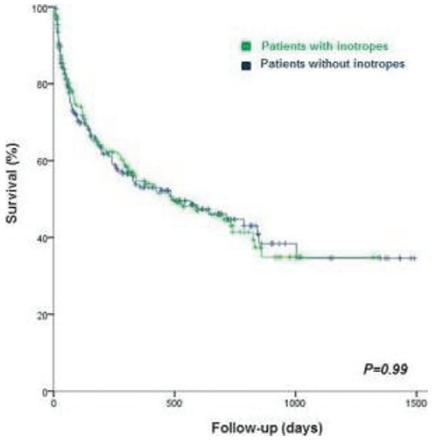
(LVEF) was 29.9±11%. We examined the association of inotropic therapy with events during hospitalization and after discharge (death, heart transplant and re-hospitalization).

Results: Inotropic therapy was required in 516 (70%) patients. In-hospital deaths and urgent heart transplants occurred more frequently in these patients (40.5% vs 3,2% and 15.9% vs 2.3%, respectively, P<0.001). Inotropic support was associated with higher in-hospital mortality after adjustment for other variables (OR=13.2, P<0.001, CI95% 5.076–34.475). In the group of patients treated with inotropes, variables independently associated with in-hospital mortality were male gender (OR=1.7, P=0.028, CI95% 1.059–2.753), physical signs of hypervolemia (OR=0.448, P=0.02, CI95% 0.228–0.879), heart rate (OR 0.989, P=0.017, CI95% 0.979–0.998) and systolic blood pressure (OR=0.985, P=0.008, CI95% 0.975–0.996) at admission and LVEF (OR 0.995, P=0.001, CI95% 0.931–0.981). At a mean follow-up of 118±70.8 days, 41 (9.5%) patients died, 21 (4.8%) were transplanted and 190 (44.1%) were readmitted. Inotropic therapy did not influence events after discharge (Figure). Conversely, Chagas etiology (HR 1.55, P=0.018, CI95% 1.079–2.227) and serum levels of potassium (HR 0.697, P=0.02, CI95% 0.513–0.948) and urea (HR 1.005, P=0.02, CI95% 1.001–1.010) at discharge were indedependently associated with prognosis in Cox regression model.



Conclusions: Inotropes were frequently used and were associated with increased in-hosptial death/urgent heart transplant. However, they did not influence the course of patients after discharge. Additional clinical variables identified subgroups of patients undergoing inotropic therapy at increased risk during hospitalization and follow-up. Therefore, further risk stratification is warranted among patients undergoing inotropic therapy in centers where MCSs are not broadly available.

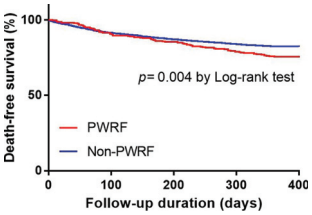
P6542
Post-discharge worsening renal function predicts long-term adverse clinical outcomes in patients with acute heart failure

J.Y. Cho[1], K.H. Kim[1], S.E. Lee[2], H.Y. Lee[3], J.O. Choi[4], E.S. Jeon[4], J.J. Kim[2], K.K. Hwang[5], S.C. Chae[6], S.H. Baek[7], S.M. Kang[8], D.J. Choi[9], B.S. Yoo[10], M.C. Cho[5], B.H. Oh[3]. *[1]Chonnam National University Hospital, Cardiology, Gwangju, Korea Republic of; [2]Asan Medical Center, Cardiology, Seoul, Korea Republic of; [3]Seoul National University Hospital, Seoul, Korea Republic of; [4]Samsung Medical Center, Seoul, Korea Republic of; [5]Chungbuk National University Hospital, Cheongju, Korea Republic of; [6]Kyungpook National University Hospital, Daegu, Korea Republic of; [7]Seoul St. Mary's Hospital, Seoul, Korea Republic of; [8]Yonsei University College of Medicine, Seoul, Korea Republic of; [9]Seoul National University Bundang Hospital, Seongnam, Korea Republic of; [10]Wonju Christian Hospital, Wonju, Korea Republic of*

Background: Previous studies have shown that initial renal dysfunction predicts long-term clinical outcome in patients with acute heart failure (AHF). However, there is lack of data regarding the effect of post-discharge renal dysfunction on heart failure mortality. Therefore, the aim of this study was to investigate the incidence and predictors of post-discharge renal dysfunction and its impact on long-term clinical outcomes.

Methods: A total of 5,625 patients (68.5±14.5 years, 2,993 men; 53.2%) with acute decompensated heart failure were enrolled in a nationwide heart failure registry. Two hundred and sixty-nine patients who died in hospital were excluded. They were divided into two groups according to the presence of post-discharge worsening renal function (PWRF) (the PWRF group: n=282, 71.3±12.7 years, 145 males) vs. the non-PWRF group: n=5074, 68.3±14.6 years, 2691 males). PWRF was defined as an increase of serum creatinine over ≥50% at follow-up visit compared to the baseline level. The potency of renin-angiotensin system inhibitors (RASI) was determined as a ratio of used dose to usual starting dose. Baseline characteristics, echocardiographic findings, laboratory findings, and clinical outcomes were compared between two groups.

Results: PWRF was seen in 5.2% in patients with AHF. Baseline clinical characteristics, laboratory, and echocardiographic findings were not so different between the groups except for age (the PWRF group vs. the non-PWRF group; 71.3±12.7 vs. 68.3±14.6 years, p<0.001). The potency of used RASI was not different between PWRF vs. non-PWRF groups (1.31±1.18 vs. 1.25±1.07, p=0.470). Patients with more than doubled potency of RASI were also not different between the two groups (27.7% vs. 24.8%, p=0.383). Low baseline glomerular filtration rate was more frequent in the PWRF group (7.0% vs. 3.7%, p<0.001). PWRF group showed higher 1-year mortality than in the non-PWRF group (24.8% vs. 16.8%, p=0.001). Also, rehospitalization was more frequent in the PWRF group (62.4% vs. 44.4%, p<0.001). Kaplan-Meier survival analysis showed higher mortality in the PWRF group (p=0.004 by log-rank test). Multivariate analysis with COX-proportional hazard regression revealed that PWRF was one of the independent predictors for long-term mortality in patients with AHF (HR 1.30, 95% CI 1.02–1.67, p=0.033).



Death-free survival between the groups

Conclusion: PWRF was noted in 5.2% in patients with AHF. However, the dose of RASI did not affect the occurrence of PWRF. The baseline renal function was more important in the incidence of PWRF. Finally, PWRF turned out to be one of the independent predictors of long-term clinical outcome in this category of patients.

P6543
Risk stratification in patients hospitalized for acute heart failure in asian population

H.-C. Chang, S.-H. Sung. *Taipei Veterans General Hospital, Division of Cardiology, Department of Medicine, Taipei, Taiwan ROC*

Background: Risk stratification had been suggested of patients with heart failure to identify the high-risk patients for tailored therapies. However, the majority of the risk scoring systems are constituted on chronic heart failure in western cohorts. Nowadays, the risk score for acute heart failure (AHF) in Asian populations is not available.

Purpose: To propose and validate a risk scoring system to improve risk stratification in patients hospitalized for AHF in Asian populations.

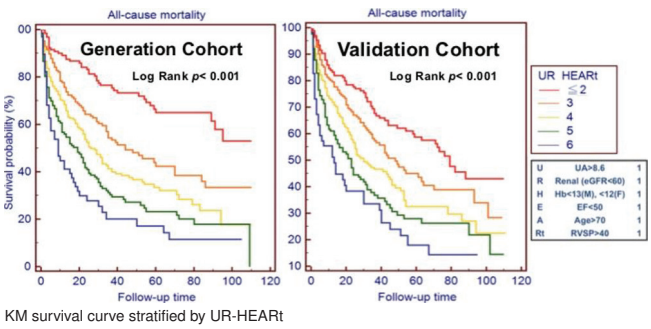
Methods: A total of 3,621 patients hospitalized for AHF was randomly assigned into the generation and validation cohort. The independent predictors of all-cause mortality in the generation cohort were identified and scored according to the hazard ratios to constitute the prediction model. The prediction model was validated by Kaplan–Meier survival curve analysis in the validation cohort. The model performance was then compared with the published risk score by calculating the net reclassification improvement.

Results: In the generation cohort of 1,790 patients (75.34±13.35 years, 68% men), there were 735 deaths (41.06%) during a mean follow-up duration of 25 months. Age>70 years, anemia, renal insufficiency (eGFR<60ml/1.73m^2), uric acid>8.6mg/dL, left ventricular ejection fraction<50% and right ventricular systolic pressure>40mmHg were all independently related to mortality. Given each of them was with comparable hazard ratio, the 6 variables were scored 1 point for each to constitute the risk score as "UR-HEARt". Each 1-point increase of the score was associated with 10.6% excessive risk for 2-year mortality. The performance of UR-HEARt score was validated in the validation cohort of 1,831 patients (75.59±13.21 years, 67.3% men) (Figure). In addition, UR-HEARt score outper-

Model performance of the two risk scores

	All-cause mortality				Cardiovascular death			
	AUC	AIC	SBC	NRI	AUC	AIC	SBC	NRI
AHEAD-U	0.606	5843.5	5868.5	–	0.537	2602.8	2622.7	–
UR-HEARt	0.623	4862.1	4886.2	0.0662	0.604	2092.4	2111.3	0.2459

AUC: area under curve, AIC: Akaike information criterion, SBC: Schwarz Bayesian criterion, NRI: net reclassification improvement.



KM survival curve stratified by UR-HEARt