

Supplementary Table S1. Complete multinomial logistic regression model for factors associated with treatment selection in non-prostatic and prostatic urethral carcinoma.

	Non-Prostatic Urethra		Prostatic Urethra	
	OR (95% CI)	P-value	OR (95% CI)	P-value
No Subsequent Treatment				
<i>Age</i>	1.01 (0.94, 1.07)	0.875	1.00 (0.95, 1.06)	0.891
<i>Male</i>	0.31 (0.08, 1.20)	0.089	No data	
<i>Race</i>				
White	Reference			
Black	2.79 (0.48, 16.21)	0.252	2.01 (0.16, 25.82)	0.592
Other	1.07 (0.08, 15.13)	0.961	2.39 (0.17, 33.20)	0.516
<i>Charlson-Deyo score</i>				
0	Reference			
1	0.37 (0.08, 1.73)	0.208	No data	
2	0.82 (0.08, 8.67)	0.87	1.12 (0.19, 6.49)	0.896
3	0.92 (0.19, 4.40)	0.912	0.70 (0.15, 3.23)	0.643
<i>Facility Type</i>				
Academic	Reference			
Non-academic	3.08 (0.93, 10.18)	0.065	1.37 (0.42, 4.44)	0.599
<i>Insurance</i>				
Private	Reference			
Medicaid	2.20 (0.14, 34.10)	0.574	1.13 (0.09, 14.72)	0.928
Medicare	3.28 (0.60, 17.88)	0.169	0.77 (0.18, 3.21)	0.714
Unknown	2.56 (0.14, 45.71)	0.522	No data	
<i>T-stage</i>				
Ta	Reference			
Tis	0.37 (0.06, 2.17)	0.272	1.85 (0.54, 6.35)	0.329
<i>Tumor Size</i>				
<2 cm	No data		Reference	
≥2 cm	NA		1.20 (0.06, 23.22)	0.903
Unknown	NA		2.92 (0.33, 25.64)	0.335
<i>Tumor Grade</i>				
Low	Reference		Reference	
High	0.34 (0.09, 1.33)	0.123	0.21 (0.04, 1.08)	0.061
Unknown	0.56 (0.13, 2.36)	0.431	1.13 (0.30, 4.25)	0.86
Urethrectomy				
<i>Age</i>	0.97 (0.92, 1.03)	0.358	0.95 (0.89, 1.01)	0.131
<i>Male</i>	2.55 (0.61, 10.60)	0.199	No data	
<i>Race</i>				
White	Reference			
Black	1.79 (0.44, 7.24)	0.411	NA	
<i>Charlson-Deyo score</i>				
0	Reference		Reference	
1	1.87 (0.59, 5.97)	0.288	0.49 (0.13, 1.85)	0.294
2	0.87 (0.15, 4.88)	0.87	0.00 (0.00, .)	0.991
3	1.04 (0.24, 4.46)	0.962	0.46 (0.08, 2.73)	0.391
<i>Facility Type</i>				
Academic	Reference		Reference	
Non-academic	0.23 (0.08, 0.60)	0.003	0.21 (0.06, 0.67)	0.008

<i>Insurance</i>				
Private	Reference		Reference	
Medicaid	1.20 (0.15, 9.46)	0.862	1.14 (0.15, 8.61)	0.899
Medicare	0.73 (0.20, 2.72)	0.639	0.92 (0.21, 4.16)	0.918
<i>T-stage</i>				
Ta	Reference		Reference	
Tis	3.27 (1.10, 9.69)	0.033	3.36 (1.00, 11.37)	0.051
<i>Tumor Size</i>				
<2 cm	Reference		Reference	
≥2 cm	2.33 (0.38, 14.23)	0.36	0.14 (0.02, 1.23)	0.076
Unknown	0.94 (0.22, 3.94)	0.932	0.07 (0.01, 0.36)	0.002
<i>Tumor Grade</i>				
Low	Reference		Reference	
High	15.15 (3.82, 60.04)	<0.001	59.29 (4.61, 763.17)	0.002
Unknown	7.43 (1.53, 36.11)	0.013	32.01 (2.32, 441.63)	0.01
Ablation and Topical				
Age	0.98 (0.90, 1.06)	0.642	0.98 (0.94, 1.02)	0.234
Male	1.23 (0.28, 5.49)	0.784	No data	
<i>Race</i>				
White	Reference		Reference	
Black	No data	0.993	No data	
Other	No data		0.97 (0.06, 15.56)	0.985
<i>Charlson-Deyo score</i>				
0	Reference		Reference	
1	0.65 (0.14, 3.02)	0.578	0.33 (0.11, 0.96)	0.042
2	No data		1.55 (0.52, 4.59)	0.427
3	No data		0.22 (0.05, 0.91)	0.036
<i>Facility Type</i>				
Academic	Reference		Reference	
Non-academic	0.56 (0.14, 2.28)	0.419	1.40 (0.66, 2.98)	0.382
<i>Insurance</i>				
Private	Reference		Reference	
Medicaid	2.81 (0.13, 61.22)	0.511	1.89 (0.40, 8.90)	0.422
Medicare	1.37 (0.20, 9.53)	0.747	1.42 (0.49, 4.10)	0.523
Unknown	No data		13.90 (0.57, 341.43)	0.107
<i>T-stage</i>				
Ta	Reference		Reference	
Tis	2.05 (0.49, 8.53)	0.325	2.53 (1.14, 5.62)	0.023
<i>Tumor Size</i>				
<2 cm			Reference	
≥2 cm	1.77 (0.15, 20.49)	0.648	0.35 (0.07, 1.84)	0.213
Unknown	0.78 (0.11, 5.64)	0.804	0.63 (0.20, 2.01)	0.434
<i>Tumor Grade</i>				
Low	No data		Reference	
High	NA		3.09 (1.21, 7.90)	0.018
Unknown	NA		2.59 (0.85, 7.83)	0.092

The reference treatment group for each model was endoluminal ablation alone. Odds ratios (ORs), 95% confidence intervals (CIs), and P-values are presented for three treatment categories: no subsequent treatment, urethrectomy, and ablation combined with topical intraluminal therapy. Separate models were constructed for the non-prostatic and prostatic urethral cohorts. Significant predictors ($P < .05$) are highlighted in bold. NA indicates the variable was not applicable or not estimable due to sample size constraints; “No data” indicates unavailable or suppressed data in the NCDB dataset.

Supplementary Table S2. Multivariable Cox Regression for Overall Survival in Non-Invasive Urethral Carcinoma, including All Prespecified Covariates.

	Non-Prostatic Urethra		Prostatic Urethra	
	HR [95% CI]	P-value	HR [95% CI]	P-value
<i>Treatment Selection</i>				
Surveillance	Reference		Reference	
Ablation only	0.85 (0.31, 2.34)	0.755	1.31 (0.47, 3.65)	0.61
Surgical	1.87 (0.78, 4.50)	0.164	1.25 (0.47, 3.30)	0.66
Ablation+topical	1.40 (0.42, 4.62)	0.582	0.18 (0.05, 0.60)	0.005
<i>Age</i>	1.03 (0.99, 1.07)	0.203	1.07 (1.03, 1.11)	<0.001
<i>Male</i>	0.99 (0.39, 2.47)	0.977	NA (All males)	
<i>Race</i>				
White	Reference			
Black	0.70 (0.19, 2.54)	0.586	1.25 (0.35, 4.47)	0.736
Other	NA		0.90 (0.11, 7.10)	0.917
<i>Charlson-Deyo Score</i>				
0	Reference		Reference	
1	2.66 (1.29, 5.45)	0.008	1.92 (0.97, 3.81)	0.062
2	1.79 (0.48, 6.65)	0.384	3.54 (1.49, 8.42)	0.004
3	1.03 (0.33, 3.22)	0.954	2.71 (1.33, 5.49)	0.006
<i>Facility type</i>				
Academic	Reference		Reference	
Non-academic	1.31 (0.67, 2.55)	0.429	1.01 (0.57, 1.79)	0.984
Unknown	NA			
<i>Insurance</i>				
Private	Reference		Reference	
Medicaid	0.53 (0.06, 4.98)	0.579	0.26 (0.05, 1.51)	0.135
Medicare	1.61 (0.58, 4.46)	0.362	0.68 (0.28, 1.62)	0.379
Unknown	4.97 (0.43, 57.35)	0.199	2.55 (0.27, 24.29)	0.416
<i>T-stage</i>				
Ta	Reference		Reference	
Tis	0.52 (0.23, 1.19)	0.12	1.00 (0.55, 1.82)	0.993
<i>Tumor size</i>				
<2 cm	Reference		Reference	
≥2 cm	7.77 (1.26, 47.73)	0.027	1.92 (0.65, 5.66)	0.239
Unknown	6.14 (1.15, 32.68)	0.033	1.32 (0.54, 3.21)	0.543
<i>Grade</i>				
Low	Reference		Reference	
High	0.93 (0.42, 2.05)	0.86	1.38 (0.67, 2.85)	0.376
Unknown	0.54 (0.20, 1.43)	0.216	1.40 (0.60, 3.25)	0.433

Multivariable Cox regression models were constructed separately for the non-prostatic and prostatic urethral carcinoma cohorts. Hazard ratios (HRs), 95% confidence intervals (CIs), and *P*-values are presented for each covariate. Reference categories are indicated within each variable grouping. “NA” denotes variables that were not applicable or not estimable due to sample size limitations. “Unknown” indicates missing or unreported data within the NCDB dataset.