



Standard Operating Procedures

Phase N: General MRI Scanning

Stanford Lucas Center for Imaging

STANFORD
UNIVERSITY



These SOP's are responsive to expanded guidelines issued Oct. 21, 2020 by the DOR's office that permit non-Stanford affiliates to be scanned if guidelines posted on [Cardinal Research Recovery](#) are met. Please read these requirements carefully in terms of approvals, record keeping and procedures such as approval of Stanford affiliates to visit Lucas in the ORMS (onsite role management system), and procedures to be followed with non-Stanford scan participants. These policies are referred to as *DOR Policies* below. In addition, these *Lucas SOPs must be read and followed* by the investigators.

1. Principles/Introduction

Safety of all persons in the Lucas Center is paramount in governing operations. Such persons include

- Researchers with facilities in the building: faculty, trainees, staff;
- Visitors: service center users, other researchers in wet or dry labs.

Offices will not be used except with special permission.

It is important to note that the Lucas Center supports research activities beyond the MRI scan operations; therefore other researchers may be encountered. Face masks, handwashing hygiene, social distancing and space density limits must be maintained at all times.

We do not scoff at disinfection/PPE/physical distancing requirements or relax any limitations of operation that could affect safety. If you are cautioned by another that you missed a step, the *only acceptable response* is "Thank you", and remediation.

2. Startup Approval

All human subjects research requires approval by researcher's home department, as well as by the radiology Dept. at [RadResearch.Stanford.edu](#). Lucas policies described herein must be followed. Additionally, basic hygiene for handwashing, distancing, and face covering is a Stanford [required course](#) in order for any Stanford affiliates- staff, PIs and trainees- to resume research at Stanford. Of course IRB approval must be in place.

3. Scheduling

A. The usual scheduling system is in use (although we will be switching to a new one soon).

- The **scan operator's name** (not the scheduler's) must be entered in the comment field.
- Priority for urgent needs occasioned by the hiatus will be accommodated to the extent possible by arrangement with Karla Epperson.
- There must be one-half hour slots left between scheduled scan sessions to accommodate disinfection procedures (15 min. before, 15 minute after) and room air exchange.
- The schedule will require you to acknowledge reading these SOPs and abiding by them.

B. When arranging a scan session, researchers will provide materials to participants (including the [Lucas COVID19 Screening Form](#)) to explain that all non-Stanford affiliates are screened for COVID-19 symptoms at entry to the Center, including a non-contact temperature reading. **Any subjects who have tested positive for COVID-19 must have a subsequent negative test before being scanned at Lucas.** Researchers will arrange to call participants on the day of the scan session before the scheduled scan session to query for COVID-19 symptoms, which if present will be a contraindication for proceeding with the scan session. This will be performed by a Redcap form in the Lucas Lobby.

October 21, 2020

4. Training

All operators will need mandatory training on how to perform disinfection of the scan facilities, the COVID Screening and foot traffic guidelines. The technologist Karla or Kevin will meet *first-time-back* researchers at the scanner to provide such training. This is arranged by contacting Karla, karlae@stanford.edu

5. Scanning Procedures:

A. *At Lobby:* All Stanford affiliates are required to sign in daily with the Stanford [HealthCheck App](#) in order to enter a Stanford building, and you may be asked to display the Onsite Access Badge you are sent for the day. In addition, the Lucas Center requires that a QR code be read at the door and your name or Sunet ID entered on your phone when entering AND leaving, as shown here (right code). The HealthCheck should be done before entering Lucas, but the code on the left will bring you to it in case you forgot. Mask and social distancing, hand hygiene, as well as density requirements of 1 person per 125 sq. ft. must be employed at all times. Currently no more than two operators are allowed to be in the scan suite.



Scan subjects that are not Stanford affiliates will be met by the investigator(s) at an agreed-upon meeting place outside the lobby and will electronically administer (Redcap entry on a computer in Lobby) the [Lucas COVID19 Screening Form](#), which will check for symptoms, describe COVID safety procedures employed at the Center. As part of the screening, the participant's forehead temperature will be recorded with a non-contact thermometer. Extra time must be allotted for this screening process. Hand sanitizer will be employed in the lobby by all persons before leaving the lobby to enter the building. The check-in will be part of a Redcap form that securely records visitor information, which may become useful for contact tracing. Informed consent should be administered in the scan suite if necessary to avoid congestion in the lobby.

B. *Foot traffic:* Plan to arrive at the scanner suite no earlier than 15 minutes before scheduled time, and leave no later than 15 minutes after end of scheduled scan time. This will provide adequate time for disinfection of the scan suite. Additional time must be allotted for check in outside the Lucas Lobby to administer the COVID attestation. Ingress will be controlled as follows:

3T1: Operator and scan subject will enter door by loading dock, take stairway down to basement.

3T2, 3T3: Operator and scan subject will enter lobby door.

7T1: Operator and scan subject will enter sub-basement door in light-well closest to 7T1.

C. *At scanner control room:* Before scan- Operator will wash hands or use hand sanitizer. Masks for participant and operator must be verified by magnet test not to be ferromagnetic (most masks contain ferromagnetic metal tabs to conform mask to nose). If magnetic, ask Karla for a new mask before entering the magnet room, or how to remove the metal tab from the mask, for BOTH operator and participant. Wipe anything operator will touch (computers, counters, etc.) with Saniwipes or other provided disinfecting materials. The usual MRI procedures with participant will be followed (IFC, changing clothes, safety screening, etc.). Operator will don gloves and personal face shield in preparing to put participant in magnet. Note that participant is required to wear face mask during entire visit, including scanning.



D. *In scan room:*

- Preparation before subject enters: Wipe all components to be used (scanner bore,/controls/ table, coil, squeeze ball, pads, cables, button box, physiological monitoring devices, etc.). Coil will be covered with towel/pillow case while transporting to the magnet and removed when in place.
- Landmarking subject: As usual, but expedite without compromising safety or proper setup for the scan. Face shield must be employed by operator. Participant must wear mask continuously during scan.
- Face shield may be removed after leaving scan room unless social distancing would be violated with another researcher in the control room..

E. After scan:

- Operator dons face shield and gloves to remove scan participant from magnet; discards gloves after participant is removed from magnet room. Coil will be disinfected and covered with towel while replacing on the shelf to avoid contamination from airborne particles.
- Wipe everything else operator and participant have touched, including scanner, accessories, computers, doorknobs.
- Data are secured as usual with scp or Flywheel, but no processing can occur on site.
- Disinfect bathroom if used.
- Operator cleans face shield and replaces it in drawer or takes with. Researchers and participant will wash hands at conclusion.
- Escort non-Stanford-affiliates to their meeting place and caution them not to dwell on campus, as visitors are not allowed at this time.

F. Social distancing, population density limits, masking and hand hygiene are required everywhere in the Center magnet suites and when entering and leaving the scan suite, using the ingress path. Don't forget to check out by reading the QR code when leaving the building. The density limits now (≥ Oct. 5, 2020) allow 1 person per 125 sq. ft. of floor space. Accordingly, the density limits for each scan room are:

Room	Area, Sq. Ft.	Num persons allowed
3T1		
Magnet room	690	6
Control room	196	2
Prep area	210	2
HyperPol. prep	160	2
3T2		
Magnet room	500	4
Control room	140	2
Prep area	70	1
3T3		
Magnet room	567	5
Control room	195	2
Prep area	840	7
0T1 (Mock scanner)		
Room	144	2

Other considerations including magnet safety may further limit the density. If in doubt, check with Lucas personnel.

6. Mock Scanner:

The mock scanner is available for use by signing up on the schedule as usual, while following all disinfection and other procedures detailed above. Because the mock scanner room is very small, only the

participant and one operator are allowed in the room. One additional person may accompany these two to the facility while socially distancing, but must not concurrently enter the scanner room itself.

Finally, note that these SOPs are adjunctive to the [Cardinal Research Recovery](#) guidelines, and both must be strictly followed without exception.