

**Supplemental Table 1. STROBE Statement—checklist of items that should be included in reports of observational studies**

	<b>Item No.</b>	<b>Recommendation</b>	<b>Page No.</b>
<b>Title and abstract</b>	1	(a) Indicate the study's design with a commonly used term in the title or the abstract	1
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	2
<b>Introduction</b>			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	3
Objectives	3	State specific objectives, including any prespecified hypotheses	3
<b>Methods</b>			
Study design	4	Present key elements of study design early in the paper	4
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	4
Participants	6	(a) <i>Cohort study</i> —Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up	4
		<i>Case-control study</i> —Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls	
		<i>Cross-sectional study</i> —Give the eligibility criteria, and the sources and methods of selection of participants	
		(b) <i>Cohort study</i> —For matched studies, give matching criteria and number of exposed and unexposed	
		<i>Case-control study</i> —For matched studies, give matching criteria and the number of controls per case	
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	5
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	5
Bias	9	Describe any efforts to address potential sources of bias	5
Study size	10	Explain how the study size was arrived at	5

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Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	5
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	5-6
		(b) Describe any methods used to examine subgroups and interactions	5-6
		(c) Explain how missing data were addressed	5-6
		(d) <i>Cohort study</i> —If applicable, explain how loss to follow-up was addressed  <i>Case-control study</i> —If applicable, explain how matching of cases and controls was addressed  <i>Cross-sectional study</i> —If applicable, describe analytical methods taking account of sampling strategy	
		(e) Describe any sensitivity analyses	5-6
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	6
		(b) Give reasons for non-participation at each stage	
		(c) Consider use of a flow diagram	
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	6
		(b) Indicate number of participants with missing data for each variable of interest	6
		(c) <i>Cohort study</i> —Summarise follow-up time (eg, average and total amount)	7
Outcome data	15*	<i>Cohort study</i> —Report numbers of outcome events or summary measures over time	7
		<i>Case-control study</i> —Report numbers in each exposure category, or summary measures of exposure	
		<i>Cross-sectional study</i> —Report numbers of outcome events or summary measures	
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	7-8
		(b) Report category boundaries when continuous variables were categorized	7-8
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	

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Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	7-8
<b>Discussion</b>			
Key results	18	Summarise key results with reference to study objectives	8-11
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	11
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	8-11
Generalisability	21	Discuss the generalisability (external validity) of the study results	8-11
<b>Other information</b>			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	12

\*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

**Note:** An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at <http://www.plosmedicine.org/>, Annals of Internal Medicine at <http://www.annals.org/>, and Epidemiology at <http://www.epidem.com/>). Information on the STROBE Initiative is available at [www.strobe-statement.org](http://www.strobe-statement.org).

**Supplemental Table 2.** Baseline characteristics of the training and testing datasets.

	<b>Training Set (70%)</b>	<b>Testing Set (30%)</b>
	<b>n of patients</b>	<b>805</b>
	<b>345</b>	
	Male Sex	579 (72%)
	248 (72%)	
	Age (years)	39 [25, 47]
	37.4 [28, 44]	
	Prodromal symptoms	488 (63%)
	212 (66%)	
<b>Clinical Presentation</b>	Chest Pain	517 (74%)
	235 (81%)	
	Dyspnoea	128 (18%)
40 (14%)		
	Arrhythmia	55 (8%)
	14 (5%)	
	Previous myocarditis	22 (5 %)
	8 (4%)	
<b>Comorbidities</b>	Hypertension	106 (13%)
	28 (8%)	
	Dyslipidaemia	97 (13%)
	38 (12%)	
	Diabetes	38 (5%)
18 (6%)		
	CKD	18 (3%)
	5 (2%)	
	Autoimmune Disease	46 (9%)
	17 (8%)	
	SBP	120 [110, 132]
	118 [105, 130]	
	HR	84.5 [70, 90]
	83 [74, 96]	
<b>Echo</b>	LVEF at admission (%)	51.1 [50, 60]
	52.5 [39, 60]	
	LVSD	552 (71%)
	253 (76%)	
<b>CMR</b>	LVEF (%)	57 [54, 63]
	57.5 [52, 62]	
	LGE	598 (87%)
	262 (90%)	
<b>In-hospital management</b>	Inotropes	59 (8%)
	20 (6%)	
	Steroids	138 (17%)
50 (15%)		
	Renal Replacement therapy	21 (4%)
	2 (1%)	
<b>Discharge medications</b>	Aspirin/NSAIDS	316 (41%)
	137 (42%)	
	RAASi	302 (38%)
	126 (37%)	
	Beta-Blockers	347 (43%)
	147 (43%)	
	MRAs	75 (9%)
31 (9%)		
	Diuretics	99 (12%)
	32 (9%)	
	Amiodarone	34 (8%)
	5 (3%)	
	Immunosuppressants	93 (12%)
	39 (12%)	
<b>Blood values</b>	CRP (mg/L)	63 [17, 68]
	61 [23, 138]	
	Neutrophils (10 <sup>9</sup> /L)	6.75 [4.4, 7.8]
	6.36 [5.9, 10.0]	
	Lymphocytes (10 <sup>9</sup> /L)	1.85 [1.65, 2.51]
	1.88 [0.96, 2.02]	
	Monocytes (10 <sup>9</sup> /L)	0.76 [0.45, 0.90]
	0.73 [0.52, 0.98]	
	Eosinophils (10 <sup>9</sup> /L)	0.10 [0.05, 0.21]
	0.06 [0.02, 0.12]	
	Basophils (10 <sup>9</sup> /L)	0.04 [0.02, 0.07]
	0.03 [0.01, 0.05]	
	Endomyocardial biopsy	140 (17.5%)
	61 (17.7%)	
<b>Events</b>	Death	38 (5%)
	10 (3%)	
	Heart Transplant	10 (2%)
	5 (2%)	

Legend: CKD, chronic kidney disease; SBP: Systolic Blood Pressure; HR: Heart Rate; LVEF, left ventricular ejection fraction; LVSD, left ventricular systolic dysfunction; LGE: Late Gadolinium Enhancement; NSAIDs, non-steroidal anti-inflammatory drugs; RAASi, renin angiotensin aldosterone system inhibitors; MRA, mineralocorticoid receptor antagonist; CRP, C-reactive protein.

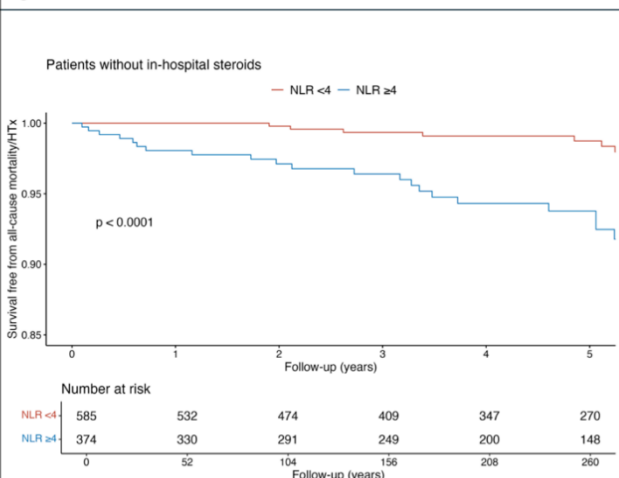
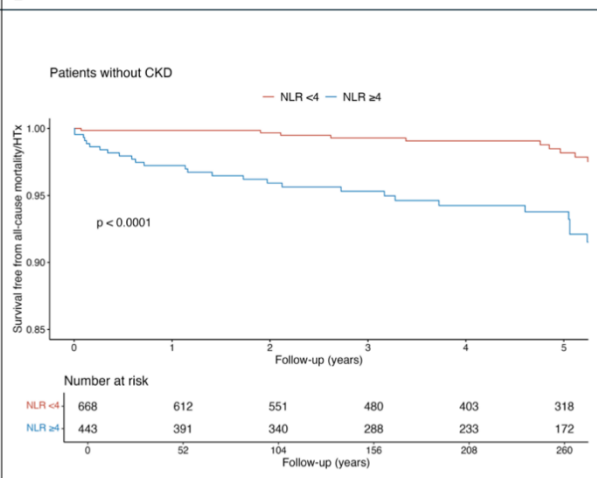
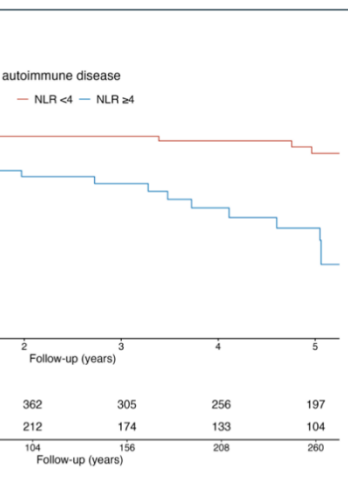
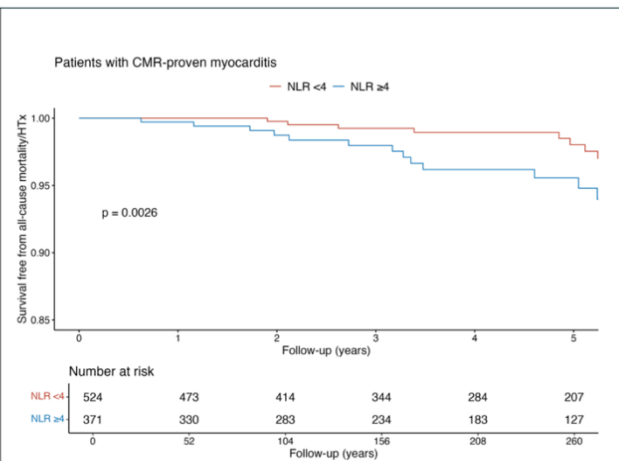
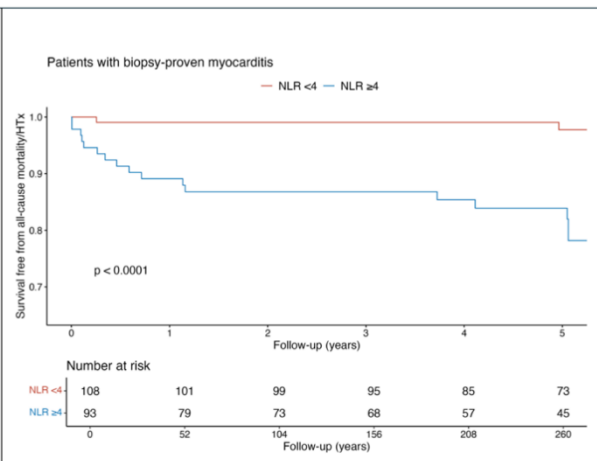
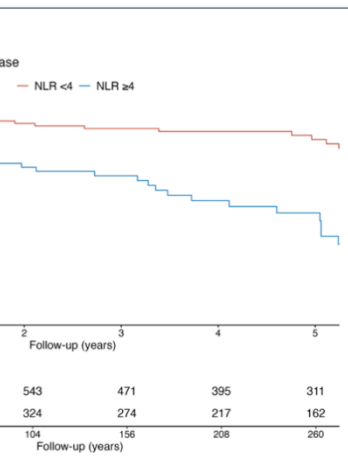
Values are reported as median [25<sup>th</sup>,75<sup>th</sup> centiles] or n (%)

Supplemental Table 3.

	CMR Group	EMB Group	p value	
<b>n of patients</b>	<b>949</b>	<b>201</b>		
Male Sex	700 (74%)	127 (63%)	<b>0.002</b>	
Age (years)	33 [25, 46]	48 [31, 61]	<b>&lt;0.001</b>	
Prodromal symptoms	623 (66%)	77 (52%)	<b>&lt;0.001</b>	
<b>Clinical Presentation</b>	Chest Pain	657 (69%)	95 (65%)	
	Dyspnoea	74 (8%)	94 (64%)	<b>&lt;0.001</b>
	Arrhythmia	32 (4%)	37 (26%)	
Previous myocarditis	25 (4%)	5 (4%)	0.9	
<b>Comorbidities</b>	Hypertension	105 (11%)	29 (19%)	<b>0.004</b>
	Dyslipidaemia	113 (12%)	22 (16%)	0.14
	Diabetes	46 (5%)	10 (7%)	0.4
	CKD	19 (2%)	4 (2%)	0.9
	Autoimmune Disease	48 (5%)	15 (7%)	0.2
SBP	120 [109, 131]	113 [100, 127]	<b>&lt;0.001</b>	
HR	80 [70, 94]	85 [71, 99]	<b>0.033</b>	
<b>Echo</b>	LVEF at admission (%)	57 [51, 60]	40 [25, 55]	<b>&lt;0.001</b>
	LVSD	211 (19%)	67 (34%)	<b>&lt;0.001</b>
<b>CMR</b>	LVEF (%)	59 [53, 63]	47 [30, 54]	<b>&lt;0.001</b>
	LGE	779 (87%)	81 (87%)	0.9
<b>In-hospital management</b>	Inotropes	33 (4%)	46 (25%)	<b>&lt;0.001</b>
	Steroids	87 (9%)	101 (50%)	<b>&lt;0.001</b>
	Renal Replacement therapy	16 (3%)	7 (6%)	0.084
<b>Discharge medications</b>	Aspirin/NSAIDs	415 (44%)	38 (26%)	<b>&lt;0.001</b>
	RAASi	296 (31%)	132 (66%)	<b>&lt;0.001</b>
	Beta-Blockers	358 (38%)	136 (68%)	<b>&lt;0.001</b>
	MRAs	35 (4%)	71 (36%)	<b>&lt;0.001</b>
	Diuretics	45 (5%)	86 (43%)	<b>&lt;0.001</b>
	Amiodarone	11 (2.1%)	28 (25%)	<b>&lt;0.001</b>
	Immunosuppressants	57 (6%)	75 (50%)	<b>&lt;0.001</b>
<b>Blood values</b>	CRP (mg/L)	37 [11, 86]	29 [11, 77]	0.5
	Neutrophils (10 <sup>9</sup> /L)	5.8 [4, 8.1]	6.3 [4.6, 8.8]	<b>0.006</b>
	Lymphocytes (10 <sup>9</sup> /L)	1.75 [1.33, 2.24]	1.70 [1.17, 2.20]	0.2
	Monocytes (10 <sup>9</sup> /L)	0.70 [0.50, 0.95]	0.50 [0.30, 0.84]	<b>&lt;0.001</b>
	Eosinophils (10 <sup>9</sup> /L)	0.09 [0.04, 0.20]	0.09 [0.02, 0.20]	0.6
	Basophils (10 <sup>9</sup> /L)	0.03 [0.02, 0.07]	0.08 [0.01, 0.10]	<b>0.007</b>
<b>Events</b>	Death	29 (3%)	19 (9%)	<b>&lt;0.001</b>
	Heart Transplant	1 (0.2%)	14 (7.5%)	<b>&lt;0.001</b>

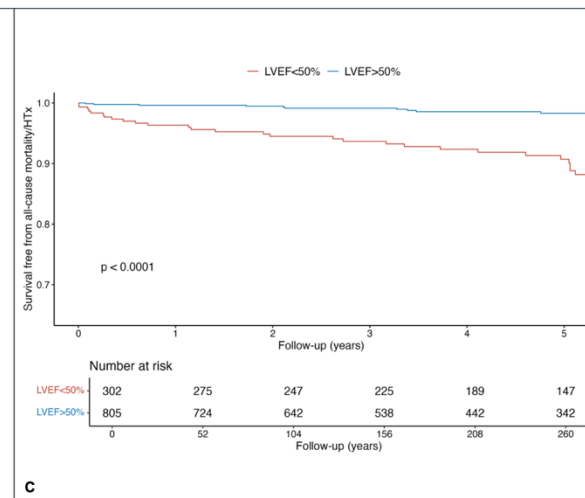
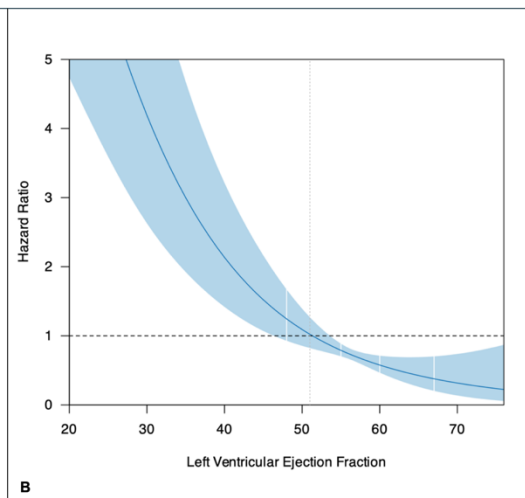
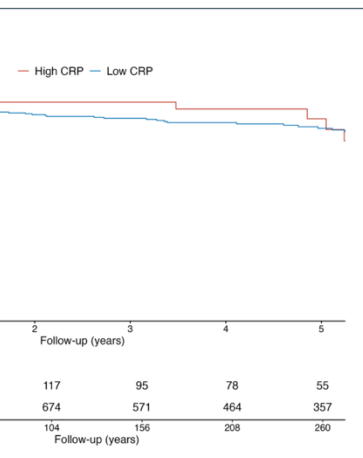
Legend: CKD, chronic kidney disease; SBP: Systolic Blood Pressure; HR: Heart Rate; LVEF, left ventricular ejection fraction; LVSD, left ventricular systolic dysfunction; LGE: Late Gadolinium Enhancement; NSAIDs, non-steroidal anti-inflammatory drugs; RAASi, renin angiotensin aldosterone system inhibitors; MRA, mineralocorticoid receptor antagonist; CRP, C-reactive protein; ULN: times the upper limit of normal. Values are reported as median [25<sup>th</sup>;75<sup>th</sup> centiles] or n (%).

**Supplemental Figure 1** Kaplan-Meier curve for all-cause mortality or heart transplant (HTx) according to NLR cut-off value of 4 in the sensitivity analyses in patients without autoimmune diseases (A), with Biopsy-proven myocarditis (B), with CMR-proven myocarditis (C), in patients with preserved left ventricular systolic without autoimmune diseases (D), in patients without chronic kidney disease (E), in patients who did not receive immunosuppression during hospitalization (F).

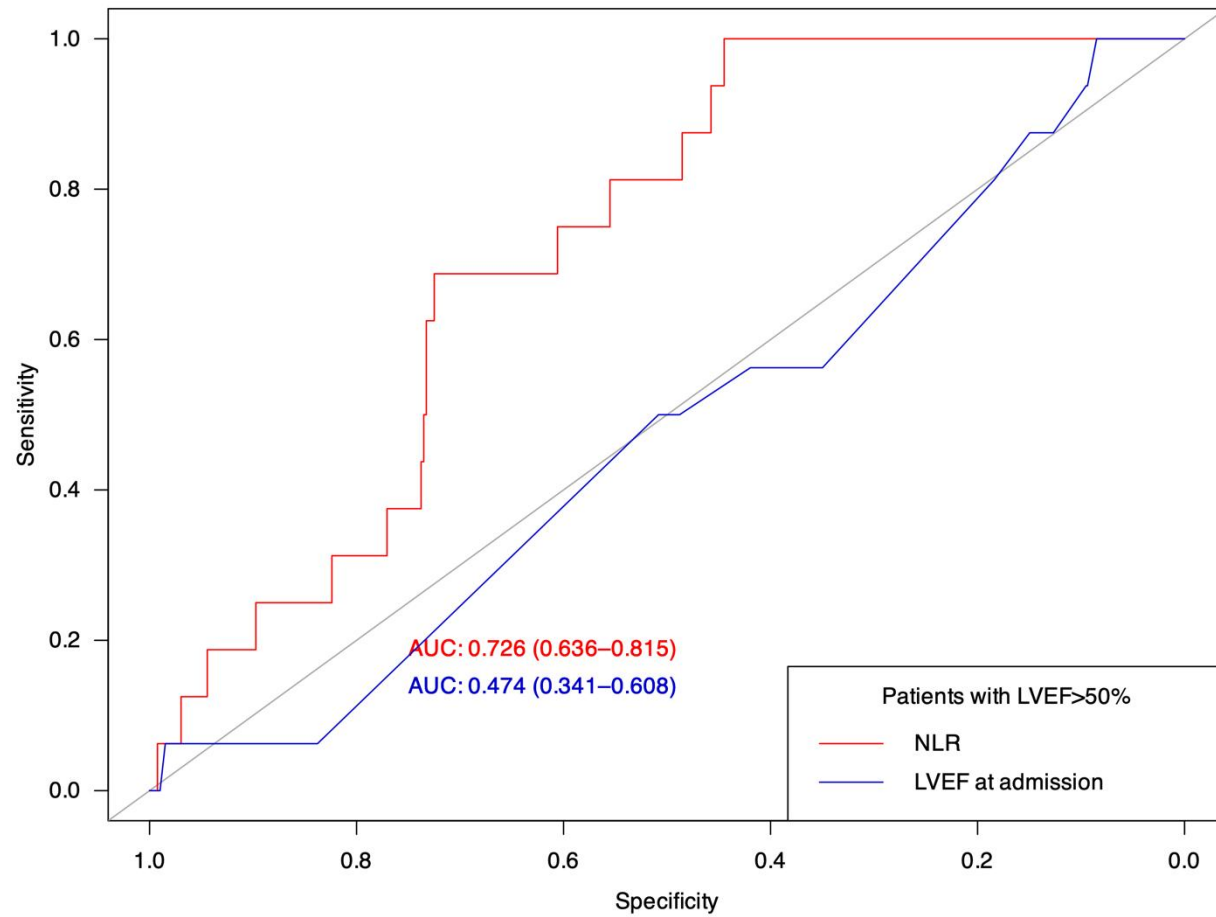


**Supplemental Figure 2.** Kaplan Meier for all-cause mortality or heart transplant (HTx) according to CRP below or above the upper limit of normal (A), Spline curve for the association between LVEF at admission and risk of death or heart transplant (B), Kaplan-Meier curve for all-cause mortality or heart transplant (HTx) according to baseline LVEF.

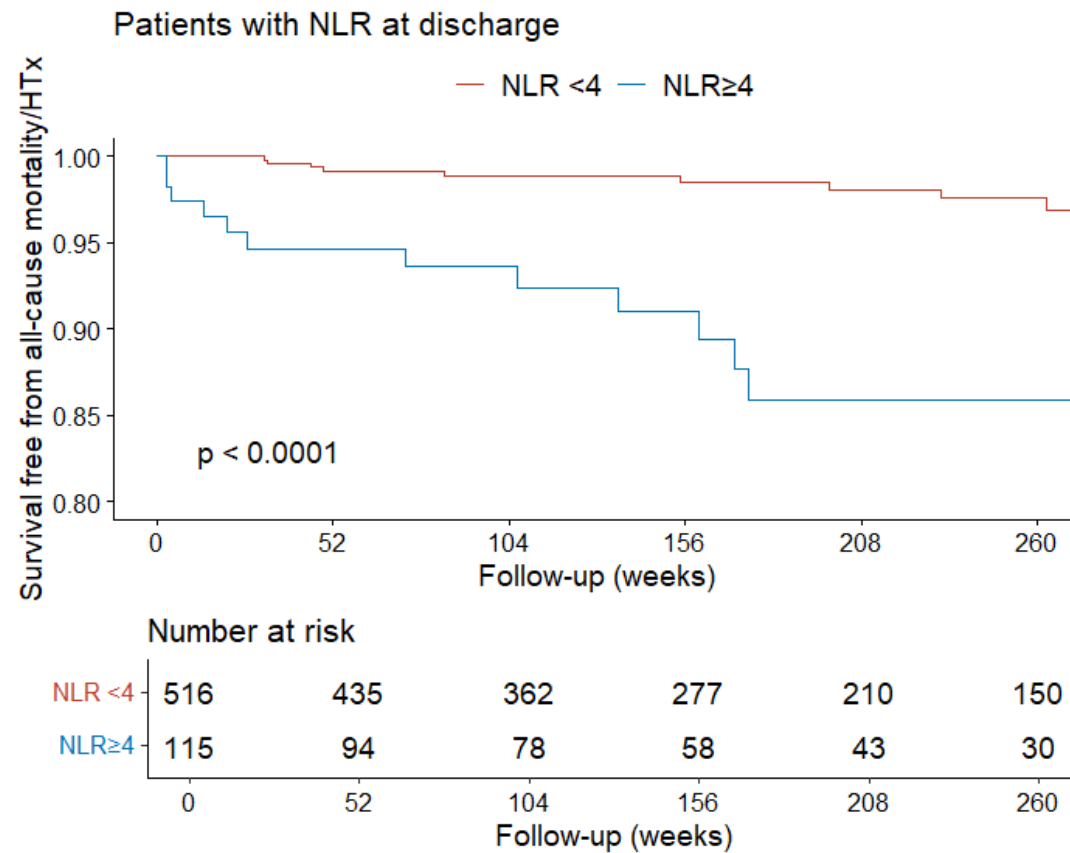




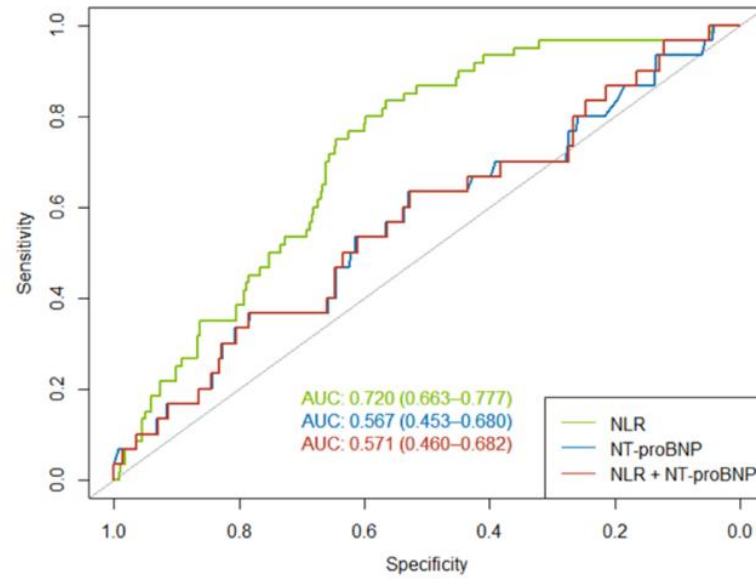
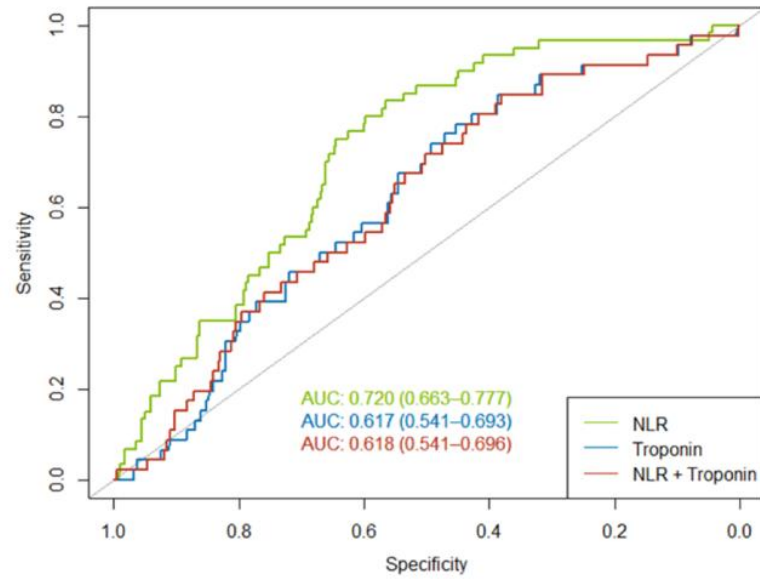
**Supplemental Figure 3** ROC curve for all-cause mortality or heart transplant according to NLR or baseline LVEF in patients without left ventricular systolic dysfunction.



**Supplemental Figure 4** Kaplan-Meier curve for all-cause mortality or heart transplant (HTx) according to NLR cut-off value of 4 at discharge.



**Supplemental Figure 5** ROC curve for all-cause mortality or heart transplant according to NLR or troponin or BNP at admission.



**Supplemental Figure 6** Kaplan-Meier curve for all-cause mortality or heart transplant (HTx) according to different NLR cut-off values in the whole population (upper panels) and in patients with preserved left ventricular systolic function (lower panels).

