NON-INTERVENTIONAL PROTOCOL ABSTRACT

Title

Risk of Safety Events Among Patients with UC and PsA Treated with Tofacitinib and Other Advanced Treatments in the United States

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Redacted

Rationale and background

Tofacitinib is a Janus kinase (JAK) inhibitor approved for 5 indications in the United States (US), including adults with moderately to severely active ulcerative colitis (UC) and adults with active psoriatic arthritis (PsA). However, there is limited information on long term safety events related to tofacitinib in these populations using real world data that included an active comparator of other advanced therapies. This non-interventional study aims to provide additional insights into incidence rates of select safety outcomes in UC and PsA populations using active comparator groups in routine clinical practice in the U.S. This non-interventional study is designated as a Post-Authorization Safety Study (PASS) and is conducted voluntarily by Pfizer.

Research question and objectives

The purpose of this study is to examine demographic and clinical characteristics of patients with UC and PsA on tofacitinib and other forms of advanced treatment in the US, estimate the risk of select safety events in these populations, and to estimate the crude and adjusted relative risks of select safety events when comparing mutually exclusive comparator groups of tofacitinib and other forms of advanced treatment.

Primary Objectives

The primary objectives for this study are:

a. To estimate the frequency distributions of demographic and clinical characteristics among tofacitinib and other forms of advanced treatment in UC and PsA populations.

b. To estimate crude incidence rates (IRs) of select safety events among UC and PsA populations on tofacitinib and other forms of advanced treatment.

c. To estimate the crude and adjusted hazard ratios (HRs) of select safety events comparing tofacitinib and other forms of advanced treatment in UC and PsA populations.

Secondary Objectives

Secondary study objectives are as follows:

To stratify estimated HRs of select safety events among populations of interest by the following factors:

1. Age < or ≥50 years.
2. Age < or ≥65 years.
3. Systemic glucocorticoid use at baseline.
4. Previous biologic or other advanced treatment use prior to baseline.
5. History of MACE or VTE.

Study design

This is a population-based retrospective cohort study of adults (ages ≥18 years of age) with UC and PsA identified through US data sources.

Population

The populations under study will be adult patients diagnosed with UC between 31 May 2018 and 30 September 2022, or patients diagnosed with PsA between 15 December 2017 and 30 September 2022.

Variables

Variables include exposure to medication categories of interest (UC: tofacitinib, vedolizumab, ustekinumab, ozanimod, TNFi; PsA: tofacitinib, ustekinumab, Risankizumab, secukinumab, TNFi), outcomes of interest (MACE, VTE, malignancy excluding non-melanoma skin cancer, serious infections), and key covariates, such as demographic and disease characteristics, as well as comorbidities.

Data sources

This study will use two US administrative databases (Optum Claims and Komodo Health).

Study size

Preliminary feasibility analyses indicate sample sizes range of approximately 2,391 and 3,411 new tofacitinib users with 12 months of continuous enrollment for UC and PsA populations, respectively, in the Komodo Health dataset (among open and closed claims), and 393 and 406 for UC and PsA populations in the Optum Claims dataset, respectively.

Data analysis

Descriptive analyses, incidence rates, and hazard ratios using propensity score matching to control for confounding will be conducted. In addition, hazard ratio estimates will be stratified based on factors of interest.

Milestones

A report including patient baseline characteristics, use of therapies to treat UC, as well as incidence rates and hazard ratios of potential safety events of interest among advanced treatments will be developed.

Milestone	Planned date
Start of data collection	31 March 2023
End of data collection	30 December 2023
Registration in the EU PAS register	10 March 2023
Final study report	30 October 2024