

Novartis Reports Omalizumab Significantly Improved Chronic Idiopathic Urticaria Symptoms in Patients Who Failed Standard Therapy

Feb 24, 2013

- - Phase III study published in NEJM today and to be presented tomorrow met primary endpoint in moderate-to-severe chronic idiopathic urticaria (CIU)
- - CIU can be a serious, debilitating form of hives; >50% of patients don't achieve symptom relief with approved antihistamine doses
- - Omalizumab is a biologic therapy that targets the IgE antibody; further Phase III studies in CIU and regulatory submissions on track for 2013

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EAST HANOVER, N.J., Feb. 24, 2013 /PRNewswire/ -- Late-breaking results from ASTERIA II, a Phase III placebo-controlled study, showed positive results in patients with moderate to severe chronic idiopathic urticaria (CIU), referred to as chronic spontaneous urticaria (CSU) outside the United States, who remained symptomatic despite treatment with approved antihistamine doses. The data were published today in the New England Journal of Medicine and will be presented tomorrow at the American Academy of Allergy, Asthma & Immunology (AAAAI) annual meeting in San Antonio, Texas. Omalizumab is not indicated for CIU.

The primary endpoint was measured using a 21-point scale known as a weekly Itch Severity Score (ISS). The study met its primary endpoint, showing that omalizumab given at doses of 150 mg and 300 mg every four weeks led to significant improvement from baseline at Week 12 in the mean weekly ISS from baseline (approximately 14 in all treatment groups) by 8.1 ($p=0.001$) and 9.8 ($p<0.001$), respectively, compared to a 5.1 improvement in patients on placebo. The omalizumab 75 mg dose group did not demonstrate statistical significance compared to placebo for the primary endpoint. All eight pre-specified secondary endpoints in the ASTERIA II trial were met for the 150 mg and 300 mg doses, except for the 150 mg dose that did not show a significant difference from placebo in the proportion of angioedema-free days from Week 4 to Week 12 of therapy.

CIU is a distressing skin condition characterized by red, swollen, itchy and sometimes painful hives on the skin, spontaneously presenting and reoccurring for more than six weeks. At any given time, the prevalence of CIU is 0.5% to 1% worldwide. While antihistamines are used first to treat CIU, more than 50% of patients are unable to achieve symptom relief with approved doses.

"These results indicate that omalizumab could potentially be an important addition in the treatment of chronic idiopathic urticaria, a disease that can have a significant impact on patients and can be challenging to manage," said Tim Wright, Global Head of Development, Novartis Pharmaceuticals. "We are committed to helping patients with this disease and look forward to receiving further results from ongoing longer-term clinical trials."

ASTERIA II is the first Phase III data to be presented from a clinical trial program in CIU, which also includes two additional studies investigating the efficacy and safety profile of omalizumab over 24 weeks treatment duration. Novartis regulatory submissions are on track for 2013.

"These results are encouraging news for appropriate patients whose CIU is unresponsive to antihistamines," said study co-lead investigator, Thomas Casale, MD, Chief of Allergy & Immunology at Creighton University Medical Center and Professor of Medicine and Medical Microbiology at Creighton University, Omaha, NE. "New and effective therapeutic strategies for CIU are necessary as treatment options are limited for these patients."

Study Details

ASTERIA II was a global, multi-center, randomized, double-blind study that evaluated the efficacy and safety profile of omalizumab compared to placebo and involved 323 patients aged between 12 and 75 with a diagnosis of moderate to severe CIU for at least six months. Patients were required to have the presence of itch and hives for at least eight consecutive weeks at any time prior to enrollment despite use of approved doses of H1 antihistamine treatment. Patients were randomized to omalizumab 75 mg, 150 mg or 300 mg or placebo, given subcutaneously every four weeks, for a total of three doses within a 12-week treatment period, with a 16-week follow-up period. Patients continued to receive stable doses of their pre-randomization H1 antihistamine. For the primary endpoint, the omalizumab 75 mg dose group did not demonstrate statistical significance compared to placebo. However, omalizumab 150 mg and 300 mg dose groups met the pre-specified primary endpoint and all eight pre-specified secondary endpoints in the ASTERIA II trial, except for the 150 mg dose that did not show a significant difference from placebo in the proportion of angioedema-free days from Week 4 to Week 12 of therapy. Patient response, as measured by the median time to Minimally Important Difference (MID) in itch severity score, a secondary endpoint, occurred at Week 1 (300 mg dose) and Week 2 (150 mg dose), compared to Week 4 in the placebo group.

The incidence and severity of adverse events (AEs) was similar across treatment groups. The most frequently reported treatment-emergent adverse events in patients taking omalizumab ($\geq 10\%$ in any omalizumab treatment arm) in the study (including treatment period and follow-up period) were nasopharyngitis (nasal and throat infection or common cold), idiopathic urticaria (hives and itching, trigger unknown) and headache. Five (6.3%) patients experienced serious adverse events (SAEs) in the omalizumab 300 mg dose group, compared to two (2.5%) in the placebo group. In the 150 mg and 75 mg dose groups, one patient experienced SAEs in each group (1.1% and 1.3%, respectively). No deaths were reported during this study.

About Omalizumab

Omalizumab is not indicated for CIU.

Omalizumab is a biologic therapy unique in targeting immunoglobulin E (IgE). Research is ongoing to understand the mechanism of action of omalizumab in CIU and to investigate its potential impact on the drivers of CIU. Omalizumab is approved for the treatment of moderate to severe allergic asthma under the brand-name Xolair[®] in more than 90 countries, including the US since 2003 and the EU since 2005. In the US, Xolair is indicated for appropriate people who are 12 years of age and older who have moderate to severe persistent allergic asthma caused by year-round allergens in the air and are uncontrolled on inhaled corticosteroids. Xolair helps reduce the number of asthma attacks in people with allergic asthma who still have asthma symptoms even though they are taking inhaled steroids. Xolair should not be used to treat other allergic conditions. Xolair is not a rescue medicine and should not be used to treat sudden asthma attacks. Xolair should not be used in children under 12 years of age.

Omalizumab is being jointly developed by Novartis and Genentech. In the US, Xolair[®] (omalizumab) for subcutaneous use in appropriate allergic asthma patients is co-promoted by Novartis Pharmaceuticals

Corporation and Genentech.

About Xolair® (omalizumab) for subcutaneous use

Important Safety Information: Appropriate Moderate-Severe Allergic Asthma Patients

Xolair should always be injected in a doctor's office. Patients should read the Medication Guide before starting Xolair treatment and before each and every treatment.

A severe allergic reaction called anaphylaxis has happened in some patients after they received Xolair. Anaphylaxis is a life-threatening condition and can lead to death. Patients must seek emergency medical treatment right away if symptoms occur.

Signs and symptoms of anaphylaxis include:

- wheezing, shortness of breath, cough, chest tightness, or trouble breathing
- low blood pressure, dizziness, fainting, rapid or weak heartbeat, anxiety, or feeling of "impending doom"
- flushing, itching, hives, or feeling warm
- swelling of the throat or tongue, throat tightness, hoarse voice, or trouble swallowing

Anaphylaxis from Xolair can happen:

- right after receiving a Xolair injection or hours later
- after any Xolair injection. Anaphylaxis has occurred after the first Xolair injection or after many Xolair injections.

A patient's healthcare provider should watch the patient for some time in the office for signs or symptoms of anaphylaxis after injecting Xolair. If patients have signs or symptoms of anaphylaxis, they must tell their healthcare provider right away.

Patients must not receive Xolair if they have ever had an allergic reaction to a Xolair injection. Patients should not use Xolair if they are allergic to any of its ingredients.

In clinical studies, a variety of cancer types, including breast, skin, prostate, and parotid (a type of salivary gland), were reported in more patients who received Xolair than in patients who did not receive Xolair.

Xolair is not a rescue medicine and should not be used to treat sudden asthma attacks.

Xolair is not a substitute for the medicines patients are already taking. Patients must not change or stop taking any of their other asthma medicines unless their doctor tells them to do so.

Some patients on Xolair may have an abnormal increase in eosinophils (a type of white blood cell) in the blood or tissues, sometimes causing an inflammation of blood vessels which can lead to rash, worsening of respiratory symptoms, heart trouble, and/or nerve pain and weakness.

Joint inflammation or pain, rash, fever, and swollen lymph nodes have been seen in some patients taking Xolair after the first or subsequent injections. Patients should talk to their doctor if they have experienced any of these signs and symptoms.

In allergic asthma studies, the most commonly seen side effects occurring more frequently in patients receiving Xolair than in patients who received placebo (an injection with no active medicine) were joint pain, pain (general), leg pain, tiredness (fatigue), dizziness, fracture, arm pain, itching, inflammation of the skin, and earache.

In allergic asthma studies, the most common side effects in patients, who either needed to stop Xolair or needed medical attention, were injection site reaction, viral infections, upper respiratory tract infection, sinusitis, headache, and sore throat. These side effects were seen at similar rates in Xolair-treated patients as in patients that did not receive Xolair.

There are other possible side effects with Xolair. Patients should talk to their doctor for more information and if they have any questions about their treatment.

Xolair has not been studied in pregnant women. Pregnant women exposed to Xolair are encouraged to enroll in the Xolair Pregnancy Exposure Registry. Patients can get more information by calling 1-866-4XOLAIR (1-866-496-5247) or by speaking with their doctor.

For the full Prescribing Information, including Boxed WARNINGS and Medication Guide for additional important safety information please log onto <http://www.pharma.us.novartis.com/cs/www.pharma.us.novartis.com/product/pi/pdf/Xolair.pdf> or contact Christine Cascio at 862-778-8026.

Disclaimer

The foregoing release contains forward-looking statements that can be identified by terminology such as "to be," "will be," "to investigate," "potentially," "could," "committed," "look forward to," "on track," "potential," or similar expressions, or by express or implied discussions regarding potential new indications or labeling for omalizumab or regarding potential future revenues from omalizumab. You should not place undue reliance on these statements. Such forward-looking statements reflect the current views of management regarding future events, and involve known and unknown risks, uncertainties and other factors that may cause actual results with omalizumab to be materially different from any future results, performance or achievements expressed or implied by such statements. There can be no guarantee that omalizumab will be approved for any additional indications or labeling in any market. Nor can there be any guarantee that omalizumab will achieve any particular levels of revenue in the future. In particular, management's expectations regarding omalizumab could be affected by, among other things, unexpected clinical trial results, including unexpected new clinical data and unexpected additional analysis of existing clinical data; unexpected regulatory actions or delays or government regulation generally; the company's ability to obtain or maintain patent or other proprietary intellectual property protection; government, industry and general public pricing pressures; competition in general; unexpected manufacturing issues; the impact that the foregoing factors could have on the values attributed to the Novartis Group's assets and liabilities as recorded in the Group's consolidated balance sheet, and other risks and factors referred to in Novartis AG's current Form 20-F on file with the US Securities and Exchange Commission. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those anticipated, believed, estimated or expected. 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 Pharmaceuticals Corporation researches, develops, manufactures and markets innovative prescription drugs used to treat a number of diseases and conditions, including cardiovascular, dermatological, central nervous system, bone disease, cancer, organ transplantation, psychiatry, infectious disease and respiratory. The company's mission is to improve people's lives by pioneering novel healthcare solutions.

Located in East Hanover, New Jersey, Novartis Pharmaceuticals Corporation is an affiliate of Novartis AG, which provides innovative healthcare solutions that address the evolving needs of patients and societies. Headquartered in Basel, Switzerland, Novartis offers a diversified portfolio to best meet these needs:

innovative medicines, eye care, cost-saving generic pharmaceuticals, preventive vaccines and diagnostic tools, over-the-counter and animal health products. Novartis is the only global company with leading positions in these areas. In 2012, the Group achieved net sales of USD 56.7 billion, while R&D throughout the Group amounted to approximately USD 9.3 billion (USD 9.1 billion excluding impairment and amortization charges). Novartis Group companies employ approximately 128,000 full-time-equivalent associates and operate in more than 140 countries around the world. For more information, please visit <http://www.novartis.com>.

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