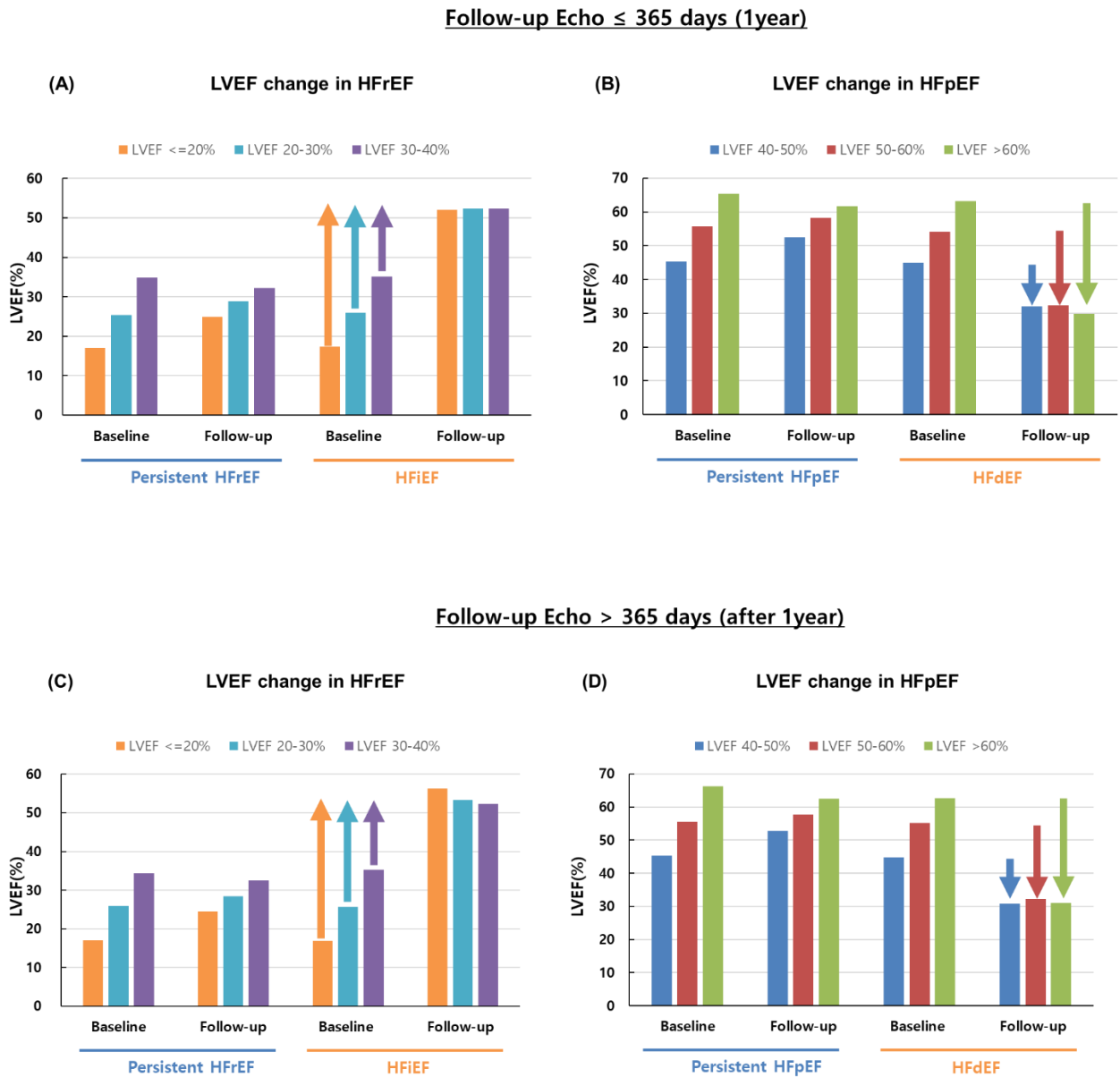


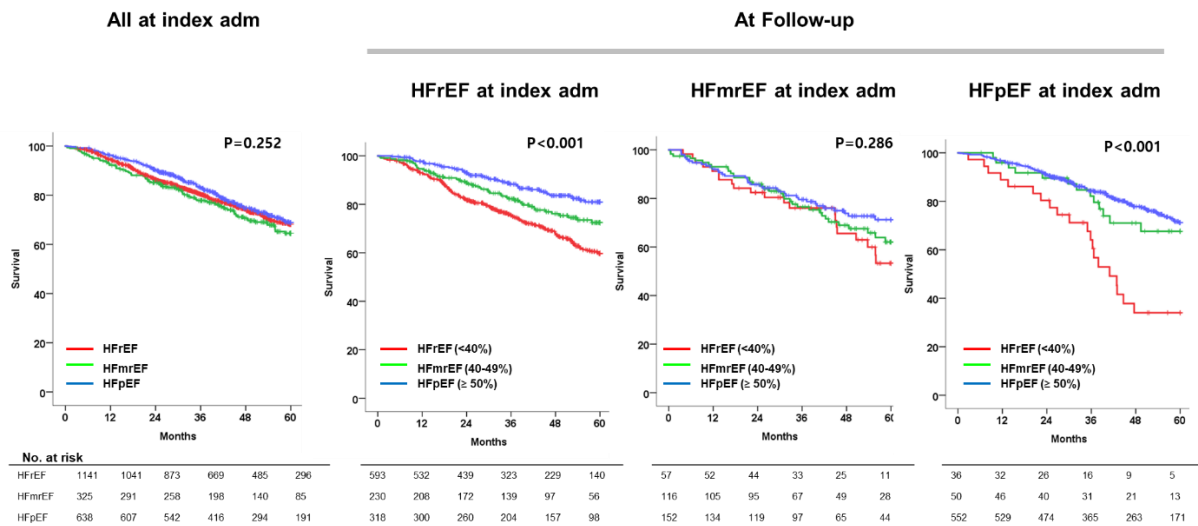
Supplemental Material

Figure S1. Stratification according to timing of echocardiography follow up.



Regarding the timing of echocardiography follow-up, 913 (43.4%) patients had follow-up echocardiography \leq 1 year from the index admission (median: 245 days, IQR 191-311 days) and 1191 (56.6%) patients follow-up echocardiography $>$ 1 year from the index admission (median 627 days, IQR 456-955 days). The changes in LVEF were similar in both groups.

Figure S2. Application of ESC HF classification.



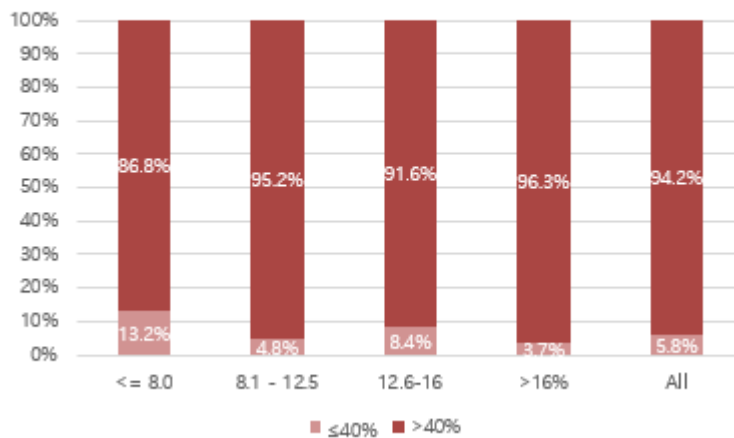
When applying the ESC classification, i.e. HFrEF EF <40%, HFmrEF EF 40-49, HFpEF ≥ 50%, there was no difference in all-cause mortality between the three groups. However, under reclassification of patients by the follow-up LVEF, patients with LVEF ≥50% had the best, whereas those with LVEF <40% had the worst prognosis regardless of baseline LVEF.

Change in LVEF during following according to HF classification according to ESC-guideline and GLS.

The ESC guideline categorized in HF into HFrEF, HFmrEF, and HFpEF. Using this HF classification, 1141, 325, and 638 patients HFrEF, HFmrEF, and HFpEF, respectively.

I- Patients with HFpEF [i.e LVEF > 50%]: differences in the rate of patients that changed to HFrEF [LVEF < 40%] at follow-up in patients with GLS < 8% vs. GLS 8-12.5% vs. GLS 12.5-16% and vs. GLS > 16%.

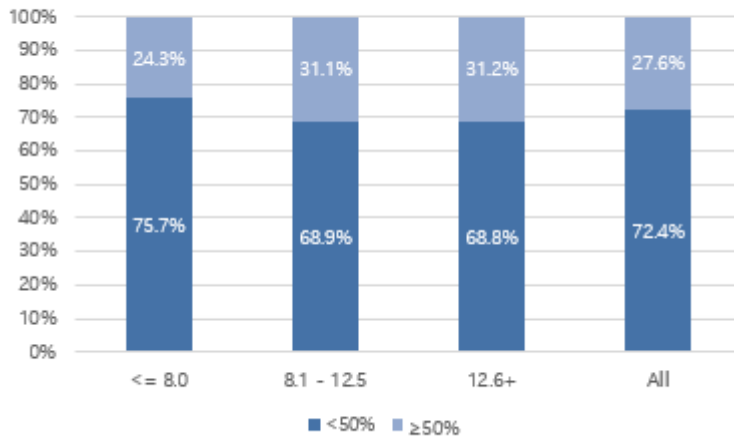
HFpEF at admission → HFrEF at F/U according to GLS



Among patients with HFpEF at the index admission, 5.8% experienced a decrease in LVEF to ≤40% during follow-up. When stratifying the patients according to GLS, 13.2% of patients with GLS ≤8% and 3.7% of patients with GLS >16% developed HFrEF, indicating that patients with low GLS were likely to experience a decrease in LVEF during follow-up.

II- Patients with HFrEF [i.e LVEF < 40%]: differences in the rate of patients that improved the LVEF (i.e. LVEF {greater than or equal to} 50%) at follow-up in patients with GLS < 8% vs. GLS 8-12.5% and vs. GLS > 12.5%.

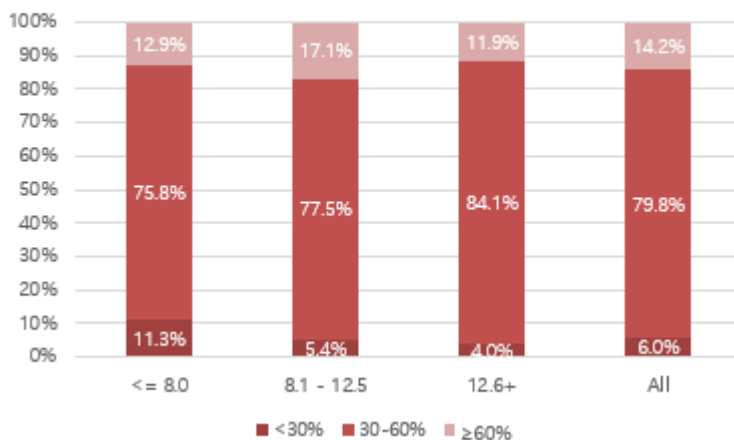
HFrEF at admission → F/U LVEF ≥50% according to GLS



Among patients with HFrEF at the index admission, 27.6% experienced an increase in LVEF to ≥50% during follow-up. Under stratification by GLS, 24.3% of patient with GLS ≤8% and 31% of patients with GLS > 8% experienced an increase in LVEF ≥ 50% during follow-up.

III- Patients with HFmrEF [i.e LVEF 40-50%]: - differences in the rate of patients that significantly improved the LVEF (i.e. LVEF {greater than or equal to} 60%) at 1 and 2 years of follow-up in patients with GLS < 8% vs. GLS 8-12.5% and vs. GLS > 12.5%; - differences in the rate of patients that significantly worsened the LVEF (i.e. LVEF < 30%) at follow-up in patients with GLS < 8% vs. GLS 8-12.5% and vs. GLS > 12.5%.

HFmrEF at admission → EF change according to GLS



For patients with HFmrEF, 14.2% experienced a decrease in LVEF to <30%, and 6%

experienced an increase in LVEF to $\geq 60\%$. When stratifying the patients according to GLS, among patients with $GLS \leq 8\%$, 11.3% experienced a decrease in LVEF to $< 30\%$, whereas 12.9% experienced an increase in LVEF to $\geq 60\%$. Among patients with $GLS > 12.6\%$, only 4% experienced a decline in LVEF to $< 30\%$.