Guideline Resource Unit
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The Organization and Delivery of Healthcare Services for Head and Neck Cancer Patients

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Cancer Care Alberta

Clinical Practice Guideline HN-001 – Version 2
www.ahs.ca/guru

Background

The treatment of head and neck cancer is complex. Significant expertise is required from a range of healthcare professionals because of the involvement of anatomically diverse areas (soft tissue, bones, skin, and a variety of glands and organs), as well, because of the vital functions affected by both the cancer and the treatment (breathing, chewing, swallowing and speech).

A number of organizations have recognized the need for guidance regarding the organization and delivery of healthcare services for patients with head and neck cancer. In Canada, Cancer Care Ontario's Program in Evidence-Based Care published such recommendations in 2019[1]. These recommendations are largely an adaptation of the U.K.'s National Health Services, National Institute for Clinical Excellence Service's 2004 recommendations that are outlined in the document *Improving Outcomes in Head and Neck Cancers*. This document is the result of an extensive synthesis of the literature that has been translated into specific-practice oriented recommendations.[2]

The Alberta Provincial Head and Neck Tumour Team has included the following tumour types in its mandate: head and neck mucosal tumours, salivary gland cancers, tumours extending in to the skull base from the head and neck (craniofacial cancers, sinus cancers, etc.), major non-melanoma skin cancers (requiring free flap reconstruction, neck dissection and radiation), invasive/complex thyroid tumours (requiring laryngectomy, pharyngectomy, tracheal resection, etc), and other malignant tumours involving the head and neck region. The Alberta Provincial Endocrine Tumour Team, in collaboration and consultation with the Alberta Provincial Head and Neck Tumour Team, will lead the development of clinical practice guidelines related to thyroid cancer. However, guidelines regarding the organization and delivery of care for patients with invasive thyroid cancer requiring complex surgery and/or external beam radiation will be developed by the Alberta Provincial Head and Neck Tumour Team.

The goal of this clinical practice guideline is to outline the recommendations for the organization and delivery of healthcare services for head and neck cancer patients in Alberta. In an effort to reduce duplication of work, Cancer Care Ontario's recommendations have been adopted and adapted with some customizations to better fit the Alberta context.

The recommendations in this clinical practice guideline should be used as a guide rather than a fixed protocol. The implementation of this clinical practice guideline will depend on many factors besides the quality and credibility of the guidelines. Among those factors are sufficient funding to support full implementation and judgement used by healthcare professionals to form the multidisciplinary team and individualize care for head and neck cancer patients.

Guideline Questions

1. What does the health care team treating head and neck cancer patients look like?
2. What are the minimum qualifications required by core team members?

3. What are the minimum cancer centre and team member volumes that optimize clinical outcomes?
4. What are the unique infrastructure requirements of team members?
5. What are the acceptable wait times from referral to initiation of curative treatment for head and neck cancer patients?

Search Strategy

The biomedical literature was searched using the database PubMed. The search terms “head and neck neoplasm” and “organization and delivery” were combined using the Boolean operator term “and” to find publications pertaining to the chosen terms. Limits were not set for the search (e.g. language or publication type). As a result, 161 publications were identified. All abstracts were considered for possible inclusion. Publications that only described the effectiveness or feasibility of equipment, testing, or treatment, were not included in the evidence (e.g. endoscopic intubation with conventional plastic stents, intensity-modulated radiotherapy). After abstract review, 14 articles were reviewed in full and included in the evidence review.

The websites of prominent national and international clinical practice guideline developers were also searched for recommendations about the organization and delivery of health care services for head and neck cancers. In total, seven websites were searched in addition to the SAGE Directory (Standards and Guidelines Evidence) on The Canadian Partnership Against Cancer’s website.[3-10]

Target Population

The recommendations outlined in this guideline are intended for adults over the age of 18 years with head and neck cancer. Different principles may apply to pediatric patients.

Recommendations

These recommendations were adapted from: Organizational guidance for the care of patients with head-and-neck cancer in Ontario, 2019[1] (Program in Evidence-Based Care, Cancer Care Ontario). All the following recommendations are considered to be a strong recommendation. ***(Level of Evidence III, Strength of Recommendation A)***

1. Teams

- The teams will include a core team, primary care physician, and extended team.
- Multidisciplinary Care by Core Team
    - Given the complexity of the disease and its associated morbidities, all adult patients who present with symptoms of, or who have been diagnosed with, head and neck cancer should be seen and cared for by a CORE Head and Neck Cancer Multidisciplinary Team before any treatment is provided

- *The core team:*
    - The core team is defined as the group of clinicians who see the majority of new head and neck cancer patients and who are responsible for the assessment, planning, treatment, management, rehabilitation and survivorship of the patient.
    - The care of patients with head and neck cancer should be coordinated among members of the core team to ensure optimally effective and safe care
    - During the diagnosis, management, and follow-up process each head and neck cancer patient will have a clearly identified Most Responsible Physician (MRP). MRP refers to the physician who has overall responsibility for directing and coordinating the head and neck cancer care and management of an individual patient at a specific point in time. The MRP will be responsible for the handover of care during periods of absence or transition of care to a different MRP and/or between treatment modalities.
    - The multidisciplinary core team should be comprised of:
        - Head and Neck Surgical Oncologist with experience managing the entire scope of head and neck disease (early to late staged cases)[1, 2, 10, 11]
        - Head and Neck Reconstructive Surgeon [1, 2, 10, 11]
        - Oral and Maxillofacial Surgeon[1, 2]
        - Medical Oncologist [1, 2, 10, 11]
        - Radiation Oncologist[1, 10, 11]
        - Maxillofacial Prosthodontist[2, 10, 11]
        - Dentist with expertise/interest in dental oncology [1, 2, 10, 11]
        - Pathologist[1, 2, 10, 11]
        - Clinical Nurse Specialist [1, 2], Nurse Practitioner[1] or Advanced Practice Speech-Language Pathologist
        - Speech-Language Pathologist[1, 2, 10, 11]
        - Specialized nursing care
        - Diagnostic Radiologist /Neuroradiologist [2, 11]
        - Registered Dietitian[1, 2, 10, 11]
        - Social Worker[1, 11]
- *The primary care physician*[1] *(family physician or general practitioner):*
    - Is not involved in the daily treatment of a head and neck cancer patient, but plays an important role in post-treatment supportive care
    - Is responsible for the ongoing overall health of a head and neck cancer patient
- *The extended team:*
    - Is responsible for supporting the core team to facilitate treatment, planning, management, survivorship and rehabilitation as needed.
    - Members of the extended team provide more episodic care and are not responsible for seeing the majority of new patients.
    - Members have training or experience managing head and neck cancer patients
    - Is comprised of:

- Neurosurgeon[1, 2]
- Thoracic Surgeon[2]
- Prosthetic Anaplastologist[1]
- Neurotologist
- Anesthsiologist[2] with a special interest in airway management[1] and perioperative care
- Health care providers with expertise in gastrostomy placement, feeding tube placement and support for patients requiring tube feeding[1, 2]
- Interventional radiologist[1]
- Ophthalmologist[1, 2, 11]
- Pharmacist
- Pain Management Specialist[1, 2]
- Palliative Care Specialist[1]
- Critical Care Physician
- Dental hygienists[2] and dental technician[1]
- Mental health providers, including Psychiatrist or Psychologist[1, 2]
- Physiotherapist[1, 2]
- Occupational Therapist[1, 2]
- Radiation Physicist[1, 2]
- Radiation Therapist[1, 2]
- Respiratory Therapist[1]
- Hyperbaric medicine[1]
- Home care team[1]
- Dermatologist

2. Qualifications

- Specific minimum qualifications are required of individual practitioners on the core team responsible for managing patients with head and neck cancer (Table 1). These qualifications were adapted from Cancer Care Ontario[1] and in some instances have been modified and expanded to reflect knowledge from practice experiences in Alberta.

Table 1. Minimum qualification required to care for head and neck cancer patients

Team member	Education	Professional license/ Certificate	Experience/Training	Knowledge, abilities and skills
Head and Neck Surgeon	Degree in medicine or equivalent[1]	Royal College of Physicians and Surgeons of Canada (RCPSC) Specialist Certificate in Otolaryngology-Head and Neck Surgery,	1-year minimum fellowship in Advanced Training in Head & Neck Oncologic Surgery through the American Head and Neck Society or equivalent Equivalent fellowship training will include a minimum of 1 year	The Head and Neck surgeon is the core team member who is responsible for the resection of head and neck cancers and will have training and experience in the surgical management of tumours in each disease site, as listed in the background section. They should be able to provide diagnostic testing to include imaging (ultrasound, CT,

Team member	Education	Professional license/ Certificate	Experience/Training	Knowledge, abilities and skills
		General Surgery or Plastic Surgery[1]	training at a major head and neck oncology centre with specific surgical training in each of the areas included in the mandate of the Alberta Provincial Head and Neck Tumour team (head and neck mucosal tumours [all subsites], salivary gland tumours, tumours of the skull base, major skin cancers, invasive/complex thyroid and parathyroid tumours, and other tumours involving the head and neck region). The fellowship training program, and the fellow, must meet all the guidelines as defined in the, "Advanced Training Council Program Guidelines" from the AHNS (http://www.ahns.info/) or the Canadian Association of Head and Neck Surgical Oncologists (https://cahnso.com)	MRI, PET), point of care Fine Needle Aspiration (FNA) biopsy, direct tissue biopsy with access to frozen section. They shoud be able to perform staging examinations including flexible nasopharyngoscopy in an ambulatory care clinic, panendoscopy and examination under anesthesia, open neck biopsy. They should be able to perform essential procedures to manage the upper aerodigestive tract (tracheotomy, rigid laryngoscopy, rigid esophagoscopy, have access to nasogastric and percutaneous feeding tube insertions). Provide minimally invasive oncologic procedures such as endoscopic surgery or trans-oral surgery.
Head and Neck Reconstructive Surgeon	Degree in medicine or equivalent[1]	RCPSC Specialist Certificate in Otolaryngology-Head and Neck Surgery, General Surgery or Plastic Surgery[1]	A minimum 1-yr fellowship in microvascular surgery with specific training in head and neck reconstruction as a major portion of the fellowship experience Note: An individual surgeon may meet the training standards and criteria as both a Head and Neck Surgical Oncologist and Microvascular Reconstructive Surgeon	The Head and Neck Reconstructive Surgeon is the core team member who is responsible for the surgical reconstruction of defects related to head and neck cancer treatment and will have training and experience in the reconstructive management of each disease site, as listed in the background section.
Oral and Maxillofacial Surgeon	Degree in Dentistry, Medicine or equivalent	FRCD(C) Certificate in Oral and Maxillofacial Surgery,	Formal clinical fellowship or significant clinical training in head and neck cancer treatment, dental	Oral and Maxillofacial Surgeons bring a unique skill set to the core team that is independent of the roles of the Head and Neck Surgeon and the Head and

Team member	Education	Professional license/ Certificate	Experience/Training	Knowledge, abilities and skills
		Fellowship Training Certificate or equivalent	rehabilitation, and implant rehabilitation at an expert center during Oral and Maxillofacial Surgery residency or fellowship	Neck Reconstructive Surgeon. Oral and Maxillofacial surgeons functioning as Head and Neck Surgeons or Reconstructive Surgeons, I.e. performing Head and Neck Cancer resections or reconstructions, on the core team must meet the criteria put forth in Tables 1 and 2 for those categories. Oral and Maxillofacial surgeons working in the core team will have expert level training and experience in head and neck cancer care treatment planning, treatment, and aftercare in conjunction with, and as a member of, the head and cancer core team and expert level training and experience in head and neck cancer resection and reconstruction in conjunction with, and as a member of, the head and cancer core team. This pertains primarily to head and neck cancer resection and reconstruction as it pertains to surgery involving the mandibular and maxillary complex and its contiguous structures.
Medical Oncologist	Degree in medicine or equivalent[1]	RCPSC Specialist Certificate in Internal Medicine or equivalent[1] RCPSC Certificate of Special Competence in Medical Oncology or equivalent[1]	Formal clinical fellowship or significant clinical training in head and neck cancer treatment at an expert centre during medical oncology residency or fellowship[1]	Enhanced knowledge and skill in the treatment of head and neck cancer patients[1]
Radiation Oncologist	Degree in medicine or equivalent[1]	RCPSC Specialist Certificate in Radiation Oncology or equivalent[1]	Formal clinical fellowship or significant clinical training in head and neck cancer treatment at an expert centre during radiation oncology residency or fellowship[1]	Enhanced knowledge and skill in the treatment of head and neck cancer patients[1]
Maxillofacial Prosthodontist	Degree in dentistry or equivalent	Registered as a Prosthodontist with the Alberta Dental	Must have significant maxillofacial prosthodontic training during prosthodontic specialty	Expert level experience in intra/extraoral maxillofacial prosthodontic aspects of head and neck cancer care treatment

Team member	Education	Professional license/ Certificate	Experience/Training	Knowledge, abilities and skills
	Graduate degree in prosthodontics or equivalent fellowship with emphasis in maxillofacial prosthodontics	Association and College Fellowship member of the American Academy of Maxillofacial Prosthetics	program or added year to fellowship. Training must include head and neck cancer care. Individual must demonstrate and active involvement in head and neck cancer care within a major institutional head and neck cancer team. Individual must demonstrate being active in the American Academy of Maxillofacial Prosthetics Fellowship or equivalent	planning, treatment and after care within a head and neck cancer care institutional environment. Expert level experience in management of head and neck cancer care sequealae related to maxillofacial prosthodontic care. Must be well experienced with surgical oncology, surgical reconstruction, radiation therapy and medical oncology patient care within an institutional head and neck cancer care institutional environment. Must have skills in digital surgical design and simulation to plan reconstructions for functional rehabilitation. In-depth experience in functional assessment and nasopharyngeal endoscopic assessment.
Dentist	University-based degree in dentistry[1]	Member of the Alberta Dental Association and College	Should have significant training in the examination and treatment of head and neck cancer patients, (both pre- and post-cancer treatment). Often graduates of a General Practice Residency or Oral Medicine Residency	Enhanced knowledge and experience regarding the sequelae of head and neck cancer treatments (surgery/chemo/ radiation) on oral health. Experience in providing pre-radiation oral health consultation, treatment planning, management, and counselling. Experience in post-radiation oral health management and counselling, including prevention strategies and collaboration with other members of the head and neck cancer team.
Pathologist	Degree in medicine or equivalent[1]	RCPSC Certificate of Special Competence in Anatomical or General Pathology[1].	Formal fellowship or significant experience in head and neck cancer pathology[1]	NA
Clinical Nurse Specialist	Master's degree in nursing[1]	NA	Should have prior oncology experience and expertise, but may require role mentoring to develop specific oncology expertise[1]	Knowledge and expertise in an area of cancer nursing[1] Greater breadth and depth of knowledge compared to the Specialized Oncology Nurse[1] Qualified as a regulated independent practitioner according to the Health Professions Act.
Nurse Practitioner	Master of Nursing, Nurse Practitioner	Holds Nurse Practitioner permit with	4,500 Registered Nurse practice hours in last five years in addition to	Nurse Practitioner is a Registered Nurse with advanced knowledge, skills and competencies. Integrate

Team member	Education	Professional license/ Certificate	Experience/Training	Knowledge, abilities and skills
		College and Association of Registered Nurses of Alberta in Adult Stream of Practice	completing required clinical hours within Nurse Practitioner education program. Successful completion of Nurse Practitioner National Registration Exam. Should have prior oncology experience and expertise, but may require role mentoring to develop specific oncology expertise	elements such as diagnosing, ordering and interpreting investigative tests, treating health problems and prescribing drugs into practice
Advanced Practice Speech-Language Pathologist	Master's degree in speech language pathology and advanced practice training	Member of the Alberta College of Speech-Language Pathologists and Audiologists Independent Authorizer with the Assistive Devices Program	Minimum of 5 years' experience required before advanced practice training can begin 2-year advanced practice training	Performs comprehensive health assessments in clinic setting, independently treats wounds, excellent patient and staff teaching skills
Speech-Language Pathologist	Master's degree or equivalent in speech pathology[1]	Member of the Alberta College of Speech-Language Pathologists and Audiologists Independent Authorizer with the Assistive Devices Program[1]	Specialized training in speech, voice, and swallowing rehabilitation in head and neck cancer patients. Comprehensive education in the anatomy and physiology of the head and neck and surgical procedures	Knowledge and expertise in clinical swallowing assessment and therapy, video fluoroscopic swallowing assessment, fiberoptic endoscopic swallowing assessment, and the management of patients with tracheotomies and head and neck surgery with anatomical reconstruction Approved for delegated controlled acts if required to do voice restoration work for laryngectomized patients[1]. This involves direct training for the placement of TEP valves at the Blom-Singer Course and subsequent supervision of the first 50 valve placements.
Specialized nursing care	Bachelor's degree in nursing[1]	Registered with the College and Association of Registered Nurses of Alberta	Registered Nurses should have general oncology experience and/or be mentored to develop the skills to work with the patient population.	Registered Nurses are working in an environment where the majority of individuals have a diagnosis of cancer or are at risk of developing cancer

Team member	Education	Professional license/ Certificate	Experience/Training	Knowledge, abilities and skills
Diagnostic Radiologist/ Neuroradiologist	Degree in medicine or equivalent[1]	RCPSC Certificate in Diagnostic Radiology Special certificate in neuroradiology or equivalent.	Minimum of 1 year fellowship in neuroradiology/head and neck imaging	NA
Registered Dietitian	Bachelor's degree with major in food science and nutrition	Membership with the College of Dietitians of Alberta, eligible for membership with the Dietitians of Canada.	Accredited dietetic internship professional license[1]	Should have hospital or patient care experience and/or oncology expertise[1] and experience with enteral nutrition
Social Worker	Bachelor's or Master's Degree in Social Work	Registered with the Alberta College of Social Workers Should have affiliation and membership with professional oncology social work organizations (e.g. Canadian Association of Social Workers) [1].	Hospital or patient care experience, as well as oncology experience[2] Should have experience teaching, coaching and psycho-social support and counselling across the continuum with patients and families[1]	NA

3. Cancer Centre and Team Member Volumes

- The management of head and neck cancer patients is complex. The initial phases of care and ongoing care of all head and neck cancer patients should be centered at a single, high-volume centre with adequate support and expertise to provide the highest level of care.
- All patients with a new diagnosis of invasive head and neck cancer should be seen at a head and neck multidisciplinary clinic prior to initiation of treatment by the designated head and neck multidisciplinary team. These patients should subsequently be discussed at regularly scheduled Tumour Conference Rounds attended by the members of the core team to ensure consensus opinion on treatment and quality assurance.
- Although the development of centres of excellence is strongly encouraged, innovative collaborations between high-volume and low-volume centres and/or regions should be expanded and defined in order to maintain the high quality of care being provided to head and neck cancer patients[2] after the initial management phases.

- The development of small-volume, non-multidisciplinary treatment programs for patients with head and neck cancer is strongly discouraged. [1]
- There is data to support a volume quality relationship with higher volume centres having better outcomes.[12-15] However, no data exists in Alberta to directly inform minimum volume thresholds for surgeons, medical and radiation oncologists to ensure high-quality care. Thus, the Alberta Provincial Head and Neck Tumour Team, like Cancer Care Ontario[1], endorse the volumes recommended by the National Institute for Health and Clinical Excellence. [2] In addition, there are no data or clinical practice guidelines in Alberta or elsewhere to directly inform the minimum volumes for Specialized Oncology Nurses, Advanced Practice Nurses, Advanced Speech-Language Pathologists, Registered Dietitians and Social Workers. Note that in some cases minimum recommended volumes and FTEs have been modified and expanded by the Alberta Provincial Head and Neck Tumour Team to reflect knowledge from practice experiences in Alberta (Table 2 and 3).

Table 2. Minimum recommended volumes required to care for head and neck cancer patients

Team member	Minimum volumes required
Head and Neck Surgeon	Assess 50 new head and neck cancer patients per year. Perform major surgery (requiring lateral compartment neck dissection or equivalent complexity) on 40 head and neck cancer patients per year[1]
Head and Neck Reconstructive Surgeon	20 head and neck cancer microsurgery cases per year[1]
Oral and Maxillofacial Surgeon	A minimum of 50 assessments and 40 head and neck cancer patients treated per year
Medical Oncologist	A minimum of 25 head and neck cancer patients treated per year[1]
Radiation Oncologist	A minimum of 50 head and neck cancer patients treated per year[1]
Maxillofacial Prosthodontist	A minimum of 50 assessments and 40 head and neck cancer patients treated per year
Dentist	A minimum of 25 initial consultations and a minimum of 25 head and neck cancer patients managed during and post radiation per year
Pathologist	No minimum volumes currently established
Clinical Nurse Specialist	No minimum volumes currently established[1]
Nurse Practitioner	No minimum volumes currently established
Advanced Practice Speech-Language Pathologist	No minimum volumes currently established
Speech-Language Pathologist	No minimum volumes currently established

Team member	Minimum volumes required
Specialized nursing care	No minimum volumes currently established
Diagnostic Radiologist /Neuroradiologist	No minimum volumes currently established
Registered Dietitian	No minimum volumes currently established[1]
Social Worker	No minimum volumes currently established[1]

Table 3. Minimum recommended FTE to care for head and neck cancer patients

Team member	Minimum FTE
Head and Neck Surgeon	No minimum FTE currently established[1]
Head and Neck Reconstructive Surgeon	No minimum FTE currently established[1]
Oral and Maxillofacial Surgeon	No minimum FTE currently established
Medical Oncologist	1.0 FTE per 150 head and neck cancer patients seen in consultation per year
Radiation Oncologist	1.0 FTE per 150 head and neck cancer patients seen in consultation per year[1]
Maxillofacial Prosthodontist	1.0 FTE per 150 head and neck cancer patients per year
Dentist	1.0 FTE per site based on 1,500-2,000 patient contacts per year
Pathologist	No minimum FTE currently established
Clinical Nurse Specialist	1.0 FTE per head and neck site group (especially with larger site groups seeing > 200 patients in consultation per year OR shared across another site group)[1]
Nurse Practitioner	1.0 FTE per head and neck site group (especially with larger site groups seeing > 200 patients in consultation per year OR shared across another site group)[1]
Advanced Practice Speech-Language Pathologist	1.0 FTE per 150 patients seen in consultation per year
Speech-Language Pathologist	No minimum FTE currently established
Specialized nursing care	No minimum FTE currently established
Diagnostic Radiologist /Neuroradiologist	No minimum FTE currently established
Registered Dietitian	1.0 FTE per 150 patients seen in consultation per year[1]
Social Worker	1.0 FTE per 150 patients seen in consultation per year[1]

Multidisciplinary Care Requirements

- Head and neck centres will provide surgery, radiation, and systemic therapy.
- All head and neck cancer patients require a multidisciplinary assessment by a head and neck surgical oncologist and a radiation oncologist with expertise in head and neck oncological cases at a minimum and should receive assessment by medical oncology as needed. Assessments can occur via multidisciplinary tumor board review or via in person assessment in a combined clinic.
- Where geography makes it difficult for patients to travel to be seen in person, assessment must include examination by an otolaryngologist/head and neck surgeon who is available in the local community. In addition, patients must be reviewed at a MCC with a head and neck surgical oncologist in attendance or by virtual review of the images and clinical examination by a head and neck surgical oncologist.
- The Head and Neck Oncologic Program must function within an acute care hospital and be affiliated with a regional cancer program. The program must have access to regular ambulatory care facilities, diagnostic and staging expertise and equipment, inpatient resources, and operating room access for cancer surgery.

Table 4. Unique infrastructure requirements*

Technology or team member	Recommendation for infrastructure requirements
Multidisciplinary Ambulatory Care Clinic	• Timely access to allied health professionals (speech language pathology, audiology, social work, nutrition, oncology nursing) • Access to audiology services and assessment of middle and inner ear function
PET Scanning	• Access to PET scanning within 2 weeks for pre- and post-treatment evaluation as clinically indicated
MRI and CT	• Access to MRI and CT for definitive staging and/or treatment planning, with expert head and neck radiology review, should be available, within 2 weeks of request
Pathologist (2022 new)	• Expert review of select head and neck cases prior to definitive management • Routine access to HPV/P16 testing • EBV status of carcinomas of the nasopharynx
Surgical Oncologist	• Infrastructure for microvascular, laser and minimally invasive surgery[1] • Perioperative monitoring (≥ Level III) [1] • Specialized surgical nursing (head and neck) [1] • Clinical equipment[1] – endoscope with image capturing capability
Medical Oncologist	• Ambulatory chemotherapy unit and oncology pharmacy support[1] • Access to inpatient services including ability to administer chemotherapy[1] • Access to peripherally inserted central catheter (PICC) line placement, continuous infusion pumps
Radiation Oncologist	Radiation treatment facility, including: • Linear accelerator based external beam radiation treatment with multileaf collimation and IMRT capability[1] • Portal or CT based on board treatment verification[1] • CT simulation (with IV contrast available) and custom immobilization capabilities[1]

Technology or team member	Recommendation for infrastructure requirements
	• IMRT-capable treatment planning system[1] • Medical dosimetry and physics support for plan development and quality assurance[1] • Resources for staff and infrastructure[1]
Advanced Practice Speech-Language Pathologists	• Specialized equipment for speech rehabilitation (post-laryngectomy) • Availability and access to radiology and equipment to support the analysis of swallowing function
Nutrition	• Access to interventional radiology/endoscopy suite for insertion of a percutaneous endoscopic gastrostomy • Access to enteral feeding supplies for the delivery of enteral nutrition
Dentistry	• Capacity to support institutional volumes • Intra-oral or extra-oral (panoramic) or CBCT imaging • Instrumentation supplies and staffing to quickly and efficiently eliminate sources of infection • Instrumentation, supplies and staffing to provide oral surgical, operative, prosthetic/maxillofacial prosthetic, preventive, and follow-up dental care
Nursing	• Access and support from vascular access programs • Access to space to see patients collaboratively and independently from other team members, including ability to assess drop-in patients and/ or manage after hours care • Triage line access to support patients outside of clinic hours • Access to acute care services to manage acute patients and systems to respond to medical emergencies • Patients receiving concurrent treatment should have access to a nurse practitioner

* These requirements are unique to the treatment of head and neck cancer and are beyond those requirements that would typically be found in these settings

Table 5. Wait times to care

Assessment or therapy	Time frame
Surgical Assessment	• Head and neck cancer patients should be seen by an experienced surgeon[10], as defined in Table 1 and 2, with access to the necessary diagnostic tools, and ideally within a multidisciplinary cancer clinic, within 2 weeks of referral, • Urgent assessment by an experienced surgeon should be immediately available for any patient with a suspected head and neck cancer and critical symptoms (e.g. severe dysphagia, airway obstructions, stridor, etc).
Primary Surgical Therapy	• Patients undergoing primary surgical therapy should have surgery performed within 4 weeks of the ready-to-treat date • The time from completion of surgery to the initiation of radiation therapy should be less than 6 weeks in the absence of post-operative medical or surgical complications

Maxillofacial Prosthodontics	• Maxillofacial Prosthodontic Care – Access to care within 3 months
	• Jaw Reconstruction Rehabilitation Care:
	  ○ Access to assessment within 3 months
	  ○ Access to treatment within 6 months

Radiation/Medical Oncology and Dental Assessment	• Within 2 weeks of referral
Primary Radiation Therapy	• The EBRT access target is a wait time interval of less than 4 weeks (i.e. ≤ 27 days) from the ready-to-treat date to the start-of-treatment date for all eligible patients. In certain cases there may be clinical indication for more rapid access to treatment

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Development and Revision History

This guideline was reviewed and endorsed by the Alberta Provincial Head and Neck Tumour Team includes surgeons, medical oncologists, radiation oncologists, nurses, pathologists, and pharmacists. Evidence was selected and reviewed by a working group comprised of members from the Alberta Provincial Head and Neck Tumour Team and a methodologist from the Guideline Resource Unit. A detailed description of the methodology followed during the guideline development process can be found in the Guideline Resource Unit Handbook.

This guideline was originally developed in August 2012. This guideline was revised in November 2012, January 2013, April 2013, May 2013, November 2015 and August 2022.

Levels of Evidence

I	Evidence from at least one large randomized, controlled trial of good methodological quality (low potential for bias) or meta-analyses of well-conducted randomized trials without heterogeneity
II	Small randomized trials or large randomized trials with a suspicion of bias (lower methodological quality) or meta-analyses of such trials or of trials with demonstrated heterogeneity
III	Prospective cohort studies
IV	Retrospective cohort studies or case-control studies
V	Studies without control group, case reports, expert opinion

Strength of Recommendations

A	Strong evidence for efficacy with a substantial clinical benefit; strongly recommended
B	Strong or moderate evidence for efficacy but with a limited clinical benefit; generally recommended
C	Insufficient evidence for efficacy or benefit does not outweigh the risk or the disadvantages (adverse events, costs, etc.); optional
D	Moderate evidence against efficacy or for adverse outcome; generally not recommended
E	Strong evidence against efficacy or for adverse outcome; never recommended

Maintenance

A formal review of the guideline will be conducted at the Annual Provincial Meeting in 2025. If critical new evidence is brought forward before that time, however, the guideline working group members will revise and update the document accordingly.

Abbreviations

FNA, Fine Needle Aspiration; MRP, Most Responsible Physician; PICC, peripherally inserted central catheter; RCPSC, Royal College of Physicians and Surgeons of Canada;

Disclaimer

The recommendations contained in this guideline are a consensus of the Alberta Provincial Head and Neck Tumour Team and are a synthesis of currently accepted approaches to management, derived from a review of relevant scientific literature. Clinicians applying these guidelines should, in consultation with the patient, use independent medical judgment in the context of individual clinical circumstances to direct care.

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Conflict of Interest Statements

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