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J Irish

J Kim

J Waldron

A C Wei

E Winquist

*See next page for additional authors*

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**Authors**

J Irish, J Kim, J Waldron, A C Wei, E Winqvist, J Yoo, A Boasie, M Brouwers, E Meertens, S McNair, and C Walker-Dilks

# Organizational guidance for the care of patients with head-and-neck cancer in Ontario

J. Irish MD MSc,\* J. Kim MD,<sup>†</sup> J. Waldron MD MSc,<sup>‡</sup> A.C. Wei MD MSc,<sup>§</sup> E. Winqvist MD MSc,<sup>||</sup>  
J. Yoo MD,<sup>#</sup> A. Boasie MSc MBA,<sup>\*\*\*</sup> M. Brouwers PhD,<sup>††</sup> E. Meertens BScN MHS,<sup>##</sup>  
S. McNair PhD,<sup>\$\$</sup> C. Walker-Dilks MLS,<sup>\$\$</sup> and the Expert Panel on Organizational  
Guidance for the Care of Patients with Head and Neck Cancer in Ontario

## ABSTRACT

**Background** At the request of the Head and Neck Cancers Advisory Committee of Ontario Health (Cancer Care Ontario), a working group and expert panel of clinicians with expertise in the management of head-and-neck cancer developed the present guideline. The purpose of the guideline is to provide advice about the organization and delivery of health care services for adult patients with head-and-neck cancer.

**Methods** This document updates the recommendations published in the Ontario Health (Cancer Care Ontario) 2009 organizational guideline *The Management of Head and Neck Cancer in Ontario*. The guideline development methods included an updated literature search, internal review by content and methodology experts, and external review by relevant health care providers and potential users.

**Results** To ensure that all patients have access to the highest standard of care available in Ontario, the guideline establishes the minimum requirements to maintain a head-and-neck disease site program. Recommendations are made about the membership of core and extended provider teams, minimum skill sets and experience of practitioners, cancer centre-specific and practitioner-specific volumes, multidisciplinary care requirements, and unique infrastructure demands.

**Conclusions** The recommendations contained in this document offer guidance for clinicians and institutions providing care for patients with head-and-neck cancer in Ontario, and for policymakers and other stakeholders involved in the delivery of health care services for head-and-neck cancer.

**Key Words** Ontario Health (Cancer Care Ontario), head-and-neck cancer, organizational guidelines

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## INTRODUCTION

The purpose of this guideline is to provide advice about the organization and delivery of health care services for adult patients with head-and-neck cancer (not including thyroid cancer). The recommendations establish the minimum requirements to maintain a head-and-neck disease site program. The recommendations are intended to ensure

that the proper infrastructure is in place and that medical, nursing, allied health professional, and support staff are experienced and properly trained. To ensure that all patients have access to the highest standard of care available in Ontario, the recommendations establish standards for minimum new-patient volumes for regional cancer centre disease site groups.

**Correspondence to:** Jon Irish, c/o Cindy Walker-Dilks, Program in Evidence-Based Care, Cancer Care Ontario, Juravinski Hospital, 711 Concession Street, Hamilton, Ontario L8V 1C3.  
E-mail: [ccopgi@mcmaster.ca](mailto:ccopgi@mcmaster.ca) ■ DOI: <https://doi.org/10.3747/co.27.5873>

## METHODS

This report updates the organizational guidance portion of the 2009 document *The Management of Head and Neck Cancer in Ontario*<sup>1</sup>. A formal review of the guideline to determine the continued relevance of the original recommendations and an updated literature search were undertaken in 2017. Little new evidence emerged. A working group was formed to address changes in the organization and delivery of care to patients with head-and-neck cancer. The recommendations are presented below, with additions and modifications to the original version labelled as “new 2019” or “revised 2019.”

### Research Questions

- What minimum requirements are necessary for the organization and delivery of multidisciplinary care to patients with head-and-neck malignancies, including advanced salivary and skin cancers, but not thyroid cancer? Areas of interest include health care teams and unique infrastructure.
- What are the recommended staff requirements and expertise required by medical, surgical, nursing, and allied health care professionals to provide optimal care for these patients with head-and-neck cancer? Areas of interest include minimum volumes and training to optimize patient outcomes.

### Target Population

The population targeted in this guideline are adult patients who present with symptoms of, or who have been diagnosed with, head-and-neck malignancies, including advanced salivary and skin cancers, but not thyroid cancer.

### Intended Users

This document is intended for administrators responsible for maintaining, developing, and implementing head-and-neck cancer programs, and for oncology health care professionals who, during the full continuum of care from diagnosis to post-treatment follow-up and rehabilitation, interact with patients who have head-and-neck cancer.

### Internal and External Review

For the internal review, an expert panel of clinical content experts reviewed the draft document and provided feedback. Health care practitioners with expertise in the guideline topic were invited to comment. Those individuals were drawn from the Ontario Head and Neck Cancers Advisory Committee, the co-authors of the previous version of this guideline, the database of Ontario cancer care practitioners maintained by the Program in Evidence-Based Care (PEBC), and recommendations by working group members. Invitations were extended to 26 people, and 14 agreed to participate.

External review involved using professional consultation to solicit feedback from content experts about the approved draft guideline. Relevant care providers and other potential users of the guideline were contacted and invited to provide feedback about the guideline recommendations through a brief online survey. That consultation

was intended to facilitate the dissemination of the final guidance report to Ontario practitioners.

On 16 November 2018, the document was disseminated to 175 health care practitioners; the survey closed on 14 December 2018. Practitioners with relevant expertise were identified in the PEBC database of Ontario cancer care practitioners, and other relevant contacts were provided by the Ontario Society of Oral Maxillofacial Surgeons and the Royal College of Dental Surgeons of Ontario. Lists of speech–language pathologists and dietitians practising in Ontario were provided by an expert panel member.

Results of the two sources of feedback can be found in the full guideline report on the Ontario Health (Cancer Care Ontario) [OH(CCO)] Web site at <https://www.cancercareontario.ca/en/guidelines-advice/types-of-cancer/58936>.

## RECOMMENDATIONS

### Team

#### *Multidisciplinary Care by Core Team (New 2019)*

- 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.

#### *Core Team Membership (Revised 2019)*

- The Core Team is defined as the group of clinicians who see most new patients with head-and-neck cancer and who are responsible for the assessment, treatment, planning, management, survivorship, and rehabilitation of those patients.
- The care of patients with head-and-neck cancer should be coordinated between the members of the Core Team to ensure optimally effective and safe care.
- During the diagnosis, management, and follow-up process, each patient with head-and-neck cancer will have a clearly identified most responsible physician (MRP). The MRP refers to the physician who has overall responsibility for directing and coordinating the head-and-neck cancer care of an individual patient and the management of their case at a specific point in time. The MRP will be responsible for handover of care during periods of absence or transition of care to a different MRP or between treatment modalities.
- The multidisciplinary team should comprise:
  - Surgical oncologist with experience managing the entire scope of head-and-neck disease (early- to late-stage cases)
  - Radiation oncologist
  - Medical oncologist
  - Pathologist with expertise in both histopathology and cytopathology
  - Dentist with expertise in dental oncology
  - Clinical nurse specialist or nurse practitioner, or both
  - Specialized oncology registered nurse (inpatient and ambulatory registered nurses)
  - Medical imaging physician

- Speech–language pathologist
- Registered dietitian
- Social worker
- Primary care physician

The primary care physician is not usually involved in the day-to-day treatment of the patient with head-and-neck cancer, but plays an important role in post-treatment supportive care and is responsible for the ongoing overall health of the patient.

Based on circumstances, some primary care physicians might be actively involved in the acute care of patients with head-and-neck cancer, especially with regard to advocacy and coordination of supportive care. Such involvement is encouraged.

### **Extended Team Membership (Revised 2019)**

- The Extended Team will be called upon by the Core Team to facilitate treatment, planning, management, survivorship, and rehabilitation of the patient. Members of the Extended Team provide more episodic care and are not responsible for seeing most new patients.
- Members of the Extended Team must have training or experience managing patients with head-and-neck cancers. The team comprises:
  - Anesthesiologist with expertise in airway management
  - Audiologist
  - Dental technicians and hygienists
  - Health care providers with expertise in gastrostomy creation, feeding tube placement, and support for patients who require tube feeding
  - Home care team
  - Hyperbaric medicine
  - Interventional radiologist
  - Mental health providers, including psychiatrist or psychologist
  - Occupational therapist
  - Ophthalmologist
  - Oral and maxillofacial surgeon
  - Pain management specialist
  - Palliative care specialist
  - Physiotherapist
  - Prosthodontist or prosthetic anaplastologist
  - Radiation physicist
  - Medical radiation technologist (radiation therapist)
  - Respiratory therapist

### **Minimal Skill Set and Experience for Treating Head-and-Neck Carcinomas**

#### **Surgical Oncologist (Revised 2019)**

- A head-and-neck surgical oncologist must have expertise in and the ability to
  - investigate, diagnose, stage, restage, and treat patients with head-and-neck cancer.
    - provide diagnostic testing that should include
    - imaging such as ultrasonography, contrast-enhanced computed tomography, magnetic resonance imaging, and positron-emission tomography;

- the performance of point-of-care fine-needle aspiration biopsy; and
- direct tissue biopsy, with access to frozen section pathologic examination.
- perform staging examinations, including
  - flexible nasopharyngoscopy in an ambulatory care clinic,
  - panendoscopy and examination under general anesthesia, and
  - open neck biopsy.
- perform essential procedures to manage the upper aerodigestive tract and support patients with head-and-neck cancer:
  - Tracheotomy
  - Rigid laryngoscopy
  - Rigid esophagoscopy
  - Nasogastric and percutaneous feeding tube insertions (have the necessary access)
- perform extirpative surgical procedures for the treatment of skin, salivary gland, sinus or skull base, oral cavity, laryngopharyngeal, and thyroid cancers, and for the management of cervical lymph nodes.
- provide minimally invasive oncologic procedures such as endoscopic surgery or transoral robotic surgery.
- perform reconstructive surgical procedures that include
  - nerve grafting (such as facial nerve);
  - skin and mucosal grafting; and
  - local, regional, and pedicle flap reconstruction.
- be a member of a reconstructive team for which microvascular reconstruction is readily available.
- Surgeons must have completed advanced fellowship training in head-and-neck surgical oncology.
- Prerequisite to fellowship requires that candidates
  - attain the Royal College of Physicians and Surgeons of Canada (RCPC) Surgical Foundations examination (or equivalent).
  - maintain a surgical case log to demonstrate sufficient competency relevant to the treatment of patients with head-and-neck cancer.
  - successfully complete a RCPC-approved surgical residency (or equivalent).
- Advanced fellowship training must
  - be of at least 1 years' duration.
  - maintain a surgical case log to demonstrate sufficient proficiency in the foregoing list with respect to “expertise and ability.”

**Note:** Advanced training is defined as an Advanced Training in Head and Neck Oncologic Surgery Fellowship through the Canadian Association of Head and Neck Surgical Oncology (<https://cahnso.com/>) or the American Head and Neck Society (<https://www.ahns.info/>).

#### **Head-and-Neck Microvascular Reconstructive Surgeon (Revised 2019)**

- The head-and-neck microvascular reconstructive surgeon is an integral member of the head-and-neck oncology team.

- Advanced fellowship training in head-and-neck microvascular surgery is required.

**Note:** An individual surgeon may meet the training standards and criteria as both a head-and-neck surgical oncologist and a microvascular reconstructive surgeon.

### **Radiation Oncologist**

- Has completed a degree in medicine (or equivalent), including the RCPSC Specialist Certificate in Radiation Oncology (or equivalent).
- Has enhanced knowledge and skill in the treatment of patients with head-and-neck cancer, acquired from either a formal clinical fellowship or significant clinical training in head-and-neck cancer treatment at an expert centre during radiation.

### **Medical Oncologist**

- Has completed a degree in medicine (or equivalent), including the RCPSC Specialist Certificate in Internal Medicine (or equivalent), as well as the RCPSC Certificate of Special Competence in Medical Oncology (or equivalent).
- Has enhanced knowledge and skill in the treatment of patients with head-and-neck cancer, acquired from either a formal clinical fellowship or significant clinical training in head-and-neck cancer treatment at an expert centre during medical oncology residency or fellowship.

### **Dentist with Expertise in Dental Oncology**

- Has completed a university-based degree in dentistry and fulfilled the requirements of the Royal College of Dental Surgeons of Ontario, and completed a 1-year hospital residency program that includes training and experience with patients who have head-and-neck cancer, or an oral pathology or oral medicine residency program approved by the Commission on Dental Accreditation of Canada.

### **Pathologist**

- Has completed a degree in medicine (or equivalent), including the RCPSC Certificate of Special Competence in Anatomical Pathology.
- Has enhanced knowledge and skill in the pathology of head-and-neck malignancies, acquired from either a formal fellowship or significant training in head-and-neck cancer at an expert centre.

### **Registered Nurse**

- All entry-to-practice nurses shall have a Bachelor's degree in nursing and be registered with the College of Nurses of Ontario. Ideally, all nurses will hold a Certified in Oncology Nursing (Canada) credential and membership in the Canadian Association of Nurses in Oncology.

### **Generalized and Specialized Oncology Nurses**

- Generalized and specialized oncology nurses have enhanced specialty knowledge and skill, and practice in an environment in which most individuals have a diagnosis of cancer or are at risk of developing cancer.

- The registered nurse is able to
  - conduct a comprehensive health assessment, engage in supportive and therapeutic relationships with patients and families, and manage cancer symptoms and treatment side effects;
  - provide teaching, coaching, psychosocial-spiritual support, and counselling across the continuum;
  - facilitate continuity of care and system navigation, self-determination, and informed decision-making for the individual or family; and
  - integrate best-practice or evidence-based knowledge in the care of patients and families<sup>2-4</sup>. Ideally, a registered nurse working with this patient population will have general oncology experience or be mentored to develop the skills to work with the patient population.
- Specialized oncology nurses should be aligned and integral to the care of this patient population in both inpatient and outpatient or ambulatory care settings.
- In ambulatory care, a primary registered nurse, case management model, or head-and-neck site-specific model should be established such that patients and families will receive consistent care across the trajectory (diagnosis, treatment, and survivorship or palliation) and care settings (new-patient clinics, reviews, and follow-up) for assessment, treatment planning, symptom management, psychosocial support, and long-term follow-up.

### **Advanced Practice Nurse (Clinical Nurse Specialist or Nurse Practitioner)**

- Advanced practice nurses should be aligned to any or all of complex, specialized, or high-risk patient populations. The advanced practice nurse roles are designed to address and meet the needs of individuals, families, and groups of patients, and to have an impact at the patient, organization, and system levels<sup>5</sup>.
- The nurse practitioner should possess advanced knowledge and skill to autonomously diagnose, order, and interpret diagnostic tests; to prescribe treatment (including drugs); and to perform specific procedures within their legislated scope of practice<sup>6</sup>. The nurse practitioner should support patients receiving concurrent treatment.
- The clinical nurse specialist has a Doctoral or Master's degree in nursing, with knowledge and expertise in an area of cancer nursing. The breadth and depth of knowledge is greater than that for the specialized oncology nurse. The clinical nurse specialist functions in the domains of direct clinical care, education, research, organizational leadership, and professional development. The nurse practitioner, in addition to the foregoing, has completed an approved post-Master's nurse practitioner specialty certificate, is registered in the "extended class," and has an expanded scope of practice that includes ordering diagnostics, diagnosing, prescribing, treating, referring, and admitting or discharging. The advanced practice nurse should have prior oncology experience and expertise, but might require role mentoring to develop specific oncology expertise<sup>5,7,8</sup>.

### **Medical Imaging Physician**

- The medical imaging physician has completed a degree in medicine (or equivalent), is a member of the College of Physicians and Surgeons of Ontario, and has completed the RCPSC 5-year residency program and received a Certificate of Special Competence in Diagnostic Radiology.
- The residency should be followed by 1 or more years of fellowship training in a subspecialty discipline.

### **Speech–Language Pathologist**

- The speech–language pathologist has a Master’s degree (or equivalent) in speech pathology, is a registered member of the College of Audiologists and Speech–Language Pathologists of Ontario, and is an independent authorizer with the Assistive Devices Program. Knowledge and expertise in clinical swallowing assessment and therapy, video fluoroscopic swallowing assessment, and the management of patients with tracheotomies is required. If required to do voice restoration work for patients who have undergone laryngectomy, the speech pathologist should be approved for delegated controlled acts and have specialized training in tracheoesophageal puncture.

### **Registered Dietitian**

- The registered dietitian has a Bachelor’s degree in human nutrition and dietetics from a university program that has been accredited by the Partnership for Dietetic Education and Practice, and a post-degree supervised practicum program accredited by the Partnership for Dietetic Education and Practice.
- Registration with the College of Dietitians of Ontario is required; membership with the Dietitians of Canada is recommended.
- Hospital or patient care experience, or oncology expertise (or both) is recommended.
- Registered dietitians complete detailed clinical nutrition assessments, develop individualized patient care goals and a nutrition care plan, and provide ongoing follow-up through the continuum of care.
- The registered dietitian has experience and training in nutrition support, with knowledge and expertise in swallowing function and dysphagia assessment and treatment.

### **Social Worker**

- The social worker has a Master’s degree in social work, registration with the Ontario College of Social Workers and Social Service Workers, and hospital or patient care experience as well as oncology expertise.
- Through a comprehensive psychosocial assessment, social workers should have experience in understanding and treating the social, psychological, emotional, spiritual, quality-of-life, and functional aspects of cancer, working with patients and their caregivers alike across the cancer care continuum.
- Affiliation and membership with professional oncology social work organizations such as the Canadian Association of Psychosocial Oncology and the Ontario Association of Social Workers are recommended.

### **Primary Care Physician**

- The primary care physician has completed a degree in medicine (or equivalent), ideally including a College of Family Physicians of Canada Certificate in Family Medicine.

### **Oral and Maxillofacial Surgeon (New 2019)**

- The oral and maxillofacial surgeon must have
  - expertise in dental rehabilitation and implant rehabilitation to support maxillofacial prostheses.
  - a degree in dentistry at an accredited dental school, followed by postgraduate residency training and successful completion of specialty examinations administered by the National Dental Examining Board of Canada of the Royal College of Dentists of Canada.
  - a FRCD(C) Certificate in Oral and Maxillofacial Surgery, Fellowship Training Certificate (or equivalent).
  - Royal College of Dental Surgeons of Ontario specialty certification as an oral and maxillofacial surgeon.

### **Volumes**

#### **Cancer Centre–Specific and Practitioner–Specific Volumes (Revised 2019)**

- Innovative collaborations between high-volume and low-volume centres or regions should be expanded and defined to maintain the high quality of care being provided to this group of patients. Such collaborations include virtual multidisciplinary case conferencing options and joint care planning with regional care-delivery models.
- The development of small-volume, non-multidisciplinary treatment programs for patients with head-and-neck cancer should be strongly discouraged.

The human resources and proficiency volumes outlined in the subsections that follow are drawn from the recommendations in the original guideline and from the OH(CCO) Head and Neck Standards—Designated Centre Requirements, which were developed by a multidisciplinary steering committee in 2014 to operationalize the original recommendations. No data are available in Ontario or elsewhere to directly inform minimum volume thresholds for surgeons, medical oncologists, or radiation oncologists to ensure high-quality care. Additionally, no data or existing clinical practice guidelines in Ontario or elsewhere are available to directly inform the minimum volumes for specialized oncology nurses, advanced practice nurses, speech–language pathologists, registered dietitians, or social workers. The revised guideline working group believes that the volumes set out here are reasonable goals in Ontario.

#### **Recommended Minimum Volumes: Surgery**

- Each centre offering surgery should have a minimum of 80 head-and-neck surgeries per year and a minimum of 2 head-and-neck surgical oncologists.

- If reconstructive microsurgeries are performed at a centre, either by a head-and-neck surgical oncologist or a plastic surgeon, the surgeon should perform a minimum of 20 reconstructive microvascular procedures each year (the 20 reconstructive surgeries are included in the 80-case volume).
- Generally, head-and-neck cancer surgery cases should be consolidated to a small number of specialized surgeons to ensure high quality of care.

**Recommended Minimum Volumes:  
Radiation Oncology**

- Optimally, all centres offering radiation to patients with head-and-neck cancer should treat a minimum of 100 patients per year and have a minimum of 2 radiation oncologists with expertise in head-and-neck cancer.
- However, radiation may be provided in centres that treat a minimum of 50 patients per year if they meet all the requirements for radiation services (including 2 radiation oncologists on site and necessary human and physical resources) to accommodate patients who live remotely. In that situation, it is expected that, to optimize experience and treatment, both radiation oncologists will be involved in the planning and management of all patients.
- Generally, head-and-neck cancer cases should be consolidated to a small number of specialized radiation oncologists to ensure high quality of care.

**Recommended Minimum Volumes:  
Systemic Therapy**

- Volumes for systemic therapy will generally be dictated by radiation oncology volumes, because chemotherapy is usually given concurrently with radiation.
- Chemotherapy delivered concurrently with radiation should be delivered only in centres in which the radiation is being given.
- There should be a minimum of 2 medical oncologists with expertise in head-and-neck cancers at that centre.
- There is no volume requirement for patients receiving palliative chemotherapy. Palliative chemotherapy can be delivered at any regional systemic treatment program site.

**Recommended Minimum Volumes:  
Allied Health Professionals**

- Specialized oncology nurse
  - 1.0 full-time equivalent (FTE) per 100 patients with head-and-neck cancer
- Advanced practice nurse
  - 1.0 FTE per head-and-neck site group (especially with larger site groups seeing more than 200 patients in consultation per year *or* shared across another site group)
- Speech-language pathologist
  - 1.0 FTE per 150 patients with head-and-neck cancer
- Registered dietitian
  - 1.0 FTE per 150 patients with head-and-neck cancer
- Social worker
  - 1.0 FTE per 150 patients with head-and-neck cancer

**Multidisciplinary Care Requirements (New 2019)**

- Head-and-neck centres will provide surgery, radiation, and systemic therapy.
- All patients with head-and-neck cancer require a multidisciplinary assessment by a head-and-neck surgical oncologist and a radiation oncologist with expertise in head-and-neck oncologic cases at a minimum, and should receive assessment by medical oncology as needed. See the multidisciplinary cancer conference guidance and information at <https://www.cancercareontario.ca/en/guidelines-advice/types-of-cancer/286>.
- Where geography makes it difficult for patients to travel to be seen in person, assessment must include examination by an otolaryngologist or head-and-neck surgeon who is available in the local community. In addition, patients must be reviewed at a multidisciplinary case conference 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.
- To allow care closer to home, radiation may be provided in centres not offering surgery if they meet all the requirements for radiation services and are partnered with a head-and-neck centre.
- A “2-site” model is divided only by discipline and does not refer to meeting volumes in one discipline (for example, surgery or radiation) by spreading it across 2 hospitals. Each site is responsible for ensuring that patients have access to all of the required human and physical resources.

**Unique Infrastructure Requirements (Revised 2019)**

- 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.

**Note:** These requirements are unique to the treatment of head-and-neck cancer and are beyond those requirements that would typically be found in such settings.

**Multidisciplinary Ambulatory Care Clinic (New 2019)**

- 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

**Perioperative**

- Infrastructure for microvascular, laser, and minimally invasive surgery
- Rapid access to neurosurgery, thoracic surgery, and vascular surgery intraoperative support
- Perioperative monitoring (level III or greater)—for example, specialized surgical nursing units with available 24-hour care, expertise in airway management, and free flap monitoring

- Clinic equipment for nasopharyngoscopy and image capture
- Access to rigid laryngoscopy, esophagoscopy, bronchoscopy
- Access to surgical pathology and frozen section

### **Medical Oncology**

- Ambulatory chemotherapy unit and oncology pharmacy support
- Access to inpatient and ambulatory services, including ability to administer chemotherapy

### **Radiation Oncology**

- Radiation treatment facility including these capabilities:
  - Linear accelerator–based external-beam radiation treatment with multileaf collimation and intensity-modulated radiation therapy or volumetric-modulated arc therapy
  - Computed tomography simulation (with intravenous contrast available) and custom immobilization
  - Daily image-guided radiation therapy
  - Medical dosimetry and physics support for plan development and quality assurance meeting or exceeding provincial and national standards
  - Resources for staff and infrastructure to support the acute and long-term patient experience, including access to all multidisciplinary programs

### **Diagnostic Imaging (New 2019)**

- Access to positron-emission tomography imaging for insured indications (for current indications see: <https://www.petscansontario.ca/cms/One.aspx?portalId=69866&pageId=69897#>)
- Ultrasound with access to point-of-care needle biopsy
- Ancillary testing as required (for example, generalized metastatic survey, bone scan, abdominal or pelvic computed tomography, brain imaging)

### **Molecular Pathology and Testing for Human Papillomavirus (New 2019)**

- Human papillomavirus status of squamous cell carcinomas of oropharynx
- Epstein–Barr virus status of keratinizing and nonkeratinizing carcinomas of the nasopharynx

### **Nursing**

- Access to interventional radiology for insertion of percutaneous endoscopic gastroscopy tubes
- Feeding pumps for inpatient and ambulatory settings
- Access to 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 to 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
- Drop-in clinics (for example, radiation nursing clinic, urgent-care clinics)
- Access to a nurse practitioner for patients receiving concurrent treatment

### **Speech–Language Pathology**

- Specialized equipment for speech rehabilitation (post-laryngectomy)
- Availability of and access to radiology for completion of modified barium swallows and equipment to support the analysis of swallowing function
- Access to space to see patients collaboratively and independently, including ability to assess drop-in patients

### **Nutrition**

- Access to interventional radiology for insertion of a radiology-inserted gastrostomy or access to the endoscopy suite for percutaneous endoscopic gastroscopy
- Access to enteral feeding supplies for the delivery of enteral nutrition

### **Dentistry (New 2019)**

- Capacity to support institutional volumes
- Intraoral and extraoral (panoramic) or cone-beam computed tomography imaging
- Instrumentation, supplies, and staffing to quickly and efficiently eliminate sources of infection
- Instrumentation, supplies, and staffing to provide oral surgical, operative, prosthetic or maxillofacial prosthetic, preventive, and follow-up dental care

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### **CONFLICT OF INTEREST DISCLOSURES**

We have read and understood *Current Oncology's* policy on disclosing conflicts of interest, and we declare the following interests: JI is a consultant with OH(CCO) and the owner of JC Irish Medicine Professional Corporation, a practice dedicated to head-and-neck oncology medical practice. JK is deputy chief of radiation medicine, Princess Margaret Hospital. The organization has multiple vendor relationships; JK does not benefit personally. ACW is a consultant with Ethicon and declares no conflict with any topics or diseases addressed by this guideline. EW has consulted for Amgen, AstraZeneca, Bayer, Eisai, Merck, and Roche and acted as an investigator in industry-supported clinical trials with funding going to his institution. JY is on the board of directors for Cotinga Pharmaceuticals Inc., a drug development company in phase I clinical trials, and receives stock options, no salary. The remaining authors have no conflicts to disclose.

### **AUTHOR AFFILIATIONS**

\*Surgical Oncology, Ontario Health (Cancer Care Ontario), and Department of Otolaryngology–Head and Neck Surgery/Surgical Oncology, Princess Margaret Cancer Centre, University of Toronto, Toronto, ON; †Head and Neck Cancers, Ontario Health (Cancer Care Ontario); Radiation Medicine Program, Princess Margaret Cancer Centre, University Health Network; and Department of Radiation Oncology, University of Toronto, Toronto, ON; ‡Radiation Medicine Program, Princess Margaret Cancer Centre, University Health Network, and Department of Radiation Oncology–Otolaryngology, University of Toronto, Toronto, ON; §Memorial Sloan Kettering Cancer Center, New York, NY, U.S.A.; ¶Department of Oncology, Division of Medical Oncology, and #Department of Otolaryngology–Head and Neck

Surgery and Oncology, London Health Sciences Centre, Schulich School of Medicine and Dentistry, Western University, London, ON; \*\*Toronto Central Regional Cancer Program and Princess Margaret Cancer Centre, University Health Network, Toronto, ON; ††School of Epidemiology and Public Health, University of Ottawa, Ottawa, ON; ‡‡Cancer Planning and Regional Program Development, Ontario Health (Cancer Care Ontario), Toronto, ON; §§Program in Evidence-Based Care, Ontario Health (Cancer Care Ontario), McMaster University, Hamilton, ON.

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