

Characteristics and Treatment Patterns of Patients Initiating Cladribine Tablets: A US Commercial and Medicare Advantage Prescription Drug Claims Analysis

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CONCLUSIONS



- Among 113 patients evaluated from the Optum database, more than half (57.5%) were ≥50 years of age
- 52.2% of the patients were insured through MAPD, and 47.8% had commercial insurance
- Most patients had moderate MS severity (46.9%), followed by low (35.4%) and high (17.7%) severity at baseline



- Nearly two-thirds (65.5%) of patients indicated previous use of DMT during the 1-year period before cladribine tablets

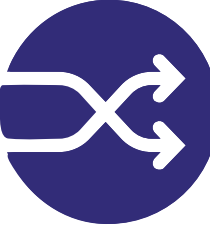


Using a payer database, initial insights were identified on the real-world patient characteristics and treatment patterns among US patients receiving cladribine tablets



BACKGROUND

- Real-world evidence for cladribine tablets in patients with MS is emerging in the US



OBJECTIVE

- To better understand the characteristics of US patients with commercial or Medicare Advantage insurance who are initiating treatment with cladribine tablets



RESULTS

Patient selection

- Among 201 enrollees with commercial or MAPD insurance with ≥1 pharmacy claim for cladribine tablets during the identification period, 113 met the inclusion criteria (**Table 1**)

Baseline demographic and clinical characteristics (n=113)

- Mean (SD) age was 52.0 (11.6) years, 75.2% of the patients were female, 52.2% had MAPD insurance, and 47.8% had commercial insurance (**Table 2**)
- Most patients had moderate MS severity (46.9%), followed by low (35.4%) and high (17.7%) severity at baseline
- Common comorbidities are shown in **Figure 1**

Table 1. Patient selection

Criteria	Patients Remaining	Patients Excluded
	n (%)	n (%)
Inclusion		
Commercial or MAPD enrollee with ≥1 pharmacy claim for cladribine tablets during the identification period April 1, 2019 through September 30, 2020 (date of the first claim for cladribine tablets is the index date)	201 (100.0)	
≥18 years old during year of index date	201 (100.0)	0 (0.0)
≥12 months of continuous enrollment in the health plan with medical and pharmacy benefits before the index date. The 12-month period before the index date is the baseline period	150 (74.6)	51 (25.4)
≥12 months of CE with medical and pharmacy benefits beginning on the index date. The 12-month period starting on the index date is the follow-up period	120 (80.0)	30 (20.0)
≥1 non-diagnostic ^a medical claim with an MS ICD-10-CM diagnosis code ^b in any position during the baseline or follow-up periods	120 (100.0)	0 (0.0)
Exclusion		
Missing or invalid demographic data (gender or geographic region)	120 (100.0)	0 (0.0)
≥1 claim with an ICD-10-CM or CPT code indicating pregnancy in the baseline or follow-up periods	113 (94.2)	7 (5.8)

^aLaboratory and diagnostic radiology services provided in free-standing (ie, outside of a hospital system or provider office) are examples of diagnostic claims.^bMS diagnosis: ICD-10-CM G35.xxx.

Table 2. Baseline demographics and clinical characteristics

Demographic Characteristic	Total (n=113)
Age, years	
Mean (SD)	52 (11.6)
Median	53
Age groups, n (%)	
18-44 years	28 (24.8)
45-64 years	71 (62.8)
≥65 years	14 (12.4)
Sex, n (%)	
Female	85 (75.2)
Male	28 (24.8)
Geographic region, n (%)	
Northeast	7 (6.2)
Midwest	20 (17.7)
South	71 (62.8)
West	15 (13.3)
Insurance type, n (%)	
Commercial	54 (47.8)
MAPD	59 (52.2)
MS severity level^a, n (%)	
Low (0-4)	40 (35.4)
Moderate (5-10)	53 (46.9)
High (11+)	20 (17.7)
Quan-Charlson comorbidity score	
Mean (SD)	0.82 (1.32)
Median	0.00

^aDeveloped by Nicholas J, et al. *Neurology* 2017;88(16 suppl):P2.052, this algorithm assigns weights to relapse, symptoms (10 groups), DMT utilization (intravenous, oral, and platform [interferon beta-1a, interferon beta-1b, glatiramer acetate]), durable medical equipment, and MS-related hospitalizations. These weights are summed to create a score and 3 derived severity categories: low (0-4), moderate (5-10), and high (≥11).

Baseline healthcare resource use, relapse, and symptoms (n=113)

- During the 1-year baseline period before cladribine tablets, 9.7% of patients used a cane/walker/hospital bed/wheelchair, 11.5% had MS-related hospitalizations, and 39.8% had a relapse (**Figure 2**)
- Common MS symptoms are shown in **Figure 3**

DMT use prior to cladribine tablets (n=113)

- Nearly two-thirds of patients (65.5%) had a previous (non-cladribine tablets) DMT during baseline (**Table 3**)
 - The most common DMTs were dimethyl fumarate, ocrelizumab, natalizumab, teriflunomide, fingolimod, glatiramer acetate, and subcutaneous interferon-beta 1a (**Figure 4**)

Figure 1. Baseline comorbidities

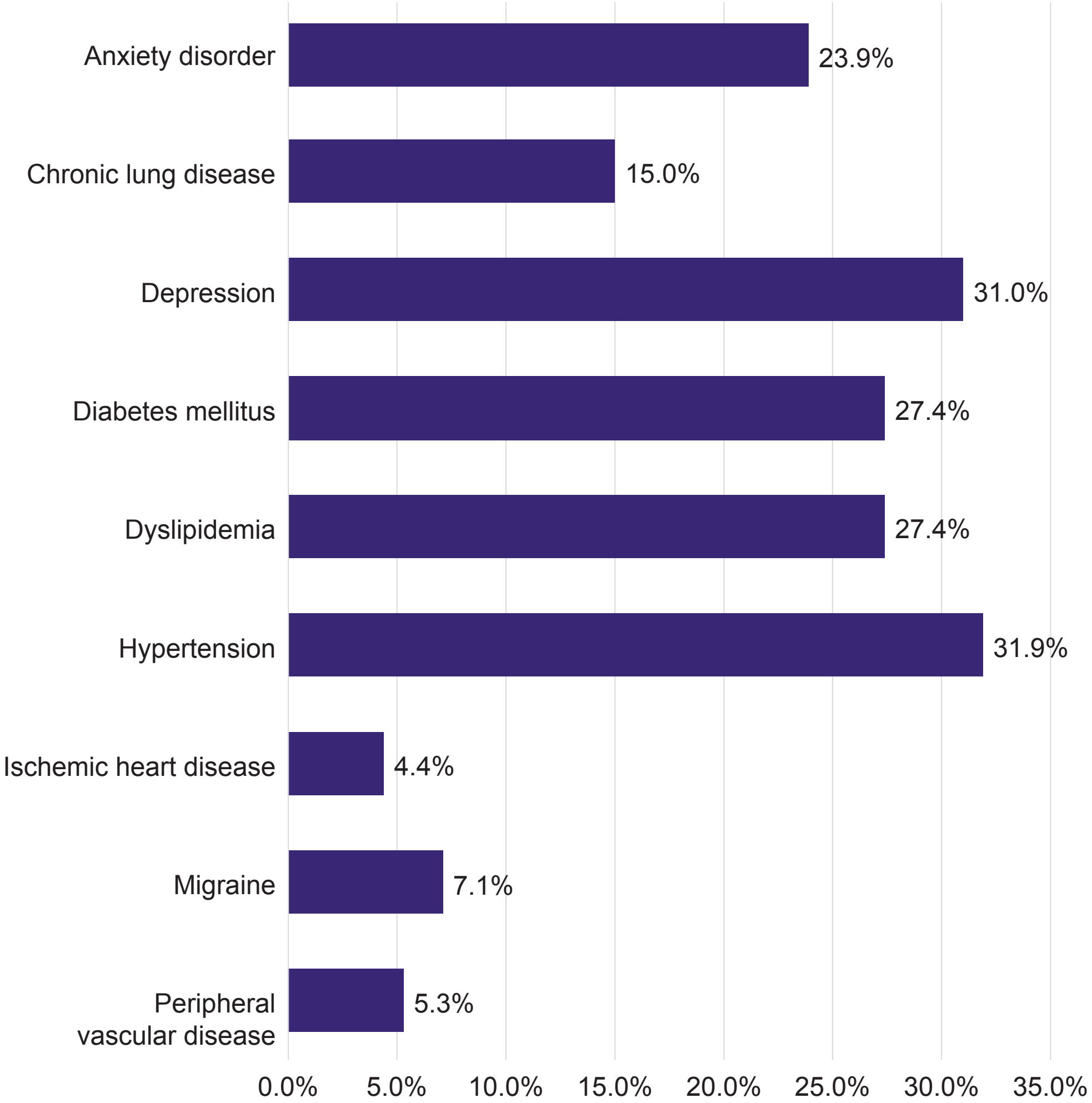


Figure 2. Baseline healthcare resource use and relapse

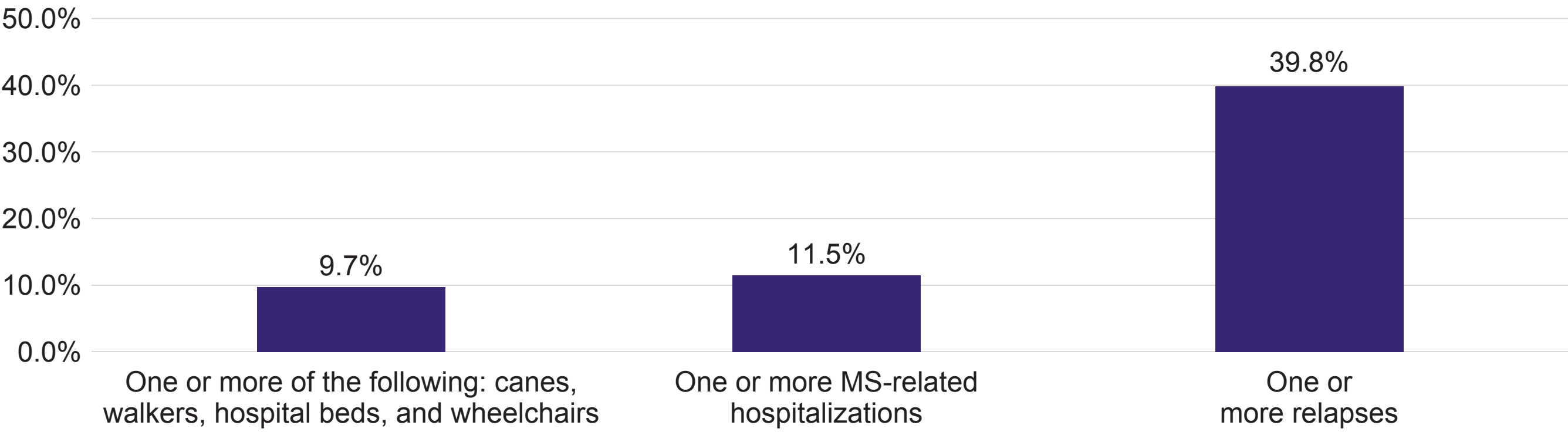


Figure 3. Baseline MS symptoms experienced by patients

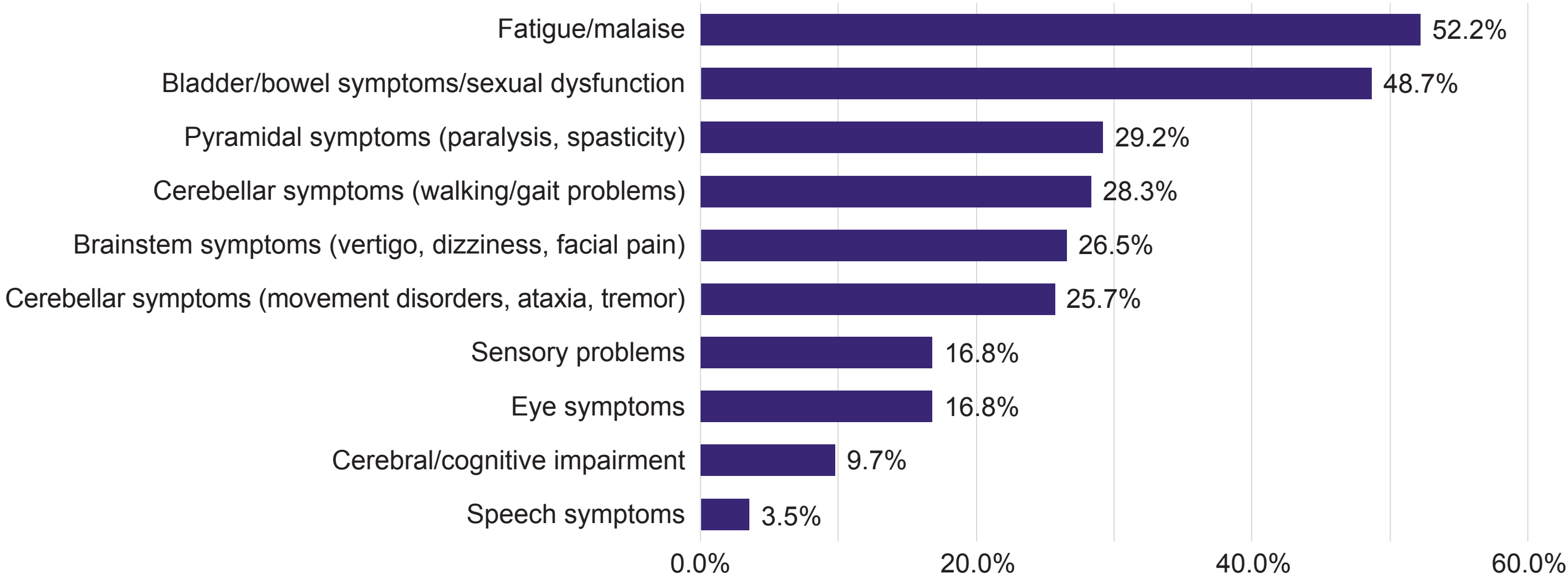
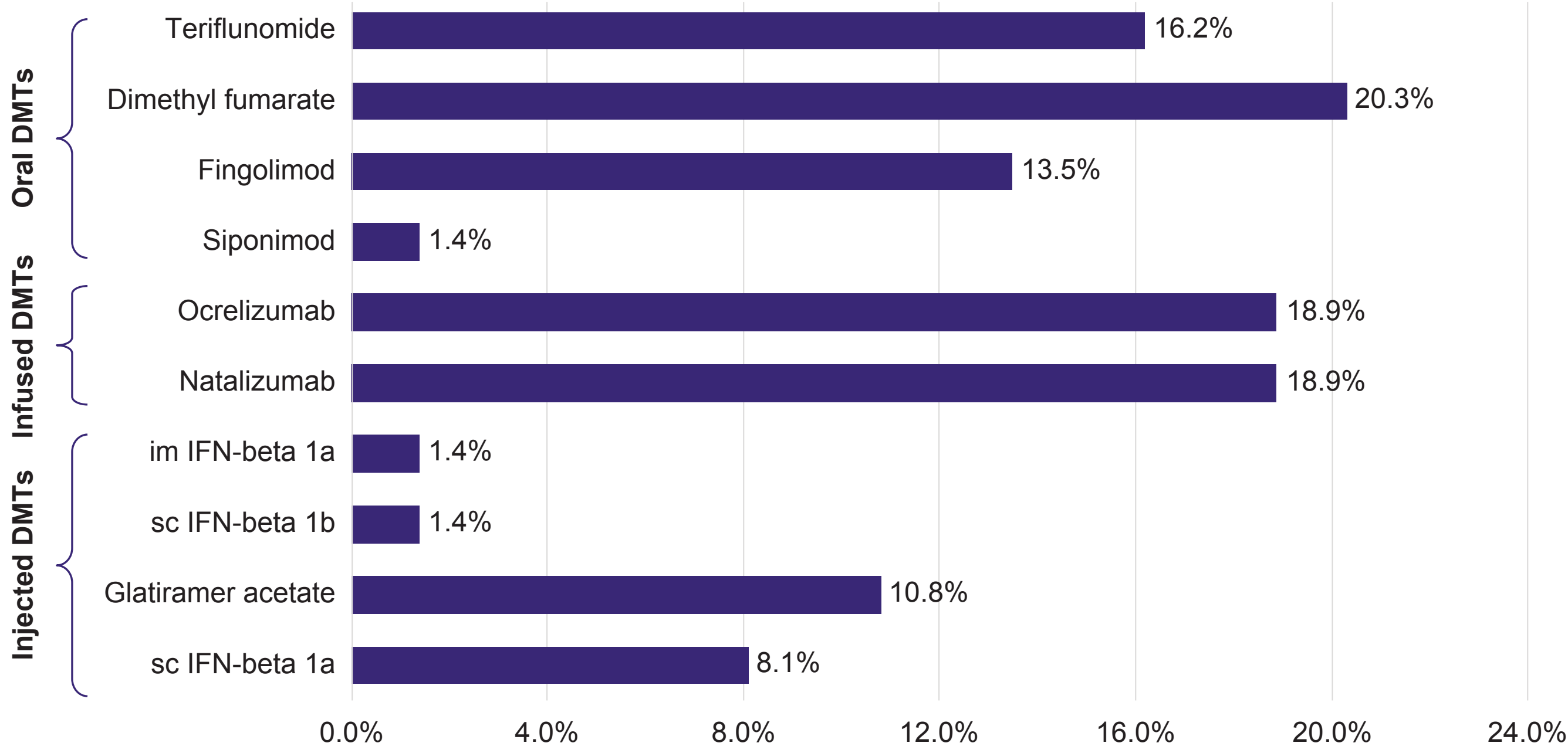


Figure 4. Proportion of DMTs by patients with DMT use in the baseline period (n=74)



Note: Sum of percentages does not total 100% because patients can have claims for multiple DMTs.

Table 3. DMT use during baseline

Baseline DMTs	Total (n=113)	MS Severity Level			P value
		Low (n=40)	Moderate (n=53)	High (n=20)	
Patients with no DMT use during baseline, n (%)	39 (34.5)	18 (45.0)	14 (26.4)	7 (35.0)	
Patients treated with ≥1 non-cladribine tablets DMT during baseline, n (%)	74 (65.5)	22 (55.0)	39 (73.6)	13 (65.0)	0.176
Number of unique non-cladribine tablets DMTs during baseline					
Mean (SD)	0.73 (0.60)	0.55 (0.50)	0.89 (0.67)	0.65 (0.49)	0.022
Median	1.0	1.0	1.0	1.0	

Abbreviations: CE, cost-effectiveness; CPT, Current Procedural Terminology; DMT, disease-modifying therapy; ICD-10-CM, International Classification of Diseases, Tenth Revision, Clinical Modification; IFN, interferon; im, intramuscular; MAPD, Medicare Advantage Prescription Drug; MS, multiple sclerosis; ns, not significant; ORD, Optum Research Database; sc, subcutaneous; SD, standard deviation; US, United States.

References: 1. Nicholas J, et al. *Neurology* 2017;88(16 suppl):P2.052

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