

# Comparative Effectiveness of Novel vs. Established Therapies in Hypertrophic Obstructive Cardiomyopathy (HOCM): Insights from a Real-World Study

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## Objective

The objective of this retrospective study is to evaluate the effectiveness of novel therapy vs. established therapy in patients with HOCM.

## Methodology

- The study analyzed de-identified Optum® Market Clarity data from the index period between July 1, 2022, and June 30, 2023.
- A prevalent pool of HOCM patients was identified from July 2020 to June 2022 using ICD-10 code (I42.1).
- Inclusion criteria: Patients  $\geq 18$  years of age with a diagnosis claim of HOCM.
- Exclusion criteria: Patients who had claims of surgical interventions for symptomatic relief of HOCM, and patients who discontinued novel therapy in the post-index period (identified as medication adherence  $< 80\%$ ).
- Index date: Date of novel therapy prescription.
- Post-index period: 12 months from the index date.
- Continuous eligibility claims were observed for novel and established therapy.
- Patients with medication adherence of  $\geq 80\%$  were eligible for analysis (novel and established therapy).
- Patients were divided into two cohorts:
  - Cohort 1: Patients on novel therapy with established therapy (BB+CCB).
  - Cohort 2: Patients on established therapy.
- Propensity score matching (PSM) was done in a 1:2 ratio between the two cohorts.
- The demographics of HOCM were analyzed.
- Clinical notes of patients from both cohorts were explored to gain insights into clinical improvement, changes in ejection fraction (EF) from baseline, New York Heart Association Classification (NYHA) of patients, and left ventricular outflow tract (LVOT) gradient changes from baseline.

Figure 1. Age Distribution (in Years) of HOCM Patients

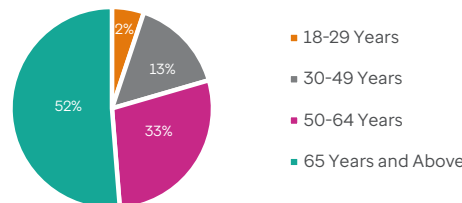


Figure 2. Gender Distribution of HOCM Patients

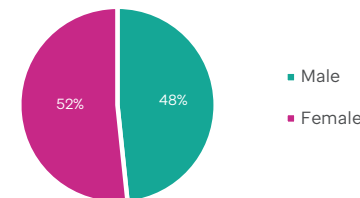
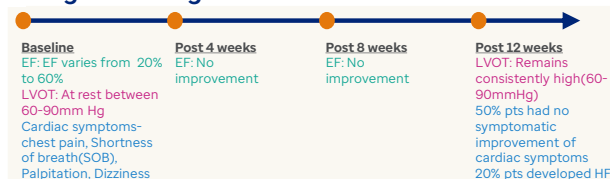


Figure 3. Insights from Clinical Notes: Cohort 1



Figure 4. Insights from Clinical Notes: Cohort 2



## Results

- The prevalent pool of patients identified from July 2020 to June 2022 was 27,937.
- The prevalence of HOCM was 52.2% in patients  $\geq 65$  years, 33.4% in patients aged 50-64 years, 12.4% in patients aged 30-49 years, and 1.9% in patients aged 18-29 years. The difference within age groups was significant ( $p < 0.001$ ) (Figure 1).
- The prevalence by gender was not significant, with 48% of males affected versus 52% of females ( $p = 0.68$ ) (Figure 2).
- After analyzing continuous eligibility claims for both cohorts, 7,176 patients were considered for analysis.
- After PSM matching, 137 patients from Cohort 1 were matched against 274 patients from Cohort 2.
- The clinical notes of these patients were explored.
- Patients in Cohort 1 had a baseline EF  $> 50\%$ , whereas patients in Cohort 2 had variable baseline EF from  $< 20\%$  to 60%.
- Patients in Cohort 1 had an EF improvement of 5-10% from baseline, whereas patients in Cohort 2 had no improvement in EF.
- The LVOT gradient improved in Cohort 1, decreasing to  $< 20$  mmHg after 12 weeks in all patients. In Cohort 2, the LVOT gradient remained consistently high with no change after 12 weeks.
- Sixty percent of patients in Cohort 1 had symptomatic improvement of cardiac symptoms (chest pain, shortness of breath, palpitations, dizziness) with no patients developing heart failure (HF). In Cohort 2, 50% of patients had no symptomatic improvement, and 20% developed HF.

## Conclusions

The combination of novel therapy with established therapy has shown promising results in terms of clinical symptoms (such as chest pain, shortness of breath (SOB), dizziness, etc.) and echocardiographic findings (EF and LVOT). Limitation: Due to the small sample size, these findings cannot be generalized to a larger population.