

CARDIAC IMAGING RESIDENT ORIENTATION GUIDE

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GETTING STARTED

- You will have an attending radiologist and an attending cardiologist each day
- Cardiac studies are scheduled for Tuesday, Wednesday, and Friday with some cases on Mondays and Thursdays
- We attendings monitor/check all cases and will assign you cases depending on degree of difficulty and your experience
- EPIC should be used to review the daily imaging schedule and look up patient histories, height/weight, and prior imaging.
 - Tech worklist is helpful to find studies of the day. MRI scanner 1 is our primary scanner, some cases are on scanner 3, and the rare case on the Vida.
 - It can be helpful to review the week with the cardiac attending on your first day or even on the Friday BEFORE your rotation so you know what to focus on while you read
- When you arrive on your first day, meet with assigned attending to discuss workflow/expectations and review this orientation

WORKFLOW

- Rotation hours: 8:00 AM-5:00 PM (radiologist arrives at 7AM but will use that hour on their own to get the day rolling)
- Work from a workstation in the 5th floor cardiac reading room (also houses 3D lab and overflow fetal and neuro). The radiology attending sits closest to 3D lab by sliding door, the cardiology attending sits along same wall by window.
- Check-in with the radiology attending upon arrival to set-up expectations for your shift
 - Note: Since surgery conference is Tuesday morning at 730AM, please arrive around 715 to check in with the cardiac attending BEFORE conference. If that is not possible or you cannot find the cardiac attending, come to cardiac reading room after surgery conference. Please check the schedule on EZ call for attending that day.
- We monitor/check all cases and then will assign you cases depending on degree of difficulty and your prior cardiac experience. This will be a mix of CT and MR. Common study types include:
 - CTA noncoronary, CT Heart, CTA coronary
 - MRA Marfan, MRA chest, MR Heart, MR Heart Stress

WORKFLOW

- At the beginning of the day, please review the schedule with the attending. You will go to the CT scanner with the attending for all CT. Please ask if there would be a good MRI for you to go to the scanner and observe. You will go with attending to scanner for all stress MR.
- You will not protocol or check images unless specifically directed by the radiology attending
- Pre-dictate studies under the radiologist attending prior to readout with radiology and cardiology attending – there might be a couple read outs but usually the largest bolus is read out at the end of the work day.
 - We will review your report line by line so it should be complete, including the impression. Changes will be made in real time during the readout. Don't be surprised if we change your words – we can be pretty particular ;)
- Templates: A basic templates autolaunches for cardiac studies. It will prompt you to select a subsequent specific template. You should choose this from the all site list. Please ask the attending if you are unsure which “CMR” template to select.
 - Many fields are picklists to toggle through. If you are unfamiliar with picklists, please ask!

WORKFLOW – POST PROCESSING

- Post-processing: plays a major role in cardiac imaging! We have an awesome 3D lab (Brian is main contact) who do the bulk of our post-processing for us (including measurements, flows, mapping, and contours), which we review. Please introduce yourself when you see him and Billy in the room just before our reading room.
 - All measurements are double oblique and will be done in Vitrea. If you do not see measurements, check if they have gone to “unspecified”; if not, close study and reopen; if still no images, ask 3D lab if complete and sent
 - DO NOT measure structures yourself on PACS – we will delete these
 - Z-scores are based on body surface area (BSA) and calculated from Boston data at: [BCH Z-Score Calculator - Home \(chboston.org\)](http://chboston.org)
 - Please find body size in Epic; you do not need to enter patient’s age
 - Use the drop down menu “group” to select measurement type e.g. “aorta”, “pulmonary valve and arteries” “coronary artery”
 - Use the drop down menu “regression” to select specific vessel
 - Note measurements are in centimeters but we dictate in millimeters

WORKFLOW – POST PROCESSING

- Post-processing: The 3D lab also does our post-processing in Medis, including T1, T2, and T2* maps, flows, function
 - Mapping: Values are in databases on shared drive. Templates include references to expected normal values.
 - T1 & T2 mapping is on L drive, cardiology or radiology attending can provide values for you
 - T2* (iron overload) mapping is on J drive, radiology attending can provide values for you
 - 2D phase contrast (aka “flows”): contouring done in Medis, 3D lab will provide paper worksheet for you. Have attending show you how to load & review.
 - Function: 3D lab will save workspace in Medis for you to review, have attending show you how to load & review. After you make adjustments, ask cardiology or radiology attending to check your contours.
 - 4D flow: Have attending show you how to load and review if needed in particular case you are reading

CT/MR DEPARTMENT

- CT Scanner locations:
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 - 5th floor GE PET CT - mainly used for PET, biopsy, and overflow CT patients
 - 5th floor Siemens CT - main scanner for inpatients, outpatients, and cardiac exams (for now at least)
 - 2nd floor ER Siemens CT - used for ER patients, some outpatients
- MR Scanner locations:
 - Lurie 5th floor, scanners 1 – 4 (scanners 2 & 4 are 3T) All Siemens
 - Clark (GE 1.5T)
 - Westchester (Siemens 1.5T)
 - Northbrook (GE 3T)

CONTACT INFORMATION

- CT numbers:
 - Main scanner (5th floor): 7-0519
 - Voalte phone: 4- 7918
 - Pager number: 9- 7033
 - ER CT number: 7- 0263
- MRI at Lurie (5th floor):
 - Main: 7- 0546
 - Scanner 1: 7- 0513
 - Scanner 2 (3T Vida): 7- 8881
 - Scanner 3: 7- 0529
 - Scanner 4 (3T Skyra): 7- 0528
- MR Charge Voalte phone: 4- 7340
- Clark: 7- 8251
- Westchester: 7- 7908
- Northbrook (3T GE): 7- 2716

**Cardiac Reading Room:
70592**