Interferon DMTs in Multiple Sclerosis

The interferon DMT class share has decreased significantly compared to a year ago, driven by neurologists’ willingness to prescribe oral DMTs in the first-line position. Ocrevus may also be having some impact on the class with switches from interferons among relapsing-remitting MS patients.

![Chart showing percentage of DMT-treated patients]

### Self-Reported Interferon DMT Class Share

- Q1 2016: 36%
- Q2 2016: 34%
- Q3 2016: 33%
- Q4 2016: 31%
- Q1 2017: 31%
- Q2 2017: 31%
- Q3 2017: 28%
- Q4 2017: 26%

### Self-Reported Ocrevus RRMS Patient Origination (Switched From)

- Interferons, 17%
- Other DMTs, 32%
- Tysabri, 22%
- Tecfidera, 22%

#### Neurologist Statement Agreements

- 70% agree: "I am using less injectable DMTs directly as a result of increased use of oral DMTs."
- 38% agree: "I am using less injectable DMTs directly as a result of increased use of monoclonal antibody DMTs."

When asked for their most preferred interferon DMT, almost two-thirds of neurologists report a preference for one of the high dose, high frequency interferons with more selecting EMD Serono's Rebif over Bayer's Betaseron.

### Most Preferred Interferon DMT (Among Neurologists with a Preference)

- Rebif: 40%
- Avonex: 23%
- Extavia: 18%
- Plegidy: 15%
- Betaseron: 4%

### Reasons for Rebif Preference

- Efficacy: 45%
- Dosing profile/ease of use: 30%
- Market experience/familiarity: 24%

"Has higher efficacy, good comparative data against Avonex, and I have not found difficulty with insurance coverage"

### Most Likely DMT Selection for Younger MS Patient Previously Untreated with DMT Therapy

- Interferons: 14%
- GAs: 37%
- Oral DMTs: 41%
- mAb DMTs: 8%

While neurologists' preference for Rebif is driven by its efficacy, dosing profile/ease of use, and market experience, other frequent mentions include strong trial data, company support, and insurance coverage that were unique to the brand.

Rebias was the only interferon DMT that also received numerous mentions for trial data (21%), company support (15%), and insurance coverage (12%).

A subgroup of neurologists still perceives the interferons to be the most likely choice for young patients previously untreated with DMT although they are outnumbered by those who believe they would select a GA or oral DMT.

While the interferon class share is anticipated to continue to decrease over the next six months, Rebif's status as the most preferred interferon may blunt the brand-level erosion and keep the actual Q3 2018 share drop from reaching significance.

Indeed, an early read on the Q1 2018 data from the quarterly RealTime Dynamix report series shows interferon share remaining stable with the last two quarters and higher than what was anticipated six months ago.

Actual Q1 2018 Interferon Class Share: 26.7%

Projected Q1 2018 Interferon Class Share (From Q3 2017): 25.1%

**RealTime Dynamix™: Multiple Sclerosis (US)** is a quarterly report series providing insights about the evolving DMT market. Participating neurologists are recruited from the Spherix Network, a proprietary panel of more than 600 neurologists managing at least 25 patients with MS. For more information contact: info@spherixglobalinsights.com
OVERVIEW

The US multiple sclerosis (MS) market is more dynamic and complex than ever with several clinically distinct disease-modifying therapies (DMTs) currently available, including Genentech’s Ocrevus for primary progressive MS (PPMS) as well as relapsing forms of MS (RMS), and an active late-stage DMT pipeline. In addition, building on the first generic DMT launch in 2015, the availability of multiple generic glatiramer acetate options, as well as the possibility of oral generics over the next few years, will result in a major future shift in the landscape in the face of increasing payer pressure.

RealTime Dynamix™: Multiple Sclerosis (US) provides a close-quarters analysis of key performance metrics, focusing on brand gains and losses, industry contact rates, familiarity and adoption rates of recently launched products, and awareness of products in development. Product perceptions, disease awareness and attitudes, practice management and other topics are rotated throughout the year to provide an ongoing probe of the crucial drivers of change. This ongoing, independent insights series allows marketing professionals to keep abreast of and quickly react to market changes by providing critical information that will support their commercial strategies in the MS space.

SAMPLE & METHODOLOGY

Each quarter, ~100 US neurologists provide their responses to an online survey. Respondents are recruited from the Spherix Network, a proprietary group of clinical neurologists meeting our strict screening criteria. Our relationship with this network leads to more engaged respondents resulting in higher quality output. Additionally, this gives us the opportunity to more easily revisit physicians in order to uncover even more insight on strategically important findings.

KEY QUESTIONS ANSWERED

- How is the current and near-term landscape for the MS market evolving?
- What are the critical opportunities and barriers to growth for each brand and class?
- How is Ocrevus impacting the RMS and PPMS markets?
- How is the availability of multiple generic glatiramer acetate agents impacting the market? To what extent is use driven by neurologist choice versus payer mandate?
- How is the treatment algorithm changing with increasing oral DMT experience and expanding options within the monoclonal antibody DMT class?
- To what degree do neurologists have strong preferences for specific brands within the DMT classes? How are the DMTs delivering on the key attributes and on typical patient types?
- With fewer opportunities for personal interactions, what are the best channels for industry to share product information with neurologists?
- How often are patients requesting specific DMT brands?
- What are neurologists’ perceptions of late-stage pipeline assets and how do they anticipate incorporating these products into their MS treatment?

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