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Healthcare Resource Use, Early Benefit, and Cost for North American Patients with HFrEF Most Likely to Benefit from *Omecamtiv Mecarbil*

GALACTIC-HF

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BACKGROUND & OBJECTIVES

- In GALACTIC-HF, *omecamtiv mecarbil* added to guideline-directed medical therapy for heart failure with reduced ejection fraction (HFrEF) reduced the risk of the primary composite outcome of a first heart failure event (HFE) or cardiovascular death.[1]
- Patients with atrial fibrillation/flutter (AFF) at baseline were less likely to benefit from *omecamtiv mecarbil* than patients without AFF, with attenuation of the treatment effect disproportionally concentrated in patients receiving digoxin as well as having AFF (dig+AFF).[2]
- A previous analysis of GALACTIC-HF found *omecamtiv mecarbil* reduced healthcare resource utilization and costs among higher-risk patients with left-ventricular ejection fraction (LVEF) ≤30% excluding dig+AFF.[3]
  - As GALACTIC-HF was an international trial, the analysis did not provide information on specific impacts for North American patients.
- This analysis examined healthcare resource use, timing, and HFE costs for patients treated with *omecamtiv mecarbil* in North America.

METHODS

- This post hoc analysis of the GALACTIC-HF trial (NCT02929329) analyzed risk of first and total HFE (hospitalization or urgent visit for HF, all adjudicated), and events at 30 days after randomization and later for patients enrolled in GALACTIC-HF in the North American region.
- Treatment effect was evaluated in the subgroup of GALACTIC-HF previously identified as most likely to benefit from *omecamtiv mecarbil*: LVEF ≤30% excluding dig+AFF at baseline.
- We applied US costs per HFE from published studies inflated to 2021 US dollars, including $17,123 per HF hospitalization.[4]
- All analyses were exploratory, with no adjustment for multiple comparisons.

RESULTS

- Of 8232 patients, 1386 (16.8%) were from North America (1220 US and 166 Canada). Of these, 4.6% had baseline dig+AFF. In total, 1090 (78.6%) patients had LVEF ≤30% but did not have baseline dig+AFF and were included in these analyses.
- In the subgroup of North American patients with LVEF ≤30% excluding dig+AFF, *omecamtiv mecarbil* reduced the risk vs placebo of the primary endpoint (HR 0.80; 95% CI 0.68–0.95; *P*=0.013) and of first HFE (HR 0.81; 95% CI 0.67–0.98; *P*=0.027) (**Table 1**).
  - Of these HFE, >90% were hospitalizations.
- For total HFE, *omecamtiv mecarbil* also reduced the risk vs placebo (HR 0.76; 95% CI 0.61–0.94, *P*=0.010), with an absolute risk reduction (ARR) of 14.2% and number needed to treat of 7 (**Table 1**).
- Fewer HFE were seen with *omecamtiv mecarbil* at 30 days (incidence rate ratio [IRR] 0.56, *P*=0.035), 90 days (IRR 0.61, *P*=0.005), and over 3 years (IRR 0.78, *P*=0.029), with rising ARR over time (**Table 2**).
- Cost reductions due to HFE avoided with *omecamtiv mecarbil* averaged $420/patient at 30 days, $928 at 90 days, and $6,052 (26.9% reduction) over 3 years (**Fig. 1 and 2**).

Table 1. Rate of first HFE and total HFE

	Rate per 100 P-Y		*OM* vs placebo[a]				
	OM + SoC (n=537)	Pbo + SoC (n=553)	HR (95% CI)	*P* value	ARR, %	NNT	RRR, %
First event	26.25	33.81	0.81 (0.67–0.98)	0.027	7.6	13	19
Total events	41.30	55.46	0.76 (0.61–0.94)	0.010	14.2	7	24

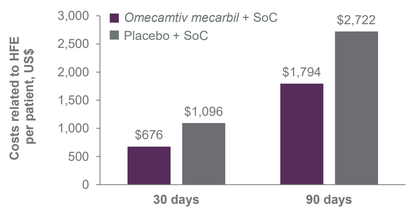
[a]Adjusted for estimated glomerular filtration rate at baseline.
ARR, absolute risk reduction; CI, confidence interval; HFE, heart failure event; HR, hazard ratio; NNT, number needed to treat; *OM, omecamtiv mecarbil*; Pbo, placebo; P-Y, person-years; RRR, relative risk reduction; SoC, standard of care

Table 2. Cumulative risk of HFE and treatment effect over time

	Cumulative hazard		*OM* vs placebo[a]		
	OM + SoC (n=537)	Pbo + SoC (n=553)	IRR (95% CI)	*P* value	ARR, %
30 days	0.041	0.069	0.56 (0.33–0.96)	0.035	2.8
90 days	0.108	0.176	0.61 (0.43–0.86)	0.005	4.1
180 days	0.239	0.354	0.69 (0.52–0.90)	0.007	4.9
360 days	0.487	0.646	0.76 (0.60– 0.97)	0.025	4.8
540 days	0.683	0.910	0.77 (0.61–0.96)	0.023	7.5
720 days	0.843	1.113	0.78 (0.63–0.98)	0.032	5.0
900 days	0.954	1.290	0.78 (0.62–0.97)	0.029	10.8
1080 days	1.056	1.471	0.78 (0.62– 0.97)	0.029	11.2

[a]Adjusted for estimated glomerular filtration rate at baseline.
ARR, absolute risk reduction; CI, confidence interval; HFE, heart failure event; IRR, incidence rate ratio; *OM, omecamtiv mecarbil*; Pbo, placebo; SoC, standard of care

Fig 1. Costs per patient due to HFE at 30 or 90 days



	30 days	90 days
Cost offsets per patient:	$420	$928
% Reduction in HFE costs:	38%	34%

HFE, heart failure event; SoC, standard of care

TAKEAWAY

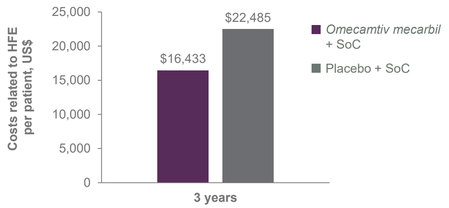
Omecamtiv mecarbil
significantly
reduced resource use and costs related to HF events
at 30 days,
with increasing absolute risk reduction over time
& NNT of 7 over 3 years' follow-up

44%
Reduction in HF events at 30 days

27%
Reduction in costs related to HF events at 3 years' follow-up

among patients with LVEF ≤30% & without digoxin+AFF at baseline in the GALACTIC-HF study population from North America

Fig 2. Costs per patient due to HFE over 3 years



Cost offsets per patient:	$6,052
% Reduction in HFE costs:	27%

HFE, heart failure event; SoC, standard of care

LIMITATIONS

- Results of this post hoc analysis must be considered exploratory, and further study is required to confirm results.
- The study was not able to evaluate cost-effectiveness; modeling long-term cost-effectiveness of *omecamtiv mecarbil* is ongoing.

CONCLUSIONS

- Among North American patients with HFrEF ≤30% and without dig+AFF in GALACTIC-HF, *omecamtiv mecarbil* significantly reduced HFEs with corresponding reductions in costs for HFEs.
  - Clinically and statistically significant benefits were apparent within 30 days of initiation and continued through the trial.
  - This large group of patients with HFrEF shows the clinical and potential economic benefit of *omecamtiv mecarbil*.

References

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