

**Table S1. Clinical characteristics of the enrolled participants.**

Characteristics	Cohort 1: Serum EpOMEs / Fecal <i>Fn</i>			Cohort 2: Tissue CYP2J2		
	Control, n	CRC, n	<i>P</i> values	Control, n	CRC, n	<i>P</i> values
Age (mean ± SEM)	63.0 ± 0.890	63.2 ± 1.349	0.9182	63.3 ± 1.323	65.4 ± 1.865	0.375
Sex			0.4118			0.7353
Female	12	8		10	11	
Male	18	22		8	7	
Tumor location			–			–
Right hemicolon	–	3		–	5	
Left hemicolon	–	12		–	9	
Rectum	–	15		–	4	
Tumor size (cm)			–			–
<5	–	24		–	11	
≥5	–	6		–	7	
Differentiation			–			–
Well-moderate	–	29		–	17	
Poor	–	1		–	1	
T			–			–
Tis – T2	–	6		–	2	
T3 – T4	–	24		–	16	
N			–			–
N0	–	18		–	9	
N1 – N2	–	12		–	9	
M			–			–
Absence	–	28		–	16	
Presence	–	2		–	2	
TNM stage			–			–
0/I	–	4		–	2	

II	–	13	–	7
III	–	11	–	7
IV	–	2	–	2
Serum CEA (mg/L)			–	–
≤5.9	–	19	–	11
>5.9	–	9	–	4
NA	–	2	–	3
Serum CA19-9 (kU/L)			–	–
≤37	–	26	–	12
>37	–	2	–	3
NA	–	2	–	3
Ki-67 expression			–	–
<50%	–	6	–	1
≥50%	–	24	–	17
NA	–	0	–	0
P53 status			–	–
Negative	–	19	–	5
Positive	–	11	–	13
NA	–	0	–	0
Lymphatic invasion			–	–
Negative	–	16	–	8
Positive	–	11	–	9
NA	–	3	–	1
Nerve invasion			–	–
Negative	–	25	–	15
Positive	–	2	–	2

NA	–	3		–	1	
Smoking			0.3422			0.6067
Absence	27	23		13	14	
Presence	1	3		1	3	
NA	2	4		4	1	
Diabetes			0.3422			0.6649
Absence	27	23		13	15	
Presence	1	3		1	2	
NA	2	4		4	1	
Appendectomy			0.6038			0.4882
Absence	27	24		14	15	
Presence	1	2		0	2	
NA	2	4		4	1	

**Table S1. Clinical characteristics of the enrolled participants. (Continued)**

Characteristics	Cohort 3: Discovery set - Tissue <i>Fn/CYP2J2</i>				Cohort 4: Validation set - Tissue <i>Fn/CYP2J2</i>			
	L/L, n	L/H or H/L, n	H/H, n	<i>P</i> value	L/L, n	L/H or H/L, n	H/H, n	<i>P</i> value
Age (mean ± SEM)	63.8 ± 2.650	67.1 ± 2.336	64.3 ± 4.209	0.6635	65.9 ± 1.812	63.8 ± 3.650	69.2 ± 1.489	0.2851
Sex				0.373				0.3523
Female	5	7	2		11	7	12	
Male	14	9	8		14	7	27	
Tumor location				0.3239				0.2637
Right hemicolon	3	7	2		3	6	8	
Left hemicolon	9	5	3		12	5	18	
Rectum	7	4	5		10	3	13	
Tumor size (cm)				0.6249				0.3648
<5	9	5	4		17	7	20	
≥5	10	11	6		8	7	19	
Differentiation				0.7291				0.6078
Well-moderate	17	13	9		21	10	32	
Poor	2	3	1		4	4	7	
T				0.8352				<b>0.0221</b>
Tis – T2	3	3	1		7	1	2	
T3 – T4	16	13	9		18	13	37	
N				0.03				0.0532
N0	13	6	2		16	7	13	
N1 – N2	6	10	8		9	7	26	
M				0.1668				<b>0.0368</b>
Absence	17	13	6		25	13	31	
Presence	2	3	4		0	1	8	
TNM stage				0.1138				0.1079

0/I	3	0	0		4	1	1	
II	10	6	2		12	6	12	
III	4	7	4		9	6	18	
IV	2	3	4		0	1	8	
Serum CEA (mg/L)				0.1579				0.3126
≤5.9	6	10	5		15	8	20	
>5.9	10	4	3		6	3	17	
NA	3	2	2		4	3	2	
Serum CA19-9 (kU/L)				0.2918				0.3988
≤37	12	11	8		20	8	30	
>37	4	2	0		2	3	6	
NA	3	3	2		3	3	3	
Ki-67 expression				0.4967				0.1953
<50%	1	0	0		0	2	3	
≥50%	18	16	10		25	12	36	
NA	0	0	0		0	0	0	
P53 status				0.306				0.2344
Negative	7	8	2		10	2	14	
Positive	12	8	8		15	12	25	
NA	0	0	0		0	0	0	
Lymphatic invasion				0.0431				0.0532
Negative	12	6	2		16	7	13	
Positive	6	10	8		9	7	26	
NA	1	0	0		0	0	0	
Nerve invasion				0.1127				0.3518

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Negative	13	14	5		16	12	28	
Positive	5	2	5		9	2	11	
NA	1	0	0		0	0	0	
Smoking				0.4418				0.4769
Absence	15	11	9		15	10	32	
Presence	4	5	1		6	2	6	
NA	0	0	0		4	2	1	
Diabetes				0.5231				0.9769
Absence	17	14	10		19	11	35	
Presence	2	2	0		2	1	3	
NA	0	0	0		4	2	1	
Appendectomy				0.7342				0.2559
Absence	18	15	10		20	11	38	
Presence	1	1	0		1	1	0	
NA	0	0	0		4	2	1	

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