

Sociodemographic differences in patient-reported pain and pain management of head and neck cancer patients in a community oncology setting.

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Background

There are currently 500,000 head and neck cancer (HNC) survivors in the United States. Pain is common among survivors and associated with adverse quality of life and outcomes. It is well-known that pain management differs considerably between White and Black patients, and a recently published study based on national Medicare data further showed significant differences in opioid doses between White and Black patients¹.

There is however a lack of data on pain management in the community oncology setting, where a growing number of HNC patients may be receiving long-term care. We described sociodemographic correlates of patient-reported pain among HNC patients receiving care in the community setting.

¹ Mordeen NE, Chyn D, Wood A, Meara E. Racial Inequality in Prescription Opioid Receipt—Role of Individual Health Systems. *N Engl J Med.* 2021;385(4):342-351.

Takeaways:

Among head and neck cancer patients in the community oncology setting, there were no racial differences in the report of pain, but significant differences between white and non-white patients in the receipt of medications for pain management.

For more information on this research:

[NavigatingCancer.com/Publications](https://www.navigatingcancer.com/Publications)

For more information regarding Navigating Cancer:

[NavigatingCancer.com](https://www.navigatingcancer.com)

Methods

Retrospective cohort study of patients within the Navigating Cancer database diagnosed with HNC after January 1, 2017 with at least one record of patient-reported pain.

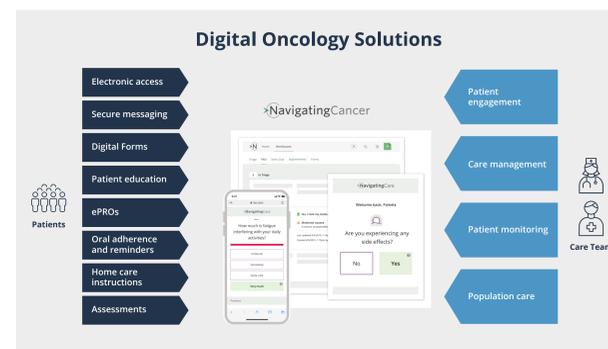


Figure 1: Navigating Cancer's digital oncology solution.

We used data from **Navigating Cancer**, a nationwide, community-oncology, patient-reported outcomes database that includes electronic patient-reported outcomes (ePROs) from 253 cancer clinics and over 1 million cancer survivors.

We identified a retrospective cohort of patients diagnosed with HNC after January 1, 2017, with at least one record of patient-reported pain through phone-in nurse triage or via Navigating Cancer's remote symptom monitoring tool, Health Tracker.

We characterized demographic and clinical factors associated with any reported pain, and pain resolution by a new prescription for pain management, based on race (white vs. non-white patients), and other sociodemographic characteristics.

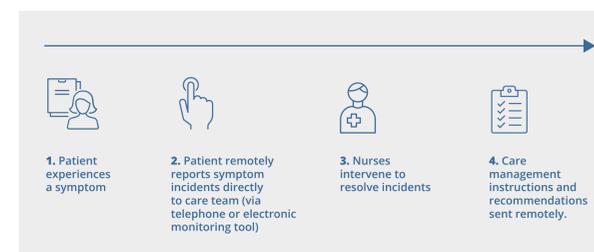


Figure 2: Workflow for reporting pain into Navigating Cancer's platform.

Patient View

Results

	All H&N Patients	H&N Patients with Pain Report
Total	3762	652
Age ranges, n (%)		
<65 years	1,744 (46.3)	304 (51.9)
≥65 years	2018 (53.6)	331 (48.1)
Gender, n (%)		
Female	908 (24.2)	168 (25.8)
Male	2,852 (75.8)	484 (74.2)
Race, n (%)		
White	2364 (62.8)	415 (63.6)
American Indian / Alaska Native	62 (1.6)	18 (2.8)
Black / African American	148 (3.9)	27 (4.1)
Asian	53 (1.4)	10 (1.5)
Hawaiian / Pacific Islander	9 (0.2)	3 (0.5)
Multiple races reported	4 (0.1)	0 (0.0)
Missing/Unknown (excluded from demographic analysis)	1058 (28.2)	167 (25.6)
Marital Status, n (%)		
Married/Partnered	1706 (45.3)	304 (46.7)
Non-Married/Partnered	1034 (27.5)	189 (30.5)
Unknown	1022 (27.2)	149 (22.9)
Smoking/Tobacco Use at Diagnosis, n (%)		
History of Smoking/Tobacco	2388 (63.4)	418 (64.1)
No History of Smoking/Tobacco	1102 (29.3)	189 (29.0)
Unknown	272 (7.2)	45 (6.9)
Insurance Status, n (%)		
Any Medicaid	311 (8.2)	74 (11.3)
Any Medicare	1688 (44.5)	287 (44.0)
Non-Medicaid/Medicare	898 (23.6)	158 (24.2)
Uninsured	78 (2.1)	16 (2.4)
Unknown	584 (15.5)	96 (14.7)

Table 1: Baseline Demographics

Baseline Demographics

- Our cohort included 3,762 patients, 62.8% white, 45.3% married, with an average age of 66.0 years.
- Of these, 652 patients (17%) reported at least one pain event during study period.

Differences in Pain Report and Management

- After adjusting for covariates, there was no statistically significant difference in the odds of any reported pain between white vs. non-white patients (aOR = 0.81; 95% CI 0.57, 1.15).
- However, we found that white HNC patients were significantly more likely to be provided a new prescription for pain management more than non-white patients, (aOR = 4.58; 95% CI 2.23, 9.38).
- Other factors associated with prescription of new pain prescription included being single/unpartnered (aOR = 1.34; 95% CI 1.03, 1.75) compared to being married/partnered, having Medicare (aOR = 3.07; 95% CI 1.59, 5.93) or commercial insurance (aOR = 2.88; 95% CI 1.54, 5.38) compared to Medicaid.
- Additionally, male patients were significantly less likely to receive a new prescription compared to females (aOR = 0.48; 95% CI 0.37, 0.61).

35-40% of HNC patients report pain at least once, and this does not differ between white and non-white patients

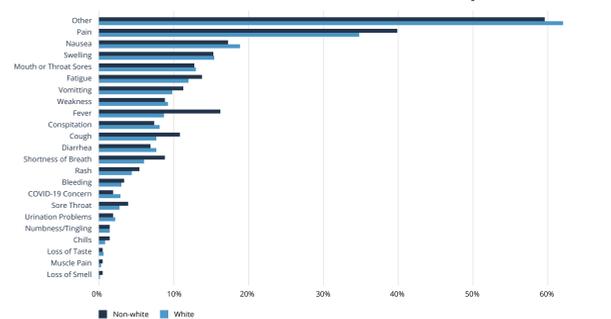


Figure 3: Differences in symptoms reported by white vs. non-white HNC patients

HNC patients report pain on average slightly less than twice, and this does not differ among white and non-white patients

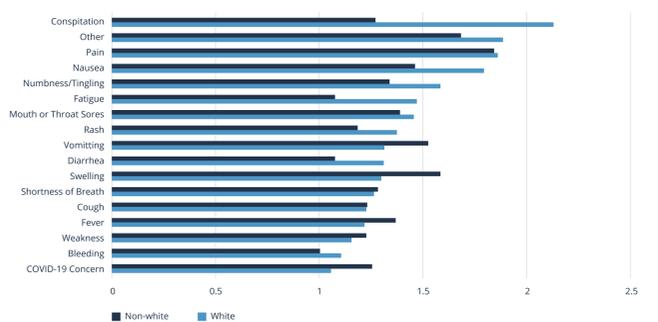


Figure 4: Average number of reported symptom per patient

Non-white HNC patients are less likely to receive a new prescription for pain management during triage than white HNC patients

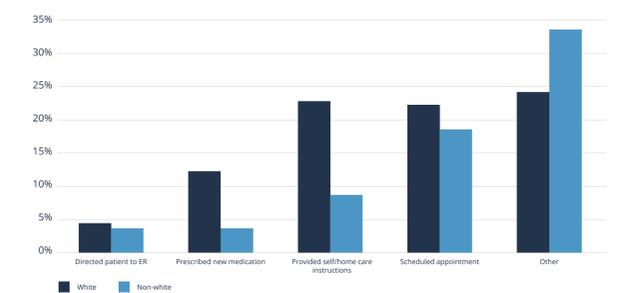


Figure 5: Differences in resolution of pain between white and non-white patients

Conclusions

- One-in-six HNC patients in the community oncology setting reported pain.
- There were no racial differences in any pain report.
- White patients were significantly more likely to receive a prescription for pain management, as were those with Medicare or commercial insurance.
- There may be disparity in the management of reported pain among HNC survivors based on race.

Opportunities

- Lack of complete race and ethnicity data limited our sample size and ability to distinctly classify racial/ethnic groups for comparison.
- Further evaluation is necessary to control for confounding factors, such as disease presentation and chronic pain disorders.
- Future studies should focus on identifying strategies to remediate inequitable pain management among HNC patients.

