cardiac CT that are summarised in Abstract 111 table 1. These incidental findings resulted in further investigations, documented in Abstract 111 table 2. The mean radiation dose (± SEM) for CAC scoring was 0.61±0.03 mSv. The mean radiation dose (± SEM) for subsequent CTCA was 2.66 ± 0.32 mSv in high pitch "flash" mode (n=27), 5.86±0.50 mSv in prospective mode (n=64) and 17.15±1.68 mSv in the retrospective mode (n=25).

Abstract 111 Table 1 Incidental findings on cardiac CT

Area	Structure	Incidental Finding	n
Chest (n=27)	Lung parenchyma	Nodule <1 cm	5
		Emphysema	3
		Atelectasis	6
		Fibrosis	4
		Tumour recurrence	1
		Bronchiectasis	2
	Pleura	Effusion	2
		Calcification	2
	Lymph node	Adenopathy	2
Abdomen (n=7)	Liver	Cyst/Nodules	6
	Adernal	Adenoma/metastasis	1
Diaphragm (n=5)		Hiatus Hernia	5
Vasculature (n=11)	Aorta	Dilatation	8
		Aneurysm	1
	Renal	Stenosis	1
	Coeliac	Stenosis	1

Abstract 111 Table 2 Further investigation of incidental findings on Cardiac CT

Investigation	n
Bone scintigraphy	1
Chest clinic referral	2
CT chest	4
DMSA	1
MR adrenals	1
MRA renal	1
Nephrology clinic referral	1
Pleural fluid aspiration	1
Ultrasound kidneys	1
Ultrasound liver	3

Abstract 111 Table 3 Investigations and referrals generated by incidental findings

Investigations or referrals	Number
Bone scintigraphy	1
Chest clinic referral	2
CT chest	4
DMSA	1
MR adrenals	1
MR cardiac	2
MRA renal	1
Nephrology clinic referral	1
Pleural fluid aspiration	1
Ultrasound kidneys	1
Ultrasound liver	3

Conclusions Despite 62 patients having a reassuring CAC score of zero, 8% of this group had evidence of non-calcified plaque, with one patient having obstructive CAD that required intervention. We conclude that if strong clinical suspicion remains in patients with a CAC score of zero further coronary investigation may be warranted. Incidental findings are common, and can result in multiple further investigations for patients. Further research is needed to evaluate the added cost, clinical benefits and radiation exposure created by investigation of such incidental findings in the context of cardiac CT.

112 COMPUTED TOMOGRAPHIC CORONARY ANGIOGRAPHY TO SCREEN FOR ALLOGRAFT VASCULOPATHY AFTER HEART TRANSPLANTATION

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Objective To evaluate ComputedTomographic Coronary Angiography (CTA) as an alternative to Invasive Coronary Angiography (ICA) for the detection of Cardiac Allograft Vasculopathy (CAV).
Background CAV is an important cause of late mortality after heart transplantation (HT). Because patients are often asymptomatic, surveillance ICA is performed in our institution. CTA is effective for the diagnosis of coronary disease in non-transplant patients, but few studies have been done after HT.
Methods 117 HT patients, 1 to 24 years post transplant (mean=12 years SD± 6) underwent CT coronary artery calcification (CTCAC) followed by retrospective ECG gated coronary angiogram on a 64-slice scanner without the use of any β-blockers. Majority (89%) of patients had CTA within 24 h before ICA. The Agatston calcium score (CS) was calculated for all patients. The CTA images were systematically analysed for image quality and the presence of CAV (graded as significant if >50% luminal stenosis) using a fifteen coronary segments model by an independent investigator blinded to the results of ICA.
Results CS ranged from 0 to 1681 (Mean=91.7±275). Out of 77 patients with absent CS, 3 had significant CAV on ICA. Despite a mean resting heart rate of 82 bpm SD±13 and body mass index of 27 kg/m^2 SD ±5, 81% of the CTA images were graded as excellent or satisfactory. For all the 1755 segments assessed by CTA irrespective of the image quality, CTA had sensitivity, specificity, positive and negative predictive values of 71%, 79%, 72% and 78% respectively for the detection of any CAV found by ICA. On a patient basis, CTA best performed in diagnosing CAV of more than 25% with sensitivity, specificity, positive and negative predictive values of 74%, 94%, 79%, and 92% respectively. None of the 61 patients with completely normal CTA had CAV on ICA. 83 (92%) out of 90 patients who responded to a patient survey preferred CTA to ICA as a screening test for CAV. Non-coronary cardiac and non-cardiac abnormalities were identified in 18% and 14% patients respectively.
Conclusion The study shows that CTA compares favourably with ICA in detecting CAV in heart transplant recipients, and may be a preferable screening technique because of its non-invasive nature, patient preference and yield of additional information. One has to exercise caution in just using CS in these patients as significant CAV can be missed out.

113 DUAL ENERGY CT IMPROVES DIFFERENTIATION OF CORONARY ATHEROSCLEROTIC PLAQUE COMPONENTS COMPARED TO CONVENTIONAL SINGLE ENERGY CT

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Introduction Vulnerable plaques have a relatively high necrotic core area and low fibrous tissue content. Although CT can identify plaque components on the basis of their x-ray attenuation, there is