Table S1 Clinicopathological characteristics of the training set and validation set

Variables	Total (n=12,260)	Validation set (n=3,678)	Training set (n=8,582)	χ^2	P
Age, n (%)				1.75	0.63
<60 years	1,851 (15.10)	577 (15.69)	1,274 (14.85)		
≥80 years	3,471 (28.31)	1,043 (28.36)	2,428 (28.29)		
60–69 years	3,242 (26.44)	954 (25.94)	2,288 (26.66)		
70–79 years	3,696 (30.15)	1,104 (30.02)	2,592 (30.20)		
Race, n (%)				0.48	0.79
Black	525 (4.28)	157 (4.27)	368 (4.29)		
Others	785 (6.40)	227 (6.17)	558 (6.50)		
White	10,950 (89.31)	3,294 (89.56)	7,656 (89.21)		
Sex, n (%)				0.06	0.80
Female	2,819 (22.99)	851 (23.14)	1,968 (22.93)		
Male	9,441 (77.01)	2,827 (76.86)	6,614 (77.07)		
Primary, n (%)				2.57	0.46
Bladder neck	664 (5.42)	215 (5.85)	449 (5.23)		
Overlapping lesion of bladder	2,074 (16.92)	604 (16.42)	1,470 (17.13)		
Ureteric orifice and urachus	724 (5.91)	219 (5.95)	505 (5.88)		
Wall of bladder	8,798 (71.76)	2,640 (71.78)	6,158 (71.75)		
Grade, n (%)				0.36	0.95
I	1,510 (12.32)	459 (12.48)	1,051 (12.25)		
II	3,281 (26.76)	991 (26.94)	2,290 (26.68)		
III	1,667 (13.60)	502 (13.65)	1,165 (13.57)		
IV	5,802 (47.32)	1,726 (46.93)	4,076 (47.49)		
Histology, n (%)				1.12	0.77
Adenocarcinoma	123 (1.00)	38 (1.03)	85 (0.99)		
Others	159 (1.30)	53 (1.44)	106 (1.24)		
Squamous cell carcinoma	158 (1.29)	50 (1.36)	108 (1.26)		
Transitional cell carcinoma	11,820 (96.41)	3,537 (96.17)	8,283 (96.52)		
Surgery, n (%)				2.26	0.13
No	242 (1.97)	62 (1.69)	180 (2.10)		
Yes	12,018 (98.03)	3,616 (98.31)	8,402 (97.90)		
Radiation, n (%)				0.41	0.52
No/unknown	11,552 (94.23)	3,458 (94.02)	8,094 (94.31)		
Yes	708 (5.77)	220 (5.98)	488 (5.69)		

Table S1 (*continued*)

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Variables	Total (n=12,260)	Validation set (n=3,678)	Training set (n=8,582)	χ^2	P
Chemotherapy, n (%)				0.01	0.94
No/unknown	7,884 (64.31)	2,367 (64.36)	5,517 (64.29)		
Yes	4,376 (35.69)	1,311 (35.64)	3,065 (35.71)		
Marital, n (%)				1.27	0.53
Married	7,879 (64.27)	2,343 (63.70)	5,536 (64.51)		
Others	3,008 (24.54)	927 (25.20)	2,081 (24.25)		
Single	1,373 (11.20)	408 (11.09)	965 (11.24)		
Stage, n (%)				0.59	0.75
Distant	468 (3.82)	133 (3.62)	335 (3.90)		
Localized	10,223 (83.38)	3,075 (83.61)	7,148 (83.29)		
Regional	1,569 (12.80)	470 (12.78)	1,099 (12.81)		
Prior cancer, n (%)				1.47	0.23
No	8,959 (73.08)	2,715 (73.82)	6,244 (72.76)		
Yes	3,301 (26.92)	963 (26.18)	2,338 (27.24)		
OS, n (%)				2.15	0.14
Alive	5,994 (48.89)	1,761 (47.88)	4,233 (49.32)		
Dead	6,266 (51.11)	1,917 (52.12)	4,349 (50.68)		
CSS, n (%)				0.47	0.49
Alive or dead of other cause	9,472 (77.26)	2,827 (76.86)	6,645 (77.43)		
Dead (attributable to this cancer)	2,788 (22.74)	851 (23.14)	1,937 (22.57)		

χ^2: Chi-squared test. CSS, cancer-specific survival; OS, overall survival.