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## Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

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1 **eAppendix 1. Postdefinitive Treatment Group Analysis**

2 The post-definitive treatment time point was defined as the first time point after  
3 completion of definitive therapy. For patients who underwent surgery alone, the time  
4 point was approximately 30 days after the surgery. For adjuvant chemotherapy (ACT)  
5 patients, the timepoint range of 0-5.4 months after ACT.

6  
7 **eAppendix 2. Surveillance Analysis**

8 Patients enrolled in the surveillance analysis consisted of all patients who removed  
9 time points immediately after treatment (surgery and adjuvant chemotherapy [ACT])  
10 except no-ACT-treated cases with only postoperative month 1 plasma available; also  
11 removing samples less than 6m follow-up time after the first positive timepoint after  
12 treatment.

13  
14 **eAppendix 3. Circulating Tumor DNA Maintenance Analysis**

15 Patients with at least two blood samples drawn postoperatively and consistent  
16 ColonAiQ results were enrolled in this analysis. Patients were defined as positive if  
17 the ColonAiQ tests remained unchanged and positive for all time points or as negative  
18 if the ColonAiQ tests were negative for all time points.

19  
20 **eAppendix 4. ColonAiQ Assay**

21 One tube of 8-10 mL of whole blood was collected from each patient and roughly 3-4  
22 mL of plasma was separated by a double-spin procedure. Plasma DNA extraction was  
23 performed using the QIAamp Circulating Nucleic Acid Kit (Qiagen, Hilden,  
24 Germany). DNA concentration was measured using a Qubit 3.0 fluorometer (Thermo  
25 Fisher Scientific). For bisulfite conversion, 10-20 ng of extracted DNA was converted  
26 using the EZ DNA Methylation-Lightning Kit (ZYMO RESEARCH) according to the  
27 manufacturer's instructions. The converted DNA was processed using the ColonAiQ  
28 kit (Cat. # QP010048R, Singlera Genomics (Shanghai) Ltd., Shanghai, China)

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29 according to the manufacturer's protocol. Specifically, DNA was amplified with a pre-  
30 amplification primer pool, followed by quantitative PCR using the standard procedure  
31 in an ABI 7500 Real-Time PCR thermal cycler. The reference gene ACTB was used  
32 as an experimental quality control. The cut-off Ct for Septin9 locus 1, BCAT1,  
33 IKZF1, Septin9 locus 2, VAV3, and BCAN were 31.5, 35, 35, 35, 35, and 30,  
34 respectively. A marker was considered positive if its Ct in the test was lower than its  
35 cut-off Ct ( $Ct_{\text{test}} < Ct_{\text{cutoff}}$ ). A sample was considered positive if any of the six markers  
36 were positive.

37

### 38 **eAppendix 5. Statistical Analysis**

39 Sensitivity was defined as the number of patients with positive test results divided by  
40 the total number of patients with clinical relapse. Specificity was defined as the  
41 number of patients with negative test results divided by the total number of relapse-  
42 free patients. Statistical analyses were performed using R software v4.1.3. P values  
43 were based on 2-sided testing, and differences were considered significant at  $P < 0.05$ .

44

### 45 **eAppendix 6. Carcinoembryonic Antigen (CEA) Test and Integration of CEA With** 46 **Circulating Tumor DNA**

47 The concentration of CEA was determined by an electrochemiluminescence  
48 immunoassay using a Roche Cobas 8000 immunoassay analyzer (Roche Diagnostics,  
49 Mannheim, Germany). A sample with CEA levels of 5.2 ng/mL or above was  
50 considered positive. The integration of CEA and ctDNA was considered to be positive  
51 if a patient with a positive result in any of the two tests.

**eTable 1. Clinicopathologic Patient Characteristics**

Patient ID	Gender	Age	TNM	Stage	Primary tumor site	Histological type	Tumors differentiation	Vascular invasion	Perineural invasion	MMR Status	ACT	Relapse after OP month
P1	Male	50	T3N2bM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P2	Female	58	T3N1aM0	III	Right	Mucinous Adenoca.	Poor	No	Yes	pMMR	Yes	5
P3	Male	63	T3N2aM0	III	Left	Adenoca.	Poor	Yes	No	pMMR	Yes	NA
P4	Male	71	T4aN1bM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	4
P5	Female	80	T4aN2aM0	III	Right	Adenoca.	Poor	Yes	Yes	pMMR	Yes	8
P6	Female	48	T3N1cM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	23
P7	Female	67	T3N0M0	II	Left	Adenoca.	Poor	No	Yes	pMMR	Yes	NA
P8	Female	48	T4aN2aM0	III	Right	Adenoca.	Poor	Yes	No	dMMR	Yes	NA
P9	Male	52	T3N2bM0	III	Left	Adenoca.	Well	Yes	No	pMMR	Yes	NA
P10	Male	66	T4aN0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P11	Male	65	T3N0M0	II	Left	Adenoca.	Poor	No	No	pMMR	Yes	NA
P12	Female	69	T3N1cM0	III	Left	Adenoca.	Poor	No	No	pMMR	Yes	24
P13	Female	60	T3N1cM0	III	Left	Adenoca.	Poor	Yes	Yes	pMMR	Yes	NA
P14	Male	47	T3N2bM0	III	Left	SRCC	Poor	Yes	Yes	pMMR	Yes	15
P15	Male	73	T3N1bM0	III	Right	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P16	Male	69	T4bN2bM0	III	Right	Mucinous Adenoca.	Moderated	Yes	No	pMMR	Yes	4
P17	Male	77	T3N2aM0	III	Right	Adenoca.	Well	No	No	pMMR	No	NA
P18	Female	64	T3N0M0	II	Right	Adenoca.	Moderated	No	Yes	pMMR	Yes	NA
P19	Male	67	T3N2bM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	17
P20	Male	72	T2N0M0	I	Left	Adenoca.	Well	No	No	pMMR	No	NA
P21	Female	77	T1N0M0	I	Left	Adenoca.	Well	No	No	pMMR	No	NA
P22	Female	57	T4aN0M0	II	Left	Adenoca.	Moderated	No	Yes	pMMR	Yes	13
P23	Male	37	T3N0M0	II	Right	Mucinous Adenoca.	Well	No	No	pMMR	Yes	14
P24	Female	79	T3N1aM0	III	Left	Adenoca.	Poor	Yes	Yes	pMMR	Yes	NA
P25	Male	64	T3N0M0	II	Right	Adenoca.	Moderated	No	No	pMMR	Yes	13

**eTable 1. Clinicopathologic Patient Characteristics**

Patient ID	Gender	Age	TNM	Stage	Primary tumor site	Histological type	Tumors differentiation	Vascular invasion	Perineural invasion	MMR Status	ACT	Relapse after OP month
P26	Male	57	T3N0M0	II	Left	Adenoca.	Moderated	No	Yes	pMMR	Yes	NA
P27	Female	53	T1N0M0	I	Left	Adenoca.	Well	No	No	pMMR	No	22
P28	Male	59	T3N0M0	II	Left	Adenoca.	Moderated	No	Yes	pMMR	Yes	NA
P29	Female	60	T3N0M0	II	Left	Adenoca.	Well	No	No	pMMR	Yes	NA
P30	Male	55	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P31	Female	57	T3N2bM0	III	Left	Adenoca.	Poor	No	No	pMMR	Yes	NA
P32	Male	41	T3N2bM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	8
P33	Male	69	T4aN2aM0	III	Right	Mucinous Adenoca.	Poor	Yes	Yes	pMMR	Yes	5
P34	Male	73	T4bN2bM0	III	Left	Adenoca.	Poor	No	No	pMMR	Yes	15
P35	Male	58	T3N0M0	II	Left	Adenoca.	Poor	Yes	No	pMMR	Yes	16
P36	Female	54	T2N0M0	I	Right	Adenoca.	Poor	Yes	Yes	pMMR	No	NA
P37	Male	65	T3N1bM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P38	Female	57	T1N2bM0	III	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P39	Male	68	T1N0M0	I	Right	Adenoca.	Well	No	No	pMMR	No	NA
P40	Male	64	T4aN1aM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P41	Male	60	T3N0M0	II	Right	Adenoca.	Well	No	No	dMMR	No	NA
P42	Female	58	T3N0M0	II	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P43	Female	71	T3N0M0	II	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P44	Female	66	T3N0M0	II	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P45	Male	38	T3N0M0	II	Right	Mucinous Adenoca.	Moderated	No	No	pMMR	Yes	NA
P46	Male	57	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P47	Male	80	T3N2aM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P48	Male	65	T2N1bM0	III	Left	Musinous	Poor	Yes	Yes	pMMR	Yes	NA
P49	Female	44	T3N1bM0	III	Left	Adenoca.	Poor	Yes	Yes	pMMR	Yes	7
P50	Male	56	T3N2aM0	III	Left	Mucinous Adenoca.	Poor	Yes	No	pMMR	Yes	NA

**eTable 1. Clinicopathologic Patient Characteristics**

Patient ID	Gender	Age	TNM	Stage	Primary tumor site	Histological type	Tumors differentiation	Vascular invasion	Perineural invasion	MMR Status	ACT	Relapse after OP month
P51	Male	64	T1N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P52	Female	57	T4aN0M0	II	Right	Adenoca.	Poor	No	Yes	pMMR	Yes	NA
P53	Female	66	T3N2bM0	III	Left	Mucinous Adenoca.	Moderated	No	Yes	pMMR	Yes	NA
P54	Male	61	T1N0M0	I	Left	Adenoca.	Well	No	No	NA	No	NA
P55	Male	40	T3N0M0	II	Left	Adenoca.	Moderated	Yes	No	pMMR	No	NA
P56	Female	57	T1N2aM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P57	Male	42	T4aN2aM0	III	Left	Musinous	Poor	Yes	No	dMMR	Yes	NA
P58	Male	60	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P59	Male	74	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P60	Male	70	T3N0M0	II	Left	Adenoca.	Poor	Yes	Yes	pMMR	Yes	NA
P61	Male	49	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P62	Male	74	T4bN1cM0	III	Left	Adenoca.	Poor	Yes	Yes	dMMR	Yes	10
P63	Male	79	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P64	Female	52	T4aN1cM0	III	Left	Adenoca.	Poor	No	Yes	pMMR	Yes	NA
P65	Female	45	T2N0M0	I	Left	Adenoca.	Moderated	No	No	dMMR	No	NA
P66	Male	76	T4aN0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	4
P67	Female	59	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P68	Male	67	T2N0M0	I	Left	Mucinous Adenoca.	Poor	No	No	pMMR	No	NA
P69	Female	61	T2N0M0	I	Left	Adenoca.	Well	No	No	pMMR	No	17
P70	Male	55	T3N1aM0	III	Left	Mucinous Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P71	Male	71	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P72	Male	66	T3N1bM0	III	Left	Adenoca.	Well	Yes	Yes	pMMR	Yes	NA
P73	Male	56	T4aN0M0	II	Right	Adenoca.	Poor	Yes	Yes	pMMR	Yes	NA
P74	Female	76	T3N1bM0	III	Right	Adenoca.	Poor	Yes	No	pMMR	Yes	NA
P75	Male	56	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA



**eTable 1. Clinicopathologic Patient Characteristics**

Patient ID	Gender	Age	TNM	Stage	Primary tumor site	Histological type	Tumors differentiation	Vascular invasion	Perineural invasion	MMR Status	ACT	Relapse after OP month
P76	Male	38	T3N1bM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P77	Female	51	T3N1bM0	III	Left	Adenoca.	Well	No	No	pMMR	Yes	NA
P78	Female	53	T2N0M0	I	Left	Adenoca.	Moderated	Yes	No	pMMR	No	NA
P79	Male	54	T2N0M0	I	Left	Adenoca.	Well	No	No	pMMR	No	5
P80	Male	50	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P81	Female	60	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P82	Male	65	T4aN1bM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	4
P83	Male	71	T4aN2aM0	III	Right	Mucinous Adenoca.	Poor	Yes	Yes	pMMR	Yes	NA
P84	Female	45	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P85	Male	68	T3N0M0	II	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P86	Female	47	T1N0M0	I	Left	Adenoca.	Moderated	Yes	No	pMMR	No	NA
P87	Male	59	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P88	Female	34	T3N0M0	II	Left	Mucinous Adenoca.	Moderated	No	No	dMMR	No	NA
P89	Male	74	T2N2aM0	III	Left	Adenoca.	Poor	Yes	No	pMMR	Yes	NA
P90	Female	74	T3N0M0	II	Right	Adenoca.	Poor	No	Yes	dMMR	Yes	6
P91	Male	68	T3N1cM0	III	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P92	Male	70	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P93	Female	72	T2N0M0	I	Left	Adenoca.	Well	No	No	pMMR	No	NA
P94	Male	67	T1N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P95	Male	44	T3N0M0	II	Left	Adenoca.	Well	No	No	pMMR	No	NA
P96	Male	56	T3N0M0	II	Right	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P97	Female	76	T4aN2bM0	III	Right	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	8
P98	Male	65	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P99	Male	57	T3N1bM0	III	Right	Adenoca.	Moderated	Yes	No	NA	Yes	NA
P100	Female	55	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA

**eTable 1. Clinicopathologic Patient Characteristics**

Patient ID	Gender	Age	TNM	Stage	Primary tumor site	Histological type	Tumors differentiation	Vascular invasion	Perineural invasion	MMR Status	ACT	Relapse after OP month
P101	Male	63	T3N0M0	II	Left	Adenoca.	Moderated	No	Yes	pMMR	Yes	NA
P102	Male	63	T3N1cM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	10
P103	Male	48	T2N1aM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	11
P104	Male	68	T2N0M0	I	Left	Adenoca.	Moderated	Yes	No	pMMR	No	NA
P105	Female	56	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P106	Female	66	T4aN0M0	II	Left	Mucinous Adenoca.	Poor	No	No	pMMR	Yes	NA
P107	Female	44	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P108	Male	60	T2N1aM0	III	Right	Adenoca.	Poor	No	No	pMMR	Yes	NA
P109	Female	61	T3N2bM0	III	Right	Mucinous Adenoca.	Poor	Yes	Yes	pMMR	Yes	15
P110	Male	68	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P111	Male	56	T3N1aM0	III	Right	Adenoca.	Moderated	No	Yes	pMMR	Yes	NA
P112	Female	60	T3N0M0	II	Right	Adenoca.	Moderated	No	No	pMMR	No	NA
P113	Female	72	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P114	Female	57	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P115	Male	49	T1N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	17
P116	Male	65	T4aN1cM0	III	Left	SRCC	Poor	Yes	No	pMMR	Yes	4
P117	Female	53	T3N0M0	II	Right	Adenoca.	Poor	No	No	pMMR	Yes	NA
P118	Female	56	T4bN2bM0	III	Right	SRCC	Poor	Yes	Yes	pMMR	Yes	7
P119	Female	36	T2N2aM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P120	Male	43	T3N0M0	II	Left	Adenoca.	Moderated	No	Yes	dMMR	Yes	NA
P121	Female	30	T3N0M0	II	Left	Adenoca.	Moderated	No	Yes	pMMR	Yes	NA
P122	Male	52	T4bN1bM0	III	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P123	Male	68	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P124	Male	69	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	No	9
P125	Male	77	T3N1aM0	III	Left	Adenoca.	Poor	Yes	No	pMMR	No	NA

**eTable 1. Clinicopathologic Patient Characteristics**

Patient ID	Gender	Age	TNM	Stage	Primary tumor site	Histological type	Tumors differentiation	Vascular invasion	Perineural invasion	MMR Status	ACT	Relapse after OP month
P126	Male	63	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	17
P127	Female	34	T2N1aM0	III	Left	Adenoca.	Poor	No	No	pMMR	Yes	NA
P128	Male	60	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P129	Male	79	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P130	Male	40	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P131	Male	55	T1N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P132	Male	33	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P133	Male	51	T3N1bM0	III	Left	Adenoca.	Moderated	No	Yes	pMMR	Yes	NA
P134	Male	52	T3N0M0	II	Right	Adenoca.	Moderated	No	No	pMMR	No	NA
P135	Female	58	T3N1aM0	III	Right	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P136	Male	60	T4aN1bM0	III	Right	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P137	Female	40	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P138	Female	73	T3N0M0	II	Right	Adenoca.	Moderated	No	No	NA	No	NA
P139	Male	60	T3N0M0	II	Left	Adenoca.	Moderated	No	Yes	NA	Yes	NA
P140	Male	67	T4aN1bM0	III	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P141	Male	75	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P142	Male	62	T4bN2bM0	III	Left	Adenoca.	Poor	No	No	pMMR	Yes	NA
P143	Male	73	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P144	Female	62	T2N1aM0	III	Right	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P145	Male	76	T1N0M0	I	Left	Adenoca.	Well	No	No	NA	No	NA
P146	Female	76	T3N1bM0	III	Left	Adenoca.	Poor	Yes	No	pMMR	Yes	NA
P147	Female	65	T4aN2bM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P148	Female	45	T1N0M0	I	Left	Adenoca.	Well	No	No	pMMR	No	NA
P149	Male	66	T4bN1cM0	III	Left	Adenoca.	Moderated	No	No	pMMR	Yes	14
P150	Male	68	T4aN2aM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA

**eTable 1. Clinicopathologic Patient Characteristics**

Patient ID	Gender	Age	TNM	Stage	Primary tumor site	Histological type	Tumors differentiation	Vascular invasion	Perineural invasion	MMR Status	ACT	Relapse after OP month
P151	Male	51	T3N0M0	II	Right	Mucinous Adenoca.	Poor	No	No	dMMR	Yes	NA
P152	Male	56	T3N0M0	II	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P153	Female	50	T3N1aM0	III	Right	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P154	Male	58	T3N1bM0	III	Left	Adenoca.	Moderated	No	Yes	pMMR	Yes	NA
P155	Male	56	T3N1aM0	III	Left	Adenoca.	Poor	Yes	Yes	pMMR	Yes	9
P156	Female	69	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P157	Male	51	T3N1bM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P158	Female	53	T3N1aM0	III	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P159	Male	71	T1N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P160	Male	68	T3N1bM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P161	Male	59	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P162	Female	67	T3N0M0	II	Left	Mucinous Adenoca.	Poor	No	No	pMMR	Yes	4
P163	Female	61	T3N1cM0	III	Left	Adenoca.	Moderated	No	Yes	pMMR	Yes	NA
P164	Male	68	T3N1aM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P165	Male	54	T3N1cM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P166	Male	70	T3N0M0	II	Right	Adenoca.	Poor	No	No	pMMR	Yes	NA
P167	Female	47	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P168	Male	57	T3N2aM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P169	Male	53	T4aN0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P170	Female	65	T3N1cM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P171	Female	65	T4aN2aM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P172	Female	71	T3N0M0	II	Left	Adenoca.	Moderated	No	Yes	pMMR	Yes	NA
P173	Male	67	T3N0M0	II	Left	Adenoca.	Moderated	No	Yes	pMMR	Yes	NA
P174	Male	64	T3N1bM0	III	Right	Mucinous Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P175	Female	59	T1N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA

**eTable 1. Clinicopathologic Patient Characteristics**

Patient ID	Gender	Age	TNM	Stage	Primary tumor site	Histological type	Tumors differentiation	Vascular invasion	Perineural invasion	MMR Status	ACT	Relapse after OP month
P176	Male	56	T4aN2aM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P177	Male	71	T3N1aM0	III	Left	Adenoca.	Poor	Yes	No	pMMR	Yes	NA
P178	Male	65	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P179	Male	40	T3N2bM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	4
P180	Male	61	T1N0M0	I	Right	Adenoca.	Well	No	No	pMMR	No	NA
P181	Male	50	T3N2aM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P182	Male	49	T3N1bM0	III	Left	SRCC	Poor	Yes	Yes	pMMR	Yes	NA
P183	Male	59	T1N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P184	Male	55	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P185	Female	50	T3N2bM0	III	Right	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	10
P186	Male	55	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P187	Male	63	T3N2bM0	III	Left	Adenoca.	Poor	Yes	No	pMMR	Yes	NA
P188	Female	64	T3N1bM0	III	Left	Adenoca.	Moderated	No	Yes	pMMR	Yes	4
P189	Male	61	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P190	Female	71	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P191	Male	69	T3N1bM0	III	Right	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P192	Male	50	T3N1cM0	III	Left	Mucinous Adenoca.	Poor	Yes	Yes	pMMR	Yes	14
P193	Male	51	T4aN2bM0	III	Left	Mucinous Adenoca.	Poor	Yes	Yes	pMMR	Yes	NA
P194	Male	66	T1N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P195	Male	40	T3N0M0	II	Left	Mucinous Adenoca.	Poor	Yes	No	pMMR	Yes	NA
P196	Male	49	T3N1bM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P197	Male	52	T3N0M0	II	Right	Mucinous Adenoca.	Poor	No	No	pMMR	Yes	NA
P198	Female	52	T3N2bM0	III	Right	Adenoca.	Poor	Yes	No	pMMR	Yes	NA
P199	Male	61	T1N0M0	I	Left	Adenoca.	Well	No	No	NA	No	NA
P200	Male	57	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	13

**eTable 1. Clinicopathologic Patient Characteristics**

Patient ID	Gender	Age	TNM	Stage	Primary tumor site	Histological type	Tumors differentiation	Vascular invasion	Perineural invasion	MMR Status	ACT	Relapse after OP month
P201	Male	66	T2N0M0	I	Left	Adenoca.	Well	No	No	pMMR	No	NA
P202	Male	53	T2N0M0	I	Left	Mucinous Adenoca.	Poor	No	No	pMMR	No	NA
P203	Male	70	T3N1bM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P204	Female	66	T3N2aM0	III	Left	Mucinous Adenoca.	Poor	Yes	Yes	pMMR	Yes	NA
P205	Male	75	T3N0M0	II	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P206	Male	69	T4aN1bM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	14
P207	Female	65	T4aN0M0	II	Right	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P208	Male	67	T3N0M0	II	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P209	Male	73	T1N0M0	I	Left	Adenoca.	Well	No	No	pMMR	No	NA
P210	Female	66	T3N1aM0	III	Left	Adenoca.	Poor	Yes	No	pMMR	Yes	NA
P211	Male	67	T2N0M0	I	Left	Adenoca.	Well	No	No	pMMR	No	NA
P212	Female	40	T4aN1bM0	III	Right	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P213	Female	60	T2N1bM0	III	Left	Adenoca.	Poor	Yes	Yes	pMMR	Yes	NA
P214	Female	52	T3N2aM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P215	Male	78	T4bN0M0	II	Right	Adenoca.	Poor	No	Yes	pMMR	Yes	NA
P216	Male	60	T1N0M0	I	Left	Adenoca.	Well	No	No	pMMR	No	NA
P217	Male	71	T2N0M0	I	Right	Adenoca.	Poor	No	No	pMMR	No	NA
P218	Male	56	T3N1cM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P219	Female	61	T4aN0M0	II	Right	Adenoca.	Well	No	No	pMMR	Yes	NA
P220	Male	62	T1N0M0	I	Left	Adenoca.	Well	No	No	NA	No	NA
P221	Female	51	T3N1bM0	III	Left	Adenoca.	Well	Yes	Yes	pMMR	Yes	14
P222	Male	52	T2N0M0	I	Left	Mucinous Adenoca.	Moderated	Yes	No	pMMR	No	NA
P223	Female	57	T3N1bM0	III	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P224	Male	69	T3N0M0	II	Right	Mucinous Adenoca.	Poor	No	No	dMMR	No	NA
P225	Male	40	T2N0M0	I	Left	SRCC	Poor	No	No	dMMR	No	NA

**eTable 1. Clinicopathologic Patient Characteristics**

Patient ID	Gender	Age	TNM	Stage	Primary tumor site	Histological type	Tumors differentiation	Vascular invasion	Perineural invasion	MMR Status	ACT	Relapse after OP month
P226	Female	68	T3N2bM0	III	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P227	Male	61	T3N1bM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P228	Male	45	T2N1aM0	III	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P229	Male	54	T2N1bM0	III	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P230	Male	65	T2N0M0	I	Left	Adenoca.	Moderated	Yes	No	pMMR	No	NA
P231	Male	58	T3N1cM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P232	Male	64	T3N0M0	II	Right	Mucinous Adenoca.	Poor	No	No	dMMR	No	NA
P233	Female	55	T4aN1bM0	III	Left	Mucinous Adenoca.	Poor	No	No	pMMR	Yes	NA
P234	Male	58	T3N1cM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P235	Female	43	T1N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P236	Male	64	T2N0M0	I	Left	Mucinous Adenoca.	Poor	No	No	pMMR	No	NA
P237	Female	51	T1N0M0	I	Left	Adenoca.	Well	No	No	NA	No	NA
P238	Female	63	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P239	Male	65	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P240	Male	72	T3N1aM0	III	Right	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P241	Male	57	T3N1aM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P242	Male	64	T4aN2aM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P243	Male	75	T3N1bM0	III	Left	Mucinous Adenoca.	Moderated	No	No	pMMR	Yes	NA
P244	Male	73	T3N1bM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P245	Male	73	T3N2aM0	III	Left	Mucinous Adenoca.	Poor	No	No	dMMR	Yes	NA
P246	Female	51	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P247	Female	29	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P248	Male	65	T2N1aM0	III	Left	Mucinous Adenoca.	Moderated	Yes	No	pMMR	Yes	8
P249	Male	57	T3N0M0	II	Right	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P250	Female	73	T2N1bM0	III	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA

**eTable 1. Clinicopathologic Patient Characteristics**

Patient ID	Gender	Age	TNM	Stage	Primary tumor site	Histological type	Tumors differentiation	Vascular invasion	Perineural invasion	MMR Status	ACT	Relapse after OP month
P251	Male	53	T3N0M0	II	Left	Adenoca.	Moderated	No	Yes	pMMR	Yes	NA
P252	Male	58	T3N0M0	II	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P253	Female	64	T3N0M0	II	Right	Adenoca.	Poor	No	No	pMMR	Yes	NA
P254	Female	68	T2N0M0	I	Left	Mucinous Adenoca.	Well	No	No	pMMR	No	NA
P255	Male	67	T3N0M0	II	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P256	Female	58	T4bN1aM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P257	Male	70	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P258	Female	55	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P259	Female	66	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P260	Female	68	T3N0M0	II	Left	Adenoca.	Moderated	No	Yes	pMMR	Yes	5
P261	Male	51	T2N1bM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P262	Female	72	T3N2aM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	8
P263	Male	52	T3N0M0	II	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P264	Male	52	T3N0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P265	Male	58	T2N0M0	I	Left	Adenoca.	Moderated	No	No	dMMR	No	NA
P266	Female	50	T3N0M0	II	Right	Adenoca.	Moderated	No	No	pMMR	Yes	NA
P267	Male	52	T2N0M0	I	Left	Adenoca.	Poor	No	No	pMMR	No	NA
P268	Female	75	T2N1bM0	III	Left	Mucinous Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P269	Male	57	T4aN2aM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P270	Female	70	T2N0M0	I	Left	Adenoca.	Moderated	No	No	pMMR	No	NA
P271	Female	51	T4aN1cM0	III	Right	Adenoca.	Moderated	Yes	No	pMMR	Yes	NA
P272	Male	61	T3N0M0	II	Left	Adenoca.	Poor	Yes	Yes	pMMR	Yes	NA
P273	Male	58	T2N2aM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	NA
P274	Male	44	T3N1bM0	III	Left	Adenoca.	Poor	Yes	Yes	pMMR	Yes	4
P275	Female	52	T2N0M0	I	Left	Adenoca.	Well	No	No	pMMR	No	NA



**eTable 1. Clinicopathologic Patient Characteristics**

Patient ID	Gender	Age	TNM	Stage	Primary tumor site	Histological type	Tumors differentiation	Vascular invasion	Perineural invasion	MMR Status	ACT	Relapse after OP month
P276	Male	65	T3N0M0	II	Right	Adenoca.	Moderated	NA	NA	NA	Yes	NA
P277	Female	70	T4N1M0	III	Left	Adenoca.	Moderated	Yes	Yes	NA	Yes	NA
P278	Female	67	T3N0M0	II	Right	Adenoca.	Moderated	NA	NA	NA	Yes	NA
P279	Female	49	T4N0M0	II	Left	Adenoca.	Moderated	No	Yes	NA	No	NA
P280	Female	69	T1N0M0	I	Left	NA	NA	NA	NA	NA	No	NA
P281	Female	63	T3N1M0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	No	NA
P282	Female	67	T4N0M0	II	Left	Adenoca.	Moderated	NA	NA	NA	No	NA
P283	Female	58	T4N0M0	II	Left	Adenoca.	Moderated	Yes	NA	NA	Yes	NA
P284	Female	45	T2N1aM0	III	Left	Adenoca.	Moderated	Yes	No	NA	Yes	NA
P285	Male	75	T3N0M0	II	Right	Mucinous Adenoca.	Moderated	No	Yes	dMMR	Yes	NA
P286	Male	72	T4N0M0	II	Left	Adenoca.	Moderated	NA	NA	pMMR	Yes	NA
P287	Male	64	T4N0M0	II	Left	Adenoca.	Moderated	No	No	NA	No	6
P288	Female	63	T4N1M0	III	Left	Adenoca.	Moderated	Yes	No	NA	Yes	NA
P289	Female	78	T4N2M0	III	Right	Mucinous Adenoca.	Moderated	Yes	Yes	pMMR	No	NA
P290	Female	71	T1N1M0	III	Left	Adenoca.	Moderated	No	No	NA	Yes	NA
P291	Male	62	T4N1M0	III	Left	Adenoca.	Moderated	No	No	NA	Yes	NA
P292	Male	79	T4N1M0	III	Left	Mucinous Adenoca.	Poor	Yes	Yes	pMMR	No	5
P293	Male	60	T4aN0M0	II	Left	Adenoca.	Moderated	No	No	pMMR	Yes	3
P294	Female	58	T3N1cM0	III	Left	Adenoca.	Poor	Yes	Yes	pMMR	Yes	3
P295	Male	48	T3N1bM0	III	Left	Adenoca.	Poor	Yes	No	pMMR	Yes	3
P296	Male	66	T4aN1bM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	3
P297	Male	66	T4aN2bM0	III	Left	Adenoca.	Moderated	Yes	Yes	pMMR	Yes	3
P298	Male	51	T3N1aM0	III	Left	Mucinous Adenoca.	Moderated	Yes	Yes	pMMR	Yes	3
P299	Female	54	T3N1cM0	III	Left	Adenoca.	Moderated	Yes	No	pMMR	Yes	3

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MMR: mismatch repair; ACT: adjuvant chemotherapy; OP: operation; Adenoca.: Adenocarcinoma; Mucinous adenoca.: Mucinous adenocarcinoma; SRCC: Signet-ring cell carcinoma.

eTable 2. Characteristics of Enrolled Patients

Characteristics	All patients (n=299)	Recurrence patients (n=55)	Recurrence-free patients (n=244)
<b>Gender</b>			
Male	186 (62.2%)	35 (63.6%)	151 (61.9%)
Female	113 (37.8%)	20 (36.4%)	93 (38.1%)
<b>Age, years</b>			
Mean (SD)	60.1 (10.3)	60.4 (10.5)	60.1 (10.3)
Median [Min, Max]	61.0 [29.0, 80.0]	63.0 [37.0, 80.0]	60.0 [29.0, 80.0]
<b>Location</b>			
Left	228 (76.3%)	42 (76.4%)	186 (76.2%)
Right	54 (18.1%)	11 (20.0%)	43 (17.6%)
Unknown	17 (5.7%)	2 (3.6%)	15 (6.1%)
<b>Histological type</b>			
Adenoca.	242 (80.9%)	41 (74.5%)	201 (82.4%)
Other (Mucinous Adenoca. or SRCC)	40 (13.4%)	12 (21.8%)	28 (11.5%)
Unknown	17 (5.7%)	2 (3.6%)	15 (6.1%)
<b>Stage</b>			
I	64 (21.4%)	6 (10.9%)	58 (23.8%)
II	98 (32.8%)	11 (20.0%)	87 (35.7%)
III	137 (45.8%)	38 (69.1%)	99 (40.6%)

SD: standard deviation; Min: minimum; Max: maximum; Adenoca.: adenocarcinoma; SRCC: Signet-ring cell carcinoma.

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P1	0.0	positive	positive	negative	positive	negative	negative	positive
P1	0.7	positive	positive	positive	positive	negative	positive	positive
P1	6.9	negative	positive	negative	negative	negative	negative	positive
P1	16.3	negative	negative	negative	negative	negative	negative	negative
P2	0.0	positive	positive	positive	positive	positive	positive	positive
P2	1.0	positive	positive	positive	positive	positive	positive	positive
P3	0.0	positive	negative	negative	negative	negative	negative	positive
P3	0.8	positive	negative	negative	negative	negative	negative	positive
P3	7.9	negative	negative	negative	negative	negative	negative	negative
P4	0.0	positive	negative	negative	positive	positive	negative	positive
P4	1.0	negative	negative	negative	positive	negative	positive	positive
P5	0.0	positive	negative	positive	positive	positive	positive	positive
P5	0.6	positive	negative	positive	positive	negative	positive	positive
P6	0.0	positive	positive	positive	positive	negative	negative	positive
P6	0.8	positive	negative	negative	negative	negative	negative	positive
P7	0.0	positive	negative	negative	negative	positive	negative	positive
P7	0.7	negative	negative	negative	negative	negative	negative	negative
P7	7.7	negative	negative	negative	negative	negative	negative	negative
P7	11.0	negative	negative	negative	negative	negative	negative	negative
P7	16.8	negative	negative	negative	negative	negative	negative	negative
P7	19.9	negative	negative	positive	negative	negative	negative	positive
P7	23.3	negative	negative	negative	negative	negative	negative	negative
P8	0.0	positive	positive	negative	negative	positive	positive	positive
P8	0.6	negative	negative	negative	negative	negative	negative	negative
P9	0.0	positive	negative	negative	negative	negative	negative	positive
P9	0.6	negative	negative	negative	negative	negative	negative	negative
P9	7.2	negative	negative	negative	negative	negative	negative	negative
P9	11.3	negative	negative	negative	negative	negative	negative	negative
P9	15.1	negative	negative	negative	negative	negative	negative	negative
P9	19.0	negative	negative	negative	negative	negative	negative	negative
P10	0.0	positive	positive	negative	negative	negative	negative	positive
P10	0.7	negative	negative	negative	negative	negative	negative	negative
P10	8.4	negative	negative	negative	negative	negative	negative	negative
P10	14.3	negative	negative	positive	negative	negative	negative	positive
P11	0.0	positive	negative	negative	negative	positive	negative	positive
P11	0.7	negative	negative	negative	negative	negative	negative	negative
P11	6.8	negative	negative	negative	negative	negative	negative	negative
P12	0.0	positive	positive	negative	positive	negative	negative	positive
P12	0.6	negative	negative	negative	negative	positive	negative	positive

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P12	6.4	negative	negative	negative	negative	negative	negative	negative
P12	12.7	negative	negative	negative	negative	negative	negative	negative
P12	15.7	negative	negative	negative	negative	negative	negative	negative
P12	19.7	negative	negative	positive	positive	positive	positive	positive
P12	23.0	negative	negative	negative	negative	positive	negative	positive
P13	0.0	negative	negative	negative	negative	negative	positive	positive
P13	0.6	negative	negative	negative	negative	negative	negative	negative
P13	5.0	negative	negative	negative	negative	negative	negative	negative
P13	8.1	negative	negative	negative	negative	negative	negative	negative
P13	12.1	negative	negative	negative	negative	negative	negative	negative
P13	15.5	negative	negative	negative	negative	negative	negative	negative
P13	22.1	negative	negative	negative	negative	negative	negative	negative
P14	0.0	positive	negative	negative	negative	negative	negative	positive
P14	0.6	negative	negative	negative	negative	negative	negative	negative
P14	6.2	negative	negative	negative	negative	negative	negative	negative
P14	10.0	negative	negative	negative	negative	negative	negative	negative
P14	14.0	negative	negative	negative	positive	negative	negative	positive
P15	0.0	negative	negative	negative	negative	negative	negative	negative
P15	0.7	negative	negative	negative	negative	negative	negative	negative
P15	7.7	negative	negative	negative	negative	negative	negative	negative
P15	10.5	negative	negative	negative	negative	negative	negative	negative
P15	14.5	negative	negative	negative	negative	negative	negative	negative
P15	16.4	negative	negative	negative	negative	negative	negative	negative
P15	19.4	negative	negative	negative	negative	negative	negative	negative
P15	22.2	negative	negative	negative	negative	positive	negative	positive
P16	0.0	positive	positive	positive	positive	positive	positive	positive
P16	0.7	positive	positive	positive	positive	positive	positive	positive
P17	0.0	positive	positive	positive	positive	positive	positive	positive
P17	0.6	negative	negative	negative	negative	negative	negative	negative
P17	4.4	negative	negative	negative	negative	negative	negative	negative
P17	7.2	negative	negative	negative	negative	negative	negative	negative
P17	11.1	negative	negative	negative	negative	negative	negative	negative
P17	13.5	negative	negative	negative	negative	negative	negative	negative
P18	0.0	negative	negative	positive	negative	negative	negative	positive
P18	1.1	negative	negative	negative	negative	negative	negative	negative
P18	4.8	negative	negative	negative	negative	negative	negative	negative
P18	7.5	negative	negative	negative	negative	negative	negative	negative
P18	13.0	negative	negative	negative	negative	negative	negative	negative
P18	15.5	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P18	19.3	negative	negative	negative	negative	negative	negative	negative
P19	0.0	positive	positive	positive	positive	positive	positive	positive
P19	0.7	positive	positive	positive	positive	negative	positive	positive
P19	4.5	negative	negative	negative	negative	negative	negative	negative
P19	7.0	positive	negative	negative	negative	negative	positive	positive
P19	12.2	positive	negative	negative	negative	negative	negative	positive
P20	0.0	positive	positive	positive	positive	positive	negative	positive
P20	1.0	negative	negative	negative	positive	positive	positive	positive
P21	0.0	positive	negative	negative	positive	negative	negative	positive
P21	0.7	negative	negative	negative	negative	negative	negative	negative
P21	12.3	negative	negative	negative	negative	negative	negative	negative
P22	0.0	negative	negative	negative	negative	negative	negative	negative
P22	0.9	negative	negative	negative	negative	negative	negative	negative
P22	4.6	negative	negative	negative	negative	negative	negative	negative
P22	7.4	negative	negative	negative	negative	negative	negative	negative
P22	11.2	negative	negative	negative	negative	negative	negative	negative
P23	0.0	positive	positive	positive	positive	negative	positive	positive
P23	0.7	negative	negative	negative	positive	negative	negative	positive
P23	3.9	negative	negative	negative	negative	negative	negative	negative
P23	7.0	negative	negative	negative	negative	negative	positive	positive
P23	10.8	negative	negative	negative	negative	negative	negative	negative
P23	13.6	negative	negative	negative	negative	negative	negative	negative
P24	0.0	negative	negative	negative	negative	negative	negative	negative
P24	0.7	negative	negative	negative	negative	negative	negative	negative
P25	0.0	positive	positive	positive	positive	positive	positive	positive
P25	0.7	negative	negative	negative	negative	negative	negative	negative
P25	5.2	negative	negative	negative	negative	negative	negative	negative
P25	6.6	negative	negative	negative	negative	negative	negative	negative
P25	11.4	negative	negative	negative	negative	negative	negative	negative
P26	0.0	positive	negative	negative	negative	negative	negative	positive
P26	0.8	negative	negative	negative	negative	negative	negative	negative
P26	3.9	negative	negative	negative	negative	negative	negative	negative
P27	0.0	positive	positive	negative	negative	negative	negative	positive
P27	0.8	positive	positive	negative	negative	negative	negative	positive
P27	12.5	negative	negative	negative	negative	negative	negative	negative
P27	18.3	negative	negative	negative	negative	negative	negative	negative
P28	0.0	positive	positive	positive	negative	positive	negative	positive
P28	0.8	positive	negative	negative	negative	negative	negative	positive
P28	4.3	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P28	13.1	negative	negative	negative	negative	negative	negative	negative
P28	17.0	negative	negative	negative	negative	negative	negative	negative
P29	0.0	negative	negative	positive	negative	negative	negative	positive
P29	0.8	positive	negative	negative	negative	negative	negative	positive
P29	4.8	negative	negative	negative	negative	negative	negative	negative
P29	8.1	negative	negative	negative	negative	negative	negative	negative
P29	13.1	negative	negative	negative	negative	negative	negative	negative
P29	16.0	negative	negative	negative	negative	negative	negative	negative
P29	21.4	negative	negative	negative	negative	negative	negative	negative
P30	0.0	positive	positive	positive	positive	negative	negative	positive
P30	0.7	negative	negative	negative	negative	negative	negative	negative
P30	7.7	negative	negative	negative	negative	negative	negative	negative
P30	12.4	negative	negative	negative	negative	negative	negative	negative
P30	15.8	negative	negative	negative	negative	negative	negative	negative
P30	19.9	negative	negative	negative	negative	negative	negative	negative
P31	0.0	negative	negative	negative	negative	positive	negative	positive
P31	1.2	negative	negative	negative	negative	positive	negative	positive
P31	5.3	negative	negative	negative	negative	negative	negative	negative
P31	7.3	negative	negative	negative	negative	positive	negative	positive
P31	10.6	negative	negative	negative	negative	negative	negative	negative
P31	15.0	negative	negative	negative	negative	negative	negative	negative
P31	18.6	negative	negative	negative	negative	positive	negative	positive
P32	0.0	positive	positive	positive	positive	positive	positive	positive
P32	1.0	negative	positive	negative	negative	negative	negative	positive
P32	4.5	negative	negative	negative	negative	negative	negative	negative
P32	6.8	negative	positive	negative	negative	negative	positive	positive
P33	0.0	positive	positive	positive	positive	positive	positive	positive
P33	0.7	positive	positive	positive	positive	positive	positive	positive
P33	4.7	positive	positive	positive	positive	negative	positive	positive
P34	0.0	negative	negative	negative	negative	negative	negative	negative
P34	0.6	negative	negative	negative	negative	negative	negative	negative
P34	4.5	negative	negative	negative	negative	negative	negative	negative
P34	6.7	negative	negative	negative	negative	negative	negative	negative
P34	10.7	positive	positive	negative	negative	negative	negative	positive
P34	13.3	negative	negative	negative	negative	negative	negative	negative
P35	0.0	negative	negative	positive	negative	negative	negative	positive
P35	0.9	negative	negative	negative	negative	positive	negative	positive
P35	4.8	negative	negative	negative	negative	negative	negative	negative
P35	7.9	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P35	11.8	negative	negative	negative	negative	negative	negative	negative
P35	15.4	negative	negative	negative	negative	negative	positive	positive
P36	0.0	negative	negative	negative	negative	negative	negative	negative
P36	0.6	negative	negative	negative	negative	negative	negative	negative
P37	0.0	negative	negative	negative	negative	negative	negative	negative
P37	0.9	negative	negative	negative	negative	negative	negative	negative
P37	4.6	negative	negative	negative	negative	negative	negative	negative
P37	6.9	negative	negative	negative	negative	negative	negative	negative
P37	13.0	negative	negative	negative	negative	negative	negative	negative
P37	17.9	negative	negative	negative	negative	negative	negative	negative
P38	0.0	negative	negative	negative	negative	negative	positive	positive
P38	1.1	negative	negative	negative	negative	negative	negative	negative
P38	7.2	negative	negative	negative	negative	negative	negative	negative
P39	0.0	negative	negative	negative	negative	negative	negative	negative
P39	0.9	negative	negative	negative	negative	negative	negative	negative
P39	4.4	negative	negative	negative	negative	negative	negative	negative
P39	7.4	negative	negative	negative	negative	negative	negative	negative
P39	12.6	negative	negative	negative	negative	negative	negative	negative
P39	15.7	negative	negative	negative	negative	negative	negative	negative
P40	0.0	positive	negative	negative	negative	negative	negative	positive
P40	0.7	positive	negative	negative	negative	negative	negative	positive
P40	4.2	negative	negative	negative	negative	negative	negative	negative
P41	0.0	positive	positive	positive	positive	positive	negative	positive
P41	2.1	negative	negative	negative	negative	negative	negative	negative
P41	4.4	negative	negative	negative	negative	negative	negative	negative
P41	11.9	negative	negative	negative	negative	negative	negative	negative
P41	15.9	negative	negative	negative	negative	negative	negative	negative
P42	0.0	positive	negative	negative	negative	negative	negative	positive
P42	0.8	negative	negative	negative	negative	negative	negative	negative
P43	0.0	positive	positive	positive	negative	positive	negative	positive
P43	0.9	negative	negative	negative	negative	negative	negative	negative
P43	11.4	negative	negative	negative	negative	negative	negative	negative
P44	0.0	positive	positive	negative	negative	positive	negative	positive
P44	0.8	positive	negative	negative	positive	negative	negative	positive
P44	6.9	negative	negative	negative	negative	positive	negative	positive
P45	0.0	negative	negative	negative	negative	negative	negative	negative
P45	0.7	negative	negative	negative	negative	negative	negative	negative
P45	3.7	negative	negative	negative	positive	negative	negative	positive
P45	6.5	negative	negative	negative	negative	negative	negative	negative



**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P45	12.3	negative	negative	negative	negative	negative	negative	negative
P45	17.9	negative	negative	negative	negative	negative	negative	negative
P46	0.0	positive	negative	positive	negative	negative	negative	positive
P46	0.7	negative	negative	negative	negative	negative	negative	negative
P46	3.5	negative	negative	negative	negative	negative	negative	negative
P46	6.5	negative	negative	positive	negative	negative	negative	positive
P46	10.2	negative	negative	negative	negative	negative	negative	negative
P46	13.8	negative	negative	negative	negative	negative	negative	negative
P46	17.1	positive	negative	negative	negative	negative	negative	positive
P46	20.3	negative	negative	negative	negative	negative	negative	negative
P47	0.0	positive	positive	positive	positive	negative	negative	positive
P47	0.7	negative	negative	negative	negative	negative	negative	negative
P48	0.0	negative	negative	negative	negative	negative	negative	negative
P48	0.7	negative	negative	negative	negative	negative	negative	negative
P49	0.0	positive	positive	positive	negative	positive	negative	positive
P49	0.8	positive	negative	positive	positive	negative	negative	positive
P49	4.2	negative	negative	negative	negative	negative	negative	negative
P50	0.0	negative	negative	negative	negative	negative	positive	positive
P50	0.7	negative	negative	negative	negative	negative	negative	negative
P50	3.8	negative	negative	negative	negative	positive	negative	positive
P50	6.1	negative	negative	negative	negative	negative	negative	negative
P50	9.7	negative	negative	negative	negative	negative	negative	negative
P50	12.7	negative	negative	negative	negative	negative	negative	negative
P50	16.1	negative	negative	negative	negative	negative	negative	negative
P50	19.5	negative	negative	negative	negative	negative	negative	negative
P51	0.0	negative	negative	negative	negative	negative	negative	negative
P51	0.7	negative	negative	negative	negative	negative	negative	negative
P51	4.2	positive	positive	positive	positive	negative	positive	positive
P51	8.0	negative	negative	negative	negative	negative	negative	negative
P51	11.3	negative	negative	negative	negative	negative	negative	negative
P51	12.9	negative	negative	negative	negative	negative	negative	negative
P51	15.7	negative	negative	negative	positive	positive	negative	positive
P52	0.0	positive	positive	positive	negative	positive	negative	positive
P52	0.7	negative	negative	negative	negative	negative	negative	negative
P53	0.0	positive	negative	positive	positive	positive	negative	positive
P53	0.7	negative	negative	negative	negative	negative	negative	negative
P53	3.5	negative	negative	negative	negative	negative	negative	negative
P53	6.3	negative	negative	negative	negative	negative	negative	negative
P53	17.9	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P54	0.0	negative	negative	negative	negative	negative	negative	negative
P54	0.7	negative	negative	negative	negative	negative	negative	negative
P54	10.5	negative	negative	negative	negative	negative	negative	negative
P55	0.0	negative	negative	negative	negative	negative	negative	negative
P55	0.7	negative	negative	negative	negative	negative	negative	negative
P56	0.0	negative	negative	negative	negative	negative	negative	negative
P56	0.7	negative	negative	negative	negative	negative	negative	negative
P56	5.2	negative	negative	negative	negative	negative	negative	negative
P56	7.5	negative	negative	negative	negative	negative	negative	negative
P56	17.3	negative	negative	negative	negative	negative	negative	negative
P57	0.0	negative	negative	negative	negative	negative	negative	negative
P57	0.9	negative	negative	negative	negative	negative	negative	negative
P57	7.3	negative	negative	negative	negative	negative	negative	negative
P57	10.9	negative	negative	negative	negative	negative	negative	negative
P57	12.9	negative	negative	negative	negative	negative	negative	negative
P57	16.3	negative	negative	negative	negative	negative	negative	negative
P57	19.5	negative	negative	negative	negative	negative	negative	negative
P58	0.0	positive	positive	positive	positive	positive	positive	positive
P58	0.7	negative	negative	negative	negative	negative	negative	negative
P58	4.2	negative	negative	negative	negative	negative	negative	negative
P58	7.5	negative	negative	negative	negative	negative	negative	negative
P58	11.0	negative	negative	negative	negative	negative	negative	negative
P58	11.9	negative	negative	negative	negative	negative	negative	negative
P58	14.5	negative	negative	negative	negative	negative	negative	negative
P58	17.3	negative	negative	negative	negative	negative	negative	negative
P58	20.2	negative	negative	negative	negative	negative	negative	negative
P59	0.0	positive	negative	negative	positive	negative	negative	positive
P59	0.6	negative	negative	negative	negative	negative	negative	negative
P60	0.0	positive	positive	positive	positive	positive	positive	positive
P60	0.7	negative	negative	negative	negative	negative	negative	negative
P60	4.9	negative	negative	negative	negative	negative	negative	negative
P60	10.7	negative	negative	negative	negative	negative	negative	negative
P61	0.0	positive	negative	negative	negative	negative	negative	positive
P61	0.8	negative	negative	negative	negative	negative	negative	negative
P61	4.3	negative	negative	negative	negative	negative	negative	negative
P61	11.1	negative	negative	negative	negative	negative	negative	negative
P61	14.1	negative	negative	negative	negative	negative	negative	negative
P61	20.0	negative	negative	negative	negative	negative	negative	negative
P62	0.0	positive	positive	positive	positive	positive	positive	positive

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P62	1.0	positive	negative	positive	positive	negative	positive	positive
P63	0.0	negative	negative	negative	negative	negative	positive	positive
P63	0.7	negative	negative	negative	negative	negative	negative	negative
P64	0.0	positive	negative	negative	negative	negative	negative	positive
P64	0.7	negative	negative	negative	negative	negative	negative	negative
P64	3.7	negative	negative	negative	negative	positive	negative	positive
P64	5.8	negative	negative	negative	negative	negative	negative	negative
P64	11.4	negative	negative	negative	negative	negative	negative	negative
P65	0.0	negative	negative	negative	positive	negative	negative	positive
P65	0.7	negative	negative	negative	negative	negative	negative	negative
P65	10.6	negative	negative	negative	negative	negative	negative	negative
P65	13.5	negative	negative	negative	negative	negative	negative	negative
P65	17.0	negative	negative	negative	negative	negative	negative	negative
P65	19.8	negative	negative	negative	negative	negative	negative	negative
P66	0.0	positive	negative	positive	negative	positive	negative	positive
P66	1.1	negative	negative	negative	positive	negative	negative	positive
P67	0.0	positive	negative	positive	negative	negative	negative	positive
P67	6.8	negative	negative	negative	negative	negative	negative	negative
P68	0.0	positive	negative	positive	negative	negative	negative	positive
P68	7.3	negative	negative	negative	negative	negative	negative	negative
P68	10.9	negative	negative	negative	positive	negative	negative	positive
P68	14.9	negative	negative	negative	negative	negative	negative	negative
P68	18.9	negative	negative	negative	negative	negative	negative	negative
P69	0.0	positive	negative	negative	negative	negative	negative	positive
P69	7.2	negative	negative	negative	negative	positive	negative	positive
P69	10.7	negative	negative	negative	negative	negative	negative	negative
P69	15.9	negative	negative	negative	negative	negative	negative	negative
P70	0.0	positive	positive	positive	positive	positive	positive	positive
P70	1.6	negative	negative	negative	negative	negative	negative	negative
P70	11.1	negative	negative	negative	negative	negative	negative	negative
P70	16.4	negative	negative	negative	negative	negative	negative	negative
P70	20.0	negative	negative	negative	negative	negative	negative	negative
P71	0.0	negative	negative	negative	positive	negative	negative	positive
P71	1.1	negative	negative	negative	negative	negative	negative	negative
P71	5.6	negative	negative	negative	negative	negative	negative	negative
P71	11.2	negative	negative	negative	negative	negative	negative	negative
P72	0.0	positive	negative	negative	positive	negative	negative	positive
P72	0.9	negative	negative	negative	negative	negative	negative	negative
P72	5.1	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P72	7.4	negative	negative	negative	negative	negative	negative	negative
P73	0.0	negative	negative	negative	negative	negative	negative	negative
P73	1.1	negative	negative	negative	negative	negative	negative	negative
P73	3.9	negative	negative	negative	negative	negative	negative	negative
P73	6.9	negative	negative	positive	negative	negative	negative	positive
P73	10.7	negative	negative	positive	negative	negative	negative	positive
P73	13.2	negative	negative	negative	negative	negative	negative	negative
P73	16.2	negative	negative	negative	negative	negative	negative	negative
P73	18.8	negative	negative	negative	negative	negative	negative	negative
P74	0.0	positive	positive	positive	positive	positive	positive	positive
P74	1.0	negative	negative	negative	negative	negative	negative	negative
P74	5.2	negative	negative	negative	negative	negative	negative	negative
P74	10.0	negative	negative	negative	negative	negative	negative	negative
P74	15.3	negative	negative	negative	negative	negative	negative	negative
P75	0.0	positive	negative	negative	negative	negative	negative	positive
P75	0.9	negative	negative	negative	negative	positive	negative	positive
P75	3.7	negative	negative	negative	negative	negative	negative	negative
P75	11.2	negative	negative	negative	negative	negative	negative	negative
P75	13.5	negative	negative	negative	negative	negative	negative	negative
P75	16.9	negative	negative	negative	negative	negative	negative	negative
P75	19.4	negative	negative	negative	negative	negative	negative	negative
P76	0.0	positive	positive	positive	positive	positive	positive	positive
P76	1.1	negative	negative	negative	negative	negative	negative	negative
P76	5.5	negative	negative	negative	negative	negative	negative	negative
P76	8.9	negative	negative	negative	negative	negative	negative	negative
P76	13.1	negative	negative	negative	negative	negative	negative	negative
P76	20.0	positive	positive	negative	negative	negative	negative	positive
P77	0.0	negative	negative	negative	negative	negative	negative	negative
P77	0.9	negative	negative	positive	negative	negative	negative	positive
P77	3.3	negative	negative	negative	negative	negative	negative	negative
P77	6.7	negative	negative	negative	negative	negative	negative	negative
P77	10.5	negative	negative	negative	negative	negative	negative	negative
P77	13.7	negative	negative	negative	negative	negative	negative	negative
P77	16.8	negative	negative	negative	negative	negative	negative	negative
P77	19.8	negative	negative	negative	negative	negative	negative	negative
P78	0.0	negative	negative	negative	negative	negative	negative	negative
P78	0.9	negative	negative	negative	negative	negative	negative	negative
P78	3.9	negative	negative	negative	negative	negative	negative	negative
P78	7.0	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P78	11.0	negative	negative	negative	negative	negative	negative	negative
P78	16.5	negative	positive	negative	negative	negative	negative	positive
P79	0.0	negative	negative	negative	negative	negative	negative	negative
P79	1.5	negative	positive	negative	negative	negative	negative	positive
P79	3.9	negative	negative	negative	negative	negative	negative	negative
P80	0.0	positive	positive	negative	negative	negative	positive	positive
P80	1.1	negative	negative	negative	negative	negative	negative	negative
P80	10.5	negative	negative	negative	negative	negative	negative	negative
P80	14.0	negative	negative	negative	negative	negative	negative	negative
P80	17.3	negative	negative	negative	negative	negative	negative	negative
P81	0.0	negative	negative	negative	negative	negative	negative	negative
P81	1.2	negative	negative	negative	negative	negative	negative	negative
P81	4.5	negative	negative	negative	negative	negative	negative	negative
P81	6.7	negative	negative	negative	negative	negative	negative	negative
P81	12.6	negative	negative	negative	negative	negative	negative	negative
P81	18.9	negative	negative	negative	negative	negative	negative	negative
P82	0.0	positive	positive	positive	positive	positive	negative	positive
P82	1.0	positive	positive	positive	positive	positive	negative	positive
P83	0.0	positive	positive	positive	positive	positive	positive	positive
P83	0.9	negative	negative	negative	negative	negative	negative	negative
P84	0.0	positive	negative	negative	positive	negative	positive	positive
P84	0.9	negative	negative	negative	negative	negative	negative	negative
P84	15.2	negative	negative	negative	negative	negative	negative	negative
P85	0.0	positive	negative	negative	negative	negative	negative	positive
P85	0.7	negative	negative	negative	negative	negative	negative	negative
P86	0.0	negative	negative	negative	positive	negative	negative	positive
P86	0.7	positive	positive	negative	negative	negative	negative	positive
P87	0.0	negative	negative	negative	positive	negative	negative	positive
P87	0.8	negative	negative	negative	negative	negative	negative	negative
P87	3.4	negative	negative	negative	negative	negative	negative	negative
P87	6.7	negative	negative	negative	negative	negative	negative	negative
P87	10.6	negative	negative	negative	negative	negative	negative	negative
P87	15.5	negative	negative	negative	negative	negative	negative	negative
P88	0.0	positive	positive	positive	positive	negative	negative	positive
P88	0.6	negative	negative	negative	negative	negative	negative	negative
P88	5.8	negative	negative	negative	negative	negative	negative	negative
P88	11.3	negative	negative	negative	negative	negative	negative	negative
P88	19.3	negative	negative	negative	negative	negative	negative	negative
P89	0.0	negative	negative	negative	positive	negative	negative	positive

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P89	0.9	negative	negative	negative	negative	negative	negative	negative
P89	10.3	negative	negative	negative	negative	negative	negative	negative
P89	14.4	negative	negative	negative	negative	negative	negative	negative
P89	17.7	negative	negative	negative	negative	negative	negative	negative
P90	0.0	negative	negative	negative	positive	negative	positive	positive
P90	1.0	negative	negative	positive	negative	negative	negative	positive
P90	5.4	negative	negative	negative	negative	negative	negative	negative
P91	0.0	negative	negative	negative	positive	negative	negative	positive
P91	0.6	negative	negative	negative	negative	negative	negative	negative
P91	5.6	negative	negative	negative	negative	negative	negative	negative
P91	10.5	negative	negative	negative	negative	negative	negative	negative
P91	13.2	negative	negative	negative	negative	negative	negative	negative
P92	0.0	positive	negative	negative	positive	negative	negative	positive
P92	0.7	negative	negative	negative	negative	negative	negative	negative
P92	4.5	negative	negative	negative	negative	negative	negative	negative
P92	8.7	negative	negative	negative	positive	negative	negative	positive
P92	11.9	negative	negative	negative	negative	negative	positive	positive
P93	0.0	positive	negative	negative	positive	negative	positive	positive
P93	0.9	negative	negative	negative	negative	negative	negative	negative
P93	6.7	negative	negative	negative	negative	negative	negative	negative
P93	10.2	negative	negative	negative	negative	negative	negative	negative
P93	13.2	negative	negative	negative	negative	negative	negative	negative
P93	16.4	negative	negative	negative	negative	negative	negative	negative
P93	19.3	negative	negative	negative	negative	negative	negative	negative
P94	0.0	negative	negative	negative	positive	negative	positive	positive
P94	0.7	negative	negative	negative	negative	negative	negative	negative
P94	9.9	negative	negative	negative	negative	negative	negative	negative
P95	0.0	negative	negative	negative	negative	negative	negative	negative
P95	1.1	negative	negative	negative	negative	negative	negative	negative
P95	3.9	negative	negative	negative	negative	negative	negative	negative
P95	6.9	negative	negative	negative	negative	negative	negative	negative
P95	9.6	negative	negative	negative	negative	negative	negative	negative
P95	14.9	negative	negative	negative	negative	negative	negative	negative
P96	0.0	positive	negative	negative	positive	negative	positive	positive
P96	0.8	negative	negative	negative	negative	negative	negative	negative
P96	3.4	negative	negative	negative	negative	negative	negative	negative
P96	6.7	negative	negative	negative	negative	negative	negative	negative
P96	13.4	negative	negative	positive	negative	negative	negative	positive
P96	16.5	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P96	19.3	negative	negative	negative	negative	negative	negative	negative
P97	0.0	positive	positive	positive	positive	positive	positive	positive
P97	0.9	positive	positive	positive	positive	positive	positive	positive
P98	0.0	positive	negative	positive	positive	negative	positive	positive
P98	0.9	negative	negative	negative	negative	negative	negative	negative
P98	3.9	negative	negative	negative	negative	negative	negative	negative
P98	5.3	negative	negative	negative	negative	negative	negative	negative
P98	10.3	negative	negative	positive	negative	negative	negative	positive
P99	0.0	positive	negative	positive	positive	positive	positive	positive
P99	0.6	negative	negative	positive	negative	negative	negative	positive
P99	10.4	negative	negative	negative	negative	negative	negative	negative
P99	13.5	negative	negative	negative	negative	negative	negative	negative
P99	16.6	negative	negative	negative	negative	negative	negative	negative
P99	19.5	negative	negative	negative	negative	negative	negative	negative
P100	0.0	negative	negative	negative	positive	negative	negative	positive
P100	0.8	negative	negative	negative	negative	negative	negative	negative
P101	0.0	negative	negative	negative	positive	negative	negative	positive
P101	0.7	negative	negative	negative	negative	negative	negative	negative
P101	8.8	negative	negative	negative	negative	negative	negative	negative
P102	0.0	negative	negative	positive	positive	negative	negative	positive
P102	1.2	positive	positive	positive	negative	negative	negative	positive
P102	5.1	negative	negative	negative	negative	negative	negative	negative
P102	8.9	positive	positive	negative	negative	negative	negative	positive
P103	0.0	negative	negative	positive	positive	negative	negative	positive
P103	0.9	negative	negative	negative	negative	negative	negative	negative
P103	4.7	negative	negative	negative	negative	negative	negative	negative
P103	10.9	negative	positive	negative	negative	negative	negative	positive
P104	0.0	negative	negative	negative	negative	negative	negative	negative
P104	0.8	negative	negative	negative	negative	negative	negative	negative
P104	10.5	negative	negative	negative	negative	negative	negative	negative
P105	0.0	negative	negative	negative	positive	negative	negative	positive
P105	0.9	negative	negative	negative	negative	negative	negative	negative
P105	10.2	negative	negative	negative	negative	negative	negative	negative
P105	14.1	positive	negative	positive	negative	negative	negative	positive
P106	0.0	positive	negative	negative	negative	negative	positive	positive
P106	0.9	negative	negative	negative	negative	negative	negative	negative
P106	6.7	negative	negative	negative	negative	negative	negative	negative
P106	10.9	negative	negative	negative	negative	negative	negative	negative
P106	13.7	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P107	0.0	negative	negative	negative	negative	negative	negative	negative
P107	0.9	negative	negative	negative	negative	negative	negative	negative
P107	7.0	negative	negative	negative	negative	negative	negative	negative
P107	9.8	negative	negative	negative	negative	negative	negative	negative
P107	19.1	positive	positive	negative	negative	negative	negative	positive
P108	0.0	negative	negative	negative	negative	negative	negative	negative
P108	0.9	negative	negative	negative	negative	negative	negative	negative
P108	4.4	negative	negative	negative	negative	negative	negative	negative
P108	8.4	negative	negative	negative	negative	negative	negative	negative
P109	0.0	negative	negative	negative	positive	negative	negative	positive
P109	0.7	negative	negative	negative	negative	negative	negative	negative
P109	4.9	negative	negative	negative	negative	negative	negative	negative
P110	0.0	positive	positive	positive	positive	positive	positive	positive
P110	0.8	negative	negative	negative	negative	negative	negative	negative
P111	0.0	positive	positive	positive	positive	positive	positive	positive
P111	1.0	negative	negative	negative	negative	negative	negative	negative
P111	4.5	negative	negative	negative	negative	negative	negative	negative
P112	0.0	positive	positive	positive	positive	negative	positive	positive
P112	0.7	negative	negative	negative	negative	negative	negative	negative
P112	10.1	negative	negative	negative	negative	negative	negative	negative
P112	12.7	negative	negative	negative	negative	negative	negative	negative
P113	0.0	positive	negative	negative	negative	negative	negative	positive
P113	0.7	negative	negative	negative	negative	negative	negative	negative
P113	6.1	negative	negative	negative	negative	negative	negative	negative
P113	9.8	negative	negative	negative	negative	negative	negative	negative
P113	12.9	negative	negative	negative	negative	negative	negative	negative
P114	0.0	positive	positive	positive	negative	negative	negative	positive
P114	0.7	negative	negative	negative	negative	negative	negative	negative
P114	4.0	negative	negative	negative	negative	negative	negative	negative
P114	10.3	negative	negative	negative	negative	negative	negative	negative
P114	12.9	negative	negative	negative	negative	negative	negative	negative
P114	16.1	negative	negative	negative	negative	negative	negative	negative
P114	19.3	negative	negative	negative	negative	negative	negative	negative
P115	0.0	negative	negative	negative	positive	negative	negative	positive
P115	0.7	negative	positive	negative	negative	negative	negative	positive
P116	0.0	positive	negative	negative	negative	negative	negative	positive
P116	1.0	negative	negative	negative	negative	negative	negative	negative
P117	0.0	negative	negative	negative	negative	negative	negative	negative
P117	0.7	negative	negative	negative	negative	negative	negative	negative



**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P118	0.0	positive	positive	positive	positive	positive	negative	positive
P118	0.8	positive	positive	positive	positive	positive	negative	positive
P119	0.0	negative	negative	negative	negative	negative	positive	positive
P119	0.6	negative	negative	negative	negative	negative	negative	negative
P119	4.4	negative	negative	negative	negative	negative	negative	negative
P119	8.8	negative	negative	negative	negative	negative	negative	negative
P119	11.6	negative	negative	negative	negative	negative	negative	negative
P119	15.1	negative	negative	negative	negative	negative	negative	negative
P119	18.1	negative	negative	negative	negative	negative	negative	negative
P120	0.0	positive	positive	positive	positive	positive	positive	positive
P120	0.7	negative	negative	negative	negative	negative	negative	negative
P120	3.9	negative	negative	negative	negative	negative	negative	negative
P120	5.8	negative	negative	negative	negative	negative	negative	negative
P120	11.9	negative	negative	negative	negative	negative	negative	negative
P120	15.8	negative	negative	negative	negative	negative	negative	negative
P121	0.0	negative	negative	negative	negative	negative	negative	negative
P121	0.6	negative	negative	negative	negative	negative	negative	negative
P121	3.4	negative	negative	negative	negative	negative	negative	negative
P121	8.1	negative	negative	negative	negative	negative	negative	negative
P121	12.6	negative	negative	negative	negative	negative	negative	negative
P121	16.5	negative	negative	negative	negative	negative	negative	negative
P122	0.0	positive	positive	positive	positive	positive	positive	positive
P122	0.7	negative	negative	negative	negative	negative	negative	negative
P122	3.7	negative	positive	negative	negative	negative	negative	positive
P122	6.1	negative	negative	negative	negative	positive	negative	positive
P122	10.7	negative	negative	negative	negative	negative	negative	negative
P122	13.7	negative	negative	negative	negative	negative	negative	negative
P122	16.8	positive	positive	negative	negative	negative	negative	positive
P123	0.0	positive	negative	negative	negative	negative	positive	positive
P123	7.1	negative	negative	negative	negative	negative	negative	negative
P124	0.0	positive	positive	positive	positive	negative	negative	positive
P124	8.0	negative	negative	negative	negative	positive	negative	positive
P125	0.0	positive	positive	positive	positive	negative	positive	positive
P125	10.2	negative	negative	negative	negative	negative	negative	negative
P126	0.0	positive	negative	negative	negative	negative	negative	positive
P126	8.7	negative	negative	negative	negative	negative	negative	negative
P126	14.7	negative	negative	negative	positive	negative	negative	positive
P127	0.0	negative	negative	negative	negative	negative	positive	positive
P127	8.0	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P127	10.8	negative	negative	negative	negative	negative	negative	negative
P127	14.0	negative	negative	negative	negative	negative	negative	negative
P127	17.1	positive	negative	negative	negative	negative	negative	positive
P128	0.0	positive	negative	negative	negative	negative	negative	positive
P128	8.3	negative	negative	negative	negative	negative	negative	negative
P128	11.1	negative	negative	negative	negative	negative	negative	negative
P128	15.8	negative	negative	negative	negative	negative	negative	negative
P128	19.0	negative	negative	negative	negative	positive	negative	positive
P129	0.0	positive	positive	negative	negative	negative	negative	positive
P129	8.0	negative	negative	negative	negative	negative	negative	negative
P129	16.7	negative	negative	negative	negative	negative	negative	negative
P129	19.1	negative	negative	positive	negative	negative	negative	positive
P130	0.0	positive	negative	negative	negative	negative	negative	positive
P130	7.8	negative	negative	negative	negative	negative	negative	negative
P130	10.2	negative	negative	negative	negative	negative	negative	negative
P130	14.2	negative	negative	negative	positive	negative	negative	positive
P130	16.4	negative	negative	negative	negative	negative	negative	negative
P130	19.3	negative	negative	negative	negative	negative	negative	negative
P131	0.0	positive	negative	negative	negative	negative	negative	positive
P131	12.3	negative	negative	negative	negative	negative	negative	negative
P132	0.0	positive	negative	negative	negative	negative	positive	positive
P132	7.8	negative	negative	negative	negative	negative	negative	negative
P132	11.4	negative	negative	negative	negative	negative	negative	negative
P132	15.6	negative	negative	negative	negative	negative	negative	negative
P132	20.8	negative	negative	negative	negative	negative	negative	negative
P133	0.0	positive	positive	negative	positive	negative	positive	positive
P133	7.7	negative	negative	negative	negative	negative	negative	negative
P133	10.2	negative	negative	negative	negative	negative	negative	negative
P133	14.1	negative	negative	negative	negative	negative	negative	negative
P133	17.1	negative	negative	negative	negative	negative	negative	negative
P134	0.0	positive	negative	negative	negative	negative	positive	positive
P134	7.5	negative	negative	negative	negative	negative	negative	negative
P134	11.5	negative	negative	negative	negative	negative	negative	negative
P134	14.5	negative	negative	negative	negative	negative	negative	negative
P134	18.7	negative	negative	negative	negative	negative	negative	negative
P135	0.0	negative	negative	negative	negative	negative	negative	negative
P135	8.6	negative	negative	negative	negative	negative	negative	negative
P136	0.0	negative	negative	positive	positive	positive	negative	positive
P136	8.2	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P136	11.2	negative	negative	negative	negative	negative	negative	negative
P136	16.2	negative	negative	negative	negative	negative	negative	negative
P136	20.2	negative	negative	negative	negative	negative	negative	negative
P137	0.0	negative	negative	negative	negative	negative	negative	negative
P137	8.4	negative	negative	negative	negative	negative	negative	negative
P137	14.0	negative	negative	negative	negative	negative	negative	negative
P138	0.0	negative	negative	negative	negative	negative	positive	positive
P138	7.7	negative	negative	negative	negative	positive	negative	positive
P138	17.2	negative	negative	negative	negative	negative	negative	negative
P139	0.0	positive	positive	negative	negative	positive	positive	positive
P139	4.3	negative	negative	negative	negative	negative	negative	negative
P140	0.0	positive	positive	positive	positive	positive	positive	positive
P140	7.7	negative	negative	negative	negative	negative	negative	negative
P141	0.0	negative	negative	negative	negative	negative	negative	negative
P141	5.3	positive	negative	negative	negative	negative	negative	positive
P142	0.0	negative	negative	positive	positive	negative	positive	positive
P142	6.3	negative	negative	negative	negative	negative	negative	negative
P142	15.3	negative	negative	negative	negative	negative	negative	negative
P142	18.3	negative	negative	negative	negative	negative	negative	negative
P143	0.0	negative	negative	negative	negative	negative	negative	negative
P143	1.7	negative	negative	negative	negative	negative	negative	negative
P144	0.0	positive	negative	negative	positive	negative	negative	positive
P144	6.5	negative	negative	negative	negative	negative	negative	negative
P145	0.0	negative	negative	negative	negative	negative	negative	negative
P145	0.7	negative	negative	negative	negative	negative	negative	negative
P146	0.0	positive	negative	negative	positive	negative	negative	positive
P146	3.5	negative	negative	negative	negative	negative	negative	negative
P146	7.8	negative	negative	negative	negative	negative	negative	negative
P146	10.8	negative	negative	negative	negative	negative	negative	negative
P147	0.0	negative	negative	negative	negative	negative	negative	negative
P147	0.8	negative	negative	negative	negative	negative	negative	negative
P147	9.4	negative	negative	negative	negative	negative	negative	negative
P147	13.9	negative	negative	negative	negative	negative	negative	negative
P148	0.0	negative	negative	negative	negative	negative	negative	negative
P148	4.4	negative	negative	negative	negative	negative	negative	negative
P148	8.8	negative	negative	negative	negative	negative	negative	negative
P148	14.4	negative	negative	negative	negative	negative	negative	negative
P148	17.5	negative	negative	negative	negative	negative	negative	negative
P149	0.0	positive	positive	positive	negative	positive	positive	positive

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P149	1.0	positive	positive	positive	negative	positive	negative	positive
P149	4.6	negative	negative	negative	negative	negative	negative	negative
P149	8.1	positive	positive	positive	negative	negative	positive	positive
P149	10.4	positive	negative	negative	negative	negative	negative	positive
P149	13.5	positive	positive	positive	negative	positive	positive	positive
P150	0.0	negative	negative	negative	negative	negative	negative	negative
P150	0.8	negative	negative	negative	negative	negative	negative	negative
P150	3.6	negative	negative	negative	negative	negative	negative	negative
P150	7.8	negative	negative	negative	negative	negative	negative	negative
P150	10.6	negative	negative	negative	negative	negative	negative	negative
P150	14.6	negative	negative	negative	negative	negative	negative	negative
P151	0.0	positive	positive	positive	negative	positive	positive	positive
P151	0.9	negative	negative	negative	negative	negative	negative	negative
P151	4.1	negative	negative	negative	negative	negative	negative	negative
P151	10.2	negative	negative	negative	negative	negative	negative	negative
P152	0.0	positive	positive	positive	negative	positive	positive	positive
P152	0.7	negative	negative	negative	negative	negative	negative	negative
P152	4.0	negative	negative	negative	negative	negative	negative	negative
P153	0.0	negative	negative	negative	negative	negative	positive	positive
P153	0.7	negative	negative	negative	negative	negative	negative	negative
P153	10.4	negative	negative	negative	negative	negative	negative	negative
P153	15.7	negative	negative	negative	negative	negative	negative	negative
P154	0.0	negative	negative	negative	negative	negative	negative	negative
P154	0.7	negative	negative	negative	negative	negative	negative	negative
P154	3.9	negative	negative	negative	negative	negative	negative	negative
P154	10.5	negative	negative	negative	negative	negative	negative	negative
P154	14.5	negative	negative	negative	negative	negative	negative	negative
P154	17.7	negative	negative	negative	negative	negative	negative	negative
P155	0.0	negative	positive	positive	positive	negative	negative	positive
P155	0.9	negative	negative	negative	negative	positive	negative	positive
P155	4.2	positive	positive	positive	positive	negative	negative	positive
P155	7.9	positive	positive	positive	positive	negative	positive	positive
P156	0.0	positive	positive	positive	positive	positive	positive	positive
P156	1.3	negative	negative	negative	negative	negative	negative	negative
P156	10.7	negative	negative	negative	negative	negative	negative	negative
P156	15.5	negative	negative	negative	negative	negative	negative	negative
P157	0.0	negative	negative	negative	negative	negative	positive	positive
P157	0.7	negative	negative	negative	negative	negative	negative	negative
P157	8.4	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P157	15.1	negative	negative	negative	negative	negative	negative	negative
P158	0.0	positive	positive	positive	positive	positive	negative	positive
P158	1.2	negative	negative	negative	negative	negative	negative	negative
P158	8.2	negative	negative	negative	negative	negative	negative	negative
P158	15.3	negative	negative	negative	negative	negative	negative	negative
P159	0.0	positive	negative	positive	negative	negative	negative	positive
P159	0.7	negative	negative	negative	negative	negative	negative	negative
P159	8.6	negative	negative	positive	negative	negative	negative	positive
P160	0.0	positive	negative	negative	positive	negative	negative	positive
P160	0.7	negative	negative	negative	negative	negative	negative	negative
P160	6.0	negative	negative	negative	negative	negative	negative	negative
P160	10.8	negative	negative	negative	negative	negative	negative	negative
P160	14.0	negative	negative	negative	positive	negative	negative	positive
P161	0.0	negative	negative	negative	negative	negative	negative	negative
P161	0.9	negative	negative	negative	negative	negative	negative	negative
P162	0.0	positive	positive	positive	positive	positive	positive	positive
P162	0.9	negative	negative	negative	negative	negative	negative	negative
P163	0.0	negative	negative	negative	negative	negative	negative	negative
P163	0.9	negative	negative	negative	negative	negative	negative	negative
P164	0.0	negative	negative	negative	negative	negative	negative	negative
P164	3.7	negative	negative	negative	negative	negative	negative	negative
P165	0.0	negative	negative	negative	negative	negative	negative	negative
P165	0.7	negative	negative	positive	negative	negative	negative	positive
P165	3.6	negative	negative	negative	negative	negative	negative	negative
P165	7.9	negative	negative	negative	negative	negative	negative	negative
P165	10.6	negative	negative	negative	negative	negative	negative	negative
P165	13.7	negative	negative	negative	negative	negative	negative	negative
P165	17.7	negative	negative	negative	negative	negative	negative	negative
P166	0.0	negative	negative	positive	negative	positive	positive	positive
P166	3.7	negative	negative	negative	negative	negative	negative	negative
P166	6.8	negative	negative	negative	negative	negative	negative	negative
P166	10.2	negative	negative	negative	negative	negative	negative	negative
P166	14.0	negative	negative	negative	negative	negative	negative	negative
P166	17.9	negative	negative	negative	negative	negative	negative	negative
P167	0.0	negative	negative	negative	negative	negative	negative	negative
P167	3.4	negative	negative	negative	negative	negative	negative	negative
P167	12.9	negative	negative	negative	negative	negative	negative	negative
P168	0.0	negative	negative	negative	negative	negative	negative	negative
P168	3.7	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P168	5.8	negative	negative	negative	negative	negative	negative	negative
P168	11.0	negative	negative	negative	negative	negative	negative	negative
P168	15.4	positive	positive	positive	negative	negative	negative	positive
P169	0.0	positive	positive	positive	positive	positive	positive	positive
P169	0.9	negative	negative	negative	negative	negative	negative	negative
P170	0.0	negative	negative	negative	positive	negative	positive	positive
P170	3.7	negative	negative	negative	negative	negative	negative	negative
P170	7.7	negative	negative	negative	negative	negative	negative	negative
P171	0.0	negative	negative	positive	positive	negative	positive	positive
P171	0.9	negative	negative	negative	negative	negative	negative	negative
P171	5.2	negative	negative	negative	negative	negative	negative	negative
P171	6.9	negative	negative	negative	negative	negative	negative	negative
P171	11.5	negative	negative	negative	negative	negative	negative	negative
P171	17.6	negative	negative	negative	negative	negative	negative	negative
P172	0.0	positive	positive	positive	positive	negative	positive	positive
P172	0.7	negative	negative	negative	negative	negative	negative	negative
P172	8.5	negative	negative	negative	negative	negative	negative	negative
P172	13.7	negative	negative	negative	negative	negative	negative	negative
P173	0.0	positive	positive	positive	positive	positive	negative	positive
P173	0.6	negative	negative	negative	negative	negative	negative	negative
P173	3.9	negative	negative	negative	negative	negative	negative	negative
P173	7.3	negative	negative	negative	negative	negative	negative	negative
P173	9.0	negative	negative	negative	negative	negative	positive	positive
P173	12.1	negative	negative	negative	negative	negative	negative	negative
P173	17.8	negative	negative	negative	negative	negative	negative	negative
P174	0.0	positive	positive	positive	negative	negative	negative	positive
P174	1.2	negative	negative	negative	negative	negative	negative	negative
P174	4.0	negative	negative	negative	negative	negative	negative	negative
P174	7.7	negative	negative	negative	negative	negative	negative	negative
P175	0.0	negative	negative	negative	negative	negative	negative	negative
P175	0.6	negative	negative	negative	negative	negative	negative	negative
P175	7.1	negative	negative	negative	negative	negative	negative	negative
P176	0.0	negative	negative	positive	negative	positive	negative	positive
P176	0.7	negative	negative	negative	negative	negative	negative	negative
P176	5.3	negative	negative	negative	negative	negative	negative	negative
P176	7.9	negative	negative	negative	negative	negative	negative	negative
P176	12.3	negative	negative	positive	negative	negative	negative	positive
P177	0.0	positive	negative	negative	negative	negative	negative	positive
P177	0.8	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P177	4.5	negative	negative	negative	negative	negative	negative	negative
P177	9.4	negative	negative	negative	negative	negative	negative	negative
P178	0.0	negative	negative	positive	negative	negative	positive	positive
P178	1.6	negative	negative	negative	negative	negative	negative	negative
P178	7.8	negative	negative	negative	negative	negative	negative	negative
P178	10.3	positive	negative	negative	negative	negative	negative	positive
P178	13.3	negative	negative	negative	negative	negative	negative	negative
P178	17.7	positive	negative	negative	negative	negative	negative	positive
P179	0.0	negative	negative	negative	positive	negative	negative	positive
P179	3.4	negative	positive	negative	negative	negative	negative	positive
P180	0.7	negative	negative	negative	negative	negative	negative	negative
P180	4.0	negative	negative	negative	negative	negative	negative	negative
P180	8.1	negative	negative	negative	negative	negative	negative	negative
P181	0.0	positive	positive	negative	negative	negative	negative	positive
P181	0.7	negative	negative	negative	negative	negative	negative	negative
P181	3.0	negative	negative	negative	negative	negative	negative	negative
P181	6.7	negative	negative	negative	negative	negative	negative	negative
P181	11.4	negative	negative	negative	negative	negative	negative	negative
P181	15.8	negative	negative	negative	negative	negative	negative	negative
P182	0.0	positive	negative	negative	negative	negative	negative	positive
P182	0.9	negative	negative	negative	negative	negative	negative	negative
P182	4.8	negative	negative	negative	negative	negative	negative	negative
P182	8.4	negative	negative	negative	negative	negative	negative	negative
P182	10.9	negative	negative	negative	negative	negative	negative	negative
P182	13.8	negative	negative	negative	negative	negative	negative	negative
P182	16.7	negative	negative	negative	negative	negative	negative	negative
P183	0.0	negative	positive	negative	negative	negative	negative	positive
P183	0.6	negative	negative	negative	negative	negative	negative	negative
P184	0.0	negative	positive	negative	positive	negative	positive	positive
P184	0.8	negative	negative	negative	negative	negative	negative	negative
P184	3.8	negative	negative	negative	negative	negative	negative	negative
P184	7.8	negative	negative	negative	negative	negative	negative	negative
P184	11.5	negative	negative	negative	negative	negative	negative	negative
P184	16.7	negative	negative	negative	negative	negative	negative	negative
P185	0.0	positive	positive	positive	positive	positive	positive	positive
P185	0.9	positive	positive	negative	positive	positive	positive	positive
P185	3.8	positive	negative	negative	positive	negative	positive	positive
P185	8.8	positive	positive	positive	positive	positive	positive	positive
P186	0.0	positive	positive	positive	positive	positive	negative	positive

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P186	0.9	negative	negative	negative	negative	negative	negative	negative
P186	3.5	negative	negative	negative	negative	negative	negative	negative
P186	7.5	negative	negative	negative	negative	negative	negative	negative
P186	10.0	negative	negative	negative	negative	negative	negative	negative
P187	0.0	negative	negative	positive	negative	negative	negative	positive
P187	0.6	negative	negative	negative	negative	negative	negative	negative
P187	3.8	negative	negative	negative	negative	negative	negative	negative
P187	6.9	negative	negative	negative	negative	negative	negative	negative
P187	9.7	negative	negative	negative	negative	negative	negative	negative
P187	13.4	negative	negative	negative	negative	negative	negative	negative
P188	0.0	negative	negative	positive	positive	negative	negative	positive
P188	0.8	positive	positive	negative	negative	negative	negative	positive
P188	3.8	negative	negative	negative	negative	negative	negative	negative
P189	0.0	positive	negative	negative	negative	negative	negative	positive
P189	0.9	negative	negative	negative	negative	negative	negative	negative
P190	0.0	positive	negative	negative	negative	negative	negative	positive
P190	0.9	negative	negative	negative	negative	negative	negative	negative
P191	0.0	negative	negative	negative	negative	negative	negative	negative
P191	0.9	negative	negative	negative	negative	negative	negative	negative
P191	7.8	negative	negative	negative	negative	negative	negative	negative
P191	14.5	negative	negative	negative	negative	negative	negative	negative
P192	0.0	positive	positive	positive	positive	positive	positive	positive
P192	0.8	positive	negative	negative	negative	negative	negative	positive
P192	3.8	negative	negative	negative	negative	negative	negative	negative
P192	7.1	negative	negative	negative	negative	negative	negative	negative
P192	10.1	negative	negative	negative	negative	negative	negative	negative
P192	13.2	negative	negative	negative	negative	negative	negative	negative
P193	0.0	negative	positive	negative	negative	negative	negative	positive
P193	0.8	negative	negative	negative	negative	negative	negative	negative
P194	0.0	positive	negative	negative	negative	negative	negative	positive
P194	0.7	negative	negative	negative	negative	negative	negative	negative
P195	0.0	negative	negative	negative	negative	negative	negative	negative
P195	0.8	negative	negative	negative	negative	negative	negative	negative
P195	3.6	negative	negative	negative	negative	negative	negative	negative
P195	6.2	negative	negative	negative	negative	negative	negative	negative
P195	10.0	negative	negative	negative	negative	negative	negative	negative
P195	12.9	negative	negative	negative	negative	negative	negative	negative
P195	16.0	negative	negative	negative	negative	negative	negative	negative
P196	0.0	negative	negative	negative	negative	positive	positive	positive



**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P196	0.7	negative	negative	negative	negative	negative	negative	negative
P196	13.7	negative	negative	negative	negative	negative	negative	negative
P197	0.0	positive	positive	negative	negative	negative	negative	positive
P197	0.6	negative	negative	negative	negative	negative	negative	negative
P197	3.9	negative	negative	negative	negative	negative	negative	negative
P197	12.4	negative	negative	positive	negative	negative	negative	positive
P197	16.5	negative	negative	negative	negative	negative	negative	negative
P198	0.0	positive	positive	positive	positive	positive	positive	positive
P198	0.7	negative	negative	negative	negative	negative	negative	negative
P198	7.0	negative	negative	negative	negative	negative	negative	negative
P198	13.6	negative	negative	negative	negative	negative	negative	negative
P199	0.0	negative	negative	negative	negative	negative	negative	negative
P199	0.6	negative	negative	negative	negative	negative	negative	negative
P200	0.0	negative	positive	positive	negative	negative	negative	positive
P200	0.6	positive	negative	negative	positive	negative	negative	positive
P200	6.9	negative	negative	positive	negative	negative	negative	positive
P200	8.6	positive	positive	positive	positive	positive	negative	positive
P200	11.3	positive	positive	positive	positive	positive	negative	positive
P201	0.0	negative	negative	negative	negative	negative	positive	positive
P201	0.9	negative	negative	negative	negative	negative	negative	negative
P202	0.0	negative	negative	positive	negative	negative	negative	positive
P202	0.7	negative	negative	negative	negative	negative	negative	negative
P202	4.3	negative	negative	negative	negative	negative	negative	negative
P202	8.4	negative	negative	negative	negative	negative	negative	negative
P202	13.8	negative	negative	positive	negative	negative	negative	positive
P202	16.6	negative	negative	positive	positive	negative	negative	positive
P203	0.0	negative	positive	negative	negative	negative	negative	positive
P203	1.1	negative	negative	negative	negative	negative	negative	negative
P203	7.5	negative	negative	negative	negative	negative	negative	negative
P203	10.3	negative	negative	negative	negative	negative	negative	negative
P203	13.7	negative	positive	negative	positive	positive	negative	positive
P203	16.5	negative	negative	negative	negative	negative	negative	negative
P204	0.0	negative	negative	negative	negative	negative	negative	negative
P204	0.8	negative	negative	negative	negative	negative	negative	negative
P204	4.1	negative	negative	negative	negative	negative	negative	negative
P204	8.3	negative	negative	negative	negative	negative	negative	negative
P204	10.2	negative	negative	negative	negative	negative	negative	negative
P205	0.0	negative	positive	positive	positive	negative	positive	positive
P205	0.7	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P206	0.0	negative	negative	negative	positive	negative	negative	positive
P206	0.6	negative	negative	positive	negative	negative	negative	positive
P206	3.7	negative	negative	negative	negative	negative	negative	negative
P206	6.7	negative	negative	negative	negative	negative	negative	negative
P206	9.7	negative	negative	negative	negative	negative	negative	negative
P206	13.0	negative	negative	negative	negative	negative	negative	negative
P207	0.0	negative	negative	negative	positive	negative	positive	positive
P207	1.1	negative	negative	negative	negative	negative	negative	negative
P207	7.3	negative	negative	negative	negative	negative	negative	negative
P207	10.7	negative	negative	negative	negative	negative	negative	negative
P207	13.6	negative	negative	negative	negative	negative	negative	negative
P207	16.5	negative	negative	negative	negative	negative	negative	negative
P208	0.0	positive	positive	negative	negative	negative	negative	positive
P208	0.7	negative	negative	negative	negative	negative	negative	negative
P208	6.1	negative	negative	negative	negative	negative	negative	negative
P208	9.8	negative	negative	negative	negative	negative	negative	negative
P208	12.8	negative	negative	negative	negative	negative	negative	negative
P209	0.0	negative	negative	negative	negative	negative	negative	negative
P209	0.7	negative	negative	negative	negative	negative	negative	negative
P210	0.0	positive	negative	positive	negative	negative	negative	positive
P210	0.6	negative	negative	negative	negative	negative	negative	negative
P210	7.7	negative	negative	negative	negative	negative	negative	negative
P210	11.4	negative	negative	negative	negative	negative	negative	negative
P210	14.5	negative	negative	negative	negative	negative	negative	negative
P211	0.0	negative	negative	negative	negative	negative	negative	negative
P211	1.0	negative	negative	negative	negative	negative	negative	negative
P211	7.8	negative	negative	negative	negative	negative	negative	negative
P211	10.3	negative	negative	negative	negative	negative	negative	negative
P211	14.7	negative	negative	negative	negative	negative	negative	negative
P212	0.0	positive	negative	negative	negative	negative	negative	positive
P212	1.0	negative	negative	negative	negative	negative	negative	negative
P212	7.6	negative	negative	negative	negative	negative	negative	negative
P212	10.4	negative	negative	positive	negative	positive	negative	positive
P212	13.9	negative	negative	negative	negative	negative	negative	negative
P213	0.0	negative	negative	negative	negative	negative	positive	positive
P213	1.1	negative	negative	negative	negative	negative	negative	negative
P213	7.0	negative	negative	negative	negative	negative	negative	negative
P213	9.8	negative	negative	negative	negative	negative	negative	negative
P213	13.7	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P213	16.1	negative	negative	negative	negative	positive	negative	positive
P214	0.0	negative	negative	negative	negative	negative	negative	negative
P214	0.9	negative	negative	negative	negative	negative	negative	negative
P214	3.8	negative	negative	negative	negative	negative	negative	negative
P214	7.0	negative	negative	negative	negative	negative	negative	negative
P215	0.0	negative	negative	positive	negative	negative	negative	positive
P215	1.1	positive	negative	negative	negative	negative	negative	positive
P215	9.3	negative	negative	negative	negative	negative	negative	negative
P216	0.0	negative	positive	negative	negative	negative	negative	positive
P216	0.8	negative	negative	negative	negative	negative	negative	negative
P216	5.7	negative	negative	negative	negative	negative	negative	negative
P216	12.8	negative	negative	negative	negative	negative	negative	negative
P217	0.0	positive	negative	negative	negative	negative	negative	positive
P217	1.0	negative	negative	negative	negative	negative	negative	negative
P217	5.9	negative	negative	negative	negative	negative	negative	negative
P218	0.0	negative	negative	negative	positive	negative	negative	positive
P218	0.9	negative	negative	negative	negative	negative	negative	negative
P218	6.5	negative	negative	negative	negative	negative	negative	negative
P218	12.1	negative	negative	negative	negative	negative	negative	negative
P219	0.0	negative	negative	negative	negative	negative	negative	negative
P219	0.9	negative	negative	negative	negative	negative	negative	negative
P219	3.0	negative	positive	negative	negative	negative	negative	positive
P220	0.0	negative	negative	negative	negative	negative	positive	positive
P220	1.0	negative	negative	negative	negative	negative	negative	negative
P220	8.3	negative	negative	negative	negative	negative	negative	negative
P220	15.9	negative	negative	negative	negative	negative	negative	negative
P221	0.0	positive	negative	negative	negative	negative	negative	positive
P221	1.0	negative	negative	negative	negative	negative	negative	negative
P221	6.0	negative	negative	negative	negative	negative	negative	negative
P221	9.5	negative	negative	negative	negative	negative	negative	negative
P221	13.1	negative	negative	positive	negative	negative	negative	positive
P222	0.0	negative	negative	negative	negative	negative	positive	positive
P222	8.4	negative	negative	negative	negative	negative	negative	negative
P222	11.5	positive	positive	positive	positive	negative	positive	positive
P222	16.2	negative	negative	negative	negative	negative	negative	negative
P223	0.0	positive	positive	positive	positive	positive	positive	positive
P223	8.0	negative	negative	negative	negative	negative	negative	negative
P223	18.0	negative	negative	negative	negative	negative	negative	negative
P224	0.0	positive	positive	positive	negative	positive	negative	positive

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P224	1.0	negative	negative	negative	negative	negative	negative	negative
P224	4.4	negative	negative	negative	negative	negative	negative	negative
P224	8.3	negative	negative	negative	negative	negative	negative	negative
P224	11.7	negative	negative	negative	negative	negative	negative	negative
P225	0.0	negative	negative	negative	negative	negative	negative	negative
P225	8.1	negative	negative	negative	negative	negative	negative	negative
P226	0.0	positive	negative	negative	negative	negative	negative	positive
P226	0.7	negative	negative	negative	negative	negative	negative	negative
P227	0.0	positive	negative	negative	negative	negative	negative	positive
P227	0.8	positive	negative	negative	negative	negative	negative	positive
P227	3.9	negative	negative	negative	negative	negative	negative	negative
P227	8.1	negative	negative	negative	negative	negative	negative	negative
P227	11.8	negative	negative	negative	negative	negative	negative	negative
P228	0.0	negative	negative	negative	positive	negative	negative	positive
P228	0.7	negative	negative	negative	negative	negative	negative	negative
P229	0.0	negative	negative	negative	positive	negative	negative	positive
P229	0.7	negative	negative	negative	negative	negative	positive	positive
P229	4.8	negative	negative	negative	negative	negative	negative	negative
P229	6.3	negative	negative	negative	negative	negative	negative	negative
P229	9.1	negative	negative	negative	negative	negative	negative	negative
P229	12.6	negative	negative	negative	negative	negative	negative	negative
P230	0.0	positive	positive	positive	positive	positive	positive	positive
P230	6.3	negative	negative	negative	negative	negative	negative	negative
P231	0.0	negative	negative	positive	negative	negative	negative	positive
P231	5.0	negative	negative	negative	negative	negative	negative	negative
P231	7.8	negative	negative	negative	positive	negative	negative	positive
P232	0.0	negative	negative	negative	negative	positive	negative	positive
P232	0.7	negative	negative	negative	negative	negative	negative	negative
P232	4.4	negative	negative	negative	negative	negative	negative	negative
P232	6.8	negative	negative	negative	negative	negative	negative	negative
P232	11.2	negative	negative	negative	negative	negative	negative	negative
P232	14.5	negative	negative	negative	negative	negative	negative	negative
P233	0.0	negative	negative	negative	negative	negative	positive	positive
P233	0.8	negative	negative	negative	negative	negative	negative	negative
P233	4.3	negative	negative	negative	negative	negative	negative	negative
P233	6.6	negative	negative	negative	negative	negative	negative	negative
P233	9.9	negative	negative	negative	negative	negative	negative	negative
P234	0.0	negative	negative	negative	negative	negative	positive	positive
P234	0.9	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P234	3.4	negative	negative	negative	negative	negative	negative	negative
P234	7.8	negative	negative	negative	negative	negative	negative	negative
P234	12.7	negative	negative	negative	negative	negative	negative	negative
P235	0.0	negative	negative	negative	negative	negative	negative	negative
P235	0.7	negative	negative	negative	negative	negative	negative	negative
P235	4.7	negative	negative	negative	negative	negative	negative	negative
P235	6.8	negative	negative	negative	negative	negative	negative	negative
P235	9.8	negative	negative	negative	negative	negative	negative	negative
P235	14.4	negative	negative	negative	negative	negative	negative	negative
P236	0.0	negative	negative	negative	negative	negative	negative	negative
P236	0.7	negative	negative	negative	negative	negative	negative	negative
P236	4.7	negative	negative	negative	negative	negative	negative	negative
P236	9.6	negative	positive	negative	negative	negative	negative	positive
P236	14.4	positive	positive	negative	negative	negative	negative	positive
P237	0.0	negative	negative	negative	negative	negative	negative	negative
P237	0.7	negative	negative	negative	negative	negative	negative	negative
P237	5.2	negative	negative	negative	negative	negative	negative	negative
P238	0.0	positive	negative	negative	negative	negative	negative	positive
P238	0.6	negative	negative	negative	negative	negative	negative	negative
P238	4.1	negative	negative	negative	negative	negative	negative	negative
P238	6.4	negative	positive	negative	negative	negative	negative	positive
P239	0.0	positive	negative	negative	positive	negative	positive	positive
P239	0.9	negative	negative	negative	negative	negative	negative	negative
P239	4.2	negative	negative	negative	negative	negative	negative	negative
P239	11.5	negative	negative	negative	negative	negative	negative	negative
P240	0.0	negative	negative	negative	positive	negative	positive	positive
P240	0.8	negative	negative	negative	negative	negative	negative	negative
P240	4.0	negative	negative	negative	positive	negative	negative	positive
P240	6.6	negative	negative	negative	negative	negative	negative	negative
P240	11.6	negative	negative	positive	negative	negative	negative	positive
P241	0.0	positive	positive	negative	negative	negative	negative	positive
P241	1.0	negative	negative	negative	negative	negative	negative	negative
P241	3.8	positive	negative	negative	negative	negative	negative	positive
P241	5.9	negative	negative	negative	negative	negative	negative	negative
P241	9.1	negative	negative	negative	negative	negative	negative	negative
P241	12.8	negative	negative	negative	negative	negative	negative	negative
P242	0.0	positive	negative	negative	negative	negative	negative	positive
P242	0.7	negative	negative	negative	negative	negative	negative	negative
P242	3.5	negative	negative	negative	positive	negative	negative	positive

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P242	6.8	negative	negative	negative	negative	negative	negative	negative
P242	10.8	negative	negative	negative	negative	negative	negative	negative
P243	0.0	negative	negative	negative	negative	negative	negative	negative
P243	0.8	negative	negative	negative	negative	negative	negative	negative
P243	3.8	negative	negative	negative	negative	negative	negative	negative
P243	6.2	positive	negative	negative	negative	negative	negative	positive
P244	0.0	positive	negative	negative	negative	negative	negative	positive
P244	0.7	negative	negative	negative	negative	negative	negative	negative
P244	8.4	negative	negative	negative	negative	negative	negative	negative
P245	0.0	negative	negative	negative	negative	negative	positive	positive
P245	0.8	negative	negative	negative	negative	negative	negative	negative
P245	6.4	negative	negative	negative	negative	negative	negative	negative
P245	9.4	negative	negative	negative	negative	negative	negative	negative
P246	0.0	positive	negative	negative	negative	negative	negative	positive
P246	0.7	negative	negative	negative	negative	negative	negative	negative
P246	6.3	negative	negative	negative	negative	negative	negative	negative
P247	0.0	positive	positive	negative	negative	positive	negative	positive
P247	0.7	negative	negative	negative	negative	negative	negative	negative
P247	3.7	negative	negative	negative	negative	negative	negative	negative
P247	7.4	negative	negative	negative	negative	negative	negative	negative
P247	12.1	negative	negative	negative	negative	negative	negative	negative
P248	0.0	negative	negative	positive	negative	negative	negative	positive
P248	0.8	negative	negative	negative	positive	negative	negative	positive
P249	0.0	positive	positive	positive	positive	positive	positive	positive
P249	0.7	positive	positive	positive	positive	negative	positive	positive
P249	3.1	negative	negative	negative	negative	negative	negative	negative
P249	6.1	negative	negative	negative	negative	negative	negative	negative
P249	12.6	negative	negative	negative	negative	negative	negative	negative
P250	0.0	negative	negative	negative	positive	negative	positive	positive
P250	0.9	negative	negative	negative	negative	negative	negative	negative
P250	4.5	negative	negative	negative	negative	negative	negative	negative
P250	7.5	negative	negative	negative	negative	negative	negative	negative
P250	11.0	negative	negative	negative	negative	negative	negative	negative
P251	0.0	negative	negative	negative	negative	negative	negative	negative
P251	3.2	negative	negative	negative	negative	negative	negative	negative
P251	5.1	negative	negative	negative	negative	negative	negative	negative
P251	8.2	negative	negative	negative	negative	negative	negative	negative
P251	11.1	negative	negative	negative	negative	negative	negative	negative
P252	0.0	positive	positive	positive	positive	positive	negative	positive

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P252	0.7	negative	negative	negative	negative	negative	negative	negative
P252	3.9	negative	negative	negative	negative	negative	negative	negative
P252	7.1	negative	negative	negative	negative	negative	negative	negative
P252	10.5	positive	negative	negative	negative	negative	negative	positive
P253	0.0	negative	negative	positive	positive	negative	positive	positive
P253	0.8	negative	negative	negative	negative	negative	negative	negative
P253	3.6	negative	negative	negative	negative	negative	negative	negative
P253	6.2	negative	negative	negative	negative	negative	negative	negative
P253	9.5	negative	negative	negative	negative	negative	negative	negative
P253	12.2	negative	positive	negative	negative	negative	negative	positive
P254	0.0	negative	negative	negative	negative	negative	negative	negative
P254	0.8	negative	negative	negative	negative	negative	negative	negative
P254	4.3	negative	negative	negative	negative	negative	negative	negative
P254	8.0	negative	negative	negative	negative	negative	negative	negative
P255	0.0	negative	negative	negative	negative	negative	negative	negative
P255	0.9	negative	negative	negative	negative	negative	negative	negative
P255	3.9	negative	negative	negative	negative	negative	negative	negative
P255	7.2	negative	negative	negative	negative	negative	negative	negative
P256	0.0	positive	positive	positive	negative	negative	positive	positive
P256	0.9	negative	negative	negative	negative	negative	negative	negative
P256	3.5	negative	negative	negative	negative	negative	negative	negative
P256	6.8	negative	negative	negative	negative	negative	negative	negative
P256	10.3	negative	negative	negative	negative	negative	negative	negative
P256	13.3	negative	negative	negative	negative	negative	negative	negative
P257	0.0	positive	negative	positive	positive	negative	positive	positive
P257	0.7	negative	negative	negative	negative	negative	negative	negative
P257	6.8	negative	negative	negative	negative	negative	negative	negative
P257	11.0	negative	negative	negative	negative	negative	negative	negative
P258	0.0	negative	negative	positive	negative	negative	negative	positive
P258	0.7	negative	negative	negative	negative	negative	negative	negative
P258	3.2	negative	negative	negative	negative	negative	negative	negative
P258	10.2	negative	negative	negative	negative	negative	negative	negative
P259	0.0	negative	negative	positive	negative	negative	negative	positive
P259	0.9	negative	negative	negative	negative	negative	negative	negative
P259	4.0	negative	negative	negative	negative	negative	negative	negative
P260	0.0	positive	positive	positive	positive	positive	positive	positive
P260	4.4	positive	positive	positive	positive	positive	positive	positive
P261	0.0	negative	negative	negative	negative	negative	negative	negative
P261	1.0	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P261	3.1	negative	negative	negative	negative	negative	negative	negative
P261	9.1	negative	negative	negative	negative	negative	negative	negative
P262	0.0	positive	positive	positive	positive	positive	positive	positive
P262	0.7	negative	negative	negative	negative	negative	negative	negative
P262	3.5	negative	negative	negative	negative	negative	negative	negative
P262	6.4	negative	negative	negative	negative	negative	negative	negative
P263	0.0	positive	positive	positive	positive	positive	positive	positive
P263	0.6	negative	negative	negative	negative	negative	negative	negative
P263	3.2	negative	negative	negative	negative	negative	negative	negative
P263	9.7	negative	negative	negative	negative	negative	negative	negative
P263	13.0	negative	negative	negative	negative	negative	negative	negative
P264	0.0	negative	negative	negative	positive	negative	negative	positive
P264	0.7	negative	negative	negative	negative	negative	negative	negative
P265	0.0	positive	positive	positive	positive	positive	positive	positive
P265	4.2	negative	negative	negative	negative	negative	negative	negative
P265	6.9	negative	negative	negative	negative	negative	negative	negative
P265	10.5	negative	negative	negative	negative	negative	negative	negative
P266	0.0	negative	negative	negative	negative	negative	negative	negative
P266	0.8	negative	negative	negative	negative	negative	negative	negative
P266	3.1	negative	negative	negative	negative	negative	negative	negative
P266	7.6	negative	negative	negative	negative	negative	negative	negative
P266	11.1	negative	negative	negative	negative	negative	negative	negative
P267	0.0	negative	negative	positive	positive	negative	positive	positive
P267	4.6	negative	negative	positive	negative	negative	negative	positive
P267	9.4	negative	negative	negative	negative	negative	negative	negative
P268	3.4	negative	negative	negative	negative	negative	negative	negative
P268	10.2	negative	negative	negative	negative	negative	negative	negative
P269	0.0	positive	negative	negative	negative	negative	negative	positive
P269	0.7	negative	negative	negative	negative	negative	negative	negative
P269	3.9	negative	negative	negative	negative	negative	negative	negative
P269	6.7	negative	negative	negative	negative	negative	negative	negative
P269	9.6	negative	negative	negative	negative	negative	negative	negative
P269	12.6	negative	negative	negative	negative	negative	negative	negative
P270	0.0	negative	negative	negative	positive	negative	negative	positive
P270	3.4	negative	negative	negative	negative	negative	negative	negative
P271	0.0	negative	negative	negative	negative	negative	negative	negative
P271	0.8	negative	negative	negative	negative	negative	negative	negative
P271	3.6	negative	negative	negative	negative	negative	negative	negative
P271	7.1	negative	negative	negative	negative	negative	negative	negative



**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P272	0.0	negative	positive	negative	negative	negative	negative	positive
P272	3.5	negative	negative	negative	negative	negative	negative	negative
P272	6.1	negative	negative	negative	negative	negative	negative	negative
P272	11.7	negative	negative	negative	negative	negative	negative	negative
P273	0.0	negative	negative	negative	negative	negative	negative	negative
P273	0.7	negative	negative	negative	negative	negative	negative	negative
P273	3.0	negative	negative	negative	negative	negative	negative	negative
P273	6.4	negative	negative	negative	negative	negative	negative	negative
P273	9.8	negative	negative	negative	negative	negative	negative	negative
P273	13.0	negative	negative	negative	negative	negative	negative	negative
P274	0.0	positive	positive	positive	positive	positive	positive	positive
P274	1.4	positive	positive	positive	positive	positive	positive	positive
P275	0.0	negative	positive	negative	negative	negative	negative	positive
P275	0.7	negative	negative	negative	negative	negative	negative	negative
P275	4.6	negative	negative	negative	negative	negative	negative	negative
P275	7.7	negative	negative	positive	negative	negative	negative	positive
P275	12.6	negative	negative	negative	negative	negative	negative	negative
P276	0.0	negative	negative	negative	positive	negative	negative	positive
P276	0.8	negative	negative	positive	positive	positive	positive	positive
P276	4.2	negative	negative	negative	negative	negative	negative	negative
P276	7.2	negative	negative	negative	negative	negative	negative	negative
P276	10.3	negative	negative	negative	negative	negative	negative	negative
P276	13.2	positive	positive	negative	negative	negative	negative	positive
P277	0.0	negative	negative	positive	positive	negative	positive	positive
P277	0.8	negative	negative	negative	negative	negative	negative	negative
P277	3.2	negative	negative	negative	negative	negative	negative	negative
P277	6.2	negative	negative	negative	negative	negative	negative	negative
P277	9.2	negative	negative	negative	negative	negative	negative	negative
P278	0.0	negative	negative	negative	negative	negative	positive	positive
P278	1.0	negative	negative	negative	negative	negative	negative	negative
P278	8.0	negative	negative	negative	negative	negative	negative	negative
P279	0.0	positive	negative	negative	negative	negative	negative	positive
P279	0.8	negative	negative	negative	negative	negative	negative	negative
P279	2.3	negative	negative	negative	negative	negative	negative	negative
P279	5.8	negative	negative	negative	negative	negative	negative	negative
P279	8.9	negative	negative	negative	negative	negative	negative	negative
P279	12.6	negative	negative	negative	negative	negative	negative	negative
P280	0.0	negative	negative	negative	negative	negative	negative	negative
P280	1.8	negative	negative	negative	negative	negative	negative	negative

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P280	3.0	negative	negative	negative	negative	negative	negative	negative
P281	0.0	negative	negative	positive	positive	negative	negative	positive
P281	1.2	negative	negative	negative	negative	negative	negative	negative
P281	4.3	negative	negative	negative	negative	negative	negative	negative
P281	8.7	negative	negative	negative	negative	negative	negative	negative
P281	10.5	negative	negative	negative	negative	negative	negative	negative
P282	0.0	negative	negative	negative	negative	positive	negative	positive
P282	1.3	negative	negative	negative	negative	negative	negative	negative
P282	4.1	negative	negative	negative	negative	negative	negative	negative
P282	7.1	negative	negative	negative	negative	negative	negative	negative
P282	9.9	negative	negative	negative	negative	negative	negative	negative
P283	0.0	negative	negative	negative	negative	negative	negative	negative
P283	1.8	negative	negative	negative	negative	negative	negative	negative
P283	7.5	negative	negative	negative	negative	negative	negative	negative
P284	0.0	negative	negative	negative	positive	negative	negative	positive
P284	1.4	negative	negative	negative	negative	positive	negative	positive
P284	4.6	negative	negative	negative	negative	negative	negative	negative
P284	7.8	negative	negative	negative	negative	negative	negative	negative
P285	0.0	positive	positive	negative	negative	negative	negative	positive
P285	1.2	negative	negative	negative	negative	negative	negative	negative
P285	4.5	negative	negative	negative	negative	negative	negative	negative
P285	7.5	negative	negative	negative	negative	positive	negative	positive
P286	0.0	negative	negative	negative	positive	negative	negative	positive
P286	1.1	negative	negative	negative	negative	negative	negative	negative
P286	5.2	negative	negative	negative	negative	negative	negative	negative
P287	0.0	positive	positive	positive	positive	negative	negative	positive
P287	1.0	negative	negative	positive	positive	negative	negative	positive
P287	4.2	negative	negative	negative	negative	positive	negative	positive
P288	0.0	positive	negative	positive	negative	negative	negative	positive
P288	1.6	negative	negative	negative	negative	negative	negative	negative
P288	6.8	negative	negative	negative	negative	negative	negative	negative
P289	0.0	negative	negative	negative	negative	negative	negative	negative
P289	2.0	negative	negative	negative	negative	negative	negative	negative
P289	5.2	positive	positive	positive	positive	negative	positive	positive
P290	0.0	positive	negative	positive	positive	negative	positive	positive
P290	1.2	negative	negative	negative	positive	negative	negative	positive
P290	4.4	negative	negative	negative	negative	negative	negative	negative
P290	7.2	negative	negative	negative	negative	negative	negative	negative
P291	0.0	positive	negative	positive	negative	negative	negative	positive

**eTable 3.** Circulating Tumor DNA Results for All 1228 Plasma Samples

Patient ID	Months after surgery	Septin9_1 Call	Septin9_2 Call	BCAT1 Call	IKZF1 Call	BCAN Call	VAV3 Call	ColonAiQ Call
P291	1.1	negative	negative	negative	negative	negative	negative	negative
P291	4.7	negative	negative	negative	negative	negative	negative	negative
P292	0.0	negative	negative	positive	negative	negative	negative	positive
P292	2.8	positive	positive	positive	negative	positive	negative	positive
P292	4.9	positive	positive	positive	negative	positive	positive	positive
P293	0.0	positive	positive	positive	negative	positive	negative	positive
P293	0.7	positive	positive	positive	negative	positive	negative	positive
P294	0.0	positive	positive	positive	positive	positive	positive	positive
P294	0.7	positive	positive	positive	positive	positive	positive	positive
P295	0.0	negative	negative	positive	positive	negative	positive	positive
P295	0.9	negative	negative	negative	negative	negative	negative	negative
P296	0.0	positive	positive	positive	positive	positive	positive	positive
P296	0.8	positive	positive	positive	positive	positive	positive	positive
P297	0.0	positive	positive	positive	positive	positive	negative	positive
P297	0.9	positive	positive	positive	positive	positive	negative	positive
P298	0.0	positive	positive	positive	positive	positive	positive	positive
P298	1.0	positive	positive	positive	positive	positive	positive	positive
P299	0.0	positive	positive	positive	negative	positive	negative	positive
P299	0.7	positive	positive	positive	negative	positive	negative	positive

**eTable 4.** Preoperative and Postoperative (POM1) Carcinoembryonic Antigen (CEA) Results

Patient ID	CEA value (ng/mL; Pre-op)	CEA result (Pre-op)	CEA value (ng/mL; POM1)	CEA result (POM1)
P1	3.21	negative	3.1	negative
P2	3.83	negative	6.1	positive
P3	7.71	positive	4.81	negative
P4	7.18	positive	2.31	negative
P5	6.86	positive	3.69	negative
P6	54.1	positive	4.72	negative
P7	1.87	negative	1.2	negative
P8	2.76	negative	1.8	negative
P9	14.8	positive	1.74	negative
P10	1.3	negative	0.95	negative
P11	2.27	negative	3.21	negative
P12	4.2	negative	1.98	negative
P13	3.89	negative	1.31	negative
P14	73.4	positive	21.5	positive
P15	2.71	negative	4.5	negative
P16	36.5	positive	23.81	positive
P17	16.3	positive	2.81	negative
P18	3.37	negative	2.3	negative
P19	3.11	negative	2.31	negative
P20	31.2	positive	3.91	negative
P21	2.29	negative	1.7	negative
P22	46.1	positive	4.58	negative
P23	11.2	positive	3.6	negative
P24	6.54	positive	4.1	negative
P25	7.7	positive	3.3	negative
P26	7.94	positive	4.4	negative
P27	1.99	negative	1.2	negative
P28	11.11	positive	2.1	negative
P29	9.05	positive	1.5	negative
P30	1.88	negative	1.1	negative
P31	1.75	negative	1.2	negative
P32	1.91	negative	1.11	negative
P33	9.28	positive	5.8	positive
P34	37.2	positive	8.9	positive
P35	2.17	negative	2.2	negative
P36	1.2	negative	1.02	negative
P37	3.11	negative	3.3	negative
P38	1.33	negative	1.27	negative

**eTable 4.** Preoperative and Postoperative (POM1) Carcinoembryonic Antigen (CEA) Results

Patient ID	CEA value (ng/mL; Pre-op)	CEA result (Pre-op)	CEA value (ng/mL; POM1)	CEA result (POM1)
P39	2.48	negative	2.76	negative
P40	3.78	negative	3.56	negative
P41	3.03	negative	2.3	negative
P42	7.08	positive	3.2	negative
P43	4.04	negative	1.3	negative
P44	1.3	negative	3.4	negative
P45	7.62	positive	3.6	negative
P46	4.34	negative	4.1	negative
P47	4.61	negative	3.67	negative
P48	4.31	negative	2.39	negative
P49	7.94	positive	1.81	negative
P50	36	positive	2.75	negative
P51	3.87	negative	2.1	negative
P52	60	positive	4.8	negative
P53	7.63	positive	4.1	negative
P54	3.33	negative	2.1	negative
P55	5.58	positive	1.2	negative
P56	0.42	negative	2.1	negative
P57	3.17	negative	2.12	negative
P58	4.67	negative	2.1	negative
P59	2.66	negative	1.85	negative
P60	13.2	positive	1.88	negative
P61	7.98	positive	1.96	negative
P62	21.91	positive	4.43	negative
P63	2.73	negative	3.2	negative
P64	2.55	negative	1.28	negative
P65	2.63	negative	1.2	negative
P66	3.23	negative	2.93	negative
P67	1.22	negative	1.4	negative
P68	1.36	negative	2.6	negative
P69	1.68	negative	1.3	negative
P70	19.3	positive	1.42	negative
P71	3.31	negative	1.88	negative
P72	4.63	negative	3.13	negative
P73	9.74	positive	1.76	negative
P74	2.9	negative	3.1	negative
P75	2.67	negative	1.07	negative
P76	13.19	positive	3.98	negative

**eTable 4.** Preoperative and Postoperative (POM1) Carcinoembryonic Antigen (CEA) Results

Patient ID	CEA value (ng/mL; Pre-op)	CEA result (Pre-op)	CEA value (ng/mL; POM1)	CEA result (POM1)
P77	1.18	negative	0.62	negative
P78	1.63	negative	0.95	negative
P79	2.16	negative	1.49	negative
P80	2.19	negative	2.1	negative
P81	4.3	negative	1.64	negative
P82	10.6	positive	4.2	negative
P83	2.6	negative	4.1	negative
P84	25.2	positive	2.06	negative
P85	3.59	negative	2.3	negative
P86	1.66	negative	3.2	negative
P87	2.79	negative	1.83	negative
P88	1.12	negative	0.88	negative
P89	1.81	negative	1.93	negative
P90	116	positive	4.6	negative
P91	2.79	negative	3.3	negative
P92	2.62	negative	2.1	negative
P93	11.5	positive	1.8	negative
P94	1.15	negative	2.1	negative
P95	2.64	negative	2.1	negative
P96	53.88	positive	5.9	positive
P97	8.12	positive	5.72	positive
P98	1.84	negative	1.31	negative
P99	49.4	positive	6.45	positive
P100	1.92	negative	1.87	negative
P101	9.58	positive	3.3	negative
P102	0.69	negative	4.2	negative
P103	5.05	negative	2.54	negative
P104	7.24	positive	2.1	negative
P105	2.06	negative	1.2	negative
P106	28.6	positive	2.6	negative
P107	1.18	negative	0.88	negative
P108	1.94	negative	1.51	negative
P109	1.15	negative	4.3	negative
P110	5.95	positive	2.6	negative
P111	1.2	negative	3.1	negative
P112	4.83	negative	4.2	negative
P113	13.4	positive	3.62	negative
P114	0.87	negative	1.5	negative

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**eTable 4.** Preoperative and Postoperative (POM1) Carcinoembryonic Antigen (CEA) Results

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Patient ID	CEA value (ng/mL; Pre-op)	CEA result (Pre-op)	CEA value (ng/mL; POM1)	CEA result (POM1)
P115	1.8	negative	1.3	negative
P116	5.63	positive	4.35	negative
P117	1.61	negative	1.1	negative
P118	48.6	positive	10.5	positive
P119	19.4	positive	7.77	positive
P120	1.48	negative	1.8	negative
P121	0.41	negative	0.47	negative
P122	7.37	positive	3.43	negative
P123	5.15	negative	4.2	negative
P124	24.4	positive	3.2	negative
P125	3.08	negative	0.68	negative
P126	3.96	negative	3.74	negative
P127	3.84	negative	1.69	negative
P128	3.12	negative	1.6	negative
P129	6.72	positive	2.3	negative
P130	1.08	negative	0.9	negative
P131	2.57	negative	2.1	negative
P132	1.16	negative	1.1	negative
P133	3.16	negative	1.5	negative
P134	1.86	negative	1.64	negative
P135	1.84	negative	1	negative
P136	3.71	negative	2.3	negative
P137	9.51	positive	1.32	negative
P138	20.2	positive	4.91	negative
P139	1.83	negative	1.52	negative
P140	2.9	negative	0.99	negative
P141	3.77	negative	1.3	negative
P142	8.02	positive	4.5	negative
P143	2.45	negative	2.3	negative
P144	0.51	negative	0.62	negative
P145	3.01	negative	1.96	negative
P146	3.23	negative	2.67	negative
P147	3.31	negative	2.07	negative
P148	1.11	negative	0.99	negative
P149	4.57	negative	3.56	negative
P150	2.18	negative	1.2	negative
P151	3.81	negative	4.1	negative
P152	10.3	positive	2.1	negative

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**eTable 4.** Preoperative and Postoperative (POM1) Carcinoembryonic Antigen (CEA) Results

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Patient ID	CEA value (ng/mL; Pre-op)	CEA result (Pre-op)	CEA value (ng/mL; POM1)	CEA result (POM1)
P153	324	positive	22.9	positive
P154	1.32	negative	1.13	negative
P155	4.24	negative	3.2	negative
P156	10.7	positive	1.33	negative
P157	0.96	negative	0.8	negative
P158	8.96	positive	1.41	negative
P159	2.69	negative	2.1	negative
P160	2.08	negative	1.22	negative
P161	0.98	negative	0.85	negative
P162	25.1	positive	50.09	positive
P163	3.17	negative	3.3	negative
P164	7.12	positive	1.65	negative
P165	12.2	positive	2.08	negative
P166	188	positive	17.8	positive
P167	1.87	negative	1.2	negative
P168	2.4	negative	1.2	negative
P169	3.33	negative	2.9	negative
P170	1.82	negative	3.1	negative
P171	53.7	positive	3.54	negative
P172	2.01	negative	2.6	negative
P173	4.88	negative	2.61	negative
P174	17.86	positive	1.83	negative
P175	3.53	negative	2.23	negative
P176	20.6	positive	2.52	negative
P177	1.46	negative	1.31	negative
P178	4.1	negative	3.23	negative
P179	5.49	positive	5	negative
P180	2.44	negative	2.14	negative
P181	1.12	negative	0.45	negative
P182	0.87	negative	0.88	negative
P183	3.06	negative	2.4	negative
P184	18.27	positive	1.83	negative
P185	12.46	positive	3.39	negative
P186	6.79	positive	1.56	negative
P187	1.82	negative	1.3	negative
P188	7.67	positive	3	negative
P189	1.33	negative	1.05	negative
P190	2.28	negative	2.1	negative

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**eTable 4.** Preoperative and Postoperative (POM1) Carcinoembryonic Antigen (CEA) Results

Patient ID	CEA value (ng/mL; Pre-op)	CEA result (Pre-op)	CEA value (ng/mL; POM1)	CEA result (POM1)
P191	4.47	negative	3.2	negative
P192	1.46	negative	1.75	negative
P193	6.07	positive	3.2	negative
P194	4.14	negative	3.9	negative
P195	3.43	negative	1.6	negative
P196	16.29	positive	4.2	negative
P197	4.98	negative	1.96	negative
P198	18.82	positive	4.9	negative
P199	2.96	negative	2.73	negative
P200	1.48	negative	1.2	negative
P201	4.54	negative	3.9	negative
P202	2.58	negative	2.6	negative
P203	3.47	negative	2.1	negative
P204	10.4	positive	2.33	negative
P205	3.68	negative	3.1	negative
P206	3.34	negative	1.82	negative
P207	5.09	negative	2.87	negative
P208	1.13	negative	0.81	negative
P209	1.59	negative	1.66	negative
P210	3.81	negative	2.1	negative
P211	1.2	negative	1.2	negative
P212	20.9	positive	2.49	negative
P213	2.49	negative	1.8	negative
P214	14.8	positive	2.67	negative
P215	5.52	positive	3.6	negative
P216	1.91	negative	2.6	negative
P217	37	positive	3.64	negative
P218	11.5	positive	1.69	negative
P219	2.78	negative	2.1	negative
P220	2.56	negative	2.4	negative
P221	1.93	negative	0.81	negative
P222	2.84	negative	4.8	negative
P223	2.81	negative	1.86	negative
P224	6.95	positive	1.92	negative
P225	2.83	negative	2.1	negative
P226	1.58	negative	1.15	negative
P227	4.38	negative	1.89	negative
P228	2.35	negative	1.8	negative

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**eTable 4.** Preoperative and Postoperative (POM1) Carcinoembryonic Antigen (CEA) Results

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Patient ID	CEA value (ng/mL; Pre-op)	CEA result (Pre-op)	CEA value (ng/mL; POM1)	CEA result (POM1)
P229	3.23	negative	1.58	negative
P230	1.43	negative	1.1	negative
P231	7.23	positive	4.1	negative
P232	3.81	negative	2.34	negative
P233	25.6	positive	3.22	negative
P234	2.84	negative	1.18	negative
P235	1.87	negative	1.3	negative
P236	1.78	negative	1.2	negative
P237	1.35	negative	1.1	negative
P238	1.37	negative	0.7	negative
P239	3.68	negative	1.77	negative
P240	2.73	negative	2.5	negative
P241	4.48	negative	4.1	negative
P242	6.99	positive	2.2	negative
P243	17.5	positive	4.6	negative
P244	4.65	negative	2.63	negative
P245	1.56	negative	1.4	negative
P246	1.28	negative	1.1	negative
P247	1.39	negative	1.2	negative
P248	3.13	negative	3.8	negative
P249	2.17	negative	1.81	negative
P250	2.29	negative	2.1	negative
P251	1.98	negative	1.1	negative
P252	2.31	negative	2.2	negative
P253	2.06	negative	3.1	negative
P254	2.99	negative	2.1	negative
P255	4.78	negative	7.1	positive
P256	27.9	positive	7.8	positive
P257	3.4	negative	2.15	negative
P258	1.81	negative	1.1	negative
P259	2.49	negative	2.1	negative
P260	6.9	positive	4.8	negative
P261	1.79	negative	1.28	negative
P262	41.4	positive	1.8	negative
P263	1.56	negative	1.53	negative
P264	37.4	positive	3.3	negative
P265	1.39	negative	NA	NA
P266	58.7	positive	6.1	positive

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**eTable 4.** Preoperative and Postoperative (POM1) Carcinoembryonic Antigen (CEA) Results

Patient ID	CEA value (ng/mL; Pre-op)	CEA result (Pre-op)	CEA value (ng/mL; POM1)	CEA result (POM1)
P267	2.29	negative	5.4	positive
P268	2.65	negative	1.2	negative
P269	29.2	positive	7.3	positive
P270	7.83	positive	NA	NA
P271	1.2	negative	5.4	positive
P272	5.93	positive	1.06	negative
P273	2.97	negative	2.1	negative
P274	392	positive	872	positive
P275	2.28	negative	1.01	negative
P276	2.64	negative	NA	NA
P277	10.8	positive	1.67	negative
P278	29.1	positive	4.04	negative
P279	1.62	negative	NA	NA
P280	1.45	negative	NA	NA
P281	1.59	negative	NA	NA
P282	1.28	negative	NA	NA
P283	2.71	negative	NA	NA
P284	2.05	negative	NA	NA
P285	1.81	negative	NA	NA
P286	8.31	positive	NA	NA
P287	10.2	positive	NA	NA
P288	0.97	negative	NA	NA
P289	2.11	negative	NA	NA
P290	1.5	negative	1.53	negative
P291	3.35	negative	NA	NA
P292	NA	NA	NA	NA
P293	316	positive	292	positive
P294	7.63	positive	26.7	positive
P295	17.9	positive	2.01	negative
P296	5.64	positive	5.89	positive
P297	15.9	positive	20.76	positive
P298	3.69	negative	1.2	negative
P299	145	positive	266.4	positive

---

**eTable 5.** Number of Recurrent Patients According to Circulating Tumor DNA Status at Postoperative Month 1 (POM1)

	ctDNA positive		ctDNA negative	
	Recurrence	Recurrence-free	Recurrence	Recurrence-free
NO.	39	20	11	185

---

**eTable 6.** Multivariable Cox Analysis of Recurrence-Free Survival by Circulating Tumor DNA and Carcinoembryonic Antigen (CEA) Status at Postoperative Month 1

Variable	HR (95% CI)	P
CEA at POM1 (positive vs. negative)	9.3 (4.5-19.0)	<0.001
ctDNA at POM1 (positive vs. negative)	19.2 (9.5-38.7)	<0.001

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**eTable 7.** Performance of 6 Methylated DNA Markers of ColonAiQ in Detecting Colorectal Cancer Recurrence

	Recurrence		Recurrence-free		Sensitivity (%)	Specificity (%)
	positive	negative	positive	negative		
Septin9_1	26	24	10	195	52.0	95.1
Septin9_2	23	27	3	202	46.0	98.5
BCAT1	23	27	6	199	46.0	97.1
IKZF1	22	28	6	199	44.0	97.1
BCAN	19	31	5	200	38.0	97.6
VAV3	13	37	5	200	26.0	97.6
ColonAiQ	39	11	20	185	78.0	90.2

Septin9\_1: Septin9 locus 1; Septin9\_2: Septin9 locus 2.

**eTable 8.** Performance Estimates of Circulating Tumor DNA and Carcinoembryonic Antigen (CEA) Status at Postoperative Month 1 for Detecting Recurrence in Single and Combined Diagnoses

		ctDNA	CEA	Combination
positive	Recurrence	37	14	40
	Recurrence-free	18	9	26
negative	Recurrence	11	34	8
	Recurrence-free	175	184	167
Sensitivity (%)		77.1	29.2	83.3
Specificity (%)		90.7	95.3	86.5

**eTable 9.** Number of Recurring Patients According to Circulating Tumor DNA Status at Postoperative Month 1 (POM1) in Stage II and III ACT-Treated Patients in the Subgroup Analysis

Stage III (100)	ctDNA status (POM1)	Recurrence	Recurrence-free	Sensitivity	Specificity
Clinical high risk	Positive	11	4	73.3%	88.9%
	Negative	4	32		
Clinical low risk	Positive	7	5	77.8%	87.5%
	Negative	2	35		
3 months	Positive	8	5	80.0%	79.2%
	Negative	2	19		
6 months	Positive	10	4	71.4%	92.3%
	Negative	4	48		
Clinical high risk-3 months	Positive	4	0	80.0%	100.0%
	Negative	1	5		
Clinical high risk-6 months	Positive	7	4	70.0%	87.1%
	Negative	3	27		
Clinical low risk-3 months	Positive	4	5	80.0%	73.7%
	Negative	1	14		
Clinical low risk-6 months	Positive	3	0	75.0%	100.0%
	Negative	1	21		
<b>Stage II (62)</b>					
Clinical high risk	Positive	2	4	66.7%	88.9%
	Negative	1	32		
Clinical low risk	Positive	1	2	50.0%	90.5%
	Negative	1	19		
3 months	Positive	1	2	100.0%	91.7%
	Negative	0	22		
6 months	Positive	2	4	50.0%	87.9%
	Negative	2	29		
Clinical high risk-3 months	Positive	1	2	100.0%	88.2%
	Negative	0	15		
Clinical high risk-6 months	Positive	1	2	50.0%	89.5%
	Negative	1	17		
Clinical low risk-3 months	Positive	0	0	NA	100.0%
	Negative	0	7		
Clinical low risk-6 months	Positive	1	2	50.0%	85.7%
	Negative	1	12		



**eTable 10.** Univariate Cox Analysis of Recurrence-Free Survival by Postoperative Circulating Tumor DNA Status at Postoperative Month 1 in Patients With Stage III Cancer With Different Clinical Risk Stratification and Adjuvant Chemotherapy (ACT) Treatment Durations

P values were determined using the log-rank test. POM1: Postoperative month 1.

Stage III-ctDNA status (POM1)	HR (95% CI)	P value
Clinical high risk	11.6 (3.6-36.9)	<b>&lt;0.001</b>
Clinical low risk	12.3 (2.5-59.7)	<b>&lt;0.001</b>
3 months	7.5 (1.6-35.8)	<b>0.0038</b>
6 months	15.6 (4.8-50.3)	<b>&lt;0.001</b>
Clinical high risk-3 months	8543000000 (0-Inf)	<b>0.0011</b>
Clinical high risk-6 months	9.2 (2.4-36.0)	<b>&lt;0.001</b>
Clinical low risk-3 months	5.5 (0.6-51.3)	0.095
Clinical low risk-6 months	55.7 (5.3-590.4)	<b>&lt;0.001</b>

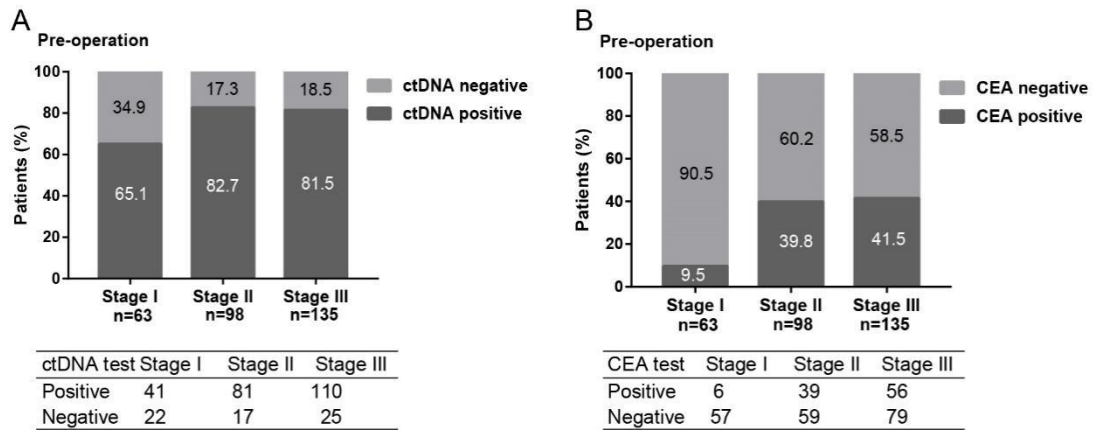
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**eTable 11.** Compliance Rates at the Key Times

Time point	Planned patients	Available patients	Compliance rate
POM1	299	255	85.3%
Post-ACT	211	149	70.6%

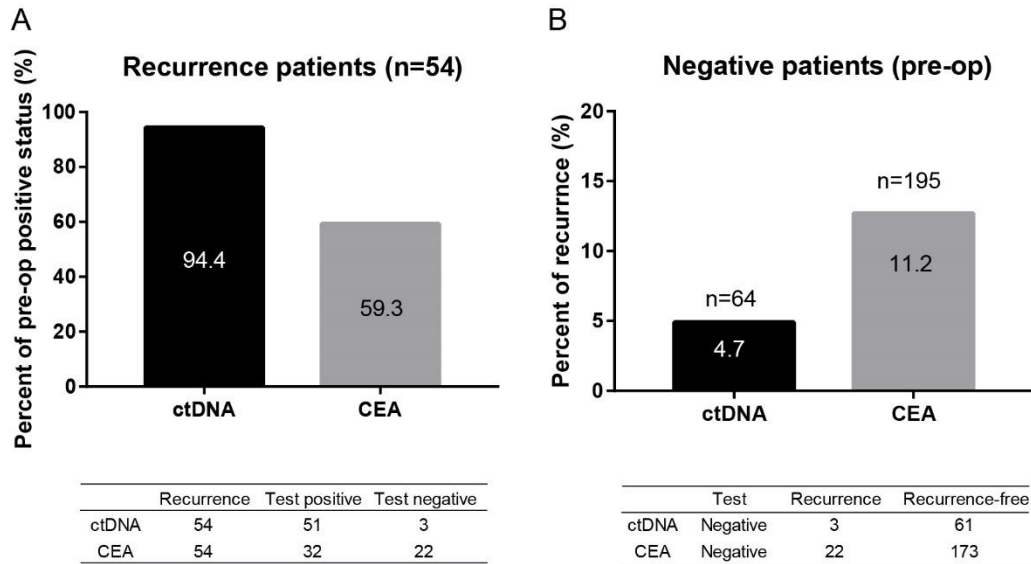
POM1: Postoperative month 1; Post-ACT: Post adjuvant chemotherapy

**Figure 1.** Preoperative Detection of Circulating Tumor DNA and Carcinoembryonic Antigen (CEA) in Patients With Stage I to III Colorectal Cancer



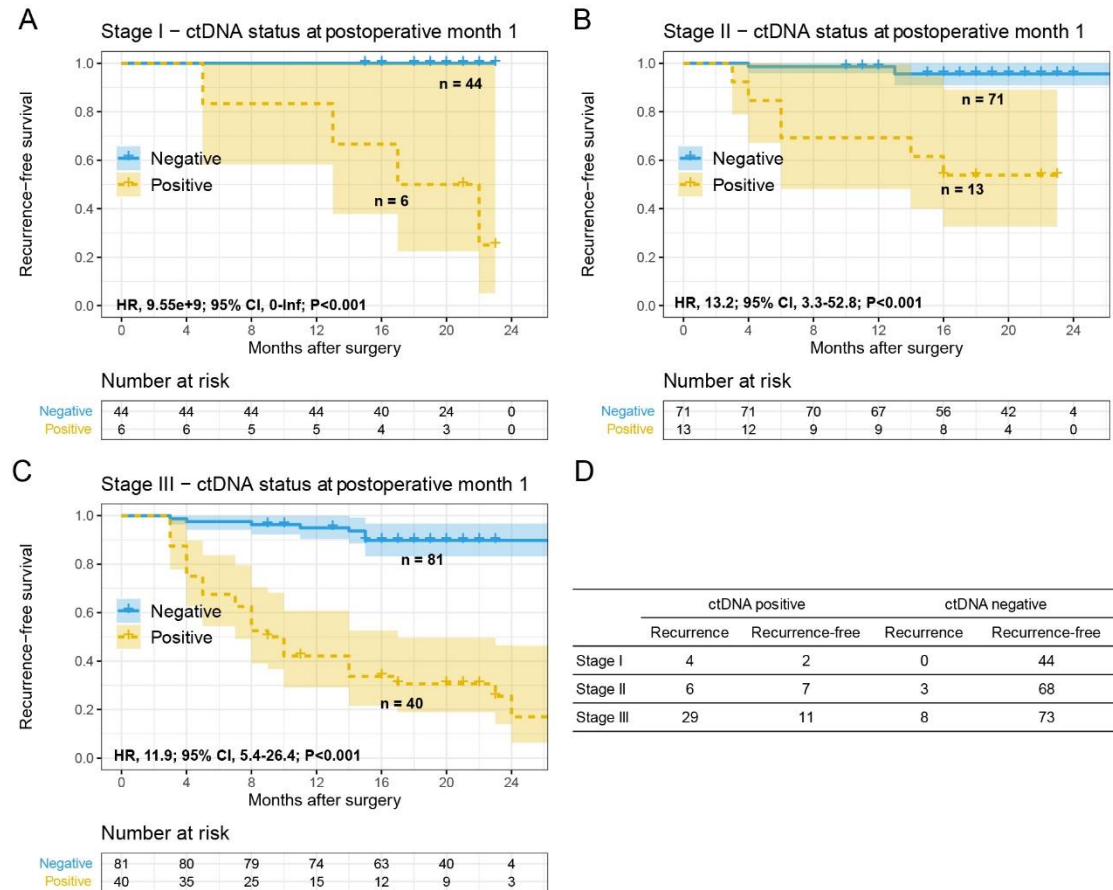
**eFigure 2.** Patients With Recurrence in Preoperative Circulating Tumor DNA (Carcinoembryonic Antigen [CEA])–positive and Circulating Tumor DNA (CEA)–Negative Patients

A. ctDNA and CEA positivity rates in patients with recurrence are shown. B. Recurrence rates in ctDNA and CEA-negative patients. Pre-op: pre-operation.

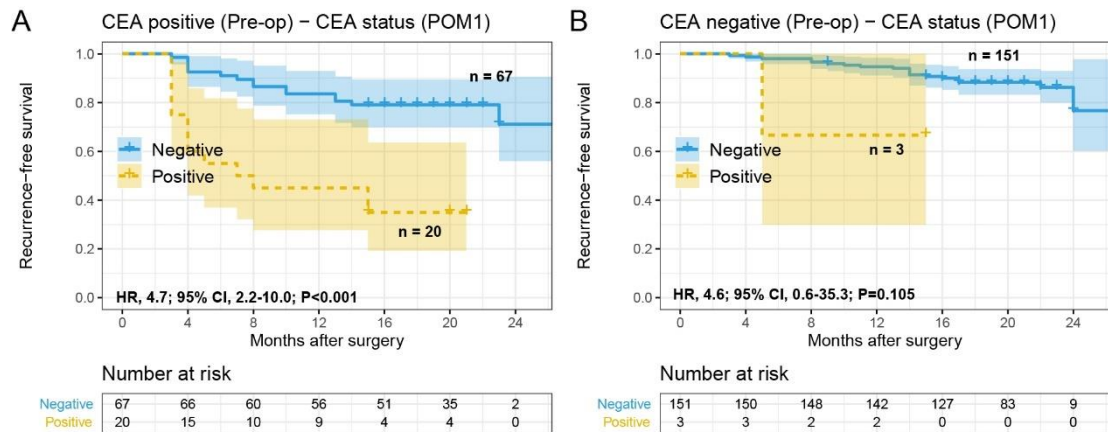


**eFigure 3. Prognostic Value by Stages**

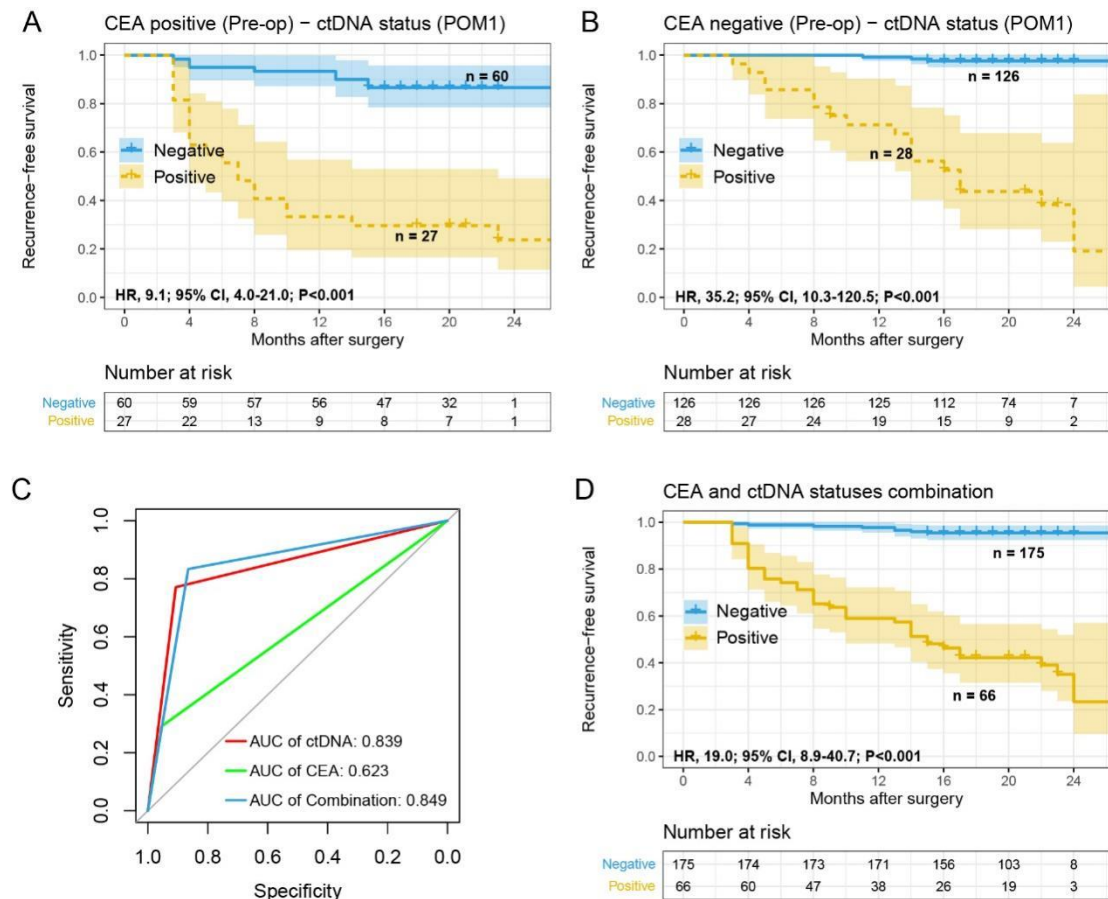
Kaplan–Meier estimates of recurrence-free survival (RFS) stratified by ctDNA status at postoperative month 1 for patients with stage I-III disease (A-C). P values were determined using the log-rank test. D. ColonAiQ results in patients with stage I-III disease. CI: confidence interval; HR: hazard ratio.



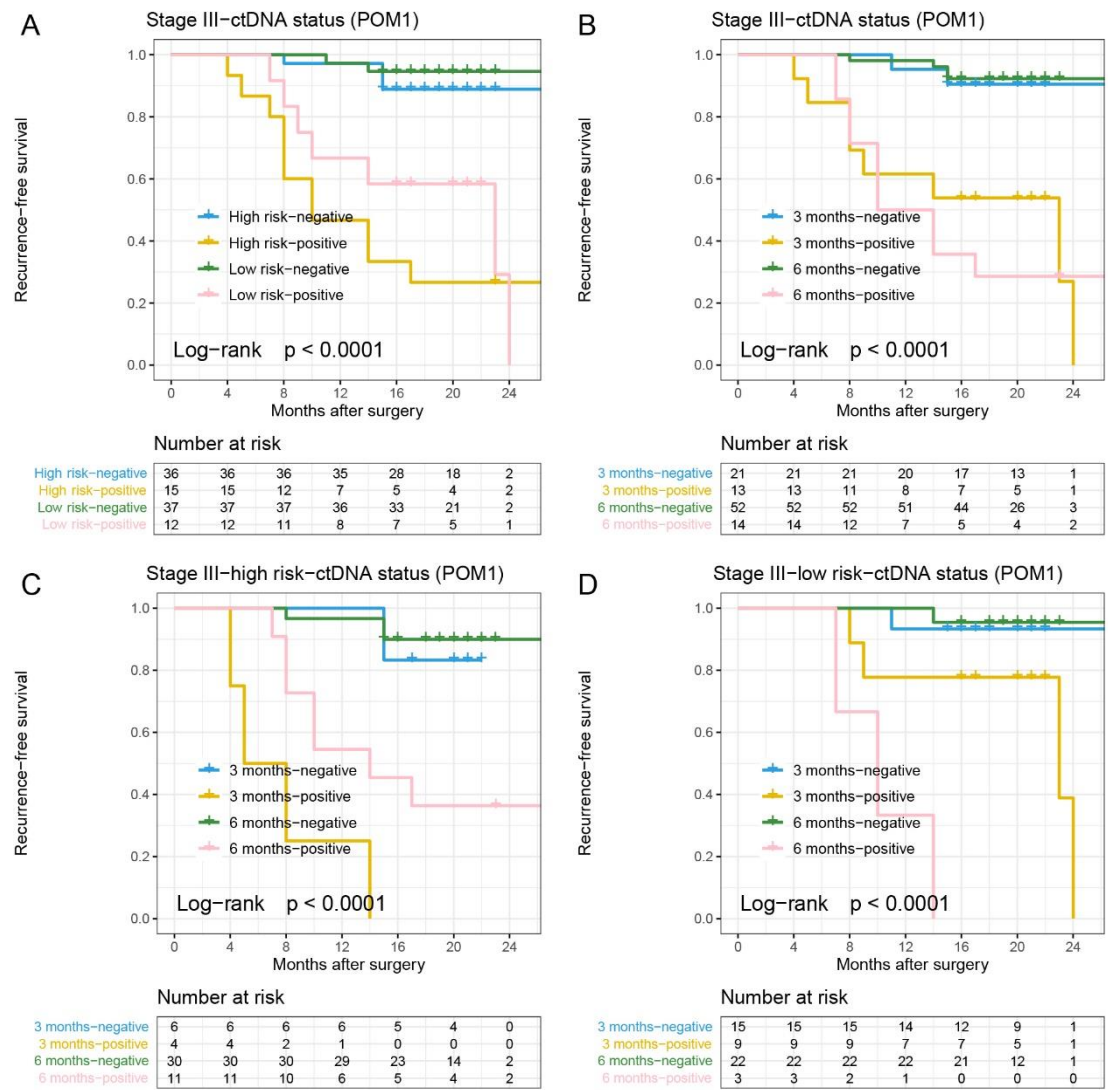
**eFigure 4.** Kaplan-Meier Estimates of Recurrence-Free Survival (RFS) Stratified by Carcinoembryonic Antigen (CEA) Status at Postoperative Month 1 for Patients Whose Preoperative CEA Levels Were Positive or Negative  
 CI: confidence interval; HR: hazard ratio; Pre-op: pre-operation; POM1: Postoperative month 1.



**Figure 5.** Subgroup Analysis of Circulating Tumor DNA Status in Patients With Preoperative and Postoperative Carcinoembryonic Antigen (CEA) Test Kaplan–Meier estimates of recurrence-free survival (RFS) stratified by ctDNA status at postoperative month 1 for patients whose preoperative CEA was positive (**A**) and negative (**B**). **C**, Receiver operator characteristic (ROC) for recurrences of ctDNA, CEA, and combination of ctDNA and CEA at postoperative month 1 (POM1). **D**, Kaplan–Meier estimates of RFS stratified by ctDNA and CEA combination status at POM1. A patient was classified as positive if the combined score was  $> -1.987$ . P values were determined using the log-rank test. CI: confidence interval; HR: hazard ratio; Pre-op: pre-operation.



**eFigure 6.** Circulating Tumor DNA Status Postoperatively as a Prognostic Factor for Recurrence-Free Survival (RFS) in Patients With Stage III Cancer With Different Clinical Risk Stratifications and Adjuvant Chemotherapy (ACT) Treatment Durations Kaplan–Meier estimate of RFS in stage III patients receiving ACT according to ctDNA and clinical risk stratification (A) or ACT treatment duration (3 versus 6 months) (B). Kaplan–Meier estimate of RFS in high-risk stage III patients (C) and low-risk stage III patients (D) according to ctDNA status at postoperative month 1 (POM1) and treatment duration. P values were determined using the log-rank test. CI: confidence interval; HR: hazard ratio.



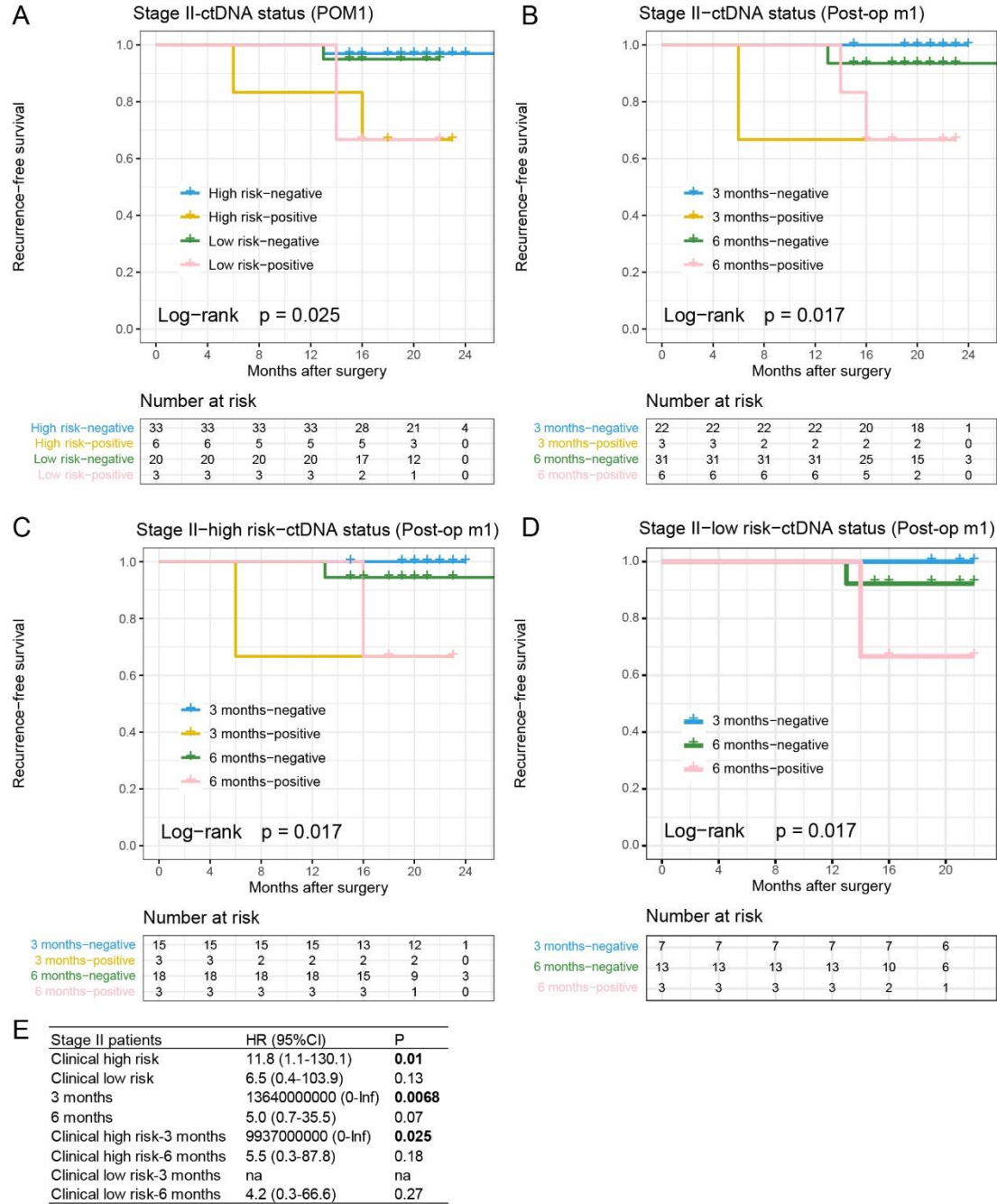


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**eFigure 7.** Circulating Tumor DNA Status Postoperatively as a Prognostic Factor for Recurrence-Free Survival (RFS) in Patients With Stage II Cancer With Different Clinical Risk Stratifications and Adjuvant Chemotherapy (ACT) Treatment Durations

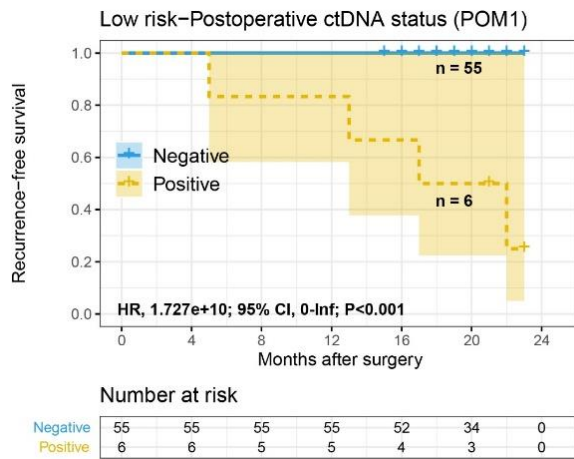
Kaplan–Meier estimate of recurrence-free survival (RFS) in stage II patients receiving ACT according to ctDNA and clinical risk stratification (A) or ACT treatment duration (3 versus 6 months) (B). Kaplan–Meier estimate of DFS in high-risk stage II patients (C) and low-risk stage II patients (D) according to ctDNA status at postoperative month 1 (POM1) and treatment duration. P values were determined using the log-rank test. E, Univariate Cox analysis of recurrence-free survival by postoperative ctDNA status at POM1. P values were determined using the log-rank test. CI: confidence interval; HR: hazard ratio.

**eFigure 7.** Circulating Tumor DNA Status Postoperatively as a Prognostic Factor for Recurrence-Free Survival (RFS) in Patients With Stage II Cancer With Different Clinical Risk Stratifications and Adjuvant Chemotherapy (ACT) Treatment Durations



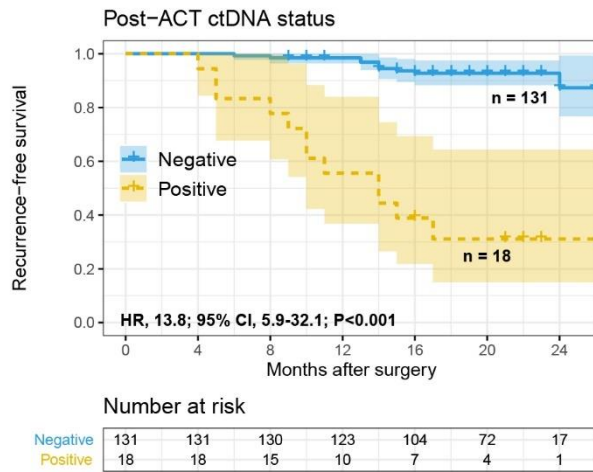
**eFigure 8.** Kaplan-Meier Estimates of Recurrence-Free Survival (RFS) Stratified by Circulating Tumor DNA Status at Postoperative Month 1 in Low-Risk Patients Without Adjuvant Chemotherapy (ACT)

P values were determined using the log-rank test. POM1: Postoperative month 1. CI: confidence interval; HR: hazard ratio.



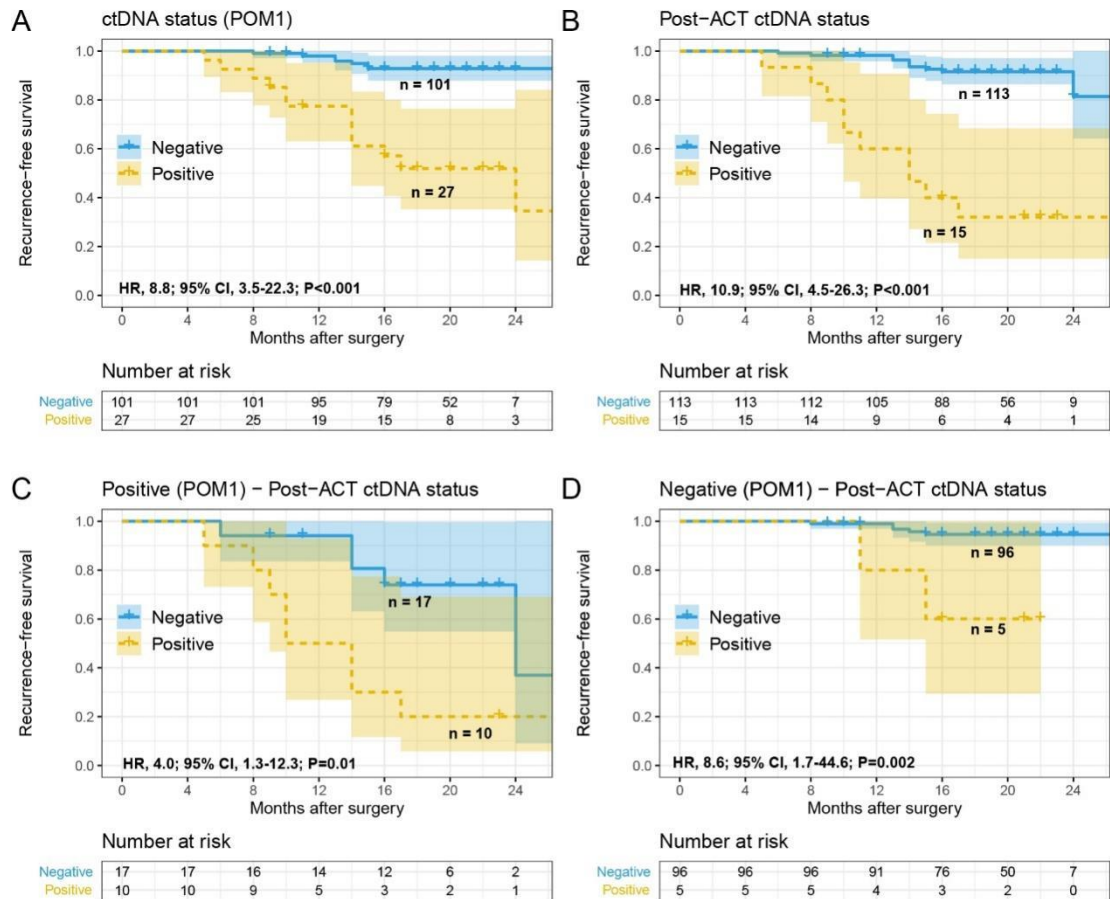
**eFigure 9.** Postadjuvant Chemotherapy (ACT) Analysis for Detecting Colorectal Cancer Recurrence

Kaplan–Meier estimates of recurrence-free survival (RFS) for ACT-treated patients stratified by ctDNA status at the first post-ACT visit. P values were determined using the log-rank test. CI: confidence interval; HR: hazard ratio.



**Figure 10.** Risk Stratification by Circulating Tumor DNA in Patients Whose Plasma Was Collected at Both Postadjuvant Chemotherapy (ACT) and Postoperative Month 1 (POM1)

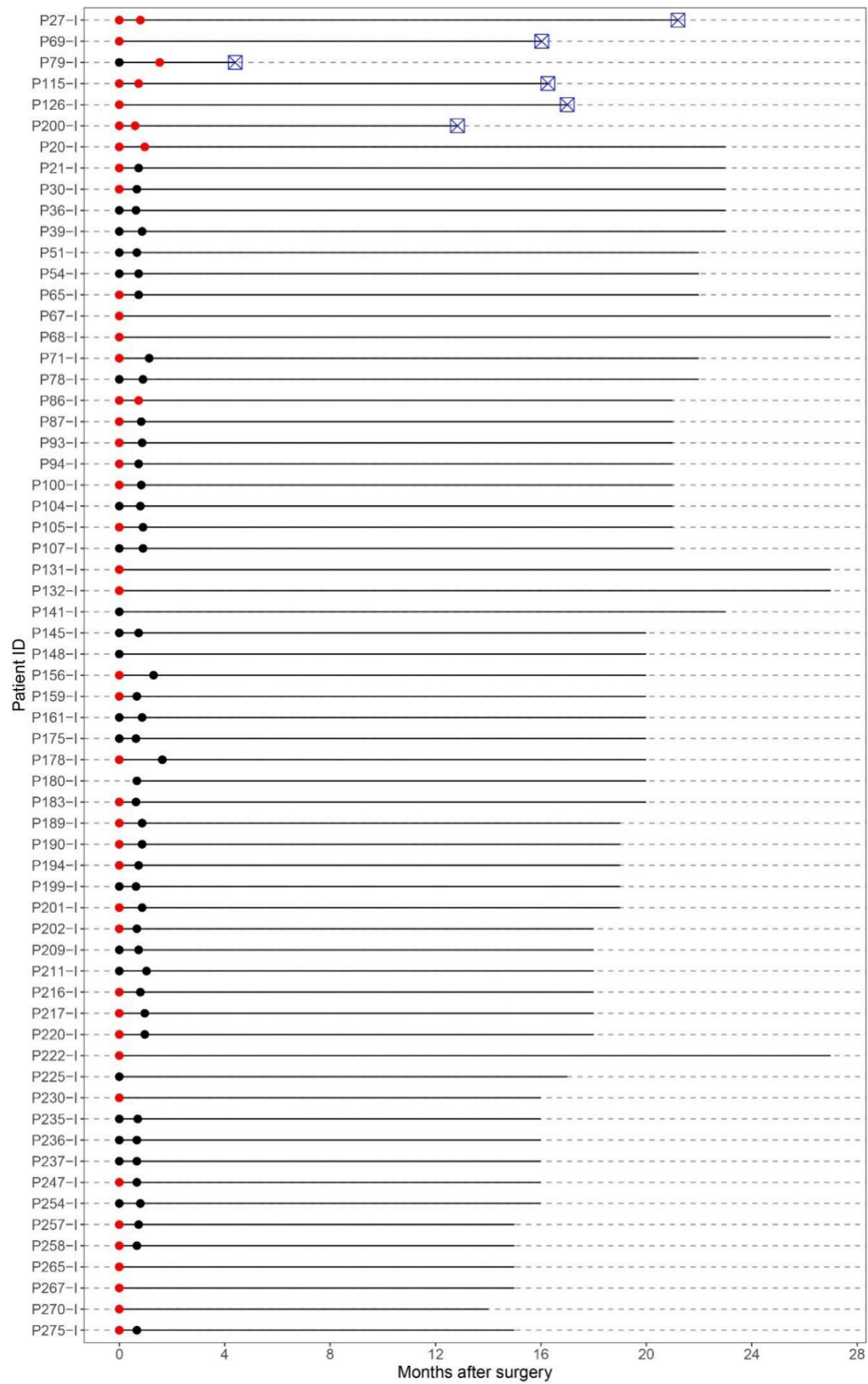
Kaplan–Meier estimates of recurrence-free survival (RFS) for ACT-treated patients whose plasma was collected at POM1, stratified by ctDNA status at postoperative month 1 (A) and at the first post-ACT visit (B). P values were determined using the log-rank test. Kaplan–Meier estimates of RFS for ctDNA-positive (B) and ctDNA-negative (C) patients at POM1 stratified by ctDNA status at the first post-ACT visit. E, ColonAiQ result. P values were determined using the log-rank test. CI: confidence interval; HR: hazard ratio.

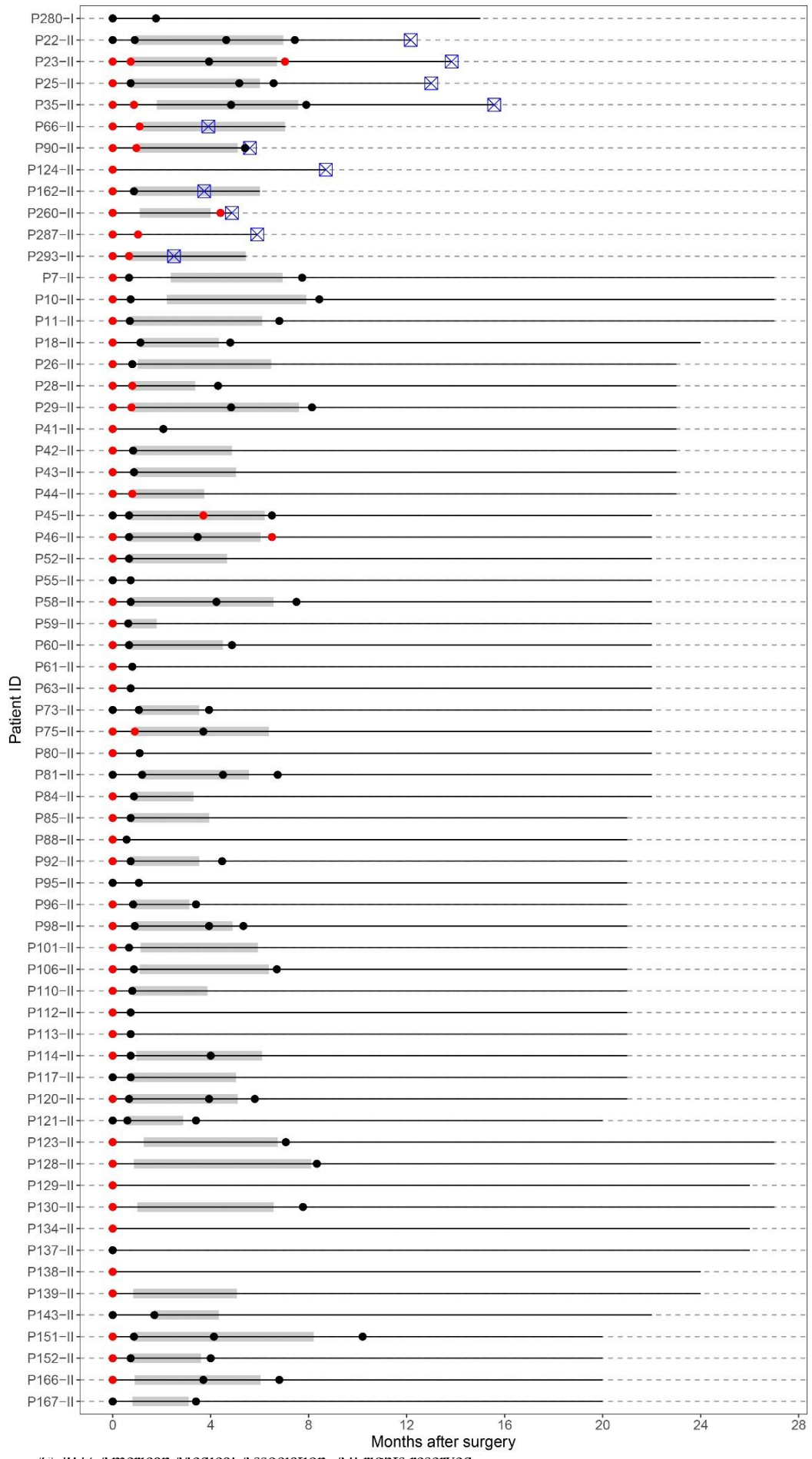


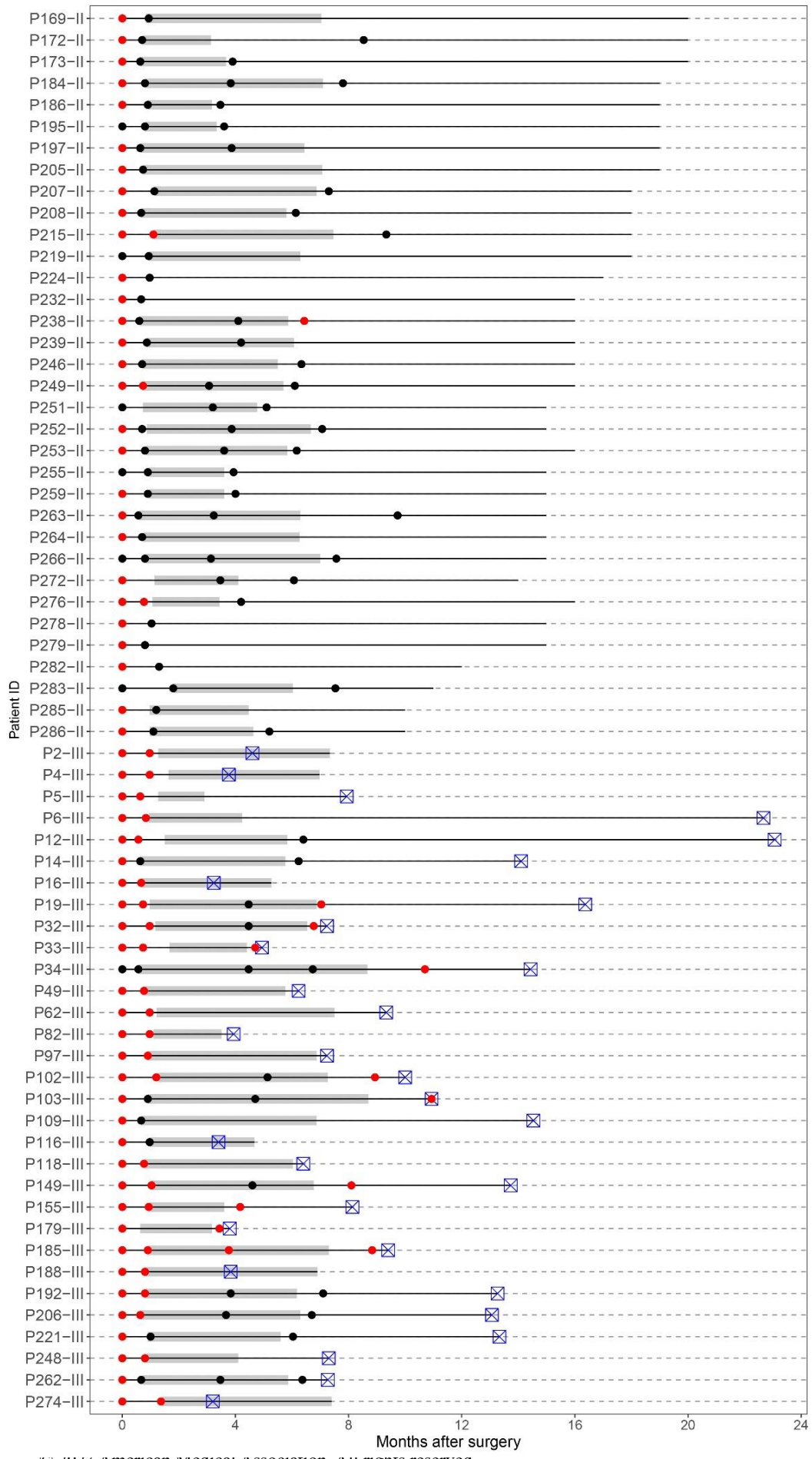
**E**

	ctDNA positive		ctDNA negative	
	Recurrence	Recurrence-free	Recurrence	Recurrence-free
Post-ACT	10	5	10	103
POM1	13	14	7	94

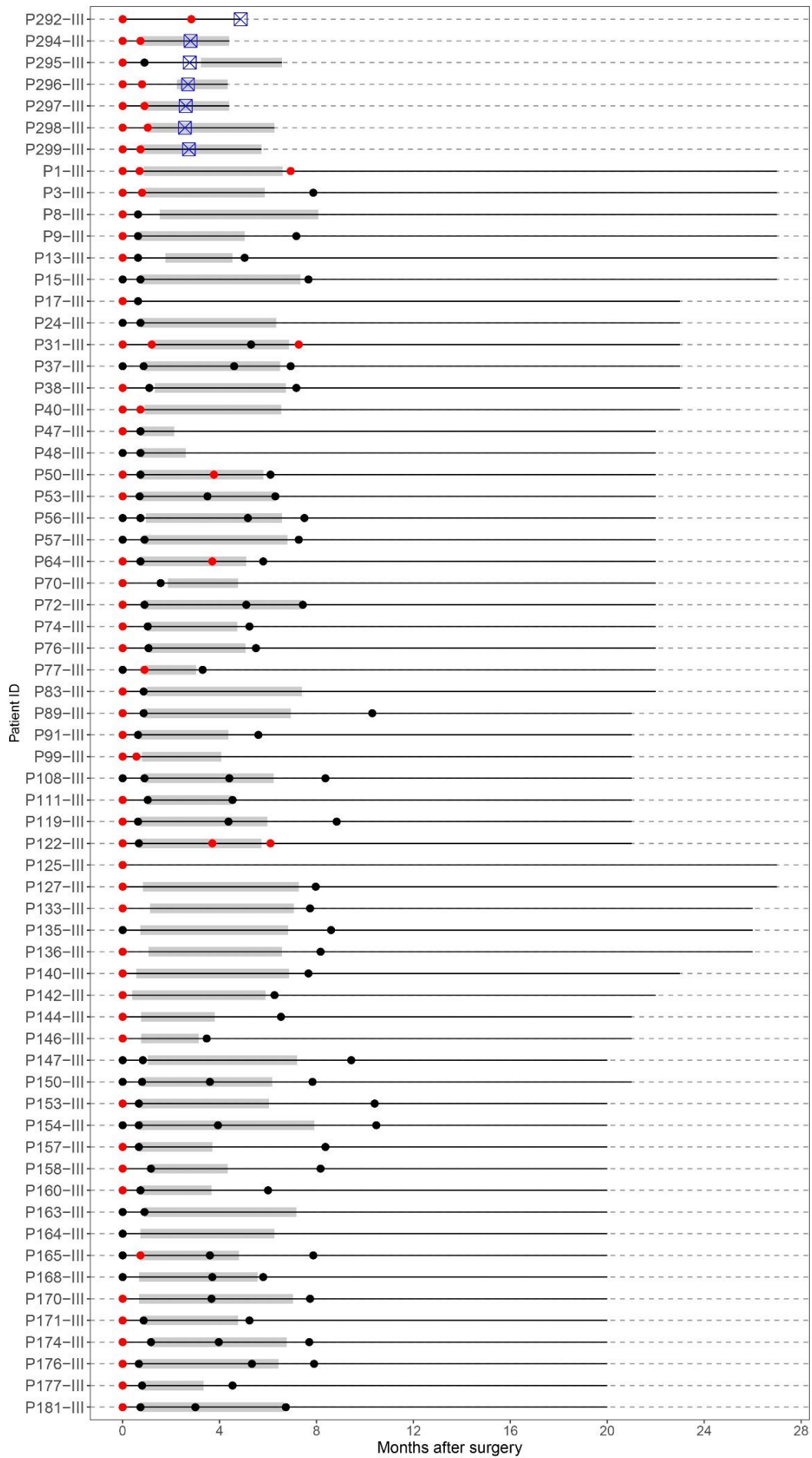
**eFigure 11.** Longitudinal Plot of Circulating Tumor DNA Status During Treatment in 299 Patients

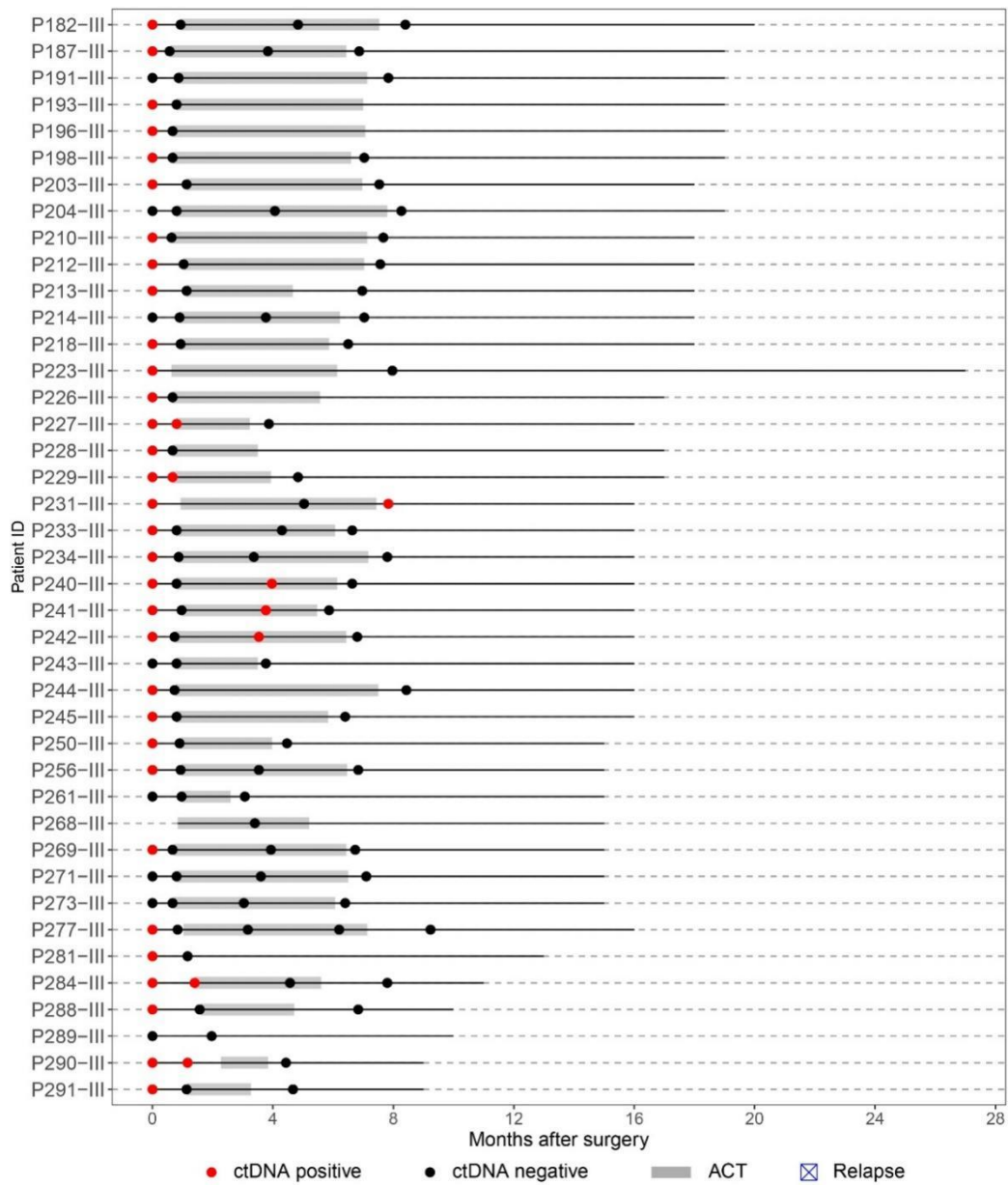












Patient ID-Stage, such as P1-III, P108-III.