General Characteristics of the Patients Prescribed Resmetirom: Data Derived from Six Tertiary Care Centers in the United States

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Background and Aims: Resmetirom was recently approved by the FDA as the first medication intended for non-cirrhotic patients with metabolic dysfunction-associated steatohepatitis (MASH) and stage F2-F3 fibrosis. The approval was based on histological improvement and patients were selected for the phase 3 trial based on liver biopsy. However, in the real world, most patients with MASH do not undergo liver biopsy and the diagnosis is based on noninvasive tests. Here, we aimed to describe the general characteristics of the MASH patients prescribed resmetirom including noninvasive tests and concomitant medications derived from six hepatology clinics in the United States.

Method: The data of MASLD patients derived from six tertiary care centers were collected between March and Nov 2024 (265, 15 ,32 ,48, 27, and 37 patients from six centers, respectively, total 424 patients). The demographic and laboratory data were recorded during the baseline visit.

Results: The cohort had a median age of 58 years (IQR: 49–67), with 179 males (42.0%). A total of 88 patients (20.8%) were diagnosed via liver biopsy, while the majority (88.9%) were assessed using transient elastography; 56 (13.2%) had ELF testing. The median liver stiffness measurement (LSM) was 11.0 kPa (IQR: 8.9–13.4) and the median ELF was 9.7 (IQR: 9.4–10.3) (Table). Obesity was prevalent in 356 patients (84.0%), while 185 patients (43.6%) had type 2 diabetes (T2D). Cardiometabolic comorbidities were common, with 40.3% on statins, 19.3% on GLP-1 analogs, and 33.3% on metformin. Patients prescribed resmetirom were predominantly on 80 mg (50.9%) or 100 mg (47.2%) doses. Only 1.9% were prescribed 60 mg. The number of patients with 0, 1, 2, 3, and ≥4 cardiometabolic risk factors were 6.8%, 23.3%, 28.3%, 29.2%, and 12.3%, respectively.

Conclusion: This large real-world cohort of MASH patients prescribed resmetirom reflects the high burden of cardiometabolic comorbidities typical of MASLD populations, with obesity and T2D being especially prevalent. Most patients were diagnosed with advanced fibrosis (F2-F3) using noninvasive methods, such as transient elastography, highlighting a shift from biopsy reliance in clinical trials to real-world practice. These findings underline the importance of integrated management of cardiometabolic risk factors and reinforce the potential of resmetirom as a critical therapy for MASH in real-world settings.

Table 1. General characteristics of the study population (N=424)

Parameter	
Age, years	58 (49-67)
Sex (male), n (%)	179 (42.0%)
Diabetes mellitus (yes), n (%)	185 (43.6%)
Hypertension (yes), n (%)	211 (49.8%)
Dyslipidemia	170 (40.0%)
Obesity	356 (80.0%)
Body mass index, kg/m^2	36 (32 – 41)
Number of Cardiometabolic Risk Factors	
0	29 (6.8%)
1	99 (23.3%)
2	120 (28.3%)

3	124 (29.2%)
4	52 (12.3%)
Dosage	
60mg	8 (1.9%)
80mg	216 (50.9%)
100mg	200 (47.2%)
Ethnicity (non-Hispanic/Hispanic), n (%)	52 (72.2%)/9 (12.5%)
Liver stiffness measurement, kPa	11 (8.9 – 13.4)
Controlled attenuation parameter, dB/m	328 (296 – 356)
ELF Score	9.7 (9.4 – 10.3)
Liver Biopsy Stage	
1	6/88 (6.8%)
2	40/88 (45.5%
3	41/88 (46.6%
4	1/88 (1.1%)
Liver Biopsy NAS Score	4 (3-6)
Fibrosis-4 Index	1.38 (0.90 – 1.91)
SAFE Score	104 (38 – 165)
Liver Risk Score	7.3 (6.4 – 6.3)
Aspartate transaminase, U/L	37 [25-51]
Alanine transaminase, U/L	43 [29-60]
Alkaline phosphatase, U/L	84 [69 - 96]
Total bilirubin, mg/dL	0.59 [0.40-0.70]
Creatinine, mg/dL	0.8 (0.7-1.0)
Albumin, g/dL	4.4 (4.2-4.5)
Total protein, g/dL	7.1(6.9-7.3)
Gamma-glutamyltransferase, U/L	68 (50-90)
Platelet, $x10^3/\mu L$	237 (206-293)
HbA1c, %	6.3 [5.9-6.9]
Total cholesterol, mg/dL	172 [147-190]
Low density lipoprotein, mg/dL	95 [76-141]
High density lipoprotein, mg/dL	43 [39-48]
Triglycerides, mg/dL	154 [123-189]
Insulin	23 (5.4%)
Metformin	141(33.3%)
GLP-1 analogues	82 (19.3%)
Statins	171 (40.3%)
Aspirin	52(12.3%)
Vitamin E	24 (5.7%)