

Comparative Effectiveness of Diroximel Fumarate vs. Dimethyl Fumarate in Persons with Multiple Sclerosis: A US Claims Analysis of Relapse Outcomes

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Table S1 MS DMTs Used to Define Study Exclusion Criteria

Drug Class	Drug	Route of Administration
Monoclonal Antibodies	Alemtuzumab	IV
	Ocrelizumab	IV
	Ofatumumab	IV
	Ublituximab	IV
	Natalizumab	IV
Anthracenediones	Mitoxantrone	IV
Fumarates	Dimethyl Fumarate	Oral
	Diroximel Fumarate	Oral
	Monomethyl Fumarate	Oral
Cladribine	Cladribine	Oral
S1P Modulator	Fingolimod	Oral
	Ozanimod	Oral
	Ponesimod	Oral
	Siponimod	Oral
Immunomodulatory	Teriflunomide	Platform
	Glatiramer Acetate	Platform
	Interferon Beta-1a	Platform
	Interferon Beta-1b	Platform
	Peginterferon Beta-1a	Platform

DMT disease-modifying therapy, *IV* intravenous, *MS* multiple sclerosis

Table S2 Coding rules for relapse-associated treatments used to define outpatient MS relapse events

Treatment	HCPCS / NDC / Procedure Code
IV Steroid	C9256, J0702, J0704, J0800, J1020, J1030, J1040, J1094, J1100, J1700, J1710, J1720, J2650, J2920, J2930, J7506, J7509, J7510, J8540; Solution NDC Code
Adrenocorticotrophic hormone (ACTH)	63004871001, 63004871002, 63004871101, 63004871104, 63004871201, 63004871204
Total plasma exchange	6A550Z3, 6A551Z3, 36514, 36515, 36516
High dosage oral corticosteroid (≥ 500 mg/day)	All codes for corticosteroids at doses equivalent to or greater than 500 mg / day were included

HCPCS Healthcare Common Procedure Coding System, IV intravenous, MS multiple sclerosis, NDC National Drug Code

Table S3 MS Severity Score and CCI input variables and weighting

MS Severity Score Variable	Weight
MS Relapses During Baseline	3
Intravenous (IV) DMT use	3
Cerebellar symptoms: movement disorders, ataxia, tremor	2
Cerebellar symptoms: walking/gait problems	2
Bladder/bowel symptoms/sexual dysfunction	2
Pyramidal symptoms: paralysis, spasticity	2
Eye symptoms	1
Brainstem symptoms (e.g., vertigo dizziness facial pain)	1
Speech symptoms	1
Sensory symptoms	1
Cerebral/cognitive impairment	1
Fatigue/malaise	1
DME use - Canes, walkers, hospital beds, wheelchairs	1
Oral DMT use or platform DMT use	1
Charlson Comorbidity Index (CCI) Variable	Weight
Myocardial Infarction	1
Congestive Heart Failure	1
Peripheral Vascular Disease	1
Cerebrovascular Disease	1
Dementia	1
Chronic Pulmonary Disease	1
Rheumatic Disease	1
Peptic Ulcer Disease	1
Mild Liver Disease	1
Diabetes Mellitus Without Complications	1
Hemiplegia/Paraplegia	2
Renal Disease	2
Diabetes Mellitus With Chronic Complication	2
Tumor w/o Metastases, Leukemia, Lymphoma, Multiple Myeloma	2
Moderate Or Severe Liver Disease	3
Metastatic Solid Tumor	6
AIDS	6

AIDS acquired immunodeficiency syndrome, *CCI* Charlson Comorbidity Index, *DME* durable medical equipment, *DMT* disease-modifying therapy, *MS* multiple sclerosis

Table S4 Persistence Status Among Patients in the 1-Year Analysis

Treatment	Patients in 1-Year Analysis	Persistent at 2-Years or Remaining on Treatment at End of Data Window (%)
DRF	1780	1025 (58%)
DMF	5340	2794 (52%)

DRF diroximel fumarate, *DMF* dimethyl fumarate