

## Neuroradiology Elective for Neurology Residents 2023-2024

### Course Director

Julie Bykowski, MD (UCSD) [jbykowski@health.ucsd.edu](mailto:jbykowski@health.ucsd.edu)

### Administrative Contact

Audrey Keane [adkeane@health.ucsd.edu](mailto:adkeane@health.ucsd.edu)

### Rotation Overview

The Neuroradiology rotation for Neurology residents is a 2-week observation of case reviews, didactic lectures and case presentations. Residents will review brain, spine, cerebrovascular and head/neck CT and MRI scans for patients presenting to the emergency room, within the hospital, and for outpatient evaluation, with an emphasis on patients currently managed by Neurology and Neurocritical care services.

Residents are expected to attend weekly Thursday morning Neuroradiology conferences, and to present a case review at one of the conferences during their rotation. Additional didactic lectures are available within the department, as well as the opportunity to observe multidisciplinary conferences and tumor boards. This instruction is to be supplemented with guided independent study. Residents are also expected to continue to participate in scheduled Department of Neurology didactic sessions and resident clinics.

### Learning Objectives

- Familiarity with brain, spine, skull base, and cerebrovascular anatomy and landmarks on imaging.
- Recognition of acute intracranial hemorrhage, acute ischemic stroke, large vessel occlusion, hydrocephalus, and herniation on non-contrast CT.
- Understanding MRI screening, contraindications to MRI, and limitations for conditional devices.
- Knowledge of UCSD neurological imaging protocol options for symptom evaluation, operative guidance, and surveillance.
- Familiarity with appropriate use for neurological and neurosurgical imaging and contrast premedication.
- Exposure to head/neck imaging cases (sinus, orbit, temporal bone, neck).
- Development of working relationship with Neuroradiology faculty, fellows and Radiology residents as a resource during training and for patient care.

### Reading Rooms

Please email Ms Keane and Dr Bykowski the week prior to elective to confirm in person vs virtual read outs, pending COVID restrictions and staffing. If there are multiple observers, rotations may be moved to Hillcrest or virtually.

Mon 9 am -noon	Independent study	afternoon	Resident clinic or VA Urgent clinic
Tues 9 am -noon	Neuroradiology-JMC*	afternoon	Neuroradiology-JMC or Resident clinic
Wed 9 am -noon	Neuroradiology-JMC	afternoon	Neuroradiology-JMC or Resident clinic
Thur 8-10 am	Neuroradiology Conf, then JMC	afternoon	Neuroradiology-JMC
Fri am	Neurology didactic	afternoon	Independent study

### Jacobs Medical Center room 1-837 (858-249-6146)

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 2<sup>nd</sup> door on the right. Code is room reversed.

### Hillcrest room 1-804/1-805 (619-471-9451)

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

### UCSD Virtual Readouts (password Lisfranc)

Neuro JMC - <https://uhealth.zoom.us/j/83709067689> Neuro HC - <https://uhealth.zoom.us/j/87078120216>

### Neuroradiology Faculty

UCSD clinical coverage schedules are posted on [radres.ucsd.edu](http://radres.ucsd.edu) Schedules>Faculty schedules>Neuro

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

Scott Pannell, MD

## Recommended Reading and Resources

Radiopedia common indications and findings on head CT on their 'Neuroradiology for students (curriculum)' page.  
<https://radiopaedia.org/articles/neuroradiology-for-students-curriculum?lang=us>

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>

UVa Introduction to Head CT  
<https://www.med-ed.virginia.edu/courses/rad/headct/index.html>

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>

UCSD IV Contrast Guidelines  
<https://ishare.ucsd.edu/sites/radres/Shared%20Documents/Rad%20Res%20Documents/Policies/WD1111.pdf>

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>

AJNR Case of the week  
<http://www.ajnr.org/cow/by/year>

Neurographics Journal focused on education/case series  
<https://www.ingentaconnect.com/content/asnr/ng;jsessionid=srzpwwiys0rs.x-ic-live-02>

Radiology Assistant  
<https://radiologyassistant.nl/>

Neuroradiology U (emphasis on pediatric cases)  
<https://www.neuroradiologyu.com/>