

Re-opening guidelines for the JHU MRI Research Center.

Tuesday, June 16, 2020

Locations:

- 1) MR01(B170), MR10(B167), 601 N. Wolfe St., MRI Building, B1 level.(Fig. 1)
- 2) MR09 (also known as XMR01, B125) 601 N. Wolfe St., Radiology Building, B1 level.(Fig. 2)

Users: JHU and JHH staff and faculty, occasional JHU/JHH affiliates/approved entities.

Access: B183 doorway at MRI building entry.

Hours: 9am – 6pm. Off-hour booking (evening and weekends) possible for qualified users.

Equipment and location details:

- a) MR01: 3 Tesla Siemens Prisma-fit scanner, Rm B170, MRI Building (Fig. 1).
Control Room: 573 sf open area; Scan Room: 468 sf; waiting + entrance ~500 sf; Clinical area changing Rooms (x3) and seating area <200 sf each.
- b) MR10: 1.5 Tesla Siemens Espree scanner and Siemens Artis Zee C-arm unit, Rm B167, MRI Building (Fig. 1).
Control Room: 573 sf open area; Scan Room: 774 sf, waiting and entrance and changing area same as in (a) above for MR01.
- c) MR09(XMR01); 3 Tesla Philips Achieva scanner, Rm B125 Radiology Building(Fig. 2).
Control Room 400 sf, Scan Room 568 sf; Changing Room: <200 sf, Radiology Building(Fig. 2).

Essential Personnel. Personnel to contact first for daily management issues in red.

Center Director: Paul Bottomley, Ph.D., JHU faculty (Professor) and FTE

Email: pbottom1@jhmi.edu; phone: 410-955-0366

Associate Center Director: Dara Kraitchman, VMD, Ph.D., JHU faculty (Professor) and FTE

Email: dkraitc1@jhmi.edu; phone: (410) 955 4892

MRI Technologist Manager: Hugh Wall. JHU staff, FTE

Email: hbwall@jhmi.edu Cell phone: 443-504-9631

MRI technologist: Cynthia Maranto. JHU staff, FTE

Email: cmarant1@jhmi.edu Cell phone: (410) 245 3223

Order of contact for MRI scanners:

Daily scheduling issues with scanning: Ms. Maranto. All other issues: Hugh Wall.

Contact Information will be posted on signage on the facility and scan room doors (Fig. 3).

General Guidelines for the staff and users

- These guidelines are intended to provide guidance for all JHU staff members and users of the MRI Research Service Center scanners. They may be revised according to circumstances.
- Nothing in these guidelines should be construed as circumventing guidance from JHU and SOM administration or state or city regulations.

- Everyone is expected to be familiar with the current guidelines and COVID-19 policies for JHU.
- Remote working is expected of all personnel when possible. Visits to the facility should be limited only to activities essential for research scanning, equipment maintenance, monitoring, or cleaning.
- Scheduling will only be allowed when the user provides us with evidence that the IRB has approved resumption of the user's research protocol. These approvals must be forwarded to Hugh Wall.

Specific Guidelines for the staff and users present at the facility

- 1) The scan area is defined as including the areas shaded in yellow for MR01, MR10 and MR09(XMR01) area in Figs. 1 and 2. The scan room is the room containing the magnet.
 - a) Face masks must always be worn by all subjects, users and staff when in the scan area. The only exception is when the subject goes in the scanner when he/she may be requested to remove the mask if the mask will affect the scan at the PI's direction. Non-metallic masks will be available from the MRI technologist.
 - b) MRI techs and other center personnel should at all times wear a lab coat when there are users or subjects in the scan area. MRI techs should have a spare lab coat and wash their coats at least weekly.
 - c) Signage will be posted on the scanner room doors and the door entering the facility, on the entrance door to the MR09 (XMR) and prominently in the scanner area of MR01 and MR10 which is shared with clinical radiology, indicating the maximum and preferred occupancy, service center contacts and user behavior reminders (distancing, entering, masking etc) (Fig. 3).
- 2) The number of people allowed in the scan area simultaneously will be strictly limited. The maximum number of people in the scan area will be determined by the total scan area and the 400 sf rule (see below in space occupancy section). Only those individuals who are essential for data collection and subject safety will be present. (Fig. 3)
- 3) Social distancing, wherein persons remain 6 feet apart must be observed at all times, unless it is needed to perform tasks together, e.g., placing the subject in the magnet. The amount of time spent in close proximity will be minimized by use of verbal instructions whenever possible to enable the subject to do things independently, such as insert ear plugs or to be comfortably positioned on the scanner bed. The informed consent and safety screening processes (except for magnetic screening, which is a Center safety responsibility that needs to be done on-site) must have been done before entering the scanning area. Movement around the scan area must be planned and communicated between individuals to avoid coming within 6 feet of each other when navigating to and from a bathroom or other areas. It is recognized that, for human scanning, protocol needs sometimes make it impossible to adhere to the 6-foot social distancing guideline, e.g. when positioning the subject in the scanner. **Whenever two or more people are temporarily needed to be within 6 feet from each other, face-shields must be worn.** PIs will be responsible for bringing their own face shields. The only exception will be when the two people are a parent accompanying a child patient.
- 4) Keeping the facilities clean and hygienic.
 - a) At the end of each imaging session, ALL used surfaces will be disinfected:
 - Tables, benches, chair arm rests, surfaces and computer keyboards (we now have washable keyboard covers) in the scan control room, waiting area, subject prep area (if used).
 - The scanner front, bore, and RF coil and all other scan room areas that have been in proximity of the user.
 - b) Cleaning procedures will utilize the new JHH/Radiology KBO buckets and cloth wipes; wiping the working and high-contact surfaces as noted below. Stations containing KBO buckets and cloth towels will be available at the individual Center scanner areas.
 - c) Door knobs of the Scan Room entrance doors and control area doors will be cleaned regularly (after every user).

d) Shared surfaces. As a core-facility, there will be shared surfaces and shared equipment. When these surfaces are used during opening hours, they will be cleaned by the MR tech after the user leaves.

e) Before being allowed to use the facilities off-hours without a staff technologist, users must be trained regarding how to clean all used surfaces as stipulated in 6a-d. As an additional precaution, the MRI tech will clean all surfaces again at the start of the next work day to assure cleanliness.

f) Wash/disinfect hands anytime after you touch shared items, before AND after using the restroom, and when you leave the Center. Do not touch your eyes, nose, or mouth.

g) Normal hand washing requirements when exiting the MRI scan room will remain in force. These new guidelines will not supercede previous hand washing requirements for the clinical area.

Specific guidelines for area entry and exit, space occupancy and its monitoring

5) Details for the different scan areas:

a) All scan rooms are >400 sf. and will have a maximum occupancy of 3 (2 investigators with a patient) with a maximum occupancy of 2 (1 investigator or technologist plus patient) encouraged (Fig. 1, Fig. 2). As this violates the 400 sq ft/person rule, face shields will be used in all rooms when more than one person is occupying the room.

b) Changing and waiting area MRI building (Fig. 1, B144, 144A, 148, 145, 147) will be limited to 2 in the event that a patient needs assistance. Again, face shields will be utilized when >1 person is occupying these small spaces.

c) Occupancy for the changing area for MR09 (XMR01) Fig. 2, (B123) is limited to 1.

d) The scan control area for MR01 and MR10 is 573 sf and will be limited to 5 maximum with a maximum of 2 maintained wherever possible for routine scan studies. As this violates the 400 sq ft/person rule, face shields will be used in all rooms when more than one person is occupying the control area.

e) The scan control area for MR09 (XMR01) is 400 sf and will be limited to 2 with face shields required when more than 1 person is in the area or a patient is present.

6) Unless required for assistance, only one staff member should be present in the scan area at a time unless another is required for lifting or positioning assistance. This staff member will also serve as the occupancy monitor. A personnel schedule will be made according to the booking of the scanners.

Scheduling

7) A daily schedule for scanner use will be made by facility personnel based on the on-line scanner bookings. Bookings will be restricted to allow sufficient time between users for cleaning (at least 15 min after the scan); for magnetic safety screening; to instruct users at least 15 min before the scan; and to account for a room air replacement of 3 refreshes. Thus, to limit the total number of people within the facility, the typical 1 hr booking slots should now be 1.5 hrs. When booking, the user should, therefore, have at least 30 min between the previous and following bookings.

8) The users need to discuss with Center personnel well in advance of scheduled use, ways to minimize the number of people in the scan area to avoid exceeding the stated maximum capacity of the space (eg, whether personnel can serve multiple roles). Timely communication is key.

9) When scheduling, the User should provide a cell phone number so that the scan area monitor can contact them.

- 10) No users should enter the facility without permission from the person monitoring the facility, to ensure that previous users have departed and the area has been cleaned before entry. If permission has been granted for use when there is no staff person monitoring the facility (eg, for early or late experiments outside work hours), users should directly confirm that no one is in the facility before entering.

Scan procedures

- 11) The subject and accompanying person(s) will be allowed to enter the scan area after having confirmed permission with the MRI tech for that scan area.
- 12) The staff member (generally but not always the MRI tech) will be wearing a face shield.
- 13) While in the waiting area, the subject will again be asked COVID-19 screening questions and when approved undergo magnetic screening. Informed written consent should have been obtained by a member of the study team prior to entering the scan area.
- 14) When approved for scanning, the subject will be asked to remove all magnetic material from their body and store it in the safety closets in the changing rooms and change into a gown.
- 15) The minimum number of persons, but always within the maximum limits imposed, will enter the scan area. This number will ultimately be decided by
 - a) the needs of the subject (eg, a child may need a parent to be present; an elderly subject may feel more secure with a companion; a translator may be needed).
 - b) The number of people needed by the investigator to run a successful study (eg, a person in addition to the MRI tech or staff person to operate ancillary equipment such as a stimulus, eye tracking, anesthesia/sedation, etc).
- 16) The staff member (generally but not always the MRI tech) will explain the scanning procedures and guide the subject into the scan room. Unless the protocol demands in-room explanation of procedures by an investigative team member, the investigator will not enter the scan room. If needed, one accompanying person may enter the scan room (e.g. see 20a above). All instruction that can be done remotely, must be done remotely.
- 17) The staff member (generally but not always the MRI tech), wearing gloves, will place the subject on the scanner table. The subject will then be positioned and any ancillary MRI coils or physiological monitoring leads needed for the study will be placed on the subject. The table will then be moved into the scanner using the scanner guidance system. The staff member will then leave the room, remove and dispose of the gloves, and close the scan room door, wash their hands, and communicate with the subject through the intercom.
- 18) After the scan is completed, the staff member will enter the scan room wearing fresh gloves. The table will be guided out of the scanner and the staff member will remove any ancillary coil(s). If the face mask has been removed, the subject will be instructed to replace their face mask. For children, the parent may help put the mask on. The subject will then be guided out of the scan room.
- 19) Once the study protocol is completed, the subject and investigators will leave the area and the staff will clean all used areas as indicated above in section 4.
- 20) The staff member will call the next user with the appropriate time to come to the scan area.

Special procedures for animal studies

- 21) Some center users study animals. These always enter through the side door of the outermost corridor, away from the main entrance. All procedures listed above, including cleaning, will be followed for these studies.

Procedures for COVID-19 Symptom detection and handling.

- 22) Before coming to the Center, users must self-check yourself for COVID-19 symptoms: fever, cough, shortness of breath, or difficulty breathing (see full list of symptoms at: <https://www.hopkinsmedicine.org/coronavirus/covid-19-self-checker.html>). If a person has any symptoms, they are required to stay at home and notify their PI and the Center contact.
- 23) Users should also ask their study subjects to check for COVID-19 symptoms and instruct them not to come to the MRI Service Center if they have symptoms. Before coming to the MRI Service Center, subjects should always first meet with the user or a user representative, whereupon they should be assessed for symptoms through screening questions. If there is a concern about subjects who are not JHU employees or students, it is the responsibility of the PI to provide them with information about local resources and instruct subjects or their caregivers to call their personal physician.
- 24) If you are experiencing symptoms you should leave work immediately and call the JHU COVID hotline at 443-287-8500 for further instructions. Johns Hopkins graduate students should in addition call the University Health Services at 410-955-3250 or Student Health & Wellness at 410-516-8270. You should also notify your PI/supervisor and the Center contact.
- 25) Positive Test Contingency. In the event that a user in the Center is positively identified to have COVID-19:
 - a) The individual will leave the Center scan area and immediately and go home. Then they should follow points 28 and 29 above.
 - b) The particular scan area will be cleaned by staff (Item 4 above) prior to continuation of work by the next users. Center users will be called to stay away until at least 30 min after cleaning is completed. The schedule will be updated.
 - c) The individual who tested positive and everyone who has been in contact with them who was not wearing a face shield will undergo mandatory self-quarantine for 14 days

Reporting

- 26) There will be zero tolerance for violation of COVID-19 workplace safety guidelines. Noncompliance with current rules will result in suspended Center access for a period of 1-4 weeks, depending on the severity and frequency of the infraction.
- 27) Report abuse/problems/concerns to the PI and one of the Center monitors or through the JHH COVID-19 Hotline.

Communication Plan

- 28) All employees and users will be made aware of the rules and of formal channels to report concerns and/or mistreatment. This will be done by email and wall posters.
- 29) Employees and users will not be placed under any pressure by PIs or Center personnel to expose themselves to potentially hazardous situations (e.g., unsafe working conditions in the Center). Employees and users will be encouraged to voice concerns confidentially to an authority (e.g. Center monitor or the Center Director) who has the ability to act on their behalf to address safety concerns.
- 30) Employees and users will be made aware of the JHH COVID-19 Hotline to report any abuse/problems/concerns.

Off-hour use

- 31) This is discouraged

32) If needed, users will be trained first in all procedures by the MRI techs and make an appointment to do so.

Required PPE

- Lab coats (Individually assigned) for Center personnel when users are present; Will be laundered weekly.
- Face masks will be required at all times in the Center. Cloth face masks will be acceptable when no other human subjects are present.
- Face shields for close proximity tasks; MRI techs and staff will have individual shields with their name.
- Gloves for positioning subjects in the magnet and guiding subjects to and from the magnet.

Material Needs

- Lab coats for personnel who do not have one (second coat for MRI techs)
- Need KBO buckets and cloth wipes at each Scan Room.
- All disinfections will be done with KBO buckets and/or disinfectant wipes.
- Gloves

Scanner area preparation before opening

- Counters and desks will be kept empty as much as possible .
- Superfluous chairs will be either removed, covered with plastic bags, or marked to avoid people using them and encourage social distancing.
- Check on signage.

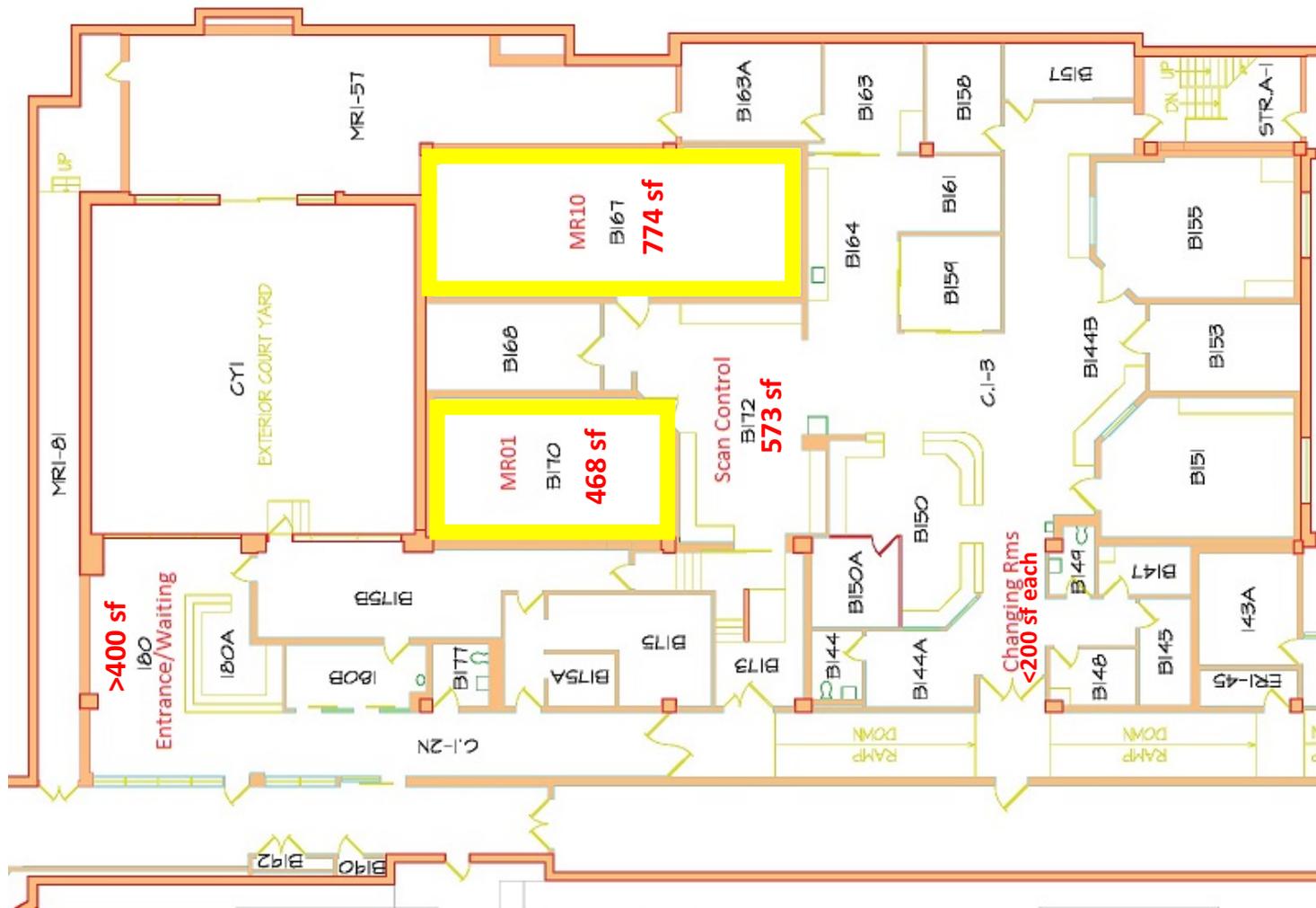


Fig. 1: MR 01 and MR10 MRI scanners in the MRI building

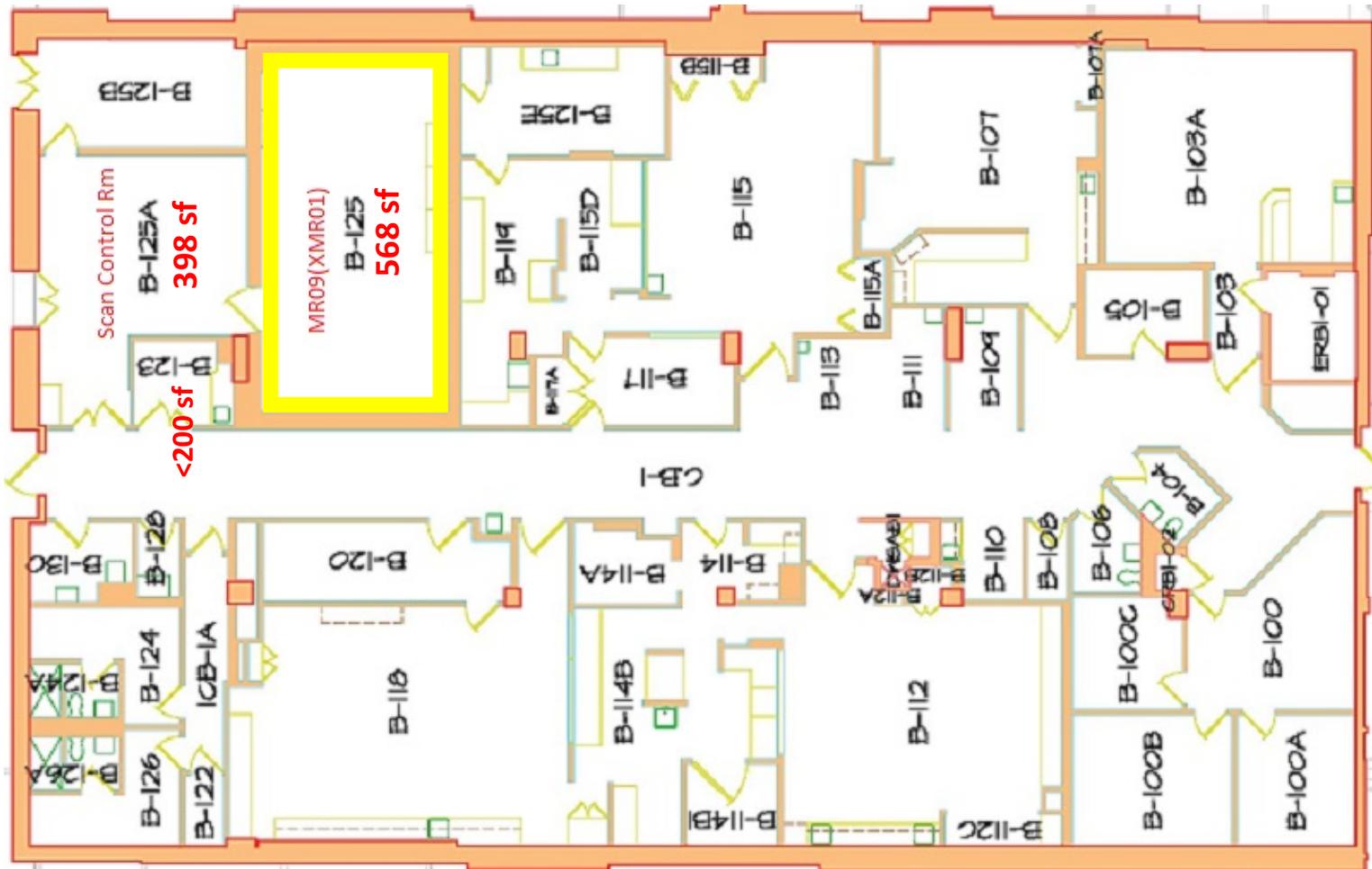


Fig. 2: MR09 (XMR) scanner in the Radiology building

MRI Service Center: MR01 area

- MRI Technologist Manager: Hugh Wall.
Email: hbwall@jhmi.edu Cell phone: 443-504-9631
- MRI technologist: Cynthia Maranto:
Email: cmarant1@jhmi.edu Cell phone: (410) 245 3223
- Scanner control room: 410-955-4265

Do not enter without permission

Yes, schedule *in advance*

Yes, wear mask, even when *alone*



Fig. 3A: signage

Preferred Occupancy = 2

Max Occupancy = 3

Only 1 user group at a time

MRI Service Center: MR10 area

- MRI Technologist Manager: Hugh Wall.
Email: hbwall@jhmi.edu Cell phone: 443-504-9631
- MRI technologist: Cynthia Maranto:
Email: cmarant1@jhmi.edu Cell phone: (410) 245 3223
- Scanner control room: 410-955-4265

Do not enter without permission

Yes, schedule *in advance*

Yes, wear mask, even when *alone*

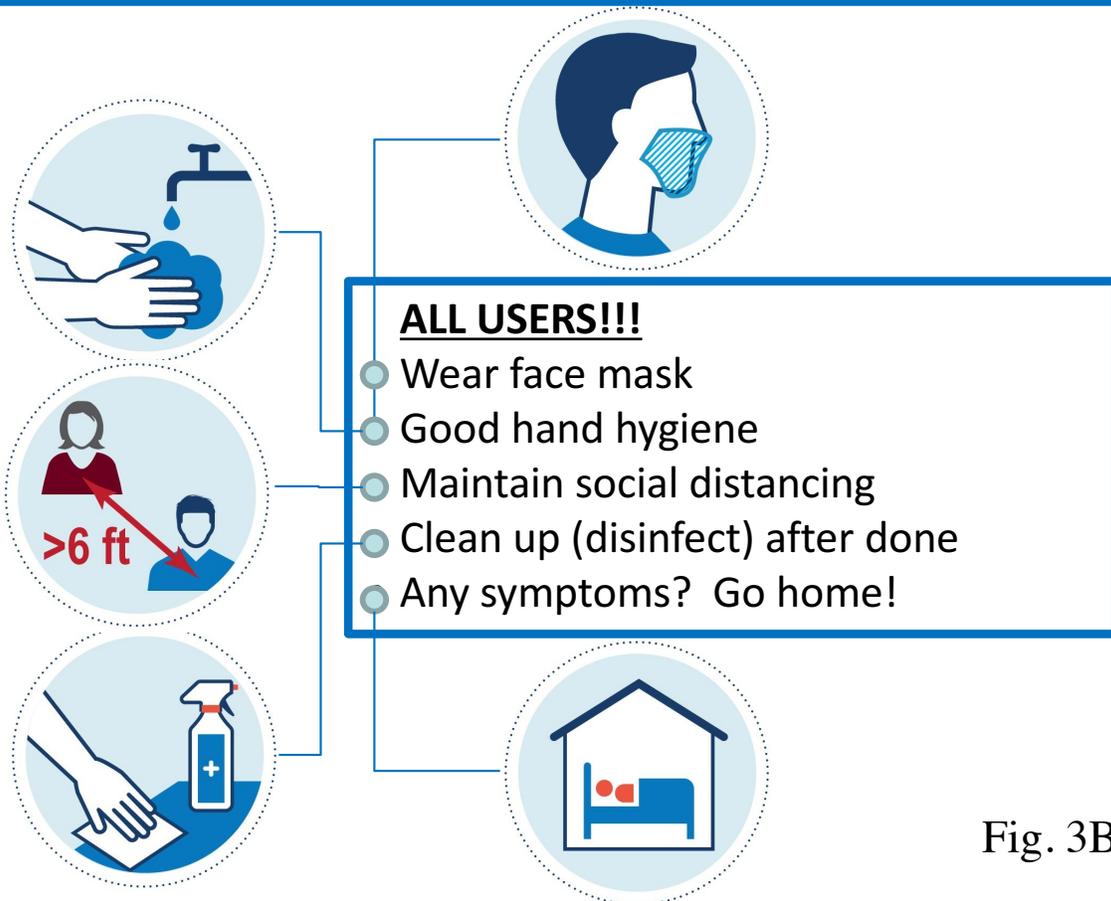


Fig. 3B: signage

Preferred Occupancy = 2

Max Occupancy = 3

Only 1 user group at a time

MRI Service Center: MR09 area

- MRI Technologist Manager: Hugh Wall.
Email: hbwall@jhmi.edu Cell phone: 443-504-9631
- MRI technologist: Cynthia Maranto:
Email: cmarant1@jhmi.edu Cell phone: (410) 245 3223
- Scanner control room: 410-502-3414

Do not enter without permission

Yes, schedule *in advance*

Yes, wear mask, even when *alone*



Fig. 3C: signage

Preferred Occupancy = 2

Max Occupancy = 3

Only 1 user group at a time