

Supplementary material

Hamala P, Kasprzak JD, Bińkowska A, et al. The impact of chronic alcohol overuse on cardiac function and prognosis: layer-specific longitudinal strain and mid-term outcome analysis. Kardiol Pol. 2021.

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Figure S1. Increased heart rate, N - terminal Brain Natriuretic Peptide as well as left atrial diameter and volume in alcohol group in comparison to control group.

Panel A – heart rate, Panel B - N - terminal Brain Natriuretic Peptide, Panel C - left atrium diameter, Panel D - left atrium volume.

HR, heart rate; LA, left atrium diameter; LAV, left atrium volume; NT-proBNP, N - terminal Brain Natriuretic Peptide.

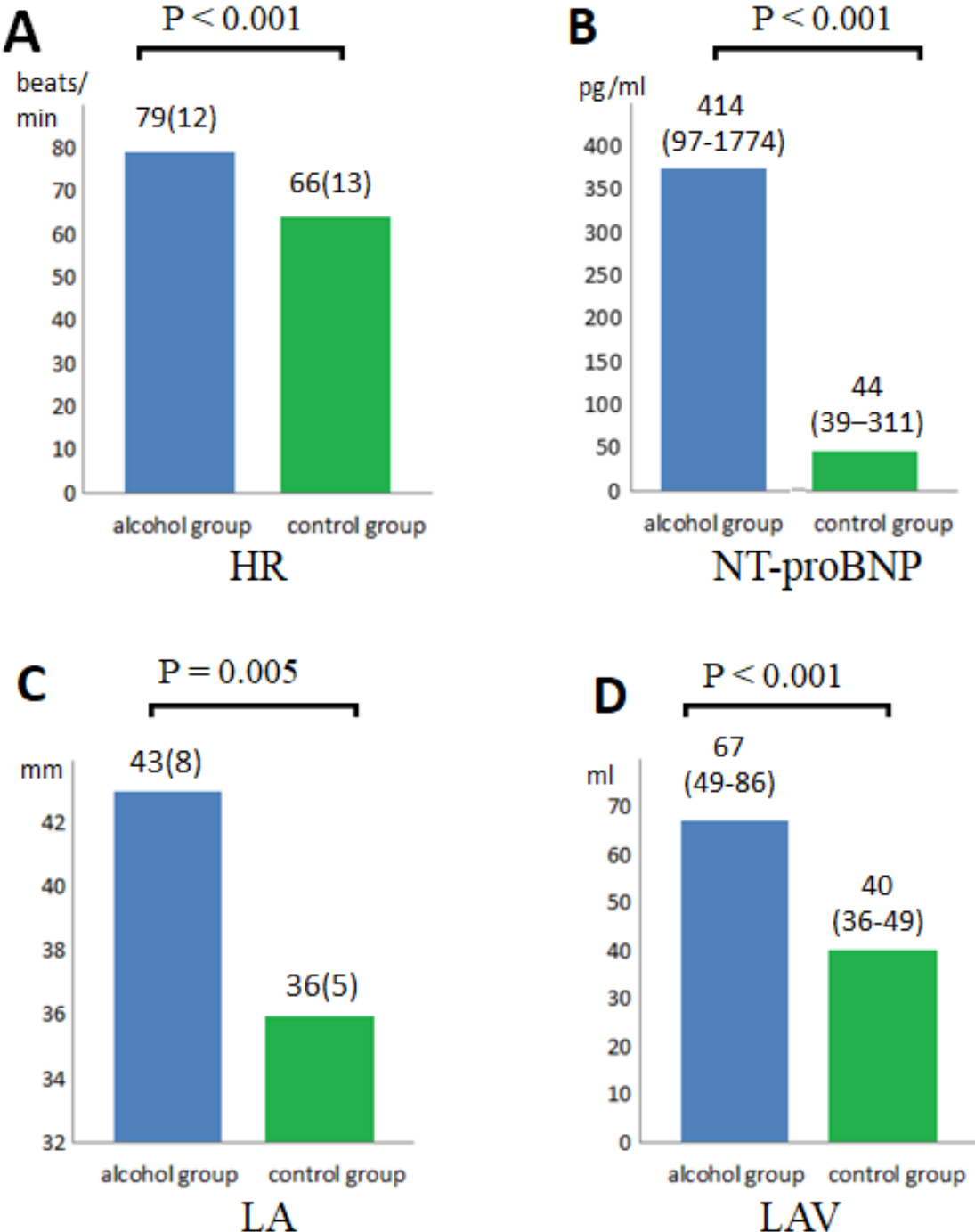


Figure S2. Very close positive relationship between global and layer-specific strains as well as strong positive correlation between layer strain and left ventricle ejection fraction in alcohol overusing group. Panel A – Correlation between GLS and GLSendo. Panel B – Correlation between GLS and GLSepi. Panel C – Correlation between EF and GLSendo. Panel D – Correlation between EF and GLSepi. EF, left ventricle ejection fraction; GLS, global longitudinal left ventricle strain; GLSendo, global longitudinal endocardial strain; GLSepi, global longitudinal epicardial strain.

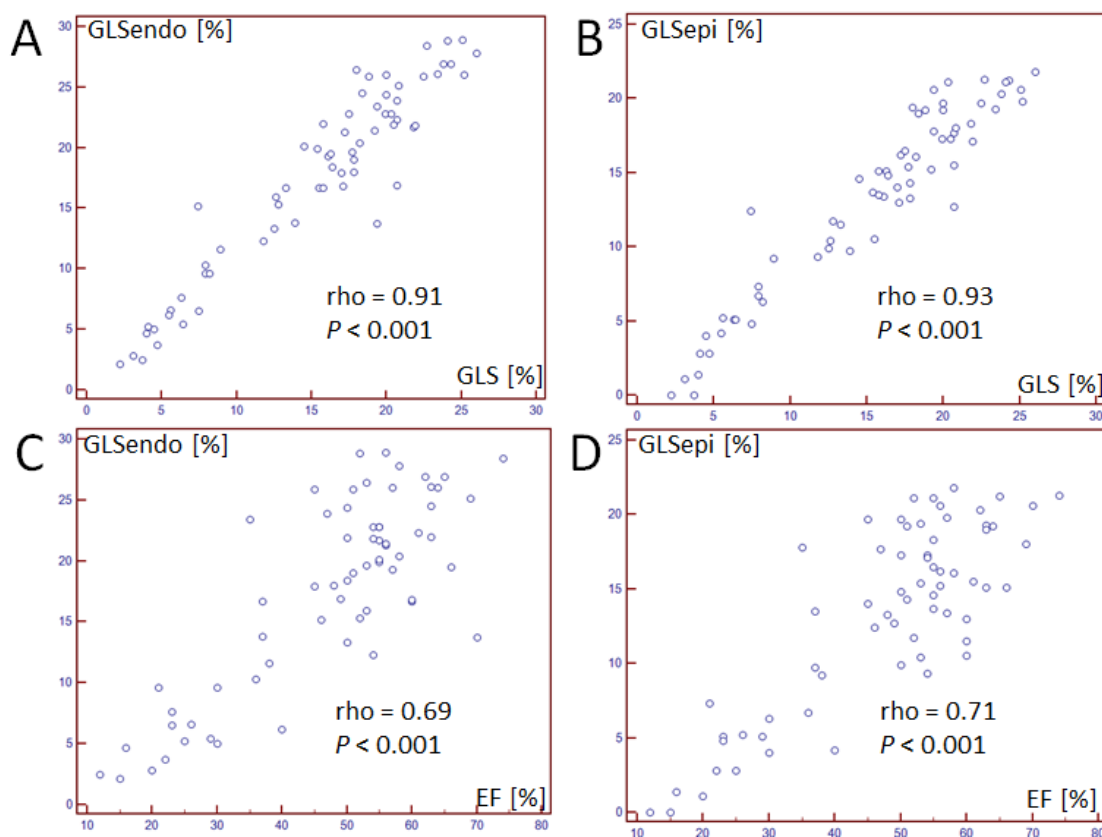
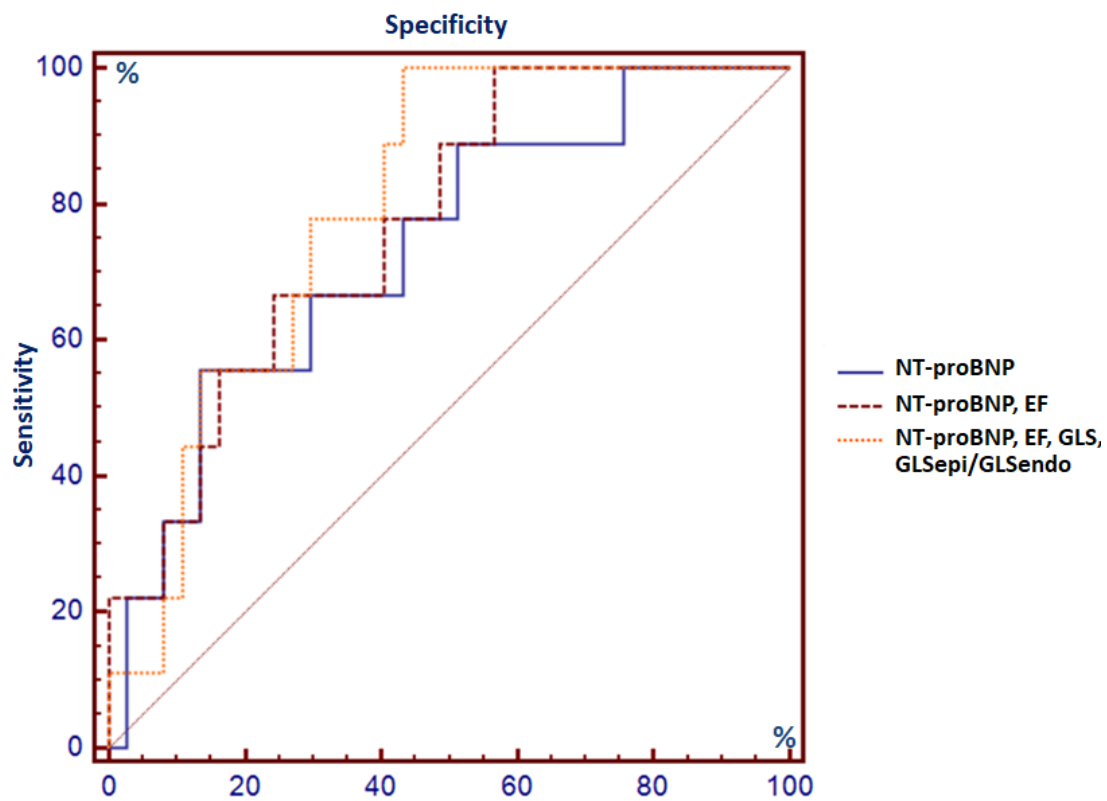


Figure S3. ROC curves comparison between 3 prognostic models with no significance difference detected.

EF, left ventricle ejection fraction; GLS, global longitudinal left ventricle strain; GLSendo, global longitudinal endocardial strain; GLSepi, global longitudinal epicardial strain; NT-proBNP, N - terminal Brain Natriuretic Peptide. M1 – model including NT-proBNP (blue line), M2 – two-variable model containing NT-proBNP + EF (red line), M3 – three-variable model containing NT-proBNP + EF+ all GLS strain.



Compared Models	Difference between areas	<i>P</i>
M1 _(NT-proBNP) VS. M2 _(NT-proBNP, EF)	0.036	0.40
M1 _(NT-proBNP) VS. M3 _(NT-proBNP, EF, GLS, GLSepi/GLSendo)	0.063	0.24
M2 _(NT-proBNP, EF) VS. M3 _(NT-proBNP, EF, GLS, GLSepi/GLSendo)	0.027	0.45

Figure S4. Prognostic significance of layer strain in ROC and Kaplan-Meier analysis.

Panel A - The comparison of areas under the ROC curves for GLSendo and GLSepi. Panel B - Kaplan-Meier curves for groups defined as $GLSendo \geq 19\%$ vs. $< 19\%$ indicating the achievement of combined endpoint. Panel C - Kaplan-Meier curves for groups defined as $GLSepi \geq 15\%$ vs. $< 15\%$ indicating the achievement of combined endpoint. GLSendo, global longitudinal endocardial strain; GLSepi, global longitudinal epicardial strain.

