Comparison of Therapy Selection Drivers Within the S1P Receptor Modulator and Fumarate Classes Among Multiple Sclerosis Patients Who Recently Switched Treatment

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Original abstract content

SPHERIX GLOBAL INSIGHTS

Background

The number of disease-modifying therapies (DMTs) within the S1P receptor modulator and fumarate classes has expanded with recent approvals of siponimod (BAF), ozanimod (RPC), and ponesimod in the S1P class and generic (Gx) dimethyl fumarate (DMF), diroximel fumarate (DRF), and monomethyl fumarate in the fumarate class.

Objective

To compare multiple sclerosis (MS) treatment patterns and therapy selection decisions between DMTs with similar mechanisms of action (MOA).

Methods

In February 2021, US neurologists contributed chart reviews for a retrospective, cross-sectional audit of MS patients switched to a new DMT within the prior three months (n=223 physicians; n=1,117 charts). Analyzed data include patients switched to fingolimod (FTY; n=71), BAF (n=43), RPC (n=44), Gx DMF (n=33), branded DMF (n=100), and DRF (n=74). Monomethyl fumarate was not included in the fumarate class analyses due to small sample (n=3). Original abstract content from the 2020 audit can be accessed using the QR code; poster analyses, based upon updated 2021 data, now include RPC and Gx DMF switches.

Results

MS subtype allocation and switch line of therapy did not differ significantly between patients recently switched to an agent within the S1P class or within the fumarate class (Figures 1, 3). Among relapsing-remitting MS patients, anticipated near-term transition to secondary progressive MS also did not differ between DMTs (Figure 2).

Within the S1P class, patients switched to FTY were more likely to have switched from an interferon, while those switched to BAF or RPC were more likely to have switched from an oral DMT, specifically teriflunomide for BAF switches (Figure 4). Product familiarity was more influential in FTY compared to RPC selection, whereas initiation ease drove more BAF and RPC switches (Figure 5). More RPC switches were influenced by expectations around level of required monitoring compared to FTY and no first-dose observation (FDO) compared to both FTY and BAF. Availability of SPMS pivotal trial data influenced 17% of BAF switches. DMF and teriflunomide were more often considered the alternative option for FTY, while cladribine was a more frequent alternative for BAF and ofatumumab for RPC (Figure 6).

Within the fumarate class, more patients switched to DMF from an interferon, while more DRF switches originated from an oral DMT, typically branded or Gx DMF (Figure 7). Unlike with DMF or DRF switches, all Gx DMF switches from a glatiramer acetate (GA) agent were from a Gx GA. Similar to FTY, DMF switches were more likely to be influenced by product familiarity compared to DRF (Figure 8). The desire to avoid Gx substitution drove more DRF versus DMF switches, although favorable tolerability profile was the most common reason for prescribing DRF. Market access reasons influenced the majority of Gx switches, including low copay, payer preference, and step therapy mandates. The most common alternative option for both Gx DMF and DRF was DMF (Figure 9). GA agents, specifically Gx GA, were also frequently considered prior to Gx DMF selection, while ozanimod was a more frequent alternative option for patients who went on to switch to DRF.

Conclusions

Recent switch patterns to DMTs sharing similar MOA are differentially influenced by attributes related to time on market for established DMTs versus the focus of the respective clinical development program for second-to-class DMTs – disability progression in SPMS for BAF and improved tolerability for DRF and RPC. Therapy initiation ease differentiated both BAF and RPC from FTY, although only RPC was associated with no or low FDO need. With most Gx DMF switches driven by market access pressure, some patients may now be switching to DRF instead of DMF, in part, to avoid the possibility of Gx substitution.

Figure 1

Physician-Designated MS Subtype

% of patients

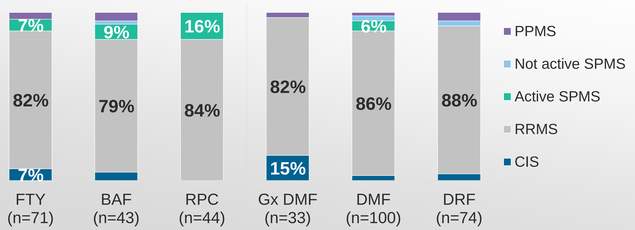


Figure 2

Anticipated Transition to SPMS Over Next 12 Months Among Relapsing-Remitting MS Patients

% of patients

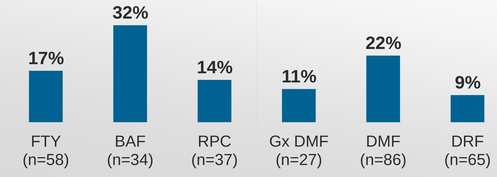


Figure 3

Switch Line of Therapy

% of patients

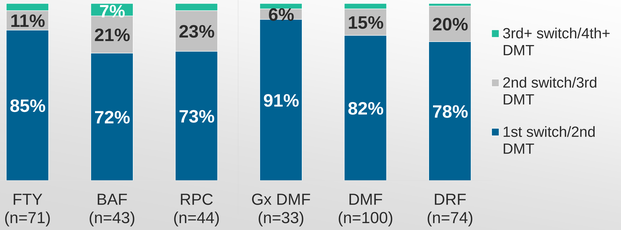
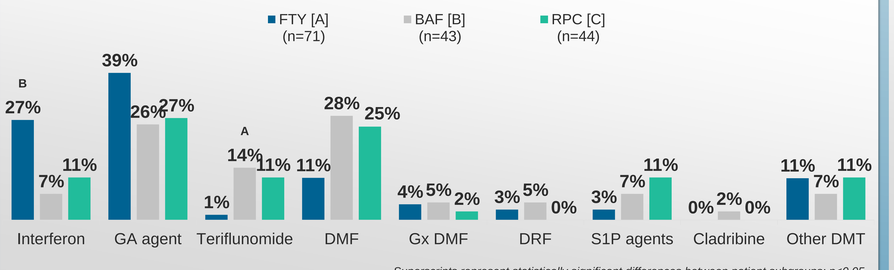


Figure 4

Prior DMT Before Switch to Current S1P Receptor Modulator

% of patients

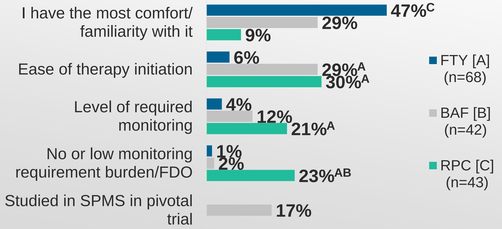


Superscripts represent statistically significant differences between patient subgroups; p<0.05

Figure 5

Select Reasons for Current S1P Receptor Modulator Selection

% of patients; multiple select

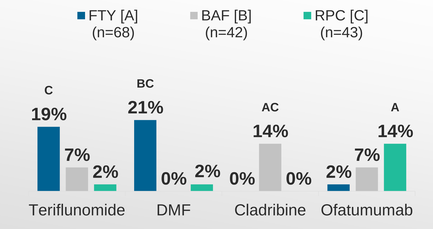


Superscripts represent statistically significant differences between patient subgroups; p<0.05

Figure 6

Select Alternative DMT if Current S1P Receptor Modulator Had Not Been Available

% of patients

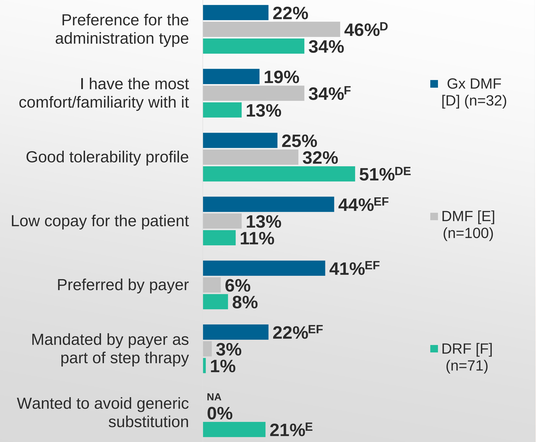


Superscripts represent statistically significant differences between patient subgroups; p<0.05

Figure 8

Select Reasons for Current Fumarate Agent Selection

% of patients; multiple select

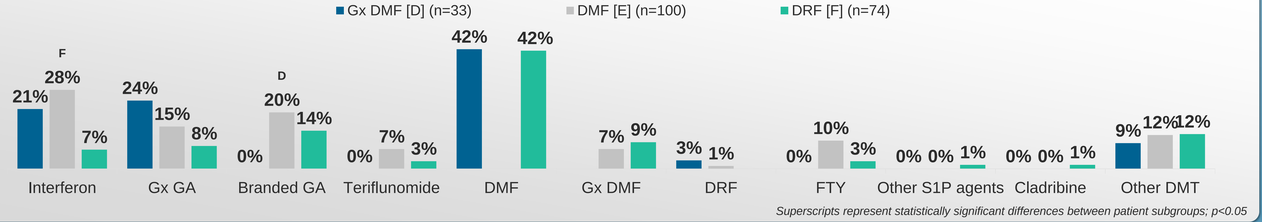


Superscripts represent statistically significant differences between patient subgroups; p<0.05

Figure 7

Prior DMT Before Switch to Current Fumarate Agent

% of patients

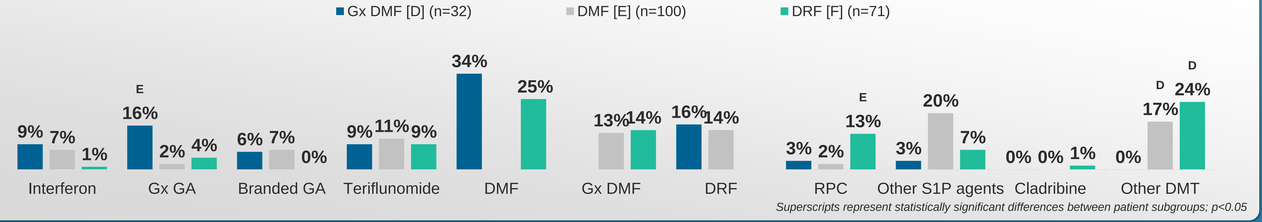


Superscripts represent statistically significant differences between patient subgroups; p<0.05

Figure 9

Alternative DMT if Current Fumarate Agent Had Not Been Available

% of patients



Superscripts represent statistically significant differences between patient subgroups; p<0.05