

# Provincial Head & Neck Cancer Diagnosis & Referral Pathway

Quick  
Links:

[Primer & Expanded details](#)

[Provider resources](#)

[Patient resources](#)

[Provide feedback](#)

## Initial Assessment by Primary Care Providers and Dental Care Practitioners

### 1. History

#### Assess and Document Risk Factors

The following factors have been shown to increase the risk of head and neck cancer:

- Age (over 40 years)
- Tobacco usage
- Alcohol consumption
- Sexual History [HPV exposure (orogenital)]
- Betel nut, paan, pituri
- Sex (male)
- Geography (ie. Southeast Asia)
- UV/sunlight for mucosa (red portion) of lip
- Immunosuppression

It is possible to have a Head & Neck Cancer and NO risk factors

#### Assess and Document Symptoms

The following should be considered **highly suspicious**:

- New onset (with or without prior imaging)
- More than 1 symptom
- Symptoms persist for longer than 3 weeks despite management
- \*Level of suspicion increases with the presence of risk factor(s)

#### STANDARD RISK SYMPTOMS

- Dysphagia for solids
- Persistent oral bleeding with unknown source
- Unilateral epistaxis, otalgia or hearing loss
- Change in voice / acute onset hoarseness (without tobacco and alcohol risk factors)
- Persistent sore throat

#### HIGH RISK SYMPTOMS

- Neck lump or facial mass
- Oral and oropharyngeal lesions (mass or ulcer)
- Persistent hoarseness **WITH** history of tobacco and/or alcohol use

### 2. Assessment/ Physical Exam (should include the following):

- Inspection of the oral cavity and oropharynx for ulceration of mucosa, swelling, and red or white patches:
  - Use of fluorescence visualization is recommended if available
  - **If oral lesion is confirmed, DO NOT DELAY referral for 3 weeks; waiting for resolution, send referral immediately**
- Inspection of the anterior nasal cavities and otoscopy
- Inspection of the facial and scalp skin
- Palpation of the neck for lymphadenopathy

**\*Treat symptoms/lesion using clinical discretion with established timeline for resolution**

[Head and Neck Physical Exam Video](#)

[Oral cancer images](#)

#### When to Refer

- Patient has physical exam finding(s) and/or symptom(s) that have persisted longer than 3 weeks despite management
- The patient has prior suspicious imaging - If an ultrasound has previously been performed (outside this pathway) and an incidental finding of mass or architecturally abnormal (i.e. cystic) lymph node has been found the referral should be made via this Head & Neck Cancer Diagnosis & Referral Pathway

### 3. Referral to Specialty Care - ALL PATIENTS

Send an urgent referral which **MUST include**:

1. Detailed symptoms list
2. Risk factors
3. 'As per Head & Neck Cancer Diagnosis & Referral Pathway'

For all pathway related concerns

**Otolaryngology - Head & Neck Surgery (OHNS/ENT)**

For oral lesions only

**Oral Maxillofacial Surgery (OMFS)**

*All OMFS services provided within the scope of this pathway are billable to Alberta Health*

#### STANDARD RISK SYMPTOMS:

- Send referral as above. Seen by Otolaryngology- Head and Neck Surgeon: triaged as appropriate
- If the pt has more than one symptom the triaging physician will assess the risk and pt will be seen sooner as required
- All DI will be arranged by Specialty Care

#### ALL PATIENTS:

- ULTRASOUND and Cone Beam Computed Tomography (CBCT) ARE NOT recommended.
- Any required biopsies will be arranged by the surgeon

#### HIGH RISK SYMPTOMS:

- Send referral as above
- Goal: seen within 4 weeks by specialty care
- Order CT Neck with contrast (include the Chest if pt has enlarged neck lymph nodes)
  - The requisition requires: a detailed history and risk assessment AND must state "URGENT – High risk symptoms for head and neck malignancy as per H&N Cancer Diagnosis Pathway"
- Serum creatinine is required within 90 days prior to CT scans with contrast in some zones
- **DO NOT DELAY REFERRAL WAITING FOR CT SCAN**

#### Considerations

If patient presents with any of the following:

- Lymphadenopathy above AND below the clavicle
- Drenching night sweats
- Unexplained fever
- Unexplained weight loss
- < 40 years of age

**Refer to Lymphoma Pathway**

The **mental health** and wellbeing of Head and Neck Cancer patients is a concern

## PATHWAY PRIMER

“Head and neck cancers are a heterogeneous group of tumors, consisting predominantly of squamous cell cancers of the lip, mouth, pharynx, larynx and cervical esophagus, adenocarcinomas of the major and minor salivary glands and thyroid and occasional tumours of connective tissue origin.” (bccancer.bc.ca,2023) [21]

Head and neck squamous cell carcinomas (HNSCC's) develop from the mucosal epithelium in the oral cavity, pharynx, and larynx, and are the most common malignancies of the head and neck. HNSCC is the sixth most common cancer worldwide, with 890,000 new cases and 450,000 deaths in 2018. The incidence of HNSCC continues to rise and is anticipated to increase by 30% (1.08 million new cases annually) by 2030. (GLOBOCAN 2023) [9, 22]

The main risk factors for HNSCC are the use of tobacco products, excessive alcohol consumption and HPV infections.

Oropharyngeal HNSCC's are comprised of two distinct clinical entities: HPV-positive and HPV-negative HNSCC.

- HPV-negative - HNSCCs of the oral cavity, hypopharynx, larynx, and some oropharyngeal are primarily associated with tobacco and alcohol use. [1]
- HPV-positive – HPV-positive HNSCC's typically arise from the tonsil, base of tongue, palate, or pharyngeal walls (oropharyngeal).
  - They are associated with a younger age at diagnosis, lesser (or no) smoking history, and a better overall prognosis compared with HPV-negative HNSCC.
  - HPV-positive HNSCC commonly presents with painless neck adenopathy in the absence of other symptoms related to the oropharyngeal primary.
  - The incidence of HPV- positive HNSCC, primarily oropharyngeal squamous cell carcinoma (OPSCC), is rising. [1]

There is no screening tool for HNSCC. Physical examination is the primary approach for early detection. **Most patients present with advanced-stage HNSCC.**

- Earlier presentations or pre-malignant lesions present as leukoplakia (white patches) or erythroplakia (red patches) in the oral cavity. HPV-positive HNSCC commonly presents with a persistently enlarging, painless neck mass.
- Adults with a persistent, enlarging neck mass in the absence of other head and neck symptoms should be considered high-risk for HPV-associated oropharyngeal cancer, and should be urgently referred to ENT/ Otolaryngology -Head and Neck Surgery. [1,3]

## EXPANDED DETAILS

### 1. History: Risk Factors

#### Age (over 40 years)

- Median age of diagnosis for non-virally associated (HPV-negative and EBV-negative) HNSCC is 66 years. [9]
- Median age of diagnosis for HPV-associated oropharyngeal cancer and EBV-associated nasopharyngeal cancer is ~53 years and ~50 years, respectively. [9]

#### Tobacco

- The risk of HNSCC in smokers is approximately **ten times higher** than that of never-smokers. [12]
- 70–80% of new HNSCC diagnoses are associated with tobacco and alcohol use.
- *Cessation does lower the risk of developing HNSCC, but it is not certain to what degree. There is data to suggest that the risk returns to that of a never smoker after about 20 years of stopping.* [12]

#### Alcohol consumption

- Moderate to heavy alcohol consumption is associated with higher risks of certain head and neck cancers.
  - Moderate alcohol drinking is defined as limiting consumption to 2 drinks or less in a day for men and 1 drink or less in a day for women.
  - Heavy alcohol drinking is defined as having 4 or more drinks on any day or 8 or more drinks per week for women and 5 or more drinks on any day or 15 or more drinks per week for men). [19]
- Moderate drinkers have 1.8-fold higher risk of oral cavity and pharynx cancers and 1.4-fold higher risk of larynx cancers than non-drinkers.
- Heavy drinkers have 5-fold higher risks of oral cavity and pharynx cancers. 2.6-fold higher risks of larynx cancers. [12]
- The risks of these cancers are substantially higher among persons who consume this amount of alcohol AND use tobacco. [12]

#### Betel nut, paan, pituri

- Betel quid (paan) chewing is common in many parts of Asia and in migrant Asian populations around the world, with an estimated global usage of 600 million to 1.2 billion people. [4]
- It has a psychostimulatory effect. [4]
- Betel quid consists of a mixture of areca nut (which alone is carcinogenic), slaked lime, and betel leaf, that can may be combined with tobacco, sweeteners, and/or spices. [4]
- Regional variations include mawa, naswar, khaini, and zarda. There are many betel quid substitutes (e.g., gutka, pan masala) that are widely available. [4]

#### Geography (i.e., Southeast Asia)

- In East and southeast Asia, EBV-associated nasopharyngeal carcinoma is endemic. [9]
- An adult, who lived in Southeast or East Asia, presenting with a new neck mass should receive a complete head and neck evaluation with close attention to the nasopharynx.
- Note if there is history of Betel quid/ pituri use.[4]

#### Sex (assigned male)

- The assigned male to assigned female ratio for HPV-positive HNSCC incidence ranges from **three to six** times, due to higher rates of persistent oropharyngeal HPV infection in assigned males despite similar prevalence of anogenital HPV infection. [10,17]
- The time to oral infection clearance is longer in assigned males than in assigned females, and smoking may increase oral HPV persistence in assigned males.[10,17]
- A higher immune response is present after infection in assigned females than assigned males, which could contribute to the assigned male predominance of oral HPV infection. [10,17]

## UV / sunlight for mucosa (red part) of lip

- Excessive exposure of UV light to lips increases risk of developing cancer which (considered an oral cancer). Tobacco uses in any form increases this risk. [20]

## Immunosuppression

There are risks associated with immunosuppression that may make a patient more susceptible to head and neck cancers.

- Increased susceptibility to oncogenic viruses such as EBV and HPV or immunodeficiency diseases such as HIV.
- Propensity of immunosuppressive drugs have been shown to encourage metastatic disease. These drugs include but not limited to:
  - Cyclosporin, Tacrolimus, Azathioprine, Mycophenolate mofetil (as well as other drugs used for conditions like autoimmune disease and inflammatory conditions.
  - When used in combination, the cancer risk increases. The risk of cancer also increases with duration of use and when combined with other risk factors such as UV light exposure and smoking. [14,15,16]

## Sexual History [HPV exposure (orogenital)]

- Sexual behavior is a risk factor for HNSCCs, mainly oropharyngeal cancers.
- Greater risk with **>5 oral** sexual partners. [18]
- HPV infection prevalence in oral region is generally lower than in genital region and is more frequent in assigned males than in assigned females. [18]
- Increased risk of oral infection per sexual partner is greater for assigned males than for assigned females. [10,17]
- Higher rates of transmission occur from assigned females to assigned males than from assigned males to assigned females. [10,17]
- Increased risk of Oropharyngeal HNSCC in assigned male spouses of assigned females with cervical cancer and in situ cancer. [11]

## HPV

HPV infection is associated with most oropharyngeal cancers (>70%) and a small minority of other cancer sites in the head and neck. A recent U.S. study showed that the incidence of oropharyngeal cancer sites that are most commonly associated with HPV infection (e.g., tonsil, oropharynx) increased by 2% per year between 2007-2017, while the incidence of oropharyngeal cancers sites that are not associated with HPV infection (e.g., lip, hypopharynx) decreased by -0.4% per year [25]. A Canadian study found a similar trend between 1992 and 2012 [26]. This suggests that, over time, we can expect to see a higher proportion of oropharyngeal cancer patients with HPV-associated HNSCC.

Patients diagnosed with HPV-positive oropharyngeal HNSCC:

- are often younger and can lack tobacco and alcohol exposure when compared to those patients with HPV-negative HNSCC.[9]
- can have cervical neck metastases that may be cystic and can often be mistaken for branchial cleft cysts, contributing to delay in diagnosis. [1]
- may present as a symptomatic mass of the tonsil or base of tongue, with or without accompanying lymphadenopathy OR
- as an asymptomatic neck mass without a symptomatic primary site. Most of these cancers arise from deep crypts in the palatine and lingual tonsils.[1]

Notes regarding presentation:

- **Presentation in people 40 to 59 years of age.** [26]
- Patients with oropharyngeal HNSCC **may not** have histories of significant tobacco or alcohol use; however, these patients should still be assessed for these risk factors as it may affect prognosis when coexisting with HPV-positive disease. [8]
- Oropharyngeal HNSCC that is caused primarily by HPV type 16 is increasing among younger people in North America and northern Europe. It has a latency period of 10 to 30 years after oral sex exposure.[9]

Risk Factors for HPV-positive Oropharyngeal Squamous Cell Carcinoma:

**The incidence of HPV-positive HNSCC continues to rise, especially in populations that are not vaccinated against HPV prior to HPV exposure.**

HPV infection that leads to HNSCC is transmitted by oral sex.[9] Specific sexual behaviors related to number of sexual partners:

- >5 oral sexual partners [18]
- Increased risk of oropharyngeal HNSCC in assigned male spouses of assigned females with cervical cancer and in situ cancer. [11]
- The ubiquity of HPV infection is important, as up to 85% of adults may have an HPV infection at some point from any of the over 120 subtypes. However, only a small percentage develops malignancy, these are mostly related to the HPV-16 subtype. [9]
- The effectiveness of prophylactic HPV vaccination is less well defined for oropharyngeal cancer than for anogenital and cervical cancers. Nevertheless, a decreased incidence is expected but may not be clear until after 2060. [5]

**The prognosis is generally better for patients with HPV-positive oropharyngeal cancer as they tend to have a better response to cancer treatment.** [6]

## 1. History: Symptoms

Symptom	Inclusion criteria	Exclusion criteria	Action
<b>Neck and Face Lump or Mass</b>  Defined: neck masses are any mass below the mandible, above the clavicle, and deep to the skin, although it may involve the overlying skin secondarily	<ul style="list-style-type: none"> <li>- Lacks infectious history</li> <li>- Mass has been present for <math>\geq 3</math> weeks</li> </ul> <p>*** If ultrasound has previously been performed (prior to use of this pathway) and an incidental finding of mass or architecturally abnormal (i.e., cystic) lymph node has been found, referral should be made urgently</p>	<ul style="list-style-type: none"> <li>- Obvious infectious source</li> </ul> <p>If patient presents with any of the following, refer to <a href="#">Lymph Node Assessment Primary Care Pathway</a>:</p> <ul style="list-style-type: none"> <li>- Lymphadenopathy above AND below the clavicle</li> <li>- Drenching night sweats</li> <li>- Unexplained fever</li> <li>- Unexplained weight loss</li> <li>- <math>&lt; 40</math> years of age</li> </ul>	<b>Send an urgent referral to Otolaryngology – Head and Neck Surgery</b>  Referrals must include: <ul style="list-style-type: none"> <li>- Detailed symptom list</li> <li>- Risk assessment</li> <li>- State "As per HEAD &amp; NECK CANCER DIAGNOSIS &amp; REFERRAL PATHWAY"</li> </ul>
<b>Non-healing Oral Lesion or Mass / Oropharynx Lesion or Mass</b>  <b>PHOTO REFERENCE:</b>  <a href="#">Oral Cancer Images – Oral Cancer Foundation   Information and Resources about Oral Head and Neck Cancer</a>	<ul style="list-style-type: none"> <li>- Persistent ulceration of the oral mucosa</li> <li>- White or red mucosal change in the oral cavity (leukoplakia or erythroplakia)</li> <li>- Exophytic or endophytic mass in the oral cavity or oropharynx</li> <li>- Asymmetrically enlarged tonsil in the absence of infectious symptoms</li> </ul>	<ul style="list-style-type: none"> <li>- Acute traumatic ulcers</li> <li>- Viral stomatitis</li> <li>- Allergic stomatitis</li> <li>- Chemotherapy-induced stomatitis</li> <li>- Bacterial stomatitis</li> </ul>	<b>Send an urgent referral to Oral Maxillofacial Surgery OR Otolaryngology-Head and Neck Surgery</b>  Referrals must include: <ul style="list-style-type: none"> <li>- Detailed symptom list</li> <li>- Risk assessment</li> <li>- State "As per HEAD &amp; NECK CANCER DIAGNOSIS &amp; REFERRAL PATHWAY"</li> </ul>
<b>Acute onset hoarseness with or without risk factors</b>  OR  <b>Change in voice</b>  OR  <b>Persistent sore throat</b>	<ul style="list-style-type: none"> <li>- A significant history of smoking and drinking alcoholic beverages who has unremitting (symptoms persistent for greater than <math>&gt; 3</math> weeks), and</li> <li>- Worsening hoarseness accompanied by throat pain should be considered to have laryngeal cancer until it is proven otherwise.</li> </ul>	<ul style="list-style-type: none"> <li>- Infectious symptoms suggestive of viral or bacterial laryngitis.</li> </ul> <p>OR</p> <p>Symptoms attributable to:</p> <ul style="list-style-type: none"> <li>- A sentinel event such as surgery or ingestion of a foreign body.</li> <li>- Hypothyroidism</li> <li>- Rheumatoid arthritis, gout, and systemic lupus erythematosus</li> </ul>	<b>Send an urgent referral to Otolaryngology - Head and Neck Surgery</b>  Referrals must include: <ul style="list-style-type: none"> <li>- Detailed symptom list</li> <li>- Risk assessment</li> <li>- State "As per HEAD &amp; NECK CANCER DIAGNOSIS &amp; REFERRAL PATHWAY"</li> </ul>

		<ul style="list-style-type: none"> <li>- Inflammatory disorders (such as amyloidosis, sarcoidosis, and GPA (granulomatosis with polyangiitis)</li> <li>- Neurodegenerative disorders, (such as myasthenia gravis)</li> <li>- Gastroesophageal or laryngopharyngeal reflux</li> <li>- Voice abuse/overuse</li> </ul>	
<b>Dysphagia for Solids</b>  Dysphagia requires assessment to identify functional, neurologic, inflammatory, or malignant cause	- Presence of odynophagia and mass with risk factors of head and neck cancer (as above).		- A dynamic imaging study i.e., swallowing study can help to identify cause and presence of mass in the absence of other risk factors.
<b>Persistent Oral Bleeding from unknown source</b>	-Oral or pharyngeal ulceration or mass	<ul style="list-style-type: none"> <li>- Bleeding attributable to periodontal disease</li> <li>- Bleeding diathesis</li> </ul>	<b>Send an urgent referral to Oral Maxillofacial Surgeon</b>  OR <b>Otolaryngology – Head and Neck Surgery</b>  Referrals must include: <ul style="list-style-type: none"> <li>- Detailed symptom list</li> <li>- Risk assessment</li> <li>- State "As per HEAD &amp; NECK CANCER DIAGNOSIS &amp; REFERRAL PATHWAY"</li> </ul>
<b>Unilateral Epistaxis</b>	<ul style="list-style-type: none"> <li>- Associated with nasal mass, neck mass, sinonasal swelling or cranial nerve pathology</li> <li>- Acute onset with persistent or recurrent episodes</li> </ul>	<ul style="list-style-type: none"> <li>- Chronic condition</li> <li>- Bleeding attributable to dryness, trauma, foreign body, rhinitis, or sinusitis</li> </ul>	<b>Send an urgent referral to Otolaryngology – Head and Neck Surgery</b>  Referrals must include: <ul style="list-style-type: none"> <li>- Detailed symptom list</li> <li>- Risk assessment</li> <li>- State "As per HEAD &amp; NECK CANCER DIAGNOSIS &amp; REFERRAL PATHWAY"</li> </ul>

<b>Unilateral Otalgia and Hearing Loss</b>	<ul style="list-style-type: none"> <li>- Associated with oral, tonsil or oropharyngeal mass or ipsilateral neck mass</li> <li>- Associated with mass or ulceration in the external auditory canal on otoscopy</li> <li>- Persistent not intermittent</li> </ul>	- TMJ dysfunction	<p><b>Send an urgent referral to Otolaryngology – Head and Neck Surgery.</b></p> <p>Referrals must include:</p> <ul style="list-style-type: none"> <li>- Detailed symptom list</li> <li>- Risk assessment</li> <li>- State "As per HEAD &amp; NECK CANCER DIAGNOSIS &amp; REFERRAL PATHWAY"</li> </ul>
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## 2. Assessment/ Physical Exam (should include the following):

### Performing a Screening Exam: [Head & Neck Cancer Screening - YouTube](#) [24]

- Inspection of the oral cavity and oropharynx for ulceration of mucosa, swelling, and red or white patches.
  - Use of florescence visualization is recommended if available.
- Inspection of the anterior nasal cavities and otoscopy
- Inspection of the facia, scalp skin
- Palpation of the neck for lymphadenopathy

### Images of Oral Cancers - [Oral Cancer Images – Oral Cancer Foundation | Information and Resources about Oral Head and Neck Cancer](#) [23]

If the patient presents with:

- Lymphadenopathy above and below the clavicle
- Drenching night sweats
- Unexplained fever
- Unexplained weight loss
- < 40 years of age

### REFER TO LYMPHOMA PATHWAY

[Lymph Node Assessment Primary Care Pathway \(albertahealthservices.ca\)](#)

## 3. Referral to Specialty Care

### When to Refer

- The patient has physical exam finding(s) or symptom(s) that have persisted longer than 3 weeks despite management.
- The patient has prior imaging- If ultrasound has previously been performed (beyond this pathway) and an incidental finding of mass or architecturally abnormal-i.e., cystic lymph node has been found- referral should be made via this HEAD & NECK CANCER DIAGNOSIS & REFERRAL PATHWAY.

Continued on next page.



### 3. Referral to Specialty Care

Send an urgent referral to:

[Otolaryngology –Head and Neck Surgery for ALL PATHWAY RELATED CONCERNS](#)

OR

[Oral Maxillofacial Surgery \(OMFS\) for ORAL LESIONS ONLY](#)

\* (All OMFS services provided within the scope of this pathway are billable to Alberta Health).

#### Referrals MUST Include:

1. Detailed symptom list
2. Risk assessment
3. State "As per HEAD & NECK CANCER DIAGNOSIS & REFERRAL PATHWAY"

#### **STANDARD RISK SYMPTOMS- Seen by specialist care: as triaged by Otolaryngology- Head and Neck Surgery**

- Send referral as above.
- If the pt has more than one symptom the triaging physician will assess the risk and pt will be seen sooner as required.
- All DI will be arranged by Specialty Care

#### **HIGH RISK SYMPTOMS- Seen by specialist care: goal within 4 weeks**

- Order CT Neck with contrast (include the Chest if pt has enlarged neck lymph nodes). The requisition requires: a detailed symptom list and risk assessment AND must state:
- "URGENT – High risk symptoms for head and neck malignancy as per H&N Cancer Diagnosis Pathway"
- *Serum creatinine is required within 90 days prior to CT scans with contrast*

#### **FOR ALL PATIENTS-**

- ULTRASOUND and Cone Beam Computed Tomography (CBCT) ARE NOT recommended.
- Any required biopsies will be arranged by the surgeon.
- Referral to specialty care should not be delayed for any testing.

#### **CONSIDERATIONS:**

##### **A. If the patient presents with:**

- Lymphadenopathy above and below the clavicle
- Drenching night sweats
- Unexplained fever
- Unexplained weight loss
- < 40 years of age

##### **REFER TO LYMPHOMA PATHWAY**

[Lymph Node Assessment Primary Care Pathway \(albertahealthservices.ca\)](#)

##### **B. Mental Health**

The mental health and wellbeing of Head and Neck Cancer survivors is a concern. The literature notes the **second highest rate of suicide** (63.4 cases per 100,000 individuals) after those with pancreatic cancer (86.4 cases per 100,000 individuals), when compared with survivors of other cancers (23.6 cases per 100,000 individuals). Psychological distress and compromised quality of life are likely factors for suicide." [9]

Patients can **call 811 for mental health support 24/7** from anywhere in Alberta.

Continued on next page.

## How to Refer: Otolaryngology- Head and Neck Surgery

Search Alberta Referral Directory for most areas - [Alberta Referral Directory - Main Search](#) - for more options including individual providers.

1. Search: Head and Neck
2. Filter REASON: Suspected head and neck cancer

<b>NORTH ZONE</b>		
Surgeons available in Grande Prairie	<a href="#">Alberta Referral Directory - Main Search</a> - for more options including individual providers.	Fax referral Referrals must include: - Detailed symptom list - Risk assessment - State " <b>As per HEAD &amp; NECK CANCER DIAGNOSIS &amp; REFERRAL PATHWAY</b> "
<b>EDMONTON ZONE</b>		
Surgeons available in Edmonton, and surrounding centers	<a href="#">Facilitated Access to Specialized Treatment (FAST) Adult Otolaryngology Head &amp; Neck Surgery Referral (albertahealthservices.ca)</a>  <a href="#">Alberta Referral Directory - Main Search</a> - for more options including individual providers.  <a href="#">ConnectMD (pcnconnectmd.com)</a>	There are many Otolaryngologists in Edmonton and surrounding area. All of whom can assess for Head and Neck cancers. Referrals must include: - Detailed symptom list - Risk assessment - State " <b>As per HEAD &amp; NECK CANCER DIAGNOSIS &amp; REFERRAL PATHWAY</b> "
<b>CALGARY ZONE</b>		
Surgeons available in Calgary and surrounding centers	<a href="#">Alberta Referral Directory - Main Search</a> - for more options including individual providers.  <a href="#">SpecialistLink.ca</a> - perform Quick search keyword Otolaryngology for expert advice.  <i>FAST – Coming soon</i>	There are many Otolaryngologists in Calgary and surrounding area. All of whom can assess for Head and Neck cancers. Referrals must include: - Detailed symptom list - Risk assessment - State " <b>As per HEAD &amp; NECK CANCER DIAGNOSIS &amp; REFERRAL PATHWAY</b> "
<b>CENTRAL ZONE</b>		
Surgeons available in Red Deer and Lloydminster	<a href="#">Alberta Referral Directory - Main Search</a> - for more options including individual providers.  <i>FAST – Coming soon</i>	Fax referral Referrals must include: - Detailed symptom list - Risk assessment - State " <b>As per HEAD &amp; NECK CANCER DIAGNOSIS &amp; REFERRAL PATHWAY</b> "
<b>SOUTH ZONE</b>		
Surgeons available in Lethbridge and Medicine Hat	<a href="#">Alberta Referral Directory - Main Search</a> - for more options including individual providers.  <i>FAST – Coming soon</i>	Fax referral Referrals must include: - Detailed symptom list - Risk assessment - State " <b>As per HEAD &amp; NECK CANCER DIAGNOSIS &amp; REFERRAL PATHWAY</b> "

## How to Refer: Oral Maxillofacial Surgery:

[Alberta Referral Directory - Main Search](#)- for more options including individual providers.

1. **Search: Oral Maxillofacial**
2. **Filter by city**
3. Refer as per individual clinic forms, include "AS PER HEAD & NECK CANCER DIAGNOSIS & REFERRAL PATHWAY".

Currently there are Oral Maxillofacial Surgeons practicing in **Calgary, Edmonton, Grand Prairie, Lethbridge, and Red Deer.**

\*All OMFS services provided within the scope of this pathway are billable to Alberta Health.

## PROVIDER RESOURCES

<b>Cancer work up in Alberta</b>	<a href="https://albertahealthservices.ca/diagnostic-workup-and-staging-of-head-and-neck-cancer">Diagnostic Workup and Staging of Head and Neck Cancer (albertahealthservices.ca)</a>
<b>Cancer Care Information</b>	<a href="https://albertahealthservices.ca/the-organization-and-delivery-of-healthcare-services-for-head-and-neck-cancer-patients">The Organization and Delivery of Healthcare Services for Head and Neck Cancer Patients (albertahealthservices.ca)</a>
<b>Cancer Care Information</b>	<a href="https://albertahealthservices.ca/oral-and-dental-care-management-in-head-and-neck-cancer">Oral &amp; Dental Care Management in Head &amp; Neck Cancer (albertahealthservices.ca)</a>
<b>Cancer Care Information</b>	<a href="https://albertahealthservices.ca/cancer-care-alberta-home">Cancer Care Alberta Home   Alberta Health Services</a>
<b>HPV Vaccine eligibility and schedule</b>	<a href="https://albertahealthservices.ca/07-241-human-papillomavirus-vaccine-biological-page">07.241 Human Papillomavirus Vaccine Biological Page (albertahealthservices.ca)</a>

## PATIENT RESOURCES

<b>Head and Neck Cancer Information for Patients</b>	<a href="https://albertahealthservices.ca/head-and-neck-cancer-information-and-resources-for-patients-and-families">Head and Neck Cancer: Information and Resources for Patients and Families (albertahealthservices.ca)</a>
<b>Head and Neck Cancer Surgery for Patients</b>	<a href="https://albertahealthservices.ca/surgery-for-head-and-neck-cancer-information-and-resources-for-patients-and-families">Surgery for Head and Neck Cancer: Information and Resources for Patients and Families (albertahealthservices.ca)</a>
<b>Living well with cancer supports and resources</b>	<a href="https://www.wellspring.ca">www.wellspring.ca</a>
<b>Cancer Care Information</b>	<a href="https://albertahealthservices.ca/cancer-care-alberta-home">Cancer Care Alberta Home   Alberta Health Services</a>
<b>Head and Neck Cancer Information for Patients</b>	<a href="https://headandneck.org">Head and Neck Cancer Alliance (headandneck.org)</a>
<b>Cancer Information for the Public</b>	<a href="https://canadiancancersociety.ca">Canadian Cancer Society   Canadian Cancer Society</a>
<b>Head and Neck Cancer support for patients</b>	<a href="https://head-way.org">Head and Neck Cancer Support Society   By the patients, for the patients (head-way.org)</a>

## BACKGROUND

### About this Pathway

- The creation of the Head & Neck Cancer Diagnosis & Referral Pathway builds on the success of earlier pathways including lung, breast, and prostate cancer. Building out multiple cancer diagnosis pathways has begun to create end-to-end pathways for cancer patients in Alberta on a provincial scale with the goals of expedited cancer diagnosis and providing better support to patients through that process.
- Initial work on this pathway was started in May 2022 and is being implemented over two years. Patients, providers, and administrators from relevant areas were brought together to gather information on current experiences with head and neck cancer diagnosis, collect data on how the system is performing and review best practice evidence. Provincial principles of care, strategic areas for improvement in Alberta and a provincial measurement and reporting framework were defined.
- Primary Care providers were engaged to co-design pathways with patients and representatives from oncology, head and neck surgery, otolaryngology, pathology, diagnostic imaging, and dental practice.
- Local implementation teams will be engaged in work around planning and pathway roll-out, determination of barriers and facilitators, and shared learnings with other sites. Performance dashboard reports will be developed and disseminated to provide feedback to clinical teams on pathway performance and outcomes. Sustainability planning will be initiated early with implementation teams to ensure successful transition of pathways to operations at the end of the initiative.

### Authors & conflict of interest declaration

- This pathway was reviewed and revised under the auspices of the Cancer Strategic Clinical Network (CSCN) in 2022, by a multi-disciplinary team led by family physicians, oncologists and head and neck surgeons. Names of participating reviewers and their conflict of interest declarations are available on request. For more information contact the CSCN at [Cancer.SCN@ahs.ca](mailto:Cancer.SCN@ahs.ca).

### Pathway review process, timelines

- Specialty access pathways undergo scheduled review every three years, or earlier if there is a clinically significant change in knowledge or practice. The next scheduled review is June 2024. However, we welcome feedback at any time. Please email comments to [Cancer.SCN@ahs.ca](mailto:Cancer.SCN@ahs.ca).

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### DISCLAIMER

This pathway represents evidence-based best practice but does not override the individual responsibility of health care professionals to make decisions appropriate to their patients using their own clinical judgment given their patients' specific clinical conditions, in consultation with patients/alternate decision makers. The pathway is not a substitute for clinical judgment or advice of a qualified health care professional. It is expected that all users will seek advice of other appropriately qualified and regulated health care providers with any issues transcending their specific knowledge, scope of regulated practice or professional competence.

## Citations and References

1. Pynnonen MA, Gillespie MB, Roman B, et al. Clinical Practice Guideline: Evaluation of the Neck Mass in Adults. <i>Otolaryngology–Head and Neck Surgery</i> . 2017;157(2_suppl): S1-S30. doi:10.1177/0194599817722550
2. Kim, J. E., & Rasgon, B. (2010). The hoarse patient: asking the right questions. <i>The Permanente journal</i> , 14(1), 51–53. <a href="https://doi.org/10.7812/TPP/10.994">https://doi.org/10.7812/TPP/10.994</a>
3. Mortazavi, H., Safi, Y., Baharvand, M., Rahmani, S. (2016) Diagnostic Features of Common Oral Ulcerative Lesions: An Updated Decision Tree, <i>International Journal of Dentistry</i> , vol. 2016, Article ID 7278925, 14 pages, 2016. <a href="https://doi.org/10.1155/2016/7278925">https://doi.org/10.1155/2016/7278925</a>
4. Chi, A.C., Day, T.A. and Neville, B.W. (2015), Oral cavity and oropharyngeal squamous cell carcinoma—an update. <i>CA: A Cancer Journal for Clinicians</i> , 65: 401-421. <a href="https://doi.org/10.3322/caac.21293">https://doi.org/10.3322/caac.21293</a>
5. Chilukuri, P., Odufalu, F., & Hachem, C. (2018). Dysphagia. <i>Missouri medicine</i> , 115(3), 206–210
6. Chow, L., (2020). Head and Neck Cancer, <i>New England Journal of Medicine</i> 382:60-72 DOI: 10.1056/NEJMra1715715
7. Gormley, M., Creaney, G., Schache, A. et al. Reviewing the epidemiology of head and neck cancer: definitions, trends, and risk factors. <i>Br Dent J</i> 233, 780–786 (2022). <a href="https://doi.org/10.1038/s41415-022-5166-x">https://doi.org/10.1038/s41415-022-5166-x</a>
8. Shaw, R., & Beasley, N. (2016). Aetiology and risk factors for head and neck cancer: United Kingdom National Multidisciplinary Guidelines. <i>The Journal of laryngology and otology</i> , 130(S2), S9–S12. <a href="https://doi.org/10.1017/S0022215116000360">https://doi.org/10.1017/S0022215116000360</a>
9. Johnson, D.E., Burtness, B., Leemans, C.R. et al. Head and neck squamous cell carcinoma. <i>Nat Rev Dis Primers</i> 6, 92 (2020). <a href="https://doi.org/10.1038/s41572-020-00224-3">https://doi.org/10.1038/s41572-020-00224-3</a>
10. Aupérin, Anne. Epidemiology of head and neck cancers: an update. <i>Current Opinion in Oncology: May 2020 - Volume 32 - Issue 3 - p 178-186</i> doi: 10.1097/CCO.0000000000000629
11. Deschler DG, Richmon JD, Khariwala SS, Ferris RL, Wang MB. The “New” Head and Neck Cancer Patient—Young, Nonsmoker, Nondrinker, and HPV Positive: Evaluation. <i>Otolaryngology–Head and Neck Surgery</i> . 2014;151(3):375
12. Jethwa, A.R., Khariwala, S.S. Tobacco-related carcinogenesis in head and neck cancer. <i>Cancer Metastasis Rev</i> 36, 411–423 (2017). <a href="https://doi.org/10.1007/s10555-017-9689-6">https://doi.org/10.1007/s10555-017-9689-6</a>
13. Fernandes, Q., Merhi, M., Raza, A., Inchakalody, V. P., Abdelouahab, N., Zar Gul, A. R., Uddin, S., & Dermime, S. (2018). Role of Epstein-Barr Virus in the Pathogenesis of Head and Neck Cancers and Its Potential as an Immunotherapeutic Target. <i>Frontiers in oncology</i> , 8, 257. <a href="https://doi.org/10.3389/fonc.2018.00257">https://doi.org/10.3389/fonc.2018.00257</a>
14. Van Leeuwen, M., Grulich, A., McDonald, S., McCredie, M., Amin, J., Stewart, J., Webster, A., Chapman, J. Immunosuppression and Other Risk Factors for Lip Cancer after Kidney Transplantation. <i>Cancer Epidemiology, Biomarkers and Prevention</i> (2009) 18 (2): 561–569. <a href="https://doi.org/10.1158/1055-9965.EPI-08-0919">https://doi.org/10.1158/1055-9965.EPI-08-0919</a>
15. Penn, I. Post-Transplant Malignancy. <i>Drug-Safety</i> 23, 101–113 (2000). <a href="https://doi.org/10.2165/00002018-200023020-00002">https://doi.org/10.2165/00002018-200023020-00002</a>
16. Chapman, J., Webster, A., Wong, G., Cancer in the Transplant Recipient Cold Spring Harbour Perspective in Medicine (2013) 3: a015677doi:10.1101/cshperspect.a015677
17. Monti, E., Barbara, G., Libutti, G. et al. A clinician’s dilemma: what should be communicated to women with oncogenic
18. Drake, V. E., Fakhry, C., Windon, M. J., Stewart, C. M., Akst, L., Hillel, A., Chien, W., Ha, P., Miles, B., Gourin, C. G., Mandal, R., Mydlarz, W. K., Rooper, L., Troy, T., Yavvari, S., Waterboer, T., Brenner, N., Eisele, D. W., & D'Souza, G. (2021). Timing, number, and type of sexual partners associated with risk of oropharyngeal cancer. <i>Cancer</i> , 127(7), 1029–1038. <a href="https://doi.org/10.1002/cnrc.33346">https://doi.org/10.1002/cnrc.33346</a>

19. Alcohol and Cancer Risk Fact Sheet - NCI(2023, April 5) <a href="http://www.cancer.gov/about-cancer/causes-prevention/risk/alcohol/alcohol-fact-sheet#what-is-the-evidence-that-alcohol-drinking-can-cause-cancer">www.cancer.gov/about-cancer/causes-prevention/risk/alcohol/alcohol-fact-sheet#what-is-the-evidence-that-alcohol-drinking-can-cause-cancer</a>
20. Lip cancer - Symptoms and causes - Mayo Clinic (2023, April 5) <a href="http://www.mayoclinic.org/diseases-conditions/lip-cancer/symptoms-causes/syn-20355079">www.mayoclinic.org/diseases-conditions/lip-cancer/symptoms-causes/syn-20355079</a>
21. Head & Neck (bccancer.bc.ca) (2023) <a href="http://www.bccancer.bc.ca/health-professionals/clinical-resources/cancer-management-manual/head-neck/head-neck">www.bccancer.bc.ca/health-professionals/clinical-resources/cancer-management-manual/head-neck/head-neck</a>
22. Global Cancer Observatory (iarc.fr)(2023) <a href="http://www.gco.iarc.fr">www.gco.iarc.fr</a>
23. Oral Cancer Images – Oral Cancer Foundation   Information and Resources about Oral Head and Neck Cancer (2023) <a href="http://www.oralcancerfoundation.org/dental/oral-cancer-images/">www.oralcancerfoundation.org/dental/oral-cancer-images/</a>
24. Montefiore Health System 2012, April 26. Head and Neck Cancer Screening [VIDEO] <a href="http://www.youtube.com/watch?v=Q1EUCuJSkk">www.youtube.com/watch?v=Q1EUCuJSkk</a>
25. Ellington, TD, Henley, SJ, Senkomago, V, O'Neil, ME, Wilson, RJ, Singh, S, Thomas, CC, Wu, M, Richardson, LC. Trends in Incidence of Cancers of the Oral Cavity and Pharynx - United States 2007-2016. MMWR Morb Mortal Wkly Rep. 2020 Apr 17;69(15):433-438. doi: 10.15585/mmwr.mm6915a1. PMID: 32298244; PMCID: PMC7755056.
26. Special topic: HPV-associated cancers. Canadian Cancer Society's Advisory Committee on Cancer Statistics. Canadian Cancer Statistics 2016. Toronto, ON: Canadian Cancer Society; 2016. <a href="#">CS2-37-2016-eng.pdf</a> ( <a href="http://publications.gc.ca">publications.gc.ca</a> )