

A Retrospective Cross-Sectional Study Investigating the Effect of Albumin Administration on the BDG (1,3- β -D-glucan) Serum Assay

Chelsea Huerter, MS-3¹, Emily Hughes, MS-3¹, Monica Ahrens, Ph.D.², Albert Eid, M.D.³

¹The University of Kansas School of Medicine-Wichita, Wichita, Kansas

²The University of Kansas School of Medicine-Kansas City, Kansas City, Kansas, Division of Medical Informatics

³The University of Kansas School of Medicine-Kansas City, Kansas City, Kansas, Department of Internal Medicine

Received Mar. 20, 2026; Accepted for publication Apr. 20, 2026; Published online Apr. 22, 2026

<https://doi.org/10.17161/kjm.vol19.25388>

Introduction. The β -D-glucan (BDG) serum assay is a screening tool used in the diagnosis and management of invasive fungal infections (IFI). False-positive results have been reported, including in patients who have recently received intravenous albumin prior to testing. Author of this study examined the association between timing of albumin administration and BDG assay results.

Methods. We conducted a retrospective cross-sectional study of 4,599 electronic health records at The University of Kansas Health System (TUKHS). Patients were eligible if they were ≥ 18 years of age and had a BDG serum assay performed between 2010 and 2020. Demographic data, comorbidities, albumin administration, and IFI status were extracted and recorded in REDCap, a HIPAA-compliant database. The final analytic cohort included 2,061 patients. Logistic regression was used to assess the association between time from albumin administration to BDG testing and false-positive results. Statistical analyses were performed using R version 4.5.2.

Results. A total of 255 patients received albumin within two weeks prior to BDG testing, of whom 109 (42.7%) had a positive BDG result. Among these positive results, 83 were classified as false positives (false-positive rate: 76.1%). Logistic regression demonstrated the highest odds of a false-positive result when albumin was administered 6-8 days prior to testing (OR 1.22; 95% CI 0.51-2.91).

Conclusions. Albumin administration within days preceding BDG testing may be associated with an increased risk of false-positive results, potentially leading to unnecessary diagnostic evaluation and treatment.