

A thick dark blue vertical bar is positioned on the left side of the page. From the bottom of this bar, several thin, curved lines in shades of blue and grey extend upwards and outwards, creating an abstract, organic shape.

# COVID-19 03-25- 2020 Rad Management Plan

Duke Department of Radiology  
Patient Management Plan

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## Patient Identification, Triage, and Isolation: Outpatient Testing Guidance

### 1. Registration (At time of Scheduled Appointment)

- 1.1. Upon arrival at an outpatient radiology location, all patients and visitors will be screened by registration personnel upon registration and check-in following the [Radiology Registration COVID-19 Screening Algorithm](#).
- 1.2. A smartform within EPIC will guide the registration workflow. If a patient's screening result is positive, the smartform outlines steps necessary for triage and isolation.

## Patient Imaging

### 1. Outpatient

- 1.1. **On-Campus:** patients under investigation, being tested, or treated for COVID-19 will be isolated to one of the designated patient isolation locations within the location they presented, assessed by infection prevention personnel and follow instructions provided.
- 1.2. **Off-Campus:** patients that provide positive answers to screening questions at registration will be given a mask, informed that their imaging procedure will be rescheduled to a later date and instructed to go home immediately and contact their primary care physician for further instruction.

### 2. Patient Scheduling

- 2.1. Screening imaging, including screening mammography, lung cancer screening, and screening CT colography will be rescheduled after May 1, 2020.

### 3. Inpatient and Emergency Department

- 3.1. Patients under investigation, being tested, or treated for COVID-19 will be isolated to DMP- 6 East DMP. Movement within the hospital should be limited and within close proximity to the unit. Imaging modalities should:
  - 3.1.1. Utilize portable imaging when most feasible (XR, US).
  - 3.1.2. Limit transport to resources within close proximity (CT, IR, MR, NM US).
- 3.2. Handoff (ISBAR) communication between the unit and radiology must occur prior to any arrangement of imaging (scheduling, transport, etc.) to ensure a full assessment of the patient's COVID-19 and isolation status is understood.
- 3.3. If the patient requires transport to another department, the team lead or designee must handoff (ISBAR) to the next receiving team member and ensure a full assessment of the patient's COVID-19 and isolation status and is understood.

### 4. Modality Specific Concerns

#### 4.1. CT

#### 4.2. Diagnostic (X-Ray)

#### 4.3. Interventional (IR)

#### 4.4. Magnetic Resonance (MR)

- 4.4.1. **Suspected/confirmed COVID-19:** perform at DMP or North. See appendix 5 for specific infection prevention and exam room decontamination guidance.
- 4.4.2. Per standard process, a radiologist should be consulted for any questions related to exam appropriateness (if any exist) at the time of protocol and before the patient is scheduled for transport. No attending to attending discussion is needed unless the notified radiologist escalates.

#### 4.5. Nuclear Medicine (NM)

#### 4.6. Ultrasound

- 4.6.1. When there is a COVID-PUI exam and there is no impediment to doing the exam, they will be done in portably in the ED.
  - 4.6.1.1. The sonographer is to call the ED Bed Czar at XXX-XXXX to ask that the patient be moved into a separate room for the portable exam.

- 4.6.1.2. The ED will move the patient and notify when ready.
- 4.6.1.3. The sonographer will manage the patient from there.
- 4.6.2. If there are questions, please ask the radiologist. This does not need to be an attending to attending discussion, just solve it at that level. If an attending is necessary we can do that as well.

## Capacity Management

### 1. Capacity Alert Tier Definitions:

#### 1.1. Overall Radiology Criteria

- 1.1.1. **Level 1 (Green) Frontline Staff:** staffing and resources are available for **all levels of care** (outpatient, inpatient, and emergency department). Frontline staff capable of handling conditions independently.
- 1.1.2. **Level 2 (Yellow) Local Leadership:** limited capacity in at least one level of care or Service Line, usually managed by local leadership.
- 1.1.3. **Level 3 (Orange) CSU Leadership:** significant capacity restraints for multiple levels of care or Service Lines, usually involving CSU leadership to maintain typical operations.
- 1.1.4. **Level 4 (Red) Hospital Leadership:** every level of care or Service Line is full, and senior hospital leadership must be involved to help prioritize staff and resource management.
- 1.1.5. **Level 5 (Purple) Declared Event:** an event that is declared by the local, state, or federal entities or event. Senior leadership can also declare Level 5 independently on an as-needed basis due to significant facility failures (e.g. network failure, flood, etc.).

RADIOLOGY	Level 1 (Frontline Staff)	Level 2 (Local Leadership)	Level 3 (CSU Leadership)	Level 4 (Hospital Leadership)	Level 5 (Declared Event)
Team Lead	Normal Operations	Monitor patient flow and volume	Begin dialogue with Supervisor	Continue to deliver imaging services with the team.	Declared event at Local, State, or National level
Supervisor	Normal Operations	Normal Operations	Assist with IP flow triage. Begin interfacing with Division Chiefs to assist with Triage.	Continue to support the team. Offer assistance with workflow and/or imaging.	
Chief Technologist/Nurse Mgr.	Normal Operations	Normal Operations	Round on the team. Connect with VP. Begin rounding with OP to indicate potential for delays.	Huddle with VP and V-C for Clinical Ops.	

Imaging VP	Normal Operations	Normal Operations	Normal Operations. Off-shift: begin dialogue to determine whether or not to bring additional systems on-line and call in staff.	Interface with V-C Clinical Ops. Dialogue with OP to include significant delay messaging. Offer to attempt to off load to Raleigh or Regional or reschedule.	
Vice-Chair for Clinical Ops	Normal Operations	Normal Operations	Normal Operations	Huddle with VP.	

### Infection Prevention and Control

1. Transmission- Based Precautions (Isolation)
  - 1.1. For patients with known or suspected COVID-19, the patient is to be placed under Droplet and Contact Precautions. Patient scenarios and detailed information can be found within the [COVID-19 Infection Prevention Guidance](#).
    - 1.1.1. Key Updates:
      - 1.1.1.1. Negative pressure rooms are no longer recommended.
      - 1.1.1.2. Aerosol-generating procedures (e.g. intubation, extubation, sputum induction, and bronchoscopy) should be performed in negative pressure rooms.
2. Personal Protective Equipment (PPE)
  - 2.1. Receiving Staff
    - 2.1.1. [Inpatient and Emergency Department](#)- See appendix for donning and doffing procedures, reminders, and required PPE.
    - 2.1.2. [Outpatient](#)- See appendix for donning and doffing procedures, reminders, and required PPE.
3. Requesting PPE
  - 3.1. Managed by the COVID-19 task force. All requests must be submitted via the Duke Coronavirus Response website <https://intranet.dh.duke.edu/SitePages/RequestPPD.aspx>
4. Inventory Control & Security
  - 4.1. All infection control and PPE supplies should be stored and secured for access by essential personnel who need them for direct patient care.
5. Post Imaging Tests/Procedural Equipment and Environment Decontamination
  - 5.1. After all imaging tests and/or procedures are complete, a thorough cleaning of the room and all equipment must be performed following the [Radiology COVID-19 Equipment and Environmental Decontamination guideline](#).

### Communication, Education, Training, and Additional Resources

1. Resident education <https://pubs.rsna.org/2019-ncov>
2. Duke's Coronavirus Response website <https://coronavirus.duke.edu/>
3. Duke Paging Web <https://pagingweb.duke.edu/smartweb/>

Appendix 1: DUH On-Campus Imaging Sites

IDENTIFY	<ul style="list-style-type: none"><li>•Registration staff perform Maestro Care Screening Activity</li><li>•If patient answers positive for travel from countries of concern w/in 14 days and has symptoms of concern.</li><li>•Immediately provide a surgical (procedure) mask to the patient and instruct the patient to remain at the desk until an escort can assist with locating a private room.</li></ul>
NOTIFY	<ul style="list-style-type: none"><li>•Notify (pager) the appropriate imaging modality lead or designee.</li><li>•Notify (pager) Infection Prevention</li></ul>
ISOLATE	<ul style="list-style-type: none"><li>•Don appropriate PPE while escorting the patient and prior to entering the room.</li><li>•Place patient into the designated isolation room and shut the door.</li><li>•Instruct the patient to continue wearing the mask for the entire time they are in the facility or otherwise instructed, and that a healthcare provider will assess them shortly.</li></ul>
INFECTION CONTROL	<ul style="list-style-type: none"><li>•Known exposure to <b>positive case</b> OR travel to <b>high risk exposure area</b>:<ul style="list-style-type: none"><li>•Implement <b>droplet and contact</b> isolation, place appropriate signage.</li><li>•Implement <b>special airborne contact</b> isolation, place appropriate signage.</li></ul></li><li>•Wait outside of the isolation room for Infection Prevention personnel , minimize traffic in/out of room, and contact Infection Prevention if they do not arrive within 15 minutes.</li></ul>
EXPOSURE CONTROL	<ul style="list-style-type: none"><li>•If the patient spent time in the waiting room or was evaluated before isolation, the imaging modality lead or designee should:<ul style="list-style-type: none"><li>•Assemble a list of all patients who may have been in the waiting room with the patient</li><li>•Assemble a list of all healthcare workers who spent time in the same room with the patient</li><li>•Follow instructions provided by Infection Prevention and Employee and Occupational Health and Wellness</li></ul></li></ul>

APPENDIX 2: DUH Off-Campus Imaging Sites

IDENTIFY

- Registration staff perform Maestro Care Screening Activity
- If patient answers positive for travel from countries of concern w/in 14 days and has symptoms of concern.
- Immediately provide a surgical (procedure) mask to the patient and inform them that their imaging procedure will be rescheduled to a later date.
- Instruct the patient to go home immediately and contact their primary care physician for further instruction.

EXPOSURE  
CONTROL

- If the patient spent time in the waiting room or was evaluated before isolation, the imaging modality lead or designee should:
- Assemble a list of all patients who may have been in the waiting room with the patient
- Assemble a list of all healthcare workers who spent time in the same room with the patient
- Follow instructions provided by Infection Prevention and Employee and Occupational Health and Wellness

APPENDIX 3: Patient Isolation Locations





APPENDIX 4: Contact Information

Contact Name	Area	Contact Number
<b>DUH Command Center</b>		(XXX)XXX-XXXX
	CT (including J-hall procedures)	XXX-XXXX
	Pet/Nuc Med	XXX-XXXX
	MRI	XXX-XXXX
	Vascular Interventional (VIR/IR)	XXX-XXXX
	X-Ray – Inpatient/OR	XXX-XXXX
	Mammo/OP clinics imaging	XXX-XXXX
	Ultrasound	XXX-XXXX
	GI/Peds	XXX-XXXX
	Nurse Manager	XXX-XXXX
	Multi-D	XXX-XXXX
<b>Off-Hours (Nights/Weekends)</b>	DMP Radiology RN Station	XXX-XXX-XXXX
<b>Infection Control</b>		XXX-XXX-XXXX
<b>Duke Paging Web</b>		

**Please Note:** If unable to reach clinical lead designated to the patient’s appointment type, please escalate to the nurse manager.

APPENDIX 5: Infection Prevention Guidance

Radiology COVID-19 Personal Protection Equipment (PPE)

Patient Scenario	Mask on Patient	HCW Provider Type	Recommended PPE	Preferred type of room
<b>Suspected/Confirmed COVID-19</b> <ul style="list-style-type: none"> <li>– High risk travel</li> <li>– Known COVID-19 contact</li> <li>– Respiratory symptoms (e.g. cough, SOB, fever)</li> </ul>	Yes	HCW(s) providing care	<b>Special Airborne Contact</b> <ul style="list-style-type: none"> <li>– N95/PAPR</li> <li>– Eye protection</li> <li>– Gown</li> <li>– Gloves</li> <li>– Shoe Covers</li> </ul>	<ul style="list-style-type: none"> <li>– Regular Room</li> <li>– Room does not need to remain closed after use</li> </ul>
<b>Undifferentiated Respiratory Illness</b> <ul style="list-style-type: none"> <li>– Eval to determine need for COVID-19 testing pending</li> </ul>	Yes	HCW(s) providing care	<b>Droplet and Contact</b> <ul style="list-style-type: none"> <li>– Facemask</li> <li>– Gown</li> <li>– Gloves</li> </ul>	<ul style="list-style-type: none"> <li>– Regular room</li> <li>– Room does not need to remain closed after use</li> </ul>

Radiology COVID-19 Equipment and Environmental Decontamination

Radiology COVID-19 Waste & Linen Management Disposal

REGULATED MEDICAL WASTE (sharps)	<ul style="list-style-type: none"><li>• Disposable sharps containers should be placed in the red bag and disposed as RMW.</li></ul>
REGULATED MEDICAL WASTE (non-sharps)	<ul style="list-style-type: none"><li>• Place directly in red bag and dispose as RMW per current procedure in biohazard container.</li></ul>
TRASH	<ul style="list-style-type: none"><li>• PPE and non-PPE items should be discarded as general trash. Remove/reprocess per usual procedures.</li></ul>
LINEN	<ul style="list-style-type: none"><li>• Reprocess per usual procedures. Place dirty linen in blue bag, transport covered to designated storage for pick up by facility designee, then transported to designated area for reprocessing by linen company.</li></ul>