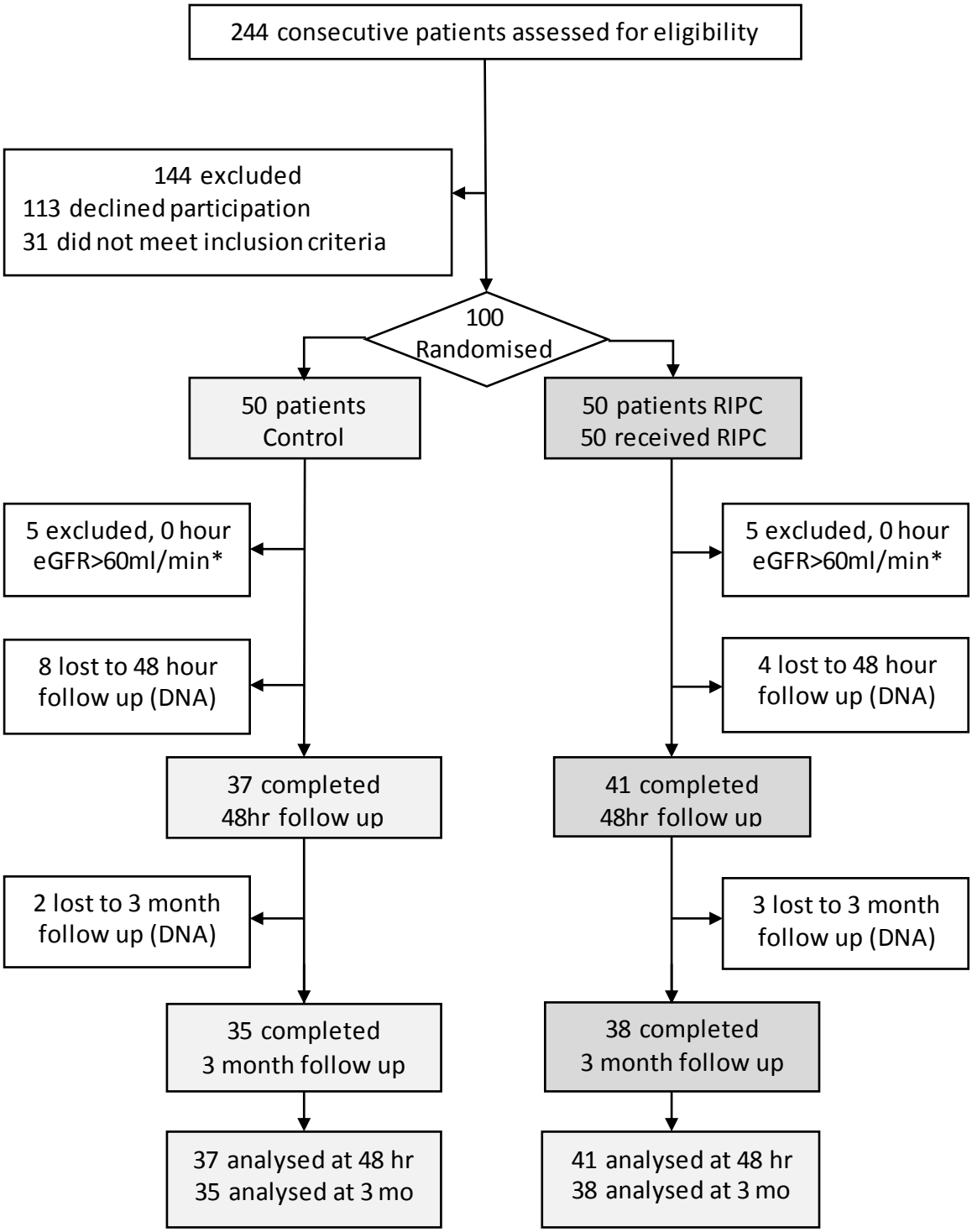
Participant Flow



Baseline Characteristics

	Control Group (n=37)	RIPC Group (n=41)	P value
Age, years (SD)	71.68 (+/-8.54)	72.12 (+/-8.137)	0.81
Age > 75*	13 (35.1%)	16 (39%)	0.54
Gender (Male)	26 (70.3%)	26 (63.4%)	0.52
Body Mass Index, Kg/m2 (SD)	30.39 (+/-6.31)	29.16 (+/-3.41)	0.28
Hypertension	29 (78.4%)	35 (85.4%)	0.42
Smoking History	27 (72.9%)	27 (65.9%)	0.49
Dyslipidaemia	27 (72.9%)	33 (80.5%)	0.43
Diabetes Mellitus*	18 (48.6%)	19 (53.7%)	0.84
Peripheral Arterial Disease	3 (8.1%)	3 (7.3%)	0.89
Acute Coronary Syndrome	4 (10.8%)	6 (14.6%)	0.61
Previous MI	15 (40.5%)	12 (29.3%)	0.29
Previous PCI	16 (43.2%)	11 (26.8%)	0.12
Previous CABG	4 (10.8%)	10 (24.4%)	0.12
Angina <1 month CCS I-IV	18 (48.6%)	10 (24.3%)	0.03
0 hour MDRD eGFR, ml/min, median(Q1-Q3)	51.2 (40.3-56.9)	47.5 (40-54.2)	0.24
0 hour Creatinine mg/dl, median (Q1-Q3)	123 (113-158)	126 (119-140)	0.59
eGFR 40-60 ml/min*	27 (72.9%)	29 (70.7%)	0.83
eGFR 20-40 ml/min*	10 (27.1%)	12 (29.3%)	0.83
eGFR <20 ml/min*	0	0	-
CCF, NYHA III-IV*	4 (10.8%)	5 (12.1%)	0.85
LV Ejection Fraction >50	17 (46.0%)	23 (56.1%)	0.37
LVEF 35-50	6 (16.2%)	5 (12.2%)	0.61
LVEF<35	2 (5.4%)	3 (7.3%)	0.73
Unknown LVEF	12 (32.4%)	10 (24.4%)	0.43
Haematocrit <0.39M/0.36Fs*	12 (32.4%)	18 (43.9%)	0.29
Blood Pressure, mmHg (SD)	132/76 (+/-19/10)	139/75 (+/-24/10)	0.16
Heart Rate, bpm (SD)	67	65	0.54
Contrast Volume ml (median/quartiles)	120 (81.5-200)	110 (90-156)	0.87
Hydration Volume, ml (SD)	750.29 (+/-169.1)	714.9 (+/-101.59)	0.26
Mehran Score <5 (SD)	11 (29.7%)	9 (21.9%)	0.19
Mehran Score 6-10 (SD)	18 (48.6%)	20 (48.7%)	0.99
Mehran Score 11-15 (SD)	6 (16.2%)	11 (26.8%)	0.26
Mehran Score >16 (SD)	2 (5.4%)	1 (2.4%)	0.49

	Control (N=37)	RIPC (N=41)	P Value
Aspirin	33 (89.2%)	32 (78%)	0.18
Clopidogrel/ P2Y(12) inhib	30 (81.1%)	25 (61%)	0.05
B-Blocker	26 (70.3%)	33 (80.5%)	0.12
Ca Channel Blocker	12 (32.4%)	13 (31.7%)	0.94
Nitrate	19 (51.4%)	9 (22%)	0.007
Statin	33 (89.2%)	33 (80.5%)	0.29
ACE-I/ARB	23 (62.2%)	31 (75.6%)	0.20
Insulin	6 (16.2%)	6 (14.6%)	0.85
Sulphonylurea	7 (18.9%)	12 (29.3%)	0.28
Metformin	11 (29.7%)	12 (29.3%)	0.96
Glitazone	2 (5.4%)	1 (2.4%)	0.49
Gliptin	2 (5.4%)	1 (2.4%)	0.49
Warfarin	3 (8.1%)	7 (17.1%)	0.24
Diuretic	14 (37.8%)	17 (41.5%)	0.74
Nephrotoxic (NSAID etc.)	2 (5.4%)	1 (2.4%)	0.49

Outcome Measures

Primary Outcome	Control Group (n=37)	RIPC Group (n=41)	Odds Ratio & Significance
CIN **(25% or 44 µmol/l increase in Creatinine)** **n, (%)**	**2** (5.4%)	**2** (4.8%)	**OR 1.1** (CI 0.15 to 8.33) **p = 0.916** **Adj. OR 1.9 *** (CI 0.19 to 20.5) **p = 0.575**
Secondary Outcomes	**Control Group** Median (Q1-Q3)	**RIPC Group** Median (Q1-Q3)	**Significance****
0-48 hour SCr Δ µmol/l	**1** (-13.5 to 13.5)	**0.5** (-6.8 to 10.5)	**p = 0.97**
0-48 hour eGFR Δ ml/min	**0.9** (-4.3 to 8.4)	**-0.3** (-3.4 to 3.3)	**p = 0.834**
0-48 hour UACR Δ mg/mmol	**0.7** (-0.2 to 4.5)	**0** (-1.3 to 0.3)	**p = 0.09**
0-3 month SCr Δ, µmol/l	**2.0** (-12.0 to 9.5)	**2.0** (-14.3 to 9.8)	**p = 0.703**
0-3 month eGFR Δ, ml/min	**-1.1** (-5.2 to 2.2)	**-1.1** (-5.6 to 8.5)	**p = 0.703**
0-3 month UACR Δ mg/mmol	**0.1** (-0.9 to 3.7)	**0.0** (-1.4 to 0.6)	**p = 0.206**
0-6 hour NGAL Δ ng/l	**-59.5** (-98.7 to -19.5)	**-4.0** (-85.2 to 21)	**p = 0.394**
Secondary Outcome	**Control Group (n=37)**	**RIPC Group (n=41)**	**Odds Ratio & Significance**
Cardio-renal Endpoints **n, (%)**	**3** (8.1%) 1 Death (Non-CV) 1 ACS 1 Readmission with haemorrhage	**2** (4.8%) 1 Haemorrhage 1 Acute LVF	**OR 1.7** (CI 0.27 –to 16.8) **p=0.565** **Adj. OR 2.2*** (CI 0.29 to 18.2) **p = 0.437**

Adverse Events

No SAE's were recorded relating to blood pressure cuff inflation in either group

Control group

1. One patient without CIN was readmitted to hospital with suspected ACS with no ECG changes, negative Troponin T and no acute obstructive lesion on repeat coronary angiography.
2. One patient without CIN died during follow up due to complications during elective cancer surgery
3. One patient without CIN was readmitted to hospital during follow up with an upper gastrointestinal bleed requiring blood transfusion.

RIPC group

1. One patient suffered a femoral haematoma and hypotension post procedure and developed CIN
2. One patient without CIN was readmitted to hospital with decompensated heart failure during follow up.
3. One patient developed an allergic contrast reaction and required oral steroids but did not develop CIN.