



## Progressive Forms of Multiple Sclerosis (US)

### OVERVIEW

With the 2017 FDA approval of Genentech's Ocrevus as the first DMT for the treatment of primary progressive multiple sclerosis (PPMS) and 2019 approval of Novartis' Mayzent and EMD Serono's Mavenclad for active secondary progressive MS (SPMS), US neurologists now have multiple options for progressive forms of multiple sclerosis (MS) subtypes. However, treatment of SPMS is complicated by heterogeneous presentation with inflammatory disease activity present in some, but not all, SPMS patients. There remains a strong unmet need for effective treatments for the not active form of SPMS, a niche that products in the late-stage SPMS pipeline, including MedDay's MD-1003, MediciNova's ibudilast, and AB Science' masitinib, are attempting to address. With the availability of the new therapeutic options, it is imperative to understand the current treatment algorithm for progressive forms of MS (PfMS) including how patient characteristics and neurologist perceptions influence the decision to initiate or switch DMT and the resulting brand selection. Understanding when, why, and to which product a neurologist will prescribe for a PfMS patient is critical to building an effective commercial strategy for both first-line and later-line therapies targeting this patient population.

**RealWorld Dynamix™: Progressive Forms of MS (US)** blends attitudinal and demographic physician survey data with patient record data to uncover how practice type and setting and certain beliefs influence the treatment pathway and to understand which marketed DMTs are being used by physicians and for what PfMS patient types. The report also captures physician's perspectives about products in development and the impact they will have on the current treatment paradigm among PfMS patients.

### SAMPLE & METHODOLOGY

Spherix Global Insights conducts an online survey with ~200 US neurologists combined with a large-scale patient record audit of over 750 of their MS patients that are diagnosed with a PfMS (n=±250 each for active SPMS, not active SPMS, or PPMS) and are currently treated with a DMT. Each neurologist completes an in-depth retrospective review of their last 3-7 patients who meet specific study criteria. 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

- What is the self-reported treatment rate for active SPMS, not active SPMS, and PPMS? What are the reasons for not treating patients with a DMT?
- What clinical assessments or tests are used to help identify when a relapsing-remitting MS patient has transitioned to SPMS? Why are some SPMS patients initiated on their first DMT following SPMS transition?
- What are the most frequently prescribed agents for active SPMS, not active SPMS, and PPMS? How has treatment patterns changed compared to previous years?
- How does line of therapy for these DMTs differ between secondarily versus primarily progressing MS?
- What are the key drivers (e.g., efficacy/safety/tolerability/patient/payer) for DMT selection?
- What is the profile of a previously treatment-naïve PPMS patient being started on an injectable vs. oral vs. monoclonal antibody DMT?
- Among patients on a second line or later DMT, how does switching decisions differ between active SPMS, not active SPMS, and PPMS patients? If previously treated, are SPMS patients typically switched to a different DMT following confirmed transition from RRMS to SPMS?
- What is the opportunity cost for each brand (e.g., where would their brand have been selected if the first choice was not available)?
- Are neurologists willing to sacrifice increased safety risk for more efficacy in certain populations of MS patients?

### Products Profiled

#### Commercial Products

Bayer (Betaseron), Biogen [Avonex, Plegridy, Tecfidera, Tysabri, (historically) Zinbryta (with AbbVie)], EMD Serono (Rebif, Mavenclad), Genentech (Ocrevus, Rituxan), Genzyme (Aubagio, Lemtrada), Mylan (generic glatiramer acetate), Novartis (Mayzent, Gilenya, Extavia), Sandoz (Glatopa), Teva (Copaxone)

#### Pipeline Agents

AB Science (masitinib), Biogen [Vumerity, diroxime fumarate (with Alkermes)], Celgene (ozanimod), J&J/Actelion (ponesimod), MedDay (MD-1003), MediciNova (ibudilast), Novartis (ofatumumab), TG Therapeutics (ublituximab)

*\*Could move to commercial products based upon regulatory outcomes*

### Key Dates

- November Publication

*Note: a three day embargo is placed on delivery to non-manufacturers allowing clients time to digest the findings before public dissemination*

### Deliverables

- PowerPoint report
- Frequency table & summary statistics
- On-site presentation
- Access to de-identified database through Spherix analytics team
- Proprietary questions in physician survey

### Related Reports

- *RealWorld Dynamix™: DMT New Starts in Multiple Sclerosis US*
- *RealWorld Dynamix™: DMT Switching in Multiple Sclerosis US*
- *RealTime Dynamix™: Multiple Sclerosis US*
- *RealTime Dynamix™: Multiple Sclerosis EU*
- *RealWorld Dynamix™: DMT Switching in Multiple Sclerosis EU*