

	Univariate		Multivariate		Adjusted P value*
	OR (95%CI)	P value	OR (95%CI)	P value	
Histology					
Urothelial carcinoma	-		Reference		
Micropapillary UC	2.95 (2.15-4.04)	<0.001	3.39 (2.38-4.82)	<0.001	<0.001
Lymphoepithelioma-like UC	1.36 (0.62-2.79)	0.40	0.90 (0.39-1.97)	0.80	1
Sarcomatoid UC	1.10 (0.82-1.45)	0.50	0.94 (0.69-1.27)	0.70	1
Adenocarcinoma	1.37 (1.10-1.70)	<0.001	1.25 (0.97-1.59)	0.07	1
Giant & spindle cell carcinoma	0.89 (0.49-1.53)	0.70	0.76 (0.40-1.34)	0.36	1
Neuroendocrine tumor	1.35 (1.05-1.71)	0.01	1.08 (0.83-1.40)	0.54	1
Squamous cell carcinoma	0.94 (0.78-1.11)	0.50	0.85 (0.69-1.04)	0.13	1
Sarcoma	0.72 (1.16-2.25)	0.60	0.56 (0.12-1.97)	0.40	1
Age at diagnosis (years)	0.99 (0.99-1)	<0.01	0.99 (0.99-1)	0.01	0.4
Sex					
Male	-		Reference		
Female	1.19 (1.10-1.29)	<0.01	1.08 (0.99-1.18)	0.06	1
Race					
Caucasian	-		Reference		
Black	1.32 (1.15-1.51)	<0.01	1.18 (1.01-1.38)	0.02	0.9
Hispanic	1.16 (1.01-1.32)	0.03	1.2 (1.03-1.39)	0.02	0.5
Asiatic	0.99 (0.84-1.17)	0.97	1.00 (0.83-1.20)	0.95	1
Other	0.87 (0.52-1.38)	0.58	0.79 (0.45-1.32)	0.39	1
Socioeconomic status					
Low	-		Reference		
High	1.01 (0.94-1.08)	0.63	1.00 (0.93-1.08)	0.86	1
Region					
West	-		Reference		
Midwest	0.93 (0.84-1.04)	0.26	0.85 (0.75-0.96)	0.01	0.5
North-East	0.95 (0.86-1.04)	0.31	0.92 (0.82-1.02)	0.13	1
South	1.04 (0.95-1.14)	0.36	0.98 (0.88-1.09)	0.82	1
Marital status					
Married	-		Reference		
Never married	1.18 (1.06-1.32)	<0.01	1.11 (0.99-1.25)	0.07	1
Previously married	1.19 (1.10-1.30)	<0.01	1.15 (1.05-1.26)	<0.001	0.07
Unknown	0.86 (0.71-1.05)	0.15	1.02 (0.82-1.27)	0.79	1
Perioperative CT					
No	-		Reference		
Yes	2.36 (2.21-2.53)	<0.001	2.26 (2.09-2.44)	<0.001	<0.001
T stage					
T<2	-		Reference		
T2	3.02 (2.45-3.75)	<0.001	2.44 (1.97-3.03)	<0.001	<0.001
T3-4	13.59 (11.16-16.7)	<0.001	11.5 (9.4-14.2)	<0.001	<0.001
T0/x	7.94 (4.66-13.1)	<0.001	6.91 (4.01-11.61)	<0.001	<0.001
Grade					
G1	-		Reference		
G2	0.99 (0.62-1.65)	0.99	0.69 (0.42-1.18)	0.16	1
G3	1.98 (1.29-3.18)	<0.01	1.24 (0.77-2.07)	0.37	1
G4	1.76 (1.15-2.82)	0.01	1.12 (0.70-1.86)	0.64	1
Gx	1.23 (0.78-2.03)	0.38	0.91 (0.55-1.56)	0.73	1
NNR	1 (0.99-1)	0.75	0.99 (0.99-1)	0.70	1

Abbreviations. CI: confidence interval; CT: chemotherapy; OR: odd ratio; NNR: number of lymph nodes removed; UC: urothelial carcinoma

* p values were adjusted using the conservative Bonferroni correction method which multiplies the raw p-values by the number of tests

Supplementary Table 3. Univariable and multivariable logistic regression analysis predicting lymph node invasion in patients treated with radical cystectomy.