

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 and referrals 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.¹

Mobile chest X-rays in intensive care should be requested as required (not as a daily routine).

CT scans

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

The Royal Australian and New Zealand College of Radiologists 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.²

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.³

Interventional radiology and interventional neuroradiology

Interventional radiology (IR) and interventional neuroradiology (INR) patients are screened for COVID-19 transmission risk prior to scheduling. IR and INR services are underpinned by a safety-first approach that reduces the risk of transmission from suspected or proven COVID-19 cases, whilst still providing high quality care to the broader patient population in need.

General principles

- Ensure services proceed when the procedure is life saving, to prevent serious deterioration or complications or avert significant psychosocial harm.
- Focus on procedures that represent low risk and high value.
- Maintain patient-centred care by taking into account the impact of COVID-19 on the psychological health and wellbeing of those undergoing procedures.

Critical procedures should not be postponed, that is 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.¹

Consider any special conditions in your local health district or facility.⁴

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.

If the MRI is not urgent, it is suggested to obtain a negative swab and have the patient attend private practice.

Consider alternative imaging or use of an intraoperative scanner where available. If MRI is required for a clinically relevant case, this unit must be left empty for 45min post exam for adequate air cycle.

For these cases it is expected that the patient can tolerate a (non ferrous) mask for the duration of the examination, or be intubated prior to arrival in the department.

Nuclear medicine

Perfusion only studies are necessary as there is a risk of COVID-19 cases having ventilation-perfusion scans due to problems of circuit contamination, aerosol generating procedure, patient coughing, etc. Ventilation-perfusion lung scanning has no role in the diagnosis or management of COVID-19 related lung disease.

If pulmonary embolism is suspected a CT pulmonary angiogram can be considered instead of a perfusion. If CT pulmonary angiogram is contraindicated, a perfusion only lung scan can be performed, or a variation in protocol, such as 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 in the emergency department, where appropriate, to avoid patient transfers.

All ultrasound examinations should be limited to a focused examination to answer the clinical question. For example do not request a routine full abdomen study if only the biliary tract is needed.

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. All positive cases requiring imaging may need to be requested by the infectious diseases team or a consultant, not a junior doctor or registrar, and require consultation with a staff specialist radiologist.
- 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 risk factors will be assessed by a local screening tool along with the urgency of their examination (be it interventional, CT, MRI or ultrasound)

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

Urgent outpatients may need to present to the emergency department for swab and consultation if required.

Please check if local agreements, e.g. memoranda of understanding, with private hospital or practice partners have been established to improve capacity as needed. For example in some local health districts, ultrasound services are being referred to local private radiology facilities or are performed in local BreastScreen units.

Some local health districts require outpatients to have a negative COVID-19 test not more than 72 hours prior to outpatient imaging.

References

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