Healthcare resource use, intensity, and costs among patients with heart failure with reduced ejection fraction treated with *omecamtiv mecarbil* in GALACTIC-HF

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BACKGROUND

- In GALACTIC-HF (NCT02929329), *omecamtiv mecarbil* (OM) added to standard of care for heart failure with reduced ejection fraction (HFrEF) reduced the risk of the primary composite endpoint of a first HF event or cardiovascular death.[1]
- Greater risk reduction was seen as baseline ejection fraction (EF) decreased.[2] Increased risk was seen in patients with both digoxin use plus atrial fibrillation/flutter (AF) together at baseline (digoxin+AF) but not for patients with either factor alone.[3] No benefit was observed for cardiovascular death.
- The purpose of this study was to examine HF-related resource utilization and costs in patients benefitting from OM.

METHODS

- We evaluated risk of first HF event (hospital and emergency room /urgent care visits, all adjudicated as due to HF), total HF events, and cumulative frequency of HF events, resource intensity, relative risk reduction (RRR), absolute risk reduction (ARR), number needed to treat (NNT), and cost of HF events.
- Treatment effect was evaluated as function of baseline EF for the full study population and after excluding digoxin+AF. Selection of cut point for benefit reflected clinical practice of reporting EF in 5% intervals.
- Costs of HF events were based on unit cost estimates from published secondary studies inflated to 2021 US dollars, including $17,123 per HF hospitalization.[4]

RESULTS

- Of 8232 trial patients, 5369 (65%) met criteria for benefit from OM, after excluding those with digoxin+AF (692; 8.4%) or with EF >30 where little risk reduction was seen (**Fig 1**).
- In this subgroup with EF ≤30% without digoxin/AF:
  - OM was associated with significant reductions in risk of a first HF event (RRR 15%, ARR 3.8, NNT 26.2), total HF events (RRR 17%, ARR 6.8, NNT 14.7) **(Table 1)**, and cumulative HF events **(Fig 2)**.
  - OM also significantly reduced resource intensity, measured by total days in hospital among patients being hospitalized (rate ratio 0.90, 95% CI 0.82–0.99).
  - Estimated cost reductions related to HF events were $3,085 (19% reduction) per patient **(Fig 3)**. 99% of cost reductions were due to HF hospitalizations avoided with OM.

CONCLUSIONS

- Among HF patients with EF ≤30% and without digoxin+AF, OM led to significant clinical benefits, with reductions in resource utilization, intensity, and costs related to HF events.
- This large, clinically relevant and easily identifiable group of HFrEF patients may be where the clinical and economic benefits of OM are most evident.
- Modeling long-term cost-effectiveness (Cost/QALY) of OM is ongoing.

Omecamtiv mecarbil **significantly reduced clinical events, resource utilization, and costs related to HF events** in a clinically relevant and easily identifiable subgroup of HFrEF patients **where risk is most evident**

19%

Reduction in costs related to HF hospitalizations & emergency room/urgent care among patients with EF ≤30% and without digoxin+AF

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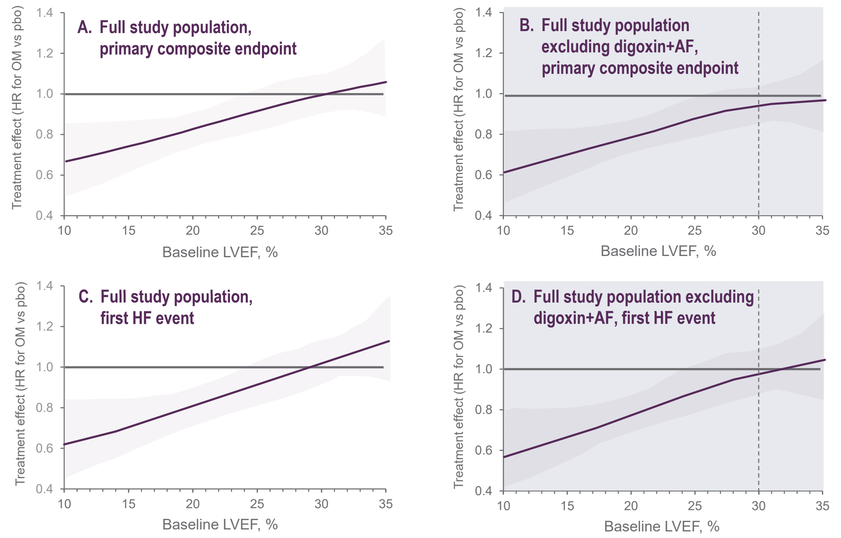
Fig 1: *Omecamtiv mecarbil* treatment effect as function of baseline EF



Solid line shows treatment effect (HR); shaded area shows 95% confidence interval.

Fig 2: Total HF events, cumulative incidence

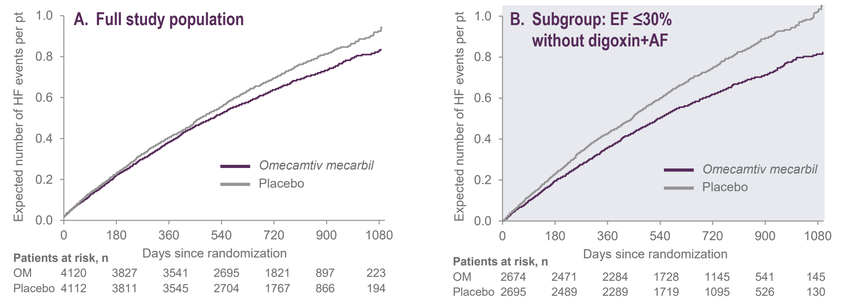
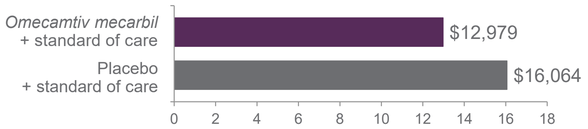


Table 1: First and total HF events (subgroup: EF ≤30% without digoxin+AF)

	OM (n=2674)	Placebo (n=2695)				
	Events per 100 pt-yr		HR (95% CI)	RRR	ARR	NNT
First HF event	**18.8**	**22.7**	0.85 (0.77–0.93)	**15%**	**3.8**	**26.2**
Total HF events	**31.1**	**37.9**	0.83 (0.74–0.93)	**17%**	**6.8**	**14.7**

NNT is the number of patients needed to be treated to prevent 1 HF event, over the 3 years studied.

Fig 3: Cost per patient of HF events (subgroup: EF ≤30% without digoxin+AF)



Cost offsets	
Per patient	$3085
% Reduction	19%

REFERENCES (1) Teerlink JR et al. *N Engl J Med* 2021;384:105-16. (2) Teerlink JR et al. *J Am Coll Cardiol* 2021;78:97-108. (3) Solomon SD et al. Heart Failure 2021; Florence, Italy (Abstract). (4) Gaziano TA et al. *JAMA Cardiol* 2020;5:1236-44.