Supplementary Table 1 Clinicopathological data of colorectal cancer patients

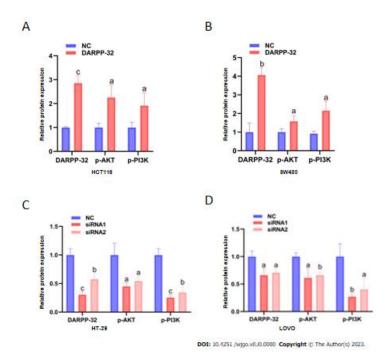
Patient	Clinical	Gender	Age	Tumor	TNM	Carbohy	drate	Carcinoembr
ID	diagnosis			size		antigen	199	yonic antigen
				(cm)		(referenc	e	(reference
						range	0-27	range 0.2-10.0
						U/mL)		ng/mL)
1971473	Rectal cancer	Male	73	6.5	pT3N1M0 III	12.4		5.6
1973685	Sigmoid colon	Male	59	2.2	pT4N1M0 III	3.2		2.3
	cancer							
1963907	Rectal cancer	Female	70	2	pT4aN1aM0	25		4.6
					III			
2014978	Rectal cancer	Male	70	5.5	pT2N2M0 III	18		5.3
1976339	Right-sided	Male	44	3	pT3N0M0 II	0.7		9.8
	colon cancer							
1975496	Rectal cancer	Male	84	3.5	pT4NIbM0 III	23		4.4
1976761	Rectal cancer	Female	53	5	pT3N2aM0 III	12.5		3.7
1980998	Rectal cancer	Male	81	4.5	pT4N0M1 IV	35.6		58.3
2019792	Left-sided	Female	<i>7</i> 5	3	pT4N1M0 III	13.7		1.6
	colon cancer							
1981105	Sigmoid colon	Male	78	3	pT4N0M1 IV	25.7		6.4
	cancer							
1944237	Left-sided	Female	57	5	pT4N0M0 II	9		1.9
	colon cancer							
1960404	Rectal cancer	Male	55	2.5	pT4N1M0 III	8.3		1.2
1959336	Right-sided	Male	67	5.5	pT4N1M0 III	69.7		4.3
	colon cancer							
1961947	Right-sided	Female	71	4.5	pT3N1M0 III	7.0		1.5
	colon cancer							
1943112	Left-sided	Female	52	4	pT4N0M0 II	30.2		5.1

colon cancer						
Right-sided	Male	63	8	pT4N0M0 II	37.3	9.5
colon cancer						
Sigmoid colon	Male	59	6	pT4N0M0 II	9.8	13.1
cancer						
Rectal cancer	Male	71	3.5	pT4N1M0 III	15.1	2.7
Right-sided	Female	49	4	pT4N0M0 II	514.4	3.8
colon cancer						
Rectal cancer	Female	54	2	pT2N1M0 III	21.3	2.3
Sigmoid colon	Female	67	4	pT2N0M0 I	10.2	17.2
cancer						
Rectal cancer	Male	63	7	pT3N1M0 III	30.7	6.3
Left-sided	Male	57	3	pT4aN0M0 II	6.3	6.3
colon cancer						
Rectal cancer	Male	69	5.5	pT4N0M1 IV	14.1	3.6
Right-sided	Female	67	3	pT4N0M0 II	14.7	1.8
colon cancer						
Rectal cancer	Male	65	3.5	pT4N0M1 IV	0.6	3.5
Rectal cancer	Female	69	2.5	pT2N0M0 I	9.7	1.7
Rectal cancer	Female	76	2.5	pT2N1M0 III	4.51	2.01
Right-sided	Female	76	5.5	pT4N1M0 III	11.8	7.8
colon cancer						
Left-sided	Female	78	5.5	pT4bN0M0 II	9.7	1
colon cancer						
Left-sided	Male	71	6.5	pT2N0M0 I	1	2.4
colon cancer						
Right-sided	Female	71	4	pT4N1M1 IV	44.4	2.4
colon cancer				_		
Left-sided	Female	80	5.5	pT3N0M0 II	14.6	20.8
colon cancer				•		
Right-sided	Female	87	7	pT4N0M1 IV	18.4	1.4
	colon cancer Sigmoid colon cancer Rectal cancer Right-sided colon cancer Rectal cancer Sigmoid colon cancer Rectal cancer Left-sided colon cancer Rectal cancer Rectal cancer Rectal cancer Retal cancer Rectal cancer Rectal cancer Rectal cancer Rectal cancer Left-sided colon cancer Rectal cancer Right-sided colon cancer Left-sided colon cancer Left-sided colon cancer Left-sided colon cancer Right-sided colon cancer	Right-sided Male colon cancer Male Sigmoid colon Male Rectal cancer Male Right-sided Female colon cancer Female Rectal cancer Male Rectal cancer Male Left-sided Male Rectal cancer Male Rectal cancer Male Rectal cancer Female Rectal cancer	Right-sided olon cancer Sigmoid colon Male 59 cancer Rectal cancer Male 71 Right-sided Female 49 colon cancer Rectal cancer Female 54 Sigmoid colon Female 67 cancer Rectal cancer Male 63 Left-sided Male 57 colon cancer Rectal cancer Male 69 Right-sided Female 67 colon cancer Rectal cancer Male 69 Rectal cancer Female 67 colon cancer Rectal cancer Male 69 Rectal cancer Female 67 colon cancer Rectal cancer Female 76 Rectal cancer Female 76 remale 76 colon cancer Left-sided Female 76 remale 76 colon cancer Left-sided Female 78 colon cancer Left-sided Female 71 colon cancer Right-sided Female 71 colon cancer Left-sided Female 80 remale 80	Right-sided Male 63 8 colon cancer Sigmoid colon Male 59 6 cancer Rectal cancer Male 71 3.5 Right-sided Female 49 4 colon cancer Rectal cancer Female 54 2 Sigmoid colon Female 67 4 cancer Rectal cancer Male 63 7 Left-sided Male 57 3 colon cancer Rectal cancer Male 69 5.5 Right-sided Female 67 3 colon cancer Rectal cancer Male 65 3.5 Rectal cancer Male 65 3.5 Rectal cancer Female 69 2.5 Rectal cancer Female 69 2.5 Rectal cancer Female 76 5.5 Right-sided Female 76 5.5 colon cancer Left-sided Female 78 5.5 colon cancer Left-sided Female 71 4 colon cancer Right-sided Female 71 4 colon cancer Left-sided Female 71 4 colon cancer Left-sided Female 80 5.5 colon cancer	Right-sided colon cancer Sigmoid colon Male 59 6 pT4N0M0 II cancer Rectal cancer Male 71 3.5 pT4N1M0 III Right-sided Female 49 4 pT4N0M0 II colon cancer Rectal cancer Female 54 2 pT2N1M0 III Sigmoid colon Female 67 4 pT2N0M0 I cancer Rectal cancer Male 63 7 pT3N1M0 III Left-sided Male 57 3 pT4N0M1 IV Right-sided Female 69 5.5 pT4N0M1 IV Right-sided Female 69 2.5 pT2N1M0 III Rectal cancer Male 65 3.5 pT4N0M1 IV Rectal cancer Female 69 2.5 pT2N1M0 III Rectal cancer Female 69 2.5 pT2N1M0 III Rectal cancer Female 76 2.5 pT2N1M0 III Right-sided Female 76 5.5 pT4N1M0 III Right-sided Female 78 5.5 pT4N0M0 I colon cancer Left-sided Male 71 6.5 pT2N0M0 I colon cancer Right-sided Female 71 4 pT4N1M1 IV colon cancer Left-sided Female 71 4 pT4N1M1 IV colon cancer Left-sided Female 71 4 pT4N1M1 IV	Right-sided Male 63 8 pT4N0M0 II 37.3 colon cancer Sigmoid colon Male 59 6 pT4N0M0 II 9.8 cancer Rectal cancer Male 71 3.5 pT4N1M0 III 15.1 Right-sided Female 49 4 pT2N0M0 II 514.4 colon cancer Rectal cancer Female 54 2 pT2N1M0 III 21.3 Sigmoid colon Female 67 4 pT2N0M0 I 10.2 cancer Rectal cancer Male 63 7 pT3N1M0 III 30.7 Left-sided Male 57 3 pT4N0M0 II 6.3 colon cancer Rectal cancer Male 69 5.5 pT4N0M1 IV 14.1 Right-sided Female 67 3 pT4N0M0 II 14.7 colon cancer Rectal cancer Male 65 3.5 pT4N0M1 IV 14.1 Right-sided Female 69 2.5 pT2N1M0 III 9.7 Rectal cancer Female 69 2.5 pT2N1M0 III 11.8 colon cancer Rectal cancer Female 76 5.5 pT4N1M0 III 11.8 colon cancer Left-sided Female 78 5.5 pT4N1M0 III 9.7 colon cancer Left-sided Female 71 6.5 pT2N1M0 II 9.7 colon cancer Right-sided Female 71 4 pT4N1M1 IV 44.4 colon cancer Right-sided Female 71 4 pT4N1M1 IV 44.4 colon cancer Left-sided Female 71 4 pT4N1M1 IV 44.4 colon cancer Left-sided Female 71 4 pT4N1M1 IV 44.4 colon cancer Left-sided Female 71 4 pT4N1M1 IV 44.4 colon cancer Left-sided Female 71 4 pT4N1M1 IV 44.4 colon cancer Left-sided Female 71 4 pT4N1M1 IV 44.4

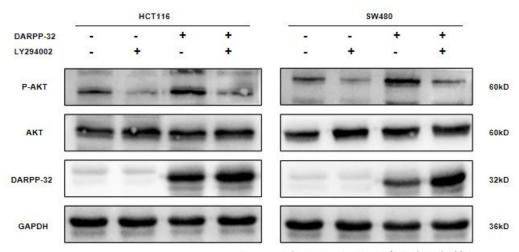
	colon cancer						
1936210	Sigmoid colon	Female	76	2.5	pT4N1M0 III	11.2	21.5
	cancer						
1942312	Rectal cancer	Male	78	3.5	pT4N0M0 II	7.3	3
2055243	Rectal cancer	Female	72	4.5	pT4N0M0 II	13	3.1
1945928	Right-sided	Male	77	7	pT3N1M1 IV	93.5	15.5
	colon cancer						
2048948	Right-sided	Male	76	2.5	pT3N1M0 III	5.5	3.5
	colon cancer						
2053235	Right-sided	Male	60	4.5	pT4N1M0 III	103.2	2.5
	colon cancer						
2061758	Rectal cancer	Male	64	4	pT4N3M0 III	89.9	1.3
2063513	Right-sided	Female	75	3.8	pT4N0M0 II	8.3	4.6
	colon cancer						
1946696	Rectal cancer	Male	66	4	pT2N0M0 I	8	4.8
1963072	Right-sided	Female	58	4	pT4N0M0 II	24.5	12.8
	colon cancer						
1992212	Right-sided	Female	41	11.4	pT4N2M0 III	110.8	1.2
	colon cancer						
1959135	Rectal cancer	Male	60	3.5	pT4N1M0 III	17.3	8.7
1955707	Sigmoid colon	Male	84	3	pT2N0M0 I	77	6.8
	cancer						
1956985	Right-sided	Male	50	4	pT1N0M0 I	19.3	2.8
	colon cancer						
1930991	Right-sided	Male	64	1.5	pT2N2M0 I	12.2	5.1
	colon cancer						
1968697	Rectal cancer	Male	49	4	pT4N0M0 II	1.1	5.1
1973846	Sigmoid colon	Male	65	2.5	pT2N0M0 I	11.5	1.4
	cancer						
1947069	Left-sided	Female	49	4	pT3N2M1 III	2.2	66
	colon cancer						

1942950	Rectal cancer	Male	59	4	pT3N0M0 II	10.1	3.7
1932066	Left-sided	Female	78	4.5	pT4N3M0 III	46.1	22.4
	colon cancer						
1929942	Left-sided	Female	50	7	pT4N1M0 III	2.3	20.2
	colon cancer						
1938079	Rectal cancer	Male	55	2.5	pT2N0M0 I	6.2	0.7
1957823	Rectal cancer	Male	85	4	pT3N1M0 III	16.7	2.6
1979003	Rectal cancer	Male	62	4	pT4N2M0 III	24.5	2.7
1942312	Rectal cancer	Male	78	3.5	pT4N0M0 II	7.3	3
1976795	Rectal cancer	Female	42	3.5	pT4N2M0 III	30.2	5.1
1991273	Sigmoid colon	Male	69	3	pT4N1M0 III	11.8	2.6
	cancer						
1939528	Sigmoid colon	Male	64	3.2	pT3N0M0 II	7.4	1.2
	cancer						
1932574	Rectal cancer	Male	78	5	pT3N0M0 II	12.2	6.7
1940255	Rectal cancer	Female	49	2	pT2N0M0 I	10.8	8.5
1987829	Rectal cancer	Female	87	5	pT3N1M0 II	18.6	7.7
1933910	Right-sided	Male	63	5	pT4N2M0 III	75.6	18.5
	colon cancer						
1953173	Rectal cancer	Female	74	4	pT4N2M0 III	50.7	10.5
1992407	Right-sided	Female	50	3.2	pT4N0M0 II	107.4	3.7
	colon cancer						
1958027	Right-sided	Male	57	3.5	pT4N0M1 IV	17.3	6.4
	colon cancer						
1991799	Right-sided	Male	54	5.5	pT3N0M0 II	33.7	9
	colon cancer						

TNM: Tumor-node-metastasis.



Supplementary Figure 1 Effect of dopamine and cyclic adenosine monophosphate regulated phosphoprotein with an apparent Mr of 32000 (DARPP-32) on progression is partially dependent on the phosphoinositide 3-kinase (PI3K)/AKT signaling pathway. A and B: DARPP-32 overexpressed levels of DARPP-32, p-AKT, and p-PI3K proteins in cells; C and D: DARPP-32 knockdown in cells resulted in decreased protein expression of DARPP-32, p-AKT, and p-PI3K. $^{a}P < 0.05$, $^{b}P < 0.01$, $^{c}P < 0.001$. DARPP-32: Expression and clinical relevance of dopamine and cyclic adenosine monophosphate regulated phosphoprotein with an apparent Mr of 32000; NC: Normal control; PI3K: Phosphoinositide 3-kinase.



DOI: 10.4251 /wjgo.v0.i0.0000 Copyright © The Author(s) 2023.

Supplementary Figure 2 Effect of Dopamine and cyclic adenosine monophosphate regulated phosphoprotein with an apparent Mr of 32000 (DARPP-32) on progression is partially dependent on the phosphoinositide 3-kinase /AKT signaling pathway. The expression of relevant proteins was evaluated in HCT116 and SW480 cell lines overexpressing DARPP-32 after treatment with the AKT inhibitor LY294002. DARPP-32: Expression and clinical relevance of dopamine and cyclic adenosine monophosphate regulated phosphoprotein with an apparent Mr of 32000; GAPDH: Glyceraldehyde-3-phosphate dehydrogenase.