Oral Abstract 17: Are Biosimilars as Safe? A Comparative Study of Bevacizumab in Gynecologic Cancer

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Topic
Quality & Healthcare Systems

Objectives
Bevacizumab, a monoclonal antibody targeting vascular endothelial growth factor (VEGF), is widely used in the treatment of multiple malignancies. Bevacizumab-awwb (MVASI®) and bevacizumab-bvzr (ZIRABEV®) were developed to improve access and reduce treatment costs. Side effect profiles of these agents are assumed to be comparable, but real-world safety data remain limited. Our study compared adverse events associated with bevacizumab and two biosimilars in the treatment of gynecologic cancers.

Methods
This is a retrospective cohort study of adult patients who received bevacizumab, MVASI, or ZIRABEV for treatment of gynecologic malignancies at an academic institution between December 1, 2016 and December 31, 2024. Data were extracted from the electronic medical record. Adverse events were graded according to CTCAE v6.0. The primary outcome was incidence of treatment-related adverse events. Secondary outcomes included rates and severity of toxicities and treatment discontinuation. Comparisons between treatment groups were analyzed using χ^2 or Fisher's exact tests.

Results
A total of 139 patients were included: 63 received bevacizumab, 34 received MVASI, and 42 received ZIRABEV. Disease sites represented included ovarian (58%), endometrial (18%), cervical (21%), and vulvovaginal (4%) carcinomas. 94 patients (68%) experienced at least one adverse event. Grade ≥3 adverse events occurred in 17% of patients receiving bevacizumab, 44% receiving MVASI, and 24% receiving ZIRABEV ($p=0.019$). There were significant differences in the incidence of treatment-related hypertension among treatment groups (25% bevacizumab, 76% MVASI, 60% ZIRABEV, $p< 0.0001$). Proteinuria was more common with MVASI (16% bevacizumab, 71% MVASI, 26% ZIRABEV, $p< 0.0001$). Thromboembolic events were also more common with MVASI (bevacizumab 3%, MVASI 24%, ZIRABEV 2%, $p=0.002$).

Conclusions
Our study suggests real world differences in rates of hypertension, proteinuria and thromboembolic events with bevacizumab and its biosimilars MVASI and ZIRABEV. These findings support the need for ongoing evaluation of biosimilar agents as their use becomes ubiquitous.