Biologic and Targeted Synthetic Therapies in Psoriatic Arthritis and the Risk of Opportunistic Infections

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BACKGROUND

- There are limited data regarding the risk for opportunistic infections (OIs) for patients with psoriatic arthritis (PsA) treated with non-biologic, biologic and the new targeted synthetic therapies
- Biologic and targeted synthetic therapies are increasingly used among patients with PsA

STUDY OBJECTIVE

To calculate the incidence of OIs associated with the use of biologic and targeted synthetic therapies in patients with PsA from randomized controlled trials (RCTs)

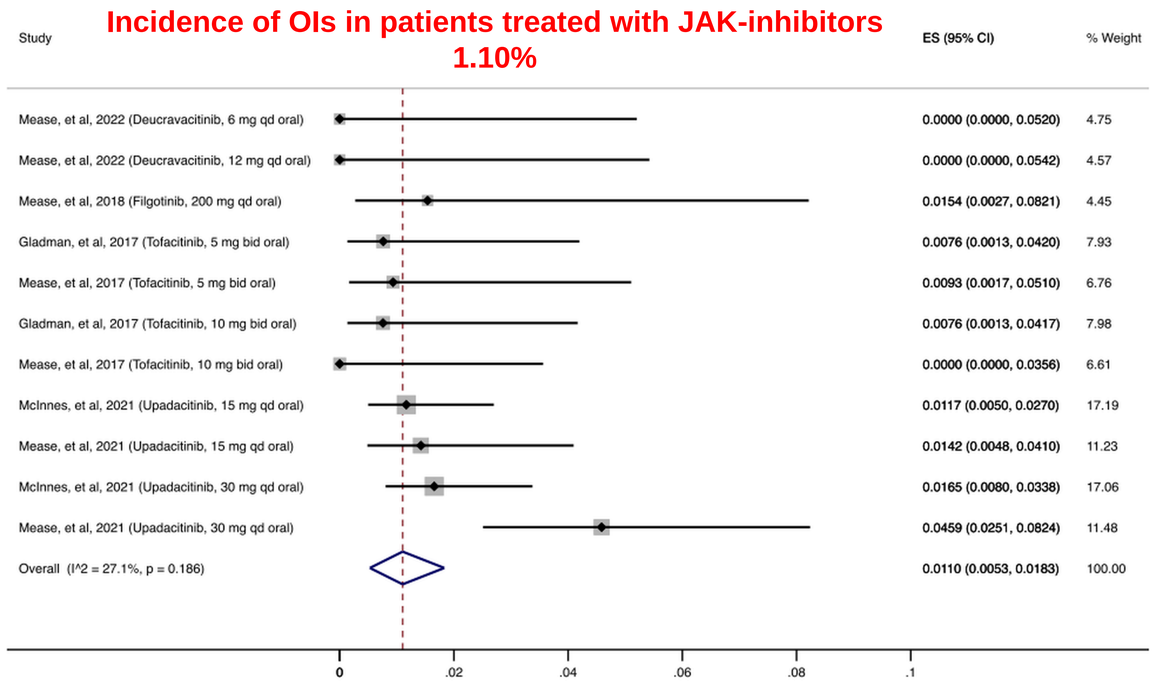
METHODS

- We performed this meta-analysis based on the PRISMA statement
- We searched the PubMed and EMBASE databases through April 14, 2022 for randomized placebo-controlled trials (RCTs) in patients with PsA
- We stratified therapeutic agents of interest by mechanism of action (MOA)
- The MOA of the tested treatment regimen had to be present in ≥3 trials

RESULTS

46 studies were eligible and provided data on 11,652 patients receiving different doses of the tested treatment regimen and 6,425 patients receiving placebo.

Mechanism of action	Number of studies	Number of patients	Range of follow-up (weeks)	Incidence rate (%)	95% CI
Anti-TNFs	17	2,621	12 - 48	0.00	0.00 – 0.00
Anti-IL-17	8	2,578	12 - 24	0.26	0.01 – 0.70
JAK inhibitors	6	1,957	12 - 24	1.10	0.53 – 1.83
Anti-IL-23	6	1,744	24	0.02	0.00 – 0.25
PDE4 inhibitors	6	1,595	12 - 24	0.00	0.00 – 0.04
Anti-IL-12/23	3	693	12 - 24	0.00	0.00 – 0.27
CTLA4-Ig	3	464	12 - 24	0.02	0.00 – 0.66



CONCLUSIONS

- The cumulative incidence of OIs was low in every MOA examined in placebo-controlled RCTs
- There was a slightly higher incidence of OIs in patients treated with JAK-inhibitors (1.1%, mainly due to herpes zoster) and anti-IL-17 therapies (0.26%, mainly due to mucocutaneous candidiasis) compared to patients treated with agents of different MOA or placebo
- RCTs were short-term with duration usually up to 24 weeks
- Findings indicate a low-risk for OIs in patients with PsA treated with biologic and targeted synthetic therapies
- Long-term follow-up and post-marketing real world data are needed for full-evaluation of the true OI risk in this patient population

Key References

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