Cardiac CTA
Patient Flow Protocol for ED Patient with Chest Pain

Patient must meet stated criteria for Cardiac CTA

- Patient with chest pain felt to be low to intermediate pretest likelihood of having coronary ischemia as a cause of their chest pain
- No increased cardiac enzymes
- No acute EKG changes
- No arrhythmia
- Creatinine level < 1.8.
- IV access
  18g preferred, 20g min
Order of location preference:
  - Right AC
  - Right mid forearm
  - Left AC
  - Left mid forearm
  - All other locations are unacceptable for contrast bolus delivery.
  - Other lines or catheters must be approved by the Cardiac Imaging Team or the radiologist/resident on call.

Contraindications for Cardiac CTA

- Inability to hold breath or cooperate
- Cardiac CTA performed within the last year
- Pregnancy
- History of severe contrast reaction
- Arrhythmia
- Renal insufficiency
- Multiple myeloma
- Sickle cell anemia
- Pheochromocytoma

Emergency Department will place order in the proper ordering system
Emergency Department will contact CT charge technologist by phone

The ED will verify that the patient meets the criteria listed above and provide the following:
  - Pt Name
  - MR Number
  - Age
  - Sex
  - History
  - Heart Rate
  - IV access location and size
  - Serum Creatinine level
CT will verify the availability of the AquilionONE or the Aquilion 64.
Emergency Department will administer 100mg oral beta blocker

- The ED will report to CT the time that the beta blocker was given
- The Cardiac CTA should be done 1 hour after the patient receives oral beta blocker
- The CT charge tech will give transport instructions

The coronary scan will be completed

- For calcium score values below 600, the contrast scan will be completed and the patient returned to the ED
- For calcium score values above 600, no contrast scan will be completed
- The ED will be notified by the cardiac team or the radiology resident on call of this change
- The calcium score will be reported to the ED by the cardiac team or the radiology resident on call as per the reporting method declared below

Results will be reported

<table>
<thead>
<tr>
<th>Time</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday – Friday, 0800 – 1600 hrs</td>
<td>1 hour: full report available</td>
</tr>
<tr>
<td>Monday – Friday, 1600 – 0800 hrs</td>
<td>1 hour: preliminary report with calcium score* After 0800: full report available**</td>
</tr>
<tr>
<td>Friday 1600 hrs – Monday 0800 hrs</td>
<td>1 hour: preliminary report with calcium score* After 0800 Monday: full report available**</td>
</tr>
</tbody>
</table>

* The preliminary report document named “After Hours Cardiac CTA Preliminary Report” will contain the calcium score and will be faxed to the ED.

** For full report see hospital reporting system.

Appropriate Indications for Cardiac CTA

- Chest pain in low to intermediate risk patient
- Chest pain in low to intermediate risk patient with borderline or mildly abnormal ETT
- Patient with possible coronary anomaly
- Patient with need for definition of anatomy prior to EP ablation
- Patient with need for definition of anatomy prior to surgery