# First Use of Upfront Polatuzumab Vedotin in Post-Transplant Lymphoproliferative Disorder

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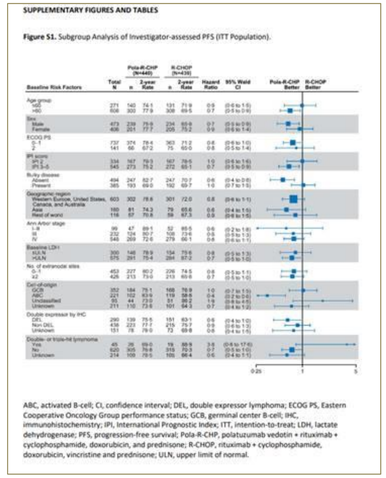
## INTRODUCTION

- Post-Transplant Lymphoproliferative Disorder (PTLD) is a rare and highly variable presentation
- Current standard management of PTLD refractory to immunosuppression reduction (RIS) incorporates the use of chemoimmunotherapy, typically the R-CHOP regimen
- The use of Polatuzumab Vedotin, the antibody-drug conjugate targeting CD79, was approved by the FDA for the treatment of diffuse large B-cell lymphoma in patients with an International Prognostic Index (IPI) score of 2 or higher
- Given the improved PFS of Pola-R-CHP compared to RCHOP in DLBCL we elected to give the newly approved combination for PTLD

## CASE DESCRIPTION

- A 33-year-old male with a PMH of Immune Thrombocytopenia & End Stage Renal Disease due to IgA nephropathy presented two years status post kidney transplant with intermittent fevers & night sweats for 1 month
- His workup included:
  - CT scan which showed multiple masses in the right lobe of his liver, largest measuring 12.7 cm
  - Liver biopsy showed a diagnosis of diffuse large B-cell lymphoma, non-GCB immunophenotype. KI-67 80-90%, FISH negative for BCL2, BCL6, and MYC.
  - IPI score was 2 (low-intermediate risk of poor outcome) – criteria met were elevated LDH and stage 4 disease given his liver involvement
  - EBV PCR was elevated

## RESULTS



SUPPLEMENTARY FIGURES AND TABLES

**Figure S1.** Subgroup Analysis of Investigator-assessed PFS (ITT Population).

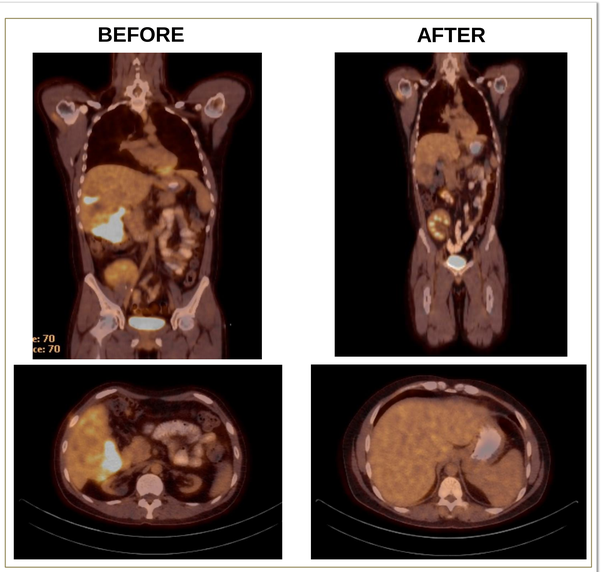
ABC, activated B-cell; CI, confidence interval; DEL, double expressor lymphoma; ECOG PS, Eastern Cooperative Oncology Group performance status; GCB, germinal center B-cell; IHC, immunohistochemistry; IPI, International Prognostic Index; ITT, intention-to-treat; LDH, lactate dehydrogenase; PFS, progression-free survival; Pola-R-CHP, polatuzumab vedotin + rituximab + cyclophosphamide, doxorubicin, and prednisone; R-CHOP, rituximab + cyclophosphamide, doxorubicin, vincristine and prednisone; ULN, upper limit of normal.

| Key Indicators | Before | After |
|---|---|---|
| LDH | 1732 (4/21/2023) | 298 (7/17/2023) |
| EBV-PCR | 1700 iU/mL (6/15/2023) | Not detected (7/17/2023) |

**Figure 1. (Left)** This chart[1] shows the rationale behind our effort, in the setting of the ABC subtype showing a significant benefit with the use of Pola-R-CHP over R-CHOP

**Figure 2. (Above)** The above table shows improvement in key indicators before pola-R-CHP and after 3 cycles of pola-R-CHP. Because of the superiority of this regimen in the ABC (activated b-cell like) subtype and that most EBV-positive lymphomas show ABC subtype[2] (likely linked by prominent NF-kB activation & the protein LMP1 which mimics CD40), this marker was followed. LDH has been of long-standing importance as a prognostic index in lymphoma and are often used to monitor treatment response, likely due to their correlation to inflammation.

**Figure 3. (Right)** PET-CT scans from 5/23/2023 (left), after 4 weekly doses of rituximab. The top left view is a coronal cut including the largest hepatic lesion visualized, and the bottom left shows the transverse cut. This is juxtaposed to PET-CT scans from 7/10/2023 (right) after cycle 2 including the pola-R-CHP regimen, showing no clear evidence of lymphoma in the liver. The top coronal cut shows improvement, and the transverse cut shows evidence of remission of the disease.




## CONCLUSIONS

- Pola-R-CHP PFS was 76.7% vs 70.2%[3] for RCHOP. In particular, in subset analysis, non-GCB (ABC Subtype) did particularly better (83.9% to 58.5% PFS).
- At this point, the patient has received 5 cycles of pola-R-CHP. As we continue to follow his improvement, this case illustrates the potential for a new treatment regimen in the setting of EBV+ PTLD with a possibility for lower rates of the risk of disease progression, relapse, or death than the current standard of care.

## REFERENCES

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[2]Shibusawa M, Kidoguchi K, Tanimoto T. Epstein-Barr Virus-Positive Diffuse Large B Cell Lymphoma. In: Gallamini A, Juweid M, editors. Lymphoma [Internet]. Brisbane (AU): Exon Publications; 2021 Dec 28. Chapter 2. Available from: https://www.ncbi.nlm.nih.gov/books/NBK578250/ doi: 10.36255/exon-publications.lymphoma.2021.ebv-dlbcl

[3]Tilly H, Morschhauser F, Sehn LH, et al. Polatuzumab vedotin in previously untreated diffuse large B-cell lymphoma. N Engl J Med 2022;386:351-63. DOI: 10.1056/NEJMoa2115304

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## CONTACT INFORMATION

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