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# Safety And Practices During Adenosine Stress Cardiac Magnetic Resonance In COPD: A 3-year Experience From A Tertiary Referral Centre.



IS Stone, T Thirukumar, M Khanji, NC Barnes, SE Petersen.  
William Harvey Research Institute, Queen Mary University of London



## Introduction and Rational

COPD is a multi-system disorder with significant cardiac morbidity and mortality, much of which is undiagnosed<sup>1</sup>.

An increasing awareness of this may prompt further referrals to exclude coronary artery disease.

Increasingly Cardiovascular Magnetic Resonance (CMR) adenosine perfusion imaging (PI) is being used to assess ischaemic heart disease.

## Aim

To look at patterns of referral, safety and practices of CMR PI in COPD.

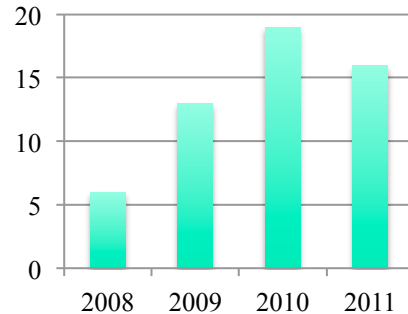
## Method

54 consecutive COPD patients who underwent CMR between 2008-2011 were identified from the hospital imaging registry and a retrospective record review performed.

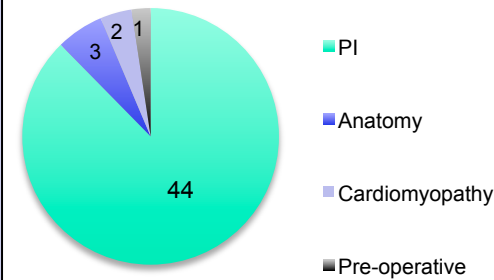
## Demographics

AGE (years)	67.0±8.1
Males: Females	41:13
FEV (ml)	1299±565
FEV%	47.5±19.7
FVC (ml)	2409±925
FVC%	68.7±19.9
FEV/FVC	54.9±12.7

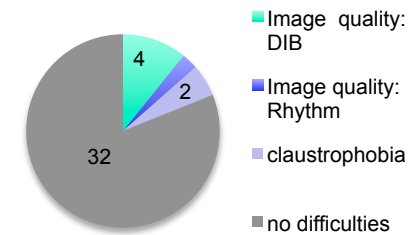
## Number Of Referrals



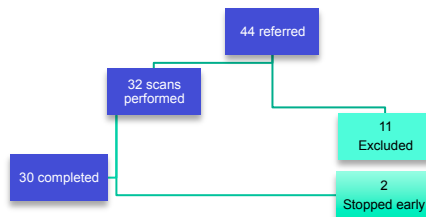
## Reason for Referral



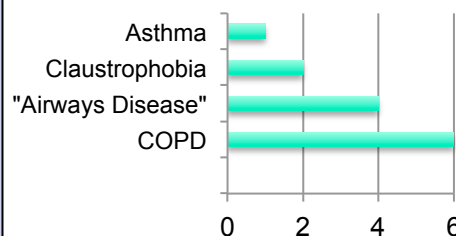
## Difficulties during stress



## Outcomes of Referral



## Reasons given for not proceeding with PI



## Outcomes of Referral

- Only 8/14 had lung function available at the time of the scan
- Comparing PFTs subsequently (31/44):

	Proceeding To Perfusion Imaging		
	YES	NO	P value
Age	66.7 ± 8.7	67.9 ± 7.0	0.53
FEV1%	50.3 ± 20.9	45.3 ± 6.0	0.37
FEV/ FVC	54.4 ± 12.5	56.1 ± 4.2	0.78

- 9.7 % of those referred incorrectly labeled with airflow obstruction

## Conclusions

- The use of PI in COPD is increasing.
- Concerns over safety persist but appear unfounded
- Over-precaution and lack of accompanying lung function data at referral may result in suboptimal management of this high-risk group.

## References:

1. IS Stone, NC Barnes, SE Petersen *Heart* 2012;98:1055-106

Email: [i.stone@qmul.ac.uk](mailto:i.stone@qmul.ac.uk)

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