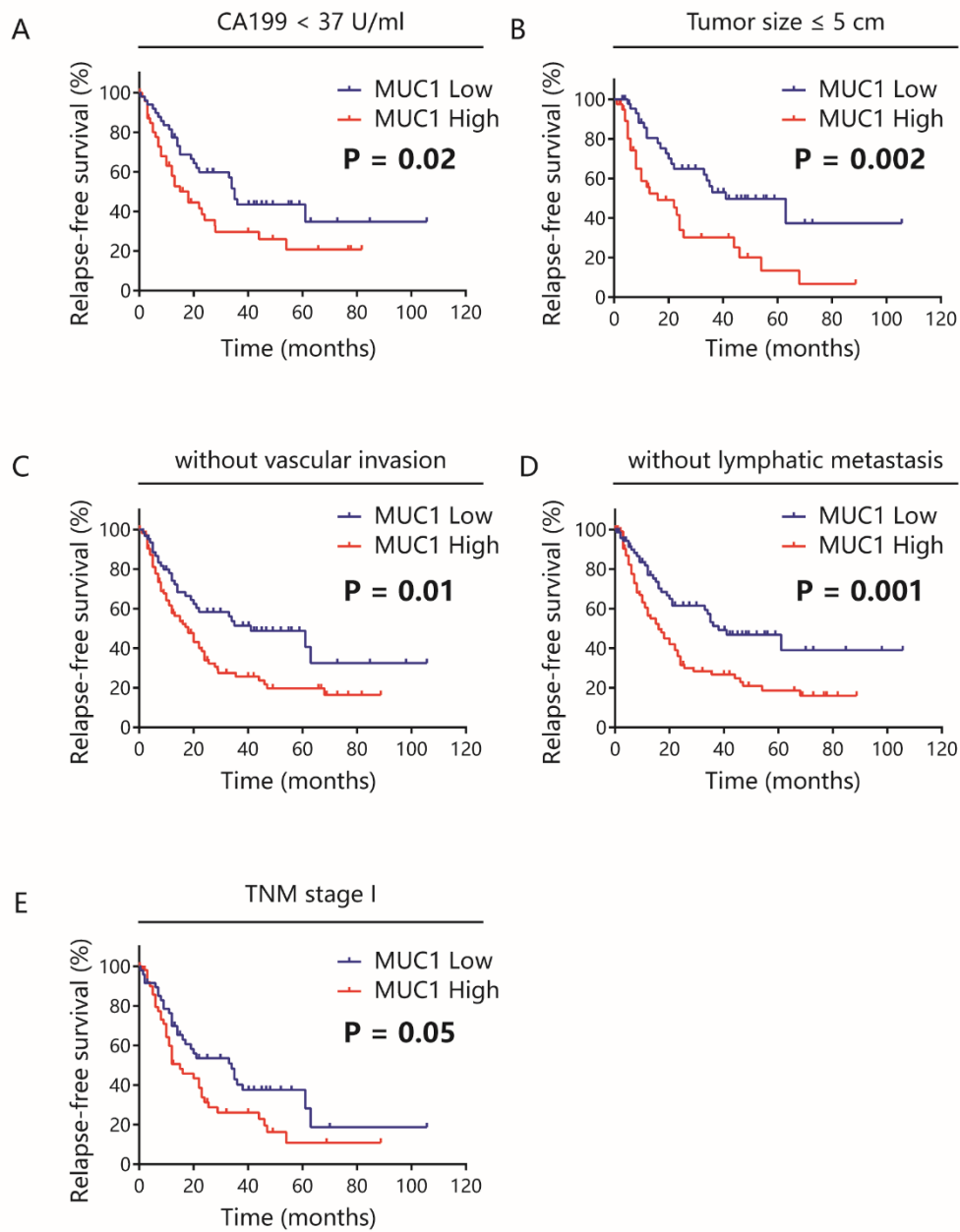


573 **Supplementary Figure S1.**



574

575

576 Prognostic significance assessed using Kaplan–Meier survival estimates and log-rank

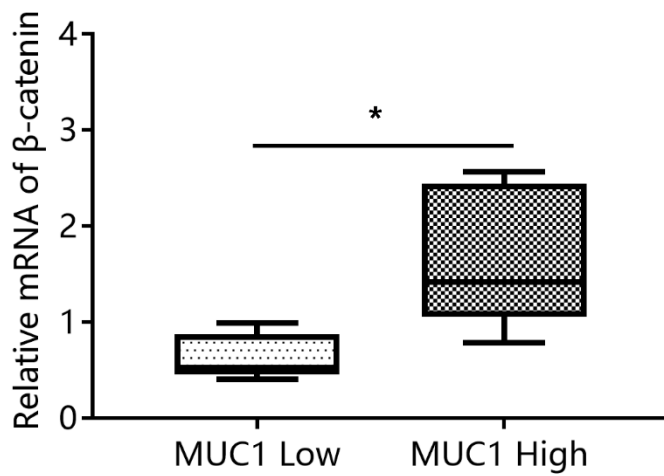
577 tests. Comparison of relapse-free survival between the MUC1 low and MUC1 high

578 group in different subgroups.

579

580

581 **Supplementary Figure S2.**



582

583

584 According to the mRNA expression of MUC1 in tumor tissues sequenced from 10  
585 patients, they were divided into MUC1 Low group (n=5) and MUC1 High group  
586 (n=5). The mRNA expression is presented in the form of FPKM of RNA-seq  
587 sequencing results. There were significant differences in the expression of β-catenin  
588 mRNA between the two groups ( $0.64 \pm 0.11$  vs.  $1.68 \pm 0.33$ , respectively, \*  $P = 0.02$ ).

589

**10 pairs of ICC patient clinical information of sequenced specimens**

Patient code	Gender	Age	Date of surgery	Tumor type	Tumor diameter (cm)	Liver capsule invasion	Lymph node metastasis	Microvascular infiltration
T009	M	44	2018/12/13	ICC	9.5	Yes	No	No
T015	M	61	2019/1/3	ICC	8	Yes	No	No
T017	F	70	2019/1/9	ICC	10.5	No	No	No
T021	M	71	2019/1/30	ICC	11	No	No	Yes
T024	F	54	2019/2/22	ICC	7	No	Yes	No
T027	M	51	2019/2/27	ICC	8	Yes	No	No
T033	M	72	2019/5/8	ICC	5	No	No	No
T036	F	68	2019/5/8	ICC	4	No	Yes	Yes
T039	F	72	2019/5/10	ICC	3.5	No	Yes	No
T042	M	63	2019/5/10	ICC	11.5	No	No	Yes