TEZSPIRE® (tezepelumab-ekko)

TEZSPIRE is the first and only biologic for severe asthma without phenotypic (eosinophilic/allergic) or biomarker limitations within its approved label.[1]

Indication

TEZSPIRE® (tezepelumab-ekko) is a first-in-class a thymic stromal lymphopoietin (TSLP) blocker, a human monoclonal antibody, indicated for the add-on maintenance treatment of adult and pediatric patients aged 12 years and older with severe asthma. TEZSPIRE is not indicated for the relief of acute bronchospasm or status asthmaticus.[1]

Mechanism of Action

TEZSPIRE acts at the top of the inflammatory cascade through TSLP blockade interfering with multiple downstream inflammatory pathways to reduce the initiation and persistence of airway inflammation. The mechanism of action in asthma has not been definitively established.[1,2]

Dosage and Administration

- The recommended dosage of TEZSPIRE is 210 mg administered subcutaneously once every 4 weeks. There is no loading dose or dose adjustment based on weight or biomarker level.[1]
- TEZSPIRE is available in a pre-filled syringe for HCP administration and a pre-filled pen for HCP or self-administration.[1]

Contraindications, Warnings and Precautions, and Most Common Adverse Reactions

TEZSPIRE is contraindicated in patients who have known hypersensitivity to tezepelumab-ekko or any of its excipients. Warnings and precautions include hypersensitivity reactions, acute asthma symptoms or deteriorating disease, risk associated with abrupt reduction in corticosteroid dosage, parasitic (helminth) infection and avoidance of use with live attenuated vaccines. Most common adverse reactions (incidence ≥ 3% and more common than placebo) are pharyngitis, arthralgia, and back pain.[1]

Exacerbation Reduction Studies

TEZSPIRE demonstrated statistically significant reductions in annualized asthma exacerbation rates (AAERs) within two 52-week pivotal trials in patients with severe asthma receiving background asthma therapy, including medium- or high-dose inhaled corticosteroids (ICS), (PATHWAY and NAVIGATOR). In both trials, patients were enrolled without requiring a minimum baseline level of blood eosinophils (bEOS) or fractioned exhaled nitric oxide (FeNO).[1,3,4]

- The AAER was 71% lower (PATHWAY) and 56% lower (NAVIGATOR) in patients receiving TEZSPIRE compared to placebo.[3,4] Among patients with baseline bEOS count <300 cells/µL, the AAER was 41% lower in the TEZSPIRE group vs placebo (NAVIGATOR).[4]
- In NAVIGATOR, the AAER for exacerbations requiring hospitalization or ED visit was 79% lower in the TEZSPIRE vs placebo group. The AAER requiring hospitalization was 85% lower in patients treated with TEZSPIRE vs placebo.[1,4]
- In the NAVIGATOR/PATHWAY post-hoc pooled analysis, TEZSPIRE reduced the AAER in maintenance oral corticosteroid (mOCS) (41%) and non-mOCS (62%) groups. Reductions in exacerbations requiring hospitalizations were observed in both mOCS (82%) and non-mOCS (84%) populations. These results were descriptive only.[5]

Safety Profile

TEZSPIRE has an established safety profile.[1,3,4]

- In PATHWAY, the treatment discontinuation rate was 1.5% due to treatment-related adverse events (TRAEs) and no treatment-related deaths occurred in TEZSPIRE patients. Adverse events (AEs) reported by ≥ 5% of patients were nasopharyngitis, asthma, bronchitis, and headache.[3]
- In NAVIGATOR, the treatment discontinuation rate was 2.1% due to TRAEs and no treatment-related deaths occurred in TEZSPIRE patients. Most common reported AEs ≥ 5% of patients were asthma, nasopharyngitis, upper respiratory tract infection, and headache.[4]

Long-term Efficacy and Safety

Long-term efficacy and safety of TEZSPIRE of up to 2 years was evaluated in a randomized, double-blind, placebo-controlled, long-term extension study (DESTINATION) and included participants from prior studies (NAVIGATOR and SOURCE). Of note, the SOURCE study enrolled patients with severe asthma on high-dose ICS + long-acting β2-agonist and maintenance oral corticosteroid therapy (stable dose of prednisone 7.5-30 mg daily or equivalent).[6,7]

- TEZSPIRE reduced the AAER over 104 weeks compared with placebo by 58% and 39% in participants from NAVIGATOR and SOURCE, respectively. [6]
- In participants who initially received TEZSPIRE in NAVIGATOR, incidence of AEs over 104 weeks was 49.62 per 100 patient-years (PY), compared with 62.66 for those on placebo. For serious AEs, incidence was 7.85 per 100 PY for TEZSPIRE and 12.45 for placebo. [6]
- In participants from SOURCE, incidence of AEs was 47.15 per 100 PY for TEZSPIRE and 69.97 for placebo. For serious AEs, incidence was 13.14 per 100 PY for TEZSPIRE and 17·99 for placebo. [6]
- In the trial, the incidence rates (IR) per 100 PY for serious cardiac adverse events in patients treated with TEZSPIRE or placebo were 1.08 and 0.21, respectively, with an incidence rate difference (IRD) of 0.88 (95% CI: 0.24, 1.53). The types of serious cardiac adverse events were heterogeneous. In the trial, the IR per 100 PY for adjudicated major adverse cardiovascular events (MACE, defined as cardiovascular deaths, non-fatal myocardial infarctions, and non-fatal strokes) in patients treated with TEZSPIRE or placebo were 0.60 and 0.42, respectively, with an IRD of 0.18 (95% CI: -0.51, 0.75). [1]

Asthma Symptoms and Quality of Life

TEZSPIRE patients reported significant improvements in asthma symptom control and quality of life compared to placebo.[1,4]

- In NAVIGATOR, the ACQ-6 (Asthma Control Questionnaire-6) responder rate for TEZSPIRE was 86% vs 77% for placebo (OR=1.99; 95% CI 1.43, 2.76).[1,4]
- The AQLQ(S)+12 (Asthma Quality of Life Questionnaire with standardized activities for ages 12+) responder rate for TEZSPIRE was 78% vs 72% for placebo (OR=1.36; 95% CI 1.02, 1.82).[1,4]

TEZSPIRE Pre-filled Pen Self-Administration/ Home Use

Tezepelumab prescribing information was updated in February 2023 to include a pre-filled pen, which can be administered by patients or caregivers.[1]

At-home administration of tezepelumab was assessed in a randomized, open-label, Phase 3 study (PATH-HOME).

- Tezepelumab was successfully administered at home via a pre-filled syringe by 95.4% (104/109) and via a pre-filled pen by 97.1% (102/105) of the patients or caregivers.[8]
- Clinically meaningful improvements in ACQ-6 score (decrease in mean ACQ-6 score ≥0.5 from baseline) were observed after 24 weeks in 81.1% (90/111) and 76.2% (80/105) of the patients in the pre-filled syringe and pre-filled pen groups, respectively.[8]
- Nasopharyngitis was the most commonly reported adverse event, with 7.2% (8/111) and 11.4% (12/105) of patients in the pre-filled syringe and pre-filled pen groups, respectively, experiencing nasopharyngitis. Injection-site reactions occurred in 0% and 5.7% of the patients in the pre-filled syringe and pre-filled pen groups, respectively.[9]

Guideline Recommendations

In 2022, TEZSPIRE was added to the Global Initiative for Asthma (GINA) guideline recommendations as an add-on biologic therapy option for patients with type 2 severe asthma with exacerbations or poor symptom control on high-dose ICS-LABA and for patients with non-type 2 severe asthma.[10,11]

Summary: TEZSPIRE is the first and only biologic for severe asthma that does not have a phenotypic (eosinophilic/allergic) or biomarker limitations within its approved label. TEZSPIRE consistently and significantly reduced asthma exacerbations across pivotal trials in a broad population of severe asthma patients irrespective of key biomarkers, including bEOS and allergic status, and FeNO.

We hope this material in response to your request is informative and useful for your decision-making process. We appreciate that TEZSPIRE was added to the State's preferred drug list and we respectfully request that TEZSPIRE utilization criteria to be aligned to label with no phenotypic or biomarker requirements.

References: 1.TEZSPIRE® (tezepelumab-ekko) prescribing information, Amgen. 2.Gauvreau GM, et al. Expert Opin Ther Targets. 2020;24:777-792. 3.Corren J, et al. N Engl J Med. 2017;377:936-946.4. Menzies-Gow A, et al. N Engl J Med. 2021;384(19):1800-1809. 5. Menzies-Gow A, et al. Poster presented at: The American Thoracic Society (ATS). May 14-19, 2021. 6. Menzies-Gow A, et al. Lancet Respir Med. 2023;S2213-2600(22)00492-1. 7.Wechsler ME, et al. Lancet Respir Med. 2022;10(7):650-660. 8. Alpizar S, et al. J Asthma Allergy. 2021;14:381-392.9.Data on File [CSR], 2020. 10.Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention. https://ginasthma.org/wp-content/uploads/2023/05/GINA-Main-Report-2022-WMSA.pdf Published 2022. Accessed May 24, 2023. 11.Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention. https://ginasthma.org/wp-content/uploads/2023/05/GINA-2023-Full-Report-2023-WMS.pdf Published 2023. Accessed May 24, 2023.