

TABLE E1. Demographics and Baseline Characteristics Before and After Propensity Score Matching

Variables	Before PS Matching			After PS Matching		
	ECLS + PVAD n =49 (%)	ECLS + IABP n=91 (%)	Standardized differences	ECLS + PVAD n =24 (%)	ECLS + IABP n = 24 (%)	Standardized differences
Age, years	52.1 ± 13.9	56.7 ± 12.3	0.35	56.2 ± 12.8	52.4 ± 15.3	-0.27
Body mass index	28.7 ± 6.1	31.0 ± 6.0	0.38	27.7± 6.2	28.9 ± 5.7	0.21
Preexisting cardiac disease						
Smoking	17 (35)	11 (12)	-0.56	6 (25)	4 (17)	-0.21
COPD	1 (2)	10 (11)	0.37	1 (4)	0	-0.29
Indication for circulatory support						
Nonischemic cardiomyopathy	18 (37)	21 (23)	-0.31	9 (38)	7 (29)	-0.19
Postcardiotomy shock	1 (2)	16 (18)	0.55	1 (4)	1 (4)	0
Pre-ECLS cardiac function						
LV ejection fraction, %	16 ± 7	22 ± 12	0.61	20 ± 8	17 ± 9	-0.32
Central ECLS	7 (14)	62 (68)	1.31	7 (29)	8 (33)	0.09

Values are presented as mean ± standard deviation, n (%).

ECLS, extracorporeal life support; PVAD, percutaneous ventricular assist device;

IABP, intra-aortic balloon pump; COPD, chronic obstructive pulmonary disease; LV, left ventricle.

TABLE E2. Hemodynamic and Laboratory Data Before, After 48 Hours of Support, and Before Weaning Only in the Propensity Score Matched Sample

Variables	After PS matching					
	ECLS + PVAD, n =24 (%)			ECLS + IABP, n =24 (%)		
	Before combined support	48 Hours	P value	Before combined support	48 Hours	P value
SPAP, mmHg	47 ± 12	30 ± 8	<0.01	49 ± 18	35± 8	0.02
DPAP, mmHg	28 ± 7	19 ± 7	0.01	28 ± 9	23 ± 8	<0.01
MPAP, mmHg	33 ± 8	23 ± 7	0.01	35 ± 12	27 ± 7	<0.01
CVP, mmHg	15 ± 7	11 ± 4	0.07	19 ± 8	12± 5	0.13
C.I., L/min/m ²	1.0 ± 0.3	...	...	1.3 ± 0.7	...	...
ECLS flow, L/min	...	4.3 ± 1.3	...	...	4.3 ± 1.6	...
PVAD flow, L/min	...	2.4 ± 0.9	...	...	...	...
Radiographic pulmonary edema						
Improved	...	8 (33)	...	...	8 (33)	...
Unchanged	...	7 (29)	...	...	13 (54)	...
Worsened	...	9 (38)	...	...	3 (13)	...
Laboratory values						
pH	7.24 ± 0.14	7.42 ± 0.06	<0.01	7.26 ± 0.16	7.41 ± 0.06	<0.01
Lactate, mmol/L	6.2 (3.7-9.7)	2.0 (1.7-3.7)	0.09	6.9 (3.0-14.1)	2.9 (1.9-6.7)	<0.01
Total bilirubin, mg/dL	1.4 (0.7-2.2)	2.5 (1.1-6.2)	0.02	1.2 (0.8-3.0)	3.1 (2.9-6.7)	<0.01
Creatine, mg/dL	1.9 ± 0.8	2.2 ± 1.3	0.26	1.9 ± 0.9	1.8 ±1.1	0.33

Cardiac Function Data Before Combined Support and Before Weaning in the Propensity Score Matched Sample

Variables	ECLS + PVAD, n =24(%)			ECLS + IABP, n = 24(%)		
	Before combined support	Before weaning	P value	Before combined support	Before weaning	P value
LV ejection fraction, %	20 ± 8	31± 18	0.11	17 ± 9	32 ± 19	0.03
LV end-diastolic diameter, mm	57± 10	55 ± 17	0.59	61 ± 14	53 ± 17	0.06
LV end-systolic diameter, mm	51± 12	41 ± 9	0.13	51 ± 14	48 ± 19	0.13

Values are presented as mean ± standard deviation, n (%), or median (interquartile range). ECLS, extracorporeal life support; PVAD, percutaneous ventricular assist device; IABP, intra-aortic balloon pump; SPAP, systolic pulmonary artery pressure; DPAP, diastolic pulmonary artery pressure; MPAP, mean pulmonary artery pressure; CVP, central venous pressure; C.I., cardiac index; LV, left ventricle.

TABLE E3. In-hospital Outcomes and Complications only in the Propensity Score

Matched Sample

Variables	After PS Matching		P values
	ECLS + PVAD n =24 (%)	ECLS + IABP n =24 (%)	
Survival			
48 hours	21 (88)	22 (92)	0.50
30 days	11 (46)	12 (50)	0.50
MCS duration, days	8 (2-13)	5 (3-10)	0.64
MCS decannulation	10 (42)	6 (25)	0.22
Survival to discharge	8 (33)	10 (42)	0.38
Length of hospital stay	15 (3-41)	24 (6-49)	0.67
Next destination			
Death on MCS	11 (46)	12 (50)	0.77
Myocardial recovery	10 (42)	6 (25)	0.22
Transition to ventricular assist device	1 (4)	4 (17)	0.16
Transition to heart transplant	0	2 (8)	0.15
Complications			
Limb ischemia caused by PVAD or IABP	2 (8)	0	0.15
Bleeding caused by PVAD or IABP	4 (17)	0	0.04
Hemolysis	3 (13)	1 (4)	0.30
Gastrointestinal bleeding	4 (17)	1 (4)	0.17
Cerebral stroke	1 (4)	0	0.50
Acute kidney injury	15 (63)	14 (58)	0.50
In-hospital dialysis	13 (54)	10 (42)	0.28
Cause of death			
Cardiac death	9 (38)	7 (29)	0.54
Multiple system organ failure	1 (4)	2 (8)	0.55
Bleeding	1 (4)	2 (8)	0.55
Sepsis	3 (13)	0	0.07
Anoxic cerebral event	2 (8)	3 (13)	0.64

Values are presented as n (%), or median (interquartile range).

ECLS, extracorporeal life support; PVAD, percutaneous ventricular assist device;

IABP, intra-aortic balloon pumping; MCS, mechanical circulatory support.

Figure E1

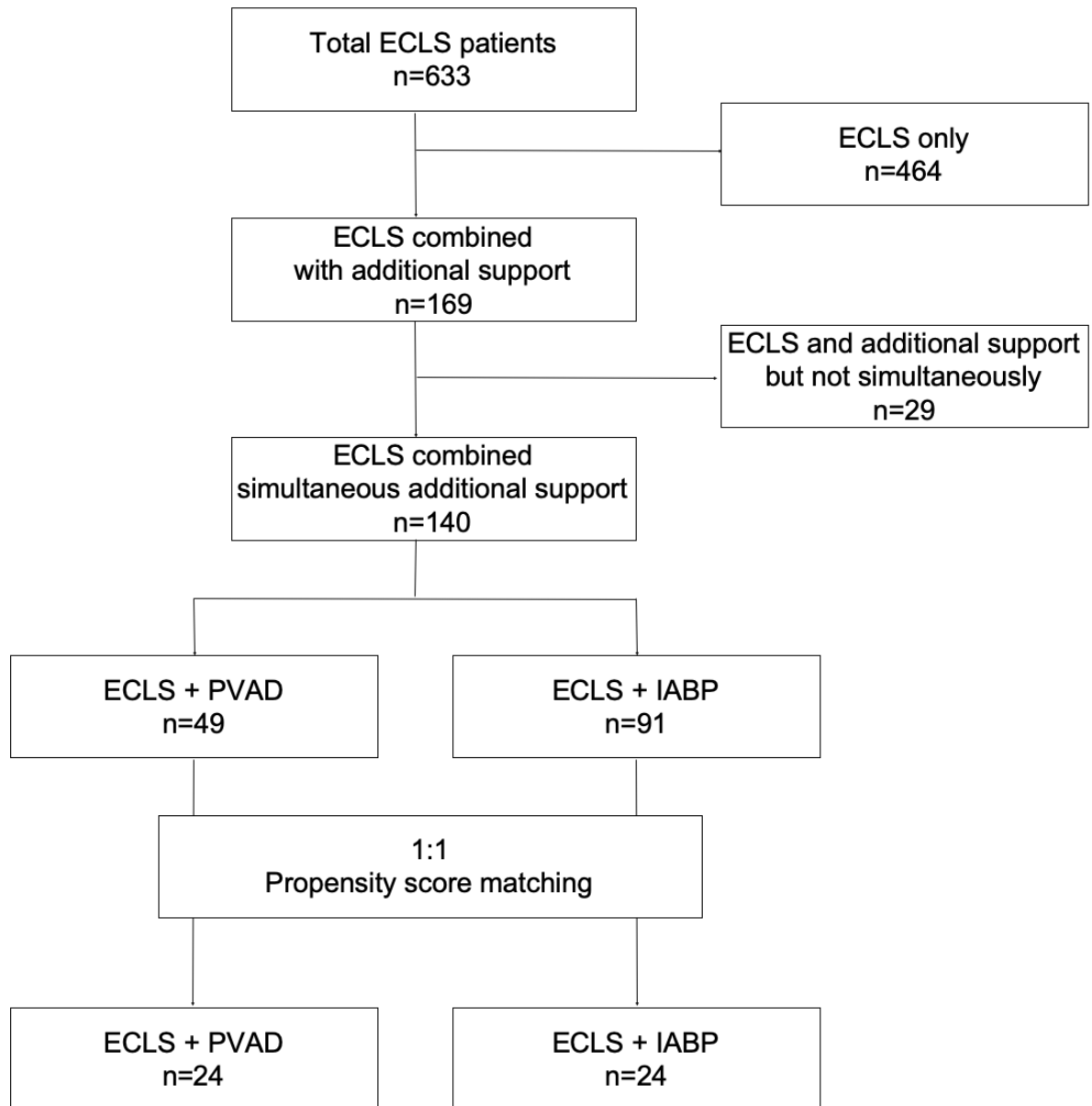


Figure E2

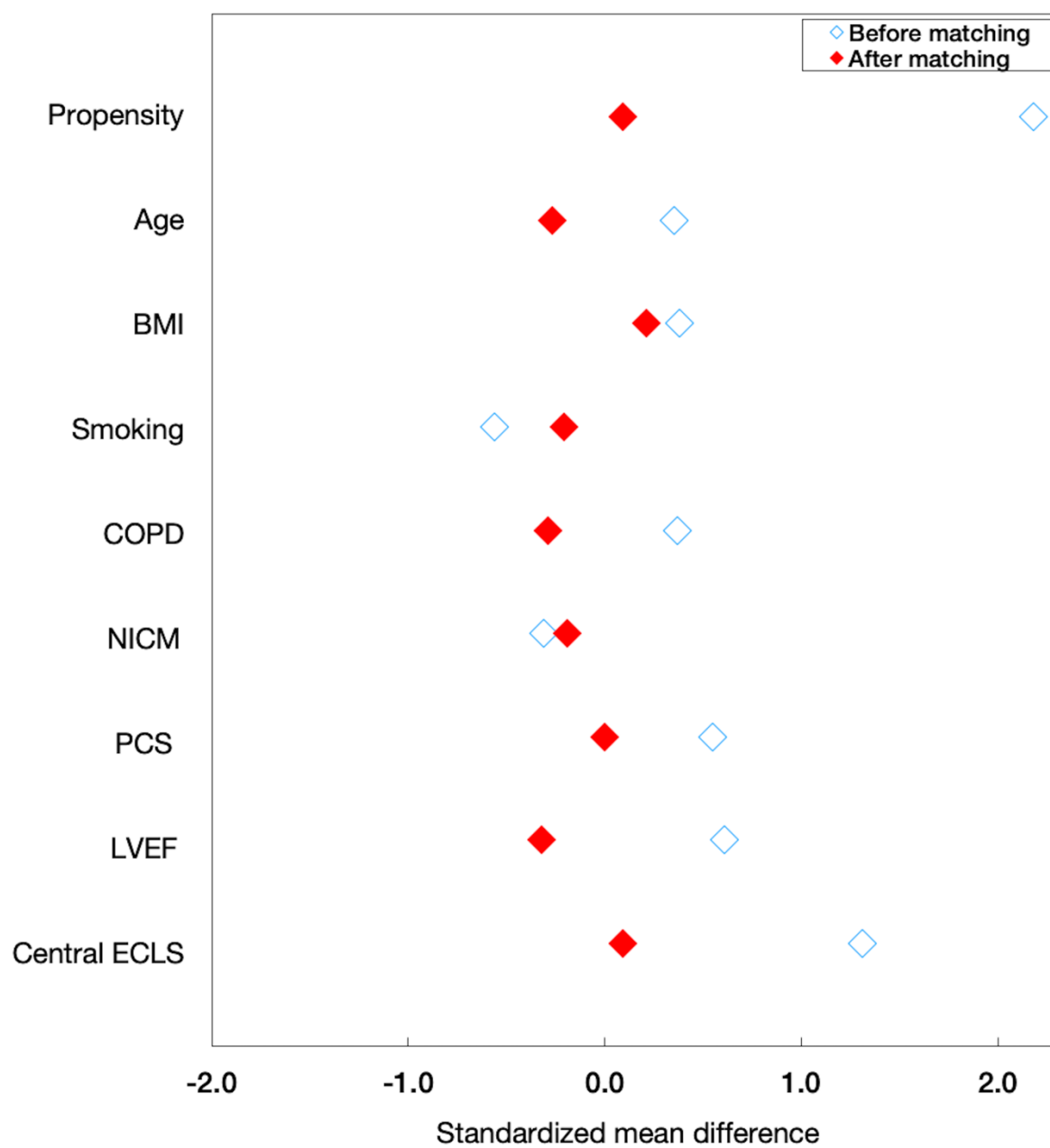
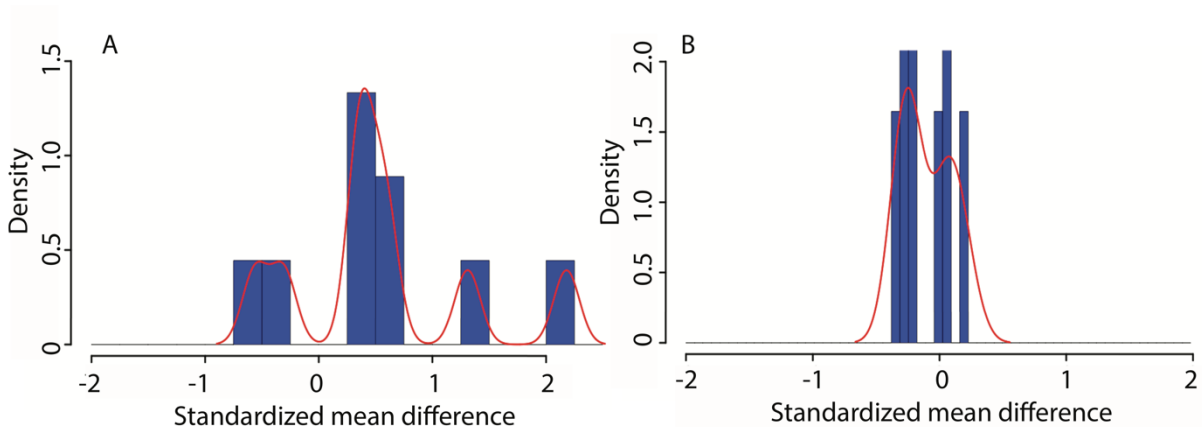


Figure E3



Supplement Figure legends

Figure E1. Flow diagram of the patient selection algorithm. ECLS, extracorporeal life support; IABP, intra-aortic balloon pump; LV, left ventricle; LVAD, left ventricular assist device; PVAD, percutaneous ventricular assist device; ECLS, extracorporeal life support.

Figure E2. Variables included in the propensity analysis and the before and after matching standardized differences. BMI, body mass index; COPD, chronic obstructive pulmonary disease; NICM, non-ischemic cardiomyopathy; PCS, post cardiomy shock; LVEF; Left ventricular ejection fraction; ECLS, extracorporeal life support.

Figure E3. (A) Standardized differences before propensity matching. (B) Standardized differences after propensity matching.