

How Bladder Cancer Affect Black Patients

Stephanie Chisolm: Most of you know me, but my name is Stephanie Chisholm and I'm the director of education and research at BCAN. And in recognition of the FDA's inaugural National Black Family Cancer Awareness Week, we're really delighted to welcome urologist and researcher, Dr. Samuel Washington and oncology social worker and researcher, Dr. Heather Honoré Goltz for a multidisciplinary discussion about the biological and psychosocial impact of race on bladder cancer incidents and survival.

Today's program is going to be a little bit different, after hearing from our experts, we will invite you to turn on your voice and your video and really share your thoughts and experience, which really will help us to determine what BCAN can be doing to help fill some of the gaps that I think we're going to identify in today's program.

So Dr. Washington and Dr. Goltz, it's a pleasure to have you here. If all the participants will join me in turning off their videos, we're going to turn it over to Dr. Washington first.

Dr. Sam Washington: Hi, everyone. Thanks for having me. I'll start with just epidemiology and a background in statistics related to bladder cancer. I think all of us are familiar with the fact that bladder cancer remains a major contributor to cancer-related morbidity and mortality throughout the United States. It's largely seen in older individuals over the age of 50. Recent estimates for 2021 report over 83,000 new cases will be diagnosed this year.

Now, the majority of those in men, but nearly 20,000 diagnosed in women as well. And there will be a roughly 17,000 estimated cancer deaths related to bladder cancer in the United States with this or similar proportional breakdown across those. But

Background

Major contributor to cancer-related morbidity and mortality

- Largely a disease of older individuals (> 50 years)
- Roughly 83,730 incident cases in US for 2021
 - 64,280 cases in men & 19,450 cases in woman

- 17,200 estimated cancer-specific deaths in US for 2021
 - 12,260 cases in men & 4,940 in woman

Our knowledge about the impact of disparities in treatment and clinical outcomes such as survival remains limited

what we don't know is how there are differences by race in terms of the treatment and things like survival related to bladder cancer.

Now, rates overall we see are lower for Black men and Black women relative to White counterparts. Here's just a little table breaking down the incidents per 100,000 persons both by incidents, death, race, and gender. We see overall that death rates differ by both of these factors, race and gender. We see higher rates of death for Black women compared to White counterparts and lower rates of death for Black men compared to White counterparts.

Now, these disparities are partially attributable to differences in stage of diagnosis. Pulling data from the American Cancer Society, cancer statistics breakdown, we see that patients who are self-represented Black may present with worse stage of disease and may have worse survival at five years compared to White counterparts and compared to all other races.

We know that that's not the entire story. We know that stage or presentation alone does not contribute to the differences in survival that we may be seeing overall. Some of that's related to access to care, and then specifically the type of care that they're receiving. When I mention this, I'm talking mostly as a guideline-based therapy or guideline concordant care, or as a non-guideline concordant care. So one question that we have from this is, is the effect of disparities and guidelines-based treatment, GBT impacting outcomes both within and across racial groups?

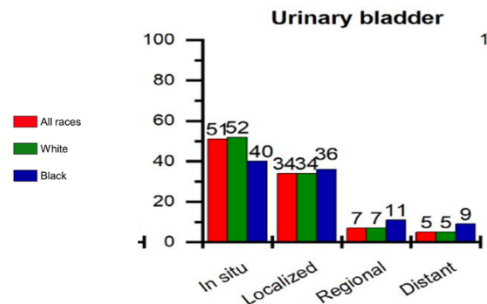
Bladder Cancer Rates in Black patients

	Incidence	Death
Male		
Black	19.9	5.5
White	39.5	8.4
Female		
Black	6.6	2.4
White	9.7	2.3

- Overall lower lifetime probability of bladder cancer for Black patients
- Death rates differ by Race and Gender
 - Higher rates in Black women compared to white women
 - Lower rates in Black men compared to white men

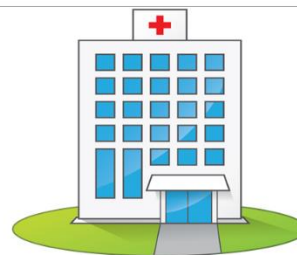
Rates per 100,000 persons

Disparities in stage at diagnosis



Black patients present with worse stage of disease and worse survival at 5-years

Explaining the disparities



Access to care



Receipt of GBT

Is the effect of disparities in guideline-based treatment (GBT) impacting outcomes within racial groups?

Now, one similar study that we did to look at this was using National Cancer Database to look at and assess how disparities in guidelines-based treatment mediate racial disparities and overall survival for older adults with bladder cancer. So this was really looking at an interaction or a relationship between race and the type of treatment received across multiple racial groups.

Now, again, using National Cancer Database, we looked at data both at an individual level, but then also clustered to look at their regional differences within a facility attributing to these differences as well. We saw in this cohort of over 54,000 individuals locally advanced muscle-invasive bladder cancer, 90% were White, 7% identified as Black, 3% Latino. Most of them had muscle-invasive disease with a little or no nodal involvement and had the most common type of bladder cancer pathology, urothelial carcinoma. The majority were treated at either an academic institution or comprehensive cancer center, but only half received guidelines-based therapy.

Now, compared to those that did not, those that did receive guidelines-based treatment were typically younger, White, diagnosed with urothelial carcinoma compared to a variant, privately insured or treated at an academic institution.

Study overview

Objective: To assess how disparities in GBT mediate racial/ethnic disparities in overall survival for older adults with bladder cancer

Aim: To examine how the interaction between race and receipt of GBT impacted survival for Black, White, and Latino individuals with MIBC

Winchester, DP et al. J Surg Oncol 2004

Race and Guideline-based Treatment (GBT)

Used National Cancer Database bladder cancer dataset

- Contains data at the individual level and aggregated by zip code which allows for hierarchical analysis

Cox proportional hazards models

- included random effects for facility to accommodate clustering for intra-facility correlations of outcome response
- Adjusted for race, age, gender, tumor characteristics, and clinical staging data
- GBT-by-race interaction effect including in models


Results

54,910 individuals with locally advanced muscle-invasive bladder cancer

- 90% white, 7% Black, and 3% Latino
- Most had cT2 disease (76.6%), cNo/x (92.9%), and urothelial carcinoma (88.7%)
- Most treated at an academic center (35.4%) or comprehensive cancer center (45.9%)
- Half (50.9%) received GBT.

Now we see when we look at the treatment received, guideline-based or not, and the groups are three here, Latino, White, and Black, we see multiple lines, but the long and short of this is that overall people who received guidelines-based treatment had a greater survival benefit than those that did not, which is not surprising. But what we did see was that even across these groups, differences in survival both across groups based on treatment and also within groups based on treatment.

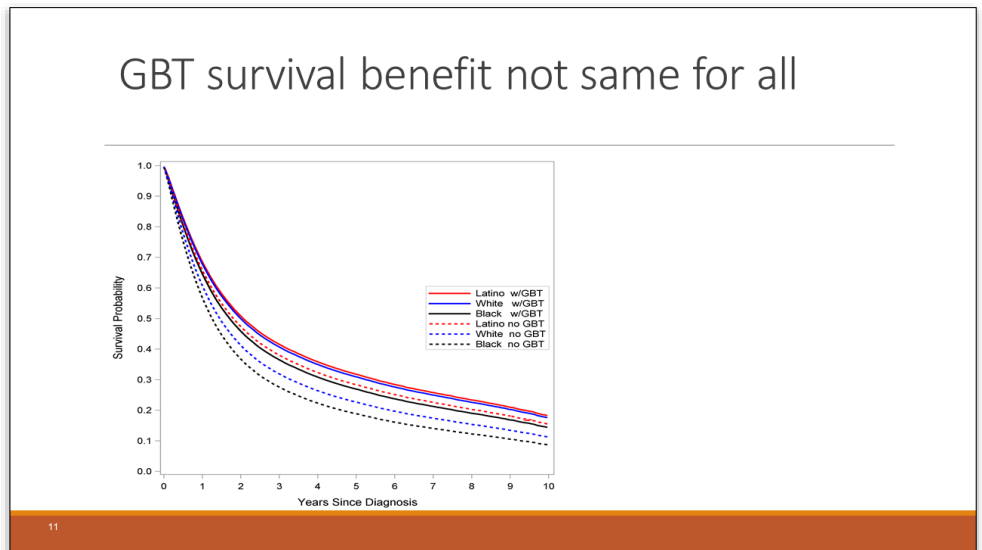
Those that received GBT (vs Non-GBT)



- Younger (<80 years, 82.6% vs 61.1%, p<.001)
- White (91% vs 89.1%, p<.001)
- Diagnosed with urothelial carcinoma (89.6% vs 87.7%, p<.001)
- Privately insured (28.4% vs 20.6%, p<.001)
- At academic facilities (43.46% vs 27.08%, p<.001)

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So if we were to look at this graph and compare Black patients who received guidelines-based therapy to those that did not, we see that those that did had a greater survival outcome up to 10 years out from diagnosis. Similar patterns we're seen with both White and Latino patients. Interestingly enough, we found that the survival benefit or survival at up to 10 years after diagnosis for Black patients who did receive guidelines-based treatment was similar to those who are Latino who did not receive guidelines-based treatment.



Interesting finding, unclear what to make of it or explanations for based on this dataset. But it's something that requires further examination, particularly because these are groups that are often under studied in clinical trials, as well as most of our clinical research.

Now, if we look at the risk of death by race and their receipt of treatment, again, similar to the graph, we see that Black individuals continue to have a higher risk of death relative to their White counterparts, as well as Latino counterparts. We saw when we compare these to other groups, it was near equivalent when you included guidelines-based treatment. Meaning that treatment alone reduced the disparity between White and Latino counterparts.

Patterns of mortality risk by Race & GBT

Black individuals continued to have greater mortality hazard		
Vs white individuals	HR 1.13	95% CI 1.06-1.20
Vs Latino individuals	HR 1.13	95% CI 1.02-1.26
Relative hazard roughly equivalent for white and Latino individuals		
	HR 1.00	95% CI 0.91-1.10
Black individuals with GBT nearly equivalent hazards as Latino counterparts without GBT		
	HR 1.02	95% CI 0.92-1.14

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But we see that the receipt of guidelines-based treatment did not completely remove the disparity for Black individuals compared to other counterparts. And similarly here, this is where we see, even though Black patients are receiving guidelines-based treatment, their survival is near similar or equivalent to those who are Latino who did not receive guidelines-based treatment.

At the end of this day, what this tells us overall is that not just race as a social construct is impacting survival for Black patients with bladder cancer, but also the type of treatment received is impacting survival as well. So this really lends itself well to a focus on self-advocacy and pushing for those patients who have concerns about the type of treatment that they're receiving to ask more questions and insist that the care they receive be based on evidence and guidelines

Now, with that, I'd like to transition over to Dr. Goltz.

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