

SUPPLEMENTARY TABLES

Supplementary Table 1. Comparison of clinical characteristics between colorectal cancer patients with non-recurrence and recurrence in Discovery cohort.

Parameters	Discovery cohort				P value
	Non-recurrence		Recurrence		
	No.	%	No.	%	
Age(year)	60.7±8.34		62.8±9.16		0.510 ^a
Gender					0.712 ^b
Male	9	60.00	8	53.33	
Female	6	40.00	7	46.67	
Tumor location					0.456 ^b
Colon	5	33.33	7	46.67	
Rectum	10	66.67	8	53.33	
Tumor size					0.712 ^b
<4cm	7	46.67	6	40.00	
≥4cm	8	53.33	9	60.00	
Differentiation					0.532 ^b
Well	6	40.00	4	26.67	
Moderate	7	46.67	10	66.67	
Poor	2	13.33	1	6.67	
Local invasion					0.690 ^b
T1-T2	5	33.33	4	26.67	
T3-T4	10	66.67	11	73.33	
Regional lymph nodes metastasis					0.256 ^b
No	7	46.67	4	26.67	
Yes	8	53.33	11	73.33	

Supplementary Table 2. The AUC, sensitivity and specificity of each exolncRNA for distinguishing diagnosis of colorectal cancer recurrence.

exolncRNA	Cutoff value	AUC(95%IC)	Sensitivity(%)	Specificity(%)
AF079515	0.688	0.780(0.705-0.844)	75.0	68.6
CCAT1	0.335	0.740(0.662-0.808)	97.5	37.1
UCA1	0.265	0.754(0.677-0.820)	85.0	51.4
HOTTIP	0.312	0.614(0.531-0.692)	33.8	91.4
RP11-434B12.1	0.355	0.809(0.737-0.868)	91.3	64.3
5-exolncRNAs	3.998	0.947(0.898-0.977)	88.8	85.7

Supplementary Table 3. Correlations between the risk scores of 5-exolncRNAs panel and clinicopathological characteristics.

Parameters	No. of patients	Risk scores of 5-exolncRNAs panel	P-value
Age			0.427 ^a
<62	101	4.13(2.62-4.77)	
≥62 (median)	102	4.08(2.63-4.94)	
Gender			0.214 ^a
Male	98	3.992(2.585-4.713)	
Female	105	4.207(2.714-4.915)	
Tumor location			0.795 ^a
Colon	86	4.143(2.644-4.700)	
Rectum	117	4.070(2.550-4.796)	
Tumor size			0.839 ^a
<4cm	126	4.135(2.513-4.786)	
≥4cm	77	4.081(2.714-4.788)	
Differentiation			0.675 ^b
Well	38	4.351(2.633-4.808)	
Moderate	111	4.005(2.528-4.767)	
Poor	54	4.206(2.628-4.783)	
Local invasion			0.022 ^a
T1-T2	54	3.637(2.312-4.525)	
T3-T4	149	4.247(2.713-4.833)	
Regional lymph nodes metastasis			<0.001 ^a
No	124	3.637(2.382-4.493)	
Yes	79	4.683(3.885-5.262)	
Distant metastasis			<0.001 ^a
No	163	3.885(2.469-4.649)	
Yes	40	4.811(4.248-5.326)	
CEA levels			0.015 ^a
<5 ng/ml	116	4.054(2.484-4.493)	
≥5 ng/ml	87	4.605(2.730-5.185)	
CA19-9 levels			0.292 ^a
<5 ng/ml	178	4.081(2.612-4.757)	
≥5 ng/ml	25	4.664(2.780-4.876)	

Note: Risk scores of 5-exolncRNAs panel were presented as median (interquartile range); P-value^a was estimated by Mann-Whitney U test; P-value^b was estimated by Kruskal-Wallis test.

Supplementary Table 4. Univariate and multivariate Cox regression model analysis of RFS and OS in CRC patients.

Parameters	Categories	Univariate analysis		Multivariate analysis	
		HR (95% CI)	P value	HR (95% CI)	P value
RFS					
Gender	Female VS Male	0.814(0.561-1.180)	0.278		
Age	<62y VS ≥62y	0.894(0.616-1.297)	0.556		
Tumor location	Colon VS Rectum	1.305(0.900-1.892)	0.160		
Differentiation	Well VS Moderate VS Poor	0.964(0.726-1.279)	0.798		
Tumor size	<4cm VS ≥4cm	0.992(0.677-1.455)	0.969		
Local invasion	T1-T2 VS T3-T4	2.072(1.288-3.334)	0.003	1.059(0.645-1.739)	0.819
Lymph node metastasis	Negative VS Positive	2.823(1.937-4.115)	<0.001	1.685(1.113-2.552)	0.014
Distant metastasis	Negative VS Positive	3.729(2.451-5.675)	<0.001	1.523(0.963-2.408)	0.072
CEA	Negative VS Positive	1.307(0.895-1.908)	0.166		
CA19-9	Negative VS Positive	1.462(0.848-2.522)	0.172		
5-exolncRNAs panel	Low VS High	14.742(8.325-26.104)	<0.001	12.240(6.704-22.348)	<0.001
OS					
Gender	Female VS Male	0.708(0.484-1.034)	0.074		
Age	<62y VS ≥62y	1.269(0.871-1.848)	0.215		
Tumor location	Colon VS Rectum	1.175(0.805-1.714)	0.403		
Differentiation	Well VS Moderate VS Poor	0.990(0.743-1.319)	0.945		
Tumor size	<4cm VS ≥4cm	1.376(0.942-2.008)	0.099		
Local invasion	T1-T2 VS T3-T4	1.884(1.170-3.035)	0.009	0.980(0.593-1.619)	0.937
Lymph node metastasis	Negative VS Positive	4.440(2.999-6.576)	<0.001	2.491(1.626-3.816)	<0.001
Distant metastasis	Negative VS Positive	4.682(3.114-7.040)	<0.001	1.642(1.062-2.540)	0.026
CEA	Negative VS Positive	1.396(0.808-2.409)	<0.001	3.442(2.186-5.419)	<0.001
CA19-9	Negative VS Positive	2.164(1.482-3.160)	0.231		
5-exolncRNAs panel	Low VS High	9.182(5.355-15.743)	<0.001	10.649(5.669-20.004)	<0.001

Supplementary Table 5. Primer sequences for real-time PCR.

Primer	Sequence	Product length
AF079515-F	5'- ATCAACCCCTCAACTATCACA -3'	122 bp
AF079515-R	5'- GCTATGTACGGTAAATGG -3'	
AC004854.4-F	5'- ATTTGGAGGATAACTCCCAGC -3'	78 bp
AC004854.4-R	5'- TTTTACAACAGCTTCCGGGG -3'	
CCAT1-F	5'- GCCGTGTTAAGCATTGCGAA -3'	168 bp
CCAT1-R	5'- TCATGTCTCGGCACCTTTCC -3'	
UCA1-F	5'- TGCCAGCCTCAGCTTAATCC -3'	153 bp
UCA1-R	5'- TCCCTGTTGCTAAGCCGATG -3'	
LOC100268168-F	5'- ACACATCCCCACTCACGTTC -3'	133 bp
LOC100268168-R	5'- CTTGCCGGAAACAATGTGGG -3'	
RP4-669L17.4-F	5'- AAATGATTCAACAGGAGGAG -3'	132 bp
RP4-669L17.4-R	5'- TCTTTGTATCGGTGCTCAG -3'	
HOTTIP -F	5'- CCTAAAGCCACGCTTCTTTG -3'	142 bp
HOTTIP -R	5'- TGCAGGCTGGAGATCCTACT -3'	
AK094859-F	5'- GGGCAGGTGTTATGTTTCTT -3'	197 bp
AK094859-R	5'- CTGGGCTGGATATTTGGT -3'	
RP11-38P22.2-F	5'- ACATCCATTGTTGGGGCCTT-3'	70 bp
RP11-38P22.2-R	5'- GATTTACAGGCTCCTGGCT-3'	
CHRND -F	5'- ATGGTGTGGCTCCCAGAGAT -3'	93 bp
CHRND -R	5'- GCCGTAGTGGTAGACAAGCA-3'	
BC005081-F	5'- TGACGCCAATCTCTTGGTCC -3'	72 bp
BC005081-R	5'- TGTCAGGTATCCCCCACCT -3'	
RP11-434B12.1-F	5'- GGCGTGGTTATGTGGAGTTG -3'	194 bp
RP11-434B12.1-R	5'- TTCAAACACGGCAAGCCATT -3'	
PHLDA3-F	5'- GAATGGCCTCTGGACTCACC -3'	137 bp
PHLDA3-R	5'- GAGGTGGGGGAAGAAGTGTG -3'	
HMGA1P4-F	5'- AAGCCCCATCTCATCCTAGC-3'	78 bp
HMGA1P4-R	5'- AATAAGCACCCCCGCAGATG -3'	
RP3-523K23.2-F	5'- AAGTTGCTGTGTGGAGCAGT -3'	210 bp
RP3-523K23.2-R	5'- TGTGGGTTCTGGGCTTTGTT -3'	
BC044655.1-F	5'- GGCTGGCCTGGTTATTTCAA -3'	111 bp
BC044655.1-R	5'- AGGCTCCAAGAAGGCAAGTA -3'	
FW340055-F	5'- CTCCTTTGGCCATTGCAGTC-3'	110 bp
FW340055-R	5'- ATTCCAAGGTTGGGAGGGAG-3'	
GAPDH-F	5'-TGCACCACCAACTGCTTAGC-3'	87 bp
GAPDH-R	5'-GGCATGGACTGTGGTCATGAG-3'	
UBC-F	5'-CCGGGATTTGGGTTCGAG-3'	70 bp
UBC-R	5'-TCACGAAGATCTGCATTGTCAAG-3'	