



Introduction

Graft versus host disease (GVHD) after solid organ transplantation is a rare but serious complication with high mortality.

GVHD typically occurs 1-8 weeks post liver transplantation (LT)

Steroids are first line treatment and data on second line treatment are less widely available

Case Presentation

54-years-old woman with history of alcohol-related cirrhosis had LT with a positive cytomegalovirus (CMV) and HCV male donor.

Discharged home with tacrolimus, mycophenolate mofetil, (MMF) and prednisone taper.

3 months later, she was admitted with diarrhea and acute kidney injury. C. difficile PCR was negative, CMV PCR was positive, and biopsies obtained during colonoscopy confirmed severe CMV colitis (A,B). She was treated with ganciclovir but symptoms did not improve and developed skin rash (C).

Rash initially thought to be due to ganciclovir, but skin biopsy was concerning for GVHD. Gastric and colon biopsies and peripheral blood chimerism (donor T cell 81.3%; normal <1%) confirmed GVHD (D).

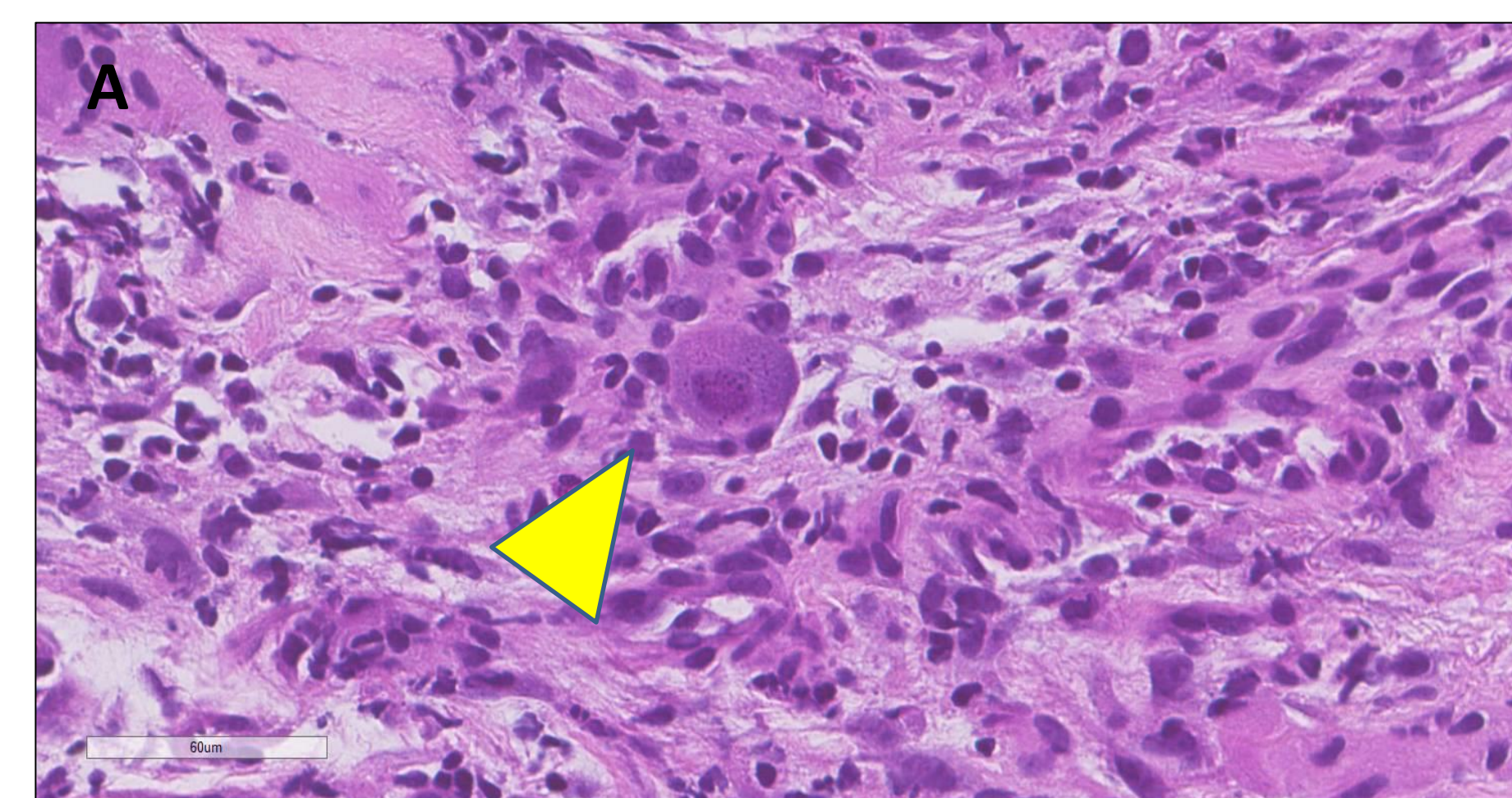
Failed steroid therapy and her course was complicated by posterior reversible encephalopathy syndrome and status epilepticus.

Developed severe neutropenia. Bone marrow biopsy showed 10.7% donor alleles and Infliximab was initiated. Stool output decreased and neutropenia resolved after 1 week and donor T cell decreased to 53.8%.

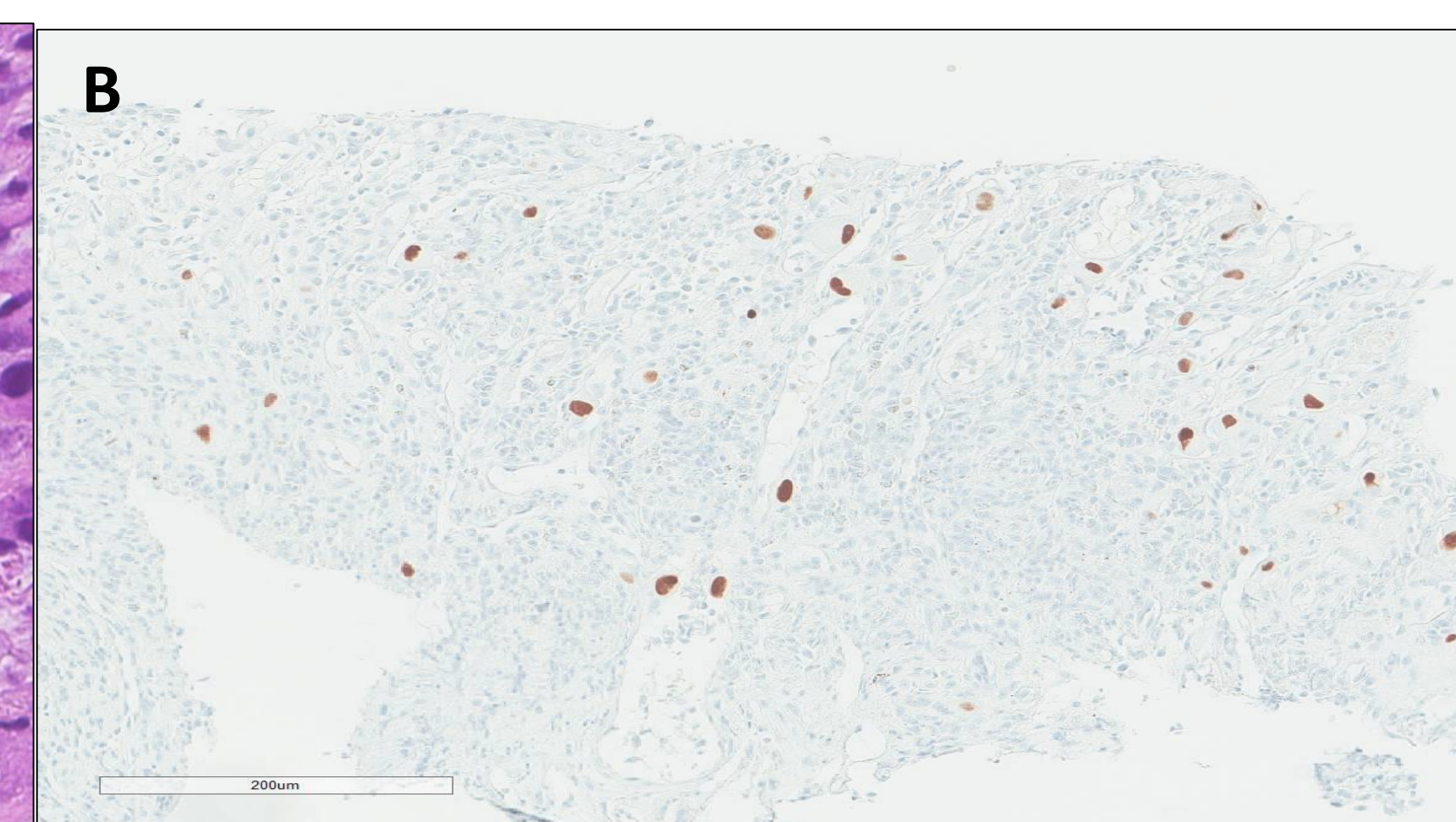
2 weeks later, diarrhea worsened and donor T cells increased to 70.9% in blood. Ruxolitinib and cyclosporin were started in addition to infliximab but she developed septic shock and expired.

Histology and immunology results

CMV inclusions in colon



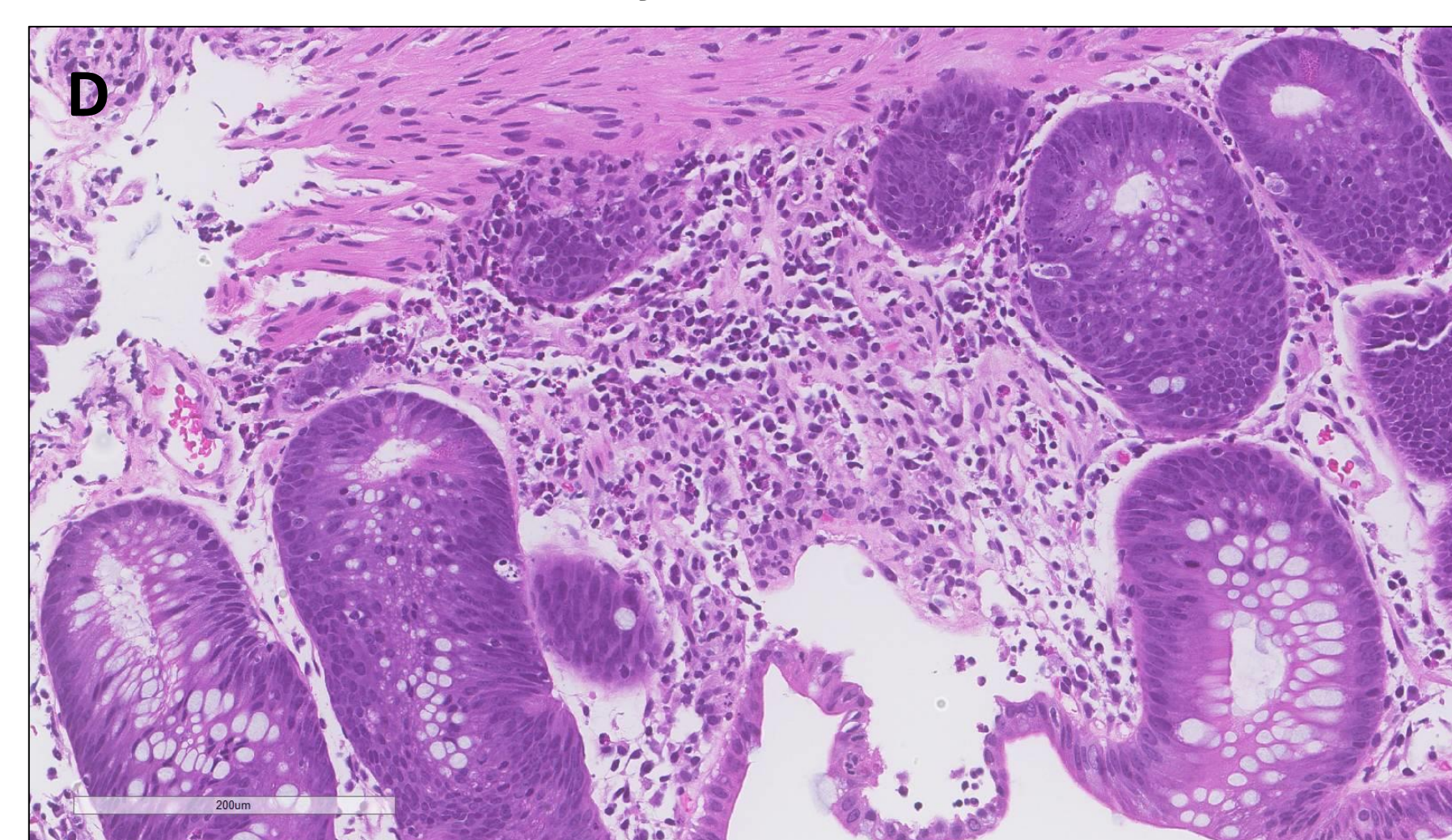
CMV immunostain in ileum



Skin rash

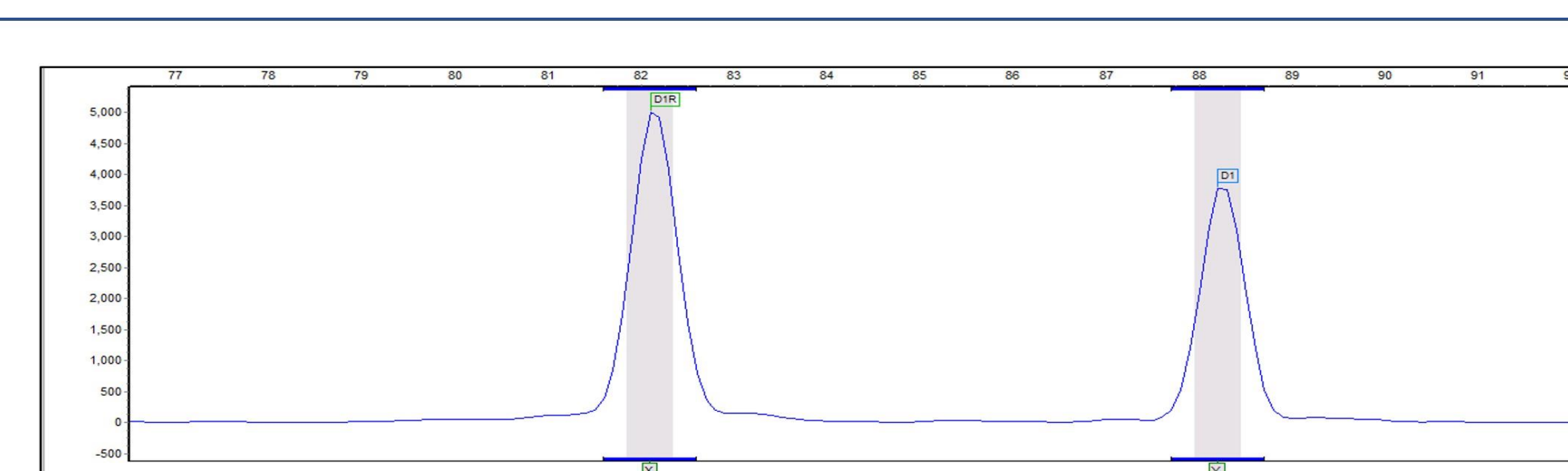


Focal crypt drop out

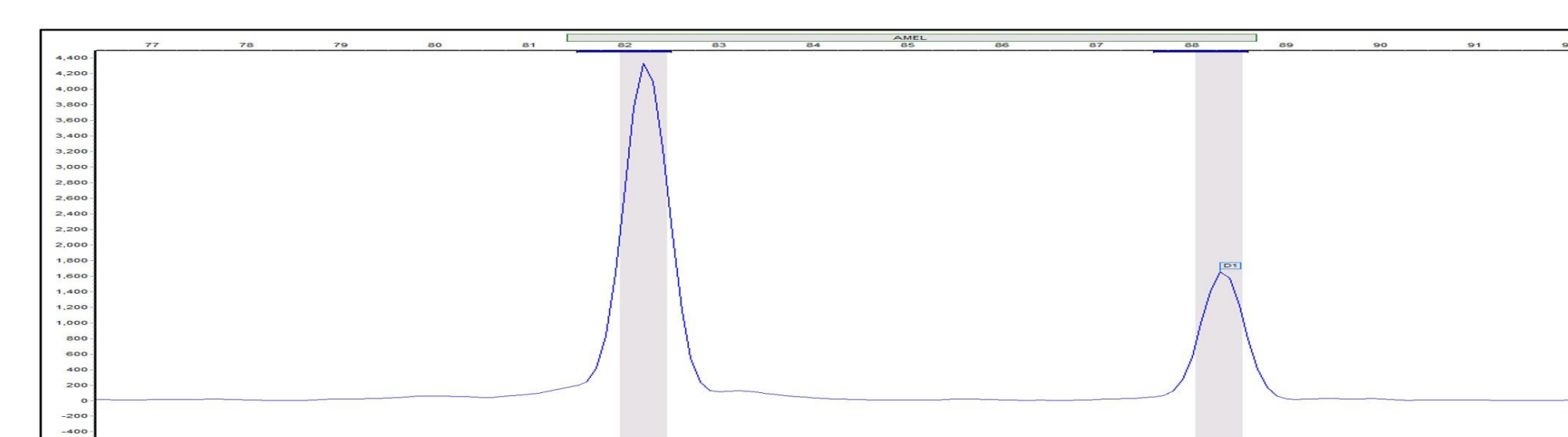


Chimerism analysis

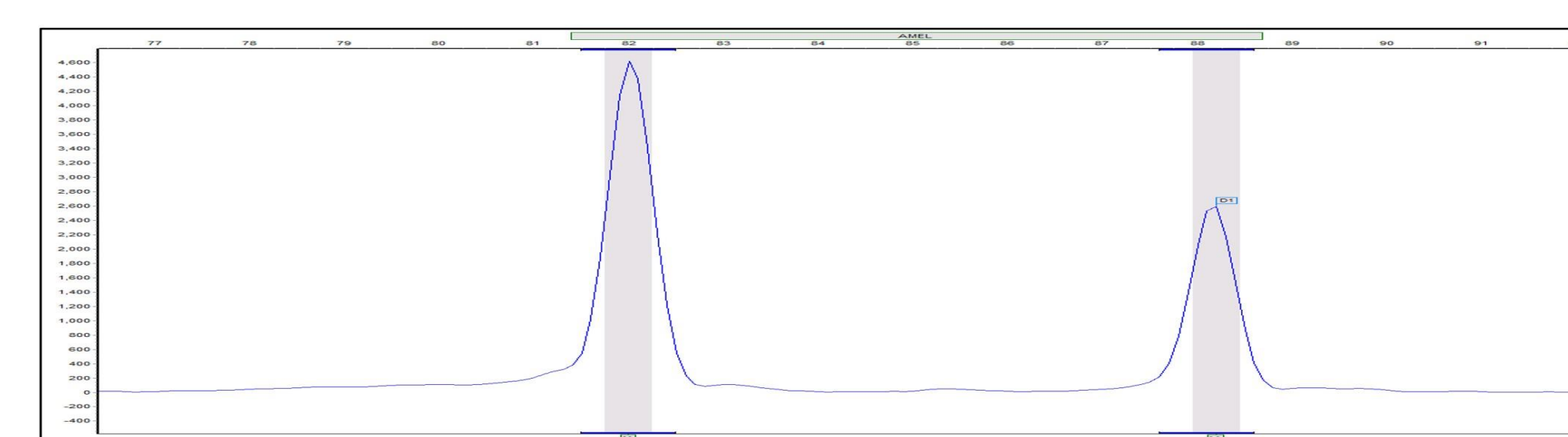
Donor T cells constituted 81.3% of T cells at time of diagnosis



11 days after treatment with infliximab: Donor T cells decreased to 58.5% of T cells



26 days after treatment with infliximab: Donor T cells increased to 70.9%



Take Home Message

- Biopsy and chimerism analysis might both be needed for diagnosis of GVHD in patients with low pretest probability
- Post LT GVHD that is refractory to steroid therapy may respond to infliximab.
- Infection with C Diff, drug reactions, and CMV infection have overlapping findings or symptoms as liver GVHD
- Sepsis is the most common cause of mortality in LT GVHD

References

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