



UNIVERSITY *of* MARYLAND

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***RACE AS A PREDICTOR OF PATHOLOGIC RESPONSE TO NEOADJUVANT
CHEMOTHERAPY AT TIME OF CYSTECTOMY FOR BLADDER CANCER***

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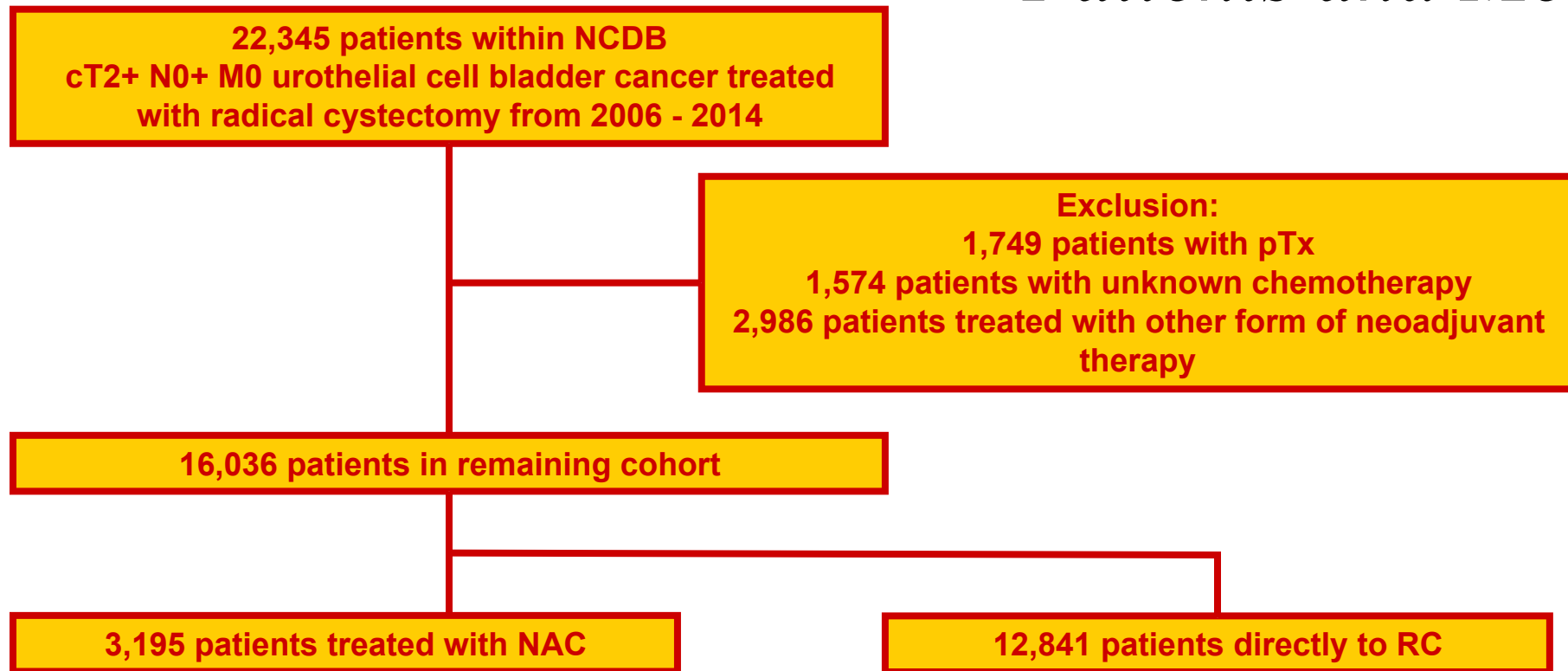
Achieving Pathological T0

- SWOG-8710 demonstrated neoadjuvant chemotherapy (NAC) improved survival outcomes for patients with locally advanced bladder cancer
- Improved survival associated with no residual disease (pT0) in cystectomy specimen
- Use of NAC associated with increased likelihood of achieving pT0

Race and Bladder Cancer Outcomes

- African American patients with bladder cancer have been found to have inferior survival outcomes after radical cystectomy
- Is race associated with pT0 response to NAC at time of cystectomy?


Patients and Methods



- **Variables analyzed:**

- Race: Caucasian non-Hispanic, Hispanic, African American, Asian
- Other: age, sex, income, insurance, education, co-morbidities, clinical T/N stage, and duration between NAC and RC

Results - Demographics (NAC vs. no NAC)

Variable	NAC	No NAC	p-value
 Race	Caucasian	2,860 (89.51%)	0.79
	African American	174 (5.45%)	
	Hispanic	67 (2.10%)	
	Asian	45 (1.41%)	
	Other	49 (1.53%)	

Variable	NAC	No NAC	p-value
Age	< 60	952 (29.80%)	< 0.001
	60-64	548 (17.15%)	
	65-69	616 (19.28%)	
	70-74	564 (17.65%)	
	75+	515 (16.12%)	
Sex	Male	2,418 (75.68%)	0.17
Income	<\$38,000	436 (13.65%)	< 0.001
	\$38,000-\$47,999	719 (22.50%)	
	\$48,000-\$62,999	888 (27.79%)	
	\$63,000 +	1,108 (34.68%)	
	Unknown	44 (1.38%)	
Insurance	Private Insurance	1,274 (39.87%)	< 0.001
	Medicaid	172 (5.38%)	
	Medicare	1,571 (49.17%)	
	Other Government	40 (1.25%)	
	Not Insured	92 (2.88%)	
	Unknown	46 (1.44%)	

Variable	NAC	No NAC	p-value
Education	< 71 %	382 (11.96%)	< 0.001
	71 – 80%	796 (24.91%)	
	81.1 – 86%	1,107 (34.65%)	
	> 86%	868 (27.17%)	
	Unknown	42 (1.31%)	
CDCC Score	0	2,385 (74.65%)	< 0.001
	1	648 (20.28%)	
	2+	162 (5.07%)	
cT Stage	T2 (T2a, T2b)	2,290 (71.67%)	< 0.001
	T3 (T3a, T3b)	519 (16.24%)	
	T4 (T4a, T4b)	386 (12.08%)	
cN Stage	0	2,661 (83.29%)	< 0.001
	1	191 (5.98%)	
	2	150 (4.69%)	
	3	21 (0.66%)	
	Unknown	172 (5.38%)	

Results – Multivariate Analysis (NAC)

Variable	OR (95% CI) of achieving pT0	p-value
<u>Race</u>		
Caucasian	1.00	
African American	0.55 (0.31 – 0.98)	0.04
Hispanic	0.64 (0.29 – 1.41)	0.55
Asian	1.37 (0.66 – 2.87)	0.29
<u>Clinical T Stage</u>		
T2	1.00	
T3	0.60 (0.44 – 0.81)	0.001
T4	0.49 (0.33 – 0.71)	< 0.001
Controlling for age, sex, income, insurance, education, CDCC score, duration between start of NAC and RC, and Clinical N stage		

Results – Multivariate Analysis (no NAC)

Variable	OR (95% CI) of achieving pT0	p-value
<u>Race</u>		
Caucasian	1.00	0.32 0.43
African American	1.27 (0.79 – 2.01)	
Hispanic	0.70 (0.28 – 1.71)	
Asian		
<u>Clinical T Stage</u>		
T2	1.00	< 0.001 0.001
T3	0.41 (0.26 – 0.64)	
T4	0.37 (0.21 – 0.65)	
Controlling for age, sex, income, insurance, education, CDCC score, duration between start of NAC and RC, and Clinical N stage		

Results – Caucasian vs. African Americans

Variable		Caucasian	African American	p-value
cT Stage	T2 (T2a, T2b)	2,079 (72.69%)	113 (64.94%)	0.07
	T3 (T3a, T3b)	456 (15.94%)	33 (18.97%)	
	T4 (T4a, T4b)	325 (11.36%)	28 (16.09%)	

Variable		Caucasian	African American	p-value
Age	< 60	833 (29.13%)	63 (36.21%)	0.06
	60-64	496 (17.34%)	23 (13.22%)	
	65-69	554 (19.37%)	36 (20.69%)	
	70-74	495 (17.31%)	34 (19.54%)	
	75+	482 (16.85%)	18 (10.34%)	
Sex	Male	2,201 (76.96%)	92 (52.87%)	< 0.001
Income	<\$38,000	336 (11.75%)	78 (44.83%)	< 0.001
	\$38,000-\$47,999	648 (22.66%)	43 (24.71%)	
	\$48,000-\$62,999	815 (28.5%)	28 (16.09%)	
	\$63,000 +	1,020 (35.66%)	25 (14.37%)	
Insurance	Private Insurance	1,147 (40.1%)	69 (39.66%)	0.48
	Medicaid	135 (4.72%)	13 (7.47%)	
	Medicare	1,425 (49.83%)	83 (47.7%)	
	Other Government	36 (1.26%)	1 (0.57%)	
	Not Insured	80 (2.8%)	4 (2.3%)	

Variable		Caucasian	African American	p-value
Education	< 71 %	286 (10.00%)	59 (33.91%)	< 0.001
	71 – 80%	696 (24.34%)	61 (35.06%)	
	81.1 – 86%	1,026 (35.87%)	31 (17.82%)	
	> 86%	813 (28.43%)	23 (13.22%)	
CDCC	0	2,131 (74.51%)	130 (74.71%)	0.96
	1	583 (20.38%)	36 (20.69%)	
	2+	146 (5.10%)	8 (4.6%)	
cN Stage	0	2,399 (83.88%)	137 (78.74%)	0.26
	1	168 (5.87%)	10 (5.75%)	
	2	125 (4.37%)	13 (7.47%)	
	3	20 (0.70%)	1 (0.57%)	
Duration	< 60 days	221 (7.73%)	16 (9.2%)	0.06
	60 – 120 days	1,447 (50.59%)	71 (40.8%)	
	120 – 240 days	1,147 (40.1%)	82 (47.13%)	
	> 240 days	45 (1.57%)	5 (2.87%)	

Conclusions

- African American patients are less likely to achieve pT0 after NAC compared to Caucasian patients
- Multifactorial causes for pT0
 - Aggressive disease
 - Socioeconomic
 - Barriers to access
- Higher Clinical T/N stage is associated with less likelihood of achieving pT0 but this is non-specific to patients receiving NAC

Limitations

- Type and duration of the chemotherapy regimen is unknown
- Factors that predict NAC receipt may be associated with factors that predict pT0 status
- African Americans are underrepresented in the NCDB

Thanks



Questions?

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