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SUPPLEMENTAL DATA

Construction of the prognostic nomogram and treatment recommendation in patients with mixed endometrial carcinoma treated with hysterectomy

	Total	The training set	The test set	
Characteristics	No. (%)	No. (%)	No. (%)	<i>P</i>
Age at diagnosis (y)				0.947
≤63	3833 (52.8%)	2682 (52.8%)	1151 (52.9%)	
64~77	2687 (37.0%)	1878 (37.0%)	809 (37.2%)	
≥78	736 (10.1%)	519 (10.2%)	217 (9.97%)	
Race				0.730
White	5802 (80.0%)	4082 (80.4%)	1720 (79.0%)	
Black	753 (10.4%)	513 (10.1%)	240 (11.0%)	
Asian/Pacific Islander	623 (8.59%)	430 (8.47%)	193 (8.87%)	
American Indian/	40 (0.55%)	27 (0.53%)	13 (0.60%)	
Alaska Native				
Unknown	38 (0.52%)	27 (0.53%)	11 (0.51%)	
Marital status				0.642
Married	3575 (49.3%)	2484 (48.9%)	1091 (50.1%)	
Unmarried	1468 (20.2%)	1044 (20.6%)	424 (19.5%)	
Divorced/Separated	883 (12.2%)	625 (12.3%)	258 (11.9%)	
Widowed	1046 (14.4%)	722 (14.2%)	324 (14.9%)	
Unknown	284 (3.91%)	204 (4.02%)	80 (3.67%)	
Tumor size (mm)				0.558
1~38	1572 (21.7%)	1087 (21.4%)	485 (22.3%)	

Table S1. Baseline demographic and clinical characteristics with mixed endometrial carcinoma

 patients of the training and test sets in our study

39~59	872 (12.0%)	618 (12.2%)	254 (11.7%)	
57-57	672 (12.070)	018 (12.270)	254 (11.770)	
≥60	797 (11.0%)	546 (10.8%)	251 (11.5%)	
Unknown	4015 (55.3%)	2828 (55.7%)	1187 (54.5%)	
Grade				0.515
Grade I	1206 (16.6%)	823 (16.2%)	383 (17.6%)	
Grade II	1274 (17.6%)	903 (17.8%)	371 (17.0%)	
Grade III	1774 (24.4%)	1260 (24.8%)	514 (23.6%)	
Grade IV	798 (11.0%)	555 (10.9%)	243 (11.2%)	
Unknown	2204 (30.4%)	1538 (30.3%)	666 (30.6%)	
SEER-Stage*				0.988
Localized	4391 (60.5%)	3075 (60.5%)	1316 (60.5%)	
Regional	2217 (30.6%)	1550 (30.5%)	667 (30.6%)	
Distant	667 (30.6%)	429 (8.45%)	182 (8.36%)	
Unknown	37 (0.51%)	25 (0.49%)	12 (0.55%)	
AJCC-Stage				0.961
Ι	2820 (38.9%)	1973 (38.8%)	847 (38.9%)	
Π	339 (4.67%)	234 (4.61%)	105 (4.82%)	
III	961 (13.2%)	670 (13.2%)	291 (13.4%)	
IV	376 (5.18%)	269 (5.30%)	107 (4.92%)	
Unknown	2760 (38.0%)	1933 (38.1%)	827 (38.0%)	
AJCC-T				0.937
T1	3145 (43.3%)	2194 (43.2%)	951 (43.7%)	

T2	480 (6.62%)	334 (6.58%)	146 (6.71%)	
Т3	795 (11.0%)	561 (11.0%)	234 (10.7%)	
T4	98 (1.35%)	72 (1.42%)	26 (1.19%)	
Unknown	2738 (37.7%)	1918 (37.8%)	820 (37.7%)	
NPR-Lymph node				0.830
0	4248 (58.5%)	2963 (58.3%)	1285 (59.0%)	
1	358 (4.93%)	243 (4.78%)	115 (5.28%)	
2~7	598 (8.24%)	422 (8.31%)	176 (8.08%)	
≥8	130 (1.79%)	92 (1.81%)	38 (1.75%)	
Unknown	1922 (26.5%)	1359 (26.8%)	563 (25.9%)	
Distant metastasis**				0.967
No	4696 (64.7%)	3283 (64.6%)	1413 (64.9%)	
Yes	485 (6.68%)	339 (6.67%)	146 (6.71%)	
Unknown	2075 (28.6%)	1457 (28.7%)	618 (28.4%)	
Peritoneal cytology				0.115
Negative	2532 (34.9%)	1778 (35.0%)	754 (34.6%)	
Positive	528 (7.28%)	377 (7.42%)	151 (6.94%)	
Suspicious	87 (1.20%)	51 (1.00%)	36 (1.65%)	
Unknown	4109 (56.6%)	2873 (56.6%)	1236 (56.8%)	
Operation of lymph node				0.643
Lymphadenectomy	4871 (67.1%)	3397 (66.9%)	1474 (67.7%)	
None	1782 (24.6%)	1262 (24.8%)	520 (23.9%)	

218 (3.00%)	157 (3.09%)	61 (2.80%)	
385 (5.31%)	263 (5.18%)	122 (5.60%)	
			0.288
2761 (38.1%)	1912 (37.6%)	849 (39.0%)	
4495 (61.9%)	3167 (62.4%)	1328 (61.0%)	
			0.270
2775 (38.2%)	1921 (37.8%)	854 (39.2%)	
4481 (61.8%)	3158 (62.2%)	1323 (60.8%)	
			0.306
203 (2.80%)	68 (3.12%)	135 (2.66%)	
7053 (97.2%)	2109 (96.9%)	4944 (97.3%)	
	 385 (5.31%) 2761 (38.1%) 4495 (61.9%) 2775 (38.2%) 4481 (61.8%) 203 (2.80%) 	385 (5.31%) 263 (5.18%) 2761 (38.1%) 1912 (37.6%) 4495 (61.9%) 3167 (62.4%) 2775 (38.2%) 1921 (37.8%) 4481 (61.8%) 3158 (62.2%) 203 (2.80%) 68 (3.12%)	385 (5.31%) 263 (5.18%) 122 (5.60%) 2761 (38.1%) 1912 (37.6%) 849 (39.0%) 4495 (61.9%) 3167 (62.4%) 1328 (61.0%) 2775 (38.2%) 1921 (37.8%) 854 (39.2%) 4481 (61.8%) 3158 (62.2%) 1323 (60.8%) 203 (2.80%) 68 (3.12%) 135 (2.66%)

*SEER-Stage was derived from summary stage 2000 (1998-2017) variable and combined summary stage (2004+). **Distant metastasis was derived from Mets at DX-bone, DX-brain, DX-liver, and DX-lung, Mets at DX-Distant LN, and Mets at DX-Other variables. OS: Overall survival; CSS: Cancer-specific survival; SEER: Surveillance, Epidemiology, and End Results; AJCC: American Joint Committee on Cancer; NPR-Lymph node: Number of positive regional lymph node.

Characteristics	Univariate analys	is of OS	Univariate anal	ysis of CSS
	Hazard Ratio (95%	Р	Hazard Ratio	Р
	CI)		(95% CI)	
Age at diagnosis (y)				
≤63	Reference		Reference	
64~77	2.38 [2.12-2.68]	< 0.001	1.94 [1.69-2.23]	< 0.001
≥78	5.60 [4.86-6.46]	< 0.001	3.32 [2.77-3.97]	< 0.001
Race				
White	Reference		Reference	
Black	1.70 [1.46-1.97]	< 0.001	2.14 [1.81-2.52]	< 0.001
Asian/Pacific Islander	0.78 [0.63-0.97]	0.022	0.91 [0.72-1.17]	0.477
American Indian/	0.54 [0.20-1.44]	0.218	0.20 [0.03-1.43]	0.109
Alaska Native				
Unknown	0.67 [0.25-1.79]	0.425	0.96 [0.36-2.55]	0.927
Marital status				
Married	Reference		Reference	
Unmarried	1.17 [1.01-1.35]	0.031	1.12 [0.94-1.32]	0.202
Divorced/Separated	1.33 [1.13-1.56]	< 0.001	1.32 [1.09-1.61]	0.004
Widowed	2.31 [2.03-2.64]	< 0.001	1.89 [1.60-2.23]	< 0.001
Unknown	1.12 [0.84-1.48]	0.455	1.09 [0.78-1.52]	0.630
Tumor size (mm)				

Table S2. Univariate Cox regression analysis in the training set of mixed endometrial

 carcinoma for overall survival and cancer-specific survival

1~38	Reference		Reference	
39~59	1.36 [1.14-1.62]	<0.001	1.65 [1.32-2.05]	< 0.001
≥60	2.46 [2.09-2.90]	<0.001	3.29 [2.70-4.01]	< 0.001
Unknown	1.18 [1.03-1.35]	0.018	1.35 [1.13-1.61]	< 0.001
Grade				
Grade I	Reference		Reference	
Grade II	2.89 [2.25-3.70]	<0.001	4.86 [3.19-7.39]	< 0.001
Grade III	6.30 [5.01-7.92]	< 0.001	14.0 [9.41-20.8]	< 0.001
Grade IV	6.99 [5.46-8.96]	<0.001	15.6 [10.4-23.4]	< 0.001
Unknown	3.21 [2.50-4.11]	< 0.001	6.49 [4.31-9.79]	< 0.001
SEER-Stage				
Localized	Reference		Reference	
Regional	2.85 [2.54-3.21]	< 0.001	4.84 [4.13-5.67]	< 0.001
Distant	9.32 [8.09-10.7]	< 0.001	18.0 [15.1-21.5]	< 0.001
Unknown	2.91 [1.56-5.45]	< 0.001	3.73 [1.66-8.40]	0.002
AJCC-Stage				
т	D C			
Ι	Reference		Reference	
I	2.12 [1.69-2.65]	<0.001	Reference 3.09 [2.32-4.12]	<0.001
		<0.001 <0.001		<0.001 <0.001
Π	2.12 [1.69-2.65]		3.09 [2.32-4.12]	
II III	2.12 [1.69-2.65] 3.26 [2.83-3.76]	<0.001	3.09 [2.32-4.12] 5.61 [4.65-6.75]	<0.001
II III IV	2.12 [1.69-2.65] 3.26 [2.83-3.76] 10.0 [8.51-11.8]	<0.001 <0.001	3.09 [2.32-4.12] 5.61 [4.65-6.75] 18.8 [15.4-22.9]	<0.001 <0.001

T1	Reference		Reference	
T2	2.13 [1.78-2.55]	<0.001	2.86 [2.29-3.59]	< 0.001
Т3	4.20 [3.67-4.81]	<0.001	6.62 [5.62-7.80]	< 0.001
T4	9.81 [7.55-12.7]	<0.001	15.5 [11.8-20.6]	< 0.001
Unknown	1.39 [1.21-1.59]	<0.001	1.75 [1.47-2.08]	< 0.001
NPR-Lymph node				
0	Reference		Reference	
1	2.45 [2.00-2.99]	<0.001	3.30 [2.62-4.15]	< 0.001
2~7	3.09 [2.65-3.61]	<0.001	4.27 [3.59-5.09]	< 0.001
≥8	4.75 [3.65-6.20]	<0.001	6.53 [4.90-8.70]	< 0.001
Unknown	1.55 [1.38-1.76]	< 0.001	1.68 [1.44-1.96]	< 0.001
Distant metastasis				
No	Reference		Reference	
Yes	6.88 [5.94-7.96]	<0.001	8.82 [7.53-10.3]	< 0.001
Unknown	1.27 [1.13-1.44]	<0.001	1.18 [1.01-1.37]	0.0316
Peritoneal cytology				
Negative	Reference		Reference	
Positive	3.38 [2.81-4.05]	<0.001	3.84 [3.13-4.71]	< 0.001
Suspicious	1.23 [0.64-2.39]	0.536	1.32 [0.62-2.80]	0.468
Unknown	1.44 [1.27-1.64]	<0.001	1.47 [1.26-1.71]	< 0.001
Operation of lymph node				
Lymphadenectomy	Reference		Reference	

	None	1.17 [1.04-1.31]	0.011	1.10 [0.96-1.27]	0.178
	Sentinel lymph	0.47 [0.25-0.87]	0.016	0.45 [0.22-0.90]	0.024
	node biopsy				
	Biopsy/Unknown	1.03 [0.85-1.26]	0.746	0.98 [0.75-1.27]	0.863
R	adiotherapy				
	Yes	Reference		Reference	
	No/Unknown	0.98 [0.89-1.09]	0.769	0.94 [0.83-1.07]	0.324
С	hemotherapy				
	Yes	Reference		Reference	
	No/Unknown	0.47 [0.42-0.52]	< 0.001	0.31 [0.27-0.35]	< 0.001
N	eoadjuvant treatment				
	Yes	Reference		Reference	
	No/Unknown	0.53 [0.40-0.70]	< 0.001	0.43 [0.32-0.58]	<0.001

OS: Overall survival; CSS: Cancer-specific survival; SEER: Surveillance, Epidemiology, and End Results; AJCC: American Joint Committee on Cancer; NPR-Lymph node: Number of positive regional lymph node; CI: Confidence interval.

Characteristics	Univariate analys	sis of OS	f OS Univariate analysis of	
	Hazard Ratio (95% CI)	P P	Hazard Ratio (95% CI)	Р
Age at diagnosis (y)				
≤63	Reference		Reference	
64~77	1.98 [1.66-2.38]	< 0.001	1.79 [1.44-2.21]	< 0.001
≥78	4.70 [3.79-5.82]	< 0.001	2.74 [2.05-3.65]	< 0.001
Race				
White	Reference		Reference	
Black	1.59 [1.27-2.01]	< 0.001	1.74 [1.32-2.29]	< 0.001
Asian/Pacific Islander	1.09 [0.82-1.45]	0.537	1.34 [0.97-1.86]	0.079
American Indian/	1.16 [0.44-3.12]	0.761	1.96 [0.73-5.26]	0.181
Alaska Native				
Unknown	0.47 [0.07-3.34]	0.450	0.69 [0.10-4.89]	0.707
Marital status				
Married	Reference		Reference	
Unmarried	1.35 [1.08-1.68]	0.007	1.19 [0.91-1.56]	0.194
Divorced/Separated	1.24 [0.95-1.63]	0.112	1.03 [0.73-1.44]	0.875
Widowed	2.53 [2.07-3.09]	<0.001	2.00 [1.55-2.57]	< 0.001
Unknown	1.12 [0.72-1.74]	0.628	0.67 [0.34-1.31]	0.239

Table S3. Univariate Cox regression analysis in the test set of mixed endometrial carcinoma for overall survival and cancer-specific survival

1~38	Reference		Reference	
1,-56			Kelefenee	
39~59	1.48 [1.13-1.95]	0.005	1.67 [1.17-2.38]	0.005
≥60	2.57 [2.01-3.30]	< 0.001	3.96 [2.93-5.36]	< 0.001
Unknown	1.24 [1.00-1.54]	0.046	1.36 [1.02-1.80]	0.034
Grade				
Grade I	Reference		Reference	
Grade II	1.47 [1.06-2.05]	0.023	2.17 [1.31-3.61]	0.003
Grade III	4.27 [3.22-5.68]	< 0.001	7.64 [4.90-11.9]	< 0.001
Grade IV	4.67 [3.42-6.38]	<0.001	8.26 [5.18-13.2]	< 0.001
Unknown	2.00 [1.44-2.77]	< 0.001	3.08 [1.90-5.01]	< 0.001
SEER-Stage				
Localized	Reference		Reference	
Regional	2.54 [2.13-3.04]	<0.001	3.92 [3.07-5.00]	< 0.001
Distant	8.35 [6.70-10.4]	< 0.001	16.4 [12.5-21.4]	< 0.001
Unknown	0.76 [0.19-3.06]	0.700	0.95 [0.13-6.83]	0.962
AJCC-Stage				
Ι	Reference		Reference	
II	2.26 [1.62-3.14]	<0.001	2.38 [1.47-3.85]	< 0.001
III	2.68 [2.15-3.35]	<0.001	4.80 [3.61-6.39]	< 0.001
IV	9.10 [7.06-11.7]	<0.001	17.5 [12.9-23.8]	< 0.001
Unknown	1.57 [1.26-1.96]	< 0.001	2.14 [1.59-2.88]	< 0.001
AJCC-T				

T1	Reference		Reference	
T2	2.33 [1.78-3.04]	<0.001	2.61 [1.84-3.72]	< 0.001
T3	3.65 [2.96-4.51]	<0.001	5.80 [4.50-7.47]	< 0.001
T4	6.92 [4.42-10.8]	<0.001	11.6 [7.24-18.7]	< 0.001
Unknown	1.36 [1.10-1.68]	0.005	1.55 [1.18-2.04]	0.002
NPR-Lymph node				
0	Reference		Reference	
1	2.13 [1.54-2.94]	<0.001	3.13 [2.19-4.48]	< 0.001
2~7	2.73 [2.13-3.50]	<0.001	3.65 [2.73-4.87]	< 0.001
≥8	4.53 [3.03-6.78]	< 0.001	5.75 [3.61-9.16]	< 0.001
Unknown	1.84 [1.53-2.21]	< 0.001	1.96 [1.55-2.49]	< 0.001
Distant metastasis				
No	Reference		Reference	
Yes	6.60 [5.22-8.34]	<0.001	9.65 [7.46-12.5]	< 0.001
Unknown	1.40 [1.16-1.68]	<0.001	1.52 [1.21-1.92]	< 0.001
Peritoneal cytology				
Negative	Reference		Reference	
Positive	2.90 [2.15-3.92]	<0.001	4.38 [3.13-6.12]	< 0.001
Suspicious	0.53 [0.17-1.65]	0.272	0.58 [0.14-2.35]	0.443
Unknown	1.46 [1.20-1.78]	<0.001	1.70 [1.32-2.17]	< 0.001
Operation of lymph node				
Lymphadenectomy	Reference		Reference	

None	1.40 [1.16-1.67]	<0.001	1.24 [0.99-1.56]	0.059
Sentinel lymph	0.29 [0.07-1.16]	0.080	0.35 [0.09-1.42]	0.144
node biopsy				
Biopsy/Unknown	1.11 [0.83-1.49]	0.472	1.14 [0.78-1.66]	0.499
Radiotherapy				
Yes	Reference		Reference	
No/Unknown	1.26 [1.07-1.49]	0.006	1.20 [0.98-1.48]	0.078
Chemotherapy				
Yes	Reference		Reference	
No/Unknown	0.57 [0.49-0.67]	<0.001	0.35 [0.29-0.43]	< 0.001
Neoadjuvant treatment				
Yes	Reference		Reference	
No/Unknown	0.37 [0.26-0.51]	<0.001	0.33 [0.22-0.48]	< 0.001

OS: Overall survival; CSS: Cancer-specific survival; SEER: Surveillance, Epidemiology, and End Results; AJCC: American Joint Committee on Cancer; NPR-Lymph node: Number of positive regional lymph node; CI: Confidence interval.

	The validation set		
Characteristics	No. (%)		
Age at diagnosis (y)			
≤63	2966 (53.0%)		
64~77	2073 (37.1%)		
≥78	553 (9.89%)		
Race			
White	4415 (79.0%)		
Black	702 (12.6%)		
Asian/Pacific Islander	418 (7.47%)		
American Indian/Alaska Native	27 (0.48%)		
Unknown	30 (0.54%)		
Marital status			
Married	2752 (49.2%)		
Unmarried	1122 (20.1%)		
Divorced/Separated	641 (11.5%)		
Widowed	832 (14.9%)		
Unknown	245 (4.38%)		
Tumor size (mm)			
1~38	1339 (23.9%)		
39~59	739 (13.2%)		

Table S4. Clinical characteristics of the validation set of mixed endometrial carcinomas

≥60	676 (12.1%)
Unknown	2838 (50.8%)
Grade	
Grade I	993 (17.8%)
Grade II	1091 (19.5%)
Grade III	1469 (26.3%)
Grade IV	726 (13.0%)
Unknown	1313 (23.5%)
SEER-Stage	
Localized	3352 (59.9%)
Regional	1752 (31.3%)
Distant	457 (8.17%)
Unknown	31 (0.55%)
AJCC-T	
T1	2689 (48.1%)
T2	425 (7.60%)
Т3	658 (11.8%)
T4	80 (1.43%)
Unknown	1740 (31.1%)
NPR-Lymph node	
0	3300 (59.0%)
1	284 (5.08%)

2~7	486 (8.69%)
≥8	97 (1.73%)
Unknown	1425 (25.5%)
Operation of lymph node	
Lymphadenectomy	3853 (68.9%)
None	1306 (23.4%)
Sentinel lymph node biopsy	114 (2.04%)
Biopsy/Unknown	319 (5.70%)
Radiotherapy	
Yes	2140 (38.3%)
No/Unknown	3452 (61.7%)
Chemotherapy	
Yes	2131 (38.1%)
No/Unknown	3461 (61.9%)
Neoadjuvant treatment	
Yes	150 (2.68%)
No/Unknown	5442 (97.32%)

OS: Overall survival; CSS: Cancer-specific survival; SEER: Surveillance, Epidemiology, and End Results; AJCC: American Joint Committee on Cancer; NPR-Lymph node: Number of positive regional lymph node.

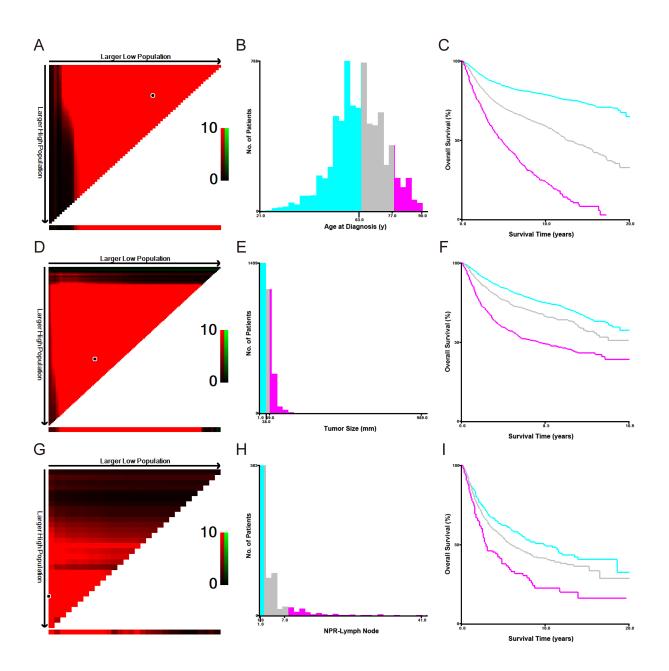


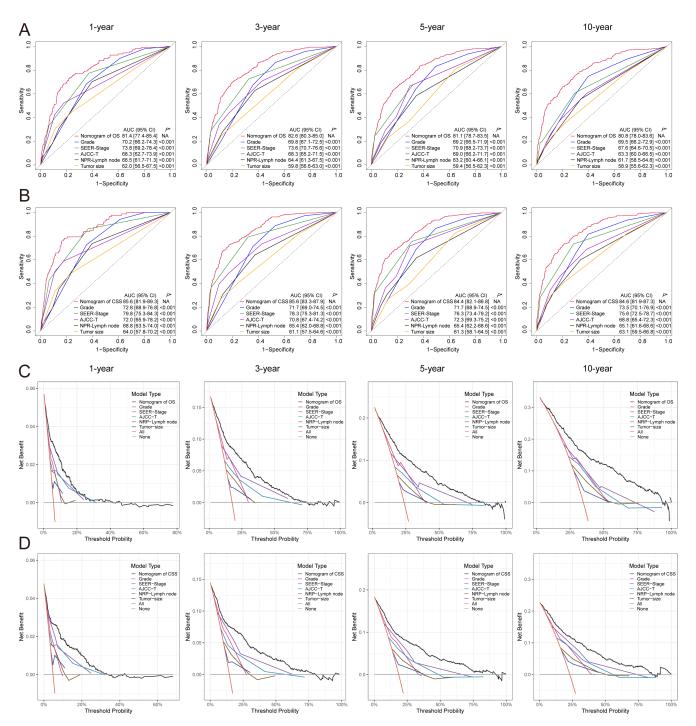
Figure S1. Calculation of the optimal cut-off values of continuous variables. The optimal cut-off of age at diagnosis (y) (A-C), tumor size (mm) (D-F), and NPR-Lymph node (G-I) were calculated by the X-tile software based on overall survival using the data of the training and test sets. The dark dots in the X-tile plots were the sites according to the highest χ^2 value defined by Kaplan-Meier survival analysis and Log-Rank test in age at diagnosis (y) (A), tumor size (mm) (D), and NPR-Lymph node (G). Histograms (B: age at diagnosis (y), 63 and 77; E: tumor size (mm), 38 and 59; H: NPR-Lymph node, 1 and 7) in good-, median-, and poor-prognosis groups according to the optimal cut-off value. In Kaplan-Meier survival analysis, cyan bars represented $\frac{17}{17}$

the good-prognosis groups, grey bars represented the median-prognosis groups, and purple bars represent the poor-prognosis groups. Kaplan-Meier survival analysis of overall survival by optimal cutoff values (C: age at diagnosis (y); F: tumor size (mm) I: NPR-Lymph node). NPR-Lymph node: Number of positive regional lymph node.

	≤63 (N=1151) 64~77 (N=809)	1.94 (1.604 - 2.34)		
	(N=809) ≥78 (N=217)	(1.604 - 2.34) 3.57 (2.779 - 4.59)		.
Race	(N=217) White (N=1720)	(2.779 – 4.59) reference		_
Nace	(N=1/20) Black (N=240)	(1.012 - 1.64)		0
	(N=240) Asian or Pacific Islande (N=193)	(1.012 - 1.64) (0.737 - 1.33)		0
	(N=193) American Indian/Alaska (N=13)	(0.737 - 1.33) Native 1.51		0
	(N=13) Unknown (N=11)	(0.544 - 4.20) 0.90 (0.125 - 6.49)		0
Marital status	(N=11) Married (N=1091)	(0.125 - 6.49) reference		
Marital status	(N=1091) Unmarried (N=424)			0
	(N=424) Divorced/Separated	1.33 (1.057 - 1.67) 1.30		0.
	Divorced/Separated (N=258) Widowed	1.30 (0.989 – 1.72) 1.52		
	Widowed (N=324)	1.52 (1.205 - 1.91) 1.07		
	Unknown (N=80) 1~38	1.07 (0.677 - 1.68)		0
Tumor size	1~38 (N=485) 39~59	reference		
	39~59 (N=254) >60	0.98 (0.742 - 1.31) 1.55		0
	≥60 (N=251)	1.55 (1.181 - 2.03)	·	C
	Unknown (N=1187) Grade L	1.11 (0.855 - 1.44)		0
Grade	Grade I (N=383) Grade II	reference		
	Grade II (N=371)	1.55 (1.105 - 2.18)	·	0
	Grade III (N=514)	3.14 (2.309 - 4.28)		
	Grade IV (N=243)	(1.909 - 3.76)		·
	Unknown (N=666)	2.03 (1.436 - 2.87)		
SEER-Stage	Localized (N=1316)	reference		
	Regional (N=667)	1.70 (1.230 - 2.36)		C
	Distant (N=182)	4.88 (2.883 - 8.26)		.
	Unknown (N=12)	0.71 (0.169 - 3.00)		0
AJCC-Stage	l (N=847)	reference	<u> </u>	
	II (N=105)	0.74 (0.383 - 1.45)		0
	III (N=291)	0.97 (0.601 - 1.56)	·•	0
	IV (N=107)	1.17 (0.591 - 2.31)		0
	Unknown (N=827)	1.16 (0.419 - 3.21)	· · · · · · · · · · · · · · · · · · ·	→ 0
AJCC-T	T1 (N=951)	reference	<u>.</u>	
	T2 (N=146)	1.38 (0.842 - 2.27)	· · · · · · · · · · · · · · · · · · ·	0
	T3 (N=234)	1.29 (0.879 - 1.88)	·	0
	T4 (N=26)	(0.95) (0.505 - 1.78)	·	0
	Unknown (N=820)	0.82 (0.292 - 2.27)	, ,	0
NPR-Lymph node	0 (N=1285)	reference	÷.	
	1 (N=115)	1.35 (0.914 - 2.00)		0
	2~7 (N=176)	(1.020 - 1.88)		0
	≥8 (N=38)	(1.020 - 1.88) 1.55 (0.985 - 2.44)		0
	Unknown (N=563)	2.02 (1.277 - 3.19)	·	-
Distant metastasis	(N=563) No (N=1413)	(1.277 – 3.19) reference	i i i i i i i i i i i i i i i i i i i	
Distant metaolabib	(N=1413) Yes (N=146)	0.99 (0.550 - 1.77)	· · · · · · · · · · · · · · · · · · ·	0
	(N=146) Unknown (N=618)	(0.550 - 1.77) 1.18 (0.919 - 1.52)		0
Peritoneal cytology	(N=618) Negative (N=754)	(0.919 - 1.52) reference		
	(N=754) Positive (N=151)	1.26 (0.904 - 1.76)		0
	(N=151) Suspicious (N=36)	(0.904 - 1.76) 0.56 (0.177 - 1.77)		0
	(N=36) Unknown (N=1236)	(0.177 - 1.77) 1.08 (0.843 - 1.38)		0
Operation of lymph node	(N=1236) Lymphadenectomy	(0.843 - 1.38) reference		U
Operation of lymph node	Lymphadenectomy (N=1474) None			0
	None (N=520) Sentinel lymph node bio (N=61)	0.76 (0.471 - 1.22) ppsy 0.38		0
	(N=61) Biopsy/Unknown	(0.093 - 1.54) 0.85		
	Biopsy/Unknown (N=122) Yes	0.85 (0.571 - 1.26)		0
Chemotherapy	Yes (N=854) No/Unknown	reference 1 24		
	No/Unknown (N=1323)	1.24 (1.018 - 1.51)		0
Neoadjuvant treatment	Yes (N=68)	reference		
	No/Unknown (N=2109)	0.66 (0.457 - 0.94)		0
# Events: 614; Global p-value (L AIC: 8147.84; Concordance Inde				

• • • • • • • •	≤63	Hazard Ratio of CSS in	esi Jei	
Age at diagnosis	≤63 (N=1151) 64~77	reference		
	64~77 (N=809)	(1.38 - 2.2)		<
	≥78 (N=217)	(1.52 - 3.0)	B 1	<
Race	White (N=1720)	reference	• • • • • • • • • • • • • • • • • • •	
	Black (N=240)	(0.97 - 1.7)	÷	0.
	Asian or Pacific Islander (N=193)	(0.74 - 1.5)		0.8
	American Indian/Alaska (N=13)	Native 3.02	· · · · · · · · · · · · · · · · · · ·	0.
	Unknown (N=11)	(0.22 - 11.9)		0.1
Marital status	Married (N=1091)	reference		
	Unmarried (N=424)	(0.87 - 1.5)		0.
	(N=424) Divorced/Separated (N=258)	(0.87 - 7.5) 1.11 (0.78 - 1.6)		0.:
	(N=258) Widowed (N=324)	(0.78 - 1.6) 1.40 (1.05 - 1.9)		0.
	(N=324) Unknown (N=80)	(1.05 - 1.9) 0.65 (0.33 - 1.3)		0.:
- .	(N=80) 1~38			0
Tumor size	1~38 (N=485) 39~59	reference		
	39~59 (N=254)	(0.73 - 1.5)		0.1
	≥60 (N=251)	2.17 (1.56 - 3.0)	⊢ ∎	<
	Unknown (N=1187)	(0.86 - 1.7)	→	0.:
Grade	Grade I (N=383)	reference		
	Grade II (N=371)	2.05 (1.22 - 3.4)	ب ر	0.
	Grade III (N=514)	4.46 (2.79 - 7.1)		
	Grade IV (N=243)	4.07 (2.47 - 6.7)		
	Unknown (N=666)	2.85 (1.72 - 4.8)	·	<
SEER-Stage	Localized (N=1316)	reference	-	
OLLIV Oldge	(N=1316) Regional (N=667)	1.88 (1.22 - 2.9)		0.
	(N=667) Distant (N=182)	(1.22 - 2.9) 7.28 (4.07 - 13.0)	•	
	(N=182) Unknown	(4.07 - 13.0) 0.81 (0.11 - 6.1)	_	
	Unknown (N=12)			→ 0.8
AJCC-Stage	(N=847)	reference		
	(N=105)	(0.33 - 1.7)		0.4
	III (N=291)	(0.73 - 2.3)		0.3
	IV (N=107)	(0.62 - 2.8)		0.4
	Unknown (N=827)	1.64 (0.50 - 5.4)		0.4
AJCC-T	T1 (N=951)	reference	•	
	T2 (N=146)	1.18 (0.68 - 2.0)	·	0.:
	T3 (N=234)	(0.81 - 1.9)	• • • • ••	0.
	T4 (N=26)	0.98 (0.50 - 1.9)		0.1
	Unknown (N=820)	0.60 (0.18 - 2.0)		0.
NPR-Lymph node	(N=820) 0 (N=1285)	reference		
ni n zympi nodo	1	(0.90 - 2.2)		0.
	(N=115) 2~7 (N=176)	(0.90 - 2.2) 1.33		0.1
		(0.94 - 1.9) 1 4 3		
	≥8 (N=38)	(0.86 - 2.4)		0.
	Unknown (N=563)	2.44 (1.39 - 4.3)		0.
Distant metastasis	No (N=1413)	reference		
	Yes (N=146)	(0.50 - 1.7)		0.1
	Unknown (N=618)	(0.94 - 1.8)		0.
Peritoneal cytology	Negative (N=754)	reference	•	
	Positive (N=151)	(0.97 - 2.1)		0.0
	Suspicious (N=36)	0.65		0.:
	Unknown (N=1236)	1.16 (0.85 - 1.6)	······································	0.5
Operation of lymph node	(N=1236) Lymphadenectomy (N=1474)	reference	<u> </u>	
- peration of symphetiode	(N=1474) None (N=520)	0.56 (0.31 - 1.0)		0.1
	(N=520) Sentinel lymph node biop (N=61)	(0.31 - 1.0) osy 0.57		0.4
	(N=61) Biopsy/Linknown	0.57 (0.14 - 2.3)		
	Biopsy/Unknown (N=122)	0.92 (0.55 - 1.5)		0.1
Chemotherapy	Yes (N=854)	reference		
	No/Unknown (N=1323)	(0.76 - 1.2)		0.1
Neoadjuvant treatment	Yes (N=68)	reference	•	
	No/Unknown (N=2109)	0.68		0.
# Events: 399; Global p−value (I	_og-Rank): 6.7928e-104			
AIC: 5302.15; Concordance Inde				

Figure S2. Screening of the independent prognostic factors by multivariate Cox regression analysis in the test set. (A) Overall survival (OS). (B) Cancer-specific survival (CSS). SEER:



Surveillance, Epidemiology, and End Results; AJCC: American Joint Committee on Cancer; NPR-Lymph node: Number of positive regional lymph node.

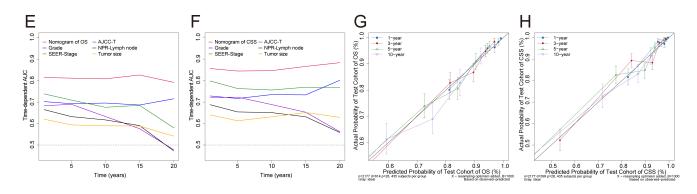
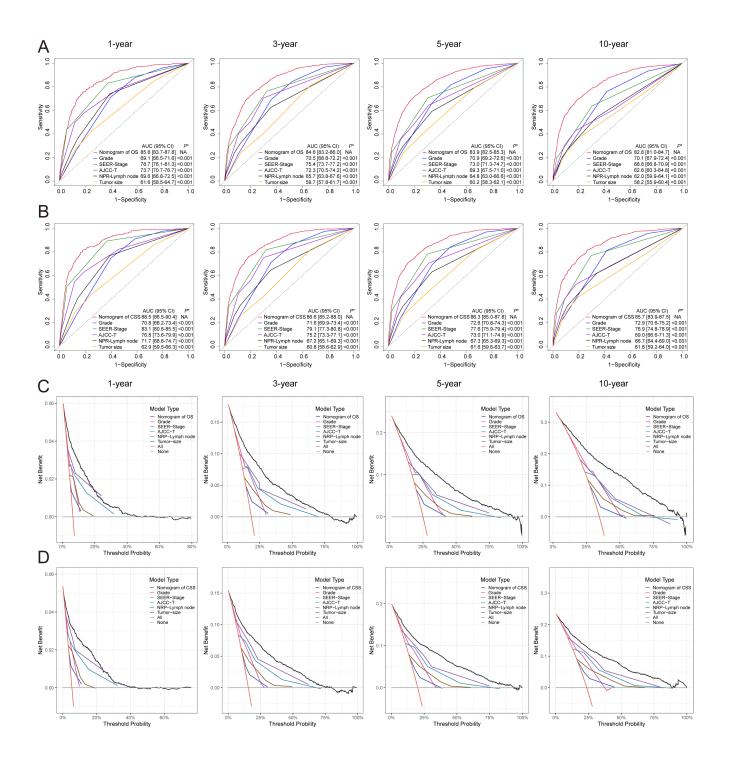


Figure S3. Validation of the nomogram in the test set. The performance of the established nomogram was compared to grade, SEER-Stage, AJCC-T, NPR-Lymph node, and tumor size using the time-dependent AUC, ROC, and DCA. ROC curves for OS (A) and CSS (B) in mixed endometrial carcinoma patients at 1-, 3-, 5- and 10-year. DCA curves for OS (C) and CSS (D). The x-axis shows the threshold probability, and the y-axis measures the net benefit. Time-dependent AUC for OS (E) and CSS (F). Calibration curves for the established nomogram for predicting 1-, 3-, 5- and 10-year OS (G) and CSS (H). **P*: Other models vs nomogram model; OS: Overall survival; CSS: Cancer-specific survival; SEER: Surveillance, Epidemiology, and End Results; AJCC: American Joint Committee on Cancer; NPR-Lymph node: Number of positive regional lymph node; AUC: Area under the curve; CI: Confidence interval.



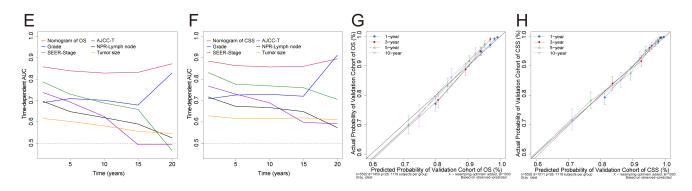


Figure S4. Validation of the nomogram in the validation set. The performance of the established nomogram was compared to grade, SEER-Stage, AJCC-T, NPR-Lymph node, and tumor size using the time-dependent AUC, ROC, and DCA. ROC curves for OS (A) and CSS (B) in mixed endometrial carcinoma patients at 1-, 3-, 5- and 10-year. DCA curves for OS (C) and CSS (D). The x-axis shows the threshold probability, and the y-axis measures the net benefit. Time-dependent AUC for OS (E) and CSS (F). Calibration curves for the established nomogram for predicting 1-, 3-, 5- and 10-year OS (G) and CSS (H). **P*: Other models vs nomogram model; OS: Overall survival; CSS: Cancer-specific survival; SEER: Surveillance, Epidemiology, and End Results; AJCC: American Joint Committee on Cancer; NPR-Lymph node: Number of positive regional lymph node; AUC: Area under the curve; CI: Confidence interval.

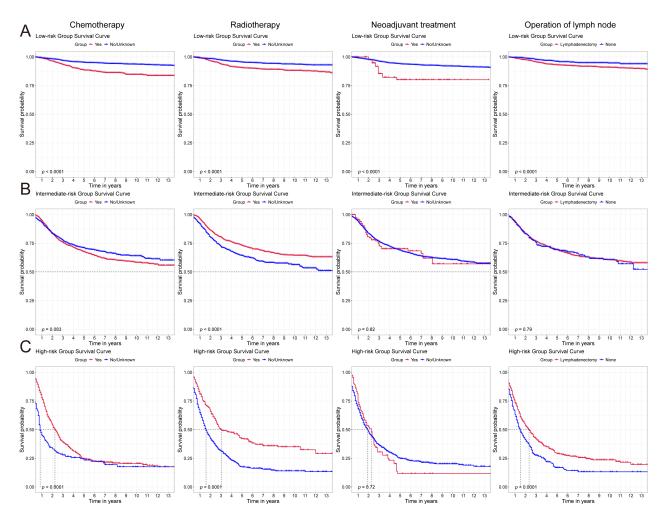


Figure S5. Kaplan-Meier survival curves of mixed endometrial carcinoma patients for cancerspecific survival by the risk score (low-risk, intermediate-risk, and high-risk) with chemotherapy, radiotherapy, neoadjuvant treatment, and operation of lymph node in the total patients (training, test, and validation set). Operation of lymph node with sentinel lymph node biopsy and biopsy/unknown were excluded due to small sample size. (A) Low-risk mixed endometrial carcinoma patients. (B) Intermediate-risk mixed endometrial carcinoma patients. (C) High-risk mixed endometrial carcinoma patients.

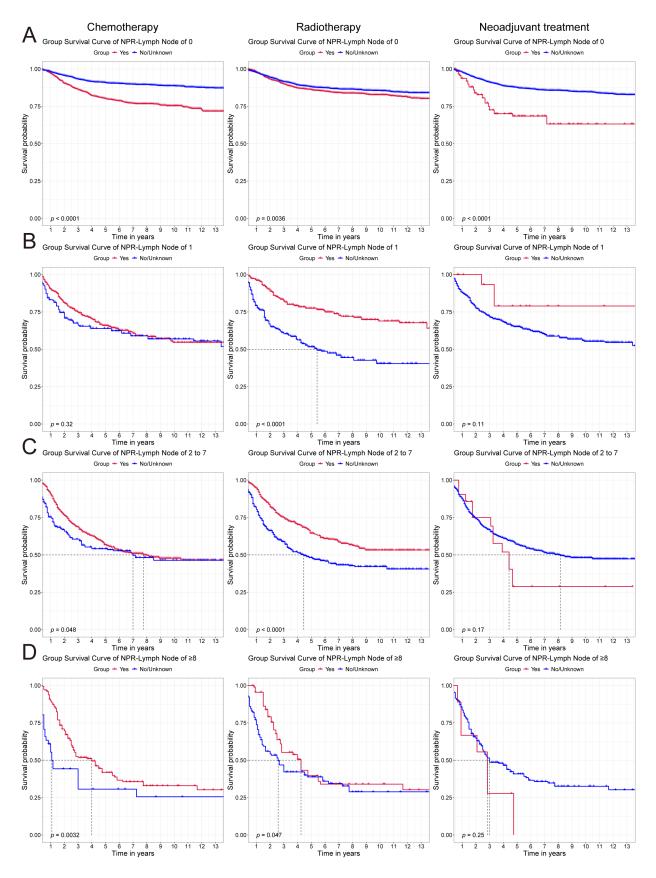


Figure S6. Kaplan-Meier survival curves of mixed endometrial carcinoma patients for cancerspecific survival by the NPR-Lymph node with chemotherapy, radiotherapy, and neoadjuvant treatment in the total patients (training, test, and validation set). (A) Mixed endometrial carcinoma patients with NPR-Lymph node of 0. (B) Mixed endometrial carcinoma patients with NPR-Lymph node of 1. (C) Mixed endometrial carcinoma patients with NPR-Lymph node of 2 to 7. (D) Mixed endometrial carcinoma patients with NPR-Lymph node of \geq 8. NPR-Lymphnode: Number of positive regional lymph node.