

MEDIA & INVESTOR RELEASE

Novartis provides update on BELINDA study investigating Kymriah® as second-line treatment in aggressive B-cell non-Hodgkin lymphoma

- *Phase III BELINDA study did not meet primary endpoint of event-free survival for patients with aggressive B-cell non-Hodgkin lymphoma who had primary refractory disease or who relapsed within 12 months of first-line treatment*
- *Novartis CAR-T innovation continues to accelerate development of next-generation platform with improved CAR-T cellular characteristics, high speed, lower cost of goods sold (COGS) and advancement of clinical research into new indications and targets; early clinical data anticipated at upcoming medical meeting*
- *In its approved indications, Kymriah is an efficacious treatment offering potential for durable responses and a favorable safety profile based on clinical and real-world experience in more than 5,300 patients to date*
- *Kymriah demonstrated strong response rates and a remarkable safety profile in relapsed or refractory follicular lymphoma, with regulatory filings on track for second half of 2021*

Basel, August 24, 2021 — Novartis today announced an update on the Phase III BELINDA study investigating Kymriah® (tisagenlecleucel) in aggressive B-cell non-Hodgkin lymphoma (NHL) after relapse or lack of response to first-line treatment. The BELINDA study did not meet its primary endpoint of event-free survival compared to treatment with the standard-of-care (SOC). SOC was salvage chemotherapy followed in responding patients by high-dose chemotherapy and stem cell transplant. The safety profile was consistent with the established safety profile of Kymriah. Novartis will complete a full evaluation of the BELINDA data and work with investigators on the future presentation of the results.

“Patients with aggressive B-cell non-Hodgkin lymphoma who are refractory to first-line treatment are vulnerable and we are disappointed that the BELINDA study did not meet its primary endpoint in this setting,” said Jeff Legos, Executive Vice President, Global Head of Oncology & Hematology Development. “Kymriah continues to demonstrate durable responses for patients with certain advanced blood cancers in the third-line setting. We remain committed to accelerating development of Kymriah and our next-generation CAR-Ts and anticipate sharing early clinical results for these therapies at an upcoming medical meeting.”

“We were hopeful the BELINDA study would show that Kymriah could improve outcomes and the overall treatment experience for these patients in need. The study investigators will work

together with Novartis in the coming weeks and months to understand the factors that contributed to this outcome,” said Michael R. Bishop, MD, Professor of Medicine and Director of the Hematopoietic Stem Cell Transplantation Program, University of Chicago Medicine and BELINDA Steering Committee Chair.

Novartis is grateful to the patients, families and investigators who participated in this trial for their determination to contribute to advancing the treatment of this aggressive blood cancer.

About the BELINDA study

The BELINDA study is a pivotal Phase III, randomized, open label, multicenter trial comparing two treatment strategies and assessing the efficacy, safety, and tolerability of Kymriah (tisagenlecleucel) compared to standard-of-care (SOC). Patients in the trial had aggressive B-cell non-Hodgkin lymphoma with primary refractory disease, or which relapsed within 12 months of first-line treatment. SOC was salvage chemotherapy followed in responding patients by high-dose chemotherapy and hematopoietic stem cell transplant (HSCT).

This international trial enrolled patients from over 73 sites in 18 countries worldwide. The primary endpoint was event-free survival (EFS) defined as the time from the date of randomization to the date of the first documented disease progression or stable disease at or after the week 12 assessment, per blinded independent review committee (BIRC), or death at any time. Secondary endpoints include EFS as assessed by local investigator, overall survival, overall response rate, duration of response, time to response and safety. Patients in the control arm, receiving SOC, had the opportunity to cross over to receive Kymriah upon progression determined by BIRC.

About Novartis Commitment to Oncology Cell & Gene

Novartis has a mission to reimagine medicine by bringing curative cell & gene therapies to patients worldwide. Novartis was the first pharmaceutical company to significantly invest in pioneering CAR-T research and initiate global CAR-T trials. Kymriah, the first approved CAR-T cell therapy, developed in collaboration with the Perelman School of Medicine at the University of Pennsylvania, is the foundation of the Novartis commitment to CAR-T cell therapy.

Kymriah is currently approved for the treatment of relapsed or refractory (r/r) pediatric and young adult (up to and including 25 years of age) acute lymphoblastic leukemia (ALL), and r/r adult diffuse large B-cell lymphoma (DLBCL). Kymriah is available in 30 countries and 330 certified treatment centers, with the ambition for further expansion.

The Novartis global CAR-T manufacturing footprint spans seven facilities, across four continents and includes both Novartis-owned and contract manufacturing sites. This comprehensive, integrated footprint strengthens the flexibility, resilience and sustainability of the Novartis manufacturing and supply chain.

US FDA approved indication for Kymriah

Kymriah® (tisagenlecleucel) is a CD19-directed genetically modified autologous T cell immunotherapy, which is indicated for:

- The treatment of patients up to 25 years of age with B-cell precursor acute lymphoblastic leukemia (ALL) that is refractory or in second or later relapse.
- The treatment of adult patients with relapsed or refractory (r/r) large B-cell lymphoma after two or more lines of systemic therapy including diffuse large B-cell lymphoma (DLBCL) not otherwise specified, high grade B-cell lymphoma and DLBCL arising from follicular lymphoma (FL). **Limitations of Use:** Kymriah is not indicated for treatment of patients with primary central nervous system lymphoma.

Kymriah® (tisagenlecleucel) US Important Safety information

Kymriah may cause side effects that are severe or life-threatening, such as Cytokine Release Syndrome (CRS) or Neurological Toxicities. Patients with CRS may experience symptoms

including difficulty breathing, fever (100.4°F/38°C or higher), chills/shaking chills, severe nausea, vomiting and diarrhea, severe muscle or joint pain, very low blood pressure, or dizziness/lightheadedness. Patients may be admitted to the hospital for CRS and treated with other medications.

Patients with neurological toxicities may experience symptoms such as altered or decreased consciousness, headaches, delirium, confusion, agitation, anxiety, seizures, difficulty speaking and understanding, or loss of balance. Patients should be advised to call their healthcare provider or get emergency help right away if they experience any of these signs and symptoms of CRS or neurological toxicities.

Because of the risk of CRS and neurological toxicities, Kymriah is only available through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS) called Kymriah REMS.

Serious allergic reactions, including anaphylaxis, may occur after Kymriah infusion. Kymriah can increase the risk of life-threatening infections that may lead to death. Patients should be advised to tell their healthcare provider right away if they develop fever, chills, or any signs or symptoms of an infection.

Patients may experience prolonged low blood cell counts (cytopenia), where one or more types of blood cells (red blood cells, white blood cells, or platelets) are decreased. The patient's healthcare provider will do blood tests to check all of their blood cell counts after treatment with Kymriah. Patients should be advised to tell their healthcare provider right away if they get a fever, are feeling tired, or have bruising or bleeding.

Patients may experience hypogammaglobulinemia, a condition in which the level of immunoglobulins (antibodies) in the blood is low and the risk of infection is increased. It is expected that patients may develop hypogammaglobulinemia with Kymriah and may need to receive immunoglobulin replacement for an indefinite amount of time following treatment with Kymriah. Patients should tell their healthcare provider about their treatment with Kymriah before receiving a live virus vaccine.

After treatment with Kymriah, patients will be monitored lifelong by their healthcare provider, as they may develop secondary cancers or recurrence of their cancer.

Patients should not drive, operate heavy machinery, or do other dangerous activities for eight weeks after receiving Kymriah because the treatment can cause temporary memory and coordination problems, including sleepiness, confusion, weakness, dizziness, and seizures.

Some of the most common side effects of Kymriah are difficulty breathing, fever (100.4°F/38°C or higher), chills/shaking chills, confusion, severe nausea, vomiting and diarrhea, severe muscle or joint pain, very low blood pressure, dizziness/lightheadedness, and headache. However, these are not all of the possible side effects of Kymriah. Patients should talk to their healthcare provider for medical advice about side effects.

Prior to a female patient starting treatment with Kymriah, their healthcare provider may do a pregnancy test. There is no information available for Kymriah use in pregnant or breast-feeding women. Therefore, Kymriah is not recommended for women who are pregnant or breast feeding. Patients should talk to their healthcare provider about birth control and pregnancy.

Patients should tell their healthcare provider about all the medicines they take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

After receiving Kymriah, patients should be advised that some commercial HIV tests may cause a false-positive test result. Patients should also be advised not to donate blood, organs, or tissues and cells for transplantation after receiving Kymriah.

Please see the full Prescribing Information for Kymriah, including Boxed WARNING, and Medication Guide at www.Kymriah.com

Disclaimer

This press release contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995. Forward-looking statements can generally be identified by words such as “potential,” “can,” “will,” “plan,” “may,” “could,” “would,” “expect,” “anticipate,” “seek,” “look forward,” “believe,” “committed,” “investigational,” “pipeline,” “launch,” or similar terms, or by express or implied discussions regarding potential marketing approvals, new indications or labeling for the investigational or approved products described in this press release, or regarding potential future revenues from such products. You should not place undue reliance on these statements. Such forward-looking statements are based on our current beliefs and expectations regarding future events, and are subject to significant known and unknown risks and uncertainties. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those set forth in the forward-looking statements. There can be no guarantee that the investigational or approved products described in this press release will be submitted or approved for sale or for any additional indications or labeling in any market, or at any particular time. Nor can there be any guarantee that such products will be commercially successful in the future. In particular, our expectations regarding such products could be affected by, among other things, the uncertainties inherent in research and development, including clinical trial results and additional analysis of existing clinical data; regulatory actions or delays or government 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 such as COVID-19; 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 press release as of this date and does not undertake any obligation to update any forward-looking statements contained in this press release as a result of new information, future events or otherwise.

About Novartis

Novartis is reimagining medicine to improve and extend people’s lives. As a leading global medicines company, we use innovative science and digital technologies to create transformative treatments in areas of great medical need. In our quest to find new medicines, we consistently rank among the world’s top companies investing in research and development. Novartis products reach nearly 800 million people globally and we are finding innovative ways to expand access to our latest treatments. About 110,000 people of more than 140 nationalities work at Novartis around the world. Find out more at <https://www.novartis.com>.

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