TAKEDA HIGHLIGHTS FAVORABLE SAFETY PROFILE OF ENTYVIO® (VEDOLIZUMAB) THROUGH COMPARATIVE REAL-WORLD DATA VERSUS TNFα-ANTAGONIST THERAPY IN ULCERATIVE COLITIS AND CROHN'S DISEASE

Takeda demonstrates leadership in GI by featuring new U.S. VICTORY Consortium data among its 24 sponsored Entyvio abstracts presented at the Digestive Disease Week (DDW) 2018 meeting

Osaka, Japan – Takeda Pharmaceutical Company Limited [TSE:4502] ("Takeda") announced a new analysis of real-world data comparing the safety data of the gut-selective biologic Entyvio®(vedolizumab) and tumor necrosis factor-alpha (TNFα)-antagonist therapy. The results showed numerically lower rates of serious infections (SIs) [6.9% vs 10.1%; odds ratio (OR) 0.67, 95% confidence interval (CI) 0.41-1.07] and significantly lower rates of serious adverse events (SAEs) [7.1% vs 13.1%; OR 0.51, 95% CI 0.32-0.81] in patients treated with Entyvio (n=436) compared to TNFα-antagonist therapy (n=436). This analysis of the VICTORY (Vedolizumab Health OuTComes in InflammatORY Bowel Diseases) Consortium evaluated the occurrence of adverse events (AEs) in patients with ulcerative colitis (UC) and Crohn's disease (CD) who received vedolizumab compared with TNFα-antagonist therapy and was presented as an oral presentation at the 2018 Digestive Disease Week® (DDW) annual scientific meeting held from June 2-5 in Washington, D.C.

Data from 872 UC and CD patients (n=334 UC, n=538 CD; n=436 Entyvio; 47% male, median age 35 years), from the UC and CD VICTORY Consortium database, were analyzed to compare the safety of Entyvio to TNFα-antagonist therapy. Patients receiving Entyvio were matched (1:1)* to patients on TNFα-antagonist therapy using propensity scores to control for baseline differences between groups. Among patients on biologic monotherapy (n=247; n=142 Entyvio), Entyvio-treated patients were observed to have numerically lower rates of SIs (4.1% vs 10.1%; OR 0.37, 95% CI 0.13-1.02) and significantly lower rates of SAEs (4.7% vs 14.5%; OR 0.29, 95% CI 0.12-0.73). Among patients who were on biologic therapy in combination with both steroids and an immunomodulator (n=137; n=69 Entyvio), rates of SIs (11.5% vs 13.9%, OR 0.81, 95% CI 0.31-2.07) and SAEs (14% vs 14%, OR 0.66, 95% CI 0.27-1.65) were similar between Entyvio and TNFα-antagonist treated patients. Concomitant immunosuppressive use was associated with an increased risk for both SI and SAE, and rates were similar between Entyvio and TNFα-antagonist therapy when using concomitant immunosuppressive therapy.**

"As we add to the extensive body of real-world evidence supporting the safety profile of Entyvio, it is encouraging to see the lower rates of serious infections and adverse events as compared to TNFα-antagonist therapy in this rigorous analysis," said Parambir Dulai, M.D., Research Fellow, University of California San Diego, and Lead Investigator of the VICTORY Consortium analyses. "Further studies will seek to understand the potential impact of gut-selective treatment versus systemic immunosuppression on clinical safety in the real world."

Further safety analyses from the GEMINI studies, also presented at DDW, support the safety profile of Entyvio. Results from a post-hoc analysis of interim data from the GEMINI long-term safety study (n=421; UC 190; CD 231) show nearly two-thirds of patients with UC (64%) and more than half with CD (55%) persisted with Entyvio treatment for three years, with low rates of discontinuation due to AEs, and treatment persistence rates higher in patients without versus with prior TNFα-antagonist failure (UC p=0.18: 69% vs 61%; CD p<0.01: 68% vs 51%). In addition, the GEMINI open-label extension (OLE) study showed that patients who were TNFα-antagonist therapy naïve experienced significantly fewer AEs (94 vs 275 per 100 patient-years) and SAEs (10 vs 18 per 100 patient-years) compared to TNFα-antagonist -experienced patients. Data from the GEMINI post-marketing (PM) setting were also analyzed and reported that a similar number of patients reported AEs in both groups, but limitations of PM safety reports, including incomplete data, must be considered when interpreting these results.

"Long-term remission and a well-established safety profile are key factors when it comes to treating chronic conditions like UC and CD," said Karen Lasch, M.D., Medical Head, GI Specialty, U.S. Medical Office, Takeda. "We are grateful for the work of groups like the VICTORY Consortium and pleased that results from multiple studies continue to support the safety and effectiveness of Entyvio."

For a full list of poster titles and authors at this year's DDW meeting, visit:

ddw.org/attendee-planning/online-planner

* Propensity score matching (1:1) accounting for age, sex, prior disease-related hospitalization within the previous year, disease phenotype (stricturing or penetrating complication history for

CD, disease extent for UC), disease severity, prior bowel surgery for CD, steroid refractoriness or dependence, and prior TNFα-antagonist failure.

** Rates of SIs and SAEs were compared using logistic regression analyses between matched patients; SIs were defined as requiring antibiotics or hospitalization or resulting in discontinuation or death, and SAEs as SI or non-infectious adverse events resulting in discontinuation or death.

About Entyvio® (vedolizumab)

Vedolizumab is a gut-selective immunosuppressive biologic.It is a humanized monoclonal antibody that is designed to specifically antagonize the alpha4beta7 integrin, inhibiting the binding of alpha4beta7 integrin to intestinal mucosal addressin cell adhesion molecule 1 (MAdCAM-1) and fibronectin, but not vascular cell adhesion molecule 1 (VCAM-1). MAdCAM-1 is preferentially expressed on blood vessels and lymph nodes of the gastrointestinal tract. The alpha4beta7 integrin is expressed on a subset of circulating white blood cells. These cells have been shown to play a role in mediating the inflammatory process in UC and CD.By inhibiting alpha4beta7 integrin, vedolizumab may limit the ability of certain white blood cells to infiltrate gut tissues.

About the VICTORY Consortium

The VICTORY (Vedolizumab Health OuTComes in InflammatORY Bowel Diseases) Consortium is a collaboration currently comprised of 16 leading inflammatory bowel disease (IBD) centers from across the U.S. and represents the first large, well-characterized cohort of patients taking Entyvio® in a real-world setting in the U.S. Patients included in the consortium were identified at each site through electronic medical record searches, review of clinical records, and/or queries of infusion center records. More than 1,700 UC and CD patients are now included in the consortium database, which was started when Entyvio® was launched in the U.S. in 2014.

About Ulcerative Colitis and Crohn's Disease

Ulcerative colitis (UC) and Crohn's disease (CD) are two of the most common forms of inflammatory bowel disease (IBD). Both UC and CD are chronic, relapsing, remitting, inflammatory conditions of the gastrointestinal (GI) tract that are often progressive in nature. UC only involves the large intestine as opposed to CD which can affect any part of the GI tract from mouth to anus. CD can also affect the entire thickness of the bowel wall, while UC only involves the innermost lining of the large intestine. UC commonly presents with symptoms of abdominal discomfort, loose bowel movements, including blood or pus. CD commonly presents with symptoms of abdominal pain, diarrhea, and weight loss. The cause of UC or CD is not fully understood; however, recent research suggests hereditary, genetics, environmental factors, and/or an abnormal immune response to microbial antigens in genetically predisposed individuals can lead to UC or CD.

Therapeutic Indications

Ulcerative colitis

Vedolizumab is indicated for the treatment of adult patients with moderately to severely active ulcerative colitis who have had an inadequate response with, lost response to, or were intolerant to either conventional therapy or a tumor necrosis factor-alpha (TNFα) antagonist.

Crohn's disease

Vedolizumab is indicated for the treatment of adult patients with moderately to severely active Crohn's disease who have had an inadequate response with, lost response to, or were intolerant to either conventional therapy or a tumor necrosis factor-alpha (TNFα) antagonist.

Important Safety Information

Contraindications

Hypersensitivity to the active substance or to any of the excipients.

Special warnings and special precautions for use

Vedolizumab should be administered by a healthcare professional equipped to manage hypersensitivity reactions, including anaphylaxis, if they occur. Appropriate monitoring and medical support measures should be available for immediate use when administering vedolizumab. Observe all patients during infusion and until the infusion is complete.

Infusion-related reactions

In clinical studies, infusion-related reactions (IRR) and hypersensitivity reactions have been reported, with the majority being mild to moderate in severity. If a severe IRR, anaphylactic reaction, or other severe reaction occurs, administration of vedolizumab must be discontinued immediately and appropriate treatment initiated (e.g., epinephrine and antihistamines). If a mild to moderate IRR occurs, the infusion rate can be slowed or interrupted and appropriate treatment initiated (e.g., epinephrine and antihistamines). Once the mild or moderate IRR subsides, continue the infusion. Physicians should consider pre-treatment (e.g., with antihistamine, hydrocortisone and/or paracetamol) prior to the next infusion for patients with a history of mild to moderate IRR to vedolizumab, in order to minimize their risks.

Infections

Vedolizumab is a gut-selective integrin antagonist with no identified systemic immunosuppressive activity.

Physicians should be aware of the potential increased risk of opportunistic infections or infections for which the gut is a defensive barrier. Vedolizumab treatment is not to be initiated in patients with active, severe infections such as tuberculosis, sepsis, cytomegalovirus, listeriosis, and opportunistic infections until the infections are controlled, and physicians should consider withholding treatment in patients who develop a severe infection while on chronic treatment with vedolizumab. Caution should be exercised when considering the use of vedolizumab in patients with a controlled chronic severe infection or a history of recurring severe infections. Patients should be monitored closely for infections before, during and after treatment. Before starting treatment with vedolizumab, screening for tuberculosis may be considered according to local practice. Some integrin antagonists and some systemic immunosuppressive agents have been associated with progressive multifocal leukoencephalopathy (PML), which is a rare and often fatal opportunistic infection caused by the John Cunningham (JC) virus. By binding to the α4β7 integrin expressed on gut-homing lymphocytes, vedolizumab exerts an immunosuppressive effect on the gut. Although no systemic immunosuppressive effect was noted in healthy subjects, the effects on systemic immune system function in patients with inflammatory bowel disease are not known. No cases of PML were reported in clinical studies of vedolizumab however, healthcare professionals should monitor patients on vedolizumab for any new onset or worsening of neurological signs and symptoms, and consider neurological referral if they occur. If PML is suspected, treatment with vedolizumab must be withheld; if confirmed, treatment must be permanently discontinued. Typical signs and symptoms associated with PML are diverse, progress over days to weeks, and include progressive weakness on one side of the body, clumsiness of limbs, disturbance of vision, and changes in thinking, memory, and orientation leading to confusion and personality changes. The progression of deficits usually leads to death or severe disability over weeks or months.

Malignancies

The risk of malignancy is increased in patients with ulcerative colitis and Crohn's disease. Immunomodulatory medicinal products may increase the risk of malignancy.

Prior and concurrent use of biological products

No vedolizumab clinical trial data are available for patients previously treated with natalizumab. Caution should be exercised when considering the use of vedolizumab in these patients. No clinical trial data for concomitant use of vedolizumab with biologic immunosuppressants are available. Therefore, the use of vedolizumab in such patients is not recommended.

Vaccinations

Prior to initiating treatment with vedolizumab all patients should be brought up to date with all recommended immunizations. Patients receiving vedolizumab may receive non-live vaccines (e.g., subunit or inactivated vaccines) and may receive live vaccines only if the benefits outweigh the risks.

Adverse reactions include:

Nasopharyngitis, Headache, Arthralgia, Upper respiratory tract infection, Bronchitis, Influenza, Sinusitis, Cough, Oropharyngeal pain, Nausea, Rash, Pruritus, Back pain, Pain in extremities, Pyrexia, and Fatigue.

Please consult with your local regulatory agency for approved labeling in your country.

For U.S. audiences, please see the full Prescribing Information:

general.takedapharm.com/entyviopi

including Medication Guide for ENTYVIO®:
general.takedapharm.com/entyviomg/

For EU audiences, please see the Summary of Product Characteristics (SmPC) for ENTYVIO®:

ema.europa.eu/docs/en_GB/document_library/EPAR_-_Product_Information/human/002782/WC500168528.pdf

Takeda's Commitment to Gastroenterology

Gastrointestinal (GI) diseases can be complex, debilitating and life-changing. Recognizing this unmet need, Takeda and our collaboration partners have focused on improving the lives of patients through the delivery of innovative medicines and dedicated patient disease support programs for over 25 years. Takeda aspires to advance how patients manage their disease. Additionally, Takeda is leading in areas of gastroenterology associated with high unmet need, such as inflammatory bowel disease, acid-related diseases and motility disorders. Our GI Research & Development team is also exploring solutions in celiac disease and liver diseases, as well as scientific advancements through microbiome therapies.

About Takeda Pharmaceutical Company Limited

Takeda Pharmaceutical Company Limited (TSE: 4502) is a global, research and development-driven pharmaceutical company committed to bringing better health and a brighter future to patients by translating science into life-changing medicines. Takeda focuses its R&D efforts on oncology, gastroenterology and neuroscience therapeutic areas plus vaccines. Takeda conducts R&D both internally and with partners to stay

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at the leading edge of innovation. Innovative products, especially in oncology and gastroenterology, as well as Takeda's presence in emerging markets, are currently fueling the growth of Takeda. Around 30,000 Takeda employees are committed to improving quality of life for patients, working with Takeda's partners in health care in more than 70 countries.

For more information, visit:
takeda.com/newsroom

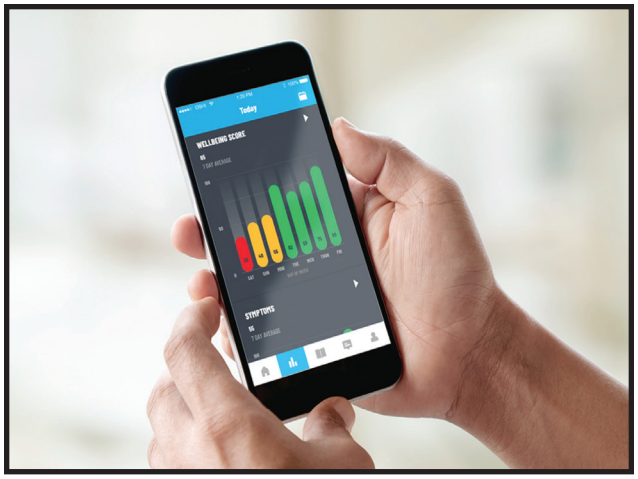
OSHI HEALTH LAUNCHES FIRST ALL-IN-ONE MOBILE APP TO EMPOWER PATIENTS WITH INFLAMMATORY BOWEL DISEASE (IBD), INCLUDING CROHN'S DISEASE AND ULCERATIVE COLITIS

New Mobile App for iOS and Android Provides Critical Patient Tools and Fresh Educational Content for Navigating Life with IBD

New York, NY — Oshi Health, Inc. announced the release of Oshi, a mobile app with all-in-one features for IBD wellness including symptom tracking, curated learning, and expert Q&A. Oshi is now available for download on the Apple App Store or Android Google Play.

There are 3 million people in the US living with IBD. Each faces an individualized experience with the disease. The frequency, duration, and severity of symptoms is variable and not clearly understood. Many factors, including lifestyle behaviors like sleep, diet, and exercise can greatly impact IBD wellness.

Keeping track of these many daily factors — and IBD symptoms — is an important part of helping individuals better understand the causes of flare-ups and how best to achieve ongoing well-being. Patients also struggle to find educational content relevant to their unique experience with the disease.



The Oshi Health platform was designed to meet these needs and empower IBD patients with managing their disease by providing tools to track, learn, and ask. The all-in-one app's features include:

- Fresh Content: Daily doses of inspiration and information
- Tracking: Short-term and long-term trends including well-being and symptom scores
- Integration: Compatibility with leading fitness devices, sensors, and wearables
- Reminders: Helpful notifications to stay on track with IBD wellness
- Surveys: Bi-weekly progress checkpoints
- Expert Q&A: Professional feedback from gastroenterologists and medical professionals
- Security: Best-In-Class data privacy with state-of-the-art encryption

"Oshi is a free mobile app that empowers individual control and understanding of IBD wellness. Oshi has the potential to significantly improve lives with smart tools to manage and control Crohn's disease and ulcerative colitis," said Daniel Weinstein, CEO, Oshi Health, Inc. "Oshi's easy-to-use, best-in-class tracking and insights tool will allow patients to work with their physicians to uncover hidden patterns to figure out what triggers flares for their unique bodies."

In addition to tracking and scoring, Oshi incorporates a magazine's worth of articles to inform, assist, and uplift patients. Exclusive content includes inspiring real-life success stories, easy-to-understand info on emerging treatments, and delicious IBD-friendly recipes.

"Curated content is core to Oshi. We work closely with Patient Advocates and Physician Partners to provide important information on IBD. Oshi Health will continue to add new articles and features based on recommendations from our community," said Barak Poker, Head of Product, Oshi Health, Inc. "Just like tracking, we know that each individual is unique when learning. Oshi provides personalized content recommendations to match users interests."

As an all-in-one mobile health app, Oshi also offers an "Ask the Experts" feature to further support the tracking and learning digital experience. A team of gastroenterologists and health professionals will provide moderated feedback on key questions.

"Oshi Health's platform is a tremendous opportunity to advance the care of IBD patients by facilitating provider/patient conversations. Physicians like me can now access key information and view dashboards about the changes in symptoms and quality of life of my patients," said Charlie Lees, Consultant Gastroenterologist at Western General Hospital, Edinburgh and advisor to Oshi Health. "Oshi Health is also transformative looking across patients' data. The insights the platform can generate can help us better understand the relationship of the many factors that impact IBD including diet, environment, medication utilization, and more. These insights are the key to moving towards predictive, hyper- personalized care."

Oshi Health was founded in 2018 with the goal of revolutionizing IBD care through digital tools. The company is led by Daniel Weinstein, a digital health veteran, who previously co-founded Cohero Health, a leading digital health company that is disrupting the care of asthma and COPD patients through its connected mobile platform.

About Crohn's Disease and Ulcerative Colitis

Currently, there is no known cause or cure for Crohn's disease (CD) or ulcerative colitis (UC), the two main forms of IBD. Both are marked by inflammation in the lining of the gastrointestinal tract. UC impacts the large intestine only including the colon and the rectum. CD impacts any part of the digestive tract and generally affects the ileum. Research shows that the interaction between genes, the body's immune system, and environmental factors may play a role.

About Oshi Health, Inc.

Oshi is a digital health company revolutionizing the management and treatment of inflammatory bowel disease, including Crohn's disease and ulcerative colitis. The company's proprietary digital platform empowers patients to track, learn, and ask. It also arms IBD stakeholders with data that enable new treatment advances and care optimization. Based in New York City, the company has raised a significant series A round led by a leading global healthcare company.

For more information, visit:
oshihealth.com