

To List or Not to List:

A Case of a Highly Sensitized Kidney After Liver Transplant Candidate

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Background

- Reduction in pre-transplant circulating anti-HLA donor specific antibodies (DSA) is a known phenomenon after liver transplantation.
- In patients who require dual organs, combination with a liver transplant from the same donor may result in better outcomes.
- However, kidney after liver transplant may be associated with an increased risk of early rejection in highly sensitized patients
- There is no consensus in avoidance of antibodies post liver transplant in patients with strong historical anti-HLA antibodies who require a second organ after a liver transplant.

Case Study

- 68-year-old female with a cPRA of 100% after multiple pregnancies received a liver transplant in July 2023.
- Virtual crossmatch at the time of liver transplant showed multiple strong DSA (Figure 1; Pre).
- Her antibody pattern was consistent with presence of antibodies to the:
 - Aw4/Bw4-associated (80I, 82LR) and 163LS
 - DP DEAV, DQ 55R and DR 70D
- A physical crossmatch was not performed.
- 6 months post liver transplant, the patient developed severe acute kidney injury and required a kidney transplant.
- HLA antibody testing showed significant reduction in the DSA levels (Figure 1; Post).
- Eplet analysis of historical and current antibody pattern showed that the liver had successfully cleared antibodies to the donor's 80I, 82LR, DEAV and 55R eplets, but not the third party 163LS and 70D eplets for class I and II, respectively (Figure 2).
- Antigens associated with third party eplets listed as unacceptable Ags
 - 87% cPRA for the kidney after liver transplant.

Figure 1; DSA Pre and Post-Txp

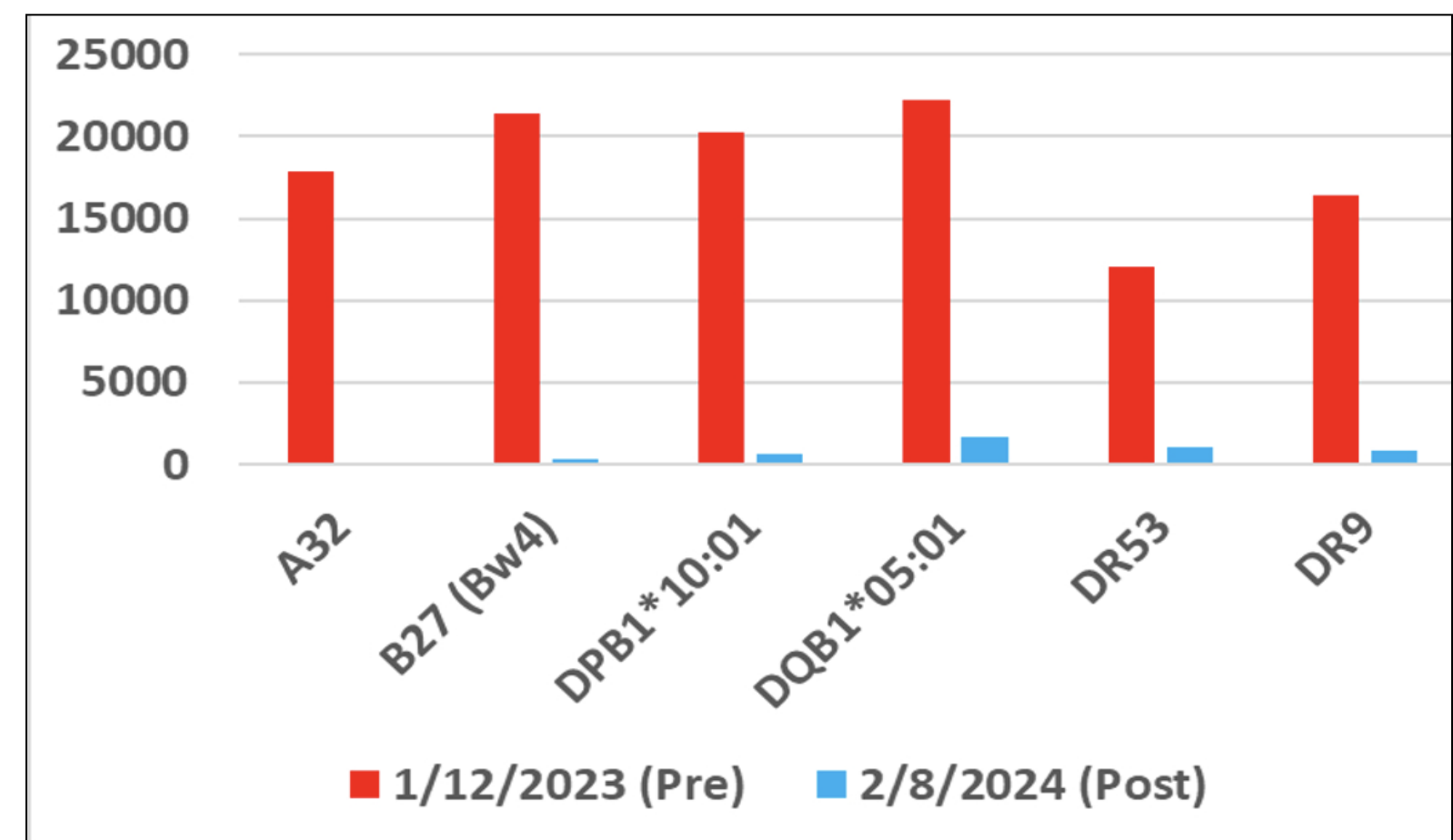
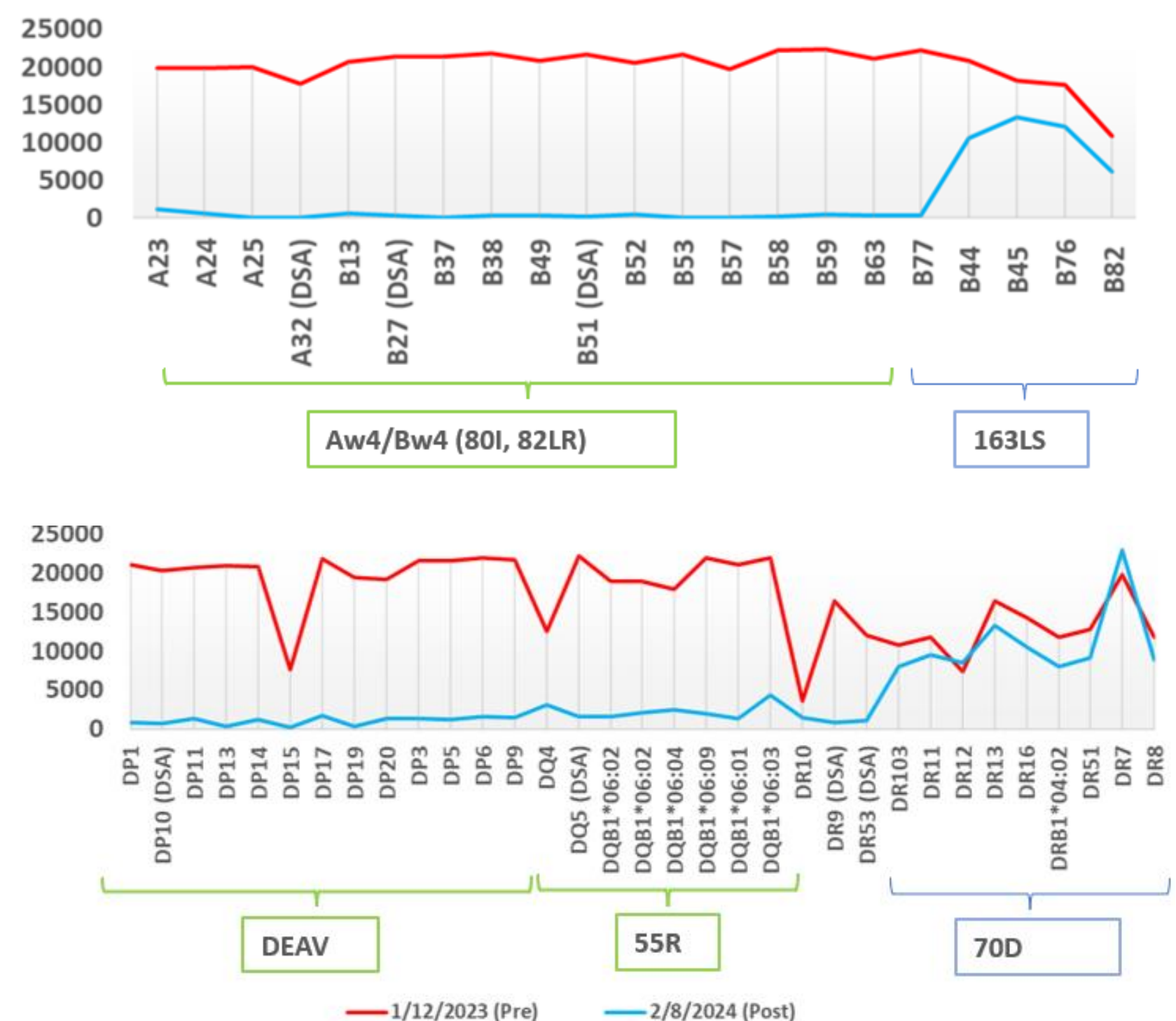


Figure 2; Class I and II Ab Pre and Post-Txp



CONCLUSION

- Liver is not efficient in clearing third party antibodies
- Eplet analysis allowed for more accurate determination of higher risk antibodies and unacceptable Ags in kidney after liver transplant candidate.