

# Isotretinoin and the risk of inflammatory bowel disease and irritable bowel syndrome: A large-scale global study



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**Introduction:** Risk of inflammatory bowel disease under isotretinoin is a scope of a long-standing controversy. The burden of isotretinoin-related irritable bowel syndrome has not been investigated.

**Objective:** To evaluate the risk of Crohn's disease, ulcerative colitis (UC), and irritable bowel syndrome in patients with acne starting isotretinoin vs oral antibiotics treatment.

**Methods:** A global population-based retrospective cohort study assigned 2 groups of patients with acne initiating isotretinoin ( $n = 77,005$ ) and oral antibiotics ( $n = 77,005$ ). Comprehensive propensity-score matching was conducted.

**Results:** The lifetime risk of Crohn's disease (hazard ratio [HR], 1.05; 95% CI, 0.89-1.24;  $P = .583$ ) and UC (HR, 1.13; 95% CI, 0.95-1.34;  $P = .162$ ) was comparable between study groups, whereas the lifetime risk of irritable bowel syndrome was lower in isotretinoin-prescribed patients (HR, 0.82; 95% CI, 0.76-0.89;  $P < .001$ ). In time-stratified analysis, isotretinoin-related risk of UC was significantly increased during the first 6 months following drug initiation (HR, 1.93; 95% CI, 1.29-2.88;  $P = .001$ ), but decreased afterward to level the risk of the comparator group. The absolute risk difference within the first 6 months was clinically marginal (5.0 additional UC cases/10,000 patients starting isotretinoin; 95% CI, 2.5-7.7).

**Limitations:** Retrospective data collection.

**Conclusion:** Isotretinoin does not confer an elevated risk of Crohn's disease, whilst it might be associated with a slight and transient increase in UC risk. (J Am Acad Dermatol 2023;88:824-30.)

**Key words:** acne; Crohn's disease; inflammatory bowel disease; irritable bowel syndrome; isotretinoin; oral antibiotics; ulcerative colitis.

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Funding sources: This research was funded by the Cluster of Excellence "Precision Medicine in Chronic Inflammation" (EXC 2167) from the Deutsche Forschungsgemeinschaft; the Schleswig-Holstein Excellence-Chair Program from the State of Schleswig-Holstein.

IRB approval status: Since this study utilized de-identified patient records, it was exempted from institutional review board approval.

Data availability statement: The data that support the findings of this study are available from the corresponding author, KK, upon reasonable request.

Accepted for publication December 7, 2022.

Reprints not available from the authors.

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Published online December 15, 2022.

0190-9622/\$36.00

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<https://doi.org/10.1016/j.jaad.2022.12.015>