

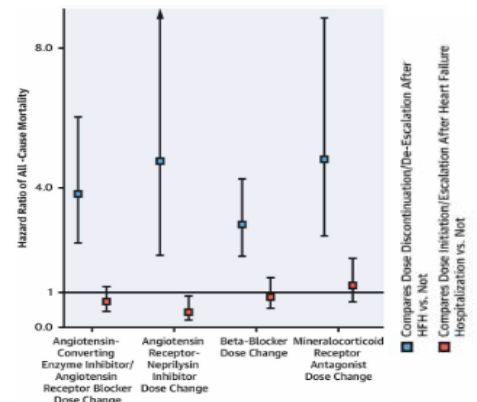
Heart Failure: GDMT

Inpatient Optimization

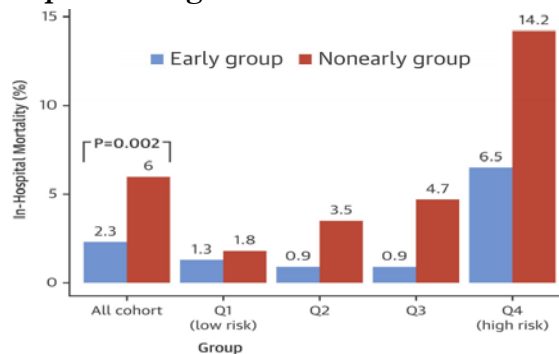
Context: HF often results in hospital admission. Hospitalists are on the front lines of HF management.

Current: Classification according to EF drives management decisions.¹ Despite clear guidelines, regional and international variation in therapy and outcomes persists.²

Cutting edge: Inpatient initiation and/or escalation of GDMT correlates with improved all-cause mortality.³



Rapid Decongestion



Context: Loop diuretics are first line therapy for management of congestive symptoms in HF.

Current: Delays in achieving effective diuresis for patients presenting with acute HF correlates with higher in-hospital mortality.⁴

Cutting Edge: Care pathways beginning on initial presentation may help reduce Time-to-Furosemide patients beginning with first medical contact for acute HF symptoms.

Angiotensin Receptor-Nephrilysin Inhibitor (ARNI) Therapy

Subgroup	Sacubitril-Valsartan (N=440)	Enalapril (N=441)	Ratio of Change in NT-proBNP with Sacubitril-Valsartan vs. Enalapril (95% CI)	P Value for Interaction
All patients	379 (0.53)	374 (0.75)	0.71 (0.63-0.81)	0.76
Age				
<65 yr	229 (0.50)	202 (0.68)	0.73 (0.61-0.87)	
≥65 yr	150 (0.61)	172 (0.82)	0.74 (0.63-0.87)	
Sex				0.61
Male	289 (0.55)	265 (0.78)	0.70 (0.60-0.80)	
Female	90 (0.50)	109 (0.66)	0.75 (0.59-0.95)	
Race				0.13
White	226 (0.56)	219 (0.74)	0.68 (0.58-0.80)	
Black	133 (0.56)	129 (0.78)	0.72 (0.57-0.89)	
Other	20 (0.82)	26 (0.70)	1.17 (0.72-1.91)	
Previous heart failure				0.40
No	130 (0.37)	148 (0.56)	0.65 (0.53-0.81)	
Yes	249 (0.65)	225 (0.90)	0.72 (0.63-0.83)	
Previous hypertension				0.62
No	50 (0.42)	64 (0.63)	0.66 (0.49-0.90)	
Yes	329 (0.55)	309 (0.77)	0.72 (0.63-0.82)	
Previous atrial fibrillation				0.32
No	251 (0.49)	230 (0.71)	0.70 (0.60-0.81)	
Yes	127 (0.62)	140 (0.79)	0.79 (0.64-0.96)	

Subgroup	Sacubitril-Valsartan (N=440)	Enalapril (N=441)	Ratio of Change in NT-proBNP with Sacubitril-Valsartan vs. Enalapril (95% CI)	P Value for Interaction
Previous use of ACE inhibitor or ARB				0.98
No	209 (0.48)	196 (0.66)	0.72 (0.60-0.86)	
Yes	170 (0.61)	178 (0.85)	0.72 (0.61-0.85)	
Systemic blood pressure at randomization				0.93
≤118 mm Hg	188 (0.60)	185 (0.84)	0.71 (0.60-0.84)	
>118 mm Hg	191 (0.48)	189 (0.67)	0.72 (0.60-0.86)	
Left ventricular ejection fraction at screening				0.37
≤25%	246 (0.51)	243 (0.74)	0.69 (0.59-0.80)	
>25%	132 (0.59)	131 (0.76)	0.77 (0.63-0.95)	
Estimated GFR at randomization				0.81
<60 ml/min/1.73 m ²	194 (0.55)	192 (0.76)	0.73 (0.61-0.87)	
≥60 ml/min/1.73 m ²	181 (0.51)	177 (0.72)	0.70 (0.59-0.84)	
NT-proBNP concentration at randomization				0.30
≤2701 pg/ml	180 (0.63)	200 (0.93)	0.67 (0.57-0.80)	
>2701 pg/ml	199 (0.45)	174 (0.60)	0.76 (0.63-0.90)	
NYHA class at randomization				0.48
I or II	90 (0.52)	112 (0.78)	0.67 (0.53-0.84)	
III or IV	278 (0.54)	258 (0.73)	0.73 (0.63-0.85)	
Time from presentation to randomization				0.66
≤67.7 hr	192 (0.52)	186 (0.71)	0.74 (0.62-0.87)	
>67.7 hr	186 (0.54)	188 (0.79)	0.69 (0.58-0.83)	

Context: ACE-inhibitors and Aldosterone-receptor blockers have been mainstays of afterload reduction.

Current: Trial data has demonstrated superiority of ARNI over ACE/ARB without neprilysin inhibition.⁵

Cutting Edge: ARNIs (ie, sacubitril-valsartan) are preferred over ACE/ARB along with other GDMT. ARNIs can be initiated and titrated during admission the same as other afterload reducing medications.

References:

- 2013 ACCF/AHA Guideline for the Management of Heart Failure: Executive Summary. *Circulation*. 2013;128(16):1810-1852.
- Intercountry Differences in Guideline-Directed Medical Therapy and Outcomes Among Patients With Heart Failure. *J Am Coll Cardiol HF*. 2021;9(7):497-505.
- Heart Failure Hospitalization and Guideline-Directed Prescribing Patterns Among Heart Failure With Reduced Ejection Fraction Patients. *J Am Coll Cardiol HF*. 2021;9(1):28-38.
- Time-to-Furosemide Treatment and Mortality in Patients Hospitalized with Heart Failure. *J Am Coll Cardiol*. 2017;69(25):3042-3051.
- Angiotensin-Nephrilysin Inhibition in Acute Decompensated Heart Failure. *NEJM* 2019;380(6):539-548.