

TO THE EDITOR:

Balancing considerations and qualifying conclusions for cost-effectiveness of therapies for relapsed/refractory follicular lymphoma

Kunal C. Potnis¹ and Scott F. Huntington^{2,3}

¹Yale School of Medicine, New Haven, CT; ²Department of Internal Medicine, Yale School of Medicine, New Haven, CT; and ³Cancer Outcomes, Public Policy, and Effectiveness Research (COPPER) Center, Yale School of Medicine, New Haven, CT

We read the recent commentary by Gribben et al with great interest.¹ Our teams share a common interest in rigorous cost-effectiveness analyses to inform the most appropriate use of high-cost novel cancer therapeutics, such as chimeric antigen receptor (CAR) T-cell therapy. Risk adjustment is an important consideration, and we commend Gribben et al. for their SCHOLAR-5 analyses.² Ideally, we would have liked to use matching-adjusted indirect comparison, or a comparable technique, in our study to better adjust for risk between the 2 arms that we drew from the ZUMA-5 and LEO CReWE studies.^{3,4} However, because we lacked access to the original individual patient data from these studies required for such adjustment, we were unable to do this. We acknowledge that our study has limitations, and we aimed to be upfront about this in our discussion. We ultimately qualified our conclusion, stating that CAR T-cell therapy is unlikely to be cost-effective in unselected patients with relapsed or refractory follicular lymphoma (FL), though it may be a cost-effective therapeutic strategy in select patients who are at high-risk and those who relapse after third-line therapy.

Although the SCHOLAR-5 cohort provided an advantage in the context of risk adjustment, 1 advantage of using the LEO CReWE study as the comparator in our base-case analysis was greater clarity in modeling cost. The SCHOLAR-5 cohort included a significant percentage of patients who received experimental therapies, which we note not to diminish their role as a treatment option but rather to highlight the challenges that arise with incorporating their costs without access to regimen specifics. The LEO CReWE cohort also more accurately reflects the patient population for which CAR T-cell therapy was approved by the Food and Drug Administration (FDA) in the United States, that is, any patient with FL after 2 or more previous lines of therapy. We agree that ZUMA-5 had a high-risk patient population and that clinicians should consider risk features when selecting the sequences of novel therapies, but our primary aim was to evaluate the cost-effectiveness of CAR T-cell therapy in the newly-approved FDA indication. In this unselected patient group, in which a sizable portion of individuals can have meaningful response to non-CAR T-cell therapy-based regimens, our model suggests CAR T-cell therapy would not be cost-effective.⁴

However, our work did include scenario analyses suggesting CAR T-cell therapy could be cost-effective for some individuals with FL. One scenario considered if the efficacy of our standard of care arm was inferior to that experienced in LEO CReWE by using the progression-free survival hazard ratio in SCHOLAR-5. In this scenario, we noted the incremental cost-effectiveness ratio to be ~\$61 000 per quality-adjusted life year, suggesting that CAR T-cell therapy could in fact be cost-effective depending on the comparator. Similarly, we conducted a scenario in which the comparator arm only received phosphatidylinositol 3-kinase and enhancer of zeste homolog 2 inhibitors, in which the incremental cost-effectiveness ratio decreased to ~\$64 000 per quality-adjusted life year. Ultimately, we agree with the need for more cost-effectiveness analyses in this area, ideally incorporating data from both randomized phase 3 trials and biomarker studies to identify clinical settings in which CAR T-cell therapy offers the greatest value to patients and those who bear the treatment costs.

Submitted 27 January 2023; accepted 4 February 2023; prepublished online on *Blood Advances* First Edition 6 February 2023; final version published online 2 June 2023. <https://doi.org/10.1182/bloodadvances.2023009864>.

© 2023 by The American Society of Hematology. Licensed under [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International \(CC BY-NC-ND 4.0\)](https://creativecommons.org/licenses/by-nc-nd/4.0/), permitting only noncommercial, nonderivative use with attribution. All other rights reserved.

Contribution: K.C.P. and S.F.H. drafted the manuscript and approved the final submission.

Conflict-of-interest disclosure: S.F.H. was a consultant for Janssen, Bayer, Genentech, AbbVie, Flatiron Health, Novartis, Beigene, AstraZeneca, ADC Therapeutics, Epizyme, Merck, Seattle Genetics, TG Therapeutics, and Tyme; received honoraria from Pharmacyclics, AstraZeneca, and Seattle Genetics; and received research funding from Celgene, DTRM Biopharma, TG Therapeutics, Debiopharm Group, and Agios. K.C.P. declares no competing financial interests.

ORCID profile: S.F.H., [0000-0001-7071-6475](https://orcid.org/0000-0001-7071-6475).

Correspondence: Scott F. Huntington, Division of Hematology, Department of Internal Medicine, Yale School of Medicine, 333 Cedar St, PO Box 208028, New Haven, CT 06520; email: scott.huntington@yale.edu.

References

1. Gribben JG, Palomba ML, Patel AR, Nahas M, Neelapu SS. Need for risk adjustment in comparative effectiveness and cost-effectiveness studies in r/r follicular lymphoma. *Blood Adv*. 2023;7(11):2494-2495.
2. Ghione P, Palomba ML, Patel AR, et al. Comparative effectiveness of ZUMA-5 (axi-cel) vs SCHOLAR-5 external control in relapsed/refractory follicular lymphoma. *Blood*. 2022;140(8):851-860.
3. Jacobson CA, Chavez JC, Sehgal AR, et al. Axicabtagene ciloleucel in relapsed or refractory indolent non-Hodgkin lymphoma (ZUMA-5): a single-arm, multicentre, phase 2 trial. *Lancet Oncol*. 2022;23(1):91-103.
4. Casulo C, Larson MC, Lunde JJ, et al. Treatment patterns and outcomes of patients with relapsed or refractory follicular lymphoma receiving three or more lines of systemic therapy (LEO CReWE): a multicentre cohort study. *Lancet Haematol*. 2022;9(4):e289-e300.