

**Figure S1** Selection of predictors using LASSO regression analysis. (A) LASSO coefficient profiles of the 15 variables. (B) A 10-fold cross-validation was used in the LASSO regression. Binomial deviance was plotted versus log ( $\lambda$ ). The left dotted vertical line represents the optimal values with the minimum criteria and the right vertical dotted line represents the one standard error criterion. LASSO, least absolute shrinkage and selection operator.

**Table S1** Demographic and clinical characteristics of the development cohort and the temporal validation cohort from multi-imputed and categorized data

	Overall (N=8,991)	Development cohort (N=5,655)	Validation cohort (N=3,336)	P
Age (%)				0.028
≤39 years	2,793 (31.1)	1,809 (32.0)	984 (29.5)	
40-59 years	4,492 (50.0)	2,805 (49.6)	1,687 (50.6)	
≥60 years	1,706 (19.0)	1,041 (18.4)	665 (19.9)	
Race (%)				0.795
White	7,371 (82.0)	4,630 (81.9)	2,741 (82.2)	
Black	603 (6.7)	387 (6.8)	215 (6.5)	
Other	1,017 (11.3)	638 (11.3)	374 (11.4)	
Grade (%)				0.052
Grade I	2,858 (31.8)	1,746 (30.9)	1,112 (33.3)	
Grade II	3,685 (41.0)	2,354 (41.6)	1,331 (39.9)	
Grade III and IV	2,448 (27.2)	1,555 (27.5)	893 (26.8)	
Summary stage (%)				0.202
Localized	5,690 (63.3)	3,593 (63.5)	2,097 (62.9)	
Regional	2,543 (28.3)	1,608 (28.4)	935 (28.0)	
Distant	758 (8.4)	454 (8.0)	304 (9.1)	
AJCC_stage (%)				0.019
IA	1,590 (17.7)	973 (17.2)	617 (18.5)	
IB	4,361 (48.5)	2,820 (49.9)	1,541 (46.2)	
II	959 (10.7)	594 (10.5)	365 (10.9)	
III	1,308 (14.5)	801 (14.2)	507 (15.2)	
IV	773 (8.6)	467 (8.3)	306 (9.2)	
Stage T (%)				<0.001
T1a	1,620 (18.0)	987 (17.5)	633 (19.0)	
T1b	5,030 (55.9)	3,234 (57.2)	1,796 (53.8)	
T2	1,455 (16.2)	857 (15.2)	598 (17.9)	
T3	606 (6.7)	370 (6.5)	236 (7.1)	
T4	280 (3.1)	207 (3.7)	73 (2.2)	
Stage N (%)				0.655
N0	7,332 (81.5)	4,620 (81.7)	2,712 (81.3)	
N1	1,659 (18.5)	1,035 (18.3)	624 (18.7)	
Stage M (%)				0.180
M0	8,298 (92.3)	5,236 (92.6)	3,062 (91.8)	
M1	693 (7.7)	419 (7.4)	274 (8.2)	
Surgery of primary site				0.001
No	1,886 (21.0)	1,123 (19.9)	763 (22.9)	
Yes	7,105 (79.0)	4,532 (80.1)	2,573 (77.1)	
Surgery of regional LNs				<0.001
No	4,105 (45.7)	2,793 (49.4)	1,312 (39.3)	
Yes	4,886 (54.3)	2,862 (50.6)	2,024 (60.7)	
Surgery of distant metastasis				<0.001
No	8,805 (97.9)	5,474 (96.8)	3,331 (99.9)	
Yes	186 (2.1)	181 (3.2)	5 (0.1)	
Radiation (%)				0.367
No	4,978 (55.4)	3,152 (55.7)	1,826 (54.7)	
Yes	4,013 (44.6)	2,503 (44.3)	1,510 (45.3)	
Chemotherapy (%)				<0.001
No	5,957 (66.3)	3,978 (70.3)	1,979 (59.3)	
Yes	3,034 (33.7)	1,677 (29.7)	1,357 (40.7)	
Treatment (%)				<0.001
Surgery alone	4,533 (50.4)	2,894 (51.2)	1,639 (49.1)	
Surgery and radiotherapy	889 (9.9)	671 (11.9)	218 (6.5)	
Surgery and chemotherapy	192 (2.1)	107 (1.9)	85 (2.5)	
Surgery and CCRT	1,617 (18.0)	940 (16.6)	677 (20.3)	
Radiotherapy	363 (4.0)	297 (5.3)	66 (2.0)	
Chemotherapy	81 (0.9)	35 (0.6)	46 (1.4)	
CCRT	1,144 (12.7)	595 (10.5)	549 (16.5)	
None	172 (1.9)	116 (2.1)	56 (1.7)	
Tumor size (%)				0.163
≤20 mm	3,934 (43.8)	2,496 (44.1)	1,438 (43.1)	
21-40 mm	2,460 (27.4)	1,565 (27.7)	895 (26.8)	
≥41 mm	2,597 (28.9)	1,594 (28.2)	1,003 (30.1)	
Number of LNs examined (%)				<0.001
None	3,283 (36.5)	1,984 (35.1)	1,299 (38.9)	
1-15	2,407 (26.8)	1,486 (26.3)	921 (27.6)	
16-30	2,467 (27.4)	1,594 (28.2)	873 (26.2)	
>30	834 (9.3)	591 (10.5)	243 (7.3)	
Number of positive LNs (%)				0.122
None	7,365 (81.9)	4,631 (81.9)	2,734 (82.0)	
1-3	1,139 (12.7)	699 (12.4)	440 (13.2)	
>3	487 (5.4)	325 (5.7)	162 (4.9)	
Multi-primary tumors (%)				<0.001
One primary only	8,183 (91.0)	5,022 (88.8)	3,161 (94.8)	
1st of 2 or more primaries	808 (9.0)	633 (11.2)	175 (5.2)	
Event (%)				<0.00
Censored	7,200 (80.1)	4,277 (75.6)	2,923 (87.6)	
UAC specific death	1,791 (19.9)	1,378 (24.4)	413 (12.4)	

AJCC, American Joint Committee on Cancer; stage T, stage of primary tumor; stage N, stage of lymph nodes; stage M, stage of metastasis; LNs, lymph nodes; CCRT, concurrent chemoradiotherapy; UAC, uterine cervical adenocarcinoma.

**Table S2** The selected variables for the model construction

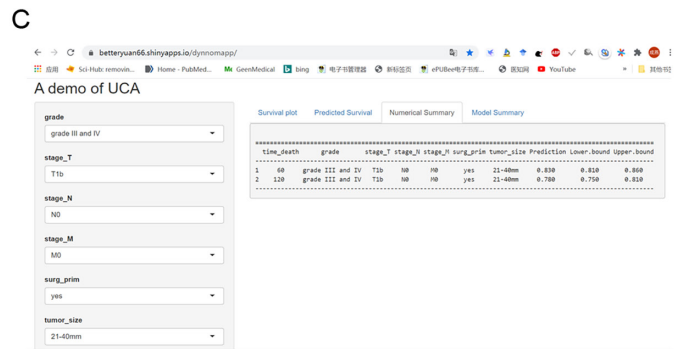
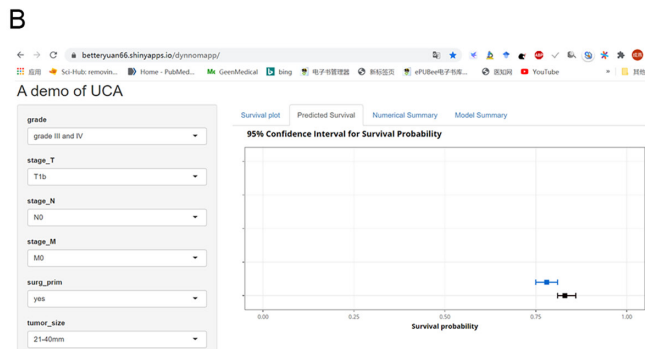
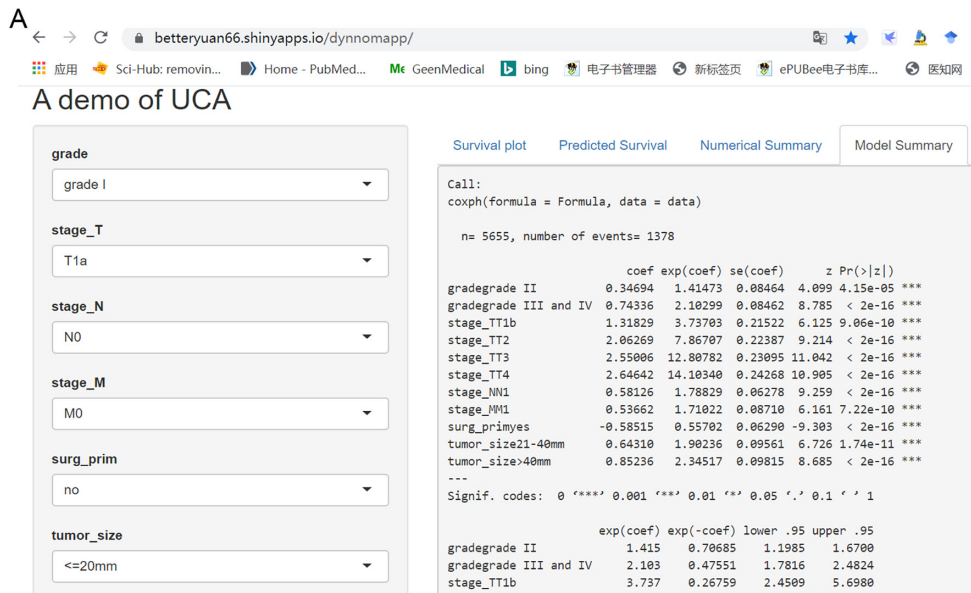
Variables	Coefficient	HR	95% CI	P
Grade				
Grade I	Reference	Reference		
Grade II	0.35	1.41	1.20-1.67	<0.001***
Grade III and IV	0.74	2.10	1.78-2.48	<0.001***
Stage T				
T1a	Reference	Reference		
T1b	1.32	3.74	2.45-5.70	<0.001***
T2	2.06	7.87	5.07-12.20	<0.001***
T3	2.55	12.81	8.14-20.14	<0.001***
T4	2.65	14.10	8.77-22.69	<0.001***
Stage N				
N0	Reference	Reference		
N1	0.58	1.79	1.58-2.02	<0.001***
Stage M				
M0	Reference	Reference		
M1	0.54	1.71	1.44-2.03	<0.001***
Surgery of primary site				
No	Reference	Reference		
Yes	-0.59	0.56	0.49-0.63	<0.001***
Tumor size (mm)				
≤20	Reference	Reference		
21-40	0.64	1.90	1.58-2.29	<0.001***
>40	0.85	2.35	1.93-2.84	<0.001***

\*\*\*, two sided P values <0.001. Stage T, stage of primary tumor; stage N, stage of lymph nodes; stage M, stage of metastasis; HR, hazard ratio; CI, confidence interval.

**Table S3** Scores of each prognostic factor in the CSS nomogram

Characteristics	Points
Grade	
Grade I	0
Grade II	13
Grade III and IV	28
Stage T	
T1a	0
T1b	50
T2	78
T3	96
T4	100
Stage N	
N0	0
N1	22
Stage M	
M0	0
M1	20
Surgery of primary site	
No	22
Yes	0
Tumor size (mm)	
≤20	0
21-40	24
>40	32

CSS, cancer-specific survival; stage T, stage of primary tumor; stage N, stage of lymph nodes; stage M, stage of metastasis.



**Figure S2** The web-based nomogram presented as an online calculator based on the model for predicting the probability of CSS in UAC patients, free for access. (<https://betteryuan66.shinyapps.io/dynnomapp/>). The web screenshots show that the 5- and 10-year probability of CSS based on the model was 0.83 (95% CI: 0.81–0.86) and 0.78 (95% CI: 0.75–0.81), respectively, for a UAC patient with tumor grade III, stage T1b, N0, M0, and a tumor size of 30 mm, who received surgery of the primary site. CSS, cancer-specific survival; UAC, uterine cervical adenocarcinoma.