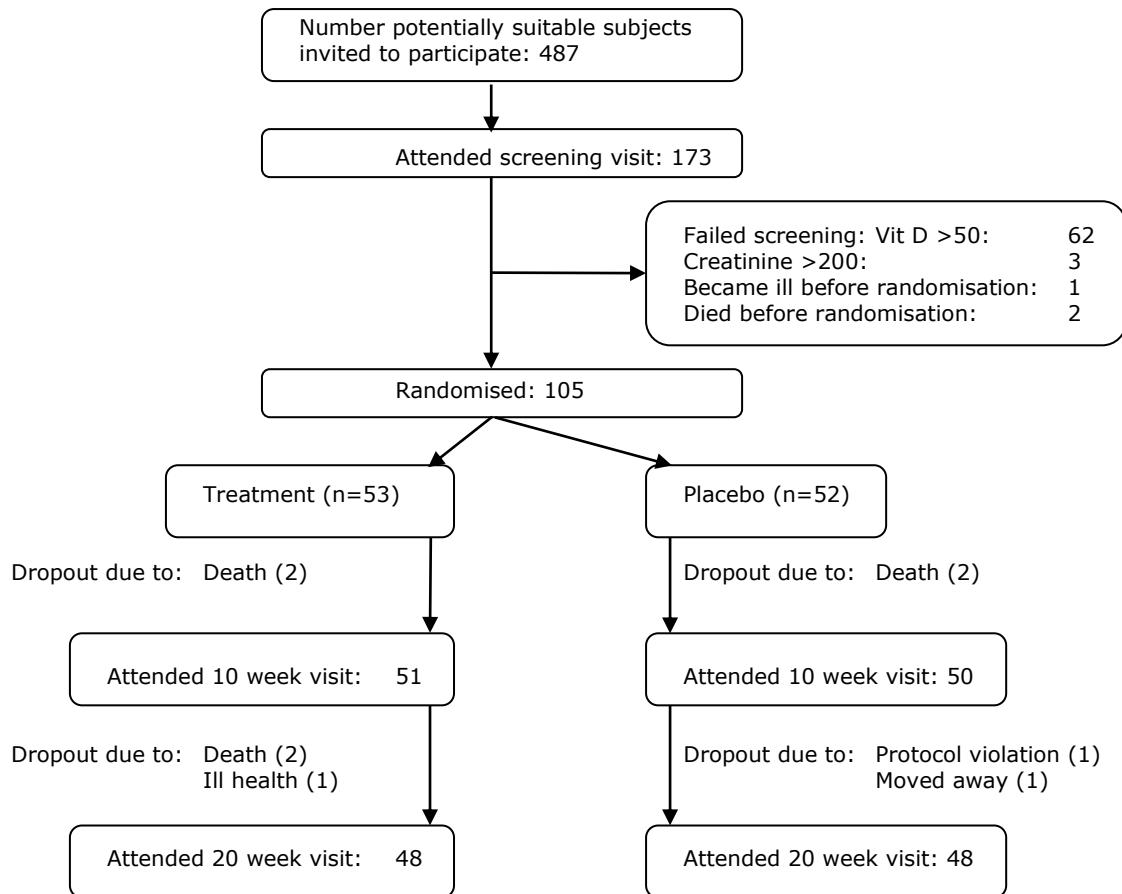


Participant flow



Baseline details

	Treatment (n=53)	Placebo (n=52)
Mean age (yrs) (SD)	78.8 (5.6)	80.6 (5.7)
Male sex	34/53 (64%)	35/52 (67%)
NYHA II vs III	25 vs 28	22 vs 30
Mild / Mod / Severe LV systolic dysfunction	21 / 14 / 18	28 / 16 / 8
Significant valvular disease	19/53 (36%)	18/52 (35%)
History of myocardial infarction	25/53 (47%)	25/52 (48%)
History of ischaemic heart disease	33/53 (62%)	34/52 (65%)
History of hypertension	33/53 (62%)	33/52 (63%)
History of diabetes mellitus	14/53 (26%)	18/52 (35%)
History of chronic airways disease	15/52 (29%)	10/52 (19%)
Atrial fibrillation	10/53 (19%)	12/52 (23%)
Current smoker	8/53 (15%)	6/52 (12%)
On ACE inhibitors / angiotensin blockers	41/53 (77%)	38/52 (73%)
On beta blocker	24/53 (45%)	30/52 (58%)
On spironolactone	14/53 (26%)	16/52 (29%)
On digoxin	19/53 (36%)	9/52 (17%)
On statin	36/53 (68%)	30/52 (58%)
On aspirin	19/53 (36%)	25/52 (48%)
Diuretic (frusemide equivalent dose per day) (mg) (SD)	37 (43)	52 (55)
Systolic BP (mmHg) (SD)	139.3 (24.0)	142.1 (26.0)

Diastolic BP (mmHg) (SD)	73.9 (13.6)	71.6 (14.7)
Sodium (mmol/L) (SD)	139.9 (2.9)	140.7 (2.5)
Creatinine (umol/L) (SD)	115.0 (29.3)	125.3 (30.9)
Body Mass Index (Kg/m ²) (SD)	27.2 (5.1)	27.3 (4.5)
Living alone	29/53 (55%)	26/52 (50%)
Walking aids	29/53 (55%)	21/52 (40%)
MMSE (median, IQR)	28 (3)	28 (2)
Home help	15/53 (28%)	20/52 (38%)
Baseline 25OHD (nmol/L) (SD)	20.5 (8.9)	23.7 (10.0)
Adjusted calcium (mmol/L) (SD)	2.35 (0.09)	2.35 (0.08)
Parathyroid hormone (pmol/L) (SD)	8.7 (4.9)	8.5 (4.7)
Phosphate (mmol/L) (SD)	1.08 (0.22)	1.08 (0.20)
Six min walk distance (m) (SD)	249 (116)	237 (108)
Timed up and go (s) (median, IQR)	15.0 (9.1)	15.5 (8.2)
Activity counts (median, IQR)	84636 (71442)	78403 (54517)
Functional Limitation Profile (SD)	782 (175)	789 (165)
Minnesota Living with Heart Failure score (SD)	23.6 (16.5)	24.7 (17.9)
B-type natriuretic peptide (pg/ml) (median, IQR)	142 (290)	168 (274)
TNF-alpha (pg/ml) (SD)	2.61 (1.69)	2.79 (2.62)

NYHA: New York Heart Association. MMSE: Mini-mental state examination. 25OHD: 25-hydroxyvitamin D. TNF: Tumor necrosis factor.

Outcomes

	Treatment	Placebo	Between group difference (95% CI)	p
<i>Primary outcome:</i>				
6'WT 0 v 10 wks (m)	5.4(38.2)	7.8 (32.4)	-2.4 (-17.1 to 12.4)	0.75
6'WT 0 v 20 wks (m)	-2.1 (39.9)	3.5 (36.5)	-5.6 (-22.2 to 11.0)	0.51
<i>Secondary outcomes:</i>				
TUAG 0 v 10 wks (s)	-0.40 (3.73)	-0.19 (4.05)	0.21 (-1.79 to 1.37)	0.80
TUAG 0 v 20 wks (s)	0.80 (7.49)	-0.53 (4.30)	1.42 (-1.13 to 3.97)	0.27
FLP total 0 v 10 wks	-9.1 (95.3)	-16.4 (113.5)	7.4 (-34.9 to 49.7)	0.73
FLP total 0 v 20 wks	4.7 (101.7)	-14.2 (116.6)	18.9 (-26.2 to 64.0)	0.41
MLWHF total 0 v 10 wks	2.4(13.2)	-1.5 (10.8)	3.8 (-1.1 to 8.8)	0.13
MLWHF total 0 v 20 wks	3.4 (12.1)	-2.0 (11.2)	5.3 (0.5 to 10.2)	0.03
Activity counts (0 v 10 wks)	-603	-4844	4241 (-8693 to 17174)	0.52
Activity counts (0 v 20 wks)	4049	-6954	11003 (-3384 to 25389)	0.13
Renin (0 v 10 wks) (pmol/L)	-13.5	3.2	-16.7 (-57.8 to 24.4)	0.42
Renin (0 v 20 wks) (pmol/L)	24.6	-7.9	32.5 (-18.1 to 83.1)	0.21
Aldosterone (0 v 10 wks) (nmol/L)	-29	-21	-8 (-127 to 111)	0.90
Aldosterone (0 v 20 wks) (nmol/L)	17	-82	99 (-24 to 222)	0.11
TNF alpha (0 v 10 wks) (pg/ml)	-0.02 (1.02)	-0.16 (1.55)	0.14 (-0.38 to 0.67)	0.59
TNF alpha (0 v 20 wks) (pg/ml)	-0.19 (1.35)	-0.14 (1.22)	-0.05 (-0.58 to 0.48)	0.85
Median BNP (IQR) (0 v 10 wks) (pg/ml)	-8 (110)	26 (169)	-34*	0.04
Median BNP (IQR) (0 v 20 wks) (pg/ml)	-15 (160)	37 (153)	-52*	0.05
25OHD 0 v 10 wks (nmol/L)	22.9 (22.0)	2.3 (10.9)	20.6 (13.2 to 27.9)	<0.001
25OHD 0 v 20 wks (nmol/L)	19.5 (13.9)	1.3 (13.4)	18.3 (12.5 to 24.0)	<0.001

*difference between medians. P calculated by t-test of log-transformed differences

Adverse events

	Treatment	Placebo
Myocardial infarction	1	0
Stroke	1	0
Exacerbation of heart failure	1	4
Angina / chest pain	1	1
Arrhythmia	1	0
Infection	2	2
Falls / fractures	2	5
Allergic reaction	2	0
Hypercalcemia	2	1
Peptic Ulcer	0	2
Elective surgery	3	3
Musculoskeletal	2	2
Other gastrointestinal	3	2
Metabolic / renal	0	3
Other	4	3
Total	29	30
Number with at least 1 adverse event	20/53 (38%)	25/52 (48%)
Hospitalisation	13/53 (25%)	11/52 (21%)
Death	4/53 (8%)	2/52 (4%)