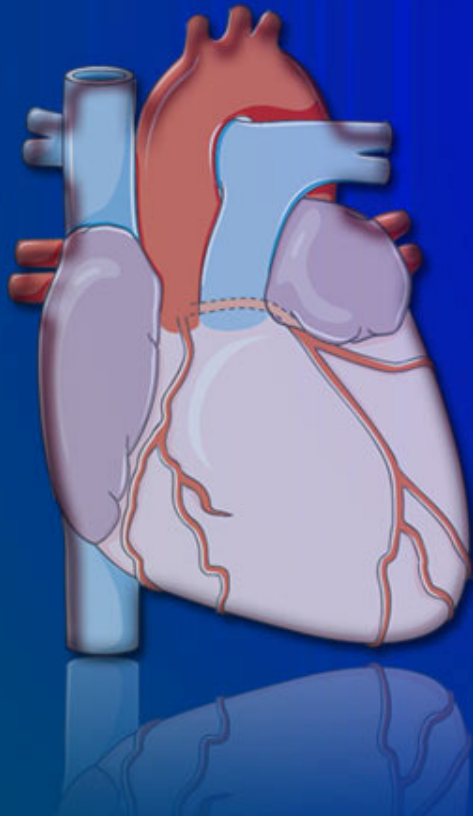


# CORONARY CTA- CHANGING CARDIOLOGY PRACTICE?

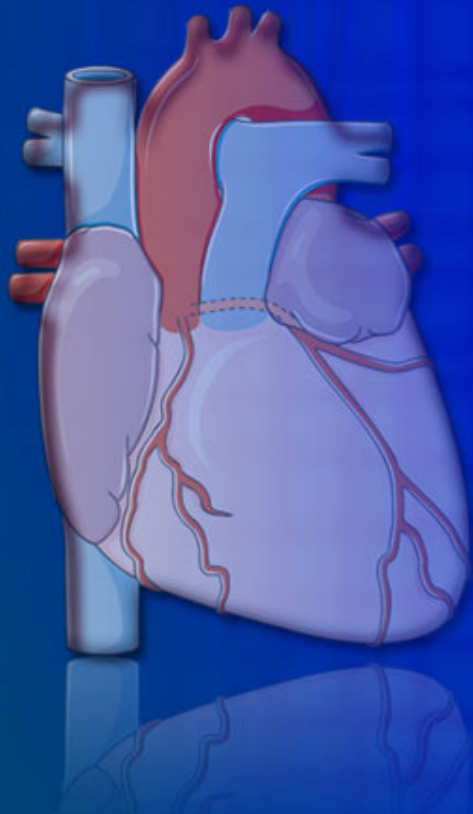


Ainla Reilly

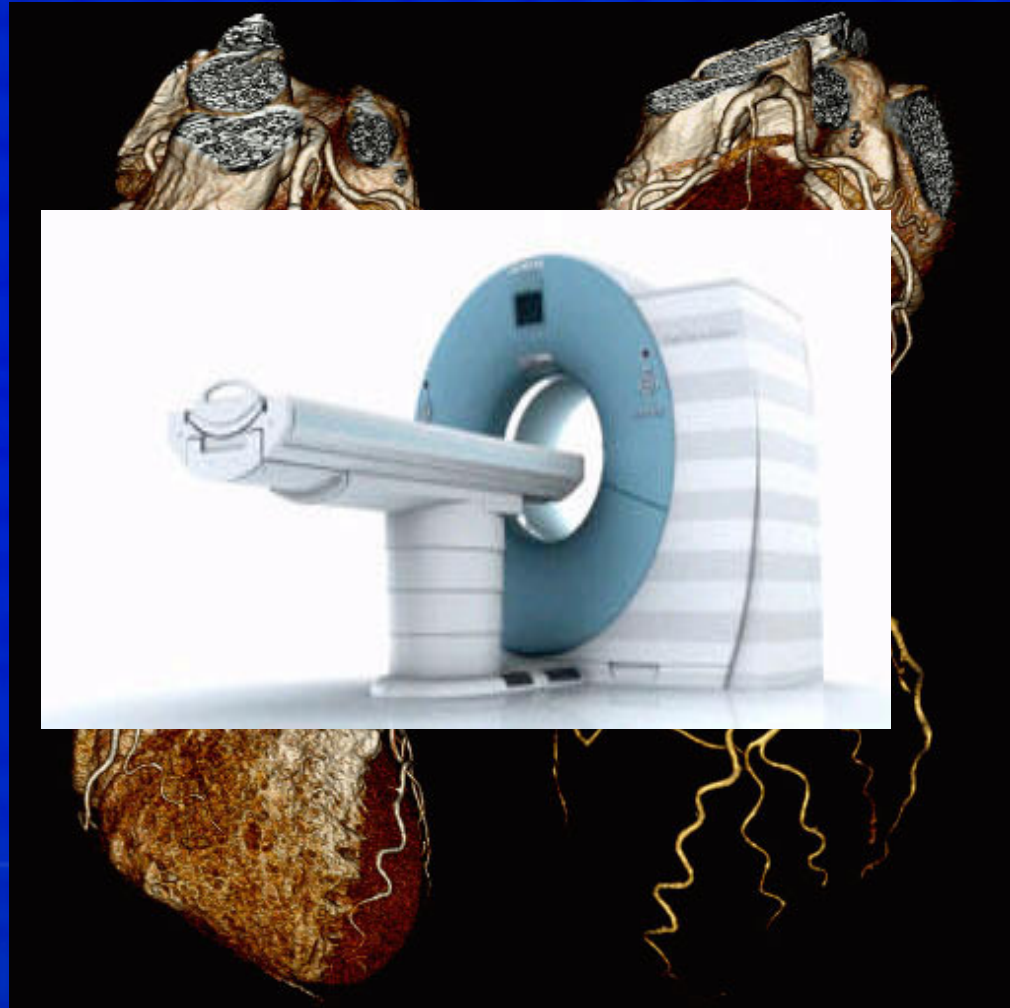
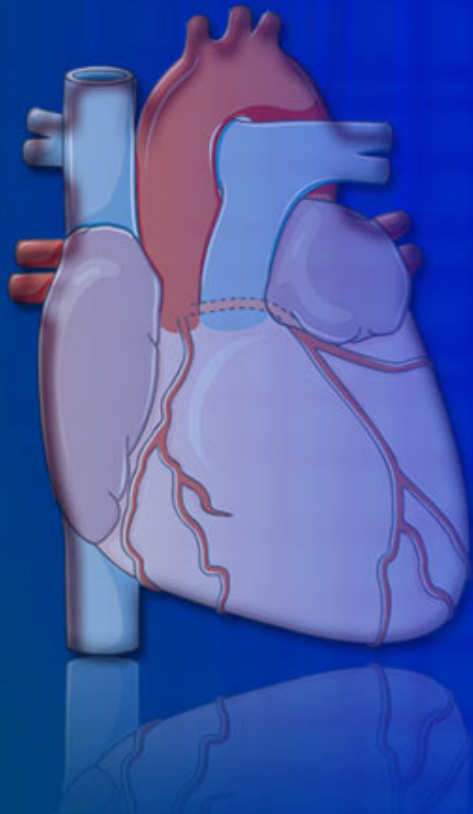
St Vincent's University  
Hospital

# TOPICS TO BE DISCUSSED

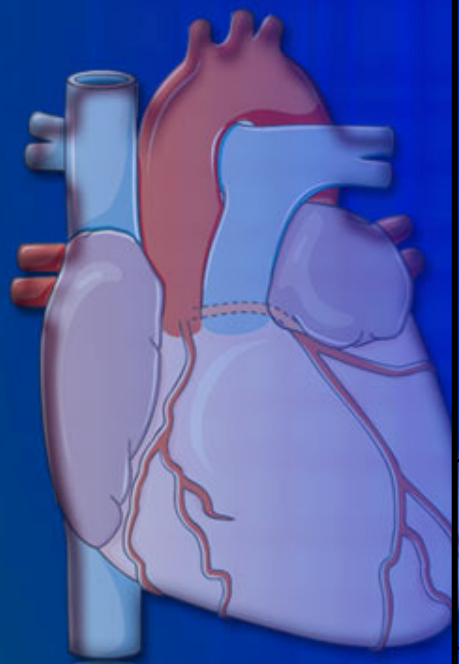
- CTA
- CTA vs. Coronary Angiogram
- Method & Study
- Results
- Limitations
- Conclusion



# CTA



# Coronary Angiogram Vs CTA



	<b>Coronary Angiogram</b>	<b>CTA</b>
Invasive	✓	X
Duration Time	20mins	10-15mins
Risks	haematoma, stroke, MI, death  radiation, contrast dye exposure	radiation, contrast dye exposure
COST	€750	€500
Waiting List	2months	2weeks

## Method

- CTA in 12months
- Calculated gender, average age and referral source
- Number of pts who proceeded to have a coronary angiogram
- Compared results of CTA to coronary angiogram
- Worked out the sensitivity and specificity



## Study

- 416 pts
  - 277 male (55%)
  - 189 female (45%)
  - Average male 55yrs
  - Average female 60yrs
  - 245 cardiac referrals (59%)
  - 171 other source (41%)
- 45 pts
  - 28 male (62%)
  - 17 female (38%)
  - Average male 60yrs
  - Average female 67yrs



## Left Main

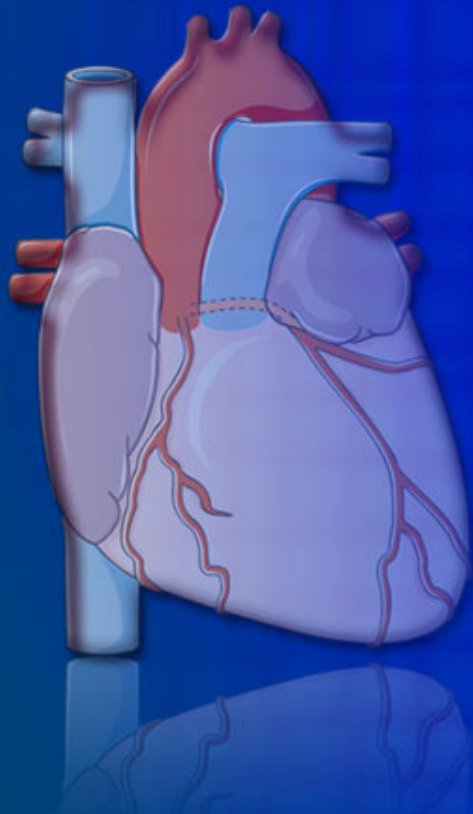
Degree of Disease	Coronary Angiogram	Coronary CTA
Normal	34	27
Mild	6	13
Significant	3	3
Occluded	2	2



- **CTA overestimated and diagnosed normal as mild**

# LAD

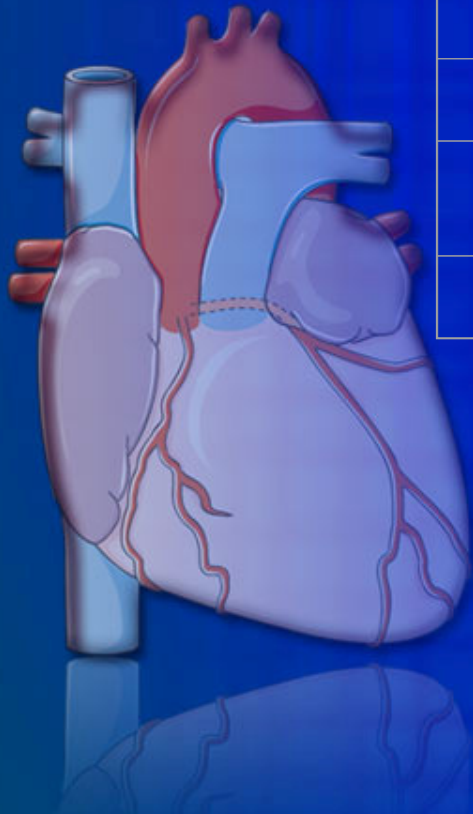
Degree of Disease	Coronary Angiogram	Coronary CTA
Normal	11	8
Mild	11	16
Moderate	5	3
Significant	12	12
Occluded	6	6



- CTA overestimated and diagnosed normal as mild

# LCX

Degree of Disease	Coronary Angiogram	Coronary CTA
Normal	15	14
Mild	15	16
Moderate	1	1
Significant	8	8
Occluded	6	6



- Overestimated normal as mild

# RCA

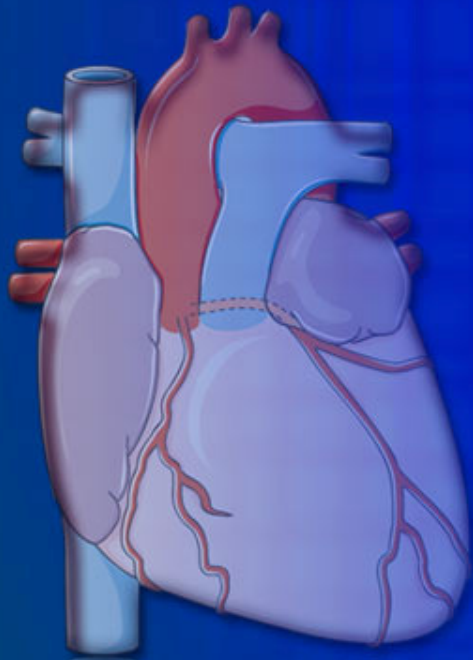
Degree of Disease	Coronary Angiogram	Coronary CTA
Normal	18	17
Mild	11	12
Moderate	3	1
Significant	9	11
Occluded	4	4

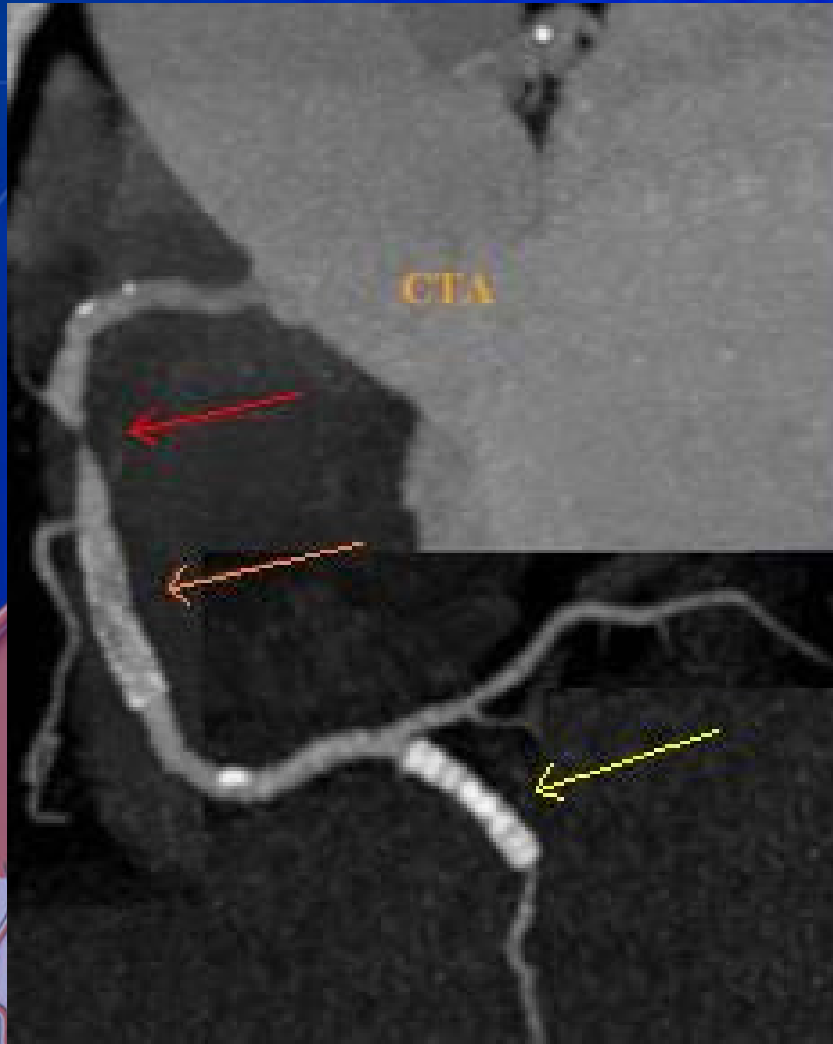


- **Overestimated moderate as significant**

# Case Study

- 55yr male
- Cardiac History
- CTA
- Coronary angiogram
- PCI

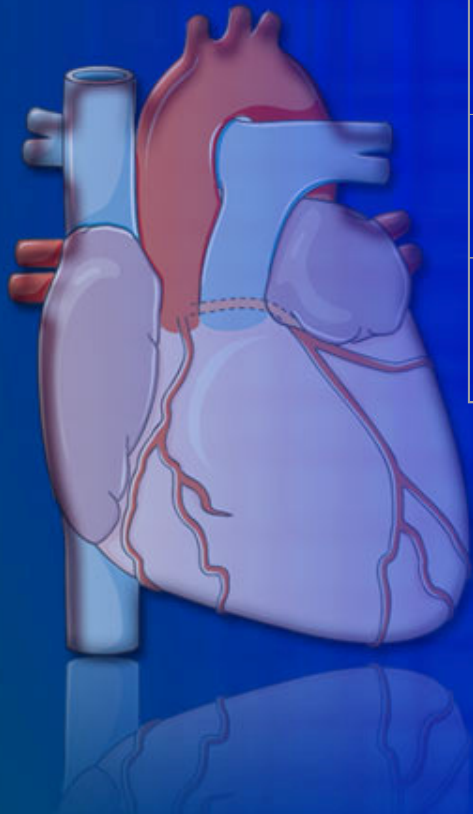




- Red arrow -severe blockage
- orange arrow -proximal stent
- yellow arrow -distal (PDA) stent

# Accuracy

Artery	Sensitivity	Specificity
LM	81%	92%
LAD	93%	80%
LCX	97%	94%
RCA	96%	95%



# Limitations

- Small sample size
- Single centre
- Retrospective analysis



# Future

- Replacing diagnostic cors with CTA
- Replacing EST with CTA
- cost-effectiveness



## Conclusion

- Need for a non-invasive, economical test that can safely rule out significant coronary artery stenosis
- Coronary CTA is guiding diagnosis and treatment of coronary artery disease and is shaping up to be a major player in the future of cardiology

