

Supplementary table S1A. ICGC-ARGO baseline

Clinical characteristics	n(%)			P
	KRAS wildtype (n=351)	KRAS mutant (n=286)	Total (n=637)	
Gender				.112
male	200 (57.0)	144 (50.3)	344 (54.0)	
female	151 (43.0)	142 (49.7)	293 (46.0)	
age				.750
<50	81 (23.1)	70 (24.5)	151 (23.7)	
≥50	270 (76.9)	216 (75.5)	486 (76.3)	
CMS				<0.001
1	30 (8.5)	35 (12.2)	65 (10.2)	
2	157 (44.7)	70 (24.5)	227 (35.6)	
3	21 (6.0)	67 (23.4)	88 (13.8)	
4	105 (29.9)	64 (22.4)	169 (26.5)	
NA	38 (10.8)	50 (17.5)	88 (13.8)	
pT stage				.223
1	27 (7.7)	16 (5.6)	43 (6.8)	
2	66 (18.8)	72 (25.2)	138 (21.7)	
3	233 (66.4)	179 (62.6)	412 (64.7)	
4	25 (7.1)	19 (6.6)	44 (6.9)	
pN stage				.289
N0	224 (63.8)	194 (67.8)	418 (65.6)	
N+	127 (36.2)	92 (32.2)	219 (34.4)	
Metachronous metastasis				.040
No	320 (91.2)	246 (86.0)	566 (88.9)	
Yes	31 (8.8)	40 (14.0)	71 (11.1)	

Supplementary table S1B. MSKCC baseline

Clinical characteristics	n(%)			P
	KRAS wildtype (n=213)	KRAS mutant (n=144)	Total (n=357)	
Gender				.003
male	137(38.4)	70(19.6)	207(58.0)	
female	76(21.3)	74(20.7)	150(42.0)	
age				.060
<50	68(19.0)	60(16.8)	128(35.9)	
≥50	145(40.6)	84(23.5)	229(64.1)	
CMS				.001
1	3(0.8)	9(2.5)	12(3.4)	
2	20(5.6)	5(1.4)	25(7.0)	
3	10(2.8)	15(4.2)	25(7.0)	
4	24(6.7)	8(2.2)	32(9.0)	
NA	156(43.7)	107(30.0)	263(73.7)	
Tumor location				.675
upper	68(19.0)	43(12.0)	111(31.1)	
middle	96(26.9)	61(17.1)	157(44.0)	
lower	48(13.4)	38(10.6)	86(24.1)	
NA	1(0.3)	2(0.6)	3(0.8)	
ypT stage				.991
0-Tis	42(11.8)	30(8.4)	72(20.2)	
1	12(3.4)	8(2.2)	20(5.6)	
2	50(14.0)	32(9.0)	82(23.0)	
3	42(11.8)	26(7.3)	68((19.0)	
4	4(1.1)	2(0.6)	6(1.7)	
NA	63(17.6)	46(12.9)	109(30.5)	
ypN stage				.978
N0	109(30.5)	72(20.2)	181(50.7)	
N+	27(7.6)	18(5.0)	45(12.6)	
NA	77(21.6)	54(15.1)	213(59.7)	
Metachronous metastasis				.077
No	185(51.8)	115(32.2)	300(84.0)	
Yes	28(7.8)	29(8.1)	57(16.0)	

Supplementary table S1C. Sidra-LUMC AC-ICAM baseline

Clinical characteristics	n(%)			P
	KRAS wildtype (n=147)	KRAS mutant (n=77)	Total (n=224)	
Gender				.972
male	76(33.9)	40(17.9)	116(51.8)	
female	71(31.7)	37(16.5)	108(48.2)	
age				.776
<50	10(4.5)	4(1.8)	14(6.3)	
≥50	137(61.2)	73(32.6)	210(93.8)	
CMS				.838
1	21(9.4)	9(4.0)	30(13.4)	
2	37(16.5)	17(7.6)	54(24.1)	
3	32(14.3)	15(6.7)	47(21.0)	
4	27(12.1)	16(7.1)	43(19.2)	
mixed	30(13.4)	20(8.9)	50(22.2)	
Tumor location				.079
Right hemicolon	66(29.5)	35(15.6)	101(45.1)	
Transverse colon	6(2.7)	9(4.0)	15(6.7)	
Left hemicolon	75(33.5)	33(14.7)	108(48.2)	
pT stage				.292
1	9(4.0)	4(1.8)	13(5.8)	
2	35(15.6)	11(4.9)	46(20.5)	
3	93(41.5)	58(25.9)	151(67.4)	
4	10(4.5)	4(1.8)	14(6.3)	
pN stage				<0.001
N0	129(57.6)	13(5.8)	142(63.4)	
N+	18(8.0)	64(28.6)	82(36.6)	
Metachronous metastasis				.091
No	129(57.9)	61(27.2)	190(84.8)	
Yes	18(8.0)	16(7.1)	34(15.2)	

Supplementary table S1D. ICGC-ARGO KRAS^{mut} chemotherapy baseline

Clinical characteristics	Before matching (n=)(%)		P	After matching (n=)(%)		P
	No adjuvant chemo (n=171)	Adjuvant chemo (n=115)		No adjuvant chemo (n=79)	Adjuvant chemo (n=79)	
gender			.074			.750
male	94 (55.0)	50 (43.5)		41 (51.9)	44 (55.7)	
female	77 (45.0)	65 (56.5)		38 (48.1)	35 (44.3)	
age			.001			.001
<50	30 (17.5)	40 (34.8)		9 (11.4)	28 (35.4)	
≥50	141 (82.5)	75 (65.2)		70 (88.6)	51 (64.6)	
pT stage			<0.001			.387
1	15 (8.8)	1 (0.9)		2 (2.5)	0	
2	58 (33.9)	14 (12.2)		9 (11.4)	9 (11.4)	
3	90 (52.6)	89 (77.4)		62 (78.5)	60 (75.9)	
4	8 (4.7)	11 (9.6)		6 (7.6)	10 (12.7)	
pN stage			<0.001			.868
N0	143 (83.6)	51 (44.3)		51 (64.6)	50 (63.3)	
N+	28(16.4)	64(55.7)		28(10.4)	29(12.5)	

Supplementary table S1E. ICGC-ARGO KRAS^{wt} CRC chemotherapy baseline

Clinical characteristics	Before matching (n=)(%)		P	After matching (n=)(%)		P
	No adjuvant chemo (n=226)	Adjuvant chemo (n=175)		No adjuvant chemo (n=81)	Adjuvant chemo (n=81)	
gender			1.000			.874
male	130 (57.5)	101 (57.7)		48 (59.3)	46 (56.8)	
female	96 (42.5)	74 (42.3)		33 (40.7)	35 (43.2)	
age			.009			.167
<50	41 (18.1)	52 (29.7)		12 (14.8)	20 (24.7)	
≥50	185 (81.9)	123 (70.3)		69 (85.2)	61 (75.3)	
pT stage			<0.001			.637
1	24 (10.6)	5 (2.9)		3 (3.7)	1 (1.2)	
2	70 (31.0)	13 (7.4)		5 (6.2)	8 (9.9)	
3	123 (54.4)	140 (80.0)		64 (79.0)	63 (77.8)	
4	9 (4.0)	17 (9.7)		9 (11.1)	9 (11.1)	
pN stage			<0.001			1.000
N0	192 (85.0)	54(30.9)		51 (63.0)	51 (63.0)	
N+	34(15.0)	121(69.1)		30(27.0)	30(27.0)	

Supplementary table S1F. MSKCC KRAS^{mut} chemotherapy baseline

Clinical characteristics	Before matching (n=)(%)		P	After matching (n=)(%)		P
	No adjuvant chemo (n=52)	Adjuvant chemo (n=24)		No adjuvant chemo (n=24)	Adjuvant chemo (n=24)	
gender			.344			1.000
male	20(26.3)	12(15.8)		12	12	
female	32(42.1)	12(15.8)		12	12	
age			.715			.562
<50	24(31.6)	10(13.2)		12(25.0)	10(20.8)	
≥50	28(36.8)	14(18.4)		12(25.0)	14(29.2)	
Tumor location			.113			.484
upper	22(28.9)	5(6.6)		8(16.7)	5(10.4)	
middle	18(23.7)	14(18.4)		10(20.8)	14(29.2)	
lower	12(15.8)	5(6.6)		6(12.5)	5(10.4)	
ypT stage			.541			1.000
0-Tis	16(21.1)	4(5.3)		4(8.3)	4(8.3)	
1	4(5.3)	4(5.3)		4(8.3)	4(8.3)	
2	17(22.4)	9(11.8)		9(18.8)	9(18.8)	
3	14(18.4)	7(9.2)		7(14.6)	7(14.6)	
4	1(1.3)	0		0	0	
ypN stage			.708			.731
N0	41(53.9)	18(23.7)		19(39.6)	18(37.5)	
N+	11(14.5)	6(7.9)		5(10.4)	6(12.5)	

Supplementary table S1G. MSKCC KRAS^{wt} chemotherapy baseline

Clinical characteristics	Before matching (n=)(%)		P	After matching (n=)(%)		P
	No adjuvant chemo (n=84)	Adjuvant chemo (n=32)		No adjuvant chemo (n=32)	Adjuvant chemo (n=32)	
gender			.270			.200
male	54(46.6)	17(14.7)		22(34.4)	17(26.6)	
female	30(25.9)	15(12.9)		10(15.6)	15(23.4)	
age			.121			.777
<50	34(29.3)	8(6.9)		9(14.1)	8(12.5)	
≥50	50(43.1)	24(20.7)		23(35.9)	24(37.5)	
Tumor location			.855			.855
upper	32(27.6)	14(12.1)		13(20.3)	14(21.9)	
middle	38(32.8)	13(11.2)		16(25.0)	13(21.3)	
lower	14(12.1)	5(4.3)		3(4.7)	5(7.8)	
ypT stage			.512			.750
0-Tis	23(19.8)	8(6.9)		8(12.5)	8(12.5)	
1	6(5.2)	3(2.6)		3(4.7)	3(9.4)	
2	28(24.1)	12(10.3)		13(20.34)	12(18.8)	
3	26(22.4)	7(6.0)		8(12.5)	7(10.9)	
4	1(0.9)	2(1.7)		0	2(3.1)	
ypN stage			.120			.708
N0	65(56.0)	29(25.0)		27(42.2)	29(45.3)	
N+	19(16.4)	3(2.6)		5(7.8)	3(4.7)	

Supplementary table S1H. Sidra-LUMC AC-ICAM KRAS^{mut} CRC chemotherapy baseline

Clinical characteristics	Before matching (n=)(%)		P	After matching (n=)(%)		P
	No adjuvant chemo (n=60)	Adjuvant chemo (n=17)		No adjuvant chemo (n=13)	Adjuvant chemo (n=13)	
gender			.314			.695
male	33 (42.9)	7 (9.1)		7(26.9)	6(23.1)	
female	27 (35.1)	10 (13.0)		6(23.1)	7(26.9)	
age			.210			1.000
<50	2(2.6)	2(2.6)		1(3.8)	1(3.8)	
≥50	58(75.3)	15(19.5)		12(46.2)	12(46.2)	
Tumor location			.005			.760
upper	24(31.2)	11(14.3)		8(30.8)	9(34.6)	
middle	4(5.2)	5(6.5)		4(15.4)	3(11.5)	
lower	32(41.6)	1(1.3)		1(3.8)	1(3.8)	
pT stage			.888			1.000
1	3(3.9)	1(1.3)		1(3.8)	1(3.8)	
2	8(10.4)	3(3.9)		3(11.5)	3(11.5)	
3	47(61.0)	11(14.3)		9(34.9)	9(34.9)	
4	2(2.6)	2(2.6)		0	0	
pN stage			<0.001			.411
N0	4(5.2)	9(11.7)		3(11.5)	6(23.1)	
N+	56(72.7)	8(10.4)		10(38.5)	7(26.9)	

Supplementary table S11. Sidra-LUMC AC-ICAM KRAS^{wt} CRC chemotherapy baseline

Clinical characteristics	Before matching (n=)(%)		P	After matching (n=)(%)		P
	No adjuvant chemo (n=111)	Adjuvant chemo (n=36)		No adjuvant chemo (n=18)	Adjuvant chemo (n=18)	
gender			.194			1.000
male	54(36.7)	22(15.0)		10(27.8)	10(27.8)	
female	57(38.8)	14(9.5)		8(22.2)	8(22.2)	
age			.260			1.000
<50	6(4.1)	4(2.7)		1(2.8)	1(2.8)	
≥50	105(71.4)	32(21.8)		17(47.2)	17(47.2)	
Tumor location			.585			.855
Right hemicolon	51(34.7)	15(10.2)		8(22.2)	9(25.0)	
Transverse colon	5(3.4)	1(0.7)		0	0	
Left hemicolon	55(37.4)	20(13.6)		10(27.8)	9(25.0)	
pT stage			.035			.803
1	8(5.4)	1(0.7)		1(2.8)	1(2.8)	
2	30(20.4)	5(3.4)		4(11.1)	5(13.9)	
3	67(45.6)	26(17.7)		12(33.3)	11(30.6)	
4	6(4.1)	4(2.7)		1(2.8)	1(2.8)	
pN stage			<0.001			1.000
N0	111(75.5)	18(12.2)		18(50.0)	18(50.0)	
N+	0	18(12.2)		0	0	