Early IVIG Use and Infectious Complications After Bispecific Antibody Therapy in Multiple Myeloma

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BACKGROUND

- Bispecific antibodies have transformed treatment of relapsed or refractory multiple myeloma, but infectious complications remain a major clinical limitation
- This concern is increasingly relevant as these therapies move earlier in treatment, including recent approval of teclistamab based combination therapy after one prior line of therapy
- IVIG is commonly used in practice, but large real world data on its association with infectious outcomes across current myeloma bispecifics remain limited

METHODS

BEFORE MATCHING
304 vs 2,100

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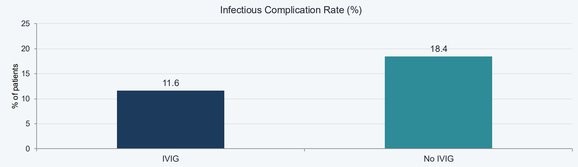
AFTER PSM MATCHING
267 vs 267

- Retrospective cohort study using the TriNetX Global Collaborative Network
- Adults with multiple myeloma treated with teclistamab, elranatamab, or talquetamab
- IVIG within 2 months of bispecific initiation compared with no IVIG
- Outcome window: day 60–180 after bispecific initiation
- Primary outcome: composite infectious complications (pneumonia, sepsis, bacteremia, febrile neutropenia, opportunistic infection)
- Propensity matching: demographics, comorbidity burden, infectious/immune diagnoses, leukocyte and neutrophil count, creatinine, albumin
- Risk ratios and Kaplan Meier analysis after matching

RESULTS



267 vs 267 matched patients per cohort (IVIG vs no IVIG)

RR 0.633 95% CI 0.417–0.960

HR 0.559 95% CI 0.356–0.876, log-rank p=0.010

- Before matching: 304 received IVIG, 2,100 did not; 267 matched per cohort after propensity matching
- Infectious complications: 31 patients with IVIG vs 49 without (OR 0.584, 95% CI 0.359–0.950)
- Infection free survival higher with IVIG: 85.51% vs 76.57% (log-rank p = 0.010)

CONCLUSION

- Early IVIG use was associated with significantly fewer infectious complications and improved infection free survival
- Infection prevention is becoming central to bispecific antibody treatment delivery, not just a supportive care afterthought
- Findings support a risk adapted approach guided by infection history, humoral immune dysfunction, treatment target, and anticipated therapy duration
- Prospective studies are needed to define optimal IVIG timing, duration, and thresholds

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