Δύσκολα περιστατικά στην καρδιακή ανεπάρκεια

Χρόνια ΚΑ με συχνές εισαγωγές στο νοσοκομείο

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Καρδιολόγος, Επιμελητής Β ΤΕΠ
Νοσ. ΑΤΤΙΚΟΝ

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70 ΧΡΟΝΙΑ ΚΑΡΔΙΟΛΟΓΙΑΣ (ΕΚΕ)
70 YEARS OF CARDIOLOGY (HSC)
38ο ΠΑΝΕΛΛΗΝΙΟ ΕΠΕΤΕΙΑΚΟ ΣΥΝΕΔΡΙΟ
38th ANNIVERSARY PANHELLENIC CONGRESS
ΕΛΛΗΝΙΚΗ ΚΑΡΔΙΟΛΟΓΙΚΗ ΕΤΑΙΡΕΙΑ · 1948 ·

ΤΙ ΙΣΧΥΕΙ ΓΙΑ ΤΟ SACUBITRIL/VALSATRAN ΣΤΗΝ PARADIGM-HF

1. ΜΕΙΩΝΕΙ 40% ΤΙΣ ΟΛΙΚΕΣ ΕΙΣΑΓΩΓΕΣ ΚΑΙ ΈΙΝΑΙ ΑΠΟΤΕΛΕΣΜΑΤΙΚΌ ΣΕ ΑΣΘΕΝΈΙΣ ΝΥΗΑ IV

2. ΜΕΊΩΝΕΙ 20% ΤΙΣ ΟΛΙΚΕΣ ΕΙΣΑΓΩΓΕΣ ΑΛΛΑ ΔΕΝ ΈΙΝΑΙ ΑΠΟΤΕΛΕΣΜΑΤΙΚΟ ΣΕ ΝΥΗΑ IV ΑΣΘΕΝΕΙΣ

3. ΜΕΙΩΝΕΙ 20% ΤΗΝ ΠΡΩΤΗ ΕΙΣΑΓΩΓΗ ΚΑΙ 20% ΤΙΣ ΟΛΙΚΕΣ ΕΙΣΑΓΩΓΕΣ ΚΑΙ ΈΙΝΑΙ ΑΠΟΤΕΛΕΣΜΑΤΙΚΌ ΣΕ ΑΣΘΕΝΈΙΣ ΝΥΗΑ IV

History and clinical presentation

- Male, 63 years old
- Diabetes mellitus
- 1990 ASD closure (surgical)
- 1992 Permanent pacemaker due to AV block
- 2005 NSTEMI, PCI LCX, RCA, HF
- 2010 ICD, permanent AF
- 2015 unsuccessful attempt to upgrade ICD to CRT-D
- Sleep apnea syndrome (CPAP use)

History and clinical presentation

- HF hospitalization 3 months ago
- 2/ Year the 2 previous years

- NYHA III, BP 105/65mmHg, HR 73bpm Hb 12.4g/dl
- BUN 54mg/dl, creatinine 1.6mg/dl, eGFR 44ml/min/1.73m^2, Sodium 138mmol/l, potassium 4.4mmol/l,
- NT-proBNP 2920pg/ml

ATTIKON

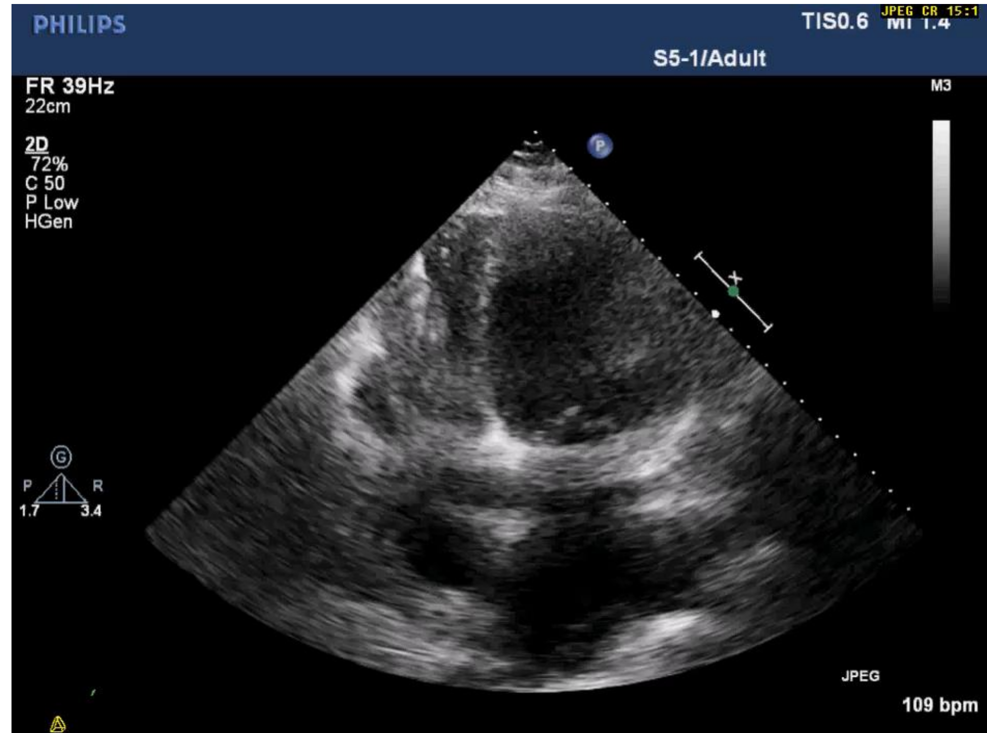
Medications

- Lisinopril 10mg 1 X 1
- Carvedilol 12.5mg 1 X 2
- Eplerenone 50mg 1 X 1
- Furosemide 40mg 2 X 2
- Simvastatin 20mg 1 X 1
- Amiodarone 200mg 1 X 1
- Acenocoumarol

Echo

LVEF 20%
LVEDD 68mm
RV mod-sev reduced systolic function
TAPSE 11mm

Mod-sev MR

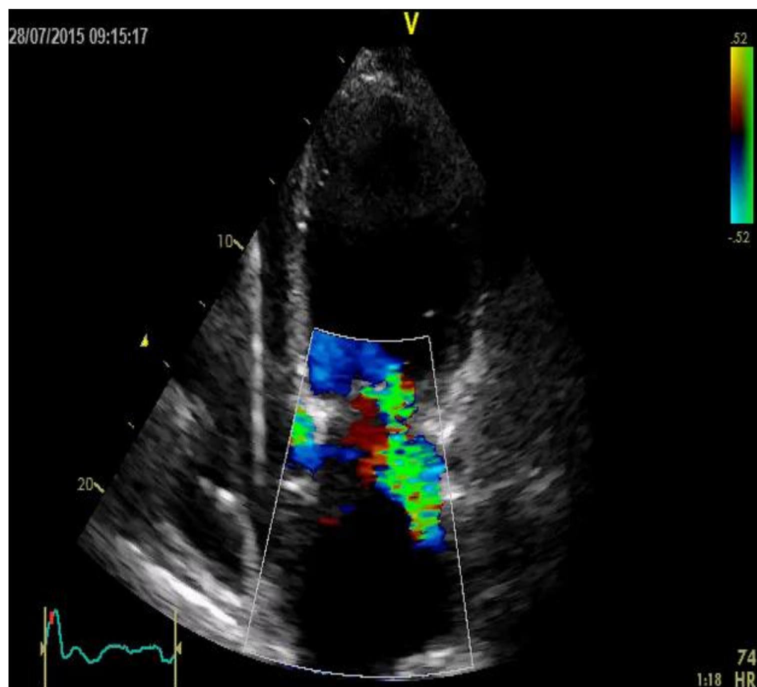


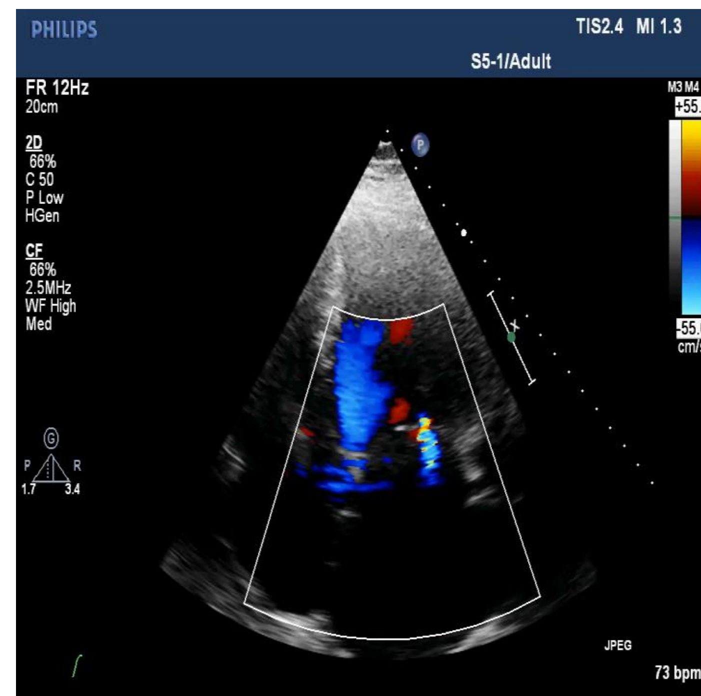
Medications

- ~~Lisinopril 10mg 1 X 1~~ → **Sacubitril/valsartan 93mg/107mg BID**
- Carvedilol 12.5mg 1 X 2
- Eplerenone 50mg 1 X 1
- Furosemide 40mg 2 X 2
- Simvastatin 20mg 1 X 1
- Amiodarone 200mg 1 X 1
- Acenocoumarol

FOLLOW UP CLINIC VISIT

- After 18 months, NYHA II, no HF hospitalizations/ER visits
- BP 110/70mmHg, HR 65bpm, Creatinine 1.4mg/dl, eGFR 51ml/min/1.73m2, potassium 4.7mmol/l
- Furosemide 40mg BID
- Other medications unchanged





Percutaneous mitral valve repair postponed due to reduction of MR

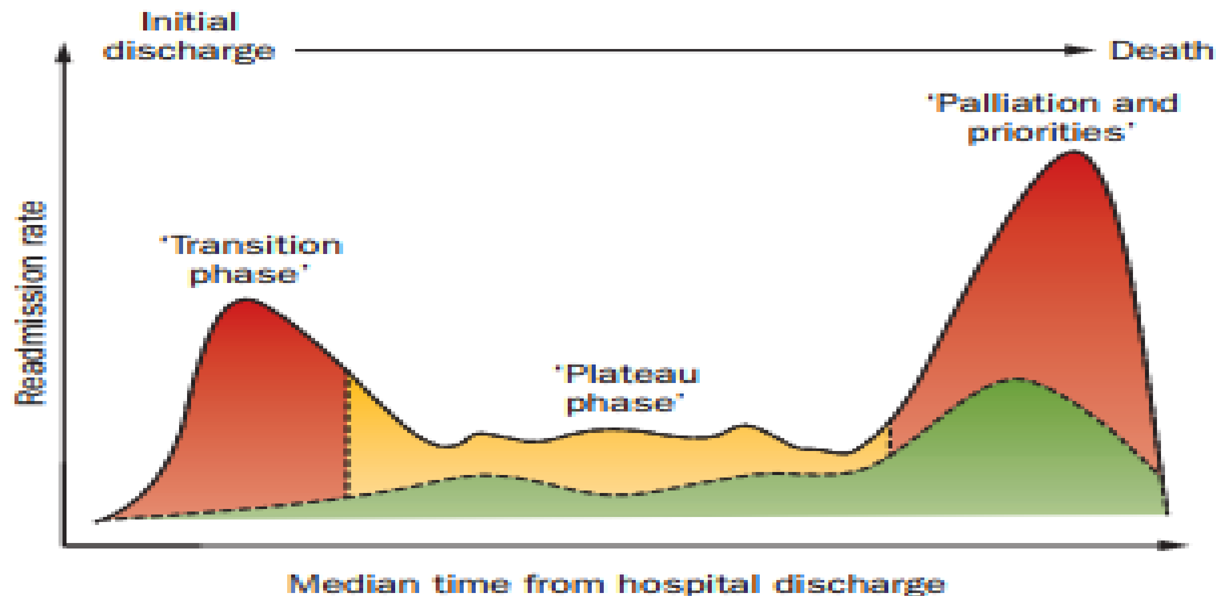


Figure 1 | Rehosptialization risk among patients hospitalized for heart failure. Among patients who have repeat hospitalization for heart failure or other cardiovascular-related disease, a three-phase lifetime readmission risk exists. Red indicates period of highest risk for readmission immediately after discharge and just before death. Yellow indicates the lower-risk plateau phase. Green indicates the assumed baseline of unavoidable readmissions. Adapted with permission from Lippincott Williams and Wilkins/Wolters Kluwer Health © Desai, A. S. & Stevenson, L. W. Rehospitalization for heart failure: predict or prevent? *Circulation* **126**, 501–506 (2012).

"Dose-dependent" Impact of Recurrent Cardiac Events on Mortality in Patients with Heart Failure

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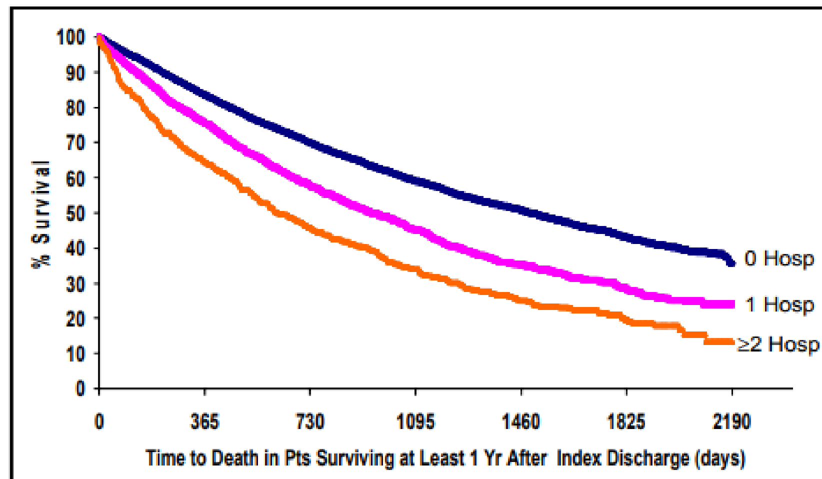

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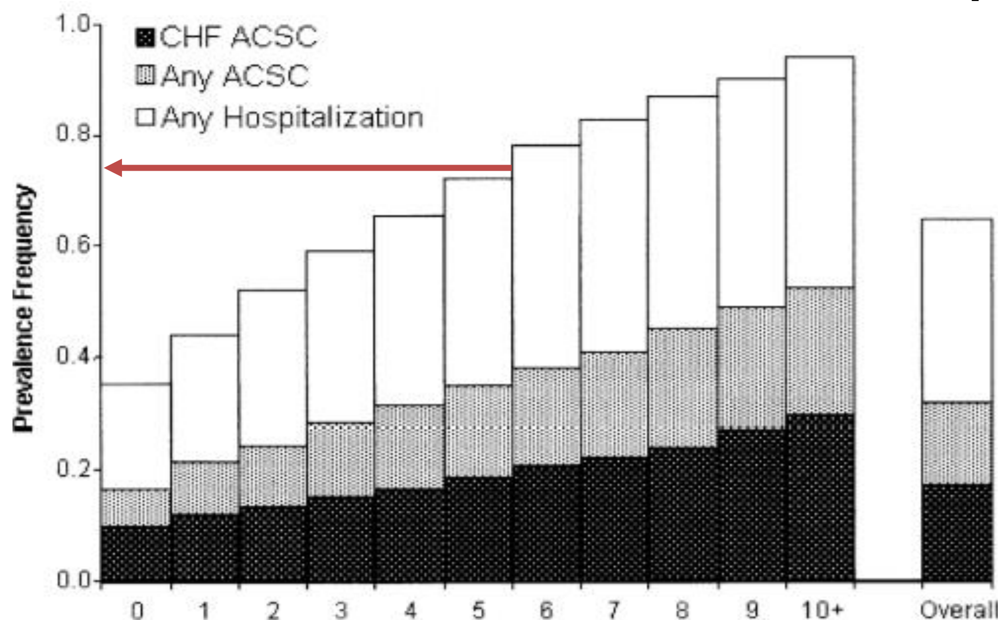
Figure 3 Among 1-year survivors after index EFFECT-HF discharge, the number of heart failure hospitalizations in the preceding year stratified the risk of death in crude analyses.

- Each readmission among HF patients leads to worse mortality and poorer survival

USA Medicare beneficiaries (122 000 patients >65 years)

- 35% annual likelihood of hospital
- 75% if 5 comorbidities are present



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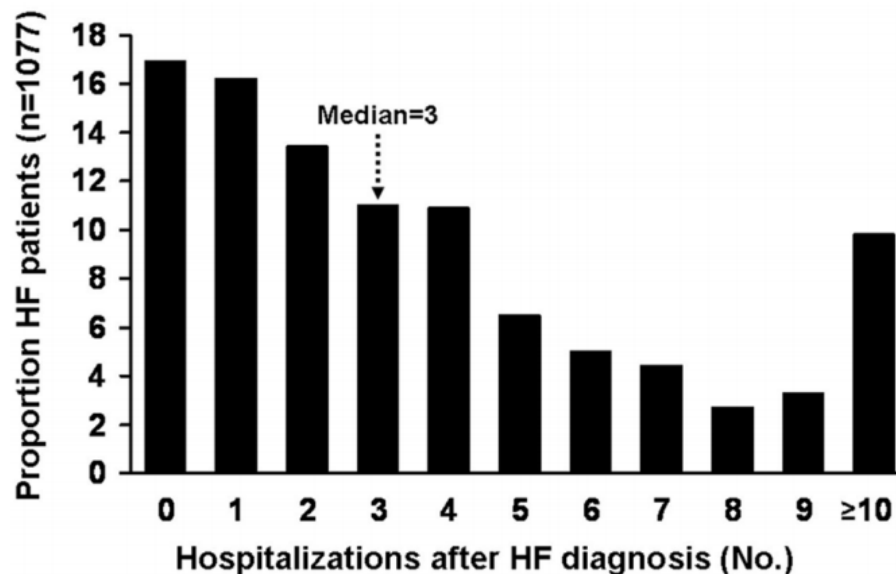
Olmstead county 5 years follow up

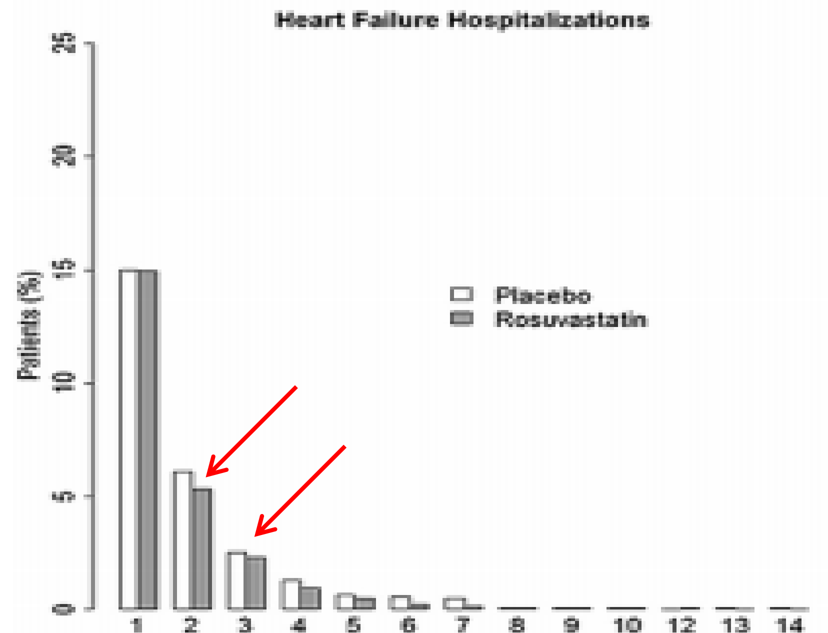
- 83% at least once
- 43% four or more
- <50% due to cardiovascular causes



J Am Coll Cardiol. 2009

1st HF admission- only a proportion of total admissions

- 54% CORONA (Rosuvastatin)
- 56 % SHIFT (Ivabradine)
- 58% EMPHASIS-HF (Eplerenone)
- 54% CHARM-Preserved (Candesartan)



Conclusions When repeat events were included, rosuvastatin was shown to reduce the risk of HFH by approximately 15% to 20%, equating to approximately 76 fewer admissions per 1,000 patients treated over a median 33 months of follow-up. Including repeat events could increase the ability to detect treatment effects in heart failure trials. (J Am Coll Cardiol HF 2014;■:■-■) © 2014 by the American College of Cardiology Foundation

JACC: Heart Failure Vol. ■, No. ■, 2014
■ 2014:■-■

Eplerenone in Patients With Systolic Heart Failure and Mild Symptoms

Analysis of Repeat Hospitalizations

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***Background*—**Eplerenone is known to reduce time to first hospitalization for heart failure or cardiovascular death in patients with heart failure and mild symptoms. In chronic diseases such as heart failure, characterized by repeat hospitalizations, analyzing all heart failure hospitalizations, not just the first, should give a more complete picture of treatment benefits.

***Methods and Results*—**The Eplerenone in Mild Patients Hospitalization and SurvIval Study in Heart Failure (EMPHASIS-HF) trial compared eplerenone with placebo in 2737 patients with mild heart failure, followed for a median 2.08 years (interquartile range, 1.08–3.10 years). Data were collected on all hospitalizations, with a focus on those due to heart failure. Heart failure hospitalization rates in the eplerenone and placebo groups were 10.70 and 16.99 per 100 patient-years, respectively. Allowing for skewness in the frequency of hospitalizations by using the negative binomial generalized linear model, the rate ratio (eplerenone versus placebo) was 0.53 (95% confidence interval, 0.42–0.66; $P<0.0001$). A plot of cumulative hospitalization rates over time revealed that most of the reduced risk on eplerenone occurred in the first year of follow-up. Several baseline variables strongly predicted the risk of hospitalization. More complex statistical methods, adjusting for mortality (as informative censoring), made a negligible difference in these findings.

***Conclusions*—**Eplerenone markedly reduces the risk of heart failure hospitalizations in patients with heart failure and mild symptoms to a greater extent than is captured by only studying the time to first hospitalization. Future clinical trials in heart failure would gain from incorporating repeat hospitalizations into their primary evaluation of treatment effects.

***Clinical Trial Registration*—**URL: http://www.clinicaltrials.gov. Unique identifier: NCT00232180.

(*Circulation*. 2012;126:2317-2323.)

Proposed treatment evaluation endpoints

- Second admission
- Total admissions
- days alive out of the hospital up
- Time gap between hospitalizations

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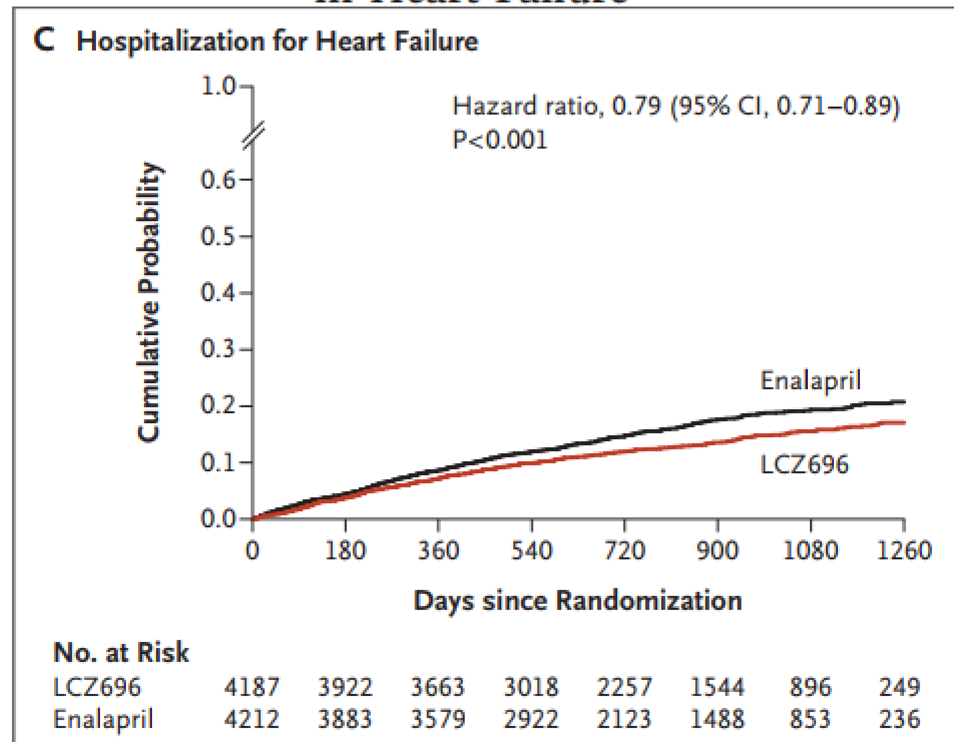
Angiotensin–Neprilysin Inhibition versus Enalapril in Heart Failure



PARADIGM-HF

- one-third of heart failure patients experienced subsequent events
- When recurrent events were analyzed, sacubitril/valsartan reduced 20% the absolute risk
- Effects consistent in NYHA IV patients

McMurray JJV Analysis of Recurrent (Including First and Repeat) Primary Endpoint Events (Composite of Heart Failure hospitalizations and Cardiovascular Death) in PARADIGM-HF.
AHA November 16, 2016

Research

JAMA Cardiol. doi:10.1001/jamacardio.2016.1747
Published online June 22, 2016.

Original Investigation

Cost-effectiveness Analysis of Sacubitril/Valsartan vs Enalapril in Patients With Heart Failure and Reduced Ejection Fraction

- 59.7 HF admissions averted for each year alive per 1000 patients in the sacubitril/valsartan strategy compared with those in the enalapril strategy

Conclusions

- LCZ696 decreases the first and subsequent HF rehospitalizations by 20%
- LCZ696 effective in end stage HF patients
- Optimization of medical treatment in symptomatic HF using S/V instead of RASi is crucial and reasonable approach before to consider other major interventions (LVAD, transplantation, etc).