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Practice Efficiency Associated with Epcoritamab for the Treatment of Patients with Relapsed or Refractory Diffuse Large B-Cell Lymphoma from an Institutional Perspective

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Introduction: Diffuse large B-cell lymphoma (DLBCL) is the most common type of non-Hodgkin lymphoma (NHL). Recently approved treatment options for patients with relapsed/refractory (R/R) DLBCL include polatuzumab, tafasitamab, chimeric antigen receptor T-cell (CAR-T) therapy and two newly approved bispecific antibodies, epcoritamab and glofitamab. Epcoritamab (subcutaneous [SC]) is a CD3xCD20 bispecific antibody developed using the DuoBody ® platform. It was the first bispecific antibody approved for the treatment of R/R DLBCL patients after two or more lines of therapy and is the first in the class to be offered as a SC treatment, in contrast to glofitamab which is offered as an intravenous infusion. Given the different treatment options available, there is a need to understand their impact on clinical practice efficiency and institutional costs.
Methods: A micro-costing analysis was developed to compare practice efficiency of treating patients with R/R DLBCL using epcoritamab versus comparator treatments (glofitamab, polatuzumab/bendamustine/rituximab [pola-BR], tafasitamab/lenalidomide [tafa-len], and axicabtagene ciloleucel [axi-cel]) over a time horizon of up to 1 year. Time for clinical personnel (pharmacy technician, pharmacist, and nurse) and chair time were estimated throughout treatment stages (pre-dosing, blood work, pre-medication, treatment administration) as well as time in hospital during post-treatment monitoring. Dosing schedules and time inputs were based on prescribing information (PI) of respective drugs, published studies, and clinical expert opinion. Institutional costs of clinical personnel and inpatient days were sourced from publicly available databases and presented in 2023 US dollars.
Results: Over the 1-year time horizon, epcoritamab treatment required 35 hours of personnel time and 22 hours of chair time per patient (Table 1). With SC administration, epcoritamab is associated with improved practice efficiency with reduced personnel time (time saved per treated patient: 31 hours versus glofitamab, 0.4 hour versus pola-BR, 41 hours versus tafa-len, 22 hours versus axi-cel) and chair time (time saved per treated patient: 54 hours versus glofitamab, 22 hours versus pola-BR, 63 hours versus tafa-len, -2 hours versus axi-cel). The improved practice efficiency translates into savings in institutional personnel costs of $1,577 versus glofitamab, $2,443 versus tafa-len, and $1,295 versus axi-cel but is slightly higher ($189) when compared with pola-BR, which is a time-limited treatment of up to 6 cycles. Post-treatment monitoring varies across the treatments according to the PIs, based on recommended monitoring time and occurrence of cytokine release syndrome. While epcoritamab-treated patients were estimated to be monitored in the hospital for an average of 24.6 hours, glofitamab was projected to be associated with 37.9 hours of hospitalization for post infusion monitoring per patient. Patients receiving axi-cel therapy were estimated to be monitored in hospital for an average of 7 days according to clinical expert opinion. Due to reduced inpatient monitoring, epcoritamab results in savings in inpatient costs of $6,924 versus glofitamab and $19,234 versus axi-cel. The trends are consistent when looking at shorter time horizons including 6 months, 30 days, or using the median cycles of the treatments.
Conclusion: Due to its unique SC administration, epcoritamab improves institutional practice efficiency despite more frequent dosing, saving personnel costs and inpatient costs. This could help to alleviate capacity constraints at infusion centers and ease patient scheduling. The resources saved (staff time, chair time, inpatient monitoring) can be redirected to other institutional needs, improving the availability and quality of healthcare services for patients.

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Table 1. Practice efficiency and institutional costs for R/R DLBCL treatments over a 1-year time horizon

	Epcoritamab	Glofitamab	Pola-BR	Tafa-len	Axi-cel
Personnel time					
Hours/patient	35	66	36	76	58
Difference (%)	-	-31 (-46%)	-0.4 (-1%)	-41 (-53%)	-22 (-39%)
Chair time					
Hours/patient	22	75	44	84	20
Difference (%)	-	-54 (-71%)	-22 (-50%)	-63 (-74%)	2 (10%)
Institutional costs					
Personnel	$2,260	$3,838	$2,071	$4,704	$3,555
Inpatient	$3,206	$10,130	$0	$0	$22,440
Difference	-	-$8,502	$3,395	$762	-$20,529

Note: Numbers may not add up due to rounding.

Figure 1

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