

Disparities in patient-reported distress in head and neck cancer

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Background

- Distress is common among cancer patients, and impacts morbidity and mortality.
- Head and neck cancer (HNC) is considered one of the most emotionally distressing of all cancers, and given the stark racial disparities in HNC outcomes,

Objective

- We sought to examine racial and sociodemographic factors associated with clinically meaningful distress in a cohort of patients with HNC.

Methods

- Data Source:** Retrospective cohort of patients at an urban, academic, National Cancer Institute (NCI)-designated comprehensive cancer center in the Southeastern United States

- Study Design:** Cross-sectional

Measures:

- Dependent variable:** Distress thermometer (DT) score
- Independent variable:** Race/ethnicity, age, sex, marital status, and health insurance status
- Statistical Analysis:**
 - Chi-square test
 - Multivariable logistic regression

Results

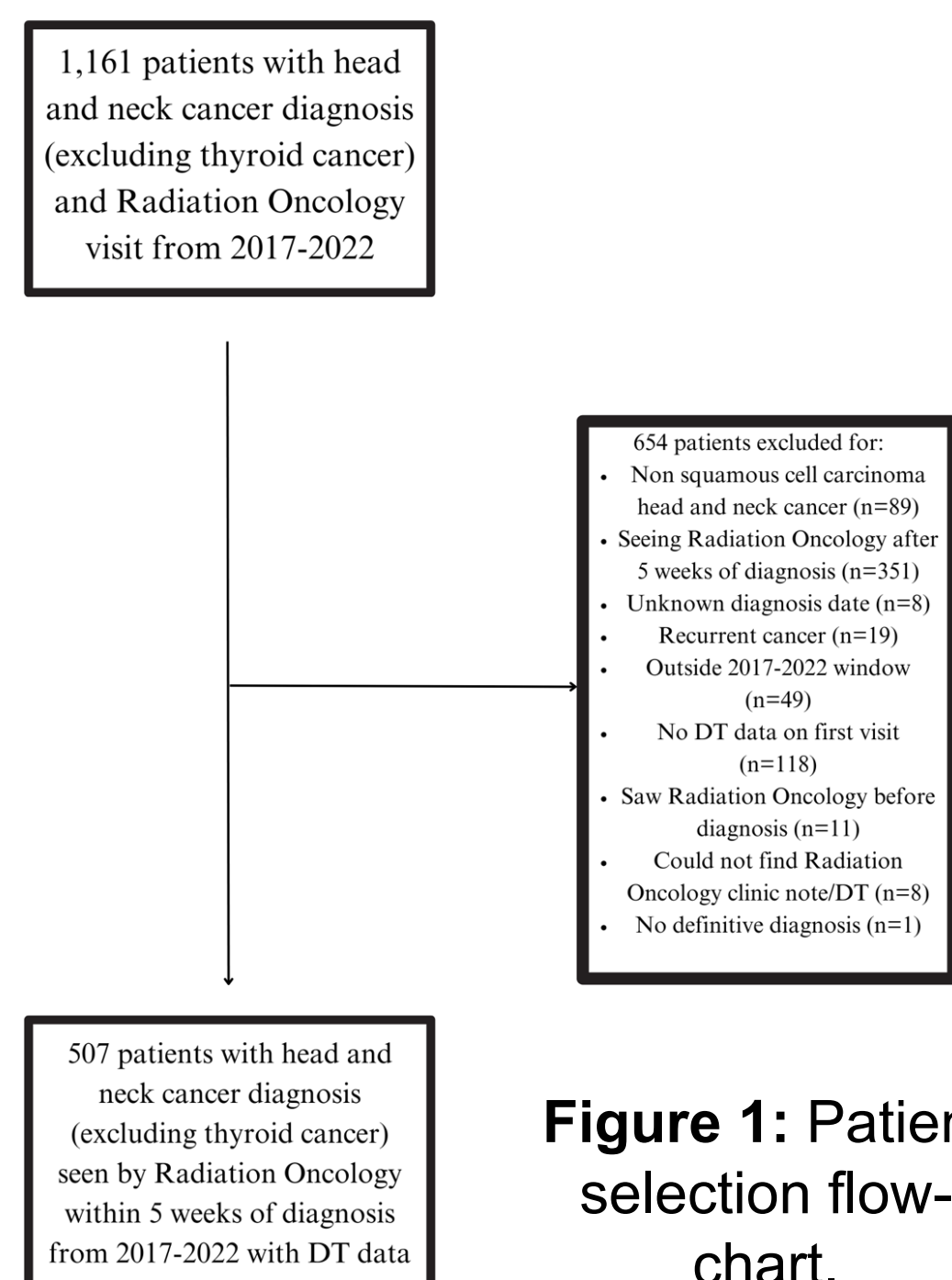


Figure 1: Patient selection flow-chart.

Variable	Effect	Lower 95%	Upper 95%
Age, years	0.98	0.96	0.99
Sex			
Female	Reference		
Male	0.92	0.58	1.46
Race			
White	Reference		
Black	0.76	0.45	1.28
Marital status			
Married	Reference		
Not married	1.61	1.05	2.50
Smoking status			
Never	Reference		
Current	2.14	1.02	4.5
Drug use			
No	Reference		
Yes	0.99	0.59	1.66
Alcohol use			
No	Reference		
Yes	0.85	0.57	1.27
Insurance status			
No	Reference		
Yes	1.06	0.47	2.44
Stage			
Early	Reference		
Late	1.28	0.81	2.03
Practical Problems			
No	Reference		
Yes	1.45	0.66	3.18
Family Problems			
No	Reference		
Yes	1.02	0.32	3.22
Emotional Problems			
No	Reference		
Yes	2.03	1.02	4.08
Physical concerns			
No	Reference		
Yes	0.72	0.40	1.29

Table 1: Adjusted odds ratio (aOR) estimates between meaningful distress and sociodemographic factors

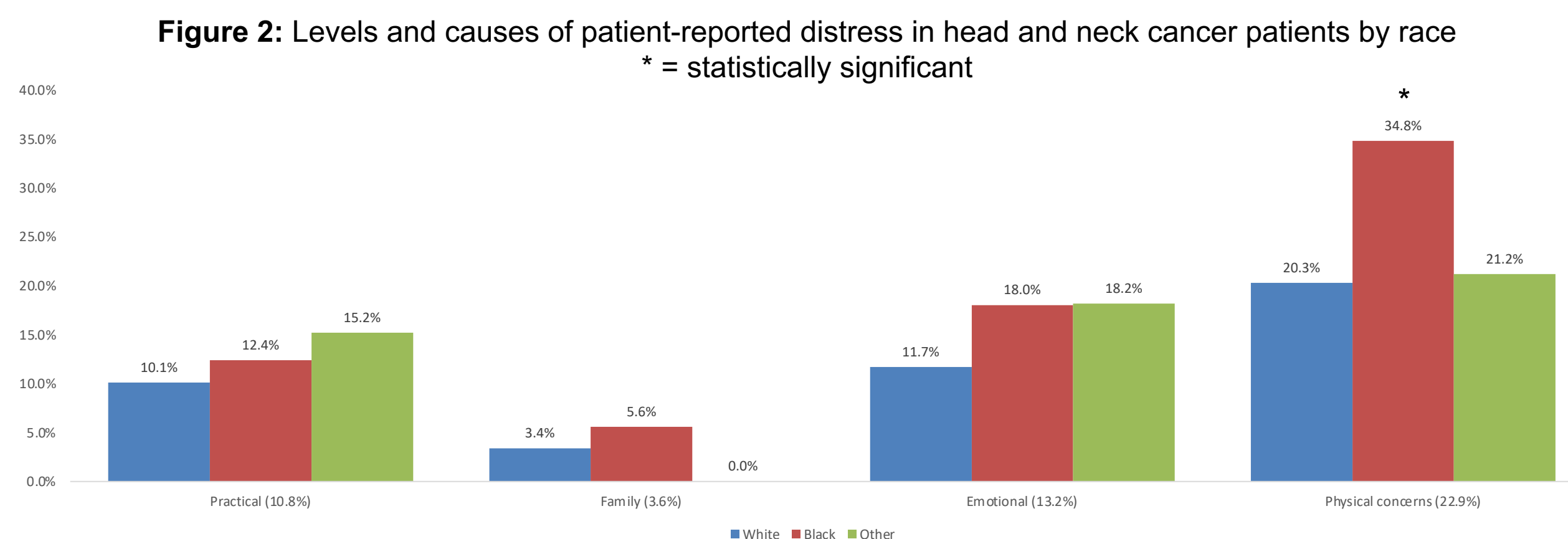


Figure 2: Levels and causes of patient-reported distress in head and neck cancer patients by race

* = statistically significant

	Total	Meaningful Distress	No Meaningful Distress	P
	n=507	n=232, 45.8%	n=275, 54.2%	
Age (Median, IQR)	63.0 15.0	61.4 11.7	64.3 10.4	0.003
Race				
White	385 75.9	176 75.9	209 76	0.95
Black	89 17.6	41 17.7	48 17.5	
Other	33 6.5	15 6.5	18 6.6	
Sex				0.67
Female	118 23.3	56 24.1	62 22.6	
Male	389 76.7	176 75.9	213 77.5	
Marital Status				0.002
Married	314 61.9	126 54.3	188 68.4	
Unmarried	184 36.3	100 43.1	84 30.6	
Unknown	9 1.8	6 2.6	3 1.1	
Smoking				0.0028
Current	53 10.5	36 15.5	17 6.2	
Former	261 51.5	113 48.7	148 53.8	
Never	191 37.7	82 35.3	109 69.6	
Drug Use				0.26
Yes	90 17.8	46 19.8	44 16	
No	380 75.0	166 71.6	214 77.8	
Unknown	37 7.3	20 8.6	17 6.2	
HNC Subtype				0.42
Oropharyngeal	260 51.3	112 48.3	148 53.8	
Laryngeal	129 25.4	61 26.3	68 24.7	
Oral cavity and other	118 23.3	59 25.4	59 21.5	
Stage				0.019
Early	304 61.9	128 56.4	176 66.7	
Late	187 38.1	99 43.6	88 33.3	
Vital Status				0.27
Alive	379 74.8	168 72.4	211 76.7	
Deceased	128 25.3	64 27.6	64 23.3	
Alcohol Use				0.53
Yes	201 39.6	89 38.4	112 40.7	
Never/No/Not Currently	295 58.2	139 59.9	156 56.7	
Unknown	11 2.2	4 1.7	7 2.6	
Insurance Status				0.75
Yes	479 94.5	220 94.8	259 94.2	
No	28 5.5	12 5.2	16 5.8	
Problem List				
Total no. of problem list items, Yes	135 26.6	71 30.6	64 23.3	0.063
No	372 73.4	161 69.4	211 76.7	
Practical Problems ≥ 1, Yes	55 10.8	34 14.7	21 7.6	0.011
No	452 89.2	198 85.3	254 92.4	
Family problems ≥ 1, Yes	18 3.6	12 5.2	6 2.2	0.07
No	489 96.4	220 94.8	269 97.8	
Emotional problems ≥ 1, Yes	67 13.2	41 17.7	26 9.5	0.0065
No	440 86.8	191 82.3	249 90.5	
Physical concerns ≥ 1, Yes	116 22.9	60 25.9	56 20.4	0.14
No	391 77.1	172 74.1	219 79.6	
Spiritual problem ≥ 1, Yes	2 0.4	2 0.9	0 0.0	cannot be tested
No	505 99.6	230 99.1	275 100.0	

Table 2: Baseline demographics of cohort and differences in meaningful distress by sociodemographic factors

Conclusions

Main Findings:

- Age, marital status, cancer stage, and the presence of practical and emotional problems are associated with meaningful distress.
- Patients who are unmarried, current smokers, and who reported emotional problems had increased odds of meaningful distress.
- Patients ≤40 years old, >80 years old, and patients with a high school education or less had decreased odds of reading online health materials.

Limitations of Study:

- our small sample size may underestimate the true rates of distress, and especially how they differ by race
- We had to exclude many patients due to missing data, once again prohibiting a more complete analysis.
- Our study encompasses data from a single time point - distress is on a continuum and might change based on treatment trajectories and other occurrences.

Implications:

- Our study underscores the need for social support in mitigating distress and optimizing mental healthcare in our patient population. Further studies will explore distress trajectories across the HNC continuum and impact on HNC outcomes.

Contact us

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