Kite’s Yescarta™ (Axicabtagene Ciloleucel) Becomes First CAR T Therapy Approved by the FDA for the Treatment of Adult Patients With Relapsed or Refractory Large B-Cell Lymphoma After Two or More Lines of Systemic Therapy

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-- Manufacturing Success Rate of 99 Percent in ZUMA-1 Pivotal Trial with a Median 17 Day Turnaround Time --

FOSTER CITY, Calif. & SANTA MONICA, Calif.--(BUSINESS WIRE)--Oct. 18, 2017-- Kite, a Gilead Company, (Nasdaq: GILD) today announced that the U.S. Food and Drug Administration (FDA) has granted regular approval to Yescarta™ (axicabtagene ciloleucel), the first chimeric antigen receptor T cell (CAR T) therapy for the treatment of adult patients with relapsed or refractory large B-cell lymphoma after two or more lines of systemic therapy, including diffuse large B-cell lymphoma (DLBCL) not otherwise specified, primary mediastinal large B-cell lymphoma (PMBCL), high-grade B-cell lymphoma, and DLBCL arising from follicular lymphoma (transformed follicular lymphoma, or TFL). Yescarta is not indicated for the treatment of patients with primary central nervous system lymphoma.


CAR T therapy is a breakthrough in hematologic cancer treatment in which a patient’s own T cells are engineered to seek and destroy cancer cells. CAR T therapy is manufactured specifically for each individual patient.

“The FDA approval of Yescarta is a landmark for patients with relapsed or refractory large B-cell lymphoma. This approval would not have been possible without the courageous commitment of patients and clinicians, as well as the ongoing dedication of Kite’s employees,” said Arie Belldegrun, MD, FACS, Founder of Kite. “We must also recognize the FDA for their ability to embrace and support transformational new technologies that treat life-threatening illnesses. We believe this is only the beginning for CAR T therapies.”

“Today is an important day for patients with relapsed or refractory large B-cell lymphoma who have run out of options and have been waiting for new treatments that may help them in their fight against cancer,” said John Milligan, PhD, President and Chief Executive Officer of Gilead Sciences. “With the combined innovation, talent and drive of the Kite and Gilead teams, we will rapidly advance cell therapy research and aim to bring new options to patients with many other types of cancer.”

Yescarta has a Boxed Warning in its product label regarding the risks of cytokine release syndrome (CRS) and neurologic toxicities. A Risk Evaluation and Mitigation Strategy (REMS) has been approved by the FDA for Yescarta. The REMS program will inform and educate healthcare professionals about the risks associated with Yescarta therapy. Training and certification on the REMS program will be an integral part of the final authorization for centers offering Yescarta.

Additional information about the REMS program can be found at www.yescartarems.com. Please see below for Important Safety Information.

Diffuse large B-cell lymphoma (DLBCL) is the most common aggressive non-Hodgkin lymphoma (NHL), accounting for three out of every five cases. In the United States each year, there are approximately 7,500 patients with refractory DLBCL who are eligible for CAR T therapy. Historically, when treated with the current standard of care, patients with refractory large B-cell lymphoma had a median overall survival of approximately six months, with only seven percent attaining a complete response. Currently, patients with large B-cell lymphoma in second or later lines of therapy have poor outcomes and greater unmet need, since nearly half of them either do not respond or relapse shortly after transplant.

“With CAR T therapy, we are reengineering a patient’s own immune system to detect and kill cancer cells, and the results have been impressive,” said Frederick L. Locke, MD, ZUMA-1 Co-Lead Investigator and Vice Chair of the Department of Blood and Marrow Transplant and Cellular Immunotherapy at Moffitt Cancer Center in Tampa, Florida. “Many of the patients that received CAR T therapy had already relapsed several times with traditional treatments such as
chemotherapy or hematopoietic stem cell transplant. Now, thanks to this new therapy many patients are in remission for months.”

“This therapy is a new option for patients with relapsed or refractory large B-cell lymphoma who have run out of treatment options and face a dire prognosis,” said Louis J. DeGennaro, PhD, President and Chief Executive Officer of The Leukemia & Lymphoma Society (LLS). “Early on, LLS recognized the potential of CAR T therapy and we are proud to be part of making this historic approval possible.”

“Engineered cell therapies like Yescarta represent the potential for a changing treatment paradigm for cancer patients,” said David Chang, MD, PhD, Worldwide Head of Research and Development and Chief Medical Officer at Kite. “Together, Gilead and Kite will accelerate studies of CAR T therapy in multiple blood cancers and advance other cell therapy approaches for solid tumors, with the goal of helping patients with diverse cancers benefit from this new era of personalized cancer therapy.”

Yescarta will be manufactured in Kite’s state-of-the-art commercial manufacturing facility in El Segundo, California. In the ZUMA-1 pivotal trial, Kite demonstrated a 99 percent manufacturing success rate with a median manufacturing turnaround time of 17 days, which is important to patients given the potential for rapid disease progression in this population.

In 2017, Kite established a multi-disciplinary field team focused on providing education and logistics training for centers. Upon Yescarta’s approval, this team will provide final site certification to 16 centers, enabling them to make Yescarta available to appropriate patients. This support is designed to assure the safe and effective use of Yescarta for patients and physicians. Kite is actively working to train more than 30 additional centers with an eventual target of 70 to 90 centers across the United States. The latest information on Yescarta authorized centers is available at www.yescarta.com.

In support of Yescarta therapy, Kite has developed Kite Konnect™, a program enabled by an integrated technology platform that focuses on providing information and assistance throughout the Yescarta therapy process, including courier tracking for shipments and manufacturing status updates. Kite Konnect also will provide information related to insurance benefits and third-party resources available for travel support. Healthcare providers and patients can reach Kite Konnect at www.KiteKonnect.com or 1-844-454-KITE (1-844-454-5483).

The list price of Yescarta in the United States is $373,000.

Yescarta has been granted Priority Medicines (PRIME) regulatory support for DLBCL in the European Union. A Marketing Authorization Application (MAA) for axicabtagene ciloleucel is currently under review with the European Medicines Agency (EMA) and potential approval is expected in the first half of 2018.

**Yescarta (axicabtagene ciloleucel) Pivotal Trial Results**

The approval of Yescarta is supported by data from the ZUMA-1 pivotal trial. In this study, 72 percent of patients treated with a single infusion of Yescarta (n=101) responded to therapy (overall response rate) including 51 percent of patients who had no detectable cancer remaining (complete remission; 95% CI: 41, 62). At a median follow-up of 7.9 months, patients who had achieved a complete remission had not reached the estimated median duration of response (95% CI: 8.1 months, not estimable [NE]).

In the study, 13 percent of patients experienced grade 3 or higher cytokine release syndrome (CRS) and 31 percent experienced neurologic toxicities. The most common (≥ 10%) Grade 3 or higher reactions include febrile neutropenia, fever, CRS, encephalopathy, infections-pathogen unspecified, hypotension, hypoxia and lung infections. Serious adverse reactions occurred in 52% of patients and included CRS, neurologic toxicity, prolonged cytopenias (including neutropenia, thrombocytopenia and anemia), and serious infections. Fatal cases of CRS and neurologic toxicity occurred. FDA approved Yescarta with a Risk Evaluation and Mitigation Strategy.
**Yescarta Indication**

Yescarta is a CD19-directed genetically modified autologous T cell immunotherapy indicated for the treatment of adult patients with relapsed or refractory large B-cell lymphoma after two or more lines of systemic therapy, including diffuse large B-cell lymphoma (DLBCL) not otherwise specified, primary mediastinal large B-cell lymphoma, high-grade B-cell lymphoma, and DLBCL arising from follicular lymphoma.

Yescarta is not indicated for the treatment of patients with primary central nervous system lymphoma.

**IMPORTANT SAFETY INFORMATION**

**BOXED WARNING: CYTOKINE RELEASE SYNDROME and NEUROLOGIC TOXICITIES**

- **Cytokine Release Syndrome (CRS)**, including fatal or life-threatening reactions, occurred in patients receiving Yescarta. Do not administer Yescarta to patients with active infection or inflammatory disorders. Treat severe or life-threatening CRS with tocilizumab or tocilizumab and corticosteroids.
- **Neurologic toxicities**, including fatal or life-threatening reactions, occurred in patients receiving Yescarta, including concurrently with CRS or after CRS resolution. Monitor for neurologic toxicities after treatment with Yescarta. Provide supportive care and/or corticosteroids as needed.
- Yescarta is available only through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS) called the Yescarta REMS.

**Cytokine Release Syndrome (CRS)**

CRS, including fatal or life-threatening reactions, occurred following treatment with Yescarta. In Study 1, CRS occurred in 94% (101/108) of patients receiving Yescarta, including ≥ Grade 3 (Lee grading system) CRS in 13% (14/108) of patients. Among patients who died after receiving Yescarta, four had ongoing CRS events at the time of death. The median time to onset was 2 days (range: 1 to 12 days) and the median duration of CRS was 7 days (range: 2 to 58 days). Key manifestations of CRS include fever (78%), hypotension (41%), tachycardia (28%), hypoxia (22%), and chills (20%). Serious events that may be associated with CRS include cardiac arrhythmias (including atrial fibrillation and ventricular tachycardia), cardiac arrest, cardiac failure, renal insufficiency, capillary leak syndrome, hypotension, hypoxia, and hemophagocytic lymphohistiocytosis/macrophage activation syndrome (HLH/MAS).

Ensure that 2 doses of tocilizumab are available prior to infusion of Yescarta. Monitor patients at least daily for 7 days at the certified healthcare facility following infusion for signs or symptoms of CRS. Monitor patients for signs or symptoms of CRS for 4 weeks after infusion. Counsel patients to seek immediate medical attention should signs or symptoms of CRS occur at any time. At the first sign of CRS, institute treatment with supportive care, tocilizumab or tocilizumab and corticosteroids as indicated.

**Neurologic Toxicities**

Neurologic toxicities, that were fatal or life-threatening, occurred following treatment with Yescarta. Neurologic toxicities occurred in 87% of patients. Ninety-eight percent of all neurologic toxicities occurred within the first 8 weeks of Yescarta infusion, with a median time to onset of 4 days (range: 1 to 43 days). The median duration of neurologic toxicities was 17 days. Grade 3 or higher neurologic toxicities occurred in 31% of patients.

The most common neurologic toxicities included encephalopathy (57%), headache (44%), tremor (31%), dizziness (21%), aphasia (18%), delirium (17%), insomnia (9%) and anxiety (9%). Prolonged encephalopathy lasting up to 173 days was noted. Serious events including leukoencephalopathy and seizures occurred with Yescarta. Fatal and serious cases of cerebral edema have occurred in patients treated with Yescarta.

Monitor patients at least daily for 7 days at the certified healthcare facility following infusion for signs and symptoms of neurologic toxicities. Monitor patients for signs or symptoms of neurologic toxicities for 4 weeks after infusion and treat
Because of the risk of CRS and neurologic toxicities, Yescarta is available only through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS) called the Yescarta REMS. The required components of the Yescarta REMS are:

- Healthcare facilities that dispense and administer Yescarta must be enrolled and comply with the REMS requirements. Certified healthcare facilities must have on-site, immediate access to tocilizumab, and ensure that a minimum of two doses of tocilizumab are available for each patient for infusion within 2 hours after Yescarta infusion, if needed for treatment of CRS.
- Certified healthcare facilities must ensure that healthcare providers who prescribe, dispense or administer Yescarta are trained about the management of CRS and neurologic toxicities.

Further information is available at www.YescartaREMS.com or 1-844-454-KITE (5483).

Hypersensitivity Reactions

Allergic reactions may occur with the infusion of Yescarta. Serious hypersensitivity reactions including anaphylaxis, may be due to dimethyl sulfoxide (DMSO) or residual gentamicin in Yescarta.

Serious Infections

Severe or life-threatening infections occurred in patients after Yescarta infusion. In Study 1, infections (all grades) occurred in 38% of patients. Grade 3 or higher infections occurred in 23% of patients. Grade 3 or higher infections with an unspecified pathogen occurred in 16% of patients, bacterial infections in 9%, and viral infections in 4%. Yescarta should not be administered to patients with clinically significant active systemic infections. Monitor patients for signs and symptoms of infection before and after Yescarta infusion and treat appropriately. Administer prophylactic anti-microbials according to local guidelines.

Febrile neutropenia was observed in 36% of patients after Yescarta infusion and may be concurrent with CRS. In the event of febrile neutropenia, evaluate for infection and manage with broad spectrum antibiotics, fluids and other supportive care as medically indicated.

Viral Reactivation

Hepatitis B virus (HBV) reactivation, in some cases resulting in fulminant hepatitis, hepatic failure and death, can occur in patients treated with drugs directed against B cells. Perform screening for HBV, HCV, and HIV in accordance with clinical guidelines before collection of cells for manufacturing.

Prolonged Cytopenias

Patients may exhibit cytopenias for several weeks following lymphodepleting chemotherapy and Yescarta infusion. In Study 1, Grade 3 or higher cytopenias not resolved by Day 30 following Yescarta infusion occurred in (28%) of patients and included thrombocytopenia (18%), neutropenia (15%), and anemia (3%). Monitor blood counts after Yescarta infusion.

Hypogammaglobulinemia

B-cell aplasia and hypogammaglobulinemia can occur in patients receiving treatment with Yescarta. In Study 1, hypogammaglobulinemia occurred in 15% of patients. Monitor immunoglobulin levels after treatment with Yescarta and manage using infection precautions, antibiotic prophylaxis and immunoglobulin replacement.
The safety of immunization with live viral vaccines during or following Yescarta treatment has not been studied. Vaccination with live virus vaccines is not recommended for at least 6 weeks prior to the start of lymphodepleting chemotherapy, during Yescarta treatment, and until immune recovery following treatment with Yescarta.

Secondary Malignancies

Patients treated with YESCARTA may develop secondary malignancies. Monitor life-long for secondary malignancies. In the event that a secondary malignancy occurs, contact Kite at 1-844-454-KITE (5483) to obtain instructions on patient samples to collect for testing.

Effects on Ability to Drive and Use Machines

Due to the potential for neurologic events, including altered mental status or seizures, patients receiving Yescarta are at risk for altered or decreased consciousness or coordination in the 8 weeks following Yescarta infusion. Advise patients to refrain from driving and engaging in hazardous occupations or activities, such as operating heavy or potentially dangerous machinery, during this initial period.

Adverse Reactions

The most common adverse reactions (incidence ≥ 20%) include CRS, fever, hypotension, encephalopathy, tachycardia, fatigue, headache, decreased appetite, chills, diarrhea, febrile neutropenia, infections-pathogen unspecified, nausea, hypoxia, tremor, cough, vomiting, dizziness, constipation, and cardiac arrhythmia. Serious adverse reactions occurred in 52% of patients. The most common serious adverse reactions (> 2%) include encephalopathy, fever, lung infection, febrile neutropenia, cardiac arrhythmia, cardiac failure, urinary tract infection, renal insufficiency, aphasia, cardiac arrest, Clostridium difficile infection, delirium, hypotension, and hypoxia.

The most common (≥ 10%) Grade 3 or higher reactions include febrile neutropenia, fever, CRS, encephalopathy, infections-pathogen unspecified, hypotension, hypoxia and lung infections.

About Kite

Kite, a Gilead Company, is a biopharmaceutical company based in Santa Monica, California. Kite is engaged in the development of innovative cancer immunotherapies. The company is focused on chimeric antigen receptor and T cell receptor engineered cell therapies. For more information on Kite, please visit www.kitepharma.com.

About Gilead Sciences

Gilead Sciences is a biopharmaceutical company that discovers, develops and commercializes innovative therapeutics in areas of unmet medical need. The company’s mission is to advance the care of patients suffering from life-threatening diseases. Gilead has operations in more than 30 countries worldwide, with headquarters in Foster City, California.

Forward-Looking Statement

This press release includes forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995 that are subject to risks, uncertainties and other factors. All statements other than statements of historical fact are statements that could be deemed forward-looking statements, including all statements regarding the intent, belief or current expectation of the companies’ and members of their senior management team. Forward-looking statements include, without limitation, the risk that physicians may not see the benefits of prescribing Yescarta for the diseases for which it is approved; the ability of Kite to continue to manufacture Yescarta at the success rates experienced during clinical trials; the possibility of unfavorable results from additional clinical trials involving Yescarta; and the risk that other regulatory agencies may not approve Yescarta in the currently anticipated timelines or at all, and that any marketing approvals may have significant limitations on its use. Investors are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties and are cautioned not to place undue reliance on these forward-
looking statements. Actual results may differ materially from those currently anticipated due to a number of risks and uncertainties. Risks and uncertainties that could cause the actual results to differ from expectations contemplated by forward-looking statements include risks and uncertainties detailed from time to time in the companies’ periodic reports filed with the Securities and Exchange Commission, including current reports on Form 8-K, quarterly reports on Form 10-Q and annual reports on Form 10-K. All forward-looking statements are based on information currently available to Gilead and Kite, and Gilead and Kite assume no obligation and disclaim any intent to update any such forward-looking statements.


For more information on Gilead Sciences, please visit the company’s website at www.gilead.com, follow Gilead on Twitter (@GileadSciences) or call Gilead Public Affairs at 1-800-GILEAD-5 or 1-650-574-3000.


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