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Guidelines for In-Patient Cardiac CTA

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Division/Champion: Cardiothoracic Imaging/ Blum/Winchester

Subject: Guidelines for In-Patient Cardiac CTA

Purpose: Indications and preparation of an inpatient scheduled for a cardiac CTA

Policy: As these are typically non-emergent exams and the expertise required to perform the imaging and interpret the study, inpatient Cardiac CTA are typically only performed between the hours of 8AM – 5PM on weekdays and weekend days.

Criteria for Cardiac CTA

Patient felt to be **low to intermediate** pretest likelihood of having coronary ischemia as a cause of their chest pain.

Appropriate Indications for Cardiac CTA

Chest pain in **low to intermediate** risk patient.

Patient with possible structural *non-atherosclerotic* cardiac anomaly.

Absolute Contraindications for Cardiac CTA

- Clinical instability
- Inability to follow directions, hold breath, lie flat and still, or cooperate
- Increased cardiac enzymes, concerning for AMI
- Acute EKG changes, suggesting AMI
- Documented history of severe coronary atherosclerosis (stents, bypass)
- Irregular cardiac rhythm
- Pregnancy
- History of severe contrast reaction (anaphylaxis, respiratory/cardiovascular collapse requiring vasopressors/intubation)

Relative Contraindications for Cardiac CTA

- Age <40 (unless concern for coronary anomaly) or Age > 75 (more likely to have significant calcific disease, especially males)
- Creatinine level > 2.0, if not on chronic dialysis. Creatinine levels greater than 2.0 must be discussed on a case by case basis with radiologist based on risk/benefit to patient.
- History of less severe contrast reactions which are safe for premedication (itching, hives, bronchospasm, hypotension not requiring vasopressors or mechanical ventilation)
- Body Mass Index > 50 kg/m²
- Coronary CTA performed within the last year

IV Access (Please see IV Access Guidelines)

Must support injection rates at least 5 cc/sec

18g preferred, 20g min

Order of location preference: 1. Right AC; 2. Right mid forearm; 3. Left AC; 4. Left mid forearm.

CT-rated (>300 PSI) central venous lines are acceptable.

All other locations, such as **external jugular** or **hand** veins are *unacceptable* for contrast bolus delivery for cardiac CTA. Other lines or catheters must be approved by the Cardiac Imaging Team or the radiologist/resident on call.

Cardiac CTA Orders Weekdays: Monday through Friday; 8AM – 5PM

- Cardiac CTA EPIC orderable: CT Angio Cardiac Coronary Arteries IMG 12017
- Radiology will place orders in EPIC for IV metoprolol and sublingual nitroglycerine.
- The in-patient scheduled for cardiac CTA is managed by radiology nursing staff.

Medication Administration: Radiology Nursing

- Beta blocker: IV metoprolol: up to 4 doses, 5mg each
- Administered by radiology staff RN just prior to scan until target rate of 66 bpm is met.
- Sublingual nitroglycerine: 0.4mg (unless patient has used Viagra, Cialis, or Levitra in last 3 days)
- Administered by radiology staff RN 3-6 minutes prior to contrasted scan.

Reporting of Results:

WEEKDAYS	
0800-1700	Final report in EPIC by 6PM .
1700-0800	Final report in EPIC by 9AM the following morning.
WEEKENDS	
0800-0800	All studies performed before noon on Saturday and Sunday will have a final read in EPIC by early afternoon. Studies performed after noon will have final reads by Sunday early afternoon (Saturday PM studies) or Monday AM (Sunday PM studies).