

Table 1. Baseline characteristics of all patients referred with suspected heart failure.

	No HF	HF		Missing	P-value*	P-value*
	(LVEF \geq 40 % & NTProBNP \leq 125 ng/L) (N=635)	HeFREF (LVEF <40%) (N=1198)	HeFNEF (LVEF \geq 40% & NTProBNP >125 ng/L) (N=2188)		HF vs no HF	HeFREF vs HeFNEF
Demographics						
Age (years)	67 (59-73)	73 (64-79)	76 (70-82)	0	<0.001	<0.001
Sex (male), n (%)	342 (54)	895 (75)	1168 (53)	0	0.001	<0.001
Height (m)	1.67 (1.60-1.74)	1.69 (1.62-1.76)	1.65 (1.58-1.73)	0	0.06	<0.001
Weight (kg)	85 (73-97)	78 (66-90)	79(67-92)	0	<0.001	0.01
BMI (kg/m ²)	30 (27-34)	27 (24-31)	29 (25-33)	0	<0.001	<0.001
BP systolic (mmHg)	144 (129-159)	128 (113-143)	145 (127-162)	5	<0.001	<0.001
BP diastolic (mmHg)	82 (74-91)	76 (67-87)	78 (70-89)	5	<0.001	<0.001
HR (bpm)	72 (64-82)	75 (64-88)	72 (62-83)	13	0.08	<0.001

NYHA, n (%)				0	<0.001	<0.001
I	302 (48)	165 (14)	547 (25)			
II	244 (38)	598 (50)	1062 (49)			
III	83 (13)	401 (33)	551 (25)			
IV	5 (1)	34 (3)	29 (1)			
Comorbidities						
CVA, n (%)	20 (3)	104 (9)	133 (6)	0	<0.001	0.004
IHD, n (%)	153 (24)	768 (64)	838 (38)	0	<0.001	<0.001
PVD, n (%)	13 (2)	72 (6)	74 (3)	0	0.007	<0.001
Diabetes, n (%)	169 (27)	274 (23)	546 (25)	0	0.19	0.18
HTN, n (%)	252 (40)	367 (31)	878 (40)	0	0.16	<0.001
COPD, n (%)	63 (10)	113 (9)	212 (10)	0	0.80	0.81
Cancer, n (%)	33 (5)	94 (8)	208 (10)	0	0.002	0.11
Significantly deranged liver function test, n (%)	2 (0)	9 (1)	7 (0)	0	0.59	0.08
Reduced mobility, n (%)	210 (33)	620 (52)	1203 (55)	0	<0.001	0.07
Blood tests						
Hb (g/dL)	14.0 (13.2-15.0)	13.5 (12.3-14.7)	13.2 (12.0-14.3)	10	<0.001	<0.001
Urea (mmol/L)	5.2 (4.2-6.3)	7.1 (5.4-9.9)	6.6 (5.1-9.1)	1	<0.001	<0.001

Creatinine (umol/L)	82 (71-96)	105 (88-133)	95 (79-121)	7	<0.001	<0.001
K+ (mmol/L)	4.3 (4.0-4.5)	4.4 (4.1-4.7)	4.3 (4.0-4.6)	24	<0.001	0.003
Na+ (mmol/L)	139 (137-141)	139 (136-140)	139(137-140)	6	<0.001	0.009
Lymphocyte (x10 ⁹ /L)	1.9 (1.6-2.3)	1.6 (1.2-2.1)	1.7 (1.3-2.1)	0	<0.001	0.46
Albumin (g/L)	40 (37-41)	38 (35-40)	38 (35-40)	0	<0.001	0.09
Cholesterol (mmol/L)	4.9 (4.1-5.8)	4.4 (3.7-5.3)	4.5 (3.7-5.4)	0	<0.001	0.08
NTproBNP (ng/L)	64 (38-92)	1974 (831-4534)	812(309-1845)	0	NA	<0.001
Treatment at Referral						
Loop diuretic, n (%)	184 (29)	904 (76)	1243 (57)	42	<0.001	<0.001
MRA, n (%)	23 (4)	369 (31)	262 (12)	42	<0.001	<0.001
ACEi, n (%)	226 (36)	858 (72)	1094 (51)	42	<0.001	<0.001
ARB, n (%)	69 (11)	112 (9)	280 (13)	42	0.63	0.003
ACEi or ARB, n (%)	292 (47)	966 (81)	1349 (62)	42	<0.001	<0.001
BB, n (%)	169 (27)	758 (64)	1119 (52)	42	<0.001	<0.001
Statin, n (%)	299 (48)	634 (53)	1093 (51)	42	0.09	0.10
Digoxin, n (%)	10 (2)	203 (17)	384 (18)	42	<0.001	0.65
ECG and echocardiography						

Cardiac rhythm, n (%)				0	<0.001	<0.001
AF	0	278 (23)	695 (32)			
Sinus	628 (99)	833 (70)	1382 (63)			
Unknown	6 (1)	87 (7)	112 (5)			
EF (%)	59 (54-64)	30 (25-35)	54 (46-60)	1779	<0.001	NA
LV impairment , n (%)				0	<0.001	<0.001
None/trivial	581 (91)	0	1499 (69)			
Mild / mild- moderate	54 (9)	108 (9)	634 (29)			
Moderate to severe	0	1090 (91)	55 (2)			
LVEDD (cm)	4.8 (4.4-5.2)	6.2 (5.7-6.8)	5.0 (4.5-5.5)	619	<0.001	<0.001
Malnutrition						
Prevalence of malnutrition						
<u>CONUT</u>						
Normal (0-1)	450 (71)	552 (46)	1010 (46)	0	<0.001	0.09
Mild malnutrition (2-4)	181 (29)	507 (42)	979 (45)			
Moderate malnutrition (5-8)	3 (<1)	129 (11)	190 (9)			
Severe malnutrition (9-12)	0	10 (1)	10 (<1)			
<u>GNRI</u>						
Normal (>98)	614 (96)	969 (81)	1874 (86)	0	<0.001	0.003
Mild malnutrition (92-98)	16 (3)	133 (11)	183 (8)			
Moderate malnutrition (82-91)	4 (1)	71 (6)	106 (5)			
Severe malnutrition (<82)	0	25 (2)	26 (1)			
<u>PNI</u>						
Normal (>38)	633 (100)	1101 (92)	2023 (93)	0	<0.001	0.65
Moderate malnutrition (35-38)	1 (0)	53 (4)	86 (4)			
Severe malnutrition (<38)	0	44 (4)	72 (3)			

ACEi = Angiotensin-converting enzyme inhibitor, AF= atrial fibrillation, ARB = Angiotensin receptor blocker, BB= betablocker, BMI= body mass index, BP= blood pressure, CONUT = Controlling nutritional status, CVA = cerebrovascular disease, ECG= electrocardiogram. EF= ejection fraction, GNRI = Geriatric nutritional risk index, Hb = Haemoglobin, HF= heart failure, HeFREF = heart failure with reduced ejection fraction, HeFNEF = heart failure with normal ejection fraction, HR= heart rate, IHD = ischaemic heart disease, HTN= hypertension, COPD = chronic obstructive pulmonary disease, K+ = potassium, LVEDD= left ventricular end diastolic diameter, MRA = Mineralocorticoids receptor antagonists, Na+ = sodium, NYHA = New York Heart Association Class, NTproBNP = N-terminal Pro Brain Natriuretic Peptide, PNI = Prognostic nutritional Index, PVD = peripheral vascular disease.

*P-value for trend except when there are ≥ 2 categories (e.g. NYHA class, cardiac rhythm etc)