

## Canadian Association of Head & Neck Surgical Oncology (CAHNSO) guidelines for management of Head & Neck Cancer during the COVID-19 Pandemic

### Executive summary

These guidelines are based on current best available evidence. They are intended to provide guidance and need to be interpreted based on local institutional policy. These guidelines will continue to be updated as more information and knowledge about COVID-19 arises.

PHASE OF CARE	RECOMMENDATION
<b>NEW PATIENT REFERRALS</b>	1. Virtual patient interactions should be used to screen new cancer referrals to identify urgent and emergent referrals. In person consultations (outpatient / clinic) should be limited to urgent and emergent referrals
<b>DIAGNOSIS AND WORK UP</b>	2. Upper aerodigestive endoscopy should be considered a Aerosol Generating Medical Procedure (AGMP) 3. Upper aerodigestive endoscopy should only be performed when absolutely necessary. Appropriate Personal Protective Equipment (PPE) should be worn during endoscopy 4. Diagnostic work up including imaging and biopsies should be limited to those cases with a high risk of malignancy
<b>SURGICAL MANAGEMENT</b>	5. Surgical Treatment of Head & Neck Cancer should be prioritized locally to ensure higher risk cases receive priority access to treatment 6. Multidisciplinary tumour board meetings should be converted into a virtual format to ensure continued function at normal intervals and continued participation of all critical disciplines 7. COVID19 testing as per regional guidelines should be sought out for all patients undergoing head and neck surgical procedures that involve manipulation of upper aerodigestive tract mucosa 8. Surgery for COVID unknown or negative patients undergoing surgery that requires manipulation of the upper aerodigestive tract. The operating team should be reduced to essential personnel. The surgical team's PPE should include scrubs, gown, N95 masks, surgical hood, face shield, and double gloves or PAPR, scrubs, gown, and double gloves. 9. Surgery for COVID positive patients undergoing surgery that requires manipulation of the upper aerodigestive tract. These cases should only be performed on an emergent basis, in a dedicated operating room, following local or regional health authority protocols. The operating team should be reduced to essential personnel. The surgical team's PPE should include: PAPR, scrubs, gown, and double gloves.
<b>FOLLOW-UPS</b>	10. All non-urgent in person follow ups should be postponed. Virtual follow-ups should be used wherever appropriate to guide further management and assessment needs

## CAHNSO Position Statement:

Healthcare systems locally, nationally and internationally are evolving to meet the unprecedented impact of COVID-19 on healthcare delivery. These guiding principles are based on current best available evidence and is intended to guide, and support decisions made by local and regional multidisciplinary head and neck cancer treatment teams. These guidelines should not be viewed as prescriptive but rather supportive and should be used in conjunction with guidance from local and provincial authorities. These guidelines will continue to be updated as more information and knowledge about COVID-19 arises.

### 1. Background literature review

There is growing evidence that personnel who perform procedures in the upper aerodigestive tract, and in particular otolaryngologists Head and Neck Surgeons are at high risk of not only becoming exposed to COVID-19, but also developing severe illness from the virus.<sup>1,2</sup> Practically speaking, a report from Wuhan noted that 14 personnel became infected from a single endoscopic trans-sphenoidal pituitary case, including every OR staff member that was involved in the case.<sup>3,4</sup> Europe has seen the same high infection rate of otolaryngologists, as reported by intensive care units across the region.<sup>5</sup> There was recently a report of four otolaryngologists in the UK having been infected, two of which are intubated and in critical condition in the ICU, after having contracted COVID-19 from asymptomatic patients.<sup>6</sup> Reliable reports have documented active transmission in asymptomatic cases.<sup>4</sup> The increased risk of contracting COVID-19 in these procedures is thought to be due to the high viral load in the upper respiratory tract.<sup>7</sup> Not only this, but persons who are exposed to high viral loads, such as during surgery as opposed to contracting the virus in the community, are thought to suffer more severe illness due to the release of cytokine storms in these settings.<sup>8</sup>

This new and emerging information has led to several specialty societies and health authorities making recommendations on the use of PPE in procedures that are considered aerosol-generating (aerosol generating medical procedures or AGMPs), where standard contact and droplet precautions are not sufficient to protect against aerosolized viral particles. Whereas many of these recommendations vary in the details, all published criteria in the literature now support the use of N95 masks and associated aerosolized droplet precautions with all aerosol-generating medical procedures, regardless of COVID-19 testing. Many guidelines go much farther, recommending PAPRs for all such cases.<sup>2,9</sup> The question of whether this should be enacted relies on three central issues:

1. The expected rate of community viral burden in the province;

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2. The rate of asymptomatic infection;
3. The reliability of COVID-19 testing in asymptomatic patients.

With respect to the first issue, we know that community transmission of COVID-19 is rising across Canada, and is now responsible for more than half of infections in the country.<sup>10</sup> Projections vary widely, but according to the federal health minister, “between 30 and 70 percent of Canadians could become infected with coronavirus.”<sup>11</sup> Countries that did not prepare for this scenario are now facing such consequences, including Italy which is battling a high rate of health worker infections and COVID-related deaths.

With respect to the second issue, emerging data shows that asymptomatic infections may be much more common than previously thought. During the CDC investigation of the Diamond Princess cruise ship outbreak, 46.5% of infected individuals were asymptomatic at the time of testing, and 17.9% of those infected never developed symptoms.<sup>12</sup> This is in alignment with findings in children, which show that more than 15% of patients have asymptomatic infection.<sup>13</sup> There is also ample data to show that active transmission of the virus occurs in asymptomatic persons.<sup>4</sup>

Finally, current methods of testing for the COVID-19 virus are not validated for use in asymptomatic persons. Departments of Public Health and the CDC have repeatedly warned about the false negative (and false positive) rate of nasal swabs in asymptomatic patients.<sup>14-16</sup> Although a positive COVID-19 swab in an asymptomatic patient can be useful, a negative swab cannot be relied on to be accurate.

In summary, we can conclude and/or infer the following from the available data:

1. Personnel who are involved in aerosol-generating medical procedures, in particular otolaryngologists, are at high risk of contracting COVID-19 AND suffering severe or fatal illness from the disease
2. Standard contact and droplet precautions are not sufficient for protecting against COVID-19 in these circumstances
3. There is (and/or soon will be) a high burden of the novel coronavirus in the general population.
4. A significant proportion of COVID-19 infections are asymptomatic, and these persons can transmit the virus and infect others
5. A negative COVID-19 swab cannot rule out infectivity in asymptomatic persons.
6. If we consider an infection rate of only 30% in the general population. With only 15% asymptomatic rate then 1 in 20 patients undergoing surgery will be unknowingly COVID-19 positive, exposing the entire team to high risk of infection without proper precautions.

## 2. Anatomy and physiology

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The upper aerodigestive tract includes the nasal cavities, nasopharynx, oral cavity, oropharynx, hypopharynx, larynx, and trachea. This tract is a zone of intense COVID-19 viral replication.<sup>1</sup> Moreover, all procedures in this region (e.g. endoscopy, oral surgery, maxillectomy, tracheostomy, etc.) are aerosol-generating procedures.<sup>18</sup> As such, surgeons, anesthetists and nurses involved in the manipulation these sites are at a particularly high risk of contracting the virus.<sup>19</sup>

### 3. Referrals

- a. Outpatient, clinic, and office consultations should be limited to urgent or emergent referrals
- b. A robust triage referral system should be in place to screen for referrals with prioritization of those with a high risk of malignancy/cancer – these patients would then be deemed urgent referrals
- c. Referrals with low likelihood of malignancy or known benign disease should be deferred with records kept for the purposes of later recall where resources and appropriateness allow
- d. Virtual / telephone consultation should be considered for all referrals with a risk of malignancy to better ascertain severity and to guide need for face to face consultations.
- e. Restrict all patient face to face patient assessments to urgent and emergent interactions.
- f. Patients who are at higher risk for adverse outcomes following COVID-19 infection (age > 70 years, known high risk comorbidities, frailty) who meet high risk cancer criteria should be prioritized in a way that minimizes their time in hospital / clinical environments with any elevated risk of COVID 19 exposure

### 4. Diagnostic Work-up

- a. All patients must undergo clinical screening prior to entering the assessment/treatment area. Minimum screening should include screening questionnaire, travel history, COVID-19 contact risk assessment and body temperature reading. Screening should follow local or regional guidelines where available.
- b. Nasopharyngoscopy, rigid nasal endoscopy, flexible laryngoscopy are considered Aerosol Generating Medical Procedures (AGMPs) and appropriate PPE should be worn by providers during these procedures. See - [https://www.entcanada.org/wp-content/uploads/NCAL-HN-Oncologic-Surgery-in-COVID-Era\\_v3.pdf](https://www.entcanada.org/wp-content/uploads/NCAL-HN-Oncologic-Surgery-in-COVID-Era_v3.pdf)
- c. Upper aerodigestive endoscopy should only be performed when absolutely necessary. Staff must not use atomizers for anesthesia and decongestion when scoping patients.
- d. COVID negative or unknown status and asymptomatic patients for consultation +/- scoping:

1. The patient should only be scoped once. Only the treating physician should perform the procedure.
  2. PPE should include scrubs, water impermeable gown, N95 mask, face shield or other eye protection, and gloves.
  3. The use of video towers is recommended.
- e. COVID positive or presumed positive (symptomatic) patients for consultations +/- scoping:
1. The examination should be performed in room with negative pressure.
  2. Only treating physician or a senior learner should perform the procedure.
  3. PPE should include scrubs, water impermeable gown, surgical hood, full face shield, and double gloves and N95 mask or Powered Air Purifying Respirator (PAPR)

Appropriate donning and doffing protocols are critical and must be followed when using PPE. An appropriately fit-tested N95 respirator is equally important.

- f. Limit diagnostic work up including biopsies, and diagnostic imaging to those cases with a high risk of malignancy
- g. Diagnostic imaging requests for patients with a high risk of malignancy should be reduced to the minimum modality(ies) required for safe oncologic treatment decision making.
- h. Diagnostic work up including biopsies and diagnostic imaging for cases with low risk of malignancy should be deferred with records kept to initiate work up if required at a later date
- i. Ensuring appropriate Personal Protective Equipment (PPE) is available for all health care providers interacting with patients - see [https://www.entcanada.org/wp-content/uploads/NCAL-HN-Oncologic-Surgery-in-COVID-Era\\_v3.pdf](https://www.entcanada.org/wp-content/uploads/NCAL-HN-Oncologic-Surgery-in-COVID-Era_v3.pdf)

## 5. Multi-disciplinary tumor team (MDT) Function

- a. MDT / tumor board meeting that require in person interactions that violate social distancing recommendations (<2m space between all individuals) should be postponed indefinitely
- b. MDT / tumor board meetings should be converted (where possible) into virtual formats to enable continued function at normal intervals and continued attendance by all required members.

## 6. Surgical Management in the COVID-19 era:

- a. Surgical treatment of Head & Neck Cancer should be prioritized locally to ensure higher risk cases (those with high likelihood of rapid progression, increased risk of death) are receiving priority treatment.
- b. As the timeline of duration of the COVID 19 epidemic is unknown, expedition of the surgical management of cases in which a worse outcome is expected if surgery is delayed more than 4-6 weeks including:
  1. SCCA of the oral cavity, oropharynx, larynx, hypopharynx
  2. Cancers with impending airway compromise
  3. Papillary thyroid cancer with impending airway compromise, rapidly growing, bulky disease
  4. High grade or progressive salivary cancer
  5. T3/T4 melanoma
  6. Rapidly progressing cutaneous SCCA with regional disease
  7. Salvage surgery for recurrent or persistent disease
  8. High grade sinonasal malignancy lacking equivalently efficacious non-surgical treatment
- c. PPE during Head & Neck Surgical interventions:  
All recommendations listed below are based on best available current evidence. Further information can be found in the following:
  1. [https://www.entcanada.org/wp-content/uploads/NCAL-HN-Oncologic-Surgery-in-COVID-Era\\_v3.pdf](https://www.entcanada.org/wp-content/uploads/NCAL-HN-Oncologic-Surgery-in-COVID-Era_v3.pdf)
  2. [https://www.entcanada.org/wp-content/uploads/NCAL-HN-Oncologic-Surgery-in-COVID-Era\\_v3.pdf](https://www.entcanada.org/wp-content/uploads/NCAL-HN-Oncologic-Surgery-in-COVID-Era_v3.pdf)
  3. <https://www.entuk.org/covid-19>
  4. <http://www.asohns.org.au/about-us/news-and-announcements/latest-news?article=78>
  5. <https://www.entcanada.org/news-events/covid-19-alerts/>
- d. COVID testing for surgical patients where available is supported by CAHNSO especially for procedures that require manipulation of the upper aerodigestive tract.
  1. Patients that test positive should have their surgery canceled if not urgent or emergent and get rebooked when they test negative.
  2. Patients that test negative should have their surgery booked and PPE precautions should be instituted as listed below (recommendations 2a-c), as the limited sensitivity and negative predictive value of testing in asymptomatic patients does not rule out an infectious state.
- e. Surgery for COVID unknown or negative patients that requires manipulation of the of the upper aerodigestive tract.:
  1. The operating team should be reduced to essential personnel.

2. The surgical team PPE should include scrubs, gown, N95 masks, surgical hood, face shield, and double gloves or PAPR, scrubs, gown, and double gloves.
- f. Surgery for COVID unknown or negative patients that does not require manipulation of the upper aerodigestive tract.:
    1. PPE as per local or regional health authority recommendations.
  - g. Surgery for COVID positive patients that includes manipulation of the upper aerodigestive tract.
    1. These cases should be performed on an emergent basis only.
    2. These cases should be performed in a dedicated operating room, following local or regional health authority protocols.
    3. The operating team should be reduced to essential personnel.
    4. The surgical team PPE should include: PAPR scrubs, gown, and double gloves.

Appropriate donning and doffing protocols are critical and must be followed when using PPE. An appropriately fit-tested N95 respirator is equally important.

## 7. Follow-up

- a. All non-urgent follow ups should be postponed with records kept for the purposes of later recall where resources and appropriateness allow
- b. Efforts should be made to maximize the utilization of virtual / telephone follow-ups where appropriate for head and neck cancer follow-ups
- c. In person patient assessments should be limited to urgent or emergent issues where in person evaluation is required to proceed with treatment decision making.
- d. All urgent or emergent follow up interactions should follow the same guidelines outlined in sections 2 and 3.

## 8. Clinical Trials

- a. Prioritize support for patients currently on clinical trials in active treatment
- b. Consider stopping recruitment into clinical trials where issues arise with patient safety or capacity (resource impact in COVID 19 era)
- c. Local, regional and national guidance should be sought to help manage existing clinical trials for the management of head and neck cancers - <https://www.canada.ca/en/health-canada/services/drugs-health-products/drug-products/announcements/management-clinical-trials-during-covid-19-pandemic.html>



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## Disclaimer

CAHNSO has developed this information as guidance for its members. This is based on information available at the time of writing (March 30, 2020) and the association recognizes that the situation is evolving rapidly, so recommendations may change. The guidance included in this document does not replace regular standards of care, nor do they replace the application of clinical judgement to each individual presentation, nor variations due to jurisdiction or facility type.

CAHNSO will not assume liability for the accuracy or completeness of the information in this document. The information in this document cannot replace professional advice, CAHNSO encourages you to use your clinical judgement in following any of these recommendations.

Yours gratefully,

CAHNSO Executive

Hadi Seikaly – President  
John Yoo – 1<sup>st</sup> Vice President  
Rob Hart – 2<sup>nd</sup> Vice President  
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