

Hypersensitivity reactions with allopurinol versus febuxostat in the US elderly. Response to: 'Confounding by indication and ethnicity difference? Comment on 'Hypersensitivity reactions with allopurinol and febuxostat: a study using the Medicare claims data'' by Hsu *et al*

We appreciate the comments by Drs Wei and Hsu¹ on our recently published study on hypersensitivity reactions (HSRs) with allopurinol versus febuxostat.² Drs Wei and Hsu bring up an important point of confounding by indication in all observational studies including those focused on pharmacovigilance. We agree that this potential bias applies to all observational studies of HSRs with allopurinol performed to date and to those that will be done in the future. By using a propensity-matched analysis, we tried to minimise the bias due to confounding by indication. Despite having similar populations and key characteristics for allopurinol-exposed versus febuxostat-exposed populations in propensity-matched analysis (the main study analysis), some residual confounding is still possible. We acknowledged this in the study limitations section. Differences in country settings and study populations, which might also reflect differences in HLA-B*5801 allele frequencies, also underlie differences in our study findings in those from the previous studies, another limitation discussed previously. Finally, we regret the first decimal error in the abstract for crude HSR incidence rates; the correct values are presented in the tables, results and appendices. All of these values including those in the abstract when rounded off to the nearest digit per 1000 provide the same number of people experiencing HSR.

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Competing interests JAS has received consultant fees from Crealta/Horizon, Medisys, Fidia, UBM LLC, Trio health, Medscape, WebMD, Clinical Care options, Clearview healthcare partners, Putnam associates, Focus forward, Navigant consulting, Spherix, Practice Point communications, the National Institutes of Health and the American College of Rheumatology. JAS owns stock options in Amarin Pharmaceuticals and Viking Therapeutics. JAS is on the speaker's bureau of Simply Speaking. JAS is a member of the executive of OMERACT, an organisation that develops outcome measures in rheumatology and receives arms-length funding from 12 companies. JAS serves on the FDA Arthritis Advisory Committee. JAS is the chair of the Veterans Affairs Rheumatology Field Advisory Committee. JAS is the editor and the director of the UAB Cochrane Musculoskeletal Group Satellite Center on Network Meta-analysis. JAS previously served as a member of the following committees: member of the American College of Rheumatology's (ACR) Annual Meeting Planning Committee (AMPC) and Quality of Care Committees, the chair of the ACR Meet-the-Professor, Workshop and Study Group Subcommittee and the co-chair of the ACR Criteria and Response Criteria subcommittee. There are no non-financial competing interests for the author.

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