

## Supplementary material

*Urbanowicz T, Wojtasińska E, Olasińska-Wiśniewska A, et al. Neutrophil to extracellular traps (NET) as an early marker of right ventricular dilatation in patients with left ventricular assist device (LVAD). Pol Heart J. 2024.*

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**Table S1.** Demographical and clinical characteristics of the presented groups. Group 1 (no changes in RV diameter) and group 2 (RV dilatation)

Parameters	Group 1 (no changes in RV diameter) n=18	Group 2 (RV dilatation) n = 7	P-value
Demographical			
Age, years (median [Q1–Q3])	61 (56–63)	51 (39–60)	0.10
BMI (median [Q1–Q3])	28.5 (27.6–28.7)	27.8 (25.7–29.9)	1.00
Clinical			
Ischemic cardiomyopathy, n (%)	10 (56)	3 (43)	0.60
Dilated cardiomyopathy, n (%)	5 (28)	4 (57)	0.27
Pulmonary hypertension, n (%)	12 (67)	4 (57)	0.69
Arterial hypertension, n (%)	5 (28)	3 (43)	0.50
Atrial fibrillation, n (%)	6 (33)	4 (57)	0.30
Diabetes mellitus, n (%)	6 (33)	1 (14)	0.37
ICD implantation, n (%)	16 (89)	6 (86)	0.87

Abbreviations: BMI, body mass index; ICD, implantable cardioverter-defibrillator; RV, right ventricle

**Table S2.** Echocardiographic results collected preoperatively and during follow-up in both subgroups

Parameters	Group 1 (no changes in RV diameter) n = 18	Group 2 (RV dilatation) n = 7	P-value
<b>Pre-implantation echocardiographic results</b>			
LVEDd, mm (median [Q1–Q3])	66 (60–71)	70 (64–78)	0.24
RVEDd, mm (median [Q1–Q3])	34 (32–37)	35 (25–37)	0.61
IVS, mm (median [Q1–Q3])	10 (9–10)	11 (10–12)	0.26
LAD, mm (median [Q1–Q3])	47 (44–49)	48 (43–56)	0.88
LVEF, % (median [Q1–Q3])	18 (15–22)	23 (15–28)	0.47
Mitral valve regurgitation, grade (median [Q1–Q3])	1.0 (1.0–1.0)	1. (1.0–1.8)	0.46
Tricuspid valve regurgitation, grade (median [Q1–Q3])	1.0 (1.0–1.8)	1.0 (1.0–1.0)	0.57
TAPSE, mm (median [Q1–Q3])	15 (14–16)	14 (13–15)	0.06
<b>Follow-up — echocardiographic results</b>			
LVEDd, mm (median [Q1–Q3])	66 (63–71)	69 (53–75)	0.98
RVEDd, mm (median [Q1–Q3])	31 (28–32)	40 (35–41)	0.01 <sup>a</sup>
RV diameter change, mm (median [Q1–Q3])	–3 (–5 to –2)	3 (3–6)	<0.001 <sup>a</sup>
IVS, mm (median [Q1–Q3])	10 (9–11)	11 (10–11)	0.46
LAD, mm (median [Q1–Q3])	48 (48–50)	46 (40–50)	0.47
LVEF, % (median [Q1–Q3])	20 (20–21)	20 (15–24)	0.72
Mitral valve regurgitation, grade (median [Q1–Q3])	1.0 (1.0–1.8)	1.0 (1.0–1.0)	0.88
Tricuspid valve regurgitation, grade (median [Q1–Q3])	1.0 (1.0–1.0)	1.0 (1.0–1.0)	0.87
TAPSE, mm (median [Q1–Q3])	14 (14–16)	14 (14–15)	0.61

<sup>a</sup>Statistically significant

Abbreviations: IVS, intraventricular septum; LAD, left atrium diameter; LVEDd, left ventricular end diastolic diameter; LVEF, left ventricular ejection fraction; RV, right ventricle; RVEDd, right ventricular end-diastolic diameter; TAPSE, tricuspid annular plane systolic excursion

**Table S3.** LVAD characteristics, laboratory results in the follow-up and changes in citH3 plasma concentrations in both subgroups

Parameters	Group 1 (no changes in RV diameter) n = 18	Group 2 (RV dilatation) n = 7	P-value
<b>LVAD function parameters</b>			
Speed (median [Q1–Q3])	5200 (5125–5200)	5000 (4888–5125)	0.32
PI (median [Q1–Q3])	2.1 (1.9–2.3)	2.1 (2.0–2.3)	1.00
Generated cardiac index, mm (median [Q1–Q3])	4.350 (4.225–4.475)	4.000 (3.900–4.150)	0.09
<b>Whole blood count analysis</b>			
WBC, K/ul (median [Q1–Q3])	7.74 (7.34–8.11)	8.68 (6.79–9.76)	0.77
Neutrophil, K/ul (median [Q1–Q3])	5.56 (4.73–6.51)	4.80 (4.76–8.07)	0.86
Monocyte, K/ul (median [Q1–Q3])	0.58 (0.46–0.62)	0.45 (0.43–0.51)	0.21
Lymphocyte, K/ul (median [Q1–Q3])	1.18 (0.95–1.71)	1.35 (1.25–1.36)	0.59
LUC, K/ul (median [Q1–Q3])	0.13 (0.12–0.22)	0.17 (0.16–0.20)	0.39
Hb, mmol/l (median [Q1–Q3])	8.40 (7.15–9.45)	8.30 (6.30–8.80)	0.54
Hematocrit, % (median [Q1–Q3])	40.0 (35.3–46.0)	42.0 (31.0–43.0)	0.71
Platelets, K/ul (median [Q1–Q3])	200 (158–271)	178 (166–199)	0.68
MCV, fl (median [Q1–Q3])	88.0 (86.3–90.8)	95 (89.0–97.0)	0.33
MCHC, g/dl (median [Q1–Q3])	20.5 (20.3–20.9)	20.5 (20.0–21.0)	0.77
<b>Biochemical laboratory tests</b>			
LDH, U/mg (median [Q1–Q3])	211 (203–232)	176 (168–196)	0.14
NT pro-BNP, pg/ml (median [Q1–Q3])	1299 (921–2157)	598 (556–719)	0.13
CRP, mg/l (median [Q1–Q3])	3 (2–5)	4 (1–7)	0.88
ALT, IU/l (median [Q1–Q3])	37 (28–42)	18 (16–23)	0.09
AST, IU/l (median [Q1–Q3])	26 (23–35)	21 (21–29)	0.36
<b>citH3 plasma concentrations</b>			
Preoperatively, pg/ml (median [Q1–Q3])	2255 (1533–2375)	2633 (2288–2699)	0.19

In the follow-up, pg/ml (median [Q1–Q3])	637 (501–770)	1935 (1099–3396)	0.003*
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Abbreviations: ALT, alanine aminotransferase; AST, aspartate aminotransferase; citH3, citrullinated histone 3; CRP, C-reactive protein; LDH, lactate dehydrogenase; LUC, large unstained cell count; LVAD, left ventricular assist device; MCHC, mean corpuscular hemoglobin concentration; MCV, mean corpuscular volume; PI, pulsation index; WBC, white blood cell count

**Table S4.** Correlations between citH3 and echocardiographic parameters

Preoperative correlations					
LVEDd	RVEDd		IVS	LAD	LVEF
$r = 0.64$	$r = 0.35$		$r = 0.27$	$r = 0.55$	$r = 0.71$
$P = 0.06$	$P = 0.35$		$P = 0.38$	$P = 0.13$	$P = 0.03^*$
Postoperative correlations					
LVEDd	RVEDd	RVED change	IVS	LAD	LVEF
$r = 0.013$	$r = 0.26$	$r = 0.47$	$r = 0.28$	$r = 0.08$	$r = 0.20$
$P = 0.95$	$P = 0.22$	$P = 0.01^*$	$P = 0.36$	$P = 0.98$	$P = 0.48$

Abbreviations: IVS, interventricular septum; LAD, left atrium diameter; LVEDd, left ventricular end diastolic diameter; LVEF, left ventricular ejection fraction; RVEDd, right ventricular end diastolic diameter