

Neuroradiology Rotations and Call

Rotation Overview

Residents are expected to gain increased proficiency of interpretation of CT and MRI of the brain, spine, head/neck, and cerebrovascular system with increased independence across the four years of training. Service rotations are Mon - Fri 8am – 5pm, including MegaConference, Tuesday-Friday noon conferences, and Thursday Neuroradiology Conference.

Hillcrest CT is the first rotation, orienting residents to anatomy, critical results findings, and common presentations for traumatic injuries, ED patients and inpatient evaluation. Resident on service provides contrast coverage for CT and MRI. Coordinate with fellows for coverage during MegaConference and Noon Conferences.

JMC CT increases exposure to imaging of Neurosurgical and Neurocritical care patients, consolidation of knowledge, and exposure to multi-site call coverage. This rotation includes a shifted week model, starting Sun 7am-5pm (at Hillcrest) each week of service, and Mon-Thurs 8am – 5pm (at JMC), with the weekend shifted to Fri-Sat.

VA Neuro provides structured exposure to MRI, in addition to outpatient and inpatient CT imaging cases.

Outpatient CT/MRI allows for increased exposure to oncologic cases and head/neck imaging.

URLJ/Telerad emphasizes outpatient spine MRI, providing outpatient imaging center experience with increased independence, including site contrast coverage.

VA MRI is a hybrid rotation shared between Neuroradiology and MRI for senior residents.

Pediatric Neuroradiology is incorporated in the Rady CT/MRI rotation.

Weekend/Holiday Call 2nd – 4th year residents also participate in the call pool, including contrast coverage at Hillcrest on Saturdays, and JMC on major holidays.* Occasional Sunday call shifts will be in the pool pending JMC resident staffing.

Contrast Coverage

For Hillcrest and URLJ rotations, residents must maintain ART/ACLS credentials, know where scanners are located, and verify badge access and contrast reaction kit locations before the first morning of service. It is expected that you will check in with the technologists at each scanner each morning on contrast service, so they know how to reach you.

Learning Objectives / GME Milestones

Medical Knowledge

- Familiarity of brain, spine, head/neck, and cerebrovascular anatomy and landmarks on imaging.
- Knowledge of UCSD neurological imaging protocol options for symptom evaluation, operative guidance, and surveillance.
- Recognition of anatomic variants, common disease presentations, implanted devices and expected post-treatment changes.
- Understanding of artifacts and how to adapt protocols when necessary.

Patient Care

- Identification and accurate communication of critical results findings.
- Knowledge of contrast premedication protocols, contrast reaction response and appropriate documentation.
- Understanding MRI screening, contraindications to MRI, and limitations for conditional devices.
- Familiarity with appropriate use and indications for imaging.

Interpersonal and Communication Skills

- Generate accurate reports and discuss results concisely.
- Appropriate documentation of communications with referring providers.

System-based Practice

- Participate in education of medical students and rotating Neurosurgery, Neurology and Head/Neck Surgery resident electives.
- Participate in CQI conference, Good Call, and communicating discrepancies between preliminary and final reads.

Practice-based Learning

- Present at Neuroradiology Conference.
- Ability to create and refine differential diagnoses through literature review.

Professionalism

- Independent preparation prior to and during service rotation to use time effectively.
- Foster collegial working relationship with Radiology technologists and staff, referring providers and trainees.
- Providing and responding to feedback in productive manner.
- Notifying Dr. Bykowski, Dr. Chen, Ms. Keane and residency leadership of any planned service absence due to vacation, conferences, in service or board exams at the time those activities/travel plans are being scheduled.

Reading Rooms

JMC IP/ED

JMC 1-837 (858-249-6146) has 3 workstations with adjustable desks.

Continue along the hallway past the IR suite to the north (towards ED ambulance bay). Turn left at the last hallway prior to exiting JMC. The reading room is the 2nd door on the right. Passcode is room reversed. There is a fridge and microwave in the work area that Neurology uses at the beginning of the corridor next to IR; your badge should allow entry.

Hillcrest IP/ED

HC 1-804 (619-471-9451) has 2 adjustable workstations, and HC 1-805 has 2 adjustable workstations.

Door to back hallway is directly across from the inpatient CT scanner. Rooms 1-804/805 are to the right, at the end.

VA

From main hallway, go past the cafeteria, and take the elevator downstairs. The reading rooms (rooms 110 and 111) are behind the MRI reception area (858-552-8585 ext 2850 or 2856). Both rooms have adjustable workstations; two in room 110 and one in room 111. Extension x2850 is generally answered from room 110 and x2856 from 111

URLJ

Located at 8929 University Center Lane, Suite 101. Lot parking is available on both sides of the building (entrance from University Center Lane, or from Camino Plaza Centro off Nobel Dr); permits are covered by the Department. Please leave parking spots near entrances for patients. Reading room is to the left of the main reception desk off the waiting room. There is a microwave, sink and fridge in the technologists work area.

Outpatient

Thornton 1-254 (858-657-1230) has 2 workstations; one has adjustable desk. Passcode is room reversed.

Located in the Admin hallway off south end of main Radiology corridor (between Radiology reception and Lycan Room).

Overflow

HC 1-916 is reservable as needed for individuals who need or prefer to work in a room independently.

Virtual Readouts (password Lisfranc)

Neuro HC - <https://uhealth.zoom.us/j/87078120216>

Neuro JMC - <https://uhealth.zoom.us/j/83709067689>

Neuro Outpatient - <https://uhealth.zoom.us/j/88040102223>

Neuro Tele Spine - <https://uhealth.zoom.us/j/83611716703>

Neuroradiology Faculty

Clinical coverage schedules are posted on radres.ucsd.edu Schedules>Faculty schedules>Neuro

UCSD

Div Bolar, MD, PhD
Julie Bykowski, MD
Jennifer Chang, MD
Steve Dorros, MD
Niky Farid, MD
Yang Guo, MD

Jason Handwerker, MD
Dan Hawley, MD
Marin McDonald, MD, PhD
Alex Norbash, MD
Scott Pannell, MD

VA

Erik Bergman, MD
Jim Chen, MD
Roland Lee, MD
Paul Manning, MD

Please reach out to faculty regarding opportunities for educational exhibits, quality and research projects.

Administrative contact: Audrey Keane adkeane@health.ucsd.edu

Observers

Neurology residents, Neurosurgery residents and Neurocritical care fellows will be observing JMC read outs on Tues-Thurs throughout the year. Rad 401/411 students and visiting scholars may also observe at Hillcrest, JMC or on Outpatient. Observers are designated on the main schedule posted on radres.

Questions about resident, fellow or visitor observations should be directed to Dr. Bykowski.

Questions about medical student observations should be directed to Dr. Farid.

Recommended Reading and Resources

Please refer to the radres.ucsd.edu site for contrast guidelines, critical results and other policies prior to coming on service. The rotation experience and learning curve is improved by reading prior to the rotation, targeted literature searches and reading to supplement the clinical service.

Univ Wisconsin Learning Neuroradiology and Virtual Neuroradiology Elective

<https://sites.google.com/a/wisc.edu/neuroradiology/virtual-neuroradiology-elective>

<https://sites.google.com/a/wisc.edu/neuroradiology/home>

RadioGraphics Core Exam Blueprints Articles

<https://pubs.rsna.org/page/radiographics/abr-core-exam-study-guide>

Dr Hesselink's teaching files for MRI

<http://spinwarp.ucsd.edu/NeuroWeb/>

MRI safety (UCSF video 1:30 minutes)

<https://youtu.be/gMAAGVLjP9s> or <https://radiology.ucsf.edu/blog/ucsf-radiology-shares-information-about-mri-safety>

Intro to MRI sequences (Radiopedia's Frank Gaillard, 13 minutes)

<https://www.youtube.com/watch?v=DYXEGY-X1n8>

MRI Safety (includes the searchable list for device make/model/compatibility)

<https://www.mrisafety.com/>

ACR Appropriateness Criteria

<https://www.acr.org/Clinical-Resources/ACR-Appropriateness-Criteria>

NCCN guidelines (free, however require you to create a log in/password)

https://www.nccn.org/guidelines/category_1

Choosing Wisely

<https://www.choosingwisely.org/clinician-lists/>

AJNR Case of the week

<http://www.ajnr.org/cow/by/year>

Neurographics

<https://www.ingentaconnect.com/content/asnr/ng;jsessionid=srzpviys0rs.x-ic-live-02>

Radiopedia

<https://radiopaedia.org/?lang=us>

Radiology Assistant

<https://radiologyassistant.nl/>

Neuroradiology U (emphasis on pediatric cases)

<https://www.neuroradiologyu.com/>