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Treatment Persistence Among Patients Prescribed Resmetirom in a US Claims-Based Cohort

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RESONANCE
Real-World Evidence of Resmetirom Advancing Outcomes, Natural History, Assessment, and Clinical Effectiveness

1 INTRODUCTION

- MASH has an estimated prevalence in the United States of 1% to 6%, and its burden is expected to rise in the next decade.[1]
- Resmetirom received US FDA conditional approval on 14 March 2024 as the first therapy for MASH with moderate-to-advanced fibrosis (F2–F3) in adults.[2]
- Understanding the real-world treatment journey, especially long-term Resmetirom persistence is essential for optimizing clinical integration

2 AIM

To assess real-world persistence with Resmetirom (defined as continued therapy without a gap of ≥60 days between prescription fills) at 6 and 12 months post-index, and to characterize patient-level adherence using the Proportion of Days Covered (PDC).

3 METHODS

Design: US retrospective cohort study using the Carelon Research Healthcare Integrated Research Dataset (HIRD).

Population:

- Adults aged ≥18 years with ≥1 Resmetirom fill between 01 April 2024 and 31 October 2025; the index date was the earliest fill of Resmetirom and were required to have ≥1 year of continuous enrollment with both medical and pharmacy benefits before initiating Resmetirom.
- Clinical history was captured from 01 October 2015 to the day before index; patients were grouped by the presence or absence of a liver biopsy claim in the 3 years before index

Measures and analysis

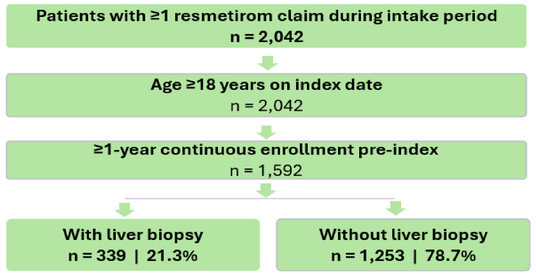
- **Persistence:** continuous therapy without a gap of ≥60 days between fills (base case), assessed at 6 and 12 months among patients with sufficient follow-up
- **Adherence:** Proportion of Days Covered (PDC) over the same windows, reported as median (IQR)
- Kaplan-Meier methods estimated time to discontinuation; overall estimates and biopsy-history comparisons were interpreted descriptively.

Sensitivity analyses

- Persistence was re-estimated using ≥45- and ≥90-day gap definitions to test the robustness of the base-case findings

4 RESULTS: TESTING & TREATMENT

Figure 1. Patient selection and attrition



- Of 1,592 patients initiating resmetirom, middle-aged (mean [SD] age, 55.4 [11.6] years), commercially insured (1,280 [80.4%]), and largely White, not Hispanic or Latino (1,226 [77.0%]); those with a prior biopsy (339 [21.3%]) differed only modestly from those without (1,253 [78.7%]), being younger and more often commercially insured.
- PDC and persistence were assessed for patients eligible at 6 months (n=880) and 12 months (n=392) post-index.
- At 6 months, median PDC was 93.0% (IQR 78.0%–98.0%) and persistence was 81.0%, with similar rates between biopsy and non-biopsy groups.
- At 12 months, median PDC was 87.0% (IQR 65.0%–95.0%; 89.0% with biopsy vs 87.0% without, p=0.367) and persistence was 68.4% (75.0% vs 66.0%, p=0.116; see Table 1 and Figure 1 for Kaplan-Meier curves).
- Sensitivity analyses: persistence was 79.2%/64.5% (≥45-day gap) and 85.2%/74.2% (≥90-day gap) at 6/12 months vs 81.0%/68.4% in the ≥60-day base case, with no significant difference by biopsy history under any definition.

5 CONCLUSIONS

- High PDC at 6 and 12 months, together with high persistence, suggests:
- Most patients remained on therapy through the first year, with medication-taking behavior consistent with trial expectations.
- Continuation was independent of prior liver biopsy, indicating that sustained use is not confined to a more intensively evaluated subgroup.
- The pattern persisted across all treatment-gap definitions, reflecting actual prescribing and refill behavior rather than a methodological artifact.
- These early real-world data establish a benchmark for future studies of Resmetirom persistence and adherence.

Table 1. Persistence & adherence at 6 months post-index

	Overall	With Biopsy[1]	Without Biopsy[2]	P-value
Number of patients, N	1,592	339	1,253	
Eligible at 6 months, n (%)	880 (55.3%)	213 (62.8%)	667 (53.2%)	0.002
Treated days, resmetirom				0.489
Mean (SD)	148.8 (47.3)	150.7 (45.6)	148.2 (47.9)	
Median (IQR)	170.0 (142.8-180.0)	171.0 (145.0-181.0)	170.0 (142.0-180.0)	
PDC, mean (SD)	81.0% (26.0%)	82.0% (25.0%)	81.0% (26.0%)	0.489
PDC, median (IQR)	93.0% (78.0%-98.0%)	93.0% (79.0%-99.0%)	93.0% (77.0%-98.0%)	
Adherent (PDC≥80%), n (%)	634 (72.1%)	157 (73.7%)	477 (71.5%)	0.594
Persistence[3], n (%)	713 (81.0%)	173 (81.2%)	540 (81.0%)	NR

1. Individuals with ≥1 claim for a liver biopsy during the 3-year baseline period. 2) Individuals without liver biopsy during the 3-year baseline period.
3) Persistence refers to continuous therapy without a gap of ≥60 days between fills assessed at 6 and 12 months among patients with sufficient follow-up.

Table 2. Persistence & adherence at 12 months post-index

	Overall	With Biopsy[1]	Without Biopsy[2]	P-value
Number of patients, N	1,592	339	1,253	
Eligible at 12 months, n (%)	392 (24.6%)	104 (30.7%)	288 (23.0%)	0.004
Treated days, resmetirom				0.367
Mean (SD)	270.6 (106.8)	278.7 (106.2)	267.7 (107.1)	
Median (IQR)	320.0 (236.8-348.0)	324.5 (261.0-351.5)	320.0 (224.8-345.0)	
PDC, mean (SD)	74.0% (29.0%)	76.0% (29.0%)	73.0% (29.0%)	0.367
PDC, median (IQR)	87.0% (65.0%-95.0%)	89.0% (71.0%-96.0%)	87.0% (61.0%-94.0%)	
Adherent (PDC≥80%), n (%)	242 (61.7%)	71 (68.3%)	171 (59.4%)	0.138
Persistence, n (%)	268 (68.4%)	78 (75.0%)	190 (66.0%)	0.116

6 REFERENCES

1. Rinella ME, Lazarus JV, Ratziu V, et al; NAFLD Nomenclature consensus group. A multisociety Delphi consensus statement on new fatty liver disease nomenclature. Hepatology. 2023;78(6):1966-1986.
2. US Food and Drug Administration. FDA approves first treatment for patients with liver scarring due to fatty liver disease. Press announcement. 14 March 2024. Accessed 4 June 2025.

7 DISCLOSURES

RWD, ZW, CCT, and JB are employees of Carelon Research, a wholly owned subsidiary of Elevance Health. Carelon Research received funding from Madrigal Pharmaceuticals for the conduct of this study. BT, KP, YK, and FL are employees of Madrigal Pharmaceuticals and may hold stock or stock options in the company. This study was funded by Madrigal Pharmaceuticals. The authors had full access to the results and take responsibility for their integrity.