Guidelines for ED Patient Cardiac CTA

Admin Approval: 6/1/2020
Next Review: 6/2022

Division/Champion: Cardiothoracic Imaging/Blum/Winchester

Subject: Guidelines for ED Patient Cardiac CTA

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

Policy:

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 coronary 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)
- EGFR < 30, if not on chronic dialysis. EGFR < 30 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 of at least 5cc/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.

Ordering Cardiac CTA

• ED will place order: CT Angio Cardiac Coronary Arteries IMG 12017
• ED will contact CT charge technologist by phone, and verify that the patient meets the criteria listed above and provide the following for the CT charge technologist: Pt name, MRN, age, gender, brief history, heart rate and rhythm, IV access size and location, eGFR.
• CT will verify the availability of an appropriate scanner
• CT charge technologist will notify ED if a delay of greater than 1 hour is expected

Premedication

• Oral beta blockers should be used (unless contraindicated) to achieve a regular heart rate of 66 bpm or less.
• Any heart rate than cannot reliably be lowered under 80 bpm may not be scanned.

Calcium Score

• Calcium score will be performed in all patients age 40 and up.
• For calcium score values above 600, calcium score images will be reviewed by a cardiovascular imaging attending or resident on call and may result in cancellation of the contrast enhanced portion of the exam.

Reporting of Results: Although a non-emergent exam, in order to limit ER length of stay, this study is offered to the ED during all hours. After hours studies may result in a higher rate of indeterminate/non-diagnostic exams and need for patient recall after final interpretation.

<table>
<thead>
<tr>
<th>WEEKDAYS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0800-1700</td>
<td>Final report in EPIC, within 2 hours.</td>
</tr>
<tr>
<td>1700-0800</td>
<td>Preliminary report in EPIC within 2 hours. Final report the following morning. Any discrepancies will be called to the ED.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WEEKENDS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0800-0800</td>
<td>Preliminary report in EPIC within 2 hours. All studies performed before noon Saturday and Sunday should be finalized by early afternoon. Remainder will be finalized the next day. Any discrepancies will be called to the ED.</td>
</tr>
</tbody>
</table>