NON-INTERVENTIONAL STUDY REPORT ABSTRACT

Title: An evaluation of non-melanoma skin cancer and melanoma skin cancer rates among patients treated for moderately to severely active rheumatoid arthritis with Xeljanz® (tofacitinib citrate): a retrospective non-interventional database study of observational data embedded within optimising patient outcome in australian rheumatology - quality use of medicines initiative (OPAL-QUMI).

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Keywords: non-melanoma skin cancer, melanoma skin cancer, tofacitinib, rheumatoid arthritis

Rationale and background: Tofacitinib is a potent, selective inhibitor of the Janus kinase (JAK) family of kinases with a high degree of selectivity against other kinases in the human genome. Being the first oral JAK inhibitor for the treatment of moderate to severe rheumatoid arthritis (RA), there is a need to gather emerging real-world long-term safety data.

Research question and objectives: To determine rates of NMSC and MSC among Australian patients with RA treated with tofacitinib or biologic disease modifying anti-rheumatic drugs (bDMARDs). Primary objectives are to determine rate of NMSC and MSC among patients treated for moderately to severely active RA, with tofacitinib. The secondary objectives are to determine: the rate of NMSC and MSC among patients treated for moderately to severely active RA, with bDMARDs.

Study design: This is a retrospective, non-interventional cohort study using real-world patient data extracted from the Australian OPAL registry during the period 01 February 2015 until 01 September 2018.

Setting: Utilising the OPAL registry to provide real-world evidence on NMSC and MSC rate in adult patients with RA. This Post-Authorisation Safety Study (PASS) was conducted voluntarily by Pfizer. Deidentified, aggregated data from the OPAL registry were encrypted and sent to the OPAL Study Committee and study statistician.

Subjects and study size, including dropouts: Eligible patients were aged 18 years or older with RA, who received treatment with tofacitinib or a bDMARD and had at least 1 year of follow-up. Patients with any autoimmune rheumatic disease or inflammatory bowel conditions except for RA were excluded. Planned recruitment was approximately 500 patients taking tofacitinib and more than 2,500 patients taking bDMARDs. While 1,493 tofacitinib and 2,589 bDMARD patients were eligible for the study, only 216 tofacitinib and 368 bDMARD patients completed the Skin Cancer PRO questionnaire.

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Variables and data sources:

Variables analysed included: exposure (tofacitinib or bDMARDs), baseline characteristics (eg, demographics, medical history, clinical characteristics, PROs, treatment history) and outcomes (incidence rate and incidence density rate of NMSC and MSC). Responses to the Skin Cancer PRO questionnaire were self-reported, and not verified by clinical records.

The OPAL – Quality Use of Medicines Initiative is a point of care observational registry database. Currently approximately 80 Australian rheumatologists and >35,000 patients with rheumatic disease are participating in the registry. Data are captured into individual clinician's servers during routine clinical consultations, and then de-identified data are exported to a central server for analysis.

Results: The Skin Cancer PRO questionnaire was completed by 14.5% and 14.2% of tofacitinib and bDMARD patients, respectively. Mean MSC incidence rate for tofacitinib and bDMARDs were 0.3 per 100 patients (95% CI 0.1-0.8) and 0.2 per 100 patients (95% CI 0.1-0.5), respectively. For NMSC, results were stratified by type: mean Basal Cell Carcinoma (BCC) incidence rate was 0.9 per 100 patients (95% CI 0.5-1.6) and 1.2 per 100 patient years (0.8-1.7) for tofacitinib and bDMARDs, respectively. Meanwhile, Squamous Cell Carcinoma (SCC) incidence rate was 0.4 per 100 patients (95% CI 0.2-0.9) and 0.3 per 100 patients (95% CI 0.2-0.7) for tofacitinib and bDMARD patients, respectively.

Discussion:

This retrospective study had several limitations. These included potential channelling bias, geographical bias, low respondents, and medically unverified reports of skin cancer. The investigators and the OPAL Scientific Advisory Committee considered these limitations significant, preventing scientifically sound conclusions from being drawn from this study.

Marketing Authorization Holder(s): Pfizer Limited

Names and affiliations of principal investigators:

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