New Novartis data in relapsing MS reinforce benefits of Kesimpta® for first-line and switch patients

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- *Nearly 90% of first-line Kesimpta patients had no disability progression independent of relapse activity (PIRA) for up to six years in an analysis of open-label ALITHIOS extension study*[1]
- *More than 80% of patients receiving first-line Kesimpta were progression-free for up to six years, reinforcing the value of introducing Kesimpta early*[1]
- *Patients switching to Kesimpta from IV anti-CD20 therapy showed no new active lesions (Gd+ T1) 12 months after switch in separate US single-arm, open-label, Phase IIIb OLIKOS study*[2]

East Hanover, September 18, 2024 – Novartis today announced new data from the ALITHIOS open-label extension study. Data show first-line Kesimpta® (ofatumumab) treatment for up to six years led to less disability and disease progression in recently diagnosed (≤3 years) and treatment-naïve (RDTN) people with relapsing multiple sclerosis (RMS), compared to those who switched from teriflunomide[1].

A separate US-based single-arm OLIKOS Phase IIIb study showed that at 12 months, all clinically stable RMS patients who switched from intravenous (IV) anti-CD20 therapy to Kesimpta showed no new gadolinium-enhancing (Gd+) T1 lesions, a commonly used marker of disease activity, compared to baseline[2].

These data will be presented at the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) 2024 Annual Meeting in Copenhagen, Denmark on September 18-20.

“We continue to study the efficacy and safety of Kesimpta in different populations of people living with relapsing multiple sclerosis as part of our mission to advance care,” said Norman Putzki, M.D., Ph.D., Global Development Unit Head, Neuroscience & Gene Therapy, Novartis International AG. “Novartis is committed to understanding and solving some of the most burdensome neurological conditions to improve the quality of life for patients and their caregivers, and to make a positive impact on society.”

Kesimpta benefits in first-line patients

Data from the overall ALITHIOS study population showed that continuous use of Kesimpta was associated with numerically fewer 6-month confirmed disability worsening (6mCDW) and progression independent of relapse activity (6mPIRA) events up to six years compared to those who switched from teriflunomide[1]. These benefits appeared more pronounced in the RDTN subgroup, defined as starting treatment within three years of diagnosis[1].

- RDTN patients receiving continuous Kesimpta were more likely to remain free from 6mCDW compared to those who switched to Kesimpta from teriflunomide (83.4% vs. 76.3%)[1].
- RDTN patients receiving continuous Kesimpta were also more likely to be free of 6mPIRA vs. switching from teriflunomide (88.9% vs. 83.3%)[1].

“These data showed that people recently diagnosed with relapsing multiple sclerosis who received first-line Kesimpta had fewer disability worsening events and greater likelihood of being progression-free,” said lead investigator Amit Bar-Or, M.D., Director of the Center for Neuroinflammation and Neurotherapeutics at the University of Pennsylvania. “The reduction of disability accumulation observed early in the disease course supports earlier adoption of Kesimpta.”

Limitations of the results include a potential for attrition bias and the open-label nature of the extension study[1].

No new T1 lesions in patients who switched from IV therapy to Kesimpta

The US-based OLIKOS study analyzed 102 clinically stable RMS patients who switched from previous IV anti-CD20 therapy (99% from ocrelizumab) to Kesimpta[2]. For 84 patients with MRI results, no new Gd+ T1 lesions were observed at 12 months, the study's primary endpoint. Additionally, 98% of patients did not develop new/enlarging T2 (NeT2) lesions at 12 months, an exploratory endpoint in the study[2].

Treatment-emergent adverse events (TEAEs) occurred at a similar frequency as in the core Phase III ASCLEPIOS clinical trials, with no new safety signals identified[2]. The most commonly reported (≥10%) TEAEs were COVID-19, headache, fatigue, and urinary tract infection. Mean serum immunoglobulin G (IgG) and IgM levels remained stable up to 12 months[2].

About Multiple Sclerosis

Multiple sclerosis (MS) is a chronic inflammatory disease of the central nervous system characterized by myelin destruction and axonal damage in the brain, optic nerves and spinal cord[3]. MS, which affects nearly 3 million people worldwide[4], can be characterized into four main types: clinically isolated syndrome (CIS), relapsing-remitting (RRMS), secondary progressive (SPMS) and primary progressive (PPMS)[5]. The various forms of MS can be distinguished based on whether a patient experiences relapses (clearly defined acute inflammatory attacks of worsening neurological function), and/or whether they experience progression of neurologic damage and disability from the onset of the disease[3].

About Kesimpta® (ofatumumab)

Kesimpta is a targeted, precisely dosed and delivered B-cell therapy that provides the flexibility of self-administration for adults with relapsing forms of multiple sclerosis (RMS). It is an anti-CD20 monoclonal antibody (mAb) self-administered by a once-monthly injection, delivered subcutaneously[6-9]. Initial doses of Kesimpta are at Weeks 0, 1 and 2, with the first injection performed under the guidance of a healthcare professional[6,7]. The selective mechanism of action and subcutaneous administration of Kesimpta allows precise delivery to the lymph nodes, where B-cell depletion in MS is needed, and preclinical studies have shown that it may preserve the B-cells in the spleen[10]. Ofatumumab was originally developed by Genmab and licensed to GlaxoSmithKline. Novartis obtained rights for ofatumumab from GlaxoSmithKline in all indications, including RMS, in December 2015[11].

Kesimpta has been approved for the treatment of relapsing forms of multiple sclerosis in over 90 countries worldwide with more than 100,000 patients treated as of August 2024[6,7,12].

Indication

What is KESIMPTA (ofatumumab) injection?

KESIMPTA is a prescription medicine used to treat adults with relapsing forms of multiple sclerosis (MS) including clinically isolated syndrome (CIS), relapsing-remitting disease, and active secondary progressive disease.

It is not known if KESIMPTA is safe or effective in children.

Important Safety Information

Who should not take KESIMPTA?

Do NOT take KESIMPTA if you:

- have an active hepatitis B virus (HBV) infection.
- have had an allergic reaction to ofatumumab or life-threatening injection-related reaction to KESIMPTA.

What is the most important information I should know about KESIMPTA?

KESIMPTA can cause serious side effects such as:

- Infections. Serious infections, which can be life-threatening or cause death, can happen during treatment with KESIMPTA. If you have an active infection, your health care provider (HCP) should delay your treatment with KESIMPTA until your infection is gone. KESIMPTA taken before or after other medicines that weaken the immune system may increase your risk of getting infections. Tell your HCP right away if you have any infections or get any symptoms including painful and frequent urination, nasal congestion, runny nose, sore throat, fever, chills, cough, or body aches.
- HBV reactivation. If you have ever had HBV infection, it may become active again during or after treatment with KESIMPTA (reactivation). If this happens, it may cause serious liver problems including liver failure or death. Before starting KESIMPTA, your HCP will do a blood test to check for HBV. They will also continue to monitor you during and after treatment with KESIMPTA for HBV. Tell your HCP right away if you get worsening tiredness or yellowing of your skin or the white part of your eyes.
- Progressive Multifocal Leukoencephalopathy (PML). PML may happen with KESIMPTA. PML is a rare, serious brain infection caused by a virus that may get worse over days or weeks. PML can result in death or severe disability. Tell your HCP right away if you have any new or worsening neurologic signs or symptoms. These may include weakness on one side of your body, loss of coordination in arms and legs, vision problems, changes in thinking and memory, which may lead to confusion and personality changes.
- Weakened immune system. KESIMPTA taken before or after other medicines that weaken the immune system could increase your risk of getting infections.

Before you take KESIMPTA, tell your HCP about all your medical conditions, including if you:

- Have or think you have an infection including HBV or PML.
- Have ever taken, currently take, or plan to take medicines that affect your immune system. These medicines could increase your risk of getting an infection.
- Have had a recent vaccination or are scheduled to receive any vaccinations.
    - You should receive any required ‘live’ or ‘live-attenuated’ vaccines at least 4 weeks before you start treatment with KESIMPTA. You should not receive ‘live’ or ‘live-attenuated’ vaccines while you are being treated with KESIMPTA and until your HCP tells you that your immune system is no longer weakened.
    - Whenever possible, you should receive any ‘non-live’ vaccines at least 2 weeks before you start treatment with KESIMPTA.
    - Talk to your HCP about vaccinations for your baby if you used KESIMPTA during your pregnancy.
- Are pregnant, think that you might be pregnant, or plan to become pregnant. It is not known if KESIMPTA will harm your unborn baby. Females who can become pregnant should use birth control (contraception) during treatment with KESIMPTA and for 6 months after your last treatment. Talk with your HCP about what birth control method is right for you during this time.
- Are breastfeeding or plan to breastfeed. It is not known if KESIMPTA passes into your breast milk. Talk to your HCP about the best way to feed your baby if you take KESIMPTA.

Tell your HCP about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

How should I use KESIMPTA?

See the detailed Instructions for Use that comes with KESIMPTA for information about how to prepare and inject a dose of KESIMPTA and how to properly throw away (dispose of) used KESIMPTA Sensoready pens or prefilled syringes.

- Use KESIMPTA exactly as your HCP tells you to use it.

- Your HCP will show you how to prepare and inject KESIMPTA the right way before you use it for the first time.
- Do not inject into areas where the skin is tender, bruised, red, scaly or hard. Avoid areas with moles, scars, or stretch marks.

KESIMPTA may cause serious side effects including:

- Injection-related reactions. Injection-related reactions are a common side effect of KESIMPTA. Injecting KESIMPTA can cause injection-related reactions that can happen within 24 hours (1 day) following the first injections and with later injections. There are two kinds of reactions:
  - at or near the injection site: redness of the skin, swelling, itching, and pain. Talk to your HCP if you have any of these signs and symptoms.
  - that may happen when certain substances are released in your body: fever, headache, pain in the muscles, chills, tiredness, rash, hives, trouble breathing, swelling of the face, eyelids, lips, mouth, tongue and throat, and feeling faint, or chest tightness. Contact your HCP right away if you experience any of these signs and symptoms, especially if they become worse or you have new severe signs of reactions after subsequent injections. It could be a sign of an allergic reaction, which can be serious.
- Low immunoglobulins. KESIMPTA may cause a decrease in some types of antibodies. Your HCP will do blood tests to check your blood immunoglobulin levels.

The most common side effects of KESIMPTA include:

- Upper respiratory tract infection, with symptoms such as sore throat and runny nose, and headache.
- Headache.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

Please see full Prescribing Information including Medication Guide.

Novartis in Neuroscience
At Novartis, we have been tackling neurological conditions for more than 80 years, launching transformative treatments which have made meaningful differences to millions of people worldwide now and in the future. We continue to collaborate on industry-leading treatments in multiple sclerosis, pediatric neurology, neurodegeneration and neuroinflammation and psychiatry.

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regulation generally; global trends toward health care cost containment, including government, payor and general public pricing and reimbursement pressures and requirements for increased pricing transparency; our ability to obtain or maintain proprietary intellectual property protection; the particular prescribing preferences of physicians and patients; general political, economic and business conditions, including the effects of and efforts to mitigate pandemic diseases; safety, quality, data integrity or manufacturing issues; potential or actual data security and data privacy breaches, or disruptions of our information technology systems, and other risks and factors referred to in Novartis AG's current Form 20-F on file with the US Securities and Exchange Commission. Novartis is providing the information in this media update as of this date and does not undertake any obligation to update any forward-looking statements contained in this media update as a result of new information, future events or otherwise.

About Novartis

Novartis is an innovative medicines company. Every day, we work to reimagine medicine to improve and extend people's lives so that patients, healthcare professionals and societies are empowered in the face of serious disease. Our medicines reach more than 250 million people worldwide.

Reimagine medicine with us: Visit us at **https://www.novartis.com** and **https://www.novartis.us** and connect with us on **LinkedIn**, **LinkedIn US**, **Facebook**, **X/Twitter**, **X/Twitter US** and **Instagram**.

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