

# COVID-19 medical imaging referral

## Guide for referring doctors

### Order medical imaging appropriately

- It is important to maintain emergency capability and capacity, so please order medical imaging appropriately.
- Medical imaging orders/requests must influence current clinical management
- Imaging is not indicated in patients with suspected COVID-19 and mild clinical features unless they are at risk for disease progression.
- Imaging is indicated in a patient with COVID-19 and worsening respiratory status.
- In a resource-constrained environment, imaging is indicated for medical triage of patients with suspected COVID-19 who present with moderate to severe clinical features and a high pre-test probability of disease.

#### Chest X-ray

Routine chest imaging is not a screening tool for COVID-19. The majority of patients with COVID-19 have mild symptoms and minimal evidence of disease on chest X-ray.<sup>1</sup>

#### CT scans

Routine CT, (screening CT) is not recommended for all individuals undergoing emergency surgery.

The Royal Australian and New Zealand College of Radiologists (RANZCR) advises very strongly against this practice because the misuse of chest CT and misapplication of results creates an unnecessary clinical risk to the surgical team and the patient during the current COVID-19 pandemic.<sup>2</sup>

Non contrast chest CT can be restricted to patients who test positive for COVID-19 and who are suspected of having complicating features such as abscess or empyema.<sup>3</sup>

#### Interventional radiology

Screen patients for COVID-19 transmission risk and consult the radiologist prior to booking.

Before you cancel, postpone or proceed with an elective intervention, consider the clinical need, risk of delay and feasibility assessment.

Critical procedures should not be postponed e.g. procedures to save life, protect limbs and prevent permanent disability, or procedures related to cancer treatment, resolution of haemorrhage, stroke clot retrieval, symptomatic aneurysms, suspected cancer biopsies and infection related drainages.<sup>1</sup> Consider any special conditions in your local health district or facility.

Consider access to intensive care beds, general anaesthetic or sedation, airways manipulation, intubation, etc.

#### Magnetic resonance imaging

Magnetic resonance imaging (MRI) should be avoided for COVID-19 positive or suspected cases because the unit cannot be effectively deep cleaned.

If your patient is COVID-19 positive or suspected, please minimise the use of MRI except where absolutely necessary and postpone all non-urgent or non-emergent exams.

Consider alternative imaging.

#### Nuclear medicine

There is a risk of COVID-19 cases having ventilation-perfusion (VQ) scans due to problems of circuit contamination, aerosol generating procedure, patient coughing. etc.

CT pulmonary angiogram (CTPA) can be considered instead. Or a variation in protocol such as a perfusion scan or perfusion with non contrast CT as a surrogate.

Even without the ventilation scan, the lung perfusion scan can provide helpful information to the referring physician.

#### Ultrasound

Choose mobile ultrasound for wards or point of care (PoC) in the emergency department where appropriate to avoid patient transfers.

## Ordering or requesting your exam

### Is the patient COVID-19 positive or suspected?

The correct and most current COVID-19 infection control status must be provided to medical imaging for all e-orders or imaging requests via eMR or similar hospital information systems.

### Approvals

- Send imaging requests or e-orders for COVID-19 cases via your locally approved pathway.
- Rationalisation and approval of the imaging procedure will occur between relevant senior staff and the radiologist (or delegated medical imaging manager) via an agreed communication pathway.
- Continued demand for urgent procedures will receive optimal and timely scheduling.

### Fewer people = lower risk

Reduce traffic in the medical imaging department to ensure staff and patient safety.

Perform imaging at sites with less foot traffic and with fewer critically ill patients in that area to avoid secondary patient and staff exposure.

Reduce the number of patients coming into the department.

Increase the use of mobile examinations where possible.

### Use outpatients or other providers

Outpatient services may be reprioritised and some patients sent to local private practices.

Please check if local agreements, e.g. memoranda of understanding, with private hospital or practice partners have been established where improved capacity can be achieved. For example in some LHDs, ultrasound services are being referred to local private radiology facilities or are performed in local BreastScreen units.

## References

1. Imaging Technology News. New research finds chest X-ray not reliable diagnostic tool for COVID-19. ITN: 14 April 2020.
2. Royal Australian and New Zealand College of Radiology. Advice on appropriate use of CT throughout the COVID-19 pandemic. Position statement. RANZCR: 9 April 2020, updated 20 April 2020.
3. American College of Radiology (ACR) and the Society of Thoracic Radiology (STR).

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