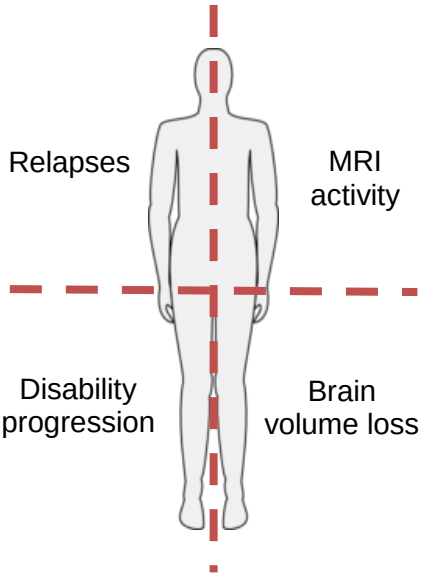
Gilenya: Addressing the Measures of Multiple Sclerosis Media Fact Sheet

Multiple sclerosis (MS) is a chronic autoimmune inflammatory disease of the central nervous system (CNS)[1] and affects 2.5 million people worldwide[2]. It can cause a range of physical and mental problems including loss of muscle control and strength, vision, balance, sensation and mental function[3]. There are four measures of disease activity which help assess the progression of a person's MS; namely disability progression, relapses, MRI activity and brain volume loss.

Gilenya® (fingolimod), a once-daily oral treatment approved to treat relapsing forms of MS, is the only oral disease-modifying therapy (DMT) to impact the course of MS with high efficacy across the four measures of disease activity[4-8], with one out of two patients on Gilenya remaining disease free* after one year compared with one out of three patients on standard interferon treatment (interferon beta 1a) (P<0.001; n=1292)[9]. Early and long term improvements have been observed both when patients started on Gilenya[4,5,7,10,11] and after they had been switched from standard interferon (interferon beta 1a) treatment to Gilenya[6,12].

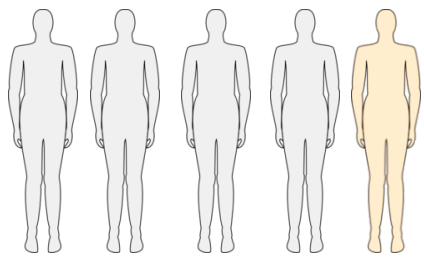


The 4 measures of MS disease activity

Free of disability progression

People with MS may increasingly lose their independence due to accumulating disability. Some may lose their ability to walk, and some may experience problems with sight[3]. Early treatment is key to giving a person with MS as much time free of disability progression as possible.

- Gilenya has been shown to reduce the risk of six month confirmed disability progression by 37% at year two compared to placebo (secondary endpoint; P=0.01; n=425, n=418 respectively)[5].
- In patients continuously treated with Gilenya for up to four years, four in five remained free of disability progression, compared to 7 out of 10 patients switched from placebo at two years (P=0.012)[7].

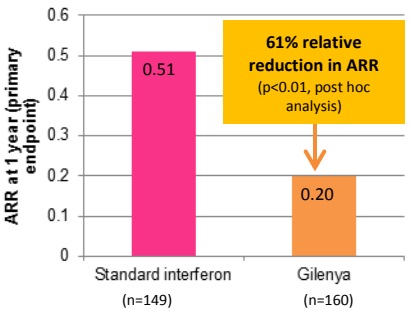


In patients continuously treated with Gilenya up to 4 years, 4 out of 5 patients were free of disability progression[7]

Free of relapses

The annualized relapse rate (ARR) is the average number of relapses an individual with MS has per year, and is an important measure because relapses can potentially significantly advance an individual's level of disability[13].

- Gilenya is the only oral treatment with superior relapse reduction vs. an active comparator[4,14].
- Post hoc analyses demonstrated that Gilenya provided a 61% relative reduction in ARR versus standard interferon at one year in patients** failing on standard interferon (P<0.01; n= 160, n=149 respectively)[14].
- Gilenya treatment has been shown to maintain a low ARR (0.17) for more than four years in clinical trials (exploratory analysis, n=429)[15].



Gilenya significantly reduced ARR vs. standard interferon at 1 year in patients failing treatment[4]

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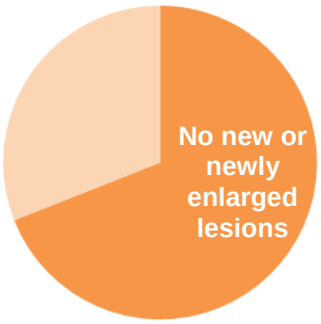
Free of MRI activity

During the course of MS, inflammation, which occurs when the body's immune cells attack the nervous system, can cause lesions (areas of damage) on any part of the CNS, including the brain. The amount of MRI activity, which is related to the number and volume of lesions, has been shown to be associated with relapses[16]. Relapses can potentially have a significant effect by advancing an individual's level of disability[13].

- More than twice as many patients on Gilenya (51%) where free of new or newly enlarged T2 lesions compared to placebo (21%) in a two-year study (secondary end point; P<0.001; n=370, n=339 respectively)[5].
- 69% of patients who continued on Gilenya up to four years remained free of new or newly enlarged T2 lesions (secondary end point; P<0.01 for months 24-48 vs. months 0-24; n=163)[7].



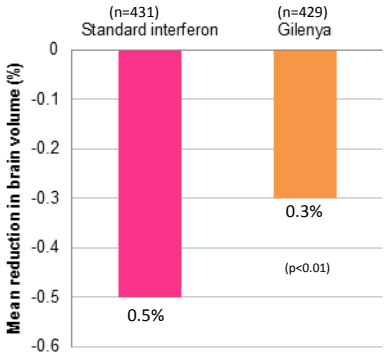
69% of patients who continued on GILENYA up to 4 years remained free of new or newly enlarged T2 lesions†[7]

†Secondary end point; P<0.01 for months 24-48 vs. months 0-24; n=163

Reduced rate of brain volume loss

MS patients lose brain volume approximately three to five times faster than people without MS, starting in the earliest, clinically silent stages of the disease[17-22]. Early brain volume loss is the best predictor of long-term disability[17]. Brain tissue loss is irreversible.

- Gilenya is the only oral treatment proven to consistently limit brain volume loss: seen within 6 months, and sustained for up to 4 years in Phase III studies and up to 7 years in a Phase II study[7,8,11].
- Patients who started on Gilenya and stayed on for four years or more had significantly lower rates of brain volume loss compared with patients who switched from placebo to Gilenya after two years (exploratory analysis; P<0.001; n=299, n=259 respectively)[7].
- Patients who completed up to seven years of a Phase II trial experienced consistently low rates of brain volume loss[11].



Gilenya has been shown to reduce the rate of brain volume loss compared to standard interferon treatment at 1 year[4]

* "Disease-free" is defined as absence of Gd+ T1 lesions, new/enlarged T2 lesions, confirmed relapses, and 3-month confirmed disability progression.

** In patients with high disease activity despite standard interferon treatment.

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