THE JACKSON IMAGER

| Radiology Group, PA |Jackson Imaging Center, Montgomery, AL

Center Beam

February is Heart Month

- Do you know your risk?
- Coronary artery calcium detection can aid in risk assessment

Evidence Exposed

- Coronary artery calcium

Tech Talk

What's the difference?

- CT calcium scoring
- CT Angiogram

Behind the Lead Apron

Featuring:

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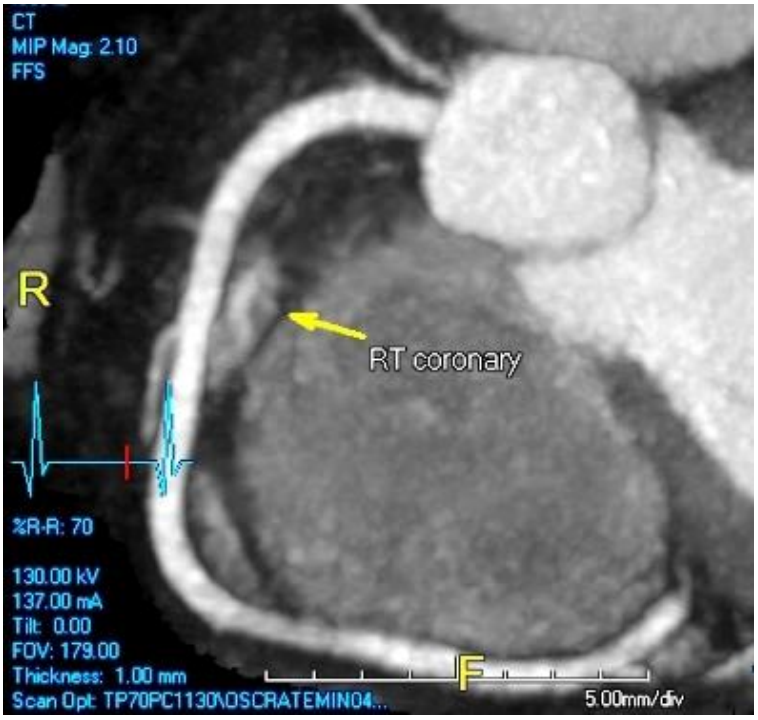
Get it right with your heart!



Coronary CT angiogram depiction of the right coronary artery

Risk factors for coronary heart disease[1]:

- Age
- Gender
- Smoker
- Cholesterol
- Diabetes
- Blood pressure
- Family History and others*

Coronary Artery Calcium – What is it and where does it fit in?

Evidence Exposed

The coronary calcium score is an established independent risk factor for coronary heart disease (CHD). Coronary calcium indicates underlying coronary atherosclerosis (hardening of the artery wall) and is therefore strongly predictive of CHD[2]. Studies have shown that even mild calcification puts patients at significant risk of CHD compared with those with no calcification[2,3].

Some patients who are classified as low risk based on traditional models still go on to develop CHD. One reason for this is that models use age as a surrogate marker for disease, not taking into account variation among individuals in a particular group. Coronary calcium is a unique risk factor in this regard[2].

A coronary calcium score of zero is a powerful piece of information and can change someone from intermediate risk to low risk stratification[2]. On the other hand, younger patients that are found to have any amount of coronary artery calcification are at significant increased risk for heart events in middle age and may warrant more aggressive prevention measures and closer follow-up[3].

Tech Talk

Coronary artery calcium scoring

- Evaluates the wall of the artery
- CACS is a relatively low cost, noninvasive imaging technique
- Uses a low dose CT scan of the heart without any i.v. contrast. The scoring is performed using computer software and compared to a data bank of individuals of the same age
- Exam takes 10-20 seconds

Coronary artery CT angiogram

- Evaluates the wall of the artery and the lumen to assess for blockages.
- Starts with a coronary artery calcium score assessment
- Involves i.v. contrast and blood pressure medication
- Uses EKG monitoring (gating) and a computer software that allows creation of beautiful still images of the heart and coronary arteries
- Exam takes 5-10 minutes

Behind the Lead Apron

This issue features Jeff Thompson, clinical director at Jackson Imaging Center. Jeff started his career in radiology in 1997 and has extensive experience in cardiac imaging including work in the cardiac cath lab from 2005-2010. His focus in cardiac imaging was instrumental in starting the coronary CTA program at Jackson Imaging Center when it opened in 2008. He is married to Tracy and they have two children, Spencer (12) and Charley (9). Other hobbies outside of work include hiking, scrambling and remodeling.

References:

1. Framingham Heart Study - *Note family history is not included in Framingham heart risk, but is in other models
2. Whelton SP, Blaha MJ, Gransar H, et al. Coronary Artery Calcium and Primary Prevention Risk Assessment: What Is the Evidence? Circulation: Cardiovascular Quality and Outcomes. 2012;5:601-607
3. Carr, JJ, Jacobs DR, Terry JG, et al. Association of Coronary Artery Calcium in Adults Aged 32-46 Years With Incident Coronary Heart Disease and Death. JAMA Cardiology. Published online February 08, 2017. doi:10.1001/jamacardio.2016.5493