7686	2.8480	2.8807	2.4317	2.2466
CIT552	1	distal	M	M	WT	0.3852	2.7565	2.8923	2.8217	3.0194	2.6018
CIT548	3	distal	WT	M	WT	0.3792	2.7749	2.8848	2.8570	2.8773	2.5295
CIT459	3	distal	M	M	NA	0.3760	2.7644	2.9079	2.8574	3.1135	2.7365

CIT537	2	proximal	WT	M	WT	0.3716	2.7221	2.8096	2.8582	3.0868	2.6574
CIT498	1	distal	M	M	WT	0.3672	2.7596	2.8621	2.7900	2.7499	2.4388
CIT466	2	proximal	WT	M	WT	0.3613	2.8038	2.8579	2.8816	2.3293	2.1656
CIT560	2	distal	WT	M	WT	0.3487	2.7492	2.9153	2.8967	2.8778	2.5823
CIT521	2	proximal	M	M	WT	0.3433	2.7315	2.7708	2.8822	2.9566	2.2867
CIT562	3	proximal	M	M	WT	0.3342	2.7436	2.8476	2.8579	2.5515	2.2338
CIT486	4	distal	WT	M	WT	0.3223	2.7263	2.8604	2.8342	2.9073	2.3317
CIT475	3	proximal	WT	M	WT	0.3215	2.7923	2.8974	2.8506	2.8845	2.6006
CIT476	3	distal	M	M	WT	0.3106	2.7607	2.8784	2.9102	2.4453	2.1137
CIT493	3	proximal	M	M	WT	0.3104	2.7867	2.8491	2.8429	2.5822	2.3615
CIT511	3	distal	M	M	WT	0.3021	2.7929	2.7826	2.8598	2.8279	2.1789
CIT460	2	distal	M	M	WT	0.3002	2.7829	2.8436	2.8507	2.7191	2.3250
CIT446	2	proximal	NA	M	WT	0.2840	2.7988	2.9003	2.9459	2.4961	2.0951
CIT484	2	distal	M	M	WT	0.2762	2.8267	2.8065	2.8840	2.5908	2.5291
CIT502	2	proximal	WT	M	WT	0.2748	2.7874	2.8434	2.8630	2.2814	2.1296
CIT473	3	distal	M	M	WT	0.2722	2.7038	2.8065	2.8475	2.4034	2.2188
CIT524	2	proximal	WT	M	WT	0.2680	2.7735	2.9277	2.8955	2.0693	2.0219
CIT556	3	proximal	WT	M	WT	0.2604	2.8038	2.8933	2.8951	2.0455	2.3184
CIT469	3	proximal	WT	M	WT	0.2572	2.7875	2.8818	2.9016	2.0899	2.2609
CIT566	2	proximal	WT	M	WT	0.2569	2.7121	2.7042	2.8931	2.0622	2.2800
CIT444	4	distal	M	M	WT	0.2496	2.7328	2.7485	2.8474	2.6570	2.5520
CIT447	2	proximal	NA	M	WT	0.2414	2.7747	2.8414	2.9253	2.2666	2.2518
CIT517	2	distal	WT	M	WT	0.2269	2.7774	2.8534	2.8780	2.4187	2.2412
CIT507	3	proximal	WT	M	WT	0.2241	2.7418	2.8651	2.8756	1.9520	2.2136
CIT490	3	proximal	NA	M	WT	0.2227	2.7678	2.8332	2.8651	2.1207	2.3916
CIT497	3	proximal	WT	M	WT	0.2209	2.7267	2.8395	2.8576	2.1679	2.2185
CIT488	3	proximal	NA	M	WT	0.2095	2.8132	2.6627	2.9309	2.7723	2.4638
CIT531	2	distal	WT	M	WT	0.2088	2.7307	2.8092	2.8452	1.8437	2.1032
CIT445	2	proximal	NA	M	WT	0.2035	2.7455	2.6545	2.8738	2.8984	2.3043
CIT533	2	proximal	WT	M	WT	0.1994	2.8182	2.9104	2.8687	2.0883	2.2968
CIT501	3	distal	WT	M	WT	0.1961	2.7783	2.8923	2.8774	2.1838	2.3090
CIT519	2	distal	WT	M	WT	0.1805	2.6936	2.8099	2.8483	2.0636	1.9800
CIT532	2	proximal	WT	M	WT	0.1674	2.7809	2.8517	2.8822	2.4638	2.3109
CIT523	3	proximal	WT	M	WT	0.1430	2.7980	2.6787	2.9006	2.3620	2.4991
CIT526	2	proximal	WT	M	WT	0.1099	2.7830	2.8049	2.8837	1.7594	2.0966

Supplementary Table S7. Julien et al. (2012) cetuximab-treated CRC PDX models (n=52) (9)---cetuximab response (CR/PR/SD/PD), MSI and *APC/TP53/KRAS/BRAF* mutation status

Note: The molecular parameters were adopted from "Figure 2" **(9)**. 1 — mut; 0 — wt; A — *APC* mutation; P — *TP53* mutation; K — *KRAS* mutation; B — *BRAF*(V600E); CR---complete response; PR---partial response; SD---stable disease; PD---progressed disease

PDX Model Code	Cetuximab response score	"CR/PR/SD/PD"	MSI_H	APC	TP53	KRAS	BRAF	A/P/K/B
CR-IC-0002P	+++	CR/PR	0	1	1	0	0	AP
CR-IC-0003P	+++	CR/PR	0	1	1	0	0	AP
CR-IC-0004M	++	SD	0	1	1	1	0	APK
CR-IC-0005P	+	PD	0	0	0	0	0	WT
CR-IC-0006M	+++	CR/PR	0	0	1	0	0	P
CR-IC-0007M	+++	CR/PR	0	1	1	1	0	APK
CR-IC-0008P	-	PD	0	1	0	0	0	A
CR-IC-0009M	-	PD	0	1	0	0	0	A
CR-IC-0010P	-	PD	0	1	0	0	0	A
CR-IC-0013M	+++	CR/PR	0	1	0	1	1	AKB
CR-IC-0016M	+	PD	0	0	1	0	0	P
CR-IC-0019P	+++	CR/PR	0	0	1	0	0	P
CR-IC-0020P	+++	CR/PR	0	1	1	0	0	AP
CR-IC-0021M	+++	CR/PR	0	1	1	0	0	AP
CR-IC-0022P	-	PD	0	1	1	0	0	AP
CR-IC-0025M	+++	CR/PR	0	1	1	0	0	AP
CR-IC-0028M	-	PD	0	0	1	0	0	P
CR-IC-0029P	-	PD	0	0	1	0	0	P
CR-IC-0032P	+++	CR/PR	0	1	1	0	0	AP
CR-IGR-0002C	++	SD	0	0	1	0	0	P
CR-IGR-0002P	++	SD	0	0	1	0	0	P
CR-IGR-0003P	+++	CR/PR	0	0	1	1	0	PK
CR-IGR-0007P	+	PD	0	1	1	1	0	APK
CR-IGR-0008P	-	PD	0	1	1	0	0	AP
CR-IGR-0009P	-	PD	0	0	1	1	0	PK
CR-IGR-0011C	-	PD	0	0	0	1	0	K
CR-IGR-0012P	-	PD	0	1	0	1	0	AK
CR-IGR-0014P	-	PD	0	1	0	1	0	AK
CR-IGR-0016P	-	PD	0	0	1	1	0	PK
CR-IGR-0023M	+	PD	0	1	1	1	0	APK
CR-IGR-0025P	-	PD	0	1	1	1	0	APK
CR-IGR-0029P	-	PD	0	1	0	1	0	AK
CR-IGR-0032P	-	PD	0	1	0	1	0	AK
CR-IGR-0034P	-	PD	0	0	1	0	1	PB
CR-IGR-0038C	++	SD	0	0	1	1	0	PK

CR-IGR-0043P	-	PD	0	1	0	1	0	AK
CR-IGR-0047P	+++	CR/PR	0	0	1	0	0	P
CR-IGR-0048M	+	PD	0	0	1	0	0	P
CR-IGR-0052M	+	PD	0	0	1	0	0	P
CR-LRB-0003P	-	PD	1	1	0	0	0	A
CR-LRB-0004P	-	PD	1	1	0	0	1	AB
CR-LRB-0007P	-	PD	0	1	1	0	0	AP
CR-LRB-0008M	+	PD	0	0	0	1	0	K
CR-LRB-0009C	-	PD	0	0	0	1	0	K
CR-LRB-0010P	-	PD	0	1	1	1	0	APK
CR-LRB-0011M	-	PD	0	1	1	1	0	APK
CR-LRB-0013P	-	PD	0	1	1	1	0	APK
CR-LRB-0014P	+++	CR/PR	0	1	1	1	0	APK
CR-LRB-0017P	-	PD	0	1	1	1	0	APK
CR-LRB-0018P	-	PD	1	0	1	0	1	PB
CR-LRB-0019C	+++	CR/PR	0	1	1	0	0	AP
CR-LRB-0022P	-	PD	1	0	0	1	0	K

Supplementary Table S8. Bertotti et al. (2015) cetuximab-treated CRC PDX models having wild-type *KRAS*, *NRAS*, *BRAF* and *PI3KCA* (n=98) (10)---cetuximab response (CR/PR/SD/PD) and mutation status of *APC, TP53, KRAS, NRAS,* and *BRAF.*

Note: The molecular parameters were adopted from "Supplementary Table 10" **(10)**. 1 — mut; 0 — wt; A — *APC* truncating mutation; P — *TP53* mutation; K — *KRAS* mutation; N — *NRAS* mutation; B — *BRAF*(V600E); PR---partial response; SD---stable disease; PD---progressed disease

PDX CASE ID	RESPONSE TO CETUXIMAB	APC	TP53	KRAS	NRAS	BRAF	A/P/K/N/B
CRC0014	SD	1	1	0	0	0	AP
CRC0030	SD	1	1	0	0	0	AP
CRC0032	SD	1	1	0	0	0	AP
CRC0054	SD	1	1	0	0	0	AP
CRC0057	SD	1	1	0	0	0	AP
CRC0065	SD	1	1	0	0	0	AP
CRC0066	SD	1	1	0	0	0	AP
CRC0076	PR	1	1	0	0	0	AP
CRC0078	SD	1	1	0	0	0	AP
CRC0081	SD	1	1	0	0	0	AP
CRC0095	SD	1	1	0	0	0	AP
CRC0096	PR	1	1	0	0	0	AP
CRC0097	SD	1	1	0	0	0	AP
CRC0098	PR	1	1	0	0	0	AP
CRC0099	SD	1	1	0	0	0	AP
CRC0101	SD	1	1	0	0	0	AP
CRC0102	PR	1	1	0	0	0	AP
CRC0103	SD	1	1	0	0	0	AP
CRC0109	SD	1	1	0	0	0	AP
CRC0113	PR	1	1	0	0	0	AP
CRC0115	SD	1	1	0	0	0	AP
CRC0116	PR	1	1	0	0	0	AP
CRC0117	SD	1	1	0	0	0	AP
CRC0121	SD	1	1	0	0	0	AP
CRC0124	PD	1	1	0	0	0	AP
CRC0126	PD	1	1	0	0	0	AP
CRC0129	SD	1	1	0	0	0	AP
CRC0131	SD	1	1	0	0	0	AP
CRC0133	SD	1	1	0	0	0	AP
CRC0146	SD	1	1	0	0	0	AP
CRC0147	SD	1	1	0	0	0	AP
CRC0151	PD	1	1	0	0	0	AP
CRC0152	PD	1	1	0	0	0	AP
CRC0153	SD	1	1	0	0	0	AP

CRC0159	SD	1	1	0	0	0	AP
CRC0161	PD	1	1	0	0	0	AP
CRC0166	PD	1	1	0	0	0	AP
CRC0171	SD	1	1	0	0	0	AP
CRC0176	PD	1	1	0	0	0	AP
CRC0177	PD	1	1	0	0	0	AP
CRC0179	SD	1	1	0	0	0	AP
CRC0185	PR	1	1	0	0	0	AP
CRC0186	PD	1	1	0	0	0	AP
CRC0188	SD	1	1	0	0	0	AP
CRC0190	SD	1	1	0	0	0	AP
CRC0196	PD	1	1	0	0	0	AP
CRC0197	PD	1	1	0	0	0	AP
CRC0202	SD	1	1	0	0	0	AP
CRC0204	SD	1	1	0	0	0	AP
CRC0219	PR	1	1	0	0	0	AP
CRC0243	SD	1	1	0	0	0	AP
CRC0246	PR	1	1	0	0	0	AP
CRC0252	PR	1	1	0	0	0	AP
CRC0254	SD	1	1	0	0	0	AP
CRC0262	PR	1	1	0	0	0	AP
CRC0264	SD	1	1	0	0	0	AP
CRC0285	SD	1	1	0	0	0	AP
CRC0297	PR	1	1	0	0	0	AP
CRC0306	SD	1	1	0	0	0	AP
CRC0321	SD	1	1	0	0	0	AP
CRC0327	PR	1	1	0	0	0	AP
CRC0344	SD	1	1	0	0	0	AP
CRC0358	PD	1	1	0	0	0	AP
CRC0362	SD	1	1	0	0	0	AP
CRC0378	PR	1	1	0	0	0	AP
CRC0394	SD	1	1	0	0	0	AP
CRC0399	PR	1	1	0	0	0	AP
CRC0400	SD	1	1	0	0	0	AP
CRC0403	SD	1	1	0	0	0	AP
CRC0404	PR	1	1	0	0	0	AP
CRC0419	PR	1	1	0	0	0	AP
CRC0440	PR	1	1	0	0	0	AP
CRC0456	PR	1	1	0	0	0	AP
CRC0025	PD	1	0	0	0	0	A
CRC0029	SD	0	1	0	0	0	P
CRC0068	PD	1	0	0	0	0	A
CRC0080	PD	0	1	0	0	0	P
CRC0137	SD	0	1	0	0	0	P
CRC0199	PD	0	1	0	0	0	P

CRC0237	SD	0	1	0	0	0	P
CRC0239	PD	0	1	0	0	0	P
CRC0312	SD	1	0	0	0	0	A
CRC0343	PD	1	0	0	0	0	A
CRC0396	PR	1	0	0	0	0	A
CRC0441	SD	1	0	0	0	0	A
CRC0058	PD	0	0	0	0	0	wt
CRC0069	PR	0	0	0	0	0	wt
CRC0112	PD	0	0	0	0	0	wt
CRC0125	PD	0	0	0	0	0	wt
CRC0157	PR	0	0	0	0	0	wt
CRC0257	SD	0	0	0	0	0	wt
CRC0276	PD	0	0	0	0	0	wt
CRC0307	PD	0	0	0	0	0	wt
CRC0322	PR	0	0	0	0	0	wt
CRC0371	PD	0	0	0	0	0	wt
CRC0416	PD	0	0	0	0	0	wt
CRC0435	SD	0	0	0	0	0	wt
CRC0442	SD	0	0	0	0	0	wt

Supplementary Table S9. Gene (and gene_id) lists of four signature scores

Note: 1. 203-gene cetuximab sensitivity score (94 up genes and 109 down genes); 2. 64-gene Wnt pathway score(5, 14); 3. 24-gene *APC* mutations-specific Wnt pathway score; 4. 18-gene RAS pathway score(15)

Cetuximab sensitivity score (94 up genes)	Cetuximab sensitivity score (109 down genes)	64-gene Wnt pathway score	24-gene Wnt pathway score	18-gene RAS pathway score
AKAP1|8165	AGR3|155465	ABCB1|5243	ABCB1|5243	KANK1|23189
ANO9|338440	ALPK2|115701	ADAM10|102	ASCL2|430	DUSP4|1846
ARFGEF2|10564	ANKRD1|27063	ARMCX1|51309	AXIN2|8313	DUSP6|1848
ARHGAP8|23779	ASXL1|171023	ASCL2|430	BMP4|652	ELF1|1997
ATP9A|10079	ATP8A1|10396	AXIN2|8313	CDX1|1044	ETV4|2118
BCL11B|64919	ATXN7|6314	BAMBI|25805	CLDN1|9076	ETV5|2119
C13orf18|80183	B3GNT6|192134	BCL2L2|599	DKK4|27121	FXYD5|53827
C1orf96|126731	BDH1|622	BIRC5|332	ENAH|55740	LGALS3|3958
C20orf112|140688	C18orf21|83608	BMI1|648	ENC1|8507	LZTS1|11178
CD24|100133941	C4orf19|55286	BMP4|652	EPHB2|2048	MAP2K3|5606
CDH1|999	CA8|767	CCND1|595	EPHB3|2049	PHLDA1|22822
CEACAM5|1048	CACNA1C|775	CD44|960	FGF18|8817	PROS1|5627
CEACAM6|4680	CAPN5|726	CDKN2A|1029	HES1|3280	S100A6|6277
CFTR|1080	CAPN9|10753	CDX1|1044	HNF1A|6927	SERPINB1|1992
CLDN4|1364	CASP5|838	CLDN1|9076	JUN|3725	SLCO4A1|28231
COPG|22820	CCDC80|151887	DKK1|22943	LGR5|8549	SPRY2|10253
CPNE1|8904	CD109|135228	DKK4|27121	MET|4233	TRIB2|28951
DERL1|79139	CDK2|1017	DNMT1|1786	MYB|4602	ZFP106|64397
DNAJC15|29103	CFL2|1073	EDN1|1906	MYC|4609	
DNTTIP1|116092	CLCA1|1179	ENAH|55740	SOX9|6662	
DSP|1832	CLDN1|9076	ENC1|8507	SP5|389058	
DUSP6|1848	CMTM4|146223	EPHB2|2048	SUZ12|23512	
EIF2C2|27161	CNOT7|29883	EPHB3|2049	VEGFA|7422	
EIF6|3692	CRIP1|1396	FGF18|8817	YAP1|10413	
EPPK1|83481	CSNK1G1|53944	FGFBP1|9982		
EPSTI1|94240	CTSE|1510	FOSL1|8061		
EREG|2069	CYB5D1|124637	FSCN1|6624		
FAM3B|54097	DICER1|23405	GAST|2520		
FAM49B|51571	DMKN|93099	HES1|3280		
FAM84A|151354	DNAJB4|11080	HNF1A|6927		
FARP1|10160	DOCK5|80005	ID2|3398		
FLRT2|23768	DSC2|1824	JAG1|182		
FOXO3|2309	DUSP4|1846	JUN|3725		
GALNT6|11226	ERAP2|64167	L1CAM|3897		
GRHL2|79977	ERP27|121506	LAMC2|3918		
GRM8|2918	FAM18B|51030	LEF1|51176		
HTATSF1|27336	FBXO21|23014	LGR5|8549		
IL22RA1|58985	FBXO32|114907	MET|4233		
IRS2|8660	FGFR2|2263	MMP14|4323		

ITPR3|3710	FHL1|2273	MMP7|4316		
ITSN1|6453	FNTB|2342	MYB|4602		
KIF3B|9371	GLIPR1|11010	MYC|4609		
KLF6|1316	GPA33|10223	MYCBP2|23077		
KRT20|54474	HMGA2|8091	NEDD9|4739		
LARP4B|23185	HSPA2|3306	NOS2|4843		
LIF|3976	IGF1R|3480	NOTCH2|4853		
MAP1LC3B|81631	INSR|3643	NRCAM|4897		
MED13|9969	IRS1|3667	PLAU|5328		
MUC12|10071	ITLN1|55600	PLAUR|5329		
MUC20|200958	JAM3|83700	PPARD|5467		
NDRG1|10397	KLF9|687	PTGS2|5743		
NUCB2|4925	KLK10|5655	S100A4|6275		
PABPC1L|80336	KPNA1|3836	S100A6|6277		
PARD6B|84612	LDLR|3949	SFRS3|6428		
PDS5B|23047	LGR5|8549	SGK1|6446		
PEA15|8682	LHFP|10186	SMC3|9126		
PHF5A|84844	LRRC16A|55604	SOX9|6662		
PIGU|128869	MBP|4155	SP5|389058		
PLAGL2|5326	MCCC2|64087	SUZ12|23512		
PLCG1|5335	MLPH|79083	TCF4|6925		
PLS1|5357	MUC2|4583	TIAM1|7074		
PPP1R14C|81706	MYO5A|4644	TNC|3371		
PRR15|222171	NOB1|28987	VEGFA|7422		
PRSS8|5652	NPNT|255743	YAP1|10413		
RALGAPB|57148	NRG1|3084			
R3HDML|140902	NRN1|51299			
RBM39|9584	NT5E|4907			
RNF113A|7737	OR2A4|79541			
RNF43|54894	PAPPA|5069			
SAMD12|401474	PARP1|142			
SCD|6319	PPM1A|5494			
SCRN1|9805	PPP1R9A|55607			
SDC4|6385	PROM2|150696			
SERINC3|10955	PRUNE2|158471			
SLC38A1|81539	PSIP1|11168			
SLC45A4|57210	QKI|9444			
SLC5A6|8884	RAB27B|5874			
SLC7A5|8140	RASGEF1B|153020			
SPINT2|10653	REG4|83998			
SRPX2|27286	RFC3|5983			
STK4|6789	RNF125|54941			
STX16|8675	RNF180|285671			
TMPRSS4|56649	RTN3|10313			
TNNC2|7125	RTN4|57142			
TOMM34|10953	SCIN|85477			

TP53RK|112858	SERPINB5|5268			
TRIM13|10206	SFXN1|94081			
VAV3|10451	SGOL2|151246			
XIAP|331	SH3RF2|153769			
YWHAB|7529	SLC25A37|51312			
ZBTB38|253461	SLC2A10|81031			
ZMYND8|23613	SLC35A1|10559			
ZNF514|84874	SLIT2|9353			
ZNF532|55205	SMCHD1|23347			
	SNAP25|6616			
	SORBS2|8470			
	SPATA18|132671			
	SPINK4|27290			
	TC2N|123036			
	TCN1|6947			
	TMC5|79838			
	TNFRSF10B|8795			
	TNFRSF11A|8792			
	TOX|9760			
	TTC37|9652			
	TTC9|23508			
	UBE2E2|7325			
	USP14|9097			
	ZBTB7C|201501			

Supplementary Table S10. Validation of the cetuximab sensitivity (CTX-S) score by Barnard's exact test Cochran-Mantel-Haenszel test in two independent test sets. The significant *P* values are highlighted by yellow color.

A. Barnard's Exact Test on the frequencies of objective response by higher vs. lower in 41 Merck NP004 cetuximab treated CRCs. Note: OR---objective response; No OR---no objective response. Of 44 CRCs, one sample with PFS of 1 day and two samples with CTX-S scores near 0.00 as shown in **Fig. 1A** were excluded from analysis.

Table of position by Status			
position	Adjusted CTX-S scores		
Frequency Expected Cell Chi-Square Col Pct	≥0	<0	Total
OR	12 8.1951 1.7666 42.86	0 3.8049 3.8049 0.00	12
No OR	16 19.805 0.731 57.14	13 9.1951 1.5744 100.00	29
Total	28	13	41

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.4483
ASE (H0)	0.1597
Z	2.8066
One-sided Pr <= Z	0.0035
Two-sided Pr >= |Z|	0.0048

B,C. Cochran-Mantel-Haenszel test on response by CTX-S scores by quartiles (4th, highest; 1st, lowest) in 80 Khambata-Ford et al. cetuximab treated CRCs.

Note: PFS---progression free survival; CR---complete response; PR---partial response; SD---stable disease; PD---progressed disease; UTD---undetermined.

B. CR/PR vs. SD vs. PD vs. UTD (n=80)

Table of Response by CTX_Sensitivity_Score					
Response	Quartile Scores				
Frequency Expected Cell Chi-Square Col Pct	4th	3rd	2nd	1st	Total
CR/PR	3 1.5 1.5 15.00	2 1.5 0.1667 10.00	1 1.5 0.1667 5.00	0 1.5 1.5 0.00	6
SD	10 4.75 5.8026 50.00	3 4.75 0.6447 15.00	4 4.75 0.1184 20.00	2 4.75 1.5921 10.00	19
PD	7 10.75 1.3081 35.00	13 10.75 0.4709 65.00	8 10.75 0.7035 40.00	15 10.75 1.6802 75.00	43
UTD	0 3 3 0.00	2 3 0.3333 10.00	7 3 5.3333 35.00	3 3 0 15.00	12
Total	20	20	20	20	80

Statistic	Alternative Hypothesis	DF	Value	Prob
1	Nonzero Correlation	1	12.7096	0.0004

C. CR/PR vs. SD vs. PD (n=68; 12 UTDs of 80 were treated as missing points**)**

Table of Response by CTX_Sensitivity_Score					
Response	**Quartile Scores**				
Frequency **Expected** **Cell Chi-Square** **Col Pct**	**4th**	**3rd**	**2nd**	**1st**	**Total**
CR/PR	3 1.7647 0.8647 15.00	2 1.5882 0.1068 11.11	1 1.1471 0.0189 7.69	0 1.5 1.5 0.00	6
SD	10 5.5882 3.483 50.00	3 5.0294 0.8189 16.67	4 3.6324 0.0372 30.77	2 4.75 1.5921 11.76	19
PD	7 12.647 2.5215 35.00	13 11.382 0.2299 72.22	8 8.2206 0.0059 61.54	15 10.75 1.6802 88.24	43
Total	20	18	13	17	68

Statistic	Alternative Hypothesis	DF	Value	Prob
1	Nonzero Correlation	1	8.6178	0.0033

Supplementary Table S11. Mutation ranking of Moffitt 468 CRCs by the cetuximab sensitivity score

Note: APC — *APC* truncating mutation; BRAF — *BRAF*(V600E). The mutated genes were listed according to adjusted p values that were calculated using the Hochberg and Benjamini method (11).

gene	p_value	N_mutation	SumOfScores	PCT	Adjusted_p
TP53	1.89E-24	277	107.3826181	0.59188	5.8E-22
msi_high	6.74E-24	61	-72.66628313	0.130342	2.06E-21
TGFBR2	1.93E-23	62	-72.41573178	0.132479	5.9E-21
APC	7.96E-21	312	94.47392504	0.666667	2.44E-18
BRAF	5.67E-17	53	-56.80325958	0.113248	1.74E-14
CELSR1	1.56E-06	72	-37.10419168	0.153846	0.000478
HDLBP	4.03E-06	23	-21.33576461	0.049145	0.001234
ITGB4	6.05E-06	45	-28.55912145	0.096154	0.001852
PML	6.3E-06	22	-20.46649294	0.047009	0.001926
HSPA2	1.23E-05	14	-15.95018497	0.029915	0.003749
MLL2	2.29E-05	84	-34.79719732	0.179487	0.006995
MICAL1	2.36E-05	26	-20.73549203	0.055556	0.007217
PTPRS	2.58E-05	47	-27.08012877	0.100427	0.007885
MAP3K9	2.72E-05	21	-18.59906752	0.044872	0.008312
ITPR1	4.23E-05	34	-22.75596786	0.07265	0.012936
HDAC4	5.35E-05	20	-17.49416233	0.042735	0.016377
DOT1L	5.87E-05	24	-18.97595021	0.051282	0.017956
RPS6KA2	5.95E-05	12	-13.58684999	0.025641	0.018212
CHD5	5.96E-05	23	-18.58022375	0.049145	0.018239
MLL4	7.03E-05	54	-27.19220738	0.115385	0.021519
THBS1	7.04E-05	19	-16.79710874	0.040598	0.02153
CASP8	7.34E-05	20	-17.17105107	0.042735	0.022451
SRC	8.31E-05	6	-9.478676218	0.012821	0.025442
ACVR1B	9.45E-05	13	-13.73760507	0.027778	0.028916
ZEB2	0.000104	18	-15.98341459	0.038462	0.031723
ITPR3	0.00011	42	-23.66389646	0.089744	0.033725
RPS6KA4	0.00012	12	-13.01361784	0.025641	0.036837
MCM3AP	0.000125	22	-17.38059095	0.047009	0.038381
BCORL1	0.00013	24	-18.07425123	0.051282	0.039672
MYH9	0.00013	38	-22.37377056	0.081197	0.039885
MACF1	0.000145	82	-30.92823514	0.175214	0.044307
DLC1	0.000157	42	-23.13115505	0.089744	0.048013
SPTAN1	0.000168	28	-19.10820483	0.059829	0.051391
LATS1	0.000176	18	-15.44291799	0.038462	0.053989
SMAD3	0.000188	22	-16.92687242	0.047009	0.057407
ATP8B1	0.000202	17	-14.88971063	0.036325	0.061709
NRP2	0.000222	26	-18.11200973	0.055556	0.067818
ERBB3	0.00023	36	-21.01395614	0.076923	0.07048
LRP1	0.000235	71	-28.24873068	0.151709	0.071996
CIC	0.000247	24	-17.30811945	0.051282	0.075713

BRCA1	0.000265	35	-20.54393615	0.074786	0.080976
CTNN	0.000297	65	-26.78649751	0.138889	0.090999
IRS1	0.000319	29	-18.58202258	0.061966	0.09747
HOXA3	0.000345	8	-9.932602598	0.017094	0.105584
CTNNA1	0.000429	23	-16.29968773	0.049145	0.131237
MEX3B	0.000431	17	-14.1025466	0.036325	0.131843
PLCB1	0.00044	20	-15.22190496	0.042735	0.134566
TRRAP	0.000465	45	-22.093729	0.096154	0.14222
SMAD2	0.000535	19	-14.63090421	0.040598	0.163807
PIAS1	0.000556	12	-11.68399706	0.025641	0.169984
AFF4	0.000564	15	-13.00445999	0.032051	0.172609
NLE1	0.000571	6	-8.297610412	0.012821	0.174861
GRM1	0.000622	29	-17.66463105	0.061966	0.190198
SMARC	0.000664	33	-18.65910794	0.070513	0.203147
CUBN	0.000665	70	-25.99074297	0.149573	0.203504
BTRC	0.000679	5	-7.479779807	0.010684	0.207714
KDM4C	0.000737	18	-13.89843497	0.038462	0.225495
RALB	0.000775	5	-7.39945985	0.010684	0.237202
CHEK1	0.000776	7	-8.735835344	0.014957	0.237332
GLI3	0.000787	47	-21.60604435	0.100427	0.24081
PRKDC	0.000787	60	-24.03086252	0.128205	0.240956
WNK1	0.000788	27	-16.75942888	0.057692	0.240994
NUP98	0.000798	26	-16.44692219	0.055556	0.244186
LRRC7	0.000799	24	-15.83500236	0.051282	0.244635
HERC1	0.000817	43	-20.69977342	0.09188	0.250036
GRM6	0.000833	31	-17.79354533	0.066239	0.254913
ZNF384	0.000849	15	-12.58153153	0.032051	0.259915
SMARCA4	0.000872	32	-17.98964199	0.068376	0.2667
BCR	0.000952	23	-15.29341411	0.049145	0.291424
ADCY9	0.000975	33	-18.07616087	0.070513	0.298261
RPTOR	0.001029	13	-11.54924246	0.027778	0.315003
NOS1	0.001034	31	-17.4721906	0.066239	0.316274
TNFAIP3	0.001036	18	-13.50752342	0.038462	0.317059
TRAF3	0.001038	9	-9.644843856	0.019231	0.317617
AR	0.001088	33	-17.90662101	0.070513	0.332841
TRIM24	0.001088	19	-13.80398076	0.040598	0.332909
CDH1	0.001158	20	-14.06975086	0.042735	0.35445
MAPK8IP3	0.001172	20	-14.05538827	0.042735	0.358605
FOXP4	0.00118	9	-9.538242376	0.019231	0.360947
JAG2	0.0012	10	-10.02783927	0.021368	0.367297
CTNNB1	0.001209	20	-14.01722715	0.042735	0.369864
JUN	0.001216	6	-7.79253254	0.012821	0.372054
LPHN1	0.001224	32	-17.47219986	0.068376	0.374513
ABCC4	0.001249	18	-13.28855827	0.038462	0.38233
PTK2B	0.001279	19	-13.60916401	0.040598	0.391394
KDM5A	0.001328	25	-15.4537233	0.053419	0.406521

MLL3	0.001393	63	-23.35588319	0.134615	0.426382
KIAA0182	0.001418	23	-14.7694247	0.049145	0.433818
TP73	0.001469	9	-9.353125	0.019231	0.449386
EVC2	0.00149	32	-17.16637834	0.068376	0.455886
TTN	0.001558	321	-31.44041996	0.685897	0.476774
DGKA	0.001573	9	-9.294327875	0.019231	0.481408
TEK	0.00161	19	-13.32788214	0.040598	0.492693
USP34	0.001663	41	-19.0359195	0.087607	0.508761
BARD1	0.001671	11	-10.19581075	0.023504	0.511293
PLCG1	0.001721	20	-13.5746738	0.042735	0.526547
TNPO3	0.001748	8	-8.686971087	0.017094	0.534773
EPHA8	0.001751	23	-14.4843565	0.049145	0.535944
ZNF831	0.001805	43	-19.29965941	0.09188	0.552373
GRM3	0.00181	23	-14.43959299	0.049145	0.553856
CBX4	0.001839	28	-15.81805517	0.059829	0.562874
STK11	0.001848	10	-9.640496963	0.021368	0.565357
TP63	0.001865	12	-10.52821617	0.025641	0.570665
RAD50	0.001895	16	-12.08504808	0.034188	0.579898
MLH3	0.0019	26	-15.2305157	0.055556	0.581335
ERCC2	0.001909	18	-12.78107442	0.038462	0.584038
PPM1H	0.001909	6	-7.476671211	0.012821	0.584225
PTPRU	0.001947	28	-15.73312846	0.059829	0.595633
DBF4B	0.001976	8	-8.586331443	0.017094	0.604665
BTK	0.002158	10	-9.497703357	0.021368	0.660346
TNPO1	0.002197	8	-8.498666343	0.017094	0.672279
RUNX1	0.002219	9	-8.995597251	0.019231	0.679028
WNT1	0.00225	9	-8.983483243	0.019231	0.688426
IGF1R	0.002293	23	-14.11381536	0.049145	0.701717
ERN1	0.002315	17	-12.20399931	0.036325	0.708486
TLR7	0.002391	11	-9.850366248	0.023504	0.731797
NEDD4L	0.002514	15	-11.39517538	0.032051	0.769425
MLL	0.002579	35	-16.97444801	0.074786	0.789232
DUSP4	0.002644	9	-8.840253732	0.019231	0.808936
ATM	0.002652	65	-22.2541142	0.138889	0.811444
ULK3	0.002675	8	-8.333724197	0.017094	0.818595
SLC2A4	0.002782	12	-10.12195505	0.025641	0.851167
NIPBL	0.002863	37	-17.22828225	0.07906	0.876201
G3BP2	0.002915	5	-6.551991515	0.010684	0.89213
NF1	0.002931	29	-15.35624595	0.061966	0.897007
IDH1	0.002943	8	-8.252843224	0.017094	0.9005
EPHA5	0.003051	33	-16.23918914	0.070513	0.933465
TNKS	0.003132	23	-13.67447622	0.049145	0.958469
DNMT3A	0.003175	9	-8.675139024	0.019231	0.971599
FASN	0.00323	33	-16.14243577	0.070513	0.988409
PARP14	0.003244	32	-15.90681476	0.068376	0.992803
FOSL1	0.003291	5	-6.469866732	0.010684	0.9991

PARP1	0.003295	18	-12.10051746	0.038462	0.9991
ALPK2	0.003332	36	-16.7468727	0.076923	0.9991
FZD10	0.003424	17	-11.72489283	0.036325	0.9991
USP9X	0.003448	18	-12.04252055	0.038462	0.9991
USP24	0.00351	12	-9.879252713	0.025641	0.9991
TSC1	0.003528	23	-13.50385018	0.049145	0.9991
PTPN21	0.00354	28	-14.81015892	0.059829	0.9991
PCDHB2	0.003694	25	-13.97774021	0.053419	0.9991
ITGAL	0.003932	18	-11.87290716	0.038462	0.9991
BMPR2	0.003947	20	-12.48228311	0.042735	0.9991
ERRFI1	0.00395	5	-6.344227464	0.010684	0.9991
ARNT	0.003962	9	-8.472039627	0.019231	0.9991
MECOM	0.003976	16	-11.20511566	0.034188	0.9991
SLC6A18	0.00399	18	-11.85397377	0.038462	0.9991
RAD21	0.004105	7	-7.458805669	0.014957	0.9991
MAPK9	0.00422	7	-7.436124774	0.014957	0.9991
DNAH8	0.00429	76	-22.55284571	0.162393	0.9991
MINK1	0.004359	17	-11.42074787	0.036325	0.9991
EXT1	0.004369	13	-10.02875743	0.027778	0.9991
USP28	0.004382	24	-13.45611422	0.051282	0.9991
WHSC1	0.004399	21	-12.62406639	0.044872	0.9991
USP8	0.004403	12	-9.637515882	0.025641	0.9991
DNMT1	0.00444	17	-11.39719193	0.036325	0.9991
CNTRL	0.004473	43	-17.58121988	0.09188	0.9991
TLE4	0.004498	19	-12.00488539	0.040598	0.9991
NTRK3	0.004527	21	-12.58351468	0.044872	0.9991
FLNB	0.004536	50	-18.77208997	0.106838	0.9991
XRCC6	0.004573	7	-7.369570393	0.014957	0.9991
ITGA9	0.004601	18	-11.66779912	0.038462	0.9991
RAD54B	0.004635	5	-6.232462882	0.010684	0.9991
INSRR	0.004674	21	-12.53814109	0.044872	0.9991
LAMC1	0.004688	26	-13.86821182	0.055556	0.9991
PLXNB3	0.004697	28	-14.35613436	0.059829	0.9991
CSMD3	0.004716	84	-23.21893068	0.179487	0.9991
NCOA7	0.004776	23	-13.0603367	0.049145	0.9991
POLE	0.004859	37	-16.27031455	0.07906	0.9991
MYH11	0.004884	46	-17.9406382	0.098291	0.9991
CXCR4	0.004968	6	-6.766414978	0.012821	0.9991
ROR2	0.005138	24	-13.21524268	0.051282	0.9991
MMP16	0.005537	22	-12.57117621	0.047009	0.9991
DAB2	0.005616	14	-10.10110324	0.029915	0.9991
TNFRSF1A	0.005636	7	-7.194348435	0.014957	0.9991
ABCA3	0.005717	40	-16.54294037	0.08547	0.9991
ITPR2	0.005743	40	-16.53425914	0.08547	0.9991
ERN2	0.005819	20	-11.9428252	0.042735	0.9991
PPP1R3A	0.005825	27	-13.76581637	0.057692	0.9991

ICK	0.005854	11	-8.939254628	0.023504	0.9991
PRKACA	0.005859	7	-7.16148805	0.014957	0.9991
RNF123	0.005924	18	-11.33121385	0.038462	0.9991
CHD8	0.005927	34	-15.29277957	0.07265	0.9991
MST1R	0.005972	31	-14.63988236	0.066239	0.9991
CELSR2	0.006034	61	-19.7943456	0.130342	0.9991
ROCK2	0.006133	20	-11.86820615	0.042735	0.9991
NRK	0.006211	28	-13.8956633	0.059829	0.9991
MAPK3	0.006278	7	-7.102551443	0.014957	0.9991
DCC	0.006464	32	-14.71618367	0.068376	0.9991
SULT1A1	0.006593	7	-7.06046496	0.014957	0.9991
ROS1	0.006599	30	-14.24587014	0.064103	0.9991
AKAP6	0.006758	34	-15.05253693	0.07265	0.9991
BAI2	0.006806	27	-13.50976522	0.057692	0.9991
ITGA10	0.006883	23	-12.50804092	0.049145	0.9991
LPHN3	0.006885	38	-15.80363474	0.081197	0.9991
RIPK4	0.007148	22	-12.18981314	0.047009	0.9991
CDH2	0.00715	21	-11.92261859	0.044872	0.9991
ZMYM4	0.007499	17	-10.71117344	0.036325	0.9991
MAP3K5	0.007577	15	-10.07051152	0.032051	0.9991
NCK2	0.007666	6	-6.422742124	0.012821	0.9991
SYNE1	0.00778	157	-26.90572396	0.33547	0.9991
TRIM37	0.007869	14	-9.693391328	0.029915	0.9991
ACAP1	0.007972	8	-7.363611623	0.017094	0.9991
APC2	0.007979	27	-13.24399322	0.057692	0.9991
TRIO	0.00803	29	-13.68360476	0.061966	0.9991
LRP6	0.008145	22	-11.99106062	0.047009	0.9991
NIM1	0.008248	11	-8.569084303	0.023504	0.9991
PRKCH	0.008256	10	-8.178220991	0.021368	0.9991
PPP2R2B	0.008446	8	-7.309331157	0.017094	0.9991
CHUK	0.008455	5	-5.796566001	0.010684	0.9991
CAD	0.008537	34	-14.6163096	0.07265	0.9991
CYLD	0.008567	6	-6.332195564	0.012821	0.9991
ANKRD32	0.008659	10	-8.128161028	0.021368	0.9991
PALB2	0.008741	19	-11.07968138	0.040598	0.9991
COL1A1	0.008826	33	-14.3542208	0.070513	0.9991
ABCA1	0.009116	32	-14.09168369	0.068376	0.9991
ALS2	0.009232	22	-11.79772268	0.047009	0.9991
PIK3CD	0.009261	10	-8.056995478	0.021368	0.9991
NUAK2	0.009266	17	-10.42376759	0.036325	0.9991
PIK3C2B	0.00947	27	-12.95272434	0.057692	0.9991
HSP90AB1	0.009515	12	-8.775261199	0.025641	0.9991
TSHR	0.009583	17	-10.3774377	0.036325	0.9991
XPC	0.009668	11	-8.393075055	0.023504	0.9991
RHOBTB2	0.009695	23	-11.9714848	0.049145	0.9991
NFKBIE	0.009701	6	-6.229669137	0.012821	0.9991

FBXW7	0.009774	57	-18.09244441	0.121795	0.9991
PKHD1	0.009818	78	-20.60406227	0.166667	0.9991
FLI1	0.01005	10	-7.969838853	0.021368	0.9991
WNK4	0.01011	26	-12.61443887	0.055556	0.9991
FIGF	0.010329	7	-6.665195677	0.014957	0.9991
CHKB	0.010612	12	-8.647512391	0.025641	0.9991
ZBTB16	0.010656	14	-9.314632876	0.029915	0.9991
SETD2	0.010721	34	-14.18065522	0.07265	0.9991
USP43	0.010743	16	-9.924835694	0.034188	0.9991
EXT2	0.010749	17	-10.21818239	0.036325	0.9991
TGFBR1	0.010899	11	-8.258310353	0.023504	0.9991
CD44	0.011032	14	-9.270509425	0.029915	0.9991
FSCB	0.01121	21	-11.24124474	0.044872	0.9991
meta	0.011211	169	26.08111006	0.361111	0.9991
wnt	0.011221	51	-16.91785983	0.108974	0.9991
BCL9L	0.011491	37	-14.60166004	0.07906	0.9991
SMARCB1	0.011586	8	-7.006292046	0.017094	0.9991
d_meta	0.011784	165	25.76333634	0.352564	0.9991
RECQL4	0.011914	33	-13.78392458	0.070513	0.9991
EPHA1	0.011919	26	-12.33235111	0.055556	0.9991
LTF	0.01202	21	-11.13264366	0.044872	0.9991
RAPH1	0.012046	13	-8.834475828	0.027778	0.9991
TRIB3	0.012344	12	-8.467901349	0.025641	0.9991
REV3L	0.012665	41	-15.09133271	0.087607	0.9991
RNF213	0.012807	57	-17.42972863	0.121795	0.9991
CYP1B1	0.012823	13	-8.756513255	0.027778	0.9991
INPP4A	0.012948	12	-8.410554199	0.025641	0.9991
KEAP1	0.013245	14	-9.03495477	0.029915	0.9991
ROCK1	0.013396	13	-8.701714893	0.027778	0.9991
TAF1L	0.013496	56	-17.16716593	0.119658	0.9991
EPHB2	0.01366	24	-11.6465003	0.051282	0.9991
NOTCH3	0.013782	44	-15.39028916	0.094017	0.9991
EPHA10	0.013817	25	-11.8534792	0.053419	0.9991
ITGB3	0.014189	18	-10.09788385	0.038462	0.9991
TUBD1	0.014497	8	-6.784860931	0.017094	0.9991
CASC5	0.014554	28	-12.40710673	0.059829	0.9991
ITK	0.014575	10	-7.563172389	0.021368	0.9991
PHOX2B	0.01459	10	-7.562016156	0.021368	0.9991
PREX1	0.015275	25	-11.67926001	0.053419	0.9991
HECW2	0.015307	28	-12.31437751	0.059829	0.9991
NFKB1	0.015491	11	-7.85205996	0.023504	0.9991
ERG	0.015579	11	-7.845395122	0.023504	0.9991
TSPAN31	0.015605	5	5.322604525	0.010684	0.9991
EIF2AK1	0.015742	12	-8.172411292	0.025641	0.9991
LRRK2	0.015757	45	-15.24030508	0.096154	0.9991
MDC1	0.015919	18	-9.926345434	0.038462	0.9991

TAF15	0.015936	7	-6.264310702	0.014957	0.9991
NOTCH1	0.01628	49	-15.74975469	0.104701	0.9991
FGFR1	0.016313	12	-8.128390038	0.025641	0.9991
RASGRP1	0.016404	7	-6.236850661	0.014957	0.9991
ABL2	0.016435	14	-8.750501815	0.029915	0.9991
ACVR2A	0.016541	15	-9.038760401	0.032051	0.9991
NCDN	0.016646	5	-5.270699046	0.010684	0.9991
ETV4	0.01671	10	-7.409152579	0.021368	0.9991
NUP153	0.016748	17	-9.582908354	0.036325	0.9991
MLH1	0.017143	23	-11.03247472	0.049145	0.9991
BMX	0.017236	7	-6.189611881	0.014957	0.9991
JAK1	0.017275	12	-8.057218691	0.025641	0.9991
UBP1	0.017333	5	-5.237968529	0.010684	0.9991
RAPGEF2	0.017335	23	-11.01341892	0.049145	0.9991
TCF3	0.017499	22	-10.76775758	0.047009	0.9991
ABCC3	0.017556	23	-10.99179623	0.049145	0.9991
WNT9B	0.017559	5	-5.227456081	0.010684	0.9991
HOXA9	0.017596	8	-6.588630799	0.017094	0.9991
PLCB4	0.017726	10	-7.341888468	0.021368	0.9991
CDK12	0.017895	16	-9.212157598	0.034188	0.9991
NCOA2	0.018017	23	-10.94750854	0.049145	0.9991
TBX22	0.018139	10	-7.315494549	0.021368	0.9991
IRS4	0.018396	34	-13.10194735	0.07265	0.9991
PAK4	0.01841	14	-8.597848595	0.029915	0.9991
NTRK1	0.018647	24	-11.11013273	0.051282	0.9991
BPTF	0.018699	33	-12.88937794	0.070513	0.9991
ERBB4	0.019083	28	-11.90246834	0.059829	0.9991
OBSCN	0.019087	148	-23.33576467	0.316239	0.9991
WRN	0.019224	18	-9.639665329	0.038462	0.9991
TECTA	0.01946	41	-14.144306	0.087607	0.9991
MGA	0.019583	37	-13.48580173	0.07906	0.9991
IKBKAP	0.019646	19	-9.858507848	0.040598	0.9991
NLRP3	0.019677	20	-10.10080515	0.042735	0.9991
CYP3A4	0.019764	5	-5.130602283	0.010684	0.9991
HNF1A	0.02031	15	-8.751414413	0.032051	0.9991
AURKB	0.020417	9	-6.817772327	0.019231	0.9991
RBPJ	0.020602	8	-6.42545623	0.017094	0.9991
PRKD1	0.020852	18	-9.51409128	0.038462	0.9991
CDH5	0.021478	18	-9.468052249	0.038462	0.9991
ADH7	0.021524	9	-6.759147577	0.019231	0.9991
CREBBP	0.021778	49	-15.03933332	0.104701	0.9991
RPS6	0.021918	5	-5.044735261	0.010684	0.9991
TNFRSF11A	0.022174	17	-9.163015493	0.036325	0.9991
ABCB1	0.02269	16	-8.865248674	0.034188	0.9991
MITF	0.022881	14	-8.299306898	0.029915	0.9991
CCKAR	0.02294	9	-6.687908527	0.019231	0.9991

ARID1A	0.023105	51	-15.15629337	0.108974	0.9991
PAK6	0.0233	10	-7.023538501	0.021368	0.9991
GRB10	0.023497	9	-6.660912614	0.019231	0.9991
FANCD2	0.023502	17	-9.074133557	0.036325	0.9991
MAGI1	0.023553	31	-12.05737699	0.066239	0.9991
GNAS	0.023703	45	-14.27710976	0.096154	0.9991
GPR84	0.024093	10	-6.983808645	0.021368	0.9991
EXOC4	0.024318	12	-7.621568242	0.025641	0.9991
NFKB2	0.024384	11	-7.301729699	0.023504	0.9991
MYST4	0.024663	27	-11.21562853	0.057692	0.9991
PRKD2	0.024947	7	-5.827323795	0.014957	0.9991
FPR3	0.024978	13	-7.88775436	0.027778	0.9991
PHF20	0.025243	11	-7.258377113	0.023504	0.9991
MUC16	0.025281	187	-23.46099133	0.399573	0.9991
THRAP3	0.025549	14	-8.144608242	0.029915	0.9991
EEF2K	0.02557	8	-6.196409041	0.017094	0.9991
HERC3	0.025601	12	-7.5543474	0.025641	0.9991
XPA	0.025691	6	-5.373500848	0.012821	0.9991
MAPT	0.025816	17	-8.929106594	0.036325	0.9991
UHRF1BP1L	0.026011	22	-10.08797595	0.047009	0.9991
EP400	0.026192	40	-13.30912606	0.08547	0.9991
NF2	0.026261	6	-5.352983974	0.012821	0.9991
MAST4	0.026583	44	-13.8573765	0.094017	0.9991
INPPL1	0.026766	18	-9.119876156	0.038462	0.9991
CHEK2	0.02724	16	-8.590723997	0.034188	0.9991
MEF2C	0.027314	11	-7.158900118	0.023504	0.9991
MN1	0.027497	15	-8.313263499	0.032051	0.9991
UVRAG	0.028131	13	-7.724897043	0.027778	0.9991
RAD18	0.029069	7	-5.672239528	0.014957	0.9991
FGFR4	0.029083	16	-8.490735791	0.034188	0.9991
STAT3	0.029526	6	-5.242310589	0.012821	0.9991
ULK2	0.029667	13	-7.65118829	0.027778	0.9991
COL7A1	0.029962	55	-14.96668667	0.117521	0.9991
VEGFC	0.030244	20	-9.383804153	0.042735	0.9991
CYP3A5	0.030913	11	-7.00057478	0.023504	0.9991
MKRN3	0.03093	24	-10.1913722	0.051282	0.9991
NFKBIZ	0.031016	7	-5.605484885	0.014957	0.9991
PAX3	0.03168	16	-8.358735089	0.034188	0.9991
SGK1	0.031721	9	-6.315863376	0.019231	0.9991
MYEOV	0.031924	8	-5.954057717	0.017094	0.9991
TERT	0.032074	17	-8.586648303	0.036325	0.9991
CENPF	0.032346	40	-12.81082021	0.08547	0.9991
NOTCH4	0.032812	41	-12.92014927	0.087607	0.9991
PLCG2	0.032981	29	-11.0070935	0.061966	0.9991
MAP3K11	0.033205	17	-8.531000471	0.036325	0.9991
DIP2C	0.033249	21	-9.437152044	0.044872	0.9991

DDR1	0.033612	9	-6.247608162	0.019231	0.9991
KDM5C	0.033866	15	-8.001322312	0.032051	0.9991
FBXO10	0.033896	16	-8.253185621	0.034188	0.9991
CNTN1	0.034249	23	-9.79899721	0.049145	0.9991
ADCY1	0.034304	20	-9.16552536	0.042735	0.9991
ZMYM2	0.034582	17	-8.465400837	0.036325	0.9991
PIM1	0.034769	6	-5.084896843	0.012821	0.9991
UBR5	0.035047	22	-9.552161782	0.047009	0.9991
FRMD7	0.035135	12	-7.129957764	0.025641	0.9991
ITCH	0.035679	14	-7.66158887	0.029915	0.9991
DAXX	0.035726	10	-6.502039664	0.021368	0.9991
DCLK3	0.035741	14	-7.658989637	0.029915	0.9991
RGL1	0.0362	14	-7.640082675	0.029915	0.9991
PTPN6	0.036324	12	-7.084203337	0.025641	0.9991
RPS6KB2	0.036831	9	-6.138639188	0.019231	0.9991
DLG1	0.036859	5	-4.594688395	0.010684	0.9991
MDM4	0.037005	10	-6.457667132	0.021368	0.9991
NUP214	0.037127	28	-10.58447397	0.059829	0.9991
CDKN2A	0.037264	6	-5.01702943	0.012821	0.9991
TP53BP1	0.037397	19	-8.79522783	0.040598	0.9991
LTK	0.037505	22	-9.427095086	0.047009	0.9991
RBL1	0.037546	13	-7.317851575	0.027778	0.9991
GRM5	0.037867	23	-9.609986946	0.049145	0.9991
SYK	0.037915	9	-6.103751438	0.019231	0.9991
TET2	0.037978	28	-10.53736875	0.059829	0.9991
ADRA1A	0.038245	12	-7.012904522	0.025641	0.9991
FOXM1	0.038442	13	-7.283835433	0.027778	0.9991
ESR1	0.038964	17	-8.270490323	0.036325	0.9991
FGFR2	0.039096	8	-5.725988618	0.017094	0.9991
ETV1	0.039142	11	-6.690806865	0.023504	0.9991
N4BP2	0.039183	23	-9.545012954	0.049145	0.9991
LRP5	0.039266	28	-10.46779422	0.059829	0.9991
FANCM	0.039337	34	-11.45186889	0.07265	0.9991
SRPK2	0.039427	8	-5.716345005	0.017094	0.9991
IRAK2	0.039498	15	-7.764836332	0.032051	0.9991
ATRX	0.039599	28	-10.45009882	0.059829	0.9991
STIM1	0.039846	12	-6.955788871	0.025641	0.9991
DLL4	0.040035	9	-6.037929582	0.019231	0.9991
PIK3R2	0.040255	14	-7.481233548	0.029915	0.9991
PPP2R3A	0.04073	20	-8.861498425	0.042735	0.9991
TYK2	0.040816	24	-9.659713998	0.051282	0.9991
TCF4	0.040819	9	-6.014353115	0.019231	0.9991
NIN	0.040935	33	-11.20502881	0.070513	0.9991
ALK	0.040981	22	-9.261694141	0.047009	0.9991
PXN	0.041267	17	-8.175440432	0.036325	0.9991
TOP2B	0.041371	13	-7.177154076	0.027778	0.9991

PDGFRA	0.041487	21	-9.036307517	0.044872	0.9991
BRCA2	0.041529	56	-14.16382326	0.119658	0.9991
VAV1	0.041842	14	-7.422742478	0.029915	0.9991
PAX5	0.042011	10	-6.295755227	0.021368	0.9991
VEGFA	0.042051	5	-4.475126913	0.010684	0.9991
INPP4B	0.042455	7	-5.273261651	0.014957	0.9991
ARHGAP6	0.042484	20	-8.78562322	0.042735	0.9991
LIG4	0.0426	18	-8.348663624	0.038462	0.9991
IRF4	0.0429	8	-5.61914867	0.017094	0.9991
ELP2	0.043456	7	-5.247949007	0.014957	0.9991
HOXD13	0.043495	7	-5.246979003	0.014957	0.9991
XIAP	0.04448	10	-6.221842364	0.021368	0.9991
RPS6KA1	0.044546	15	-7.576113429	0.032051	0.9991
PTPRD	0.045088	38	-11.71865508	0.081197	0.9991
DDX10	0.045433	18	-8.237526354	0.038462	0.9991
CDC25A	0.045721	7	-5.192487201	0.014957	0.9991
ITGB2	0.046367	17	-7.979940901	0.036325	0.9991
PRKCE	0.046969	17	-7.95809529	0.036325	0.9991
DGKZ	0.047064	13	-6.986922899	0.027778	0.9991
PPARG	0.047149	5	-4.369359508	0.010684	0.9991
SOS1	0.047186	20	-8.59455815	0.042735	0.9991
TET1	0.047279	5	4.366782892	0.010684	0.9991
ALPK3	0.047435	29	-10.23321777	0.061966	0.9991
PAX7	0.04788	13	-6.961270424	0.027778	0.9991
TRIM33	0.047991	8	-5.488067205	0.017094	0.9991
ESR2	0.048173	13	-6.95216019	0.027778	0.9991
NFKBIB	0.048527	7	-5.126907528	0.014957	0.9991
PRKCZ	0.048787	8	-5.468637804	0.017094	0.9991
RFC4	0.049096	6	-4.739785816	0.012821	0.9991
DDB1	0.049485	5	-4.32406573	0.010684	0.9991
MLLT6	0.049561	23	-9.088998168	0.049145	0.9991
PTCH1	0.049628	19	-8.295530126	0.040598	0.9991
DDB2	0.050899	6	-4.702611708	0.012821	0.9991
WSB1	0.051966	9	-5.714573349	0.019231	0.9991
RASA3	0.052246	12	-6.569171047	0.025641	0.9991
LRP1B	0.052773	95	-16.67956421	0.202991	0.9991
OR8G5	0.054641	5	-4.230146234	0.010684	0.9991
AKAP9	0.054648	41	-11.63248943	0.087607	0.9991
IQGAP1	0.054725	21	-8.515159405	0.044872	0.9991
CA9	0.055617	10	-5.926105746	0.021368	0.9991
CASK	0.056637	11	-6.182862189	0.023504	0.9991
RPS6KA3	0.05694	5	-4.190633494	0.010684	0.9991
COL11A1	0.057671	33	-10.40472725	0.070513	0.9991
TFEB	0.058053	8	-5.26007494	0.017094	0.9991
FN1	0.058294	41	-11.46191101	0.087607	0.9991
PTPRF	0.058421	24	-8.937752921	0.051282	0.9991

MAG	0.058516	15	-7.134490172	0.032051	0.9991
POLL	0.058709	8	-5.24638897	0.017094	0.9991
ABL1	0.059275	22	-8.547603871	0.047009	0.9991
PRDM5	0.059368	5	-4.150332133	0.010684	0.9991
MAP3K2	0.059697	8	-5.225997638	0.017094	0.9991
UBR4	0.059906	54	-12.87026294	0.115385	0.9991
WNK2	0.059975	23	-8.705980258	0.049145	0.9991
NFKBID	0.060231	8	-5.21511502	0.017094	0.9991
UGT1A1	0.060333	5	-4.134690746	0.010684	0.9991
BAI1	0.061257	22	-8.481847967	0.047009	0.9991
TRAF1	0.061429	11	-6.067055101	0.023504	0.9991
BRD3	0.061452	9	-5.499367128	0.019231	0.9991
ZNF148	0.061633	6	-4.501723134	0.012821	0.9991
MAP3K8	0.061758	11	-6.059381998	0.023504	0.9991
CMAS	0.062576	7	-4.83965816	0.014957	0.9991
STAT5A	0.062587	7	-4.839450948	0.014957	0.9991
PLCH1	0.062898	26	-9.121803815	0.055556	0.9991
KDM1A	0.063159	7	-4.828939205	0.014957	0.9991
PFKFB2	0.06325	11	-6.024998087	0.023504	0.9991
LDHA	0.063666	7	-4.819691376	0.014957	0.9991
PIK3R1	0.064007	20	-8.020750663	0.042735	0.9991
IGF2R	0.064495	39	-10.94026419	0.083333	0.9991
VRTN	0.064804	26	-9.056544721	0.055556	0.9991
HDAC9	0.064912	24	-8.717378584	0.051282	0.9991
PDK1	0.064932	9	-5.427309974	0.019231	0.9991
RUNX1T1	0.064968	17	-7.392843296	0.036325	0.9991
CDC25B	0.064995	14	-6.73049391	0.029915	0.9991
ARID3A	0.065399	13	-6.483046788	0.027778	0.9991
PIK3CG	0.065797	30	-9.648494956	0.064103	0.9991
FLT1	0.06591	18	-7.572211624	0.038462	0.9991
TEX14	0.066177	28	-9.329476335	0.059829	0.9991
REL	0.066837	8	-5.08652108	0.017094	0.9991
FANCA	0.067893	22	-8.273730176	0.047009	0.9991
IL12B	0.068586	11	-5.907265854	0.023504	0.9991
ETV5	0.068587	6	-4.386600381	0.012821	0.9991
EPHB6	0.068648	22	-8.251145285	0.047009	0.9991
NTRK2	0.069502	11	-5.887820674	0.023504	0.9991
KIT	0.069646	23	-8.396933942	0.049145	0.9991
BUB1	0.069669	16	-7.057802792	0.034188	0.9991
DLL1	0.069888	13	-6.377911195	0.027778	0.9991
NEIL3	0.070104	11	-5.875156706	0.023504	0.9991
ERCC6	0.070356	40	-10.83245359	0.08547	0.9991
MARK4	0.071947	9	-5.291255978	0.019231	0.9991
POLQ	0.071962	48	-11.68832262	0.102564	0.9991
PDGFRL	0.072051	10	-5.569352469	0.021368	0.9991
POLN	0.072132	11	-5.83315295	0.023504	0.9991

STAT4	0.072619	11	-5.823202134	0.023504	0.9991
CD34	0.073141	5	-3.944495518	0.010684	0.9991
NCK1	0.075106	5	-3.917783021	0.010684	0.9991
TRAF4	0.075137	5	-3.917370192	0.010684	0.9991
PIK3CA	0.075426	71	-13.65567176	0.151709	0.9991
TRIP11	0.075472	23	-8.227437655	0.049145	0.9991
FANCE	0.075601	11	-5.763458166	0.023504	0.9991
EP300	0.075605	43	-10.98882528	0.09188	0.9991
CCBP2	0.07631	9	-5.212022667	0.019231	0.9991
MET	0.077685	22	-7.995329792	0.047009	0.9991
MAPK10	0.077856	9	-5.184839761	0.019231	0.9991
EPHA3	0.078162	19	-7.443225616	0.040598	0.9991
ULK1	0.078289	30	-9.233650041	0.064103	0.9991
BAP1	0.078579	10	-5.446116823	0.021368	0.9991
MEN1	0.078671	7	-4.5700272	0.014957	0.9991
GRIN2A	0.079427	33	-9.614479452	0.070513	0.9991
HIPK2	0.079452	22	-7.94818285	0.047009	0.9991
BCL2L14	0.079524	7	-4.557043983	0.014957	0.9991
TNFRSF8	0.080665	13	-6.146396321	0.027778	0.9991
SLC19A1	0.080861	7	-4.536928677	0.014957	0.9991
EPHB3	0.080994	19	-7.373468868	0.040598	0.9991
PREX2	0.083198	35	-9.757126301	0.074786	0.9991
MUC4	0.083236	242	-18.53329934	0.517094	0.9991
EPHA6	0.083299	25	-8.338228443	0.053419	0.9991
PRKAA2	0.083345	5	-3.811642531	0.010684	0.9991
SORL1	0.084069	26	-8.472632755	0.055556	0.9991
SIRT6	0.086327	6	-4.131202279	0.012821	0.9991
CABLES1	0.087061	6	-4.121587795	0.012821	0.9991
SLCO1B3	0.087836	22	-7.735416611	0.047009	0.9991
NGFR	0.08802	9	-5.016267285	0.019231	0.9991
CDC25C	0.088226	7	-4.430680919	0.014957	0.9991
ARHGEF11	0.088688	25	-8.196203624	0.053419	0.9991
RGL2	0.089385	11	-5.509960453	0.023504	0.9991
GATA1	0.089663	9	-4.990507082	0.019231	0.9991
SFRP2	0.089773	7	-4.409280728	0.014957	0.9991
CRHR1	0.090338	12	-5.731636002	0.025641	0.9991
FES	0.090681	15	-6.380243146	0.032051	0.9991
MAP2K2	0.092957	10	-5.201549503	0.021368	0.9991
RPS6KA6	0.093505	7	-4.358857127	0.014957	0.9991
NLRP1	0.0937	25	-8.070229363	0.053419	0.9991
WWP2	0.094413	12	-5.660388644	0.025641	0.9991
TIAM1	0.094435	44	-10.450871	0.094017	0.9991
BIVM_ERCC5_ERCC5	0.095464	15	-6.287617286	0.032051	0.9991
TBK1	0.095524	9	-4.901634296	0.019231	0.9991
ARAP3	0.095657	35	-9.384633553	0.074786	0.9991
DIS3	0.096238	14	-6.066967846	0.029915	0.9991

RASGRF2	0.096242	22	-7.537935782	0.047009	0.9991
PTPRG	0.097019	19	-7.012327238	0.040598	0.9991
DUSP10	0.098725	8	-4.58224151	0.017094	0.9991
HSD17B2	0.098898	10	-5.109336946	0.021368	0.9991
PTPN11	0.099445	10	-5.101073143	0.021368	0.9991
FGF3	0.099704	6	-3.965459894	0.012821	0.9991
SFN	0.09972	5	-3.623691749	0.010684	0.9991
UBA1	0.10017	12	-5.563808052	0.025641	0.9991
ATG16L1	0.101315	6	-3.946715032	0.012821	0.9991
SNAI3	0.101794	10	-5.065981584	0.021368	0.9991
TLR3	0.102149	13	-5.75120623	0.027778	0.9991
PES1	0.102557	22	-7.398505773	0.047009	0.9991
HSD11B1	0.104033	7	-4.224795168	0.014957	0.9991
ALOX15	0.104484	15	-6.122591019	0.032051	0.9991
FYN	0.105265	9	-4.76311658	0.019231	0.9991
PPM1L	0.106821	5	-3.549811466	0.010684	0.9991
PRKAG3	0.107106	13	-5.669613096	0.027778	0.9991
PIK3C2G	0.107314	29	-8.31285378	0.061966	0.9991
AKT1	0.107616	13	-5.661404176	0.027778	0.9991
RET	0.108745	22	-7.268343516	0.047009	0.9991
TOP2A	0.109523	19	-6.762422489	0.040598	0.9991
SUFU	0.11025	6	-3.846902329	0.012821	0.9991
C9orf96	0.110515	15	-6.018467072	0.032051	0.9991
SLC2A3	0.110748	7	-4.144824295	0.014957	0.9991
TTK	0.110928	8	-4.423962876	0.017094	0.9991
CARD11	0.111155	29	-8.223244517	0.061966	0.9991
JAK2	0.11154	18	-6.552195435	0.038462	0.9991
AKT2	0.112355	7	-4.126266783	0.014957	0.9991
LHCGR	0.11237	14	-5.790708981	0.029915	0.9991
CASP2	0.113306	6	-3.814222504	0.012821	0.9991
TCF12	0.113461	12	-5.356685016	0.025641	0.9991
DNMT3B	0.114291	15	-5.955533438	0.032051	0.9991
CBFA2T3	0.115128	19	-6.657703761	0.040598	0.9991
IGFBP4	0.115916	5	-3.46066088	0.010684	0.9991
MAP4K4	0.116443	16	-6.107818425	0.034188	0.9991
STON2	0.118275	21	-6.923883922	0.044872	0.9991
MAGI3	0.118391	16	-6.075445798	0.034188	0.9991
BCL6	0.118562	14	-5.692976247	0.029915	0.9991
BCL11A	0.118584	13	-5.49160436	0.027778	0.9991
IDH2	0.122557	5	-3.398981025	0.010684	0.9991
ZNF442	0.122971	12	-5.219951934	0.025641	0.9991
LPHN2	0.124279	24	-7.259011908	0.051282	0.9991
SESN2	0.124621	5	3.380350409	0.010684	0.9991
SMG1	0.124623	32	-8.298538117	0.068376	0.9991
SGK2	0.125671	8	-4.250131916	0.017094	0.9991
PTGFR	0.126076	10	-4.73637029	0.021368	0.9991

LCP1	0.126195	6	-3.683607422	0.012821	0.9991
CD33	0.126245	13	-5.380182888	0.027778	0.9991
BIRC5	0.127309	6	-3.672813723	0.012821	0.9991
WNT2	0.127729	10	-4.715804886	0.021368	0.9991
DPYSL4	0.129268	8	-4.210151415	0.017094	0.9991
APBB1IP	0.13048	11	4.905208575	0.023504	0.9991
PFKFB1	0.130995	10	-4.675784613	0.021368	0.9991
DLL3	0.132435	7	-3.910220781	0.014957	0.9991
BID	0.132806	10	-4.653918134	0.021368	0.9991
ROBO2	0.133655	48	-9.742745427	0.102564	0.9991
MAP2K1	0.134391	9	-4.401913488	0.019231	0.9991
ZEB1	0.134515	18	-6.161953319	0.038462	0.9991
UBASH3B	0.134839	11	-4.85030905	0.023504	0.9991
GTPBP4	0.135791	7	-3.876651234	0.014957	0.9991
PLA2G4A	0.136785	6	-3.583864358	0.012821	0.9991
BRD2	0.13714	21	-6.589100528	0.044872	0.9991
TTBK2	0.138831	13	-5.20805926	0.027778	0.9991
NOV	0.140655	6	-3.548901305	0.012821	0.9991
BCAT1	0.140752	11	4.778003627	0.023504	0.9991
BIRC2	0.140892	9	-4.32978344	0.019231	0.9991
EPHB4	0.141819	14	-5.358195211	0.029915	0.9991
ROBO1	0.14238	38	-8.579105914	0.081197	0.9991
CDC42BPB	0.142388	20	-6.35273398	0.042735	0.9991
TSC2	0.144513	43	-9.02464818	0.09188	0.9991
MTOR	0.144763	35	-8.213134858	0.074786	0.9991
HEYL	0.145388	9	-4.281381286	0.019231	0.9991
MAP3K1	0.145602	22	-6.594836013	0.047009	0.9991
TNFRSF10B	0.14714	6	-3.491938049	0.012821	0.9991
APOB	0.147193	82	-11.7981435	0.175214	0.9991
EPHA2	0.147498	24	-6.840432329	0.051282	0.9991
PTPN1	0.147849	9	-4.255367008	0.019231	0.9991
FAM123B	0.148357	46	-9.212987587	0.098291	0.9991
PTGS2	0.148377	5	-3.18141077	0.010684	0.9991
STK32B	0.14909	11	-4.679903437	0.023504	0.9991
PRKAG2	0.149846	11	-4.671207211	0.023504	0.9991
MERTK	0.150138	11	-4.667872542	0.023504	0.9991
ZNF217	0.150247	17	-5.763166405	0.036325	0.9991
TACR3	0.150748	14	-5.240914217	0.029915	0.9991
ODZ1	0.152574	58	-10.0921408	0.123932	0.9991
CDH20	0.152943	13	-5.028797416	0.027778	0.9991
PLD2	0.153036	19	-6.037940614	0.040598	0.9991
SYNE2	0.153209	88	-11.94918596	0.188034	0.9991
MYLK2	0.153358	8	-3.962521887	0.017094	0.9991
ABCC2	0.1538	36	-8.137186799	0.076923	0.9991
PAXIP1	0.153802	16	-5.548917675	0.034188	0.9991
ADAM33	0.15384	15	-5.378168985	0.032051	0.9991

CASP9	0.155354	5	3.127667811	0.010684	0.9991
MUTYH	0.155799	16	-5.522125239	0.034188	0.9991
STK36	0.158722	21	-6.247152423	0.044872	0.9991
PRKCA	0.163889	7	-3.617958001	0.014957	0.9991
SIK1	0.164466	17	-5.569068073	0.036325	0.9991
LATS2	0.164612	25	-6.690996254	0.053419	0.9991
FKTN	0.165186	5	-3.054953137	0.010684	0.9991
TBCK	0.166571	11	-4.487068861	0.023504	0.9991
PAX6	0.167307	9	-4.060531032	0.019231	0.9991
SLC17A5	0.167516	11	-4.477085703	0.023504	0.9991
STAT5B	0.16761	7	-3.586281129	0.014957	0.9991
MYBL2	0.169768	10	-4.250863432	0.021368	0.9991
ANO1	0.170088	15	-5.173849107	0.032051	0.9991
BAI3	0.171149	35	-7.707610203	0.074786	0.9991
RFX2	0.171539	28	-6.943068538	0.059829	0.9991
SMAD4	0.172008	55	-9.417308711	0.117521	0.9991
CYP2C8	0.173132	5	-2.998535515	0.010684	0.9991
NLRP5	0.173622	38	-7.957283014	0.081197	0.9991
MAP3K6	0.175686	14	-4.939139305	0.029915	0.9991
UGT1A1_UGT1A10_UGT1A3_UGT1A4_UGT	0.175841	5	-2.979745649	0.010684	0.9991
ADAMTS18	0.175915	43	-8.370624515	0.09188	0.9991
PTPRC	0.177008	27	-6.739578056	0.057692	0.9991
IKBIP	0.177599	11	-4.373142142	0.023504	0.9991
EXOC2	0.17779	15	-5.082097294	0.032051	0.9991
USP7	0.178238	18	-5.542959993	0.038462	0.9991
PRRC2C	0.178482	32	-7.270650019	0.068376	0.9991
HERC6	0.178576	16	-5.233475648	0.034188	0.9991
MSH2	0.178998	15	-5.067972382	0.032051	0.9991
CD22	0.179691	20	-5.810344746	0.042735	0.9991
MAP2K4	0.181804	11	-4.331095442	0.023504	0.9991
PHF14	0.1824	14	-4.863432728	0.029915	0.9991
CLSPN	0.182626	28	-6.767551927	0.059829	0.9991
PLAT	0.182694	14	-4.860165733	0.029915	0.9991
GPR81	0.183891	10	-4.114384665	0.021368	0.9991
JUNB	0.183979	11	-4.309626389	0.023504	0.9991
ADAM29	0.18459	29	-6.848752327	0.061966	0.9991
KTN1	0.187996	19	-5.563155526	0.040598	0.9991
LGR5	0.190098	22	-5.93794259	0.047009	0.9991
ADAMTS20	0.190352	46	-8.347254328	0.098291	0.9991
NR0B1	0.190368	12	-4.431655111	0.025641	0.9991
SMO	0.19038	14	-4.776093373	0.029915	0.9991
ARHGAP26	0.19123	10	-4.046512998	0.021368	0.9991
CLU	0.193876	7	-3.376482831	0.014957	0.9991
NUMB	0.195005	9	-3.810604211	0.019231	0.9991
WIF1	0.195109	7	-3.367165514	0.014957	0.9991

PPARGC1A	0.19591	6	-3.115179815	0.012821	0.9991
TICAM1	0.200194	7	-3.329184494	0.014957	0.9991
DYRK2	0.200998	10	-3.95909546	0.021368	0.9991
AXIN1	0.201459	13	-4.494652862	0.027778	0.9991
BCL9	0.201625	26	6.262622396	0.055556	0.9991
ADAM17	0.202963	9	-3.743681922	0.019231	0.9991
NKX2_1	0.202978	5	-2.802412222	0.010684	0.9991
ENPP2	0.203327	14	-4.639949535	0.029915	0.9991
CDK8	0.20405	6	-3.059306858	0.012821	0.9991
MAPK8	0.204283	5	-2.79433649	0.010684	0.9991
TMEM132B	0.205699	25	-6.092801707	0.053419	0.9991
PTPN13	0.205823	46	-8.06420297	0.098291	0.9991
ATG16L2	0.206456	11	-4.09802938	0.023504	0.9991
ADAMTSL3	0.208627	49	-8.242342899	0.104701	0.9991
GPR124	0.20939	26	-6.156249842	0.055556	0.9991
BLM	0.210692	28	-6.355996253	0.059829	0.9991
CCDC82	0.211221	9	3.676227504	0.019231	0.9991
TFE3	0.211425	8	-3.468202601	0.017094	0.9991
STK32C	0.212193	8	-3.462374979	0.017094	0.9991
CSDA	0.213182	6	-2.9985301	0.012821	0.9991
NOS2	0.214153	19	-5.249175584	0.040598	0.9991
XRCC2	0.215153	9	-3.644774095	0.019231	0.9991
AURKC	0.215295	10	-3.836557091	0.021368	0.9991
CD4	0.217207	9	-3.628517033	0.019231	0.9991
AXL	0.217273	23	-5.710608971	0.049145	0.9991
WNT4	0.2175	11	-4.000170939	0.023504	0.9991
TOPBP1	0.218571	23	-5.694524007	0.049145	0.9991
PLAU	0.218658	12	-4.162986917	0.025641	0.9991
PIK3CB	0.218823	12	-4.161490979	0.025641	0.9991
SIX4	0.219226	8	-3.409731066	0.017094	0.9991
HUS1	0.220396	6	2.951829122	0.012821	0.9991
GSK3A	0.220673	5	-2.695932703	0.010684	0.9991
VEPH1	0.220772	16	-4.763981539	0.034188	0.9991
CDS1	0.221105	10	-3.788441352	0.021368	0.9991
PHLPP2	0.222911	16	-4.741988671	0.034188	0.9991
MYO1B	0.223125	14	-4.443466198	0.029915	0.9991
P2RY10	0.223927	9	-3.576062072	0.019231	0.9991
MSN	0.225308	10	-3.754190723	0.021368	0.9991
JAG1	0.225347	22	-5.494473658	0.047009	0.9991
MAP2K7	0.227653	16	-4.693747232	0.034188	0.9991
KCNH8	0.2279	19	-5.095186492	0.040598	0.9991
ITGAV	0.228092	11	-3.909623828	0.023504	0.9991
IL21R	0.228949	11	-3.902433923	0.023504	0.9991
DDX1	0.229079	8	-3.337980684	0.017094	0.9991
SPEG	0.231612	50	-7.911748491	0.106838	0.9991
PTPN22	0.232047	13	-4.205060074	0.027778	0.9991

FOXO3	0.232263	7	-3.104516927	0.014957	0.9991
ILK	0.233171	12	-4.034810338	0.025641	0.9991
CBLC	0.234223	6	-2.865297603	0.012821	0.9991
HGF	0.234825	16	-4.622137977	0.034188	0.9991
EPHB1	0.235244	22	-5.379030219	0.047009	0.9991
MAPK8IP2	0.236172	15	-4.467451891	0.032051	0.9991
KIAA1409	0.238148	44	-7.371305041	0.094017	0.9991
XRCC1	0.23974	6	-2.831779716	0.012821	0.9991
USP33	0.239977	9	3.455189728	0.019231	0.9991
OR8G1	0.246248	8	-3.218016669	0.017094	0.9991
PKMYT1	0.246885	8	-3.213680548	0.017094	0.9991
DGKG	0.247663	21	-5.124221916	0.044872	0.9991
MKNK2	0.248431	6	-2.780070512	0.012821	0.9991
BIVM_BIVM_ERCC5	0.248826	7	-2.99706543	0.014957	0.9991
MRE11A	0.250098	13	-4.046761645	0.027778	0.9991
ZAP70	0.251497	17	-4.593677901	0.036325	0.9991
CTDP1	0.25176	14	-4.180212307	0.029915	0.9991
NOTCH2	0.253424	24	-5.393619874	0.051282	0.9991
TAB3	0.25585	7	-2.953011919	0.014957	0.9991
FBXL6	0.255909	11	-3.685241086	0.023504	0.9991
PAK7	0.257809	15	-4.267486422	0.032051	0.9991
AZI2	0.257874	5	-2.490539135	0.010684	0.9991
PKM2	0.262611	5	-2.465907055	0.010684	0.9991
GUCY2F	0.263646	28	-5.676296784	0.059829	0.9991
TRIM28	0.264578	6	-2.687253235	0.012821	0.9991
STIL	0.266904	14	-4.04940024	0.029915	0.9991
PTCH2	0.268257	23	-5.124065157	0.049145	0.9991
TLN1	0.269594	26	-5.4144672	0.055556	0.9991
SLC2A1	0.270283	8	-3.059551025	0.017094	0.9991
ETS2	0.270389	10	-3.412478682	0.021368	0.9991
MSH6	0.272737	27	-5.47534203	0.057692	0.9991
CD248	0.272937	7	-2.8492372	0.014957	0.9991
CDKN1A	0.275441	5	-2.400701815	0.010684	0.9991
RALGAPA1	0.278064	13	-3.816524472	0.027778	0.9991
GAB2	0.278549	12	-3.667122309	0.025641	0.9991
SPO11	0.279248	7	2.812035454	0.014957	0.9991
MAMDC4	0.279969	35	-6.084828718	0.074786	0.9991
GLP1R	0.280339	5	2.376354079	0.010684	0.9991
GLI1	0.283347	17	-4.297680916	0.036325	0.9991
BRIP1	0.283841	12	-3.627011313	0.025641	0.9991
HIP1	0.284722	15	-4.03436977	0.032051	0.9991
CDC7	0.289734	11	-3.434150706	0.023504	0.9991
ARAF	0.292532	9	3.095092721	0.019231	0.9991
SLC4A4	0.294691	32	-5.662677781	0.068376	0.9991
CYB5D2	0.295124	5	-2.304571594	0.010684	0.9991
PKN3	0.296733	28	-5.29874626	0.059829	0.9991

DNTT	0.299737	9	3.049262323	0.019231	0.9991
WNT10B	0.300948	13	-3.639628945	0.027778	0.9991
GOLIM4	0.302204	10	-3.194361406	0.021368	0.9991
GRM8	0.302995	22	-4.667877042	0.047009	0.9991
RBL2	0.303786	16	-4.000913224	0.034188	0.9991
PRKCG	0.304113	13	-3.615878331	0.027778	0.9991
TWF2	0.304689	6	-2.472385334	0.012821	0.9991
BIRC7	0.312263	7	2.626147912	0.014957	0.9991
IGF1	0.313925	11	-3.266501412	0.023504	0.9991
ORM1	0.317911	6	-2.405731889	0.012821	0.9991
PCM1	0.321713	39	-5.86407474	0.083333	0.9991
SFRP1	0.322519	5	-2.177663245	0.010684	0.9991
MYBL1	0.322778	8	-2.744146008	0.017094	0.9991
SENP6	0.324397	13	-3.467427981	0.027778	0.9991
EGF	0.328706	18	-4.021648079	0.038462	0.9991
TMEM161A	0.33233	14	-3.535887863	0.029915	0.9991
IRAK4	0.332393	7	2.519128087	0.014957	0.9991
ERCC3	0.332554	9	-2.849266347	0.019231	0.9991
PSEN2	0.334694	6	-2.323698447	0.012821	0.9991
STK33	0.335547	9	-2.831682676	0.019231	0.9991
ELK3	0.3375	14	-3.498265905	0.029915	0.9991
MCPH1	0.337691	22	-4.34478224	0.047009	0.9991
MS4A1	0.339533	5	-2.102370295	0.010684	0.9991
ROR1	0.348422	14	-3.419992195	0.029915	0.9991
MTHFR	0.350272	13	-3.286570515	0.027778	0.9991
ERC1	0.352483	15	-3.506442673	0.032051	0.9991
NEK10	0.35349	7	-2.411364513	0.014957	0.9991
EGFL6	0.359226	5	2.018176186	0.010684	0.9991
SLC22A2	0.35988	8	-2.541071951	0.017094	0.9991
PDIA4	0.359887	15	-3.452877031	0.032051	0.9991
MSH4	0.360512	13	-3.217352238	0.027778	0.9991
SOCS1	0.363734	8	2.520754421	0.017094	0.9991
PAG1	0.363743	9	-2.670705433	0.019231	0.9991
ASXL1	0.365518	28	-4.595111496	0.059829	0.9991
LARGE	0.368105	18	-3.705861008	0.038462	0.9991
ANAPC5	0.369245	15	-3.386157363	0.032051	0.9991
XRCC3	0.36949	5	-1.975446887	0.010684	0.9991
PRKACB	0.374487	5	-1.954911878	0.010684	0.9991
CCR3	0.374686	15	-3.347846336	0.032051	0.9991
GPC5	0.376783	14	-3.223703219	0.029915	0.9991
APEX1	0.379389	7	-2.284491055	0.014957	0.9991
TRIM36	0.37962	10	-2.720271171	0.021368	0.9991
GSK3B	0.380821	8	-2.432252739	0.017094	0.9991
ITSN2	0.385714	25	-4.176274426	0.053419	0.9991
CA12	0.386862	8	-2.401550853	0.017094	0.9991
NEK9	0.387903	11	-2.800720231	0.023504	0.9991

PDGFRB	0.389047	19	-3.639722987	0.040598	0.9991
APAF1	0.391481	20	-3.71100183	0.042735	0.9991
PDK3	0.392949	6	-2.057725855	0.012821	0.9991
PTPN5	0.393296	13	-3.003655345	0.027778	0.9991
TMPRSS2	0.395446	10	-2.631056435	0.021368	0.9991
CD8A	0.395495	8	-2.358179832	0.017094	0.9991
ADORA2A	0.395551	12	-2.875239698	0.025641	0.9991
CHRNA5	0.398064	8	-2.345380864	0.017094	0.9991
PRDM16	0.401165	32	-4.536813914	0.068376	0.9991
RRM2B	0.403143	12	2.829308321	0.025641	0.9991
NLK	0.40473	9	2.450011772	0.019231	0.9991
KRAS	0.405565	190	-8.745165371	0.405983	0.9991
HECW1	0.407093	39	-4.905869334	0.083333	0.9991
TGFB3	0.408304	10	-2.560152084	0.021368	0.9991
CCNE1	0.408768	9	-2.429021054	0.019231	0.9991
KDM6A	0.410631	14	-3.001007735	0.029915	0.9991
ADHFE1	0.411441	16	-3.195602852	0.034188	0.9991
KDR	0.411829	19	-3.4678753	0.040598	0.9991
FAM46A	0.415365	10	-2.521785477	0.021368	0.9991
RB1CC1	0.417956	11	-2.627331701	0.023504	0.9991
PAK1	0.419503	7	-2.098048092	0.014957	0.9991
ETS1	0.421038	12	-2.723043176	0.025641	0.9991
PIK3C3	0.421296	9	-2.36465546	0.019231	0.9991
VPS13B	0.421675	68	-6.062763682	0.145299	0.9991
NRAS	0.421798	15	3.029462394	0.032051	0.9991
C10orf137	0.425825	11	-2.58316258	0.023504	0.9991
NEK11	0.425952	16	3.09747218	0.034188	0.9991
SPEN	0.426255	44	-4.971679769	0.094017	0.9991
IGFBP5	0.426436	8	-2.20723082	0.017094	0.9991
NKD2	0.426705	14	-2.899099178	0.029915	0.9991
USP42	0.426922	24	-3.752012955	0.051282	0.9991
FANCF	0.427017	5	-1.748449685	0.010684	0.9991
ERCC4	0.427375	12	-2.686051673	0.025641	0.9991
NMUR2	0.429748	7	-2.052148724	0.014957	0.9991
KSR2	0.435092	17	-3.126656231	0.036325	0.9991
FLT4	0.435637	31	-4.151192731	0.066239	0.9991
CSF1R	0.438958	23	-3.582192129	0.049145	0.9991
MTMR3	0.439136	16	-3.009989921	0.034188	0.9991
IKZF1	0.440338	14	-2.814408353	0.029915	0.9991
BIRC3	0.441178	5	-1.695400118	0.010684	0.9991
IGFBP3	0.44152	5	-1.694130798	0.010684	0.9991
HEY2	0.44221	9	-2.259659425	0.019231	0.9991
PGR	0.448576	21	-3.358944732	0.044872	0.9991
PIK3R3	0.450269	7	-1.962083554	0.014957	0.9991
PARK2	0.451938	13	-2.646632651	0.027778	0.9991
REV1	0.452997	15	-2.830044858	0.032051	0.9991

F2RL2	0.462161	7	-1.910950739	0.014957	0.9991
MELK	0.462749	9	-2.159274332	0.019231	0.9991
DBN1	0.464988	17	2.926961214	0.036325	0.9991
PLD1	0.467517	16	-2.826634219	0.034188	0.9991
HSP90AA1	0.470594	11	-2.340389124	0.023504	0.9991
NBN	0.471278	8	-1.999347309	0.017094	0.9991
DTX1	0.471301	10	-2.23035779	0.021368	0.9991
SOS2	0.471596	12	-2.436270799	0.025641	0.9991
CD14	0.472384	9	-2.113042889	0.019231	0.9991
MMP2	0.474861	15	-2.694901123	0.032051	0.9991
EPHA7	0.47739	19	-3.002328388	0.040598	0.9991
BAK1	0.478532	6	-1.706979749	0.012821	0.9991
FOXO1	0.485323	14	-2.545028055	0.029915	0.9991
MOS	0.486206	16	-2.709260351	0.034188	0.9991
GEN1	0.486274	11	-2.258435066	0.023504	0.9991
RB1	0.48745	11	-2.252346255	0.023504	0.9991
FANCC	0.492102	6	-1.654716688	0.012821	0.9991
DDR2	0.492784	15	-2.586647496	0.032051	0.9991
AXIN2	0.493092	36	-3.910446141	0.076923	0.9991
PER1	0.493424	19	-2.894009431	0.040598	0.9991
ARHGEF12	0.493829	23	-3.166914767	0.049145	0.9991
FLT3	0.49729	28	-3.446761927	0.059829	0.9991
KIF16B	0.499475	27	-3.371309611	0.057692	0.9991
IKBKE	0.504343	5	1.469699326	0.010684	0.9991
KAT2B	0.507071	10	-2.054007286	0.021368	0.9991
BMP2	0.509726	6	-1.587985508	0.012821	0.9991
PMS2	0.512982	9	1.923665151	0.019231	0.9991
LIG3	0.514267	14	-2.37885749	0.029915	0.9991
XRCC5	0.514695	12	-2.204992078	0.025641	0.9991
MYB	0.517296	13	2.278347885	0.027778	0.9991
HCRTR2	0.517687	12	-2.18932284	0.025641	0.9991
CBLB	0.518751	16	2.510511925	0.034188	0.9991
CCNE2	0.519288	6	-1.552284622	0.012821	0.9991
GRM7	0.520899	25	-3.090792703	0.053419	0.9991
NFATC3	0.525682	16	-2.469030536	0.034188	0.9991
RFC1	0.529897	17	-2.516373002	0.036325	0.9991
CES3	0.530151	11	2.036333765	0.023504	0.9991
MAS1L	0.530823	8	-1.739434153	0.017094	0.9991
POU1F1	0.531326	9	-1.840688824	0.019231	0.9991
CDH11	0.532223	28	-3.171821835	0.059829	0.9991
PARP2	0.532638	13	2.195534923	0.027778	0.9991
TRAF5	0.536203	7	-1.607589253	0.014957	0.9991
ATG9B	0.536263	11	-2.00615953	0.023504	0.9991
FPGT_TNNI3K_TNNI3K	0.539616	15	-2.313256911	0.032051	0.9991
MAS1	0.541892	8	1.692822126	0.017094	0.9991
PRKAA1	0.542439	5	1.34083204	0.010684	0.9991

PPM1D	0.542638	11	-1.974873093	0.023504	0.9991
TCF7L2	0.54345	45	3.835187826	0.096154	0.9991
RPS6KA5	0.544659	12	-2.050123162	0.025641	0.9991
ZC3H12B	0.546592	9	-1.772737747	0.019231	0.9991
LDHB	0.547094	8	-1.671078684	0.017094	0.9991
PTEN	0.547991	16	-2.337379746	0.034188	0.9991
RIF1	0.54928	31	-3.188758747	0.066239	0.9991
IRS2	0.550217	11	1.93791601	0.023504	0.9991
CCR5	0.551119	6	1.435802033	0.012821	0.9991
TRAF2	0.551435	17	-2.385971296	0.036325	0.9991
PRKAG1	0.551566	5	-1.310643969	0.010684	0.9991
FURIN	0.553499	9	-1.742306446	0.019231	0.9991
RAP1GDS1	0.555231	8	-1.63727396	0.017094	0.9991
PFKFB3	0.556782	13	-2.067618042	0.027778	0.9991
CHRNA3	0.559421	9	-1.71636006	0.019231	0.9991
PTPN9	0.559478	6	-1.40577102	0.012821	0.9991
SLC6A2	0.564749	16	-2.24023091	0.034188	0.9991
FANCB	0.565027	16	2.238626005	0.034188	0.9991
MPL	0.573627	6	1.355429964	0.012821	0.9991
CHRNB4	0.577615	10	-1.724162453	0.021368	0.9991
GAB3	0.577905	6	-1.340325496	0.012821	0.9991
NUAK1	0.578057	12	-1.882408197	0.025641	0.9991
IKZF3	0.583158	8	1.52303613	0.017094	0.9991
FHIT	0.583171	7	-1.426168603	0.014957	0.9991
INHBA	0.58706	8	-1.50728436	0.017094	0.9991
CCDC63	0.588324	23	2.505216461	0.049145	0.9991
ATG2B	0.588349	30	-2.838371183	0.064103	0.9991
PTPN14	0.588988	29	-2.789062748	0.061966	0.9991
STAT1	0.589579	5	-1.187444481	0.010684	0.9991
TGFB2	0.593544	7	-1.387052692	0.014957	0.9991
MYH1	0.593889	35	-3.00306798	0.074786	0.9991
MYCN	0.595212	8	-1.474525524	0.017094	0.9991
PFKFB4	0.597851	7	-1.370903509	0.014957	0.9991
E4F1	0.598199	14	-1.922147126	0.029915	0.9991
PCGF2	0.598311	9	-1.549132765	0.019231	0.9991
TPO	0.600927	23	-2.420983348	0.049145	0.9991
MARK1	0.601967	16	-2.029247239	0.034188	0.9991
CDKL2	0.60308	6	-1.252477019	0.012821	0.9991
MAP3K14	0.604789	14	-1.887618473	0.029915	0.9991
UPP1	0.605585	5	-1.136685	0.010684	0.9991
FANCG	0.607002	13	-1.809807685	0.027778	0.9991
HIF1A	0.60974	8	1.41664767	0.017094	0.9991
PDGFB	0.610295	6	-1.22760921	0.012821	0.9991
HDAC1	0.610541	6	-1.226764365	0.012821	0.9991
GRK5	0.617416	10	-1.54657855	0.021368	0.9991
GSTP1	0.618835	9	-1.462894657	0.019231	0.9991

NLRP8	0.621591	27	2.464129845	0.057692	0.9991
CXorf30	0.623024	15	-1.853824479	0.032051	0.9991
MYC	0.623356	10	-1.520520249	0.021368	0.9991
PIK3C2A	0.629405	24	-2.278989852	0.051282	0.9991
SMC6	0.635915	8	-1.313888491	0.017094	0.9991
CDC42BPA	0.637954	24	-2.222301713	0.051282	0.9991
ATR	0.639034	22	2.12562927	0.047009	0.9991
NEK8	0.642147	10	-1.438780986	0.021368	0.9991
SOX11	0.642933	15	-1.748355646	0.032051	0.9991
IKBKB	0.644948	10	-1.426681548	0.021368	0.9991
PRKCI	0.645709	5	-1.011974158	0.010684	0.9991
GAB1	0.648321	8	1.265813909	0.017094	0.9991
TCF	0.648843	52	-3.064095363	0.111111	0.9991
TNKS2	0.648891	7	-1.183288038	0.014957	0.9991
DKK1	0.649792	8	-1.260137729	0.017094	0.9991
USP6NL	0.654733	10	1.384590294	0.021368	0.9991
TNFRSF10A	0.656149	11	1.444226267	0.023504	0.9991
KNTC1	0.659357	43	-2.726225495	0.09188	0.9991
PPP2R1A	0.661626	12	-1.481185479	0.025641	0.9991
BIRC6	0.661944	55	-3.014792718	0.117521	0.9991
KSR1	0.665561	15	-1.630111453	0.032051	0.9991
PDGFA	0.665746	6	1.040552801	0.012821	0.9991
HAPLN1	0.667973	8	1.190424853	0.017094	0.9991
AKT3	0.66916	7	-1.110511628	0.014957	0.9991
RASSF1	0.672159	10	1.310253089	0.021368	0.9991
NCAM1	0.673541	28	-2.139337443	0.059829	0.9991
PPARA	0.67406	9	-1.23671024	0.019231	0.9991
WT1	0.674994	11	-1.360106393	0.023504	0.9991
UMPS	0.685026	6	-0.977010912	0.012821	0.9991
DDX11	0.685121	12	1.372265568	0.025641	0.9991
LTBP1	0.689648	29	-2.061370575	0.061966	0.9991
XBP1	0.690419	5	-0.876718862	0.010684	0.9991
SOX10	0.691771	5	0.87268326	0.010684	0.9991
PTPN12	0.695066	9	-1.152637087	0.019231	0.9991
RASGRF1	0.695111	21	-1.737239346	0.044872	0.9991
TLR4	0.695489	10	-1.21188563	0.021368	0.9991
TMPRSS6	0.698172	19	-1.63865024	0.040598	0.9991
HLA_A	0.701054	84	-3.154357228	0.179487	0.9991
ADA	0.701788	9	-1.12593313	0.019231	0.9991
WNT2B	0.702666	13	-1.343126293	0.027778	0.9991
BMPR1B	0.702912	16	-1.483855087	0.034188	0.9991
DGKB	0.703549	12	1.287825047	0.025641	0.9991
ECT2	0.704941	5	-0.833516882	0.010684	0.9991
RING1	0.709444	7	-0.968355821	0.014957	0.9991
EGFR	0.718524	18	1.484075822	0.038462	0.9991
TGFB1	0.719849	10	-1.110466809	0.021368	0.9991

MUC1	0.720864	7	-0.928596426	0.014957	0.9991
PTPRT	0.722373	41	-2.150692349	0.087607	0.9991
PAK3	0.722999	7	-0.921188103	0.014957	0.9991
CDKN1B	0.724479	10	1.091331635	0.021368	0.9991
RAF1	0.725186	8	0.975629045	0.017094	0.9991
FER	0.725411	9	1.032802805	0.019231	0.9991
CCKBR	0.725659	13	1.234688898	0.027778	0.9991
BMP4	0.736456	6	0.810655575	0.012821	0.9991
RIPK1	0.736786	11	-1.090255723	0.023504	0.9991
TRAF7	0.741383	6	-0.794931849	0.012821	0.9991
GUCY1A2	0.742105	23	-1.523063186	0.049145	0.9991
JAK3	0.745291	33	1.780657548	0.070513	0.9991
TMEFF2	0.748484	6	-0.77233022	0.012821	0.9991
PLAG1	0.766667	7	-0.771189436	0.014957	0.9991
CTNND2	0.768335	32	-1.591738697	0.068376	0.9991
ORAI1	0.768696	6	-0.708360315	0.012821	0.9991
SGK494	0.770918	9	0.8561911	0.019231	0.9991
LRRN3	0.772994	10	0.893120006	0.021368	0.9991
RYK	0.7764	7	0.738122527	0.014957	0.9991
BAX	0.784935	8	0.757368844	0.017094	0.9991
SMYD2	0.787383	8	-0.748535836	0.017094	0.9991
EPHA4	0.794026	15	0.984620511	0.032051	0.9991
NPY2R	0.799616	7	0.65971541	0.014957	0.9991
PTK2	0.800613	10	0.781944824	0.021368	0.9991
PHLPP1	0.80075	13	-0.888008076	0.027778	0.9991
MAN1B1	0.80473	15	0.932367499	0.032051	0.9991
RFC5	0.805855	5	0.541011596	0.010684	0.9991
MSH3	0.807802	17	-0.974490052	0.036325	0.9991
INPP5A	0.821918	7	0.584956263	0.014957	0.9991
PRKCD	0.834241	14	0.763271729	0.029915	0.9991
CBL	0.836751	13	-0.725007284	0.027778	0.9991
ALOX12B	0.838192	7	-0.530712857	0.014957	0.9991
MMP9	0.841029	22	-0.908971676	0.047009	0.9991
SIRT1	0.842772	5	-0.436610401	0.010684	0.9991
TANK	0.845899	9	-0.57149071	0.019231	0.9991
IGFBP1	0.849752	7	-0.492320539	0.014957	0.9991
LEF1	0.853799	6	0.443863933	0.012821	0.9991
SPOP	0.853813	5	-0.405588518	0.010684	0.9991
CSNK1G2	0.857067	8	-0.499860808	0.017094	0.9991
E2F1	0.857394	6	0.43282893	0.012821	0.9991
HES1	0.868856	5	-0.363449524	0.010684	0.9991
CLTC	0.879505	9	0.445764918	0.019231	0.9991
PTPN3	0.893259	17	-0.537519461	0.036325	0.9991
BCL3	0.894624	5	-0.291563805	0.010684	0.9991
INSR	0.896911	17	0.519024873	0.036325	0.9991
CYP2C19	0.903002	9	-0.3583561	0.019231	0.9991

PDZRN4	0.903357	25	0.584597515	0.053419	0.9991
PLAGL1	0.904429	6	0.289211883	0.012821	0.9991
ATG4D	0.905268	13	-0.418742742	0.027778	0.9991
RELB	0.906044	8	0.327571029	0.017094	0.9991
USP54	0.908283	23	-0.533219197	0.049145	0.9991
ETV6	0.910573	8	-0.311713604	0.017094	0.9991
FOXL2	0.911565	5	0.244480016	0.010684	0.9991
PARP4	0.912851	35	-0.616388323	0.074786	0.9991
RICTOR	0.916964	19	0.440557256	0.040598	0.9991
TLR2	0.917551	13	0.364239527	0.027778	0.9991
LRRC10	0.917821	5	-0.227121202	0.010684	0.9991
NQO1	0.921543	5	0.21679954	0.010684	0.9991
BAZ1A	0.924455	13	-0.333643777	0.027778	0.9991
CALCR	0.927775	16	0.352663902	0.034188	0.9991
FCGR3A	0.929468	14	0.322845001	0.029915	0.9991
MTM1	0.930265	6	0.210790647	0.012821	0.9991
PTPRJ	0.932798	24	-0.398237857	0.051282	0.9991
RASA1	0.935892	15	0.303336648	0.032051	0.9991
ARHGAP29	0.938549	6	-0.185696938	0.012821	0.9991
CDC73	0.944841	8	0.192016748	0.017094	0.9991
COL14A1	0.945734	31	-0.362440576	0.066239	0.9991
CYP2D6	0.946101	16	-0.263021353	0.034188	0.9991
CCNA1	0.948151	8	0.180476139	0.017094	0.9991
USP5	0.948923	6	0.154299771	0.012821	0.9991
FH	0.949422	8	0.176046021	0.017094	0.9991
CX3CR1	0.950092	11	-0.203030074	0.023504	0.9991
SRSF6	0.961473	6	0.116353401	0.012821	0.9991
TNK2	0.962094	14	0.173347288	0.029915	0.9991
MAPK7	0.964421	10	-0.138109527	0.021368	0.9991
TAL1	0.965387	7	-0.112778126	0.014957	0.9991
IRAK3	0.968075	12	0.135445177	0.025641	0.9991
NRG2	0.969328	10	-0.119051594	0.021368	0.9991
SHC1	0.972644	10	0.106175739	0.021368	0.9991
MAGI2	0.974348	34	0.178702054	0.07265	0.9991
LYN	0.980415	7	0.063799737	0.014957	0.9991
TRIM47	0.982555	11	0.070926461	0.023504	0.9991
ERBB2	0.995426	28	0.029108518	0.059829	0.9991
FGFR3	0.9991	16	-0.004387565	0.034188	0.9991

Supplementary Table S12. Mutation ranking of Moffitt 407 MSS CRCs by the cetuximab sensitivity score

Note: APC — *APC* truncating mutation; BRAF — *BRAF*(V600E). The mutated genes were listed according to adjusted p values that were calculated using the Hochberg and Benjamini method (11).

gene	p_value	N_mutation	SumOfScores	PCT	Adjusted_p
TP53	4.64E-22	261	92.35618721	0.641278	4.08706E-19
APC	8.55E-12	296	60.65144013	0.727273	7.5234E-09
BRAF	0.000709	18	-13.88261987	0.044226	0.622700297
KRAS	0.001858	177	-30.76529221	0.434889	0.998439386
SMAD3	0.00204	14	-11.20981994	0.034398	0.998439386
BARD1	0.002188	7	-7.942689556	0.017199	0.998439386
CTNNB1	0.003312	13	-10.29971874	0.031941	0.998439386
BRCA1	0.005571	25	-13.27313668	0.061425	0.998439386
IDH1	0.006636	5	-5.963150252	0.012285	0.998439386
RAD18	0.006847	6	-6.49927295	0.014742	0.998439386
SMAD2	0.006852	12	-9.121449253	0.029484	0.998439386
TLR7	0.011293	5	-5.565343911	0.012285	0.998439386
HECW1	0.012886	24	11.68261576	0.058968	0.998439386
TRIB3	0.013672	8	-6.825915453	0.019656	0.998439386
NRP2	0.016995	15	-8.967723787	0.036855	0.998439386
TAF15	0.02442	5	-4.943597175	0.012285	0.998439386
GRM1	0.02554	18	-9.155877612	0.044226	0.998439386
AFF4	0.026074	7	-5.769056663	0.017199	0.998439386
FLT4	0.027436	18	9.041583062	0.044226	0.998439386
EGFR	0.0279	11	7.110228904	0.027027	0.998439386
RRM2B	0.028647	8	6.057809533	0.019656	0.998439386
ULK2	0.030294	10	-6.68765777	0.02457	0.998439386
BIRC6	0.032138	37	12.28390347	0.090909	0.998439386
TSPAN31	0.032338	5	4.701410007	0.012285	0.998439386
CLTC	0.03246	5	4.698111899	0.012285	0.998439386
NIM1	0.03741	8	-5.76147621	0.019656	0.998439386
CDH1	0.040885	12	-6.897500195	0.029484	0.998439386
ICK	0.044216	6	-4.835687129	0.014742	0.998439386
PKN3	0.044288	17	8.024549362	0.041769	0.998439386
CCKBR	0.04468	8	5.557715523	0.019656	0.998439386
TGFBR1	0.045719	7	-5.180187235	0.017199	0.998439386
USP9X	0.048256	11	-6.387179447	0.027027	0.998439386
FSCB	0.048801	14	-7.161010609	0.034398	0.998439386
STK11	0.051034	5	-4.286209611	0.012285	0.998439386
LATS1	0.05192	8	-5.380930938	0.019656	0.998439386
ROCK1	0.052334	8	-5.37145599	0.019656	0.998439386
DNTT	0.05385	6	4.633816496	0.014742	0.998439386
LRP6	0.055435	15	-7.196722861	0.036855	0.998439386
EEF2K	0.056198	5	-4.194615691	0.012285	0.998439386
PLCB1	0.056837	11	-6.159047137	0.027027	0.998439386

PRKCD	0.058169	8	5.244250178	0.019656	0.998439386
XIAP	0.058739	8	-5.2324091	0.019656	0.998439386
PFKFB1	0.062574	8	-5.155073717	0.019656	0.998439386
THBS1	0.063498	8	-5.137025128	0.019656	0.998439386
FANCE	0.064185	8	-5.123751252	0.019656	0.998439386
AKAP6	0.06502	25	-8.834885842	0.061425	0.998439386
ROR2	0.067431	14	-6.646598098	0.034398	0.998439386
USP33	0.06787	7	4.733956841	0.017199	0.998439386
GOLIM4	0.068147	10	-5.631233547	0.02457	0.998439386
CX3CR1	0.068166	7	4.728867498	0.017199	0.998439386
CELSR1	0.06825	46	-11.51271666	0.113022	0.998439386
MAG	0.070921	12	-6.092259558	0.029484	0.998439386
BCL9	0.071699	20	7.763641936	0.04914	0.998439386
RAD50	0.073187	10	-5.531292185	0.02457	0.998439386
ACVR2A	0.073586	10	-5.523615717	0.02457	0.998439386
ERBB3	0.077019	22	-7.973706883	0.054054	0.998439386
TET1	0.079925	5	3.846708464	0.012285	0.998439386
RHOBTB2	0.080112	13	-6.136799063	0.031941	0.998439386
CTNND2	0.080687	19	7.348332036	0.046683	0.998439386
ALPK3	0.081093	23	-8.032397434	0.056511	0.998439386
RIF1	0.081813	21	7.677013846	0.051597	0.998439386
PRKCH	0.082756	6	-4.169665231	0.014742	0.998439386
MYBL2	0.084052	9	-5.066313425	0.022113	0.998439386
SPEN	0.08537	28	8.683388602	0.068796	0.998439386
USP24	0.085598	8	-4.758888092	0.019656	0.998439386
ANKRD32	0.086226	5	-3.768785732	0.012285	0.998439386
ATR	0.086754	15	6.435232032	0.036855	0.998439386
CUBN	0.08719	49	-11.09977712	0.120393	0.998439386
MAPK10	0.087476	7	-4.430591172	0.017199	0.998439386
KDM5A	0.089913	16	-6.572219837	0.039312	0.998439386
SOS1	0.091124	15	-6.347775097	0.036855	0.998439386
JAG2	0.091347	5	-3.708779248	0.012285	0.998439386
CSF1R	0.092495	14	6.114481777	0.034398	0.998439386
ROS1	0.09377	18	-6.870974228	0.044226	0.998439386
HOXA9	0.096717	5	-3.648697588	0.012285	0.998439386
GUCY1A2	0.097086	15	6.233736506	0.036855	0.998439386
ERBB2	0.099683	19	6.926298862	0.046683	0.998439386
EPHA8	0.099757	14	-5.982381225	0.034398	0.998439386
CREBBP	0.10027	27	8.15700114	0.066339	0.998439386
TET2	0.100879	20	-7.072134764	0.04914	0.998439386
TSC1	0.101348	14	-5.954470306	0.034398	0.998439386
VPS13B	0.104423	47	10.3490776	0.115479	0.998439386
FLT3	0.105895	19	6.802321116	0.046683	0.998439386
NCOA7	0.108004	14	-5.841357666	0.034398	0.998439386
PTPN6	0.108203	7	-4.164730033	0.017199	0.998439386
DLC1	0.108524	24	-7.539081278	0.058968	0.998439386

GTPBP4	0.109484	5	-3.515874852	0.012285	0.998439386
LPHN1	0.109764	13	5.608061545	0.031941	0.998439386
NLRP8	0.109766	18	6.556943273	0.044226	0.998439386
NCAM1	0.111013	18	6.534030562	0.044226	0.998439386
MAST4	0.115663	33	-8.563732609	0.081081	0.998439386
TNK2	0.117009	8	4.339112887	0.019656	0.998439386
GLI3	0.117271	30	-8.161876029	0.07371	0.998439386
ITGB3	0.117527	11	-5.061732725	0.027027	0.998439386
FLI1	0.118235	5	-3.431761885	0.012285	0.998439386
LAMC1	0.120433	16	-6.018431178	0.039312	0.998439386
PLXNB3	0.122831	13	5.410788503	0.031941	0.998439386
NEK9	0.123632	5	3.382286773	0.012285	0.998439386
MSH3	0.124268	11	4.970746867	0.027027	0.998439386
NOTCH4	0.125806	32	-8.216732369	0.078624	0.998439386
DAB2	0.126289	8	-4.232392908	0.019656	0.998439386
APBB1IP	0.126889	10	4.712623773	0.02457	0.998439386
SNAI3	0.128339	7	-3.942699949	0.017199	0.998439386
NFKB2	0.130445	7	-3.921081938	0.017199	0.998439386
IRAK2	0.131565	11	-4.876502963	0.027027	0.998439386
GRM7	0.135097	16	5.791110389	0.039312	0.998439386
PLCG2	0.135291	22	-6.735017774	0.054054	0.998439386
LTK	0.135551	16	-5.784372391	0.039312	0.998439386
MMP9	0.135956	15	5.602049945	0.036855	0.998439386
BAI2	0.136808	18	-6.099945854	0.044226	0.998439386
TNFRSF8	0.136825	10	-4.592941313	0.02457	0.998439386
NEK11	0.138658	12	4.995311391	0.029484	0.998439386
PLA2G4A	0.138845	5	-3.251369349	0.012285	0.998439386
HDAC4	0.139723	8	-4.088230602	0.019656	0.998439386
PLD2	0.142423	14	-5.331068362	0.034398	0.998439386
CCDC63	0.143144	19	6.159743247	0.046683	0.998439386
CD44	0.14454	8	-4.039140236	0.019656	0.998439386
DAXX	0.144635	5	-3.204443918	0.012285	0.998439386
IKBKAP	0.145557	12	-4.909621658	0.029484	0.998439386
RNF123	0.145644	11	-4.705542242	0.027027	0.998439386
PIK3R3	0.146112	6	-3.493078448	0.014742	0.998439386
NCOA2	0.148954	16	-5.593203193	0.039312	0.998439386
LRRN3	0.149513	6	3.46388469	0.014742	0.998439386
PTPN14	0.150694	21	6.339580005	0.051597	0.998439386
IL12B	0.150868	8	-3.976524653	0.019656	0.998439386
PDK1	0.151027	6	-3.451045877	0.014742	0.998439386
STK32C	0.151134	6	-3.45014495	0.014742	0.998439386
MLH1	0.154743	13	-4.989905733	0.031941	0.998439386
EPHA1	0.154895	12	4.798460983	0.029484	0.998439386
DGKB	0.156708	9	4.153089662	0.022113	0.998439386
WNK4	0.156889	13	4.964088906	0.031941	0.998439386
TNFRSF10A	0.157531	8	3.912723853	0.019656	0.998439386

FLNB	0.157883	36	-7.996826867	0.088452	0.998439386
BAX	0.15937	5	3.09119734	0.012285	0.998439386
BIRC7	0.160438	6	3.373389217	0.014742	0.998439386
THRAP3	0.160668	8	-3.883393989	0.019656	0.998439386
CES3	0.163047	7	3.616561525	0.017199	0.998439386
PRDM16	0.163873	19	5.856767233	0.046683	0.998439386
BCL6	0.163891	11	-4.501845899	0.027027	0.998439386
LARGE	0.164431	11	4.496088363	0.027027	0.998439386
NBN	0.166962	8	-3.825818329	0.019656	0.998439386
ITCH	0.173026	5	2.993116642	0.012285	0.998439386
ITGAV	0.173345	7	-3.53006595	0.017199	0.998439386
MKNK2	0.173503	5	-2.989801389	0.012285	0.998439386
DLL3	0.174218	5	-2.98483552	0.012285	0.998439386
TERT	0.174583	8	3.758250963	0.019656	0.998439386
ERCC4	0.177957	11	-4.356217227	0.027027	0.998439386
LTF	0.178354	14	-4.891353158	0.034398	0.998439386
PPP2R2B	0.180562	5	-2.941457944	0.012285	0.998439386
ADCY9	0.180753	21	-5.904414048	0.051597	0.998439386
HERC3	0.181119	8	-3.702035595	0.019656	0.998439386
TRIO	0.182183	17	-5.322415341	0.041769	0.998439386
KIAA1409	0.184129	26	6.476957859	0.063882	0.998439386
PPP1R3A	0.184282	17	-5.296968671	0.041769	0.998439386
PTPN21	0.188156	17	-5.250561702	0.041769	0.998439386
SYNE2	0.189685	60	9.272309922	0.14742	0.998439386
AR	0.190871	21	-5.770161178	0.051597	0.998439386
RPTOR	0.19348	6	-3.125244384	0.014742	0.998439386
ORM1	0.195961	5	-2.840667683	0.012285	0.998439386
IGF2R	0.197028	21	5.691021314	0.051597	0.998439386
IL21R	0.197088	9	-3.782605532	0.022113	0.998439386
PKHD1	0.197464	61	-9.174177744	0.149877	0.998439386
GPR124	0.198282	23	-5.923818526	0.056511	0.998439386
DNMT3B	0.198773	6	3.088479076	0.014742	0.998439386
STIM1	0.203538	7	-3.29672616	0.017199	0.998439386
EPHB1	0.204202	11	4.105912989	0.027027	0.998439386
STAT4	0.204488	7	-3.289806922	0.017199	0.998439386
SMAD4	0.205141	48	-8.149533793	0.117936	0.998439386
ALOX15	0.205753	11	-4.091876548	0.027027	0.998439386
PDGFRL	0.205963	7	-3.279114213	0.017199	0.998439386
PTPRS	0.206604	28	-6.374747636	0.068796	0.998439386
APC2	0.207003	17	-5.034306024	0.041769	0.998439386
MYB	0.207475	9	3.696528991	0.022113	0.998439386
INSR	0.209621	11	4.05720826	0.027027	0.998439386
TBCK	0.212812	8	-3.448887743	0.019656	0.998439386
DTX1	0.213679	5	2.731639196	0.012285	0.998439386
FANCG	0.214349	8	3.437330402	0.019656	0.998439386
CHKB	0.214953	6	-2.980342018	0.014742	0.998439386

NUP98	0.215197	15	-4.656665888	0.036855	0.998439386
MTOR	0.215813	20	5.335490065	0.04914	0.998439386
DOT1L	0.216519	10	-3.81532706	0.02457	0.998439386
ZBTB16	0.217309	7	-3.198665388	0.017199	0.998439386
LRP5	0.217519	12	4.159877093	0.029484	0.998439386
RASSF1	0.221596	7	3.169057993	0.017199	0.998439386
IKZF3	0.22523	7	3.144281972	0.017199	0.998439386
ARHGAP6	0.226777	11	-3.908757798	0.027027	0.998439386
ANAPC5	0.227599	8	3.340087714	0.019656	0.998439386
NUP153	0.227825	11	-3.899954278	0.027027	0.998439386
CMAS	0.228901	5	-2.643073809	0.012285	0.998439386
TWF2	0.229402	5	-2.640226793	0.012285	0.998439386
TTK	0.229734	5	-2.638345257	0.012285	0.998439386
ATM	0.23178	47	-7.621302275	0.115479	0.998439386
MUTYH	0.231841	13	-4.192681792	0.031941	0.998439386
TOP2B	0.233009	10	-3.681979533	0.02457	0.998439386
SOX11	0.233788	10	3.675844271	0.02457	0.998439386
IRS2	0.23655	8	3.27665805	0.019656	0.998439386
LIG4	0.236565	12	-3.992773653	0.029484	0.998439386
CD4	0.23695	6	-2.842349608	0.014742	0.998439386
PREX1	0.23745	12	3.98524731	0.029484	0.998439386
CBFA2T3	0.237754	13	-4.140042641	0.031941	0.998439386
AXL	0.238606	18	-4.831789973	0.044226	0.998439386
USP8	0.240125	6	-2.823188565	0.014742	0.998439386
GPR84	0.242456	5	-2.56766772	0.012285	0.998439386
PML	0.243739	7	-3.02230048	0.017199	0.998439386
LDHA	0.243983	5	-2.559363651	0.012285	0.998439386
RAPH1	0.244738	8	-3.220109845	0.019656	0.998439386
PARP14	0.24486	19	-4.89237264	0.046683	0.998439386
INPPL1	0.249019	11	-3.727766268	0.027027	0.998439386
MEX3B	0.249499	8	-3.187835091	0.019656	0.998439386
CELSR2	0.249643	36	6.518843518	0.088452	0.998439386
CASC5	0.249742	19	-4.842101856	0.046683	0.998439386
CENPF	0.250996	29	-5.888933492	0.071253	0.998439386
HCRTR2	0.251106	7	2.975569181	0.017199	0.998439386
MITF	0.251168	8	-3.176620003	0.019656	0.998439386
MAS1	0.252775	6	2.748593055	0.014742	0.998439386
CDS1	0.254992	8	-3.151131725	0.019656	0.998439386
HERC1	0.258102	26	-5.51497773	0.063882	0.998439386
CCDC82	0.258189	8	3.130020483	0.019656	0.998439386
BCL9L	0.258408	25	-5.411498437	0.061425	0.998439386
MAP3K9	0.261788	10	-3.464420545	0.02457	0.998439386
PDGFB	0.262243	6	-2.694446871	0.014742	0.998439386
TLE4	0.26438	11	-3.609289623	0.027027	0.998439386
DBN1	0.264514	14	4.055231525	0.034398	0.998439386
AURKC	0.264655	8	-3.087870312	0.019656	0.998439386

ATG4D	0.265391	9	3.266037112	0.022113	0.998439386
NEK10	0.266109	6	-2.672721322	0.014742	0.998439386
RICTOR	0.266755	11	3.591397022	0.027027	0.998439386
CCR5	0.267397	5	2.436322953	0.012285	0.998439386
TRRAP	0.269812	26	-5.381391773	0.063882	0.998439386
ITPR1	0.270806	17	-4.393409032	0.041769	0.998439386
BIVM_BIVM_ERCC5	0.271485	5	-2.415613429	0.012285	0.998439386
HDAC9	0.27162	17	-4.385953994	0.041769	0.998439386
BCORL1	0.272568	11	-3.548068984	0.027027	0.998439386
FCGR3A	0.274258	11	3.535587337	0.027027	0.998439386
TOPBP1	0.275756	14	3.961164996	0.034398	0.998439386
KAT2B	0.275954	8	-3.015886862	0.019656	0.998439386
TNKS2	0.276891	7	-2.81913439	0.017199	0.998439386
PDGFRA	0.277052	14	-3.950493909	0.034398	0.998439386
ABCB1	0.278138	9	-3.180326598	0.022113	0.998439386
DPYSL4	0.27883	6	-2.602747896	0.014742	0.998439386
FBXO10	0.280187	10	-3.333907262	0.02457	0.998439386
PPM1D	0.281848	6	2.586464265	0.014742	0.998439386
ABCA3	0.283539	25	-5.134936803	0.061425	0.998439386
PARP2	0.283901	11	3.46537896	0.027027	0.998439386
FAM123B	0.284098	35	-5.988727698	0.085995	0.998439386
CALCR	0.284507	11	3.461018726	0.027027	0.998439386
GRM6	0.284685	16	-4.146181321	0.039312	0.998439386
TLN1	0.285252	15	4.014920141	0.036855	0.998439386
PFKFB2	0.286762	8	-2.948892376	0.019656	0.998439386
MLL2	0.287232	52	-7.08466733	0.127764	0.998439386
CASP8	0.288482	7	-2.752050033	0.017199	0.998439386
CDC25C	0.289806	5	-2.32532218	0.012285	0.998439386
PIK3C2G	0.293563	20	-4.52766193	0.04914	0.998439386
EP400	0.296196	23	4.810228261	0.056511	0.998439386
MCM3AP	0.298723	10	-3.208185424	0.02457	0.998439386
FGFR3	0.299072	12	3.502992836	0.029484	0.998439386
IRAK3	0.29955	9	3.042167602	0.022113	0.998439386
INPP4A	0.299583	5	-2.278709356	0.012285	0.998439386
TNFAIP3	0.300736	9	-3.034712884	0.022113	0.998439386
DUSP10	0.301479	5	-2.269789619	0.012285	0.998439386
STK32B	0.30283	8	-2.852364257	0.019656	0.998439386
CDKN1B	0.303021	7	2.670433597	0.017199	0.998439386
CAD	0.307561	19	-4.292574634	0.046683	0.998439386
ITGB4	0.307709	20	-4.397069366	0.04914	0.998439386
GRM3	0.309851	12	-3.425776678	0.029484	0.998439386
CDH2	0.31105	13	-3.552332546	0.031941	0.998439386
UMPS	0.313398	5	-2.214545283	0.012285	0.998439386
PDGFRB	0.314317	12	3.39430265	0.029484	0.998439386
ARID1A	0.315498	35	-5.61185924	0.085995	0.998439386
MYH11	0.316732	26	4.88250999	0.063882	0.998439386

FES	0.318511	10	-3.079590831	0.02457	0.998439386
FLT1	0.319026	11	-3.222397585	0.027027	0.998439386
TCF7L2	0.319188	36	5.640635441	0.088452	0.998439386
GRK5	0.320246	5	2.183427803	0.012285	0.998439386
EPHA5	0.322545	20	-4.264300597	0.04914	0.998439386
PALB2	0.322687	12	-3.33609858	0.029484	0.998439386
CHD5	0.324109	10	-3.044166744	0.02457	0.998439386
MARK4	0.325065	5	-2.161790808	0.012285	0.998439386
CYP3A5	0.325351	6	-2.363778994	0.014742	0.998439386
ABL1	0.327358	15	-3.679980133	0.036855	0.998439386
INSRR	0.328005	11	-3.163151826	0.027027	0.998439386
CYP1B1	0.328049	5	2.148497266	0.012285	0.998439386
PTPRJ	0.328194	17	3.900885478	0.041769	0.998439386
ZEB2	0.329663	7	-2.527357558	0.017199	0.998439386
MUC1	0.329982	7	-2.525690935	0.017199	0.998439386
VAV1	0.332414	5	2.129189729	0.012285	0.998439386
TTN	0.337227	263	-9.150633646	0.646192	0.998439386
EIF2AK1	0.339172	6	-2.297160994	0.014742	0.998439386
FH	0.339218	5	2.099422281	0.012285	0.998439386
HSP90AB1	0.340836	6	-2.289256335	0.014742	0.998439386
PTPN22	0.341257	9	-2.790815046	0.022113	0.998439386
ESR1	0.341702	12	-3.207427917	0.029484	0.998439386
LPHN2	0.345425	17	-3.764213447	0.041769	0.998439386
EXOC4	0.347034	8	-2.603151257	0.019656	0.998439386
BID	0.347355	6	-2.258534673	0.014742	0.998439386
KIF16B	0.349007	18	3.839737772	0.044226	0.998439386
BPTF	0.350435	25	-4.471008543	0.061425	0.998439386
ILK	0.35152	9	-2.732045604	0.022113	0.998439386
PPP2R1A	0.351587	11	-3.012377718	0.027027	0.998439386
ZMYM4	0.353885	8	-2.566395163	0.019656	0.998439386
PCDHB2	0.355927	12	-3.114143562	0.029484	0.998439386
KDM4C	0.356824	5	2.024125948	0.012285	0.998439386
PLD1	0.358779	10	2.833142061	0.02457	0.998439386
WNK1	0.358792	14	-3.335199064	0.034398	0.998439386
GRB10	0.358907	5	-2.015370592	0.012285	0.998439386
ETV4	0.359055	5	-2.014750848	0.012285	0.998439386
IKZF1	0.360618	8	2.530710276	0.019656	0.998439386
BIRC2	0.362544	6	-2.188348209	0.014742	0.998439386
BCAT1	0.363455	11	2.938922781	0.027027	0.998439386
TECTA	0.363487	29	-4.661870975	0.071253	0.998439386
FRMD7	0.364013	5	-1.99405476	0.012285	0.998439386
ERC1	0.364695	9	2.658180507	0.022113	0.998439386
SHC1	0.365285	8	2.506213493	0.019656	0.998439386
NRAS	0.365926	13	3.170488154	0.031941	0.998439386
SPTAN1	0.367571	14	-3.27472995	0.034398	0.998439386
MSN	0.369161	7	-2.328372814	0.017199	0.998439386

RBL1	0.370471	8	-2.479228955	0.019656	0.998439386
MTHFR	0.372928	7	2.310113051	0.017199	0.998439386
PDZRN4	0.373115	19	3.74693806	0.046683	0.998439386
DNMT1	0.373695	8	-2.462566866	0.019656	0.998439386
BAI3	0.373744	23	4.095831625	0.056511	0.998439386
SYK	0.373788	5	-1.953754576	0.012285	0.998439386
NLK	0.373812	7	2.305842297	0.017199	0.998439386
PTPN11	0.374602	7	-2.302031425	0.017199	0.998439386
TNKS	0.375512	13	-3.10759546	0.031941	0.998439386
BIVM_ERCC5_ERCC5	0.380156	11	-2.838047904	0.027027	0.998439386
PTPRG	0.380572	12	-2.95791952	0.029484	0.998439386
FGFR1	0.380877	5	-1.924939117	0.012285	0.998439386
TMPRSS2	0.380958	6	2.105680486	0.014742	0.998439386
CASK	0.382643	6	-2.098241112	0.014742	0.998439386
SLC22A2	0.383622	6	-2.093927613	0.014742	0.998439386
PTCH1	0.38493	13	-3.046765456	0.031941	0.998439386
NFKB1	0.385467	6	-2.085818611	0.014742	0.998439386
MEF2C	0.386085	5	-1.903974249	0.012285	0.998439386
CD33	0.388517	9	-2.528723916	0.022113	0.998439386
HUS1	0.389424	6	2.068499702	0.014742	0.998439386
DKK1	0.391634	5	1.881831064	0.012285	0.998439386
OR8G1	0.396413	6	-2.038173739	0.014742	0.998439386
PARP1	0.397429	8	-2.342560501	0.019656	0.998439386
TMEFF2	0.398005	6	-2.03131245	0.014742	0.998439386
EPHB6	0.39812	13	-2.963080073	0.031941	0.998439386
PIK3CB	0.398788	6	2.027943353	0.014742	0.998439386
TCF	0.399447	38	4.888847469	0.093366	0.998439386
MAP3K11	0.400233	9	-2.466831698	0.022113	0.998439386
HDLBP	0.402901	6	-2.010310807	0.014742	0.998439386
PLCG1	0.403117	10	-2.581139311	0.02457	0.998439386
BAZ1A	0.404069	9	2.446807867	0.022113	0.998439386
TEX14	0.404812	21	-3.674970248	0.051597	0.998439386
TRIM24	0.40551	9	-2.439315791	0.022113	0.998439386
d_meta	0.405866	158	8.077996877	0.388206	0.998439386
MN1	0.406046	7	-2.154209691	0.017199	0.998439386
CBLB	0.406578	13	2.910295121	0.031941	0.998439386
meta	0.407248	161	8.081216393	0.395577	0.998439386
ARAF	0.407279	8	2.294032608	0.019656	0.998439386
ELK3	0.408283	11	-2.674126664	0.027027	0.998439386
PLAU	0.408437	6	1.986750954	0.014742	0.998439386
VEGFC	0.409889	14	-2.995086161	0.034398	0.998439386
CNTRL	0.410354	28	-4.155432941	0.068796	0.998439386
PHOX2B	0.410407	5	-1.808284088	0.012285	0.998439386
PXN	0.410412	11	-2.66199756	0.027027	0.998439386
USP54	0.412542	17	3.269208166	0.041769	0.998439386
MAP3K2	0.413873	5	-1.794925045	0.012285	0.998439386

ADAMTS20	0.414981	31	4.312136585	0.076167	0.998439386
MAPK8IP3	0.416561	8	-2.248940051	0.019656	0.998439386
USP6NL	0.417335	8	2.245203919	0.019656	0.998439386
FANCB	0.420353	13	2.825706535	0.031941	0.998439386
ADH7	0.424198	5	-1.755522211	0.012285	0.998439386
GRM5	0.424821	11	2.580884317	0.027027	0.998439386
NEDD4L	0.427058	6	-1.908853923	0.014742	0.998439386
GEN1	0.427464	10	-2.449845179	0.02457	0.998439386
UVRAG	0.427643	7	-2.056620035	0.017199	0.998439386
ERN2	0.428121	11	-2.562531841	0.027027	0.998439386
HLA_A	0.429401	66	5.808589012	0.162162	0.998439386
EVC2	0.430234	18	-3.234063378	0.044226	0.998439386
ATP8B1	0.432037	6	-1.888362891	0.014742	0.998439386
MAP2K4	0.432793	8	-2.171478692	0.019656	0.998439386
WT1	0.434294	7	2.027149627	0.017199	0.998439386
CDH11	0.435208	20	3.363665312	0.04914	0.998439386
PRKDC	0.435614	36	4.414653025	0.088452	0.998439386
FASN	0.439094	19	-3.255020016	0.046683	0.998439386
KSR1	0.441849	9	2.255312446	0.022113	0.998439386
KDR	0.442417	14	-2.791664398	0.034398	0.998439386
PDGFA	0.442626	5	1.686561406	0.012285	0.998439386
ADORA2A	0.443221	7	1.987999492	0.017199	0.998439386
MAP4K4	0.443413	11	-2.478556371	0.027027	0.998439386
GPR81	0.443621	7	-1.986255882	0.017199	0.998439386
IRS4	0.444882	19	3.214006855	0.046683	0.998439386
RASA3	0.445096	7	-1.97983569	0.017199	0.998439386
DCLK3	0.446464	9	-2.232578888	0.022113	0.998439386
NEK8	0.447373	7	1.969945629	0.017199	0.998439386
NOTCH1	0.449161	30	3.943630571	0.07371	0.998439386
DLL1	0.449343	5	1.661835896	0.012285	0.998439386
LRRC7	0.449588	12	-2.550614358	0.029484	0.998439386
ZC3H12B	0.451011	6	1.811502108	0.014742	0.998439386
EPHA7	0.452291	16	-2.91279774	0.039312	0.998439386
RYK	0.452391	6	1.805983536	0.014742	0.998439386
ATG16L2	0.452498	8	-2.07967195	0.019656	0.998439386
GNAS	0.454362	33	-4.07252811	0.081081	0.998439386
PTPRT	0.45447	30	3.897612406	0.07371	0.998439386
BCR	0.455541	13	-2.616708784	0.031941	0.998439386
PLAG1	0.457772	5	1.631102386	0.012285	0.998439386
TBX22	0.461524	5	-1.617526291	0.012285	0.998439386
MYLK2	0.462625	5	-1.613554216	0.012285	0.998439386
WNT2B	0.465259	9	2.141351771	0.022113	0.998439386
ARAP3	0.465377	19	3.071167668	0.046683	0.998439386
MYST4	0.467876	16	-2.813351023	0.039312	0.998439386
NUAK2	0.469245	9	-2.122271823	0.022113	0.998439386
RB1CC1	0.47011	9	-2.11814165	0.022113	0.998439386

ZNF217	0.472023	12	-2.426098643	0.029484	0.998439386
NFATC3	0.473614	11	2.31740709	0.027027	0.998439386
SIRT1	0.475048	5	-1.569090326	0.012285	0.998439386
ZNF442	0.47552	7	-1.849968978	0.017199	0.998439386
TTBK2	0.476188	8	-1.972236198	0.019656	0.998439386
RECQL4	0.476261	21	-3.14238305	0.051597	0.998439386
MYCN	0.477744	5	1.559525639	0.012285	0.998439386
FGFR4	0.47946	9	-2.073777334	0.022113	0.998439386
ITK	0.480298	5	-1.550491677	0.012285	0.998439386
DGKZ	0.480742	8	-1.951925524	0.019656	0.998439386
OBSCN	0.481553	109	6.215131015	0.267813	0.998439386
KTN1	0.482954	12	-2.366619202	0.029484	0.998439386
ITGAL	0.483552	10	-2.162921269	0.02457	0.998439386
SPO11	0.484671	7	1.811810368	0.017199	0.998439386
TRIP11	0.484979	15	-2.623711302	0.036855	0.998439386
XPC	0.492882	6	-1.648075539	0.014742	0.998439386
PPP2R3A	0.493238	13	-2.402655071	0.031941	0.998439386
POLE	0.49707	23	-3.127105851	0.056511	0.998439386
CDC25B	0.497713	8	-1.877135886	0.019656	0.998439386
EXT2	0.499079	10	-2.08678667	0.02457	0.998439386
HAPLN1	0.501164	7	1.744010033	0.017199	0.998439386
CD248	0.503212	6	-1.608932381	0.014742	0.998439386
MRE11A	0.503817	9	-1.960363659	0.022113	0.998439386
MAGI2	0.504598	26	3.254072017	0.063882	0.998439386
IGFBP5	0.504675	6	-1.603422137	0.014742	0.998439386
NEIL3	0.504858	7	-1.728990024	0.017199	0.998439386
SLC6A18	0.506044	9	-1.950140652	0.022113	0.998439386
ODZ1	0.506615	41	3.986140549	0.100737	0.998439386
CDH20	0.509609	8	-1.825519852	0.019656	0.998439386
PLCH1	0.5112	16	-2.546065563	0.039312	0.998439386
TEK	0.513747	9	-1.914962503	0.022113	0.998439386
COL1A1	0.513956	20	-2.813533799	0.04914	0.998439386
BRIP1	0.515792	8	-1.798940933	0.019656	0.998439386
TSHR	0.517952	9	-1.895877869	0.022113	0.998439386
LIG3	0.520011	9	1.886561424	0.022113	0.998439386
PLAT	0.521875	10	-1.977244244	0.02457	0.998439386
PRRC2C	0.522082	23	-2.94766933	0.056511	0.998439386
GLI1	0.522579	12	-2.156851432	0.029484	0.998439386
USP7	0.522909	10	1.972339357	0.02457	0.998439386
ROCK2	0.523642	13	-2.236347653	0.031941	0.998439386
MAMDC4	0.523742	24	2.99516209	0.058968	0.998439386
APAF1	0.524397	17	-2.539720971	0.041769	0.998439386
NOS2	0.528019	11	2.040662666	0.027027	0.998439386
HSD17B2	0.528556	6	-1.514641542	0.014742	0.998439386
MSH2	0.53059	7	1.625901785	0.017199	0.998439386
CDK12	0.53132	10	-1.932587396	0.02457	0.998439386

STIL	0.531553	11	-2.023213453	0.027027	0.998439386
SMO	0.533034	9	-1.828065299	0.022113	0.998439386
CHEK2	0.534608	9	-1.821045854	0.022113	0.998439386
MAP3K6	0.534675	9	-1.820747697	0.022113	0.998439386
ALPK2	0.536455	22	-2.787621588	0.054054	0.998439386
PPARA	0.537008	6	1.483713545	0.014742	0.998439386
LTBP1	0.543284	21	2.681502387	0.051597	0.998439386
RPS6KA5	0.543314	8	1.682571591	0.019656	0.998439386
HECW2	0.543514	19	-2.555759094	0.046683	0.998439386
EPHA4	0.544043	12	2.046658699	0.029484	0.998439386
VEPH1	0.544271	9	1.778170769	0.022113	0.998439386
CD8A	0.544627	6	-1.456043005	0.014742	0.998439386
ASXL1	0.54485	21	2.67109293	0.051597	0.998439386
SLC6A2	0.545413	12	2.039704057	0.029484	0.998439386
ZNF831	0.545589	23	2.783022545	0.056511	0.998439386
RASA1	0.545793	11	1.953488165	0.027027	0.998439386
MAGI3	0.545875	9	1.771088626	0.022113	0.998439386
MST1R	0.547561	18	-2.465831258	0.044226	0.998439386
ALS2	0.547986	11	-1.942831771	0.027027	0.998439386
C10orf137	0.548773	9	-1.758325998	0.022113	0.998439386
ERCC2	0.549644	8	-1.656230089	0.019656	0.998439386
PDIA4	0.550492	10	1.843153414	0.02457	0.998439386
GAB2	0.550698	8	-1.651857591	0.019656	0.998439386
PIK3CD	0.551453	5	-1.308328384	0.012285	0.998439386
GRIN2A	0.556244	21	2.595812289	0.051597	0.998439386
ABCC3	0.557165	13	-2.05861438	0.031941	0.998439386
UBR4	0.558815	36	3.310353241	0.088452	0.998439386
CARD11	0.559888	18	2.390345015	0.044226	0.998439386
MOS	0.561423	14	-2.110613643	0.034398	0.998439386
BMPR1B	0.561465	12	1.958805946	0.029484	0.998439386
PIK3R1	0.561706	14	-2.109091507	0.034398	0.998439386
AKT1	0.564866	7	-1.492438527	0.017199	0.998439386
MMP16	0.569028	13	-1.996990931	0.031941	0.998439386
NIN	0.570637	21	-2.501777838	0.051597	0.998439386
RIPK4	0.570858	11	1.832906808	0.027027	0.998439386
ABCC4	0.571701	9	-1.658468234	0.022113	0.998439386
APEX1	0.573789	5	-1.235607983	0.012285	0.998439386
GATA1	0.576625	5	-1.226470303	0.012285	0.998439386
CSNK1G2	0.578408	5	1.220737918	0.012285	0.998439386
FBXW7	0.57856	38	-3.222969148	0.093366	0.998439386
EXOC2	0.580376	8	1.530390863	0.019656	0.998439386
PRKCE	0.584154	8	1.51514421	0.019656	0.998439386
TBK1	0.584797	5	-1.200264414	0.012285	0.998439386
POU1F1	0.585933	6	1.309214814	0.014742	0.998439386
NRK	0.586136	14	-1.978738	0.034398	0.998439386
EGFL6	0.586138	5	1.195979433	0.012285	0.998439386

XRCC5	0.586335	8	1.506358996	0.019656	0.998439386
CD14	0.589837	5	1.184187216	0.012285	0.998439386
NTRK1	0.590351	13	1.887735266	0.031941	0.998439386
BRD3	0.593965	5	-1.171065497	0.012285	0.998439386
RAF1	0.593971	6	1.28122101	0.014742	0.998439386
ARID3A	0.594318	7	-1.380850176	0.017199	0.998439386
MAP3K1	0.594351	13	1.867444857	0.031941	0.998439386
PTPRF	0.594353	13	1.867438769	0.031941	0.998439386
RB1	0.596006	7	1.374533322	0.017199	0.998439386
PMS2	0.600603	8	1.449276444	0.019656	0.998439386
JAK3	0.600797	28	2.641110562	0.068796	0.998439386
SLC4A4	0.601906	22	2.352371804	0.054054	0.998439386
TLR4	0.603503	8	1.437749141	0.019656	0.998439386
MECOM	0.603823	5	-1.139896531	0.012285	0.998439386
MYH9	0.604248	17	-2.067827388	0.041769	0.998439386
TOP2A	0.604252	13	-1.817491484	0.031941	0.998439386
TCF12	0.608448	6	-1.231227928	0.014742	0.998439386
CDC73	0.608574	6	1.230794495	0.014742	0.998439386
AXIN2	0.608642	26	2.496922868	0.063882	0.998439386
TRIM37	0.609139	6	-1.228854608	0.014742	0.998439386
COL11A1	0.609389	20	-2.2025226	0.04914	0.998439386
SPEG	0.609544	36	2.892014336	0.088452	0.998439386
MYC	0.610125	8	-1.411521861	0.019656	0.998439386
ITGA10	0.61056	11	-1.64691223	0.027027	0.998439386
PARK2	0.611396	9	1.489949606	0.022113	0.998439386
LRP1	0.612622	43	-3.103827367	0.105651	0.998439386
CNTN1	0.612746	14	-1.83959123	0.034398	0.998439386
E4F1	0.612764	9	1.484229474	0.022113	0.998439386
RGL2	0.613759	6	-1.213022208	0.014742	0.998439386
DDR2	0.615856	12	-1.692528687	0.029484	0.998439386
FPGT_TNNI3K_TNNI3K	0.616086	10	1.547958997	0.02457	0.998439386
KDM6A	0.616948	11	-1.61750629	0.027027	0.998439386
WHSC1	0.617238	10	-1.542905187	0.02457	0.998439386
BRD2	0.617573	13	-1.750852858	0.031941	0.998439386
MACF1	0.618539	52	-3.314762973	0.127764	0.998439386
NOS1	0.619201	17	-1.982772967	0.041769	0.998439386
EPHB2	0.619887	12	1.673228258	0.029484	0.998439386
MTMR3	0.620567	10	1.528329082	0.02457	0.998439386
IRF4	0.623116	5	-1.079548534	0.012285	0.998439386
DNAH8	0.623153	51	-3.244205173	0.125307	0.998439386
RAP1GDS1	0.623183	6	-1.180889193	0.014742	0.998439386
NR0B1	0.630391	7	1.24755119	0.017199	0.998439386
FPR3	0.630685	8	-1.330875947	0.019656	0.998439386
MAPT	0.631984	9	-1.404481119	0.022113	0.998439386
ERCC3	0.632784	7	-1.238827967	0.017199	0.998439386
DGKG	0.633122	12	1.610236475	0.029484	0.998439386

PTPRU	0.633435	13	-1.672323502	0.031941	0.998439386
SGK494	0.633527	7	1.236124061	0.017199	0.998439386
APOB	0.633606	64	-3.460342711	0.157248	0.998439386
RPS6KA1	0.633841	6	1.144796619	0.014742	0.998439386
MAS1L	0.633924	7	-1.234676773	0.017199	0.998439386
PTPRD	0.635169	25	-2.271855182	0.061425	0.998439386
MINK1	0.636097	7	-1.226772664	0.017199	0.998439386
RASGRF2	0.636768	12	1.592979533	0.029484	0.998439386
TRAF2	0.637339	13	-1.653124798	0.031941	0.998439386
MMP2	0.640971	12	-1.573143913	0.029484	0.998439386
LRRK2	0.641325	30	-2.427446279	0.07371	0.998439386
BAP1	0.641754	5	-1.022015493	0.012285	0.998439386
PAX7	0.641822	6	1.117941001	0.014742	0.998439386
SENP6	0.642591	11	-1.500760195	0.027027	0.998439386
NUMB	0.642593	6	-1.115354421	0.014742	0.998439386
REV3L	0.64339	27	-2.297713831	0.066339	0.998439386
FZD10	0.646948	7	-1.187478944	0.017199	0.998439386
ERN1	0.64861	9	-1.336322415	0.022113	0.998439386
TNFRSF11A	0.649301	9	-1.333503814	0.022113	0.998439386
TP53BP1	0.651378	10	-1.39496505	0.02457	0.998439386
MAP3K5	0.651543	6	1.085413523	0.014742	0.998439386
CA9	0.651817	6	-1.084500519	0.014742	0.998439386
TMPRSS6	0.652228	14	1.637920416	0.034398	0.998439386
FBXL6	0.655524	8	-1.234921785	0.019656	0.998439386
PAX6	0.656279	5	0.977660764	0.012285	0.998439386
P2RY10	0.658848	6	-1.061102913	0.014742	0.998439386
MICAL1	0.65894	11	1.427343223	0.027027	0.998439386
MLL4	0.660387	29	-2.254029995	0.071253	0.998439386
ESR2	0.661496	8	-1.212076252	0.019656	0.998439386
ITSN2	0.661502	20	-1.887387122	0.04914	0.998439386
SOCS1	0.661939	8	1.210386517	0.019656	0.998439386
UBASH3B	0.663888	7	-1.126667729	0.017199	0.998439386
ADA	0.664254	8	-1.201555494	0.019656	0.998439386
PAXIP1	0.664918	7	1.122989121	0.017199	0.998439386
MAPK7	0.665867	8	1.195407717	0.019656	0.998439386
ZAP70	0.66651	11	1.393602198	0.027027	0.998439386
MAP2K1	0.669373	5	-0.93801574	0.012285	0.998439386
PCM1	0.669666	28	2.153281706	0.068796	0.998439386
CHRNB4	0.670595	6	1.022235699	0.014742	0.998439386
TSC2	0.67231	28	2.134976877	0.068796	0.998439386
ARHGEF11	0.674438	16	1.62794353	0.039312	0.998439386
PTEN	0.674634	12	-1.416129201	0.029484	0.998439386
CBX4	0.674743	14	-1.525175348	0.034398	0.998439386
WNT4	0.675177	6	-1.007147311	0.014742	0.998439386
PTPRC	0.675945	20	-1.801877445	0.04914	0.998439386
DDX11	0.677012	11	1.347038873	0.027027	0.998439386

KEAP1	0.677036	5	0.914954644	0.012285	0.998439386
TPO	0.68048	17	1.642961405	0.041769	0.998439386
IQGAP1	0.680493	12	-1.389123226	0.029484	0.998439386
LPHN3	0.681043	24	-1.930921029	0.058968	0.998439386
ULK1	0.681235	20	1.770730836	0.04914	0.998439386
TGFB1	0.682069	8	1.133994208	0.019656	0.998439386
PKMYT1	0.682785	5	-0.897720121	0.012285	0.998439386
PFKFB3	0.683163	9	1.196899814	0.022113	0.998439386
STON2	0.683401	14	1.482215761	0.034398	0.998439386
MLLT6	0.685615	15	-1.520961463	0.036855	0.998439386
LGR5	0.685765	15	-1.520194327	0.036855	0.998439386
KIT	0.688411	16	-1.554107446	0.039312	0.998439386
PIK3C3	0.688514	7	-1.039347166	0.017199	0.998439386
CXorf30	0.690884	11	1.285954475	0.027027	0.998439386
CTNN	0.692766	37	-2.265106962	0.090909	0.998439386
FOXO1	0.693944	11	-1.272543086	0.027027	0.998439386
NF1	0.69583	15	-1.468895294	0.036855	0.998439386
STK36	0.697237	14	-1.413981843	0.034398	0.998439386
NUP214	0.697355	18	-1.594469227	0.044226	0.998439386
TLR2	0.701199	11	1.240831774	0.027027	0.998439386
ATG9B	0.70156	8	-1.060839631	0.019656	0.998439386
NUAK1	0.70207	9	1.121763778	0.022113	0.998439386
WRN	0.704964	10	-1.168914222	0.02457	0.998439386
CCNE1	0.705963	6	0.906755142	0.014742	0.998439386
NLRP5	0.706892	28	-1.898015514	0.068796	0.998439386
ADAM29	0.707165	19	1.580411759	0.046683	0.998439386
SMG1	0.708289	23	-1.72288242	0.056511	0.998439386
WWP2	0.710237	5	0.816161145	0.012285	0.998439386
NLRP1	0.712326	16	-1.429012181	0.039312	0.998439386
RFX2	0.715119	21	-1.610122284	0.051597	0.998439386
CCNA1	0.715899	5	0.799482941	0.012285	0.998439386
HNF1A	0.71754	8	-1.001412917	0.019656	0.998439386
BMPR2	0.717762	9	-1.059957334	0.022113	0.998439386
MDC1	0.718651	10	-1.112214563	0.02457	0.998439386
SMYD2	0.722143	6	0.854633188	0.014742	0.998439386
PTPN5	0.722196	10	1.097590676	0.02457	0.998439386
NIPBL	0.723683	18	1.449523251	0.044226	0.998439386
PTPN3	0.724281	14	-1.282017655	0.034398	0.998439386
MYH1	0.725363	27	1.743523364	0.066339	0.998439386
MSH4	0.72548	7	0.910414322	0.017199	0.998439386
POLQ	0.725593	30	1.828969106	0.07371	0.998439386
PARP4	0.726815	28	1.763410054	0.068796	0.998439386
KIAA0182	0.726874	11	-1.129537735	0.027027	0.998439386
ENPP2	0.7272	9	-1.023010711	0.022113	0.998439386
ATRX	0.727638	19	-1.465150163	0.046683	0.998439386
RFC1	0.727808	13	-1.220470264	0.031941	0.998439386

ALOX12B	0.730368	6	-0.828291753	0.014742	0.998439386
C9orf96	0.730953	9	-1.008364549	0.022113	0.998439386
EPHA10	0.731101	15	-1.29120472	0.036855	0.998439386
KCNH8	0.731819	12	1.156078219	0.029484	0.998439386
FOXM1	0.732385	5	0.751177213	0.012285	0.998439386
REV1	0.733714	11	-1.100116895	0.027027	0.998439386
HGF	0.733748	12	-1.147434495	0.029484	0.998439386
PGR	0.734308	15	1.275192883	0.036855	0.998439386
CHRNA3	0.735077	7	-0.877319553	0.017199	0.998439386
RELB	0.735752	7	0.874998703	0.017199	0.998439386
CHD8	0.737568	21	-1.478156419	0.051597	0.998439386
CCR3	0.739239	11	1.076420348	0.027027	0.998439386
FANCD2	0.740074	9	-0.972871267	0.022113	0.998439386
NTRK2	0.74151	6	-0.792765901	0.014742	0.998439386
FAM46A	0.741866	7	-0.853996704	0.017199	0.998439386
IRS1	0.742265	14	-1.195201422	0.034398	0.998439386
PRKCG	0.745452	8	0.898691759	0.019656	0.998439386
DIP2C	0.75181	11	1.022716723	0.027027	0.998439386
PRKAG2	0.754211	6	0.752478399	0.014742	0.998439386
GAB1	0.75426	7	0.81158786	0.017199	0.998439386
PTK2	0.756696	9	0.908552518	0.022113	0.998439386
ITGB2	0.756909	10	-0.955632583	0.02457	0.998439386
ZNF384	0.757137	7	-0.80177784	0.017199	0.998439386
TGFB3	0.757153	6	0.743178462	0.014742	0.998439386
wnt	0.758089	29	1.580004613	0.071253	0.998439386
ARHGAP26	0.760725	5	0.668961839	0.012285	0.998439386
ADAMTSL3	0.761135	36	1.721370448	0.088452	0.998439386
JAK2	0.76232	12	-1.020228454	0.029484	0.998439386
RIPK1	0.76513	8	0.827019326	0.019656	0.998439386
ROR1	0.765369	9	0.875168461	0.022113	0.998439386
CTNNA1	0.76548	8	0.825750294	0.019656	0.998439386
WNT10B	0.765934	8	0.824104523	0.019656	0.998439386
ATG2B	0.76694	25	-1.419142489	0.061425	0.998439386
CBL	0.767043	11	0.958011073	0.027027	0.998439386
HEYL	0.768442	5	-0.646740921	0.012285	0.998439386
HIF1A	0.771297	7	0.753647394	0.017199	0.998439386
MARK1	0.771562	12	0.979400215	0.029484	0.998439386
IGF1	0.771802	8	-0.802844612	0.019656	0.998439386
MLH3	0.772628	14	-1.050124627	0.034398	0.998439386
WNT2	0.774048	5	0.630642086	0.012285	0.998439386
LEF1	0.774056	6	-0.689946883	0.014742	0.998439386
TMEM161A	0.774869	9	0.838729984	0.022113	0.998439386
GRM8	0.775059	17	-1.140090083	0.041769	0.998439386
UBR5	0.775589	11	0.921879278	0.027027	0.998439386
SYNE1	0.775862	117	2.569676512	0.287469	0.998439386
ITPR3	0.776378	22	1.280853355	0.054054	0.998439386

ERCC6	0.77667	25	1.358242219	0.061425	0.998439386
GPC5	0.777088	10	-0.874048029	0.02457	0.998439386
ADCY1	0.777317	12	-0.954045812	0.029484	0.998439386
SIX4	0.777333	5	-0.621223084	0.012285	0.998439386
ABCC2	0.783668	24	1.289703194	0.058968	0.998439386
ERG	0.783823	5	-0.602646045	0.012285	0.998439386
USP34	0.78431	21	-1.207435732	0.051597	0.998439386
ETV6	0.785367	7	-0.70607825	0.017199	0.998439386
SETD2	0.786249	22	-1.222874335	0.054054	0.998439386
GSTP1	0.790484	6	0.638534551	0.014742	0.998439386
USP42	0.794365	17	1.039883498	0.041769	0.998439386
ITGA9	0.795402	7	0.672297185	0.017199	0.998439386
HEY2	0.79573	6	-0.622181387	0.014742	0.998439386
MET	0.79653	15	-0.968758466	0.036855	0.998439386
MYO1B	0.797886	10	-0.79059424	0.02457	0.998439386
PHLPP1	0.799427	9	0.745116555	0.022113	0.998439386
SORL1	0.800821	18	-1.034371741	0.044226	0.998439386
MAP3K14	0.801114	11	-0.814624042	0.027027	0.998439386
COL14A1	0.802124	27	-1.243735499	0.066339	0.998439386
ARHGAP29	0.80268	5	-0.548914395	0.012285	0.998439386
JAK1	0.804305	5	-0.544300575	0.012285	0.998439386
PAK1	0.805757	5	-0.540179801	0.012285	0.998439386
CDC42BPB	0.808778	12	0.816366248	0.029484	0.998439386
CA12	0.809061	6	-0.580746865	0.014742	0.998439386
STK33	0.810057	6	0.577658486	0.014742	0.998439386
PER1	0.810214	14	0.87280652	0.034398	0.998439386
ADHFE1	0.812183	11	0.768394958	0.027027	0.998439386
PAG1	0.812805	6	0.569143795	0.014742	0.998439386
IKBKE	0.813559	5	0.518066114	0.012285	0.998439386
MUC4	0.813825	200	-2.347767359	0.4914	0.998439386
MAP3K8	0.815263	6	0.561530495	0.014742	0.998439386
CIC	0.816225	9	0.68152271	0.022113	0.998439386
PIK3CG	0.816322	19	0.977180702	0.046683	0.998439386
PAK4	0.818102	7	-0.596290554	0.017199	0.998439386
NOTCH3	0.818478	29	-1.177357063	0.071253	0.998439386
NPY2R	0.819211	6	0.549316366	0.014742	0.998439386
RING1	0.819889	5	-0.500164963	0.012285	0.998439386
COL7A1	0.820903	37	-1.297841603	0.090909	0.998439386
F2RL2	0.820944	5	-0.497184757	0.012285	0.998439386
UBA1	0.821581	6	0.541992193	0.014742	0.998439386
USP28	0.824523	13	0.777540086	0.031941	0.998439386
MLL3	0.824549	40	-1.316132213	0.09828	0.998439386
ZEB1	0.824991	11	0.715099717	0.027027	0.998439386
HIP1	0.825262	10	-0.68160919	0.02457	0.998439386
PRKD1	0.825378	10	-0.681147815	0.02457	0.998439386
CDC7	0.8278	6	0.522792158	0.014742	0.998439386

DCC	0.828016	18	-0.890716216	0.044226	0.998439386
RFC5	0.829925	5	-0.471849507	0.012285	0.998439386
ANO1	0.830187	9	0.628907336	0.022113	0.998439386
EPHA6	0.831245	16	-0.825881813	0.039312	0.998439386
NLRP3	0.832347	11	-0.684578926	0.027027	0.998439386
KDM5C	0.832811	9	-0.619043362	0.022113	0.998439386
PAK7	0.835335	11	0.672199868	0.027027	0.998439386
RET	0.835885	16	-0.802840522	0.039312	0.998439386
FANCM	0.838371	22	-0.919809885	0.054054	0.998439386
TAL1	0.839109	6	-0.487967759	0.014742	0.998439386
TMEM132B	0.840018	18	-0.827671217	0.044226	0.998439386
FN1	0.840815	30	-1.046598997	0.07371	0.998439386
TRIM47	0.841851	9	0.585111538	0.022113	0.998439386
TIAM1	0.841893	28	1.006829213	0.068796	0.998439386
POLN	0.842444	6	-0.477716802	0.014742	0.998439386
MELK	0.844678	7	-0.507947609	0.017199	0.998439386
MAN1B1	0.844845	13	0.686256114	0.031941	0.998439386
IKBIP	0.845358	7	0.505694595	0.017199	0.998439386
SLC17A5	0.84761	7	-0.498236389	0.017199	0.998439386
N4BP2	0.847702	14	-0.697995384	0.034398	0.998439386
ETS1	0.848154	8	0.53004957	0.019656	0.998439386
PREX2	0.848355	21	0.843540271	0.051597	0.998439386
MGA	0.848393	22	0.862056703	0.054054	0.998439386
TGFB2	0.849537	5	-0.416735217	0.012285	0.998439386
JUNB	0.850126	6	-0.454138283	0.014742	0.998439386
PIK3CA	0.850202	52	-1.257279263	0.127764	0.998439386
HERC6	0.850325	11	-0.610236455	0.027027	0.998439386
LYN	0.851852	5	0.41024883	0.012285	0.998439386
CYP2C19	0.851932	7	0.483938931	0.017199	0.998439386
MUC16	0.852665	146	1.776354556	0.358722	0.998439386
PAX3	0.854524	9	-0.537672809	0.022113	0.998439386
RASGRF1	0.854635	16	0.710015908	0.039312	0.998439386
EGF	0.855324	12	0.615066536	0.029484	0.998439386
FANCA	0.856666	12	0.609296433	0.029484	0.998439386
ROBO2	0.857765	36	-1.014846319	0.088452	0.998439386
PFKFB4	0.85915	5	0.389819087	0.012285	0.998439386
NRG2	0.86061	8	0.486098678	0.019656	0.998439386
DYRK2	0.862746	6	0.415496763	0.014742	0.998439386
AKAP9	0.864885	28	0.85887312	0.068796	0.998439386
EPHB4	0.869818	8	0.453687744	0.019656	0.998439386
TAF1L	0.871243	38	-0.940388564	0.093366	0.998439386
AKT3	0.872033	5	-0.353838643	0.012285	0.998439386
MKRN3	0.8761	14	0.566659517	0.034398	0.998439386
RUNX1T1	0.876351	10	-0.480362908	0.02457	0.998439386
CDC42BPA	0.877242	17	0.616262886	0.041769	0.998439386
HSP90AA1	0.877243	8	0.427600394	0.019656	0.998439386

ROBO1	0.877847	27	-0.762818725	0.066339	0.998439386
ADAMTS18	0.878147	31	-0.811044113	0.076167	0.998439386
DDX10	0.88023	10	-0.46517982	0.02457	0.998439386
BLM	0.880745	20	0.6467084	0.04914	0.998439386
CLSPN	0.882786	21	-0.650413049	0.051597	0.998439386
EP300	0.882791	29	-0.756332907	0.071253	0.998439386
DIS3	0.884113	8	0.40349289	0.019656	0.998439386
IGFBP1	0.886329	6	-0.343564239	0.014742	0.998439386
CYP2D6	0.887725	13	0.495082563	0.031941	0.998439386
INHBA	0.887753	6	-0.339231502	0.014742	0.998439386
ARHGEF12	0.887783	16	0.546864233	0.039312	0.998439386
E2F1	0.889223	5	0.305975478	0.012285	0.998439386
ERBB4	0.889239	18	-0.570998892	0.044226	0.998439386
GAB3	0.889416	5	-0.305437686	0.012285	0.998439386
IGF1R	0.889718	11	0.448410123	0.027027	0.998439386
ADRA1A	0.890665	6	-0.33037499	0.014742	0.998439386
XRCC2	0.890754	6	-0.330104347	0.014742	0.998439386
RBL2	0.891174	11	-0.442451533	0.027027	0.998439386
AXIN1	0.891507	6	0.327815011	0.014742	0.998439386
PTPN13	0.891554	32	0.731784417	0.078624	0.998439386
JAG1	0.893755	13	-0.468332132	0.031941	0.998439386
MAPK8IP2	0.896951	10	-0.399839324	0.02457	0.998439386
TP63	0.898309	5	0.280734136	0.012285	0.998439386
TCF3	0.898577	13	-0.446955141	0.031941	0.998439386
BUB1	0.900962	8	-0.344497938	0.019656	0.998439386
SMC6	0.900998	6	-0.298981089	0.014742	0.998439386
ZMYM2	0.901771	8	-0.341669874	0.019656	0.998439386
MCPH1	0.902826	17	0.487103895	0.041769	0.998439386
UHRF1BP1L	0.90445	13	0.420945402	0.031941	0.998439386
NKD2	0.904576	10	0.370107332	0.02457	0.998439386
KNTC1	0.904799	33	0.651036693	0.081081	0.998439386
KSR2	0.906119	11	-0.381384641	0.027027	0.998439386
RAPGEF2	0.906187	13	-0.413258295	0.031941	0.998439386
MAGI1	0.90665	16	0.454454519	0.039312	0.998439386
SIK1	0.911833	12	0.373522774	0.029484	0.998439386
NTRK3	0.912501	10	-0.339238181	0.02457	0.998439386
PTPN1	0.912645	6	-0.26365919	0.014742	0.998439386
BAI1	0.913145	13	-0.382481743	0.031941	0.998439386
PIK3C2A	0.913792	18	0.44385553	0.044226	0.998439386
CTDP1	0.915986	8	0.29202648	0.019656	0.998439386
BCL11A	0.916457	6	0.252110382	0.014742	0.998439386
NMUR2	0.921057	5	0.217698977	0.012285	0.998439386
LRP1B	0.922037	72	-0.744737537	0.176904	0.998439386
MLL	0.922537	19	-0.409079506	0.046683	0.998439386
PAX5	0.923077	5	-0.212112522	0.012285	0.998439386
CDH5	0.924065	11	-0.308232419	0.027027	0.998439386

NOTCH2	0.924386	17	-0.378657201	0.041769	0.998439386
RGL1	0.924885	8	0.260997486	0.019656	0.998439386
MSH6	0.925826	19	-0.391655933	0.046683	0.998439386
TLR3	0.930474	7	0.226210973	0.017199	0.998439386
VRTN	0.931648	17	0.342195901	0.041769	0.998439386
PAK3	0.932617	5	-0.185738708	0.012285	0.998439386
PTK2B	0.933587	6	0.200281734	0.014742	0.998439386
ADAM17	0.933885	5	0.182234397	0.012285	0.998439386
SOS2	0.937614	8	0.216668687	0.019656	0.998439386
RALGAPA1	0.938773	9	-0.22525328	0.022113	0.998439386
ABL2	0.940582	7	-0.193257851	0.017199	0.998439386
SLCO1B3	0.940926	14	0.269334857	0.034398	0.998439386
LATS2	0.94166	18	0.300056754	0.044226	0.998439386
MPL	0.942202	6	0.174250318	0.014742	0.998439386
USP43	0.943161	6	0.171354216	0.014742	0.998439386
ADAM33	0.94436	9	0.204661851	0.022113	0.998439386
CRHR1	0.944395	7	-0.180835349	0.017199	0.998439386
PTCH2	0.945169	15	0.258400394	0.036855	0.998439386
CD22	0.946277	12	-0.227305946	0.029484	0.998439386
ABCA1	0.94633	18	0.275999091	0.044226	0.998439386
MERTK	0.946652	7	-0.173483902	0.017199	0.998439386
FURIN	0.947429	6	-0.158469089	0.014742	0.998439386
ETV1	0.947921	6	-0.156982049	0.014742	0.998439386
ALK	0.947936	14	0.237324353	0.034398	0.998439386
WNK2	0.949794	13	-0.220800188	0.031941	0.998439386
EPHB3	0.952279	11	0.193531237	0.027027	0.998439386
TYK2	0.952822	14	-0.215025897	0.034398	0.998439386
LDHB	0.953169	6	0.14114473	0.014742	0.998439386
SGK1	0.954203	5	0.126155301	0.012285	0.998439386
CSMD3	0.955339	57	-0.387579219	0.140049	0.998439386
HIPK2	0.958031	15	0.197720846	0.036855	0.998439386
SMARCA4	0.960089	13	0.175481285	0.031941	0.998439386
SMARC	0.960089	13	0.175481285	0.031941	0.998439386
RNF213	0.960979	37	0.280485171	0.090909	0.998439386
IKBKB	0.964225	8	0.124161148	0.019656	0.998439386
PHF14	0.965976	10	-0.131687223	0.02457	0.998439386
CHRNA5	0.967183	5	-0.090376637	0.012285	0.998439386
PES1	0.971501	14	0.129843455	0.034398	0.998439386
ETS2	0.971619	6	-0.085505625	0.014742	0.998439386
FER	0.975008	8	0.086723451	0.019656	0.998439386
LHCGR	0.985394	8	-0.050679695	0.019656	0.998439386
PHLPP2	0.986176	10	0.053490672	0.02457	0.998439386
TACR3	0.98696	9	-0.047930061	0.022113	0.998439386
USP5	0.987949	5	0.033180088	0.012285	0.998439386
PRKAG3	0.988262	9	0.043141703	0.022113	0.998439386
PIK3C2B	0.988891	15	0.052312911	0.036855	0.998439386

EPHA2	0.989061	16	0.053135373	0.039312	0.998439386
MAP2K7	0.990167	11	0.039853202	0.027027	0.998439386
TRIM36	0.990756	6	-0.027844102	0.014742	0.998439386
TRAF5	0.990807	5	-0.025310213	0.012285	0.998439386
EPHA3	0.991756	12	0.034854499	0.029484	0.998439386
BRCA2	0.995044	39	0.03646165	0.095823	0.998439386
PIK3R2	0.996404	6	0.010831766	0.014742	0.998439386
GUCY2F	0.997145	20	-0.01542473	0.04914	0.998439386
ITPR2	0.997355	23	0.015264931	0.056511	0.998439386
PTPN12	0.998439	7	-0.00507119	0.017199	0.998439386

Supplementary Table S13. Cochran-Mantel-Haenszel (CMH) trend test of the CTX-S scores by quartiles (4th, highest; 1st, lowest) for mutant forms of *APC* and *TP53* as well as primary tumor location

Cetuximab Sensitivity Scores		**WT *APC*** (n=156)	***APC* 1 mut w/o LOH** (n=129)	***APC* 2 mut/1 mut & LOH** (n=183)	**MUT *TP53*** (n=277)	**Left-sided** (n=276)
4th quartile		15 (10%)	**38 (29%)**	**65 (36%)**	**102 (37%)**	**91 (33%)**
3rd quartile		19 (12%)	38 (29%)	59 (32%)	86 (31%)	75 (27%)
2nd quartile		49 (31%)	34 (26%)	35 (19%)	61 (22%)	58 (21%)
1st quartile		**73 (47%)**	19 (15%)	24 (13%)	28 (10%)	52 (19%)
CMH test (nonzero correlation)	DF	1			1	1
	value	**72.8**			**105.6**	**30.5**
	p	**< 0.0001**			**< 0.0001**	**< 0.0001**

Note: MUT – mutant; WT – wild-type; *APC* 1 mut or 2 mut – one or two *APC* truncated mutations; LOH – Loss of heterozygosity.

Supplementary Table S14. Barnard's exact test on the frequency of "MUT *APC* + MUT *TP53*" (AP) by the MSI/MSS status in Moffitt (n=468) and TCGA (n=220) CRCs.

Note: Of 221 TCGA CRCs, 1 sample without MSI status information was excluded. **A** — *APC* truncating mutation; **P** — *TP53* mutation The significant *P* values are highlighted by yellow color. MUT — mutant.; **AP** — *APC* + *TP53* doubly-mutated tumors regardless of *RAS* mutations status.

A. Moffitt CRCs (n=468)

Table of Status by Mutation			
Status	**Mutation**		
Frequency Expected Cell Chi-Square Col Pct	**AP**	**Others**	**Total**
MSI_H	2 25.938 22.092 1.01	59 35.062 16.343 21.93	61
MSS	197 173.06 3.3111 98.99	210 233.94 2.4495 78.07	407
Total	199	269	468

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.4512
ASE (H0)	0.0679
Z	-6.6480
One-sided Pr <= Z	<.0001
Two-sided Pr >= |Z|	<.0001

B. TCGA CRCs (n=220)

Table of Status by Mutation			
Status	**Mutation**		
Frequency **Expected** **Cell Chi-Square** **Col Pct**	**AP**	**Others**	**Total**
MSI_H	1 11.2 9.2893 1.14	27 16.8 6.1929 20.45	28
MSS	87 76.8 1.3547 98.86	105 115.2 0.9031 79.55	192
Total	88	132	220

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.4174
ASE (H0)	0.0991
Z	-4.2119
One-sided Pr <= Z	0.0006
Two-sided Pr >= |Z|	0.0006

Supplementary Table S15. Barnard's exact test or Cochran-Mantel-Haenszel trend test on the frequencies of MSI and "MUT *APC* + MUT *TP53*" (*AP*) by the sidedness (Left vs Right) in Moffitt CRCs (n=464).

Note: Of 468 CRCs, 4 samples without tumor location information were excluded. **A** — *APC* truncating mutation; **P** — *TP53* mutation; K — *KRAS* mutation; **N** — *NRAS* mutation; **B** — *BRAF*(V600E). In all patients **AP** represents *APC* + *TP53* doubly-mutated tumors regardless of *RAS/RAF* mutation status; WT AP — *APC* + *TP53* doubly wild-type tumors; The significant *P* values are highlighted by yellow color.

A. All patients (Left vs. Right n=464)

A-1. MSI (n=464)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**MSI**	**Others**	**Total**
Left	12 35.89 15.902 19.67	261 237.11 2.4071 64.76	273
Right	49 25.11 22.73 80.33	142 165.89 3.4404 35.24	191
Total	61	403	464

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.2126
ASE (H0)	0.0319
Z	-6.6693
One-sided Pr <= Z	<.0001
Two-sided Pr >= |Z|	<.0001

A-2. “AP” vs. “A or P” vs. “wtAP” (n=464)

Table of position by Status				
position	Status			
Frequency Expected Cell Chi-Square Col Pct	AP	A or P	wtAP	Total
Left	134 115.32 3.0262 68.37	106 111.79 0.2998 55.79	33 45.892 3.6217 42.31	273
Right	62 80.681 4.3254 31.63	84 78.211 0.4285 44.21	45 32.108 5.1766 57.69	191
Total	196	190	78	464

Cochran-Mantel-Haenszel Statistics (Based on Table Scores)				
Statistic	Alternative Hypothesis	DF	Value	Prob
1	Nonzero Correlation	1	16.8332	<.0001

A-3. “AP” vs. others (n=464)

Table of position by Status			
position	Status		
Frequency Expected Cell Chi-Square Col Pct	AP	Others	Total
Left	134 115.32 3.0262 68.37	139 157.68 2.2132 51.87	273
Right	62 80.681 4.3254 31.63	129 110.32 3.1634 48.13	191
Total	196	268	464

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.1662
ASE (H0)	0.0466
Z	3.5677
One-sided Pr >= Z	0.0002
Two-sided Pr >= |Z|	0.0004

B. wtRAS patients (Left vs. Right n=262)

B-1. MSI (n=262)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**MSI**	**Others**	**Total**
Left	6 30.046 19.244 12.50	158 133.95 4.3164 73.83	164
Right	42 17.954 32.204 87.50	56 80.046 7.2234 26.17	98
Total	48	214	262

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.3920
ASE (H0)	0.0494
Z	-7.9365
One-sided Pr <= Z	<.0001
Two-sided Pr >= |Z|	<.0001

B-2. "AP" vs. "A or P" vs. "wtAP" (n=262)

Table of position by Status				
position	Status			
Frequency Expected Cell Chi-Square Col Pct	AP	A or P	wtAP	Total
Left	85 66.351 5.2415 80.19	56 60.718 0.3665 57.73	23 36.931 5.2552 38.98	164
Right	21 39.649 8.7715 19.81	41 36.282 0.6134 42.27	36 22.069 8.7944 61.02	98
Total	106	97	59	262

Cochran-Mantel-Haenszel Statistics (Based on Table Scores)				
Statistic	Alternative Hypothesis	DF	Value	Prob
1	Nonzero Correlation	1	28.8452	<.0001

B-3. "AP" vs. others (n=262)

Table of position by Status			
position	Status		
Frequency Expected Cell Chi-Square Col Pct	AP	Others	Total
Left	85 66.351 5.2415 80.19	79 97.649 3.5615 50.64	164
Right	21 39.649 8.7715 19.81	77 58.351 5.9601 49.36	98
Total	106	156	262

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.3040
ASE (H0)	0.0627
Z	4.8513
One-sided Pr >= Z	<.0001
Two-sided Pr >= |Z|	<.0001

C. wtRAS_RAF patients (Left vs. Right n=209)

C-1. MSI (n=209)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**MSI**	**Others**	**Total**
Left	2 9.3923 5.8182 15.38	149 141.61 0.3859 76.02	151
Right	11 3.6077 15.147 84.62	47 54.392 1.0047 23.98	58
Total	13	196	209

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.1764
ASE (H0)	0.0373
Z	-4.7282
One-sided Pr <= Z	<.0001
Two-sided Pr >= |Z|	<.0001

C-2. "AP" vs. "A or P" vs. "wtAP" (n=209)

Table of position by Status				
position	**Status**			
Frequency **Expected** **Cell Chi-Square** **Col Pct**	**AP**	**A or P**	**wtAP**	**Total**
Left	84 72.971 1.6669 83.17	48 53.464 0.5584 64.86	19 24.565 1.2605 55.88	151
Right	17 28.029 4.3396 16.83	26 20.536 1.4539 35.14	15 9.4354 3.2818 44.12	58
Total	101	74	34	209

Cochran-Mantel-Haenszel Statistics (Based on Table Scores)				
Statistic	**Alternative Hypothesis**	**DF**	**Value**	**Prob**
1	**Nonzero Correlation**	1	12.0390	0.0005

C-3. "AP" vs. others (n=209)

Table of position by Status			
position	**Status**		
Frequency **Expected** **Cell Chi-Square** **Col Pct**	**AP**	**Others**	**Total**
Left	84 72.971 1.6669 83.17	67 78.029 1.5588 62.04	151
Right	17 28.029 4.3396 16.83	41 29.971 4.0583 37.96	58
Total	101	108	209

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.2632
ASE (H0)	0.0772
Z	3.4093
One-sided Pr >= Z	0.0012
Two-sided Pr >= |Z|	0.0012

D. MSI vs. 6 MSS subgroups (Left vs. Right n=464)

Table of position by Status								
position	Status							
Frequency Expected Cell Chi-Square Col Pct	MSI	APKN	AK_PK	KN_BRAF	AP	A_ P	wtAP	Total
Left	12 35.89 15.902 19.67	48 52.364 0.3637 53.93	46 50.011 0.3217 54.12	18 19.416 0.1033 54.55	84 59.425 10.163 83.17	46 39.42 1.0982 68.66	19 16.474 0.3873 67.86	273
Right	49 25.11 22.73 80.33	41 36.636 0.5199 46.07	39 34.989 0.4598 45.88	15 13.584 0.1476 45.45	17 41.575 14.527 16.83	21 27.58 1.5697 31.34	9 11.526 0.5535 32.14	191
Total	61	89	85	33	101	67	28	464

Cochran-Mantel-Haenszel Statistics (Based on Table Scores)				
Statistic	Alternative Hypothesis	DF	Value	Prob
1	Nonzero Correlation	1	43.9853	<.0001

E. Stage IV patients (Left vs. Right n=107)

E-1. MSI (n=107)

Table of position by Status			
position	Status		
Frequency Expected Cell Chi-Square Col Pct	MSI	Others	Total
Left	2 3.5327 0.665 33.33	61 59.467 0.0395 60.40	63
Right	4 2.4673 0.9521 66.67	40 41.533 0.0566 39.60	44
Total	6	101	107

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.0592
ASE (H0)	0.0452
Z	-1.3089
One-sided Pr <= Z	0.1204
Two-sided Pr >= |Z|	0.2116

E-2. “AP” vs. others (n=107)

Table of position by Status			
position	Status		
Frequency Expected Cell Chi-Square Col Pct	AP	Others	Total
Left	33 29.439 0.4307 66.00	30 33.561 0.3778 52.63	63
Right	17 20.561 0.6167 34.00	27 23.439 0.5409 47.37	44
Total	50	57	107

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.1374
ASE (H0)	0.0980
Z	1.4022
One-sided Pr >= Z	0.1028
Two-sided Pr >= |Z|	0.1921

Supplementary Table S16. Cochran-Mantel-Haenszel test or Barnard test on the frequencies of MSI and "mut*APC* + mut*TP53*" (AP) by the sidedness (Left vs Right) in TCGA CRCs (n=217).

Note: Of 221 CRCs, 3 samples without tumor location information and 1 sample with MSI status information were excluded. A — *APC* truncating mutation; P — *TP53* mutation; K — *KRAS* mutation; N — *NRAS* mutation; B — *BRAF*(V600E). **AP** represents APC + TP53 doubly-mutated tumors regardless of RAS/RAF mutation status; WT AP — APC + TP53 doubly wild-type tumors; The significant *P* values are highlighted by yellow color.

A. All patients (Left vs. Right n=217)

A-1. MSI (n=217)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**MSI**	**others**	**Total**
Left	1 17.419 15.477 3.70	139 122.58 2.1993 73.16	140
Right	26 9.5806 28.14 96.30	51 67.419 3.9988 26.84	77
Total	27	190	217

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.3305
ASE (H0)	0.0468
Z	-7.0579
One-sided Pr <= Z	<.0001
Two-sided Pr >= |Z|	<.0001

A-2. “AP” vs. others (n=217)

Table of position by Status			
position	Status		
Frequency Expected Cell Chi-Square Col Pct	AP	Others	Total
Left	73 56.129 5.071 83.91	67 83.871 3.3937 51.54	140
Right	14 30.871 9.22 16.09	63 46.129 6.1703 48.46	77
Total	87	130	217

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.3396
ASE (H0)	0.0695
Z	4.8841
One-sided Pr >= Z	<.0001
Two-sided Pr >= |Z|	<.0001

B. wtRAS patients (Left vs. Right n=111)

B-1. MSI (n=111)

Table of position by Status			
position	Status		
Frequency Expected Cell Chi-Square Col Pct	MSI	Others	Total
Left	0 13.333 13.333 0.00	74 60.667 2.9304 81.32	74
Right	20 6.6667 26.667 100.00	17 30.333 5.8608 18.68	37
Total	20	91	111

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.5405
ASE (H0)	0.0774
Z	-6.9851
One-sided Pr <= Z	<.0001
Two-sided Pr >= |Z|	<.0001

B-2. “AP” vs. others (n=111)

Table of position by Status			
position	Status		
Frequency Expected Cell Chi-Square Col Pct	AP	Others	Total
Left	42 32 3.125 87.50	32 42 2.381 50.79	74
Right	6 16 6.25 12.50	31 21 4.7619 49.21	37
Total	48	63	111

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.4054
ASE (H0)	0.0997
Z	4.0642
One-sided Pr >= Z	<.0001
Two-sided Pr >= |Z|	<.0001

C. wtRAS_RAF patients (Left vs. Right n=93)

C-1. MSI (n=93)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**MSI**	**Others**	**Total**
Left	0 5.4194 5.4194 0.00	72 66.581 0.4411 83.72	72
Right	7 1.5806 18.581 100.00	14 19.419 1.5124 16.28	21
Total	7	86	93

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.3333
ASE (H0)	0.0654
Z	-5.0945
One-sided Pr <= Z	<.0001
Two-sided Pr >= |Z|	<.0001

C-2. “AP” vs. others (n=93)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**AP**	**Others**	**Total**
Left	42 36.387 0.8658 89.36	30 35.613 0.8846 65.22	72
Right	5 10.613 2.9685 10.64	16 10.387 3.0331 34.78	21
Total	47	46	93

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.3452
ASE (H0)	0.1240
Z	2.7843
One-sided Pr >= Z	0.0062
Two-sided Pr >= |Z|	0.0062

D. MSI vs. 4 MSS subgroups (Left vs. Right n=217)

Table of position by Status						
position	Status					
Frequency Expected Cell Chi-Square Col Pct	MSI	MSS_APKN	MSS_mRAS_RAF_other	MSS_AP	MSS_wRAS_RAF_other	Total
Left	1 17.419 15.477 3.70	30 25.161 0.9305 76.92	37 41.935 0.5809 56.92	42 30.323 4.497 89.36	30 25.161 0.9305 76.92	140
Right	26 9.5806 28.14 96.30	9 13.839 1.6919 23.08	28 23.065 1.0561 43.08	5 16.677 8.1765 10.64	9 13.839 1.6919 23.08	77
Total	27	39	65	47	39	217

Cochran-Mantel-Haenszel Statistics (Based on Table Scores)				
Statistic	Alternative Hypothesis	DF	Value	Prob
1	Nonzero Correlation	1	30.6748	<.0001

Supplementary Table S17. Distribution of *APC/TP53/KRAS/NRAS/BRAF* subgroups by CTX-S Quartiles (left vs. right) in Moffitt CRCs (n=464)

Note: The quartiles with higher scores (Q3 and Q4) are predicted to be more responsive to CTX. A — *APC* truncating mutation; P — *TP53* mutation; K — *KRAS* mutation; N — *NRAS* mutation; MUT *BRAF* — all *BRAF*-mutated tumors. K* — K or N. WT — wild type for all A/P/K*/B

Note: **A-C.** 2-sided p-values for the chi-square goodness-of-fit tests; R denotes that the Q2 or Q1 probability is more than expected, rather than Q4 or Q3. **D, E**. Cochran-Mantel-Haenszel test.

A. Left vs. Right

		Left		Right			
Subgroups	N	n	%	n	%	p_2-SIDED	Reverse Direction
AP	101	84	83%	17	17%	0.000002	
APK*	90	49	54%	41	46%	0.578	R
A	37	26	70%	11	30%	0.21	
P	37	22	59%	15	41%	1	
AK*	73	40	55%	33	45%	0.5572	R
PK*	20	10	50%	10	50%	0.5598	R
WT	34	19	56%	15	44%	0.853	R
K*	19	10	53%	9	47%	0.743	R
MUT BRAF	53	13	25%	40	75%	0.000002	R
Total	464	273	59%	191	41%		

B. Left-sided tumors (n=273) Q4 or Q3 vs. Q2 or Q1

Subgroups	N	Q4 (highest)		Q3		Q2		Q1 (lowest)		Q4 or Q3		Q2 or Q1			
		n	%	n	%	n	%	n	%	n	%	n	%	p_2-SIDED	Reverse Direction
AP	84	52	62%	25	30%	5	6%	2	2%	77	92%	7	8%	0.000002	
APK*	49	18	37%	19	39%	10	20%	2	4%	37	76%	12	24%	0.0004	
A	26	8	31%	9	35%	2	8%	6	23%	17	65%	8	31%	0.0756	
P	22	9	41%	6	27%	5	23%	2	9%	15	68%	7	32%	0.1338	
AK*	40	0	0%	11	28%	17	43%	12	30%	11	28%	29	73%	0.0064	R
PK*	10	1	10%	0	0%	8	80%	1	10%	1	10%	9	90%	0.0214	R
WT	19	1	5%	1	5%	3	16%	15	79%	2	11%	18	95%	0.0008	R
K*	10	0	0%	1	10%	3	30%	6	60%	1	10%	9	90%	0.0214	R
MUT BRAF	13	0	0%	0	0%	6	46%	7	54%	0	0%	13	100%	0.0002	R
Total	273	89	47%	72	38%	59	31%	53	28%	161	59%	112	41%	0.0036	

C. Right-sided tumors (n=191) Q4 or Q3 vs. Q2 or Q1

Subgroups	N	Q4 (highest)		Q3		Q2		Q1 (lowest)		Q4 or Q3		Q2 or Q1			
		n	%	n	%	n	%	n	%	n	%	n	%	p_2-SIDED	Reverse Direction
AP	17	8	47%	6	35%	1	6%	2	0	14	82%	3	18%	0.0126	
APK*	41	11	27%	19	46%	10	24%	1	0	30	73%	11	27%	0.0044	
A	11	1	9%	3	27%	5	45%	2	0	4	36%	7	64%	0.5488	R
P	15	1	7%	4	27%	8	53%	2	0	5	33%	10	67%	0.3018	R
AK*	33	4	12%	4	12%	14	42%	11	0	8	24%	25	76%	0.0046	R
PK*	10	1	10%	5	50%	2	20%	2	0	6	60%	4	40%	0.754	
WT	15	0	0%	1	7%	1	7%	13	1	1	7%	14	93%	0.001	R
K*	9	0	0%	0	0%	7	78%	2	0	0	0%	9	100%	0.0038	R
MUT BRAF	40	0	0%	1	3%	10	25%	29	1	1	3%	39	98%	0.000002	R
Total	191	26	14%	43	23%	58	30%	64	34%	69	36%	122	64%	0.0002	R

D. Left-sided tumors (n=273) CMH test

WT RAS_RAF		Q4 (highest)		Q3		Q2		Q1 (lowest)		CMH chi-square for trend	p-value
Subgroups	N	n	%	n	%	n	%	n	%		
AP	84	52	62%	25	30%	5	6%	2	2%		
A_P_WT	67	18	27%	16	24%	10	15%	23	34%	35.22	<.0001
Total	151	70	46%	41	27%	15	10%	25	17%		
MUT RAS_RAF		Q4 (highest)		Q3		Q2		Q1 (lowest)			
Subgroups	N	n	%	n	%	n	%	n	%		
APK*	49	18	37%	19	39%	10	20%	2	4%	45.44	<.0001
AK*_PK*_K*_BRAF	73	1	1%	12	16%	34	47%	26	36%		
Total	113	1	1%	23	20%	51	45%	38	34%		
AP vs APK*		Q4 (highest)		Q3		Q2		Q1 (lowest)			
Subgroups	N	n	%	n	%	n	%	n	%		
AP	84	52	62%	25	30%	5	6%	2	2%	8.96	0.0028
APK*	49	18	37%	19	39%	10	20%	2	4%		
Total	133	70	53%	44	33%	15	11%	4	3%		

E. Right-sided tumors (n=191) CMH test

WT RAS_RAF		Q4 (highest)		Q3		Q2		Q1 (lowest)		CMH chi-square for trend	p-value
Subgroups	N	n	%	n	%	n	%	n	%		
AP	17	8	47%	6	35%	1	6%	2	12%	16.71	<.0001
A_P_WT	41	2	5%	8	20%	14	34%	17	41%		
Total	58	10	17%	14	24%	15	26%	19	33%		
MUT RAS_RAF		Q4 (highest)		Q3		Q2		Q1 (lowest)			
Subgroups	N	n	%	n	%	n	%	n	%		
APK*	41	11	27%	19	46%	10	24%	1	2%	42.06	<.0001
AK*_PK*_K*_BRAF	92	5	5%	10	11%	33	36%	44	48%		
Total	125	9	7%	14	11%	47	38%	55	44%		
AP vs APK*		Q4 (highest)		Q3		Q2		Q1 (lowest)			
Subgroups	N	n	%	n	%	n	%	n	%		
AP	17	8	47%	6	35%	1	6%	2	12%		
APK*	41	11	27%	19	46%	10	24%	1	2%	0.66	0.4169
Total	58	19	33%	25	43%	11	19%	3	5%		

Supplementary Table S18. Barnard's Exact Test on the frequencies of single driver genes (*APC, TP53, KRAS/NRAS*, or *BRAF*) by the sidedness (Left vs Right) in Moffitt CRCs (n=464).

Note: Of 468 CRCs, 4 samples without tumor location information were excluded. mAPC — *APC* truncating mutation; TP53 — *TP53* mutation; mRAS — *KRAS/NRAS* mutation; m*BRAF* — *BRAF*(V600E). The significant *P* values are highlighted by yellow color.

A. mut*APC*

A-1. All patients (Left vs. Right n=464)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**mAPC**	**others**	**Total**
Left	200 181.8 1.8212 64.72	73 91.196 3.6306 47.10	273
Right	109 127.2 2.6031 35.28	82 63.804 5.1893 52.90	191
Total	309	155	464

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.1619
ASE (H0)	0.0445
Z	3.6393
One-sided Pr >= Z	0.0002
Two-sided Pr >= |Z|	0.0003

A-2. MSS patients (Left vs. Right n=403)

Table of position by Status			
position	**Status**		
Frequency **Expected** **Cell Chi-Square** **Col Pct**	**mAPC**	**others**	**Total**
Left	193 189.76 0.0553 65.87	68 71.241 0.1474 61.82	261
Right	100 103.24 0.1017 34.13	42 38.759 0.271 38.18	142
Total	293	110	403

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.0352
ASE (H0)	0.0465
Z	0.7586
One-sided Pr >= Z	0.2388
Two-sided Pr >= |Z|	0.4645

A-3. Stage IV patients (107)

Table of position by Status			
position	**Status**		
Frequency **Expected** **Cell Chi-Square** **Col Pct**	**mAPC**	**others**	**Total**
Left	43 43.57 0.0075 58.11	20 19.43 0.0167 60.61	63
Right	31 30.43 0.0107 41.89	13 13.57 0.024 39.39	44
Total	74	33	107

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.0220
ASE (H0)	0.0907
Z	-0.2425
One-sided Pr <= Z	0.4554
Two-sided Pr >= |Z|	0.9083

B. mut*TP53*

B-1. All patients (Left vs. Right n=464)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**mTP53**	**others**	**Total**
Left	174 160.62 1.1141 63.74	99 112.38 1.5924 51.83	273
Right	99 112.38 1.5924 36.26	92 78.623 2.276 48.17	191
Total	273	191	464

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.1190
ASE (H0)	0.0464
Z	2.5642
One-sided Pr >= Z	0.0062
Two-sided Pr >= |Z|	0.0105

B-2. MSS patients (Left vs. Right n=403)

Table of position by Status			
position	Status		
Frequency Expected Cell Chi-Square Col Pct	mTP53	others	Total
Left	170 166.44 0.076 66.15	91 94.556 0.1337 62.33	261
Right	87 90.556 0.1396 33.85	55 51.444 0.2458 37.67	142
Total	257	146	403

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.0387
ASE (H0)	0.0501
Z	0.7714
One-sided Pr >= Z	0.2300
Two-sided Pr >= |Z|	0.4490

B-3. Stage IV patients (107)

Table of position by Status			
position	Status		
Frequency Expected Cell Chi-Square Col Pct	mTP53	others	Total
Left	42 38.271 0.3633 64.62	21 24.729 0.5623 50.00	63
Right	23 26.729 0.5202 35.38	21 17.271 0.8051 50.00	44
Total	65	42	107

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.1439
ASE (H0)	0.0959
Z	1.5003
One-sided Pr >= Z	0.0759
Two-sided Pr >= |Z|	0.1381

C. mut*KRAS/NRAS*

C-1. All patients (Left vs. Right n=464)

Table of position by Status			
position	**Status**		
Frequency **Expected** **Cell Chi-Square** **Col Pct**	**mRAS**	**others**	**Total**
Left	109 118.85 0.8162 53.96	164 154.15 0.6293 62.60	273
Right	93 83.151 1.1666 46.04	98 107.85 0.8995 37.40	191
Total	202	262	464

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.0876
ASE (H0)	0.0468
Z	-1.8739
One-sided Pr <= Z	0.0324
Two-sided Pr >= |Z|	0.0623

C-2. MSS patients (Left vs. Right n=403)

Table of position by Status			
position	**Status**		
Frequency **Expected** **Cell Chi-Square** **Col Pct**	**mRAS**	**others**	**Total**
Left	104 123.7 3.1373 54.45	157 137.3 2.8265 74.06	261
Right	87 67.3 5.7664 45.55	55 74.7 5.1952 25.94	142
Total	191	212	403

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.2142
ASE (H0)	0.0521
Z	-4.1140
One-sided Pr <= Z	<.0001
Two-sided Pr >= |Z|	<.0001

C-3. Stage IV patients (107)

Table of position by Status			
position	**Status**		
Frequency **Expected** **Cell Chi-Square** **Col Pct**	**mRAS**	**others**	**Total**
Left	27 31.794 0.723 50.00	36 31.206 0.7366 67.92	63
Right	27 22.206 1.0352 50.00	17 21.794 1.0547 32.08	44
Total	54	53	107

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.1851
ASE (H0)	0.0982
Z	-1.8840
One-sided Pr <= Z	0.0415
Two-sided Pr >= |Z|	0.0689

D. mut*BRAF*

D-1. All patients (Left vs. Right n=464)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**mBRAF**	**others**	**Total**
Left	13 31.183 10.603 24.53	260 241.82 1.3673 63.26	273
Right	40 21.817 15.155 75.47	151 169.18 1.9543 36.74	191
Total	53	411	464

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.1618
ASE (H0)	0.0300
Z	-5.3925
One-sided Pr <= Z	<.0001
Two-sided Pr >= |Z|	<.0001

D-2. MSS patients (Left vs. Right n=403)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**mBRAF**	**others**	**Total**
Left	9 11.658 0.6058 50.00	252 249.34 0.0283 65.45	261
Right	9 6.3424 1.1136 50.00	133 135.66 0.0521 34.55	142
Total	18	385	403

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.0289
ASE (H0)	0.0215
Z	-1.3416
One-sided Pr <= Z	0.1627
Two-sided Pr >= |Z|	0.1942

D-3. Stage IV patients (107)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**mBRAF**	**others**	**Total**
Left	3 5.8879 1.4164 30.00	60 57.112 0.146 61.86	63
Right	7 4.1121 2.0281 70.00	37 39.888 0.2091 38.14	44
Total	10	97	107

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.1115
ASE (H0)	0.0572
Z	-1.9493
One-sided Pr <= Z	0.0319
Two-sided Pr >= |Z|	0.0548

Supplementary Table S19. Cochran-Mantel-Haenszel test or Barnard test on the frequencies of single driver genes (*APC, TP53, KRAS/NRAS*, or *BRAF*) by the sidedness (Left vs Right) in TCGA CRCs (n=217).

Note: Of 221 CRCs, 3 samples without tumor location information and 1 sample without MSI status information were excluded. mAPC — APC truncating mutation; TP53 — TP53 mutation; mRAS — KRAS/NRAS mutation; mBRAF — BRAF(V600E). The significant *P* values are highlighted by yellow color.

A. mut*APC*

A-1. All patients (Left vs. Right n=217)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**mAPC**	**others**	**Total**
Left	113 101.29 1.3537 71.97	27 38.71 3.5422 45.00	140
Right	44 55.71 2.4613 28.03	33 21.29 6.4403 55.00	77
Total	157	60	217

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.2357
ASE (H0)	0.0635
Z	3.7145
One-sided Pr >= Z	0.0001
Two-sided Pr >= |Z|	0.0002

A-2. MSS patients (Left vs. Right n=190)

Table of position by Status			
position	Status		
Frequency Expected Cell Chi-Square Col Pct	mAPC	others	Total
Left	112 109.01 0.0823 75.17	27 29.995 0.299 65.85	139
Right	37 39.995 0.2242 24.83	14 11.005 0.8149 34.15	51
Total	149	41	190

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.0803
ASE (H0)	0.0673
Z	1.1918
One-sided Pr >= Z	0.1409
Two-sided Pr >= |Z|	0.2679

B. mut*TP53*

B-1. All patients (Left vs. Right n=217)

Table of position by Status			
position	Status		
Frequency Expected Cell Chi-Square Col Pct	mTP53	others	Total
Left	90 75.484 2.7916 76.92	50 64.516 3.2661 50.00	140
Right	27 41.516 5.0756 23.08	50 35.484 5.9384 50.00	77
Total	117	100	217

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.2922
ASE (H0)	0.0707
Z	4.1318
One-sided Pr >= Z	<.0001
Two-sided Pr >= |Z|	<.0001

B-2. MSS patients (Left vs. Right n=190)

Table of position by Status			
position	Status		
Frequency Expected Cell Chi-Square Col Pct	mTP53	others	Total
Left	89 81.937 0.6089 79.46	50 57.063 0.8743 64.10	139
Right	23 30.063 1.6594 20.54	28 20.937 2.3828 35.90	51
Total	112	78	190

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	0.1893
ASE (H0)	0.0805
Z	2.3506
One-sided Pr >= Z	0.0134
Two-sided Pr >= |Z|	0.0201

C. mut*KRAS/NRAS*

C-1. All patients (Left vs. Right n=217)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**mRAS**	**others**	**Total**
Left	68 69.032 0.0154 63.55	72 70.968 0.015 65.45	140
Right	39 37.968 0.0281 36.45	38 39.032 0.0273 34.55	77
Total	107	110	217

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.0208
ASE (H0)	0.0709
Z	-0.2929
One-sided Pr <= Z	0.4170
Two-sided Pr >= |Z|	0.7996

C-2. MSS patients (Left vs. Right n=190)

Table of position by Status			
position	**Status**		
Frequency Expected Cell Chi-Square Col Pct	**mRAS**	**others**	**Total**
Left	65 72.426 0.7615 65.66	74 66.574 0.8284 81.32	139
Right	34 26.574 2.0754 34.34	17 24.426 2.2578 18.68	51
Total	99	91	190

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.1990
ASE (H0)	0.0818
Z	-2.4337
One-sided Pr <= Z	0.0105
Two-sided Pr >= |Z|	0.0152

D. mut*BRAF*

D-1. All patients (Left vs. Right n=217)

Table of position by Status			
position	**Status**		
Frequency **Expected** **Cell Chi-Square** **Col Pct**	**mBRAF**	**others**	**Total**
Left	2 12.258 8.5844 10.53	138 127.74 0.8238 69.70	140
Right	17 6.7419 15.608 89.47	60 70.258 1.4977 30.30	77
Total	19	198	217

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.2065
ASE (H0)	0.0401
Z	-5.1492
One-sided Pr <= Z	<.0001
Two-sided Pr >= |Z|	<.0001

D-2. MSS patients (Left vs. Right n=190)

Table of position by Status			
position	**Status**		
Frequency **Expected** **Cell Chi-Square** **Col Pct**	**mBRAF**	**others**	**Total**
Left	2 3.6579 0.7514 40.00	137 135.34 0.0203 74.05	139
Right	3 1.3421 2.048 60.00	48 49.658 0.0554 25.95	51
Total	5	185	190

Barnard's Exact Test Proportion (Risk) Difference	
H0: P1 - P2 = 0	
Proportion Difference	-0.0444
ASE (H0)	0.0262
Z	-1.6956
One-sided Pr <= Z	0.0653
Two-sided Pr >= |Z|	0.0949

Supplementary Table S20. Frequencies (and percentages) of right-sided tumors, stages, distant metastasis, and histotypes

							Stages**						Histotypes			
		Age***	Right*		d_Mets		I-II		III		IV		AD_muc		AD_NOS	
Group	N	Median	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MSI	61	76	49↑↑↑	80	7↓↓	11	40↑↑	65	15	25	6↓	10	9	15	52	85
APK*	91	65↓↓↓	41	46	45↑	49	24↓	27	41↑	45	25	28	4	4	87	96
AK* or PK*	85	67↓↓	39	46	33	39	38	44	23	27	24	29	10	11	75	89
K* or MUT BRAF	33	66	15	45	16	48	11	33	10	30	12	36	6	18	27	82
AP	102	60↓↓↓	17↓↓↓	17	38	37	40	38	35	35	27	27	3↓	3	99	97
A or P	68	68↓	21	31	18	26	36	52	23	35	9	14	4	6	64	94
WT AP	28	65↓↓	9	32	8	29	14	50	7	25	7	25	9↑↑↑	32	19	68
Total	468	66	191	41	165	35	198	43	154	33	110	24	45	10	423	90

Note:

A = *APC* mutation; **P** = *TP53* mutation; **K** = *KRAS* mutation; **N** = *NRAS* mutation; K* = K or N; (e.g. ***AP*** = *APC* mutation + *TP53* mutation; ***APK**** = *APC* mutation + *TP53* mutation + *KRAS/NRAS* mutation). WT *AP* = WT *APC* + WT *TP53*. MUT BRAF = all MSS BRAF mutations

Right = right-sided tumors

d_Mets = distant metastasis

AD_muc = 45 adenocarcinoma with mucinous features, including 8 adenocarcinoma, mucinous, 4 adenocarcinoma with focal mucinous features, 1 adenocarcinoma with mucinous differentiation, and 27 adenocarcinoma, mucinous (great than 50% mucinous), 2 adenocarcinoma with signet ring cell features, and 3 Carcinoma, signet ring cee (greater that 50%signet ring cell)

AD_NOS = 422 adenocarcinoma, NOS and 1 Carcinoma, NOS

* four tumors without primary location data, percentages were calculated based 464 tumors

** six tumors without stage information, percentages were calculated based 462 tumors; two tumors labeling stage 0 were included as stage I-II.

There is significantly higher or lower observation than expectation: ↑(↓) for $p<0.05$; ↑↑(↓↓) for $p<0.01$; ↑↑↑(↓↓↓) for $p<0.001$; based on individual chi-square (X^2) contribution from the table cell.

***Nonparametric multiple comparison Dunn test was applied for age across the groups.

Supplementary Table S21. CMS classification results for Moffitt 468

Classification	RF Class	SSP Class	N
CMS1	CMS1	CMS1	37
CMS1	CMS1	NA	11
CMS1	CMS3	CMS1	9
CMS1	CMS4	CMS1	3
CMS1	NA	CMS1	17
CMS2	CMS2	CMS2	96
CMS2	CMS2	NA	11
CMS2	CMS4	CMS2	1
CMS2	NA	CMS2	8
CMS3	CMS3	CMS2	15
CMS3	CMS3	CMS3	24
CMS3	CMS3	NA	25
CMS4	CMS4	CMS4	102
CMS4	NA	CMS4	10
NA	NA	NA	72
NA	CMS4	NA	17
ND	ND	ND	10

Rules for Resolving Two Classification Methods, with Rationale

The consensus molecular subtypes classification method describes two different methods, “random forests” (RF), and “single-sample predictor” (SSP). We used both methods to obtain their classifications, and developed the following rules to resolve the discrepancies between the methods.

1) 10 patients lacked data for classification. Percentages below based on 458 evaluable samples
2) If both RF and SSP agree, that is the CMS classification (N=331, 72%)
3) If one method classified the sample into CMS1-CMS3 and the other method was NA, then use the CMS1-3 selection; N=47 (10%), classification determined by RF for this rule, N=35 (8%), classification determined by SSP method
4) If RF=CMS4 and SSP = NA, then classify the 17 samples (4%) as NA. 64/116 of our CMS2-classified patients have TP53 mutations with alternate allele rates ≥ 50% (likely allelic loss), compared to 2/17 of these patients
5) There are N=28 (6%) samples for which there were direct CMS classification conflicts. Reasons for selections above:
    a. CMS1 when RF = CMS3, SSP = CMS1; 8/9 patients were MSI-H, and 5/9 had BRAF mutations, and these are highly CMS1-associated features

b. CMS3, when RF = CMS3 and SSP = CMS2; 10/15 of the patients have KRAS mutations
c. CMS1, when RF=CMS4, and SSP = CMS1; all 3 patients are BRAF-mutated MSI-H patients
d. CMS2, when RF=CMS4, and SSP = CMS2; this patient could have been classified either way

Supplementary Table S22. Additional Cochran-Mantel-Haenszel test on cetuximab (CTX) response by frequencies of mut*APC* and/or mut*TP53* in cetuximab-treated CRC PDX models

Note: A— *APC* mutation; P — *TP53* mutation; CR---complete response; PR---partial response; SD---stable disease; PD---progressed disease. The significant *P* values are highlighted by **bolding** and yellow color.

Bertotti et al. (2015) 98 CTX CRC PDX models with wild-type *APC, TP53, KRAS, NRAS, BRAF* and *PIK3CA* (**PR vs. SD vs. PD)**

Table of Response by Mutation				
Response	**Mutation**			
Frequency **Expected** **Cell Chi-Square** **Row Pct**	**A + P**	**A or P**	**wtA + wtP**	**Total**
PR	19 17.133 0.2035 82.61	1 2.8163 1.1714 4.35	3 3.051 0.0009 13.04	23
SD	42 37.245 0.6071 84.00	5 6.1224 0.2058 10.00	3 6.6327 1.9896 6.00	50
PD	12 18.622 2.3551 48.00	6 3.0612 2.8212 24.00	7 3.3163 4.0917 28.00	25
Total	73	12	13	98

Cochran-Mantel-Haenszel Statistics (Based on Table Scores)				
Statistic	**Alternative Hypothesis**	**DF**	**Value**	**Prob**
1	**Nonzero Correlation**	1	6.1351	**0.0133**

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