

Outpatient step-up dosing of bispecific antibodies for multiple myeloma

Executive summary

Highlights

Transitioning step-up dosing to outpatient care offers crucial advantages, including reduced infection risk, greater patient comfort, cost savings and better use of inpatient resources. As more evidence supports this approach, institutions are increasingly evaluating their adoption.

BsAbs are reshaping multiple myeloma treatment. With thoughtful planning, standard protocols and strong team coordination, outpatient step-up dosing can deliver safe, patient-centered and efficient care.

Overview

The Vizient Oncology Network (VON) convened a taskforce of experts from academic and community hospitals to develop best practices for administering bispecific antibodies (BsAbs) to multiple myeloma patients in outpatient settings. These T-cell engaging therapies are a promising advancement, directing the immune system to attack cancer cells. However, they carry serious risks – particularly cytokine release syndrome (CRS) and immune effector-cell associated neurotoxicity syndrome (ICANS) – that require careful monitoring during initial step-up dosing.

Three BsAbs are FDA-approved for relapsed or refractory multiple myeloma: **teclistamab-cqyv** (**Tecvayli**) and **elranatamab-bcmm** (**Elrexfio**), both targeting BCMA, and **talquetamab-tgvs** (**Talvey**), targeting GPRC5D. These therapies typically require four to nine days of inpatient monitoring and fall under a REMS (Risk Evaluation and Mitigation Strategy) program due to their potential toxicities.

Key considerations for outpatient step-up dosing programs

- **Eligibility criteria**: Patients should have ECOG 0–1, stable comorbidities, a reliable caregiver, live near the treatment site and have access to home monitoring tools.
- **Infrastructure:** Facilities must have appropriate infrastructure and emergency plans to manage cytokine release syndrome or neurotoxicity.
- Coordination: Cross-functional collaboration between clinical teams, operations, informatics and finance is essential.
- Education: Patients and caregivers need training on symptom monitoring, home
 care and knowing when to seek help. Providers, pharmacies and healthcare
 settings need to be certified by risk evaluation and mitigation strategy (REMS)
 programs.
- Triage: Clear protocols must guide when toxicity can be managed at home versus when escalation is needed.

Operational readiness is crucial. Institutions should schedule dosing when adequate staffing and support is available, avoiding weekends and holidays. Structured checklists can guide team and patient preparation. A phased approach is recommended – starting with a small group of patients before expanding outpatient access more broadly.



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