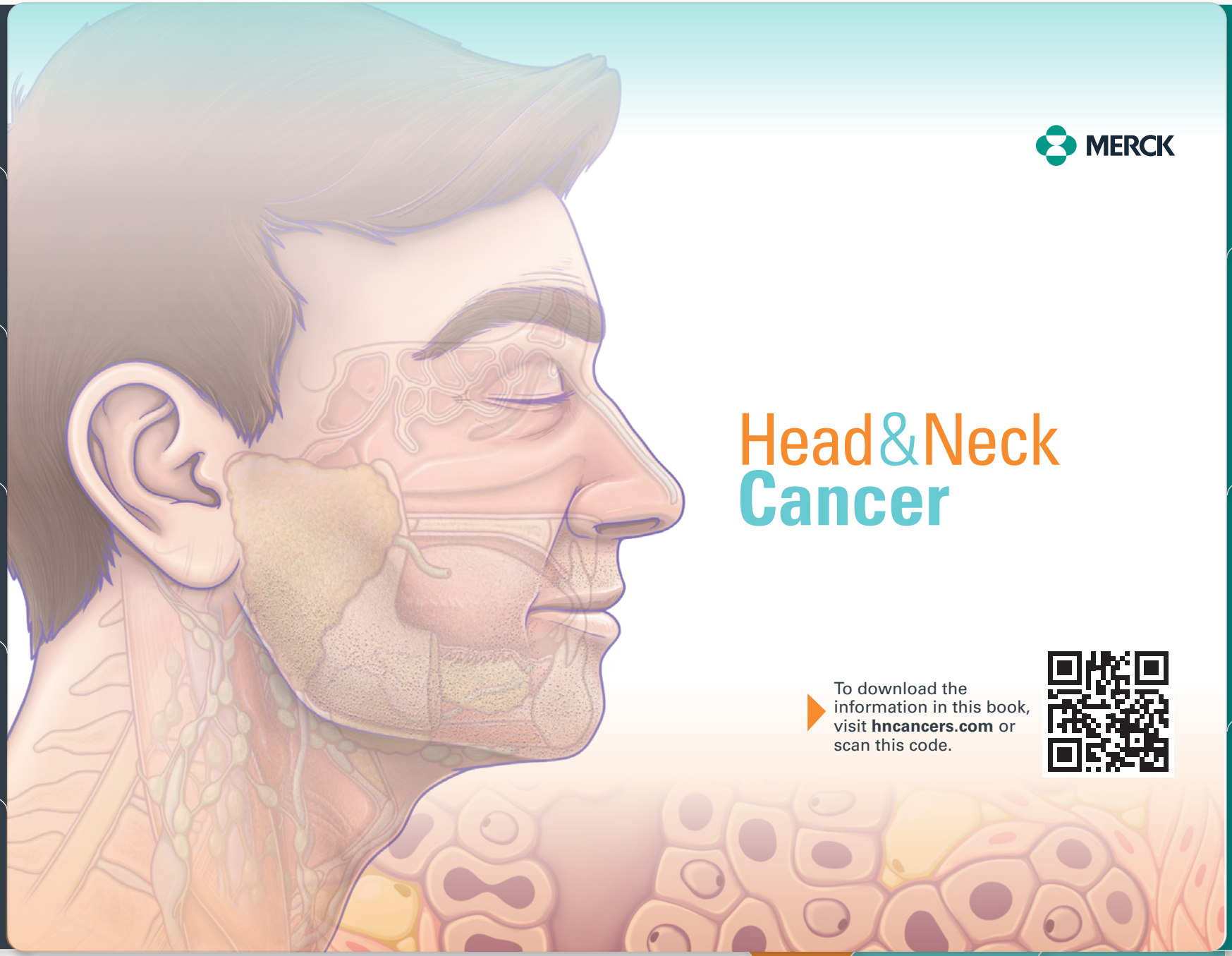

MERCK

Head&Neck Cancer

To download the information in this book, visit **hncancers.com** or scan this code.

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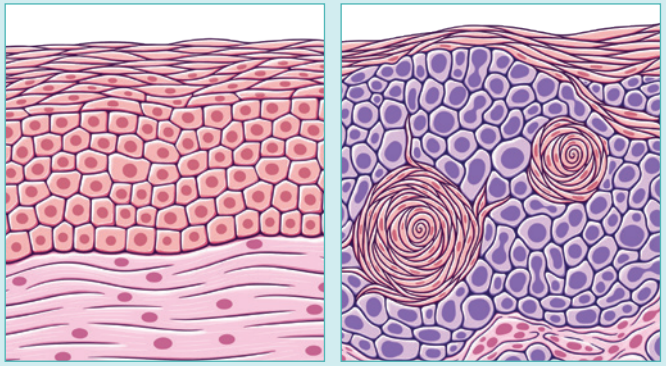
Head and Neck Cancer

Head and neck cancer includes tumors that originate in areas of the head and neck. There are many different types of tissues of the head and neck, and cancer can begin in any of them.[1]

Head and neck cancer mostly arises from **squamous cells** lining the mucosal surfaces of the head and neck and is called **squamous cell carcinoma (HNSCC)** of the head and neck. Less commonly, head and neck cancer may originate from other cell types in the sinuses, salivary glands, nerves, or muscles in the head and neck.[2]



Healthy squamous cells *Squamous cell carcinoma*

Where can head and neck cancer originate?

THROAT (PHARYNX):

- A hollow tube connecting the nose and esophagus
- Includes the nasopharynx, oropharynx, and hypopharynx[2]

MOUTH (ORAL CAVITY):

- Includes the lips, the inside lining of the lips and cheeks, the front two-thirds of the tongue, the gums, the floor of the mouth, the small area of the gums behind the wisdom teeth, and the bony top of the mouth[2]

PARANASAL SINUSES:

- Small, air-filled spaces in the bones connected to the nasal cavity[2,3]
- There are 4 types of sinuses on each side of the face. They are located in the cheek area, the lower forehead area, and between and behind the eyes[3,4]

VOICE BOX (LARYNX):

- A short passageway below the throat that contains the vocal cords
- Contains the epiglottis, which blocks the entry of food into the airway[2]

NASAL CAVITY:

- The nasal cavity is the hollow space inside of the nose[2]
- The nasal cavity starts at the end of the nostrils and extends to the nasopharynx[2]

SALIVARY GLANDS:

- Produce saliva
- Located in the floor of the mouth and near the jawbone (major salivary glands) and throughout the mucous membranes of the mouth and throat (minor salivary glands)[2]

*Sometimes, cancerous squamous cells are detected in the lymph nodes of the neck, but a primary tumor is not found. This type of cancer is referred to as **occult primary**.[2]*

Risk Factors

A risk factor is anything that increases your chance of developing a disease, like cancer. Some risk factors can be changed (like smoking), while others cannot (like your age).[5]

In 2023, head and neck cancer accounted for **3.4%** of new cancer cases in the US.[6*]

♂ Men are more likely to be affected than women[2]

50+ More often diagnosed in people over 50 years old[2]

*This data reflects estimated new cases of cancer of the oral cavity, pharynx, and larynx

Here are some of the common risk factors for head and neck cancer:

ALL FORMS OF TOBACCO USE including secondhand smoke[2]

ALCOHOL USE – heavy drinkers have a higher risk than light drinkers. Tobacco use and drinking together further increases that risk[5]

Tobacco use and alcohol use are the 2 most important risk factors for head and neck cancer, especially cancer of the oral cavity and oropharynx.[5]

Workplace exposure, such as exposure to wood dust, nickel dust, and formaldehyde (cancer of the paranasal sinuses and nasal cavity)[2]

Poor nutrition, such as a diet low in fruits and vegetables (oral cavity and oropharyngeal cancer)[5]

Ancestry – Asian (especially Chinese) ancestry (nasopharyngeal cancer)[2]

Radiation exposure of the head and neck (cancer of the salivary glands)[2]

Underlying genetic disorders, such as Fanconi anemia, increase the risk of precancerous lesions and cancer in early life[2]

Certain viral infections like human papillomavirus (HPV) (oropharyngeal cancer) or Epstein-Barr virus (EBV) (nasopharyngeal cancer and cancer of the salivary glands)[2]

Understanding Cancer Staging

Why is cancer staged? *Head and neck cancer is staged to describe the size of the tumor(s) and location(s) of any potential cancer spread. Knowing the stage helps your healthcare provider understand the outlook (also known as prognosis) of the cancer. It also helps them determine how to move forward with the most appropriate treatment.*[7,8]

Staging of head and neck cancer is done through a system known as the TNM System.[9]

The staging system provides information about the location, size, and extent of the tumor in your body.[7,8]

- The stage of cancer that is based on tests done before surgery is called the **clinical stage**[10]
- The stage of cancer that is based on how the tissue looks under a microscope following surgery is known as the **pathologic stage**[11]

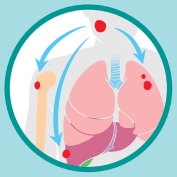
The TNM System helps assess the size, location, and spread of the cancer[8]

T

Describes the size and extent of the **tumor**. The higher the number, the more the tumor has grown into nearby tissues or gotten larger in size.[7]

N

Describes whether or not the cancer has spread to your lymph **nodes** and, if it has spread, the size of the cancerous lymph nodes and the side of the neck that the cancerous lymph nodes are on.[9]



M

Describes whether or not the cancer has spread to distant parts of the body from where it began **(metastasis)**.[7] The most common sites of distant metastases for head and neck cancer are the lungs, bone, liver, and mediastinal lymph nodes, with the lungs being the most common site.[12]

Common areas of metastasis

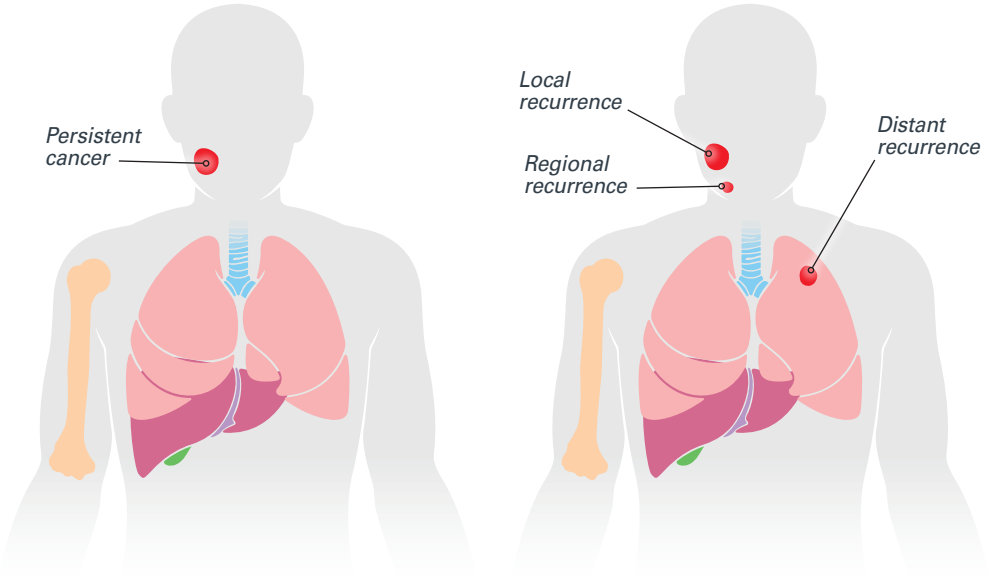
Lungs *Bones* *Lymph nodes* *Liver*

Persistent and Recurrent Cancer

*Sometimes, after you have been treated for cancer, the cancer can remain **(persistent)** or come back after a cancer-free time period **(recurrent)**.*[8,13]

It is not possible to predict cancer recurrence. However, a cancer that grows fast, or that is more advanced or widespread, may be more difficult to treat and more likely to recur.[13]

If a cancer recurs, you will undergo tests to determine the type of recurrence, where in the body it is, whether it has spread, and how far. This new assessment may be referred to as "restaging."[14]



Persistent

Persistent cancer is a cancer that remains even after treatment.[8]

Recurrent

Recurrent cancer can come back in the same place where it started (local recurrence), in nearby tissue or lymph nodes (regional recurrence) or in a different part of the body (distant recurrence).[14]

Treatment options for **recurrent** or **persistent** cancers depend on whether the patient has previously received radiation therapy and whether the tumor is surgically removable.[8]

Lifestyle and Wellness

Living with cancer may be challenging, but here are some helpful tips to consider.

Discontinue tobacco and alcohol use

Tobacco use is harmful to nearly every organ in the body. All forms of tobacco use are harmful and increase the risk of developing cancer in other areas of the body (not just the lungs).[15]

Alcohol use also increases the risk of head and neck cancer, with heavy drinkers having a higher risk than light drinkers.[2] Using alcohol and tobacco together can make the cancer-causing effects of tobacco and alcohol even worse, and raises the risk of developing head and neck cancer.[2]

What you can do:

- Talk to your healthcare team about your options for quitting tobacco, whether it is medication, counseling, or local support programs
- It is best not to drink alcohol, but if you choose to drink, try to limit alcoholic intake to no more than 2 drinks per day for men and 1 drink per day for women[16]

Maintain good nutrition

Some treatments may cause side effects such as taste and smell changes, appetite changes, nausea, constipation, fatigue, or mouth sores. Some side effects can create discomfort when swallowing and chewing.[17]

Here are some tips to help you maintain your nutrition during treatment[18]:

- **Build a healthy diet** with foods and liquids that contain important nutrients
- **Work with a registered dietitian** to manage your diet during and after treatment

Prioritize sleep and rest

Tips to create healthy sleep practices[19]:

- Avoid exercising a few hours before bedtime
- Avoid TV and electronic devices a few hours before bed
- Keep the room dark and quiet
- Go to bed only when you are sleepy

Mental health and wellness

Mental health and wellness are an integral part of your journey with head and neck cancer.

Here are some helpful coping tips:

- **Be kind to yourself** and try to practice self-compassion[20]
- **Therapy** – A mental health professional can provide support and suggest strategies to cope with tough feelings[21]
- **Exercise** can help with overall health, improve sleep, and strengthen your bones and muscles. If you were active before treatment, you may need to reduce the intensity or frequency of your exercise during treatment. The key is to stay as active as possible within your limits[22]
- **Support** – Lean on family, friends, partners, or members of your religious community[23]

Other things to consider:

Support groups and services[23]

Speech-language therapy[2]

Fertility counseling[8]

Screenings and Procedures

A brief overview of common screenings and procedures that may be used by your treatment team is provided below.

PROCEDURES

Biopsy

A suspicious area of tissue or a sample of cells are removed and sent for testing. A biopsy helps your doctor determine if you have cancer.[8]

Endoscopy

An endoscope (a thin tube-shaped device with a camera and light) is used to examine the inside of your nose and throat and assess the extent of the tumor.[8,24]

IMAGING

PET

Uses a slightly radioactive form of sugar that is introduced into the bloodstream and shows up primarily in cancer cells.[25]

MRI

Uses radio waves and powerful magnets to make pictures of the inside of the body.[8]

Ultrasound

Uses sound waves to create images of the inside of the body to look for signs of cancer, such as swollen or abnormal lymph nodes, or cancer recurrence following treatment.[25]

CT

Combines X-ray technology and computer processing to create more detailed, 3-D X-ray images.[26]

PET = positron emission tomography; **MRI** = magnetic resonance imaging; **CT** = computed tomography

SCREENINGS AND EXAMS

Blood Tests

Routine blood tests can provide an idea of your overall health.[25]

Biomarker Testing

A biomarker is a substance found in body tissues or fluids that is an indication of a normal or abnormal process or of a medical condition.[27]

When biomarker testing is done for cancer, it is looking for specific genes, proteins, or other molecules that may provide information about the cancer.[27,28]

Viral Screening

Some viral infections have been linked to cancer.[29] Your healthcare provider may order certain viral screening tests:

- **HPV Test**
  There is a link between HPV (human papillomavirus) and oropharyngeal cancer[2]
- **Epstein-Barr Virus Test**
  There is a link between EBV (Epstein-Barr virus) and both nasopharyngeal cancer and cancer of the salivary glands[2]

Nutritional Assessment

A registered dietitian can develop a nutritional plan to help you if your treatment causes pain with chewing or swallowing.[8]

Head and Neck Physical Exam

Your physician will look closely at your ears, nose, throat, and mouth. They will also feel under your jaw and along your neck for lumps.[8]

Dental Exam

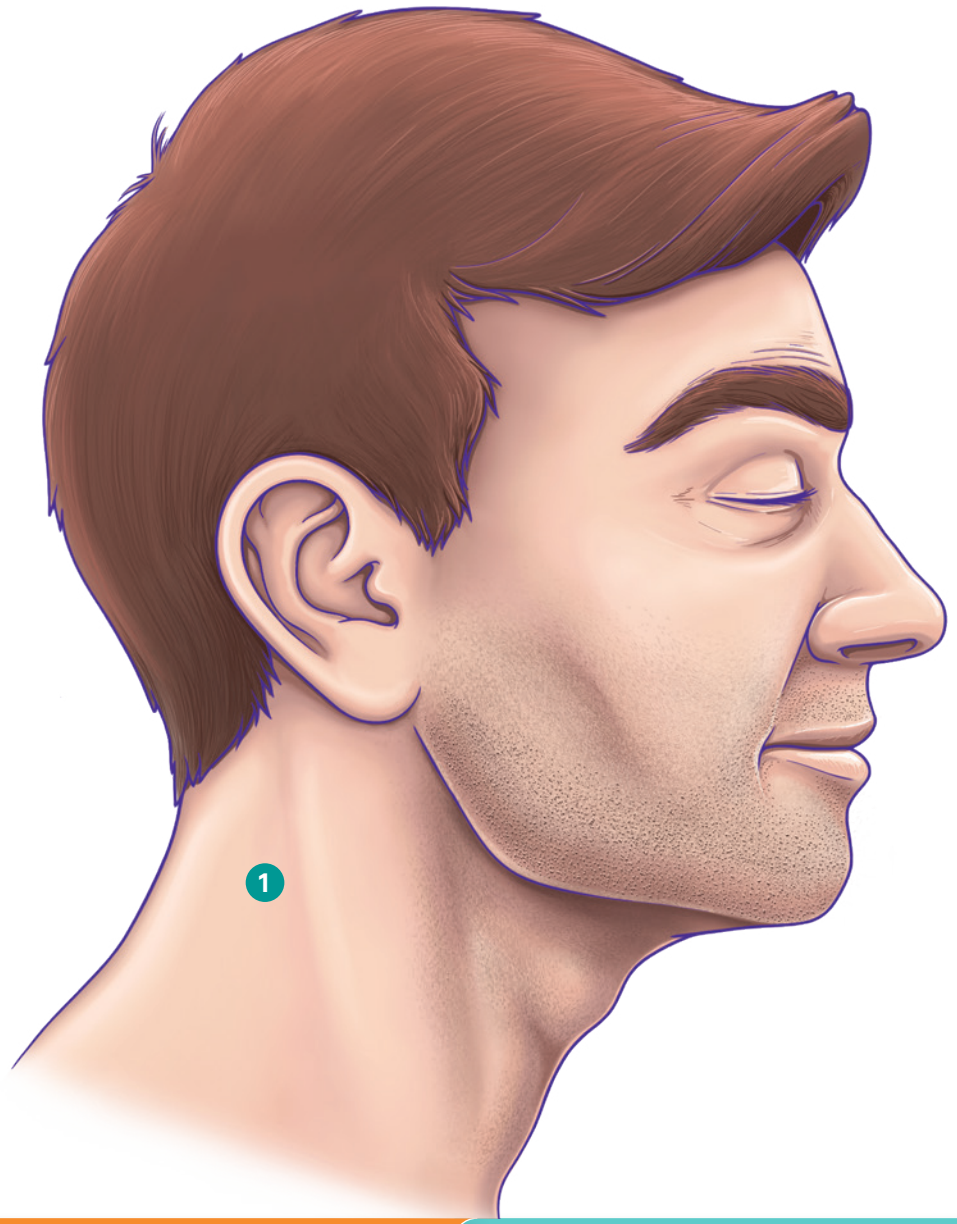
Dental exams help address and prevent problems that may happen during cancer treatments.[8]

Hearing Test

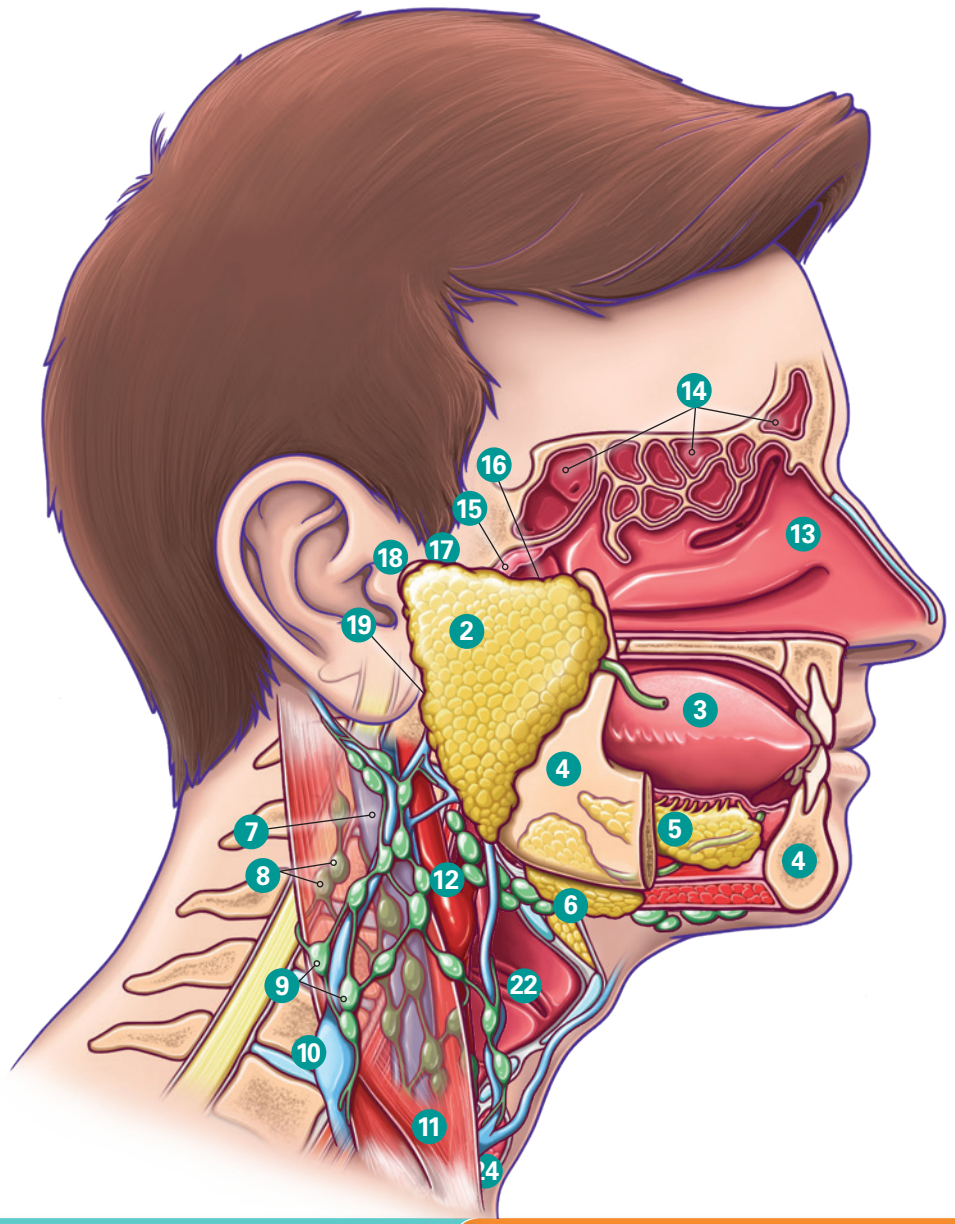
A hearing test may be needed to evaluate symptoms such as hearing loss, which may develop from the cancer or your treatment.[8]

Speech and Swallowing Exam

If your treatment is expected to cause problems with your speech or swallowing, a speech-language pathologist will evaluate you to create a therapy plan to help reduce any problems.[8]



1. Skin
2. Parotid gland
3. Tongue
4. Mandible (jaw bone)
5. Sublingual gland
6. Submandibular gland
7. Jugular vein (internal)
8. Lymph nodes (deep)
9. Lymph nodes (surface)
10. Jugular vein (external)
11. Sternocleidomastoid muscle
12. Carotid artery
13. Nasal cavity
14. Sinuses
15. Adenoids (pharyngeal tonsils)
16. Nasopharynx
17. Soft palate
18. Tonsil (palatine)
19. Oropharynx
20. Tongue (muscle)
21. Hypopharynx
22. Voice box (larynx)
23. Trachea (windpipe)
24. Thyroid



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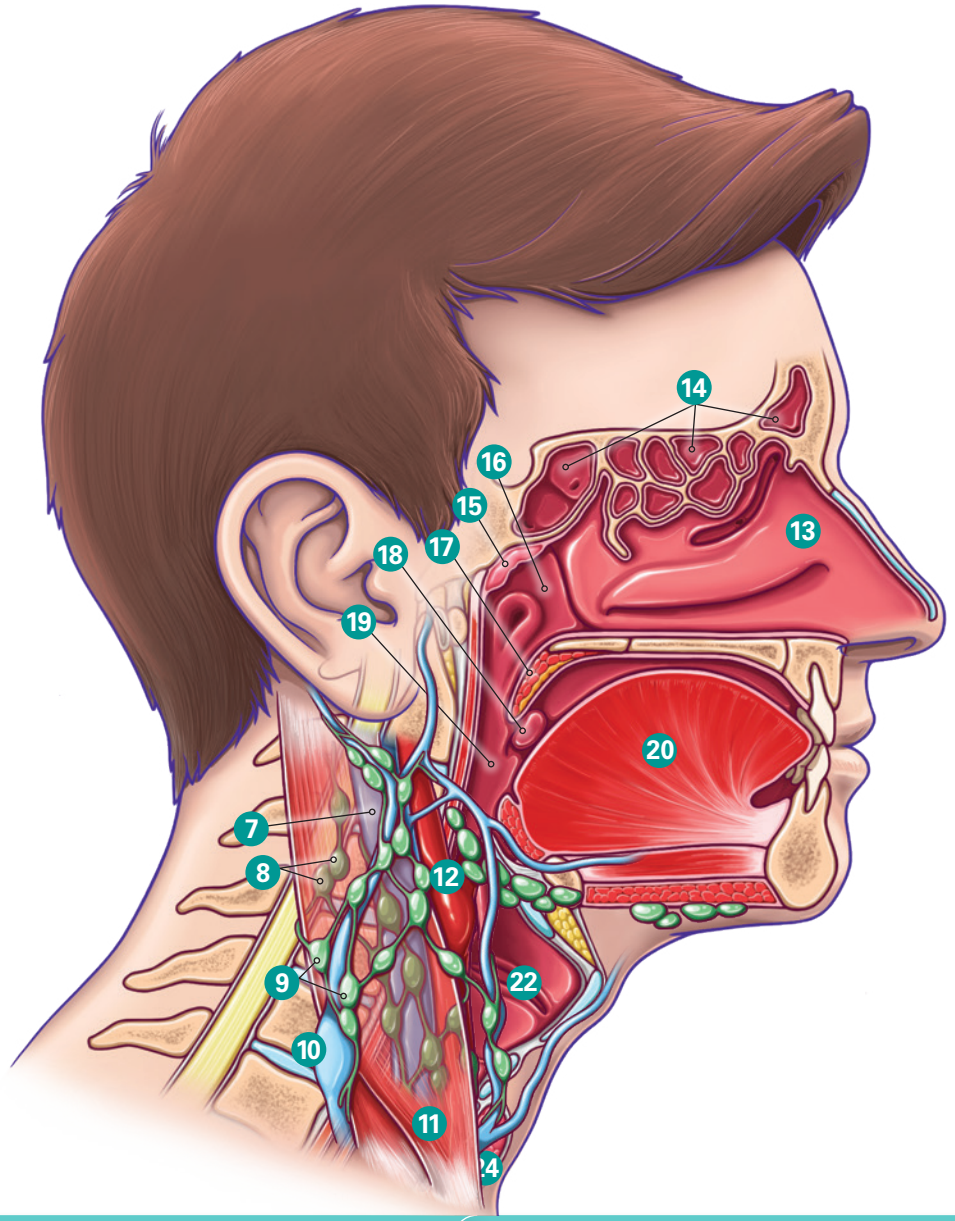

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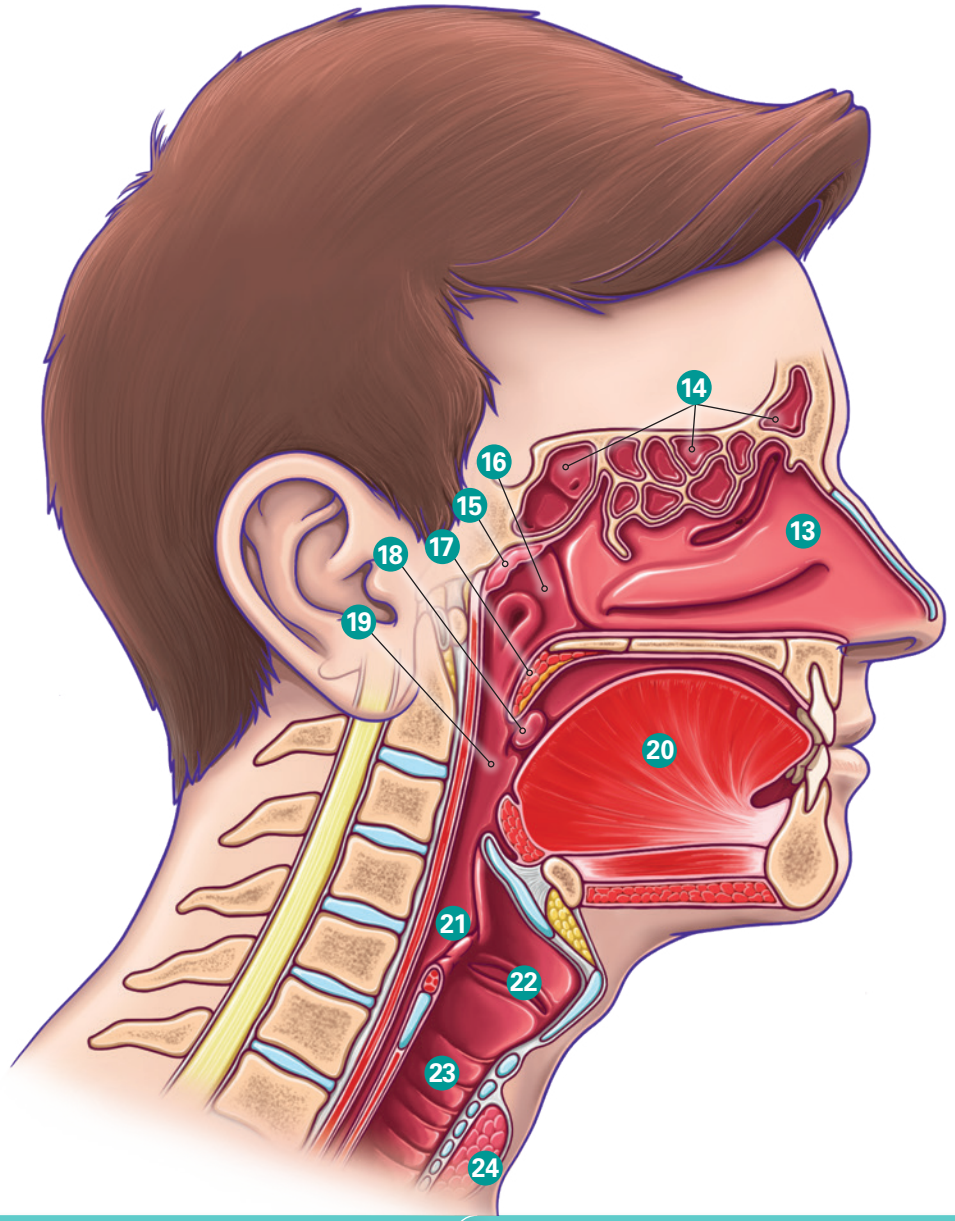

13. Nasal cavity
14. Sinuses
15. Adenoids (pharyngeal tonsils)
16. Nasopharynx
17. Soft palate
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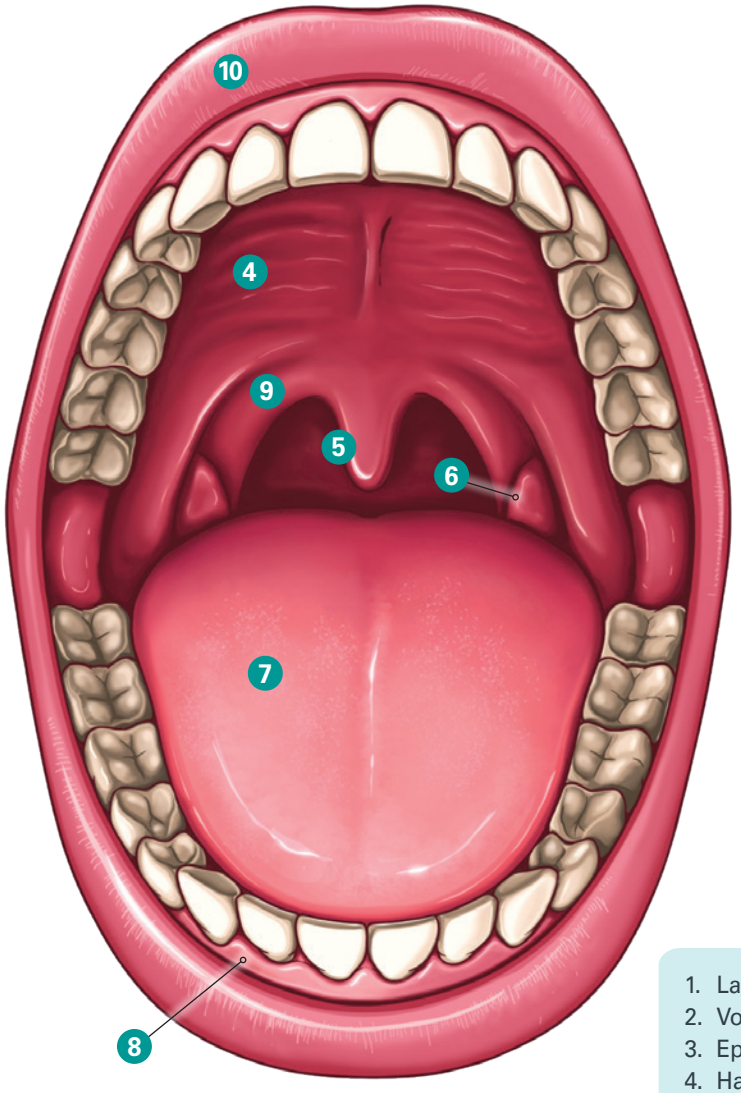
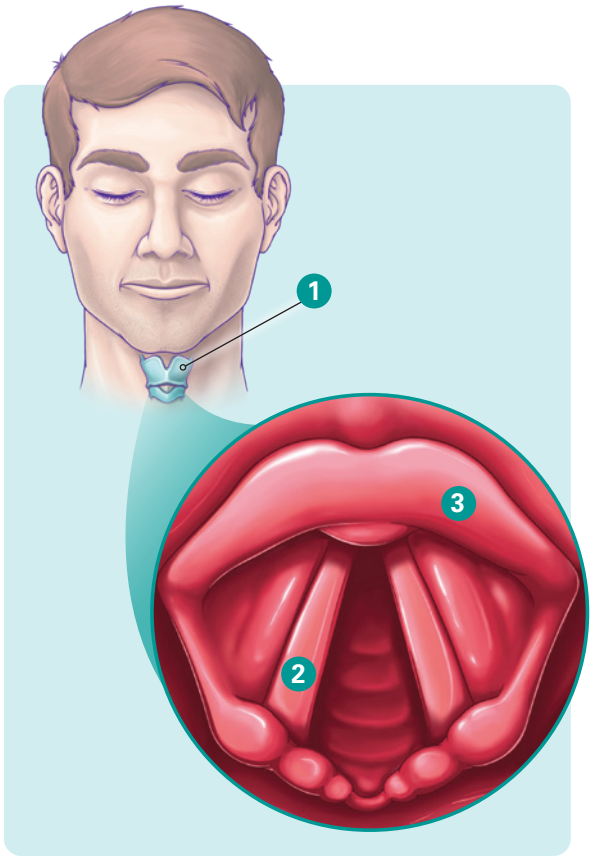
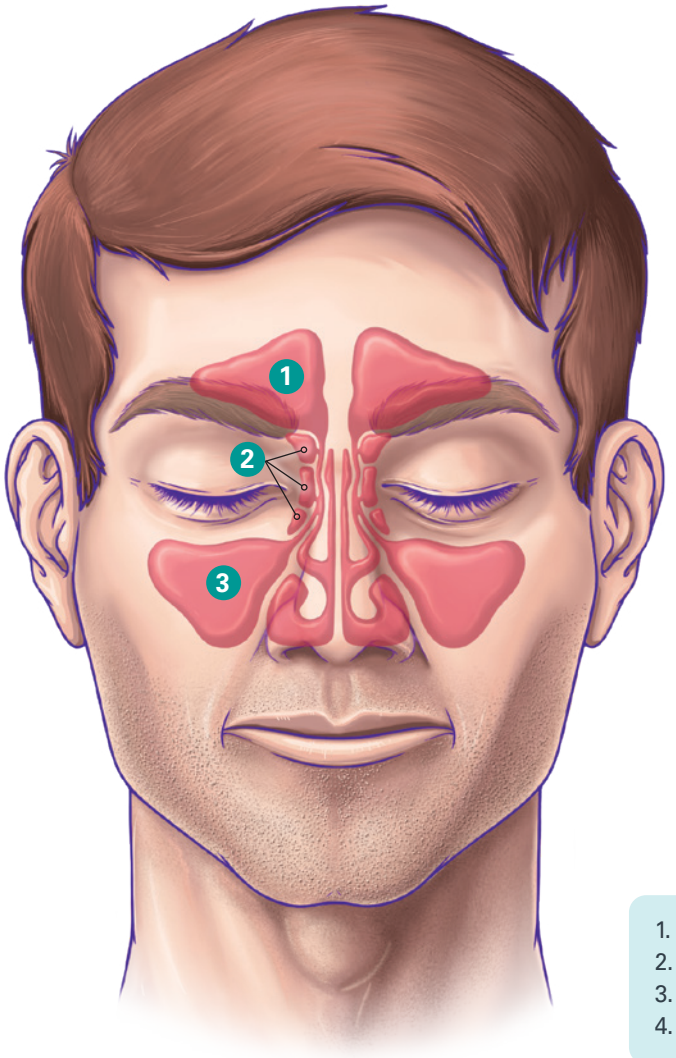


Mouth

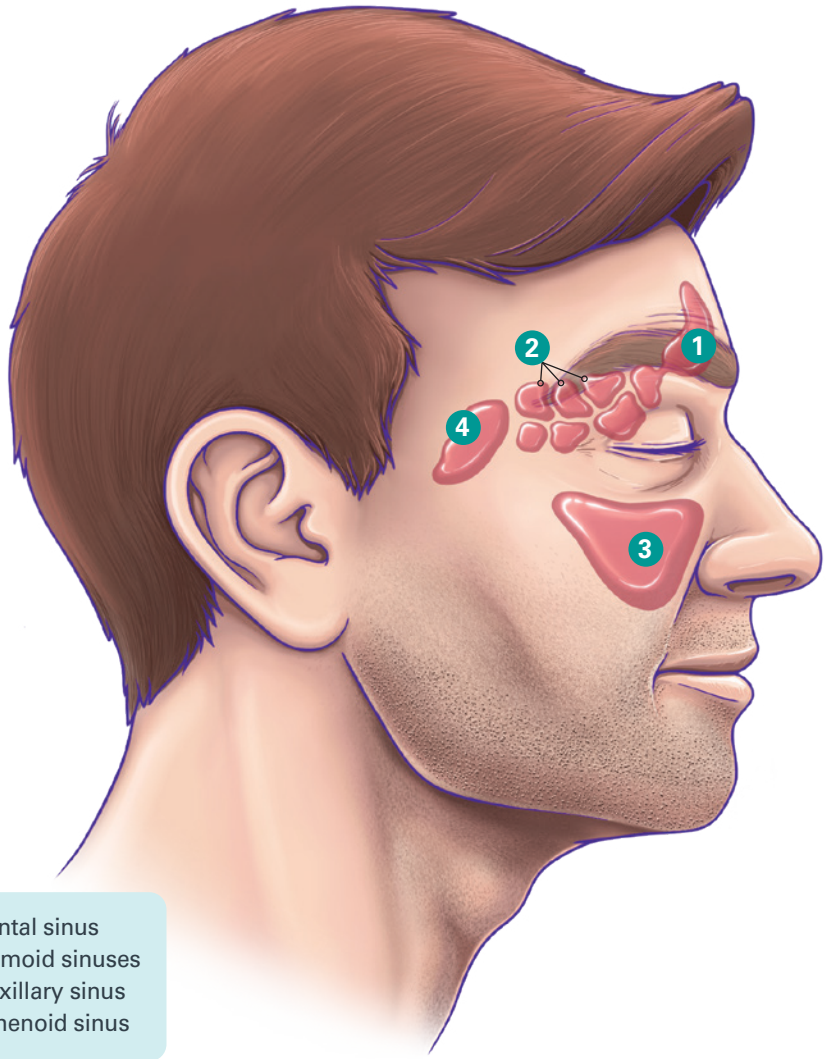


Voice Box (Larynx)

1. Larynx
2. Vocal cord
3. Epiglottis
4. Hard palate
5. Uvula
6. Tonsil (palatine)
7. Tongue
8. Gums
9. Soft palate
10. Lips



Front view



Side view

1. Frontal sinus
2. Ethmoid sinuses
3. Maxillary sinus
4. Sphenoid sinus

A Discussion Guide for Care Teams on Social Determinants of Health

"Social Determinants of Health" (SDoH) are non–health-related conditions in which people are born, grow, live, work, and age that influence health outcomes. In fact, SDoH may be more important than health care or lifestyle choices in influencing one's health. Understanding SDoH and their impact on patients and their well-being may help inform better patient care.[30]

SDoH Discussion Guide

When speaking to patients, develop an understanding of their social needs by using the information below to help guide conversation.

Transportation[31]

Does the patient have:

- An active driver's license and access to a personal vehicle?
- Access to public transportation?
- Friends and family who can drive them to appointments?

Finances & Employment[31,32]

- What is the patient's current employment status?
- Does the patient have health insurance or do they need help getting health insurance for themselves or their family?
- Does the patient have difficulty making ends meet? Would they have trouble paying for medical care?

Food Security[31,32]

Is the patient experiencing any food insecurity concerns?:

- Do they have access to affordable and/or healthy meals?
- Can they afford meals on a routine basis?
- Do they have access to healthy foods?

Housing Security & Utilities[31,32]

Does the patient have:

- Stable and affordable housing?
- Access to affordable utility services, such as gas, electricity, water, and oil?
- Any housing-related issues, such as concerns over mold, bug infestations, poor heat, or water leaks?

Health Literacy[32]

- Is the patient able to fill out medical forms on their own?
- Does the patient ever have problems understanding what is told to them by doctors?
- Is there a language barrier present that will impact conversations around the patient's health?

Gender Identity[33]

- Does the patient have preferred names and pronouns?
- Has the patient undergone or are they currently undergoing gender-affirming changes? Are these changes medical (hormones, surgeries) or social (appearance, clothing, name changes, gender-marker changes)?

Family & Social Support[33]

- Does the patient need daycare for their child/children? If so, do they need help finding it?
- Does the patient have someone to help them if they were sick and need to be in bed?

Cultural/Ethnic Identity[34]

- Are there any aspects of the patient's family life that play a role in their overall health or medical decision-making?
- Does the patient have any cultural traditions that play a role in their medical decision-making?

Spirituality[35]

- Does the patient have a religious or spiritual identity? If yes, how does it guide their decision-making?

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