

## Background

- The COVID-19 pandemic is affecting all aspects of clinical practice including nuclear cardiology.
- Given the urgency, WHO and CDC have issued general recommendations with key goals to reduce mortality and morbidity, minimize disease transmission, protect healthcare professionals and preserve healthcare system functioning.
- This Information Statement from ASNC and SNMMI seeks to provide guidance and best practices for nuclear cardiology laboratories during the COVID-19 pandemic.

## General Principles for COVID-19 Protection

- Physical distancing (at least 1-2 meters)
- Hand hygiene
- Rescheduling non-urgent visits
- Rescheduling elective surgeries and procedures
- Using separate spaces for patients with known or suspected COVID-19 to prevent spread
- Ensuring supplies are available
- Promoting use of telehealth

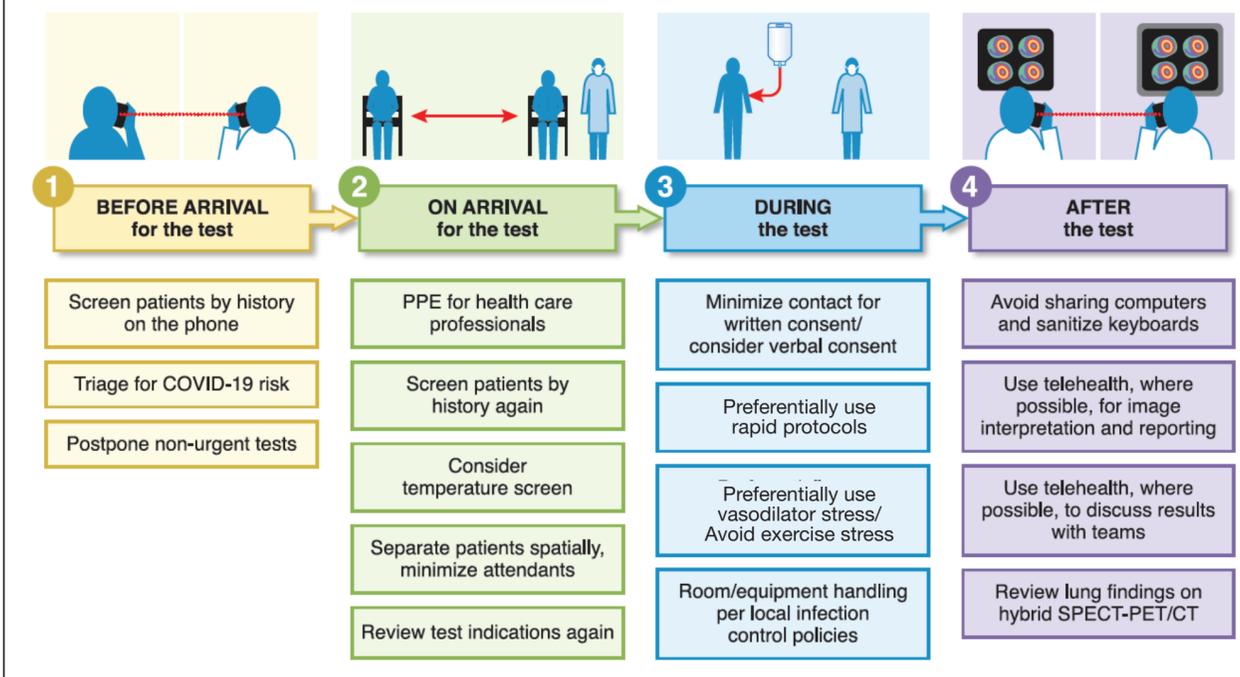
## Screening Checklist

- ✓ Have you had a fever?
- ✓ Have you had a cough?
- ✓ Have you had difficulty breathing?
- ✓ Have you been unusually tired?
- ✓ Have you had muscle aches?
- ✓ Have you had diarrhea recently?
- ✓ Is your sense of smell less than it usually is?
- ✓ Is your sense of taste less than it usually is?
- ✓ Have you been exposed to any person with the virus in the last 2 weeks?
- ✓ Have you been exposed to any person who was a high risk of getting the virus in the last 2 weeks?
- ✓ Have you travelled to any place where a lot of people have COVID-19?

## Adapting NC During COVID-19 Pandemic

- Patients referred for nuclear cardiology procedures are frequently greater than 60 years of age and have other comorbidities that place them at a high-risk for adverse outcomes with COVID-19.
- The various steps to minimize patients and healthcare professionals exposure to COVID-19 are listed below, tracking the patient journey from pre-procedure planning before the test, to steps taken on arrival for the test, during the test, and after the test for image interpretation and reporting (**Figure**).

**Figure: Key Steps to Minimizing COVID-19 Exposure during the Patient's Journey through the Nuclear Cardiology Laboratory**



## Timing of Nuclear Cardiology Test

- All non-urgent nuclear cardiology studies should be postponed, and only urgent studies performed with precautions to minimize exposure of healthcare professionals and patients.
- Each nuclear cardiology test should be evaluated and placed in one of three categories during the COVID-19 pandemic (**Table**):
  - Priority 1:** perform test as scheduled: the test should be expected to drive a meaningful treatment change that could be implemented in the immediate future and would have a clear short-term benefit.
  - Priority 2:** postpone test by 2-4 months.
  - Priority 3:** postpone test by >4 months.
- Some institutions use a 4-category triage scheme.

## Conclusions

- Changes to nuclear cardiology procedures are essential to minimize risk of viral exposure and transmission to healthcare personnel and patients during the COVID-19 pandemic.
- Nuclear cardiology laboratories are urged to follow local, state, public health, and institutional policies and these may change from day to day with the evolution of the pandemic.
- ASNC and SNMMI recommend that all non-urgent nuclear cardiology studies be postponed and urgent studies performed with careful precautions listed in this document.
- Our goal is to keep the patients and healthcare professionals safe while providing clinical useful information to guide the management of patients with heart diseases.

**Table: Some examples of nuclear cardiology studies and selection\***

Indication	Urgency	Notes
<b>Myocardial Perfusion Imaging for Ischemic Heart Disease</b>		
Recent acute coronary syndrome: evaluation of ischemia in a moderate to high-risk patients considered for urgent coronary revascularization	Priority 1	Perform test using precautions
New or accelerating symptoms Canadian Cardiovascular Society Class II-IV where diagnosis of CAD is uncertain (intermediate pretest likelihood), or where suspicion of CAD, is high but coronary angiography has greater risk.	Priority 1	Perform test using precautions
Preoperative evaluation: evaluation of ischemia in moderate to high-risk patients for pre-operative evaluation, in whom surgical procedure is urgent and revascularization is an option.	Priority 1	Perform test using precautions
Stable angina: for evaluation of ischemia follow-up when there is no urgent revascularization plan	Priority 2 or 3	Postpone test
<b><sup>18</sup>F-FDG PET viability</b>		
Patient with ongoing symptoms being considered for CABG in the next 2 weeks where viability imaging will impact revascularization decision (such as patients with multiple comorbidities)	Priority 1	Perform test using precautions
Stable chronic ischemic cardiomyopathy evaluation prior to cardiac transplant listing	Priority 2 or 3	Postpone test
<b><sup>99m</sup>Tc- PYP imaging for transthyretin cardiac amyloidosis</b>		
Heart failure where transthyretin cardiac amyloidosis is suspected	Priority 1 or Priority 2 or 3	Perform test in select cases or Postpone test
<b><sup>18</sup>F-FDG PET for sarcoidosis</b>		
Initial evaluation: Heart block or VT and suspected cardiac sarcoidosis	Priority 1 or 2	Perform test using precautions
Follow-up evaluation: Known cardiac sarcoidosis on therapy	Priority 2 or 3	Postpone test
<b><sup>18</sup>F-FDG PET for infective endocarditis</b>		
Initial evaluation: Suspected prosthetic or device infection	Priority 1	Perform test using precautions
Follow-up evaluation: FDG PET prosthetic valve infective endocarditis	Priority 2 or 3	Postpone test
<b>MUGA scan for LVEF estimation</b>		
Assessment of left ventricular function, as an alternative to echocardiography with short duration of patient-staff interaction.	Priority 1	Perform test using precautions
Initial evaluation: Prior to initiation of cardiotoxic chemotherapy	Priority 1	Perform test using precautions
Follow-up evaluation: Prior to subsequent chemotherapy	Priority 1	Perform test using precautions
<b>Organ transplant**</b>		
Liver transplant: preoperative evaluation in patient with intermediate or high cardiovascular risk and poor life expectancy from liver disease without transplantation**	Priority 1 or Priority 2	Perform test using precautions or Postpone test
Kidney transplant: preoperative evaluation***	Priority 2 or 3	Postpone test
Heart transplant: Routine evaluation for transplant vasculopathy	Priority 2 or 3	Postpone test