# Memorandum

**SUBJECT:** CorHealth COVID-19 Cardiac Memo #15 - **RECOMMENDATIONS FOR AN ONTARIO APPROACH TO TRIAGING HOSPITAL-BASED CARDIAC COMPUTED TOMOGRAPHY, CARDIOVASCULAR MAGNETIC RESONANCE IMAGING AND CARDIAC NUCLEAR IMAGING SERVICES DURING COVID-19**

**TO:** Diagnostic and Medical Imaging Directors, Departments of Radiology, Cardiology, Nuclear Medicine, Cardiac Leadership Council, Members of the Clinical Advisory Committee

**FROM:** Office of the CEO, CorHealth Ontario

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**TIME:** 3:00pm

**VERSION:** 1

DISCLAIMER: The information in this document represents general guidance based on current practice and available evidence. The document was developed by provincial clinical experts, reflecting best knowledge at the time of writing, and is subject to revision based on changing conditions and new evidence. This information is *intended to* be "guidance rather than directive," and is *not meant to replace clinical judgment, regulatory body requirements, organizational, or hospital policies*. Reference to Infection Prevention and Control (IPAC) or Personal Protective Equipment (PPE) in this document should not replace or supersede the IPAC and PPE protocols or directives in place at your hospital.

# Recommendations for an Ontario Approach to Triaging Hospital-Based Cardiac Computed Tomography, Cardiovascular Magnetic Resonance Imaging and Cardiac Nuclear Imaging Services During COVID-19

## PREAMBLE

COVID-19 is an unprecedented crisis and poses a significant risk to the community as the landscape is rapidly evolving. On March 15, 2020 the Ministry of Health (MOH) issued Directive #2 for Health Care Providers (Regulated Health Professionals or Persons who operate a Group Practice of Regulated Health Professionals) requesting that all hospitals ramp down all non-essential services, elective surgeries, and other non-emergent clinical activity. Subsequently on May 26, 2020, an amendment was issued for Directive #2 indicating that all deferred and non-essential and elective services carried out by Health Care Providers may be gradually restarted subject to the requirements of this Directive. A memo from Ontario Health accompanying the amendment stated that subject to requirements, Health Care Providers are in the best position to determine which services should continue to be provided remotely vs. in person. On June 8, 2020, Ontario Health provided further recommendations to support the gradual return to full scope of service for outpatient care, primary care, and home and community care. CorHealth Ontario has worked with cardiac experts and stakeholders across the province to discuss how best to preserve care capacity for those cardiac patients in greatest need, while we gradually restore health care capacity in the context of COVID-19. The following guidance and recommendations reflect advice from this engagement.

## GUIDING PRINCIPLES

1. Keeping front line health care providers healthy and patients protected is vital.
2. Minimizing the impact of COVID-19 on the mortality and morbidity of patients with cardiac disease is a priority.
3. Aligning with province- and hospital-specific infection prevention and control policies and protocols exist is important.
4. Promoting clinical activities aimed at preserving hospital resources (i.e. health care human resources, personal protective equipment, procedure rooms) is a priority.



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## PURPOSE

As the pandemic evolves and capacity for non-urgent care expands, there will be a need to engage significant volumes of deferred cardiac imaging examinations. It is important to acknowledge these volumes exist in parallel with a significant backlog where specialized imaging examinations guides diagnosis determines appropriate treatments and provides routine follow-ups for a variety of conditions.

This document is intended to provide guidance as to how hospitals providing cardiac imaging services, including Cardiac Computed Tomography (CT), Cardiac Magnetic Resonance Imaging (MRI) and Cardiac Nuclear Imaging could be engaged in a manner that will allow for rational prioritization of the patients requiring cardiac imaging examinations. Importantly, the guidance provided in this document should be considered in collaboration with local hospital leadership, including radiology/nuclear medicine medical directors and can be tailored to fit local circumstances and resource.

Several societies have released documents regarding the use of cardiac imaging (CT, MRI and nuclear imaging) during the COVID-19 pandemic. To access these documents, as well as resources related to COVID-19 from the Canadian Cardiovascular Society (CCS), please see below or visit the CorHealth COVID-19 Resource Centre.

Anticipating that a large number of deferred cardiac imaging examinations exist, and that those examinations will include patients with a wide range of indications and relative urgency, this document is provided to guide and assist with further triaging.

## RECOMMENDATIONS

Acknowledging that all patients present unique situations that must be individually assessed and evaluated by a qualified physician and/or interdisciplinary healthcare team, the following categorization scheme is recommended to assist in establishing consistent triaging decisions for patients requiring cardiac CT, MRI and nuclear imaging examinations.

### 1. Triage Categories

**CATEGORY 1 – CRITICAL INDICATIONS**

The examination is expected to impact management decisions that prevent an adverse outcome (death or major morbidity) or hospital admission within two weeks.

**CATEGORY 2 – URGENT INDICATIONS**

The examination is essential to establishing a management decision in a symptomatic patient which, if deferred, could affect patient prognosis, or where the referring physician believes that the risk/benefit ratio favours the patient having URGENT imaging despite current pandemic risks.



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**CATEGORY 3 – ESTABLISHED BUT SEMI-URGENT or NON-URGENT INDICATION**

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|---|---|
| 3a - Semi-Urgent Indication (may be deferred based on pandemic risks) | The examination is important to establishing a management decision in a **symptomatic** patient which could affect patient prognosis, BUT where the referring physician believes that based on the risk/benefit ratio, the patient may have DEFERRED imaging in the context of current pandemic risks. |
| 3b - Semi-Urgent Indication (may be deferred based on pandemic risks) | The examination is important to establishing a management decision in an **asymptomatic** patient that would affect patient prognosis, BUT where the referring physician believes that based on the risk/benefit ratio, the patient may have DEFERRED imaging in the context of current pandemic risks. |
| 3c - Established but Non-Urgent Indication | As per Category 3b **but** a safer alternative, imaging modality is readily available or there is an uncertain impact on patient prognosis. Intended primarily to optimize/guide management in a stable/treated patient. |

**CATEGORY 4 – SURVEILLANCE AND PREVENTION**
The examination is scheduled to monitor disease progression or to screen for high risk conditions in an otherwise asymptomatic patient. Intended primarily for risk stratification in an at-risk but asymptomatic patient.

## 2. Waitlist Management

Hospitals should ensure there is a process in place, which includes assigned accountability, for the *active* management, including triage/prioritization and wait-time management, of patients requiring cardiac CT, MRI and nuclear imaging examinations. Active management may include:

- Designating an appropriately qualified member of medical staff to oversee triaging/prioritizing, in collaboration with diagnostic imaging, of cardiac CT, MRI and nuclear imaging examination requests
- Establish bi-directional communication between physicians requesting cardiac CT, MRI or nuclear imaging examinations and the medical designate accountable for triaging/prioritizing to ensure clinical status changes impacting patient's triage/prioritization category are communicated in a timely manner.
- Communicating with referred patients to inform them of cardiac CT, MRI and nuclear imaging examination delays due to COVID-19 or other reasons
- Ensuring that patients who are referred for cardiac CT, MRI or nuclear imaging examinations receive relevant information/education about their pending examinations (i.e. mailing out relevant examination information packages)

Note: Additional guidance for cardiac CT and MRI can be found in the ***Ontario Health's Memo: Practical Guidance of the Management of CT and MRI Recovery*** located here: https://www.corhealthontario.ca/Access-to-Care_COVID-19-Diagnostic-Imaging-Tip-Sheet_20200810_Final.pdf.



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## 3. Other Important Considerations

- Hospital CT, MRI and nuclear imaging capacity, in the context of COVID-19 will vary over time and across regions. Acknowledging this variation, hospitals should consider strategies to preserve access for time sensitive cardiac imaging examinations, with frequent review of this strategy as health system circumstances change.
- Consideration to providing the least invasive examination or an alternative imaging modality if both tests have similar efficacy.
- Nuclear cardiac imaging should consider leveraging vasodilator testing over exercise testing during the service resumption phases of the COVID-19 pandemic.

**Resources (weblinks) for cardiac imaging resources during COVID-19**

**Ontario Best Practice Guidelines for Managing the Flow of Patients Requiring an MRI or CT Examination**
https://collections.ola.org/mon/23006/292809.pdf

**Canadian Cardiovascular Society**
https://www.ccs.ca/images/Images_2020/Refer_Triage_Wait_Mgmt_07Apr20.pdf

**North American Society of Cardiovascular Imaging**
https://www.nasci.org/wp-content/uploads/2020/04/NASCI-COVID-statement-V2020_04.06A_website.pdf

**European Society of Cardiology**
https://www.escardio.org/Education/COVID-19-and-Cardiology/ESC-COVID-19-Guidance

**Society of Cardiovascular CT**
https://scct.org/general/custom.asp?page=COVID-19

**Society of Cardiac MR**
https://scmr.org/page/StatementCOVID-19
https://scmr.org/page/COVID19

**ASNC**
https://zenodo.org/record/3827461#.Xr3dXMhKiUk
https://link.springer.com/epdf/10.1007/s12350-020-02123-2?sharing_token=JY1bk71f657gc3KHhsafJve4RwlQNchNByi7wbcMAY5EHft5yUd4DjscRK9lx5gw13lH_xQxBzsrK3PZ1NMHdlE5VmN2_aKeCdpQjQ1wPyN_JJSS1SDHczdlEY2a6V6qMTHZqJSJw7bMtljTh6m2TVS1rlPDBpKf_6KHF_a9YdI%3D

**Circulation Imaging Weblinks**
https://www.ahajournals.org/circimaging/covid-19

Computed Tomography
SCCT Guidance for Use of Cardiac Computed Tomography Amidst the COVID-19 Pandemic



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Magnetic Resonance
SCMR guidance for the practice of cardiovascular magnetic resonance during the COVID-19 pandemic
SCMR'S COVID-19 Preparedness Toolkit

Nuclear Cardiology
ASNC Webinar: COVID-19 Preparedness for Nuclear Cardiology Labs: Insights from the US, China and Singapore
VIDEO: Best Practices for Nuclear Cardiology During the COVID-19 Pandemic
IAEA Webinar: COVID-19 Pandemic: Guidance for Nuclear Medicine Departments

Other
ACR COVID-19 Clinical Resources for Radiologists
COVID-19 pandemic and cardiac imaging: EACVI recommendations on precautions, indications, prioritization, and protection for patients and healthcare personnel



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