

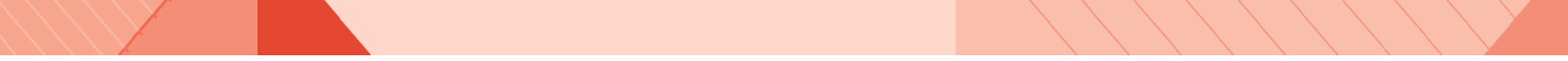
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**MULTIDISCIPLINARY  
APPROACHES TO  
HEAD AND NECK  
CANCER CARE**

LANDSCAPE ANALYSIS





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# EXECUTIVE SUMMARY

This landscape analysis has been prepared to provide an overview of the clinical treatment offered for patients with head and neck cancer and to outline barriers to effective multimodal care coordination in various community settings. The treatment of head and neck cancer requires collaboration across members of the multidisciplinary cancer care team and access to services that may not be available in remote areas.

In connection with its education program, **Multidisciplinary Approaches to Head and Neck Cancer Care**—in partnership with the Head and Neck Cancer Alliance and the American Society for Radiation Oncology (ASTRO), and with support by EMD Serono—the Association of Cancer Care Centers (ACCC) reviewed literature and data from previous projects to outline some of the key challenges that affect the treatment of head and neck cancer.

Key issues that were identified include challenges regarding incorporating and coordinating effective multidisciplinary care models, addressing breakdowns in communication and coordination across members of the cancer care team, inadequate patient navigation and psychosocial support as they go through their treatment journey, lack of supportive resources for patients and their caregivers, and healthcare disparities.

Recent advances in treatment are improving outcomes for patients with head and neck cancer, but they must have access to these therapies and coordinated care before, during, and after treatment. As cancer programs face staffing shortages and clinician burnout, it remains critical to find and establish more effective ways for cancer programs to provide high-quality care for patients with head and neck cancer and to equip multidisciplinary cancer care teams with the necessary resources and education.

## INTRODUCTION

As of 2023, an estimated 66,920 people (49,190 men and 17,730 women) in the US have been diagnosed with head and neck cancer.<sup>1</sup> This accounts for about 4% of all cancers in the US. The 5 major types of head and neck cancer include<sup>2</sup>:

1. Laryngeal and hypopharyngeal cancer
2. Nasal cavity and paranasal sinus cancer
3. Nasopharyngeal cancer
4. Oral and oropharyngeal cancer
5. Salivary gland cancer

Patients who receive treatment for locally advanced head and neck cancer often receive multimodal treatment that may include surgery, radiation therapy, and/or medications. While numerous advances in head and neck cancer treatment have been made in recent years, barriers to comprehensive

care remain a challenge in the community, especially when a multidisciplinary team model is not employed to deliver care.<sup>3</sup> Coordination among members of the multidisciplinary team is required to ensure timely and appropriate diagnosis, treatment, and post-treatment care (eg, reconstructive surgery or regaining swallowing). Outcomes are improved when patients receive care from high-volume centers, but many patients do not live near such facilities.<sup>4</sup> Therefore, it remains essential for local community cancer programs to optimize their care delivery for patients with head and neck cancer.

The treatment of head and neck cancer is further complicated by the fact that patients may experience shame and embarrassment due to factors such as self-blame, disfigurement, speech impairments, dry mouth, and difficulty swallowing.<sup>5</sup> The stigma and psychological trauma that patients experience also may place an additional burden on caregivers who face demanding tasks as they assist with a patient's daily activities, manage their medical appointments, and provide them with emotional support.<sup>6</sup>

## RECENT ADVANCES IN TREATMENT

In recent years, significant advancements have been made in the treatment of certain subtypes of head and neck cancer. In 2023, the journal *Cancer* featured head and neck cancer as a specialty that has made some of the “top advances of the year” and highlighted 2 key areas of promising research<sup>7</sup>:

1. De-escalation of therapeutics for human papillomavirus (HPV)-related oropharyngeal squamous cell carcinoma to reduce treatment-related toxicity (examples include immunotherapy with lower doses of radiation, induction followed by reduced-dose adjuvant radiation, etc)

2. Use of immunotherapy for recurrent/metastatic head and neck cancer (examples include neoadjuvant/adjuvant trials and combination anti-PD-L1/anti-CTLA-4 studies)

Given that radiotherapy is a key treatment modality for locally advanced head and neck cancer, treatment-related toxicities can be significant. New technology and imaging techniques, such as proton therapy and magnetic resonance imaging, are being integrated into radiotherapy treatment to minimize radiation impact outside of target areas.<sup>8</sup> Other areas of active research include gene therapy, prevention studies with vaccines, and combination regimens.<sup>9</sup>

As of Sept 1, 2023, the following immune checkpoint inhibitors have been approved by the FDA for the treatment of recurrent/metastatic head and neck cancer<sup>10, 11</sup>:

<p>Pembrolizumab (KEYTRUDA)</p>	<p><b>Head and Neck Squamous Cell Cancer (HNSCC)</b></p> <ul style="list-style-type: none"> <li>• In combination with platinum and FU for the first-line treatment of patients with metastatic or with unresectable, recurrent HNSCC. (1.3)</li> <li>• As a single agent for the first-line treatment of patients with metastatic or with unresectable, recurrent HNSCC whose tumors express PD-L1 [Combined Positive Score (CPS) ≥1] as determined by an FDA-approved test. (1.3, 2.1)</li> <li>• As a single agent for the treatment of patients with recurrent or metastatic HNSCC with disease progression on or after platinum-containing chemotherapy. (1.3)</li> </ul>
<p>Nivolumab (OPDIVO)</p>	<p><b>Squamous Cell Carcinoma of Head and Neck (SCCHN)</b></p> <ul style="list-style-type: none"> <li>• Adult patients with recurrent or metastatic squamous cell carcinoma of the head and neck with disease progression on or after a platinum-based therapy. (1.8)</li> </ul>

Since 2019, no new immunotherapy drugs or regimens have been approved by the FDA for non-metastatic head and neck cancer. Current FDA approvals are only for patients who have recurrent or known metastatic squamous cell cancer of the head and neck.

Beyond immunotherapy, other agents like xevinapant are being studied in patients with locally advanced head and neck cancer. Xevinapant is a potent oral oncolytic agent that targets inhibitors of apoptosis proteins (IAPs) and regulates programmed cell death.<sup>12</sup> In a recent phase 2 study involving patients with locally advanced squamous cell head and neck cancer, xevinapant plus chemoradiotherapy showed a 67% reduction in death or disease compared with placebo plus chemoradiotherapy.<sup>13</sup> IAPs are highly effective as radiosensitizers and some studies are also exploring their use with immunotherapy.<sup>14</sup> Current phase 3 studies with xevinapant

include the TrilynX study (NCT04459715; unresected, locally advanced head and neck cancer) and the XRay Vision study (NCT05386550; resected, locally advanced head and neck cancer at high risk for recurrence).<sup>15</sup>

As research continues to explore how IAPs may impact the care of patients with locally advanced head and neck cancer, cancer programs in the community ought to:

- Identify patients who may be eligible for clinical trials
- Anticipate how treatment plans may change if these agents become available
- Provide ongoing education as new data emerges

# COORDINATING MULTIDISCIPLINARY CARE

Multidisciplinary care models are essential for providing comprehensive and effective treatment for patients with head and neck cancer. These models involve collaboration and coordination among various health care professionals to address the complex medical, psychological, and support needs of patients.

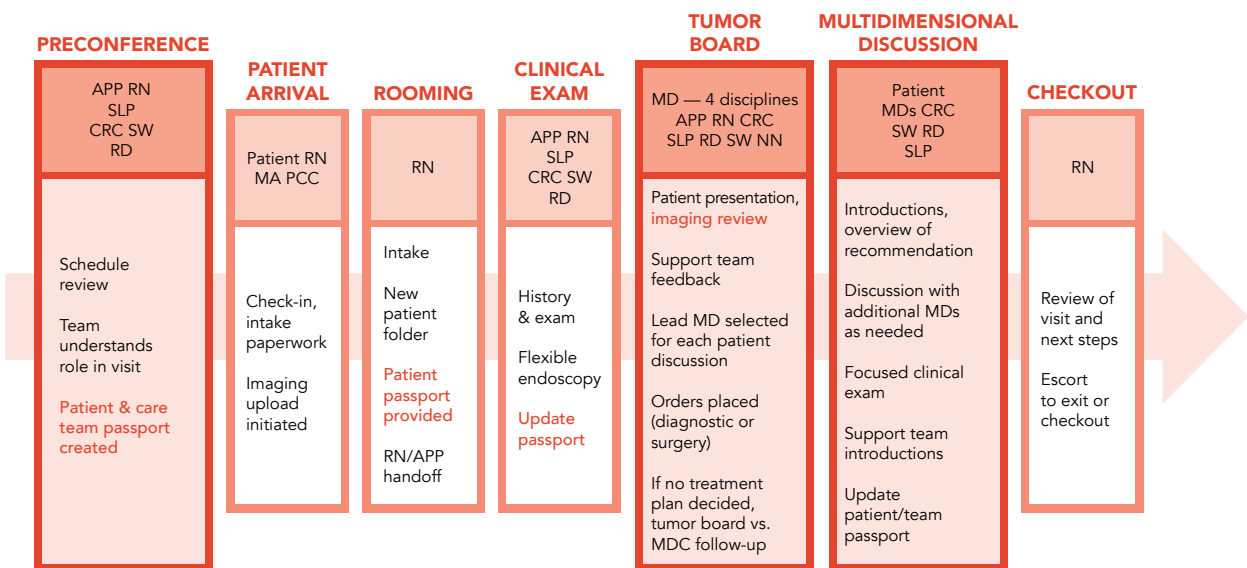
A multidisciplinary clinic model can involve streamlining medical, surgical, and radiation appointments into a single

day so that multiple specialists can give coordinated, multimodal care.<sup>16</sup>

The following is an example of a co-located multidisciplinary clinic model new patient clinic flow at Emory Healthcare, where all first-time patients are seen during the same initial visit by surgical oncology, radiation oncology, medical oncology, and ancillary providers; this is followed by tumor board discussion and neuroradiology review.<sup>17</sup>

## Schema of New Clinic Flow

Schema of new clinic flow at Emory, from left to right, spanning the steps for preconference, patient arrival, rooming, clinical examination, tumor board, multidisciplinary discussion, and checkout, is presented.



APP = advanced practice provider, CRC = clinical research coordinator, MA = medical assistant, MD = medical doctor, MDC = multidisciplinary clinic, NN = nurse navigator, PCC = primary care clinician, RD = radiologist, RN = registered nurse, SLP = speech language pathologist, SW = social worker.

Source: Emory Healthcare

NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society

Image source: <https://catalyst.nejm.org/cms/asset/078a8899-7e49-46a1-9dfa-653361880b34/cat.22.0235-f1.jpg>

Multidisciplinary clinic models for head and neck cancer can result in fewer treatment delays and more timely access to speech and audiology clinicians.<sup>18</sup> However, establishing a multidisciplinary clinic model may not always be feasible, especially in community settings where specialists may be located in different buildings or may not have coordinated clinic schedules. Staffing shortages also may prevent patients from receiving timely access to specialists.

Some of the other barriers to effective multidisciplinary care include the following:

### Makeup of the Care Team

Many community cancer programs offer surgery, radiation, and medical oncology services. However, the treatment team for head and neck cancer should include other groups such as dentists and audiologists, although some community cancer programs may not have established formal relationships with such groups or they may face workforce shortages.<sup>19</sup> The NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Head and Neck Cancers has provided guidelines on the composition of the multidisciplinary care team, and the following has been reproduced with permission from the NCCN.<sup>20</sup>

## NCCN Guidelines Version 1.2024 Team Approach

### MULTIDISCIPLINARY TEAM

The comprehensive care of patients with head and neck cancers is complex. All patients need access to the full range of support services and specialists with expertise in the comprehensive care of patients with head and neck cancer for optimal treatment and follow-up. Outcomes are improved when patients with head and neck cancers are treated in high-volume centers.

- Head and neck surgery
- Radiation oncology
- Medical oncology
- Plastic and reconstructive surgery
- Specialized nursing care
- Dentistry/prosthetics
- Physical medicine and rehabilitation (including therapy for lymphedema of the neck)
- Speech and swallowing therapy
- Clinical social work
- Clinical nutrition
- Pathology (including cytopathology)
- Diagnostic and interventional radiology
- Adjunctive services
  - Neurosurgery
  - Ophthalmology
  - Psychiatry
  - Addiction services
  - Audiology
  - Palliative care
  - Pain management

### SUPPORT SERVICES

Follow-up should be performed by a physician and other health care professionals with expertise in the comprehensive care and prevention of treatment sequelae. It should include a comprehensive head and neck exam. The comprehensive care of patients with head and neck cancer may involve the following:

- General medical care
- Pain and symptom management ([NCCN Guidelines for Adult Cancer Pain](#))
- Nutritional support
  - Enteral feeding
  - Oral nutrition
- Dental care for RT effects
- Xerostomia management
- Smoking and alcohol cessation ([NCCN Guidelines for Smoking Cessation](#))
- Speech and swallowing therapy
- Audiology
- Tracheotomy care
- Wound management
- Depression assessment and management ([NCCN Guidelines for Distress Management](#))
- Social work and case management
- Care coordination
- Supportive care ([NCCN Guidelines for Palliative Care](#))
- Physical therapy (lymphedema management)

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## Breakdowns in Communication and Care Coordination

Ineffective communication may occur when clinicians discuss treatment options and goals of care with patients.<sup>21</sup> Studies have shown that care that is provided by a dedicated team that meets regularly for tumor boards results in improved survival for patients with head and neck cancer.<sup>22</sup> If teams are not meeting regularly to discuss patient cases and coordinate care plans, then gaps may occur around treatment scheduling or around preoperative and postoperative evaluations and therapy.<sup>23</sup> Also, some clinicians may feel reluctant to refer patients for psychological services due to lack of access or perceived stigma associated with mental illness.<sup>24</sup>

## Inadequate Health Insurance Coverage

Many patients with cancer lack insurance or are underinsured.<sup>25</sup> Compared with privately insured patients, Medicaid-insured and uninsured patients were significantly more likely to be diagnosed with late-stage (III/IV) cancer for all stageable cancers.<sup>26</sup> Patients with squamous cell carcinoma of the pharynx who lack private insurance or who have lower household income may experience delays in diagnosis and treatment.<sup>27</sup>

While many community cancer programs offer charity care and find ways to utilize patient assistance programs, such efforts often require coordinated efforts with financial advocates and social workers. Some healthcare providers, especially in behavioral health, do not take insurance or are out-of-network providers.<sup>28</sup>

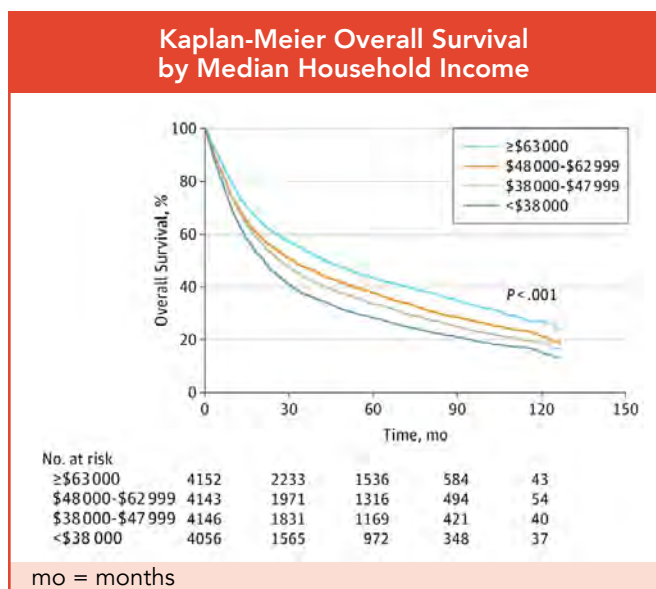
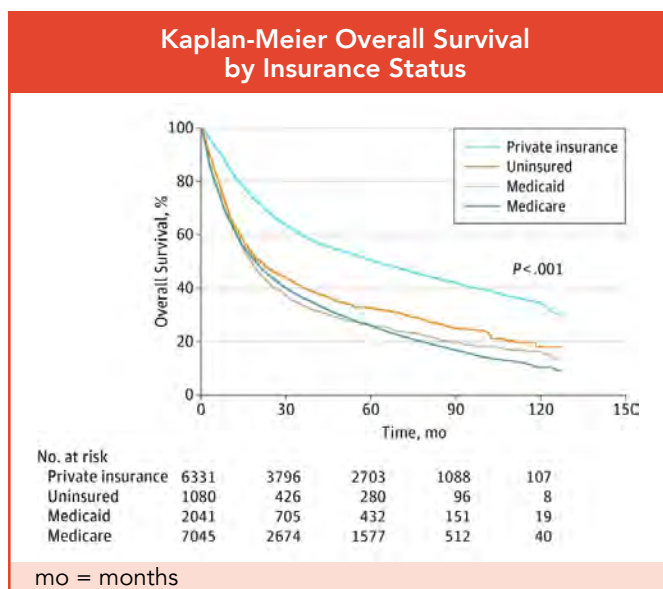


Image source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5710281/>

## Lack of Patient Navigation and Support for Patients and Caregivers

Community cancer programs may not have dedicated nurse navigators who can work closely with patients with head and neck cancer to identify and address critical needs such as transportation to appointments, obtaining prescriptions, help with tube feeding, and more.<sup>29</sup> Caregivers also face unmet needs, especially as patients move through diagnosis, treatment, and follow-up care.<sup>30</sup> The significant time commitments required from caregivers may lead to fatigue

and burnout.<sup>31</sup> Clinicians often overlook caregiver burden and may miss opportunities to recommend interventions and support designed to benefit patients and caregivers.

In a blog post featured in ASCO Connection, Abdul-Rahman Jazieh, MD, MPH, suggests some approaches to provide care for caregivers<sup>33</sup>:


- Document “caregiver care” in the clinical management plan
- Identify relevant resources to support caregivers
- Improve communication with caregivers



# ADDRESSING PSYCHOSOCIAL NEEDS OF PATIENTS AND CAREGIVERS

Patients with head and neck cancer often face significant emotional and psychological distress due to visible changes in appearance, communication difficulties, and treatment-related adverse effects. Typical distress screening questionnaires used in many cancer programs may not be specific enough to identify distress among patients with unique head and neck symptoms.<sup>34</sup>

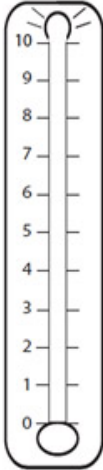
By using more tailored psychosocial distress screening protocols, cancer clinicians may better identify and address distress that might otherwise go unrecognized.<sup>35</sup> The sample questionnaire below from the University of California, Los Angeles (UCLA) combines the Distress Thermometer with other specific questions about head and neck symptoms.



### HNCP DISTRESS SCREENER FOR PATIENTS

**Instructions:** First please circle the number (0-10) that best describes how much distress you have been experiencing in the **PAST WEEK** including today.

Extreme distress



No distress

**Second, please indicate if any of the following has been a problem for you in the PAST WEEK including today. Be sure to check YES or NO for each.**

<b>Yes</b>	<b>No</b>	<b>Practical Problems</b>	<b>Yes</b>	<b>No</b>	<b>Physical Problems</b>
<input type="checkbox"/>	<input type="checkbox"/>	Child Care	<input type="checkbox"/>	<input type="checkbox"/>	Appearance
<input type="checkbox"/>	<input type="checkbox"/>	Housing	<input type="checkbox"/>	<input type="checkbox"/>	Breathing
<input type="checkbox"/>	<input type="checkbox"/>	Insurance/Financial	<input type="checkbox"/>	<input type="checkbox"/>	Eating
<input type="checkbox"/>	<input type="checkbox"/>	Transportation	<input type="checkbox"/>	<input type="checkbox"/>	Changes in Swallowing
<input type="checkbox"/>	<input type="checkbox"/>	Work/School	<input type="checkbox"/>	<input type="checkbox"/>	Changes in Speech
<input type="checkbox"/>	<input type="checkbox"/>	Treatment Decisions	<input type="checkbox"/>	<input type="checkbox"/>	Constipation/Diarrhea
		<b>Family Problems</b>	<input type="checkbox"/>	<input type="checkbox"/>	Fatigue
<input type="checkbox"/>	<input type="checkbox"/>	Dealing with Children	<input type="checkbox"/>	<input type="checkbox"/>	Getting Around
<input type="checkbox"/>	<input type="checkbox"/>	Dealing with Partner	<input type="checkbox"/>	<input type="checkbox"/>	Memory/Concentration
<input type="checkbox"/>	<input type="checkbox"/>	Ability to Have Children	<input type="checkbox"/>	<input type="checkbox"/>	Nausea
<input type="checkbox"/>	<input type="checkbox"/>	Family Health Issues	<input type="checkbox"/>	<input type="checkbox"/>	Pain
<input type="checkbox"/>	<input type="checkbox"/>	Isolation/Loneliness	<input type="checkbox"/>	<input type="checkbox"/>	Mouth Sores
<input type="checkbox"/>	<input type="checkbox"/>	Lack of Support	<input type="checkbox"/>	<input type="checkbox"/>	Sexual
<input type="checkbox"/>	<input type="checkbox"/>	<b>Spiritual/Religious Concerns</b>	<input type="checkbox"/>	<input type="checkbox"/>	Sleep
			<input type="checkbox"/>	<input type="checkbox"/>	Substance Abuse

Other: \_\_\_\_\_

Over the <b>LAST TWO WEEKS</b> how often have you been bothered by the following problems? (Use ✓ to indicate your answer)	Not At All	Several Days	More Than Half the Days	Nearly Every Day
1. Feeling nervous, anxious or on edge.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
2. Not being able to stop or control worrying.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
3. Little interest or pleasure in doing things.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
4. Feeling down, depressed, or hopeless.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3

**Patient or Representative Signature:** \_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_

If signed by someone other than the patient, please specify relationship to the Patient: \_\_\_\_\_

**Interpreter Signature:** \_\_\_\_\_

ID # \_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_

Image source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9875715/>

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The following are several strategies that may address some of the unique psychosocial needs of patients and caregivers to:

### ***Support Groups and Counseling***

Support groups and individual counseling sessions can provide a safe space for patients and caregivers to share their experiences, express emotions, and receive emotional support from peers and professionals.<sup>36</sup> Studies examining patient-caregiver dyads have shown that the emotional distress experienced by patients with head and neck cancer and their caregivers are often interconnected, but patients often receive more psychological support than their caregivers.<sup>37</sup>

### ***Patient and Caregiver Education and Resources***

Education can be delivered in ways to empower patients and help them engage in shared decision-making conversations about treatment options and potential adverse effects. Patients and caregivers can also learn coping strategies and other techniques for handling emotional distress.<sup>38</sup>

### ***Speech and Swallowing Therapy***

Speech therapists play a crucial role in helping patients regain their communication and swallowing abilities post treatment, prompting improvement in their quality of life and social interactions.<sup>39</sup> Providing patients with tools and techniques to enhance communication may help them engage in social interactions and express themselves more effectively.

### ***Body Image and Self-Esteem Workshops***

A person's face is a key component of personality, self-image, and interpersonal relationships.<sup>40</sup> Because patients often experience disfigurement, specialized workshops addressing body-image issues and self-esteem challenges may help patients cope with changes in appearance and aid them in fostering a healthier self-image.<sup>41</sup>

### ***Mindfulness and Relaxation Techniques***

Incorporating mindfulness, meditation, and relaxation techniques into the care plan can help patients manage stress, anxiety, and treatment-related discomfort.<sup>42</sup> Additional integrative interventions such as visualization and progressive muscle relaxation may increase quality of life for patients with head and neck cancer by further reducing psychological distress.<sup>43</sup>

### ***Collaboration with Mental Health Professionals***

Psychologists and psychiatrists can offer specialized interventions for managing patients' anxiety, depression, and adjustment difficulties, which can enhance their emotional well-being. Both patients with head and neck cancer and their caregivers may need to access professional counseling services to address emotional distress.

## **POST-TREATMENT CARE**

Post-treatment rehabilitation and survivorship care play critical roles in the comprehensive management of patients with head and neck cancer. After completing treatments such as surgery, radiation, and chemotherapy, patients often face challenges related to physical function, communication, and psychosocial well-being. Tailored rehabilitation and survivorship programs aim to improve quality of life and address the potential effects of treatment.

Examples of post-treatment care for head and neck cancer include:

- Speech and swallowing therapy
- Dental and oral health
- Lymphedema management
- Psychosocial support
- Nutritional guidance
- Managing secondary effects of treatment

# HEALTHCARE DISPARITIES

Racial disparities among patients with head and neck cancer have been studied extensively, particularly the inequities between Black and White patients receiving care in the US.<sup>46</sup> Even when compared to other racial and ethnic minority groups, Black patients had significantly worse outcomes.<sup>47</sup> Socioeconomic determinants such as insurance status play a critical role in racial disparity, but issues such as genetic and epigenetic differences are also thought to contribute to differences in survival outcomes.<sup>48</sup> A meta-analysis evaluating treatment outcomes among patients with head and neck cancer who were enrolled in clinical trials found that Black participants were consistently more likely to have

worse progression-free survival or disease-free survival when compared with White patients.<sup>49</sup> Interestingly, a recent study from the Veterans Health Administration (VHA) found that Black patients with laryngeal squamous cell carcinoma had tumor burden at diagnosis and survival outcomes comparable to those of White patients, which was counter to national trends.<sup>50</sup> The VHA findings suggest that socioeconomic factors, notably access to care, are principal among etiologies behind racial disparities in larynx cancer outcomes. Researchers have noted that future research needs to explore community and societal factors that may explain some of these disparities.<sup>51</sup>

## CONCLUSION

As ongoing advances occur in head and neck cancer treatment, clinicians in the community must work together to establish effective multidisciplinary models of care. Cancer programs must prioritize their efforts based on their staffing resources and capabilities to find ways to address some of the unique needs of patients with head and neck cancer and their caregivers.

## REFERENCES

1. Head and neck cancer: statistics. Cancer.net. Accessed Aug 23, 2023. <https://www.cancer.net/cancer-types/>
2. Head and neck cancer: introduction. Cancer.net. Accessed Aug 23, 2023. <https://www.cancer.net/cancer-types/head-and-neck-cancer/introduction>
3. Beeram M, Kennedy A, Hales N. Barriers to comprehensive multidisciplinary head and neck care in a community oncology practice. *Am Soc Clin Oncol Educ Book*. 2021;41:1-10. doi:10.1200/EDBK\_320967
4. Torabi SJ, Benchetrit L, Yu PK, et al. Prognostic case volume thresholds in patients with head and neck squamous cell carcinoma. *JAMA Otolaryngol Head Neck Surg*. 2019;145(8):708-715. doi:10.1001/jamaoto.2019.1187
5. Fingeret MC, Teo I, Goettsch K. Body image: a critical psychosocial issue for patients with head and neck cancer. *Curr Oncol Rep*. 2015;17(1):422. doi:10.1007/s11912-014-0422-0
6. Sterba KR, Zapka J, Cranos C, Laursen A, Day T. Quality-of-life in head and neck cancer patient-caregiver dyads: A systematic review. *Cancer Nursing*. 2016;39(3):238–250. doi: 10.1097/NCC.0000000000000281
7. Verma A, Burtneß B. Top advances of the year: head and neck cancer. *Cancer*. 2023;129(9):1308-1312. doi:10.1002/cncr.34654
8. O Leary B, Young A, Nutting C. Recent advances in the oncological management of head and neck cancer and implications for oral toxicity. *Br Dent J*. 2022;233(9):737-743. doi:10.1038/s41415-022-5195-5

9. Head and neck cancer: latest research. Cancer.net. Accessed Aug 23, 2023. <https://www.cancer.net/cancer-types/head-and-neck-cancer/latest-research>
10. Pembrolizumab. Prescribing information. Merck; 2023. Accessed Aug 23, 2023. [https://www.merck.com/product/usa/pi\\_circulars/k/keytruda/keytruda\\_pi.pdf](https://www.merck.com/product/usa/pi_circulars/k/keytruda/keytruda_pi.pdf)
11. Prescribing information. Bristol Myers Squibb; 2023. Accessed Aug 23, 2023. [https://packageinserts.bms.com/pi/pi\\_opdivo.pdf](https://packageinserts.bms.com/pi/pi_opdivo.pdf)
12. Smith A, Jones B, Doe J, et al. Xevinapant in combination with standard of care chemoradiation for high-risk locally advanced squamous cell carcinoma of the head and neck: preliminary results from a phase I dose-finding trial. Abstract presented at: American Society of Clinical Oncology Annual Meeting; May 29-31, 2020; University of Chicago (virtual).
13. Tao Y, Sun XS, Pointreau Y, et al. Extended follow-up of a phase 2 trial of xevinapant plus chemoradiotherapy in high-risk locally advanced squamous cell carcinoma of the head and neck: a randomised clinical trial. *Eur J Cancer*. 2023;183:24-37. doi:10.1016/j.ejca.2022.12.015
14. Kansal V, Kinney BLC, Uppada S, et al. The expanding role of IAP antagonists for the treatment of head and neck cancer. *Cancer Med*. 2023;12(13):13958-13965. doi:10.1002/cam4.6011
15. Ferris RL, Harrington K, Schoenfeld JD, et al. Inhibiting the inhibitors: development of the IAP inhibitor xevinapant for the treatment of locally advanced squamous cell carcinoma of the head and neck. *Cancer Treat Rev*. 2023;113:102492. doi:10.1016/j.ctrv.2022.102492
16. Patil RD, Meinen-Derr JK, Hendricks BL, Patil YJ. Improving access and timeliness of care for veterans with head and neck squamous cell carcinoma: a multidisciplinary team's approach. *Laryngoscope*. 2016;126(3):627-631. doi:10.1002/lary.25528
17. Halle T, Ryan M, Schmitt NC, et al. Designing and building a colocated multidisciplinary head and neck cancer clinic. *NEJM Catal Innov Care Deliv* 2022;4(1). doi:10.1056/CAT.22.0235
18. Townsend M, Kallogjeri D, Scott-Wittenborn N, Gerull K, Jansen S, Nussenbaum B. Multidisciplinary clinic management of head and neck cancer. *JAMA Otolaryngol Head Neck Surg*. 2017;143(12):1213-1219. doi:10.1001/jamaoto.2017.1855
19. Institute of Medicine (US) National Cancer Policy Forum. Ensuring quality cancer care through the oncology workforce: sustaining care in the 21st century. Washington (DC): National Academies Press (US); 2009. doi:10.17226/12613
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21. Sandman L, Hofmann B, Bognar G. Rethinking patient involvement in healthcare priority setting. *Bioethics*. 2020;34:403-411. doi:10.1111/bioe.12730
22. Liu JC, Kaplon A, Blackman E, Miyamoto C, Savior D, Ragin C. The impact of the multidisciplinary tumor board on head and neck cancer outcomes. *Laryngoscope*. 2020;130(4):946-950. doi:10.1002/lary.28066
23. Harris JP, Chen MM, Orosco RK, Sirjani D, Divi V, Hara W. Association of survival with shorter time to radiation therapy after surgery for US patients with head and neck cancer. *JAMA Otolaryngol Head Neck Surg*. 2018;144(4):349-359. doi:10.1001/jamaoto.2017.3406
24. Gurren L, O'Sullivan E, Keogh I, Dunne S. Barriers to accessing psycho-oncological support in head and neck cancer: a qualitative exploration of healthcare professionals' perspectives. *Eur J Oncol Nurs*. 2022;58:102145. doi:10.1016/j.ejon.2022.102145

25. Yabroff KR, Reeder-Hayes K, Zhao J, et al. Health insurance coverage disruptions and cancer care and outcomes: systematic review of published research. *J Natl Cancer Inst.* 2020;112(7):671-687. doi:10.1093/jnci/djaa048
26. Zhao J, Han X, Nogueira L, et al. Health insurance status and cancer stage at diagnosis and survival in the United States. *CA Cancer J Clin.* 2022;72(6):542-560. doi:10.3322/caac.21732
27. Shin JY, Yoon JK, Shin AK, Blumenfeld P, Mai M, Diaz AZ. Association of insurance and community-level socioeconomic status with treatment and outcome of squamous cell carcinoma of the pharynx. *JAMA Otolaryngol Head Neck Surg.* 2017;143(9):899-907. doi:10.1001/jamaoto.2017.0837
28. Coombs NC, Meriwether WE, Caringi J, Newcomer SR. Barriers to healthcare access among U.S. adults with mental health challenges: a population-based study. *SSM Popul Health.* 2021;15:100847. doi:10.1016/j.ssmph.2021.100847
29. Okado I, Cassel K, Pagano I, et al. Assessing patients' perceptions of cancer care coordination in a community-based setting. *JCO Oncol Pract.* 2020;16:e726-e733. doi:10.1200/JOP.19.00509
30. Zeng Q, Ling D, Chen W, Liao Y, An R, He L. Family caregivers' experiences of caring for patients with head and neck cancer: a systematic review and metasynthesis of qualitative studies. *Cancer Nurs.* 2023;46(1):E41-E61. doi:10.1097/NCC.0000000000001096
31. Langenberg SMCH, van Herpen CML, van Opstal CCM, Wymenga ANM, van der Graaf WTA, Prins JB. Caregivers' burden and fatigue during and after patients' treatment with concomitant chemoradiotherapy for locally advanced head and neck cancer: a prospective, observational pilot study. *Support Care Cancer.* 2019;27(11):4145-4154. doi:10.1007/s00520-019-04700-9
32. Kudrick LD, Baddour K, Wu R, et al. Longitudinal analysis of caregiver burden in head and neck cancer. *JAMA Otolaryngol Head Neck Surg.* 2023;149(8):681-689. doi:10.1001/jamaoto.2023.1283
33. ASCO Connection (blog). Caring for caregivers: an overdue need for effective intervention. July 20, 2023. Accessed Aug 23, 2023. <https://connection.asco.org/blogs/caring-caregivers-overdue-need-effective-intervention>
34. Gascon B, Panjwani AA, Mazzurco O, Li M. Screening for distress and health outcomes in head and neck cancer. *Curr Oncol.* 2022;29(6):3793-3806. doi:10.3390/currenol29060304
35. Brauer ER, Lazaro S, Williams CL, et al. Implementing a tailored psychosocial distress screening protocol in a head and neck cancer program. *Laryngoscope.* 2022;132(8):1600-1608. doi:10.1002/lary.30000
36. Chen S, Yu W, Chu T, Hung H, Tsai M, Liao C. Prevalence and correlates of supportive care needs in oral cancer patients with and without anxiety during the diagnostic period. *Cancer Nursing.* 2010;33:280-289. doi:10.1097/NCC.0b013e3181d0b5ef
37. Pasek M, Goździalska A, Joachim M, Caruso R. Social support in a cancer patient-informal caregiver dyad: a scoping review. *Cancers (Basel).* 2023;15(6):1754. doi:10.3390/cancers15061754
38. Kassir ZM, Li J, Harrison C, Johnson JT, Nilsen ML. Disparity of perception of quality of life between head and neck cancer patients and caregivers. *BMC Cancer.* 2021;21(1):1127. doi:10.1186/s12885-021-08865-7
39. Kraaijenga SAC, van der Molen L, Jacobi I, Hamming-Vriese O, Hilgers FJM, van den Brekel MWM. Prospective clinical study on long-term swallowing function and voice quality in advanced head and neck cancer patients treated with concurrent chemoradiotherapy and preventive swallowing exercises. *Eur Arch Otorhinolaryngol.* 2015;272(11):3521-3531. doi:10.1007/s00405-014-3379-6
40. Global Burden of Disease Cancer Collaboration. Global, regional, and national cancer incidence, mortality, years of life lost, years lived with disability, and disability-adjusted life-years for 32 cancer groups, 1990 to 2015: a systematic analysis for the global burden of disease study. *JAMA Oncol.* 2017;3(4):524-548. doi:10.1001/jamaoncol.2016.5688

41. Covrig VI, Lazăr DE, Costan VV, Postolică R, Ioan BG. The psychosocial role of body image in the quality of life of head and neck cancer patients. What does the future hold?—A review of the literature. *Medicina (Kaunas)*. 2021;57(10):1078. doi:10.3390/medicina57101078
42. Pollard A, Burchell JL, Castle D, et al. Individualised mindfulness-based stress reduction for head and neck cancer patients undergoing radiotherapy of curative intent: a descriptive pilot study. *Eur J Cancer Care (Engl)*. 2017;26(2). doi:10.1111/ecc.12474.
43. Baider L, Peretz T, Hadani PE, Koch U. Psychological intervention in cancer patients: a randomized study. *Gen Hosp Psychiatry*. 2001 Sep-Oct;23(5):272-7. doi: 10.1016/s0163-8343(01)00158-x.
44. van Beek FE, Jansen F, Baatenburg de Jong RJ, et al. Psychological problems among head and neck cancer patients in relation to utilization of healthcare and informal care and costs in the first two years after diagnosis. doi:10.3390/currenccol29050260
45. Hutcheson KA, Lewin JS. Functional assessment and rehabilitation: how to maximize outcomes. *Otolaryngol Clin North Am*. 2013 Aug;46(4):657-70. doi: 10.1016/j.otc.2013.04.006.
46. Daraei P, Moore CE. Racial disparity among the head and neck cancer population. *J Cancer Educ*. 2015;30(3):546-551. doi:10.1007/s13187-014-0753-4
47. Taylor DB, Osazuwa-Peters OL, Okafor SI, et al. Differential outcomes among survivors of head and neck cancer belonging to racial and ethnic minority groups. *JAMA Otolaryngol Head Neck Surg*. 2022;148(2):119-127. doi:10.1001/jamaoto.2021.3425
48. Thomas GR. Racial disparity in head and neck cancer. *Cancer*. 2021;127(15):2612-2613. doi:10.1002/cncr.33555
49. Liu JC, Egleston BL, Blackman E, Ragin C. Racial survival disparities in head and neck cancer clinical trials. *J Natl Cancer Inst*. 2023;115(3):288-294. doi:10.1093/jnci/djac219
50. Voora RS, Kotha NV, Kumar A, et al. Association of race and health care system with disease stage and survival in veterans with larynx cancer. *Cancer*. 2021;127(15):2705-2713. doi:10.1002/cncr.33557
51. Nallani R, Subramanian TL, Ferguson-Square KM, et al. A systematic review of head and neck cancer health disparities: a call for innovative research. *Otolaryngol Head Neck Surg*. 2022;166(6):1238-1248. doi:10.1177/01945998221077197

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