CORONARY CALCIUM REPORTING TRENDS IN THE US

Jacobob Kirsch, MD
Felipe Martinez, MD
Craig Asher, MD

1 Division of Radiology
2 Department of Cardiology
Cleveland Clinic Florida
• No relevant financial disclosure.
Introduction

- Risk stratification is the cornerstone of preventive cardiology.
- Calcium scoring has abundant supporting data from large prospective studies that show its association with the risk of future cardiovascular events.
Introduction

• Agatston scoring and ordinal scoring methods are predictive of cardiovascular death and major adverse cardiac events.
• Additionally, several studies have demonstrated that a simpler so-called Gestalt method of visual analysis of calcium burden correlates well with dedicated calcium scoring methods.
• Furthermore, that these Gestalt method may also be sufficient for risk classification.
Purpose

- To determine the trends in reporting coronary calcium during non-cardiac CT examinations in the US.
Survey Monkey® email surveys were sent to all ACR members self-described in their profiles as radiologists trained in the US. Questionnaire items included questions regarding their preferences/structure for reporting the presence/absence of coronary calcifications on standard CT exams of the chest.
Survey Questions

1. In your practice, do you interpret CT scans of the chest (adults)?
2. You are a radiologist in practice for how long?
3. Do you consider yourself a cardiac imager (ie. subspecialty training, advance proficiency certification, etc)?
4. On your non-gated chest CT interpretations, do you routinely report the presence of coronary calcifications?
5. Does your institution perform coronary artery calcium score studies?
6. Do you interpret coronary calcium scoring?
7. On your non-gated chest CT interpretations, when reporting the presence of coronary calcifications, do you mention only the presence of calcium or do you qualify the amount of calcified plaque?
8. On your non-gated chest CT reports, when coronary calcified plaque is present, do you include recommendations for further imaging?
9. Do you use a reporting template for non-contrast CT reporting?
10. Is coronary calcium presence a part of the template?
11. Are you aware of published data correlating qualitative and quantitative calcium scores on non-gated chest CT examinations?
Results

• 634 responses were received of which 541 (85%) included radiologists that interpret CT exams of the chest; of these, only 24% considered themselves cardiac imagers.

• 474 radiologists routinely reported the coronary calcifications on their reports (88%).

• However, only 52% reported an assessment of the atherosclerotic burden.
Results

- Of those that consider themselves cardiac imagers, 91% reported the calcifications.
- However, only 57% of them reported a subjective assessment (any grading system such as mild, moderate, severe) of the plaque burden.
Results

- Are you aware of published data correlating qualitative and quantitative calcium scores on non-gated chest CT examinations?

- Yes: 42%
- No: 58%
Conclusions

• While most radiologists interpreting CT exams of the thorax do report the presence/absence of coronary calcium, only approximately half of them provide a subjective assessment of the plaque burden.

• Only a minority of radiologists are aware of published data supporting the good correlation between subjective assessment and quantitative measurements.
References

Cleveland Clinic

Every life deserves world class care.