

CONTROVERSY BETWEEN CYCLIC PARENTERAL NUTRITION AND TOTAL PARENTERAL NUTRITION

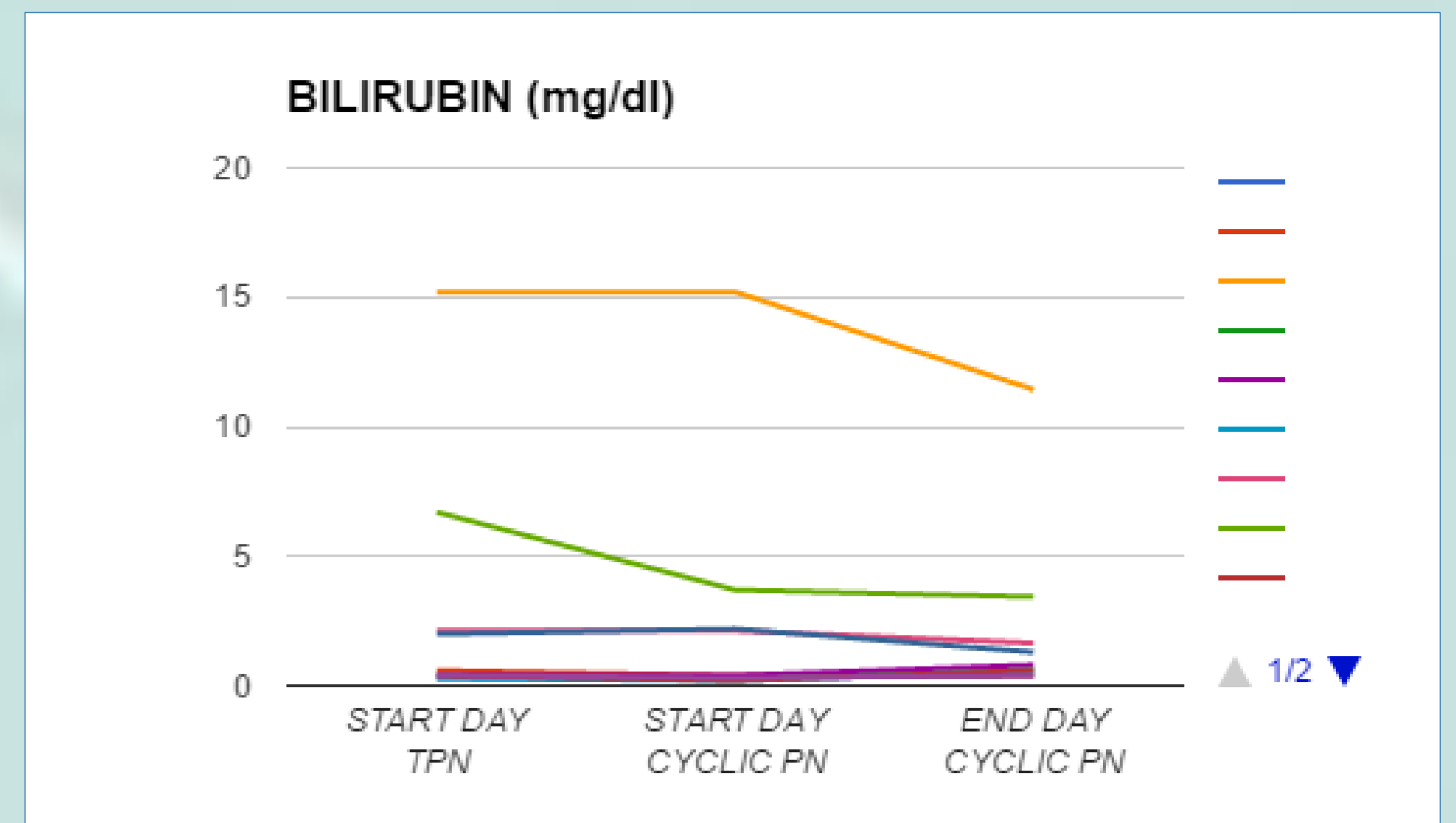
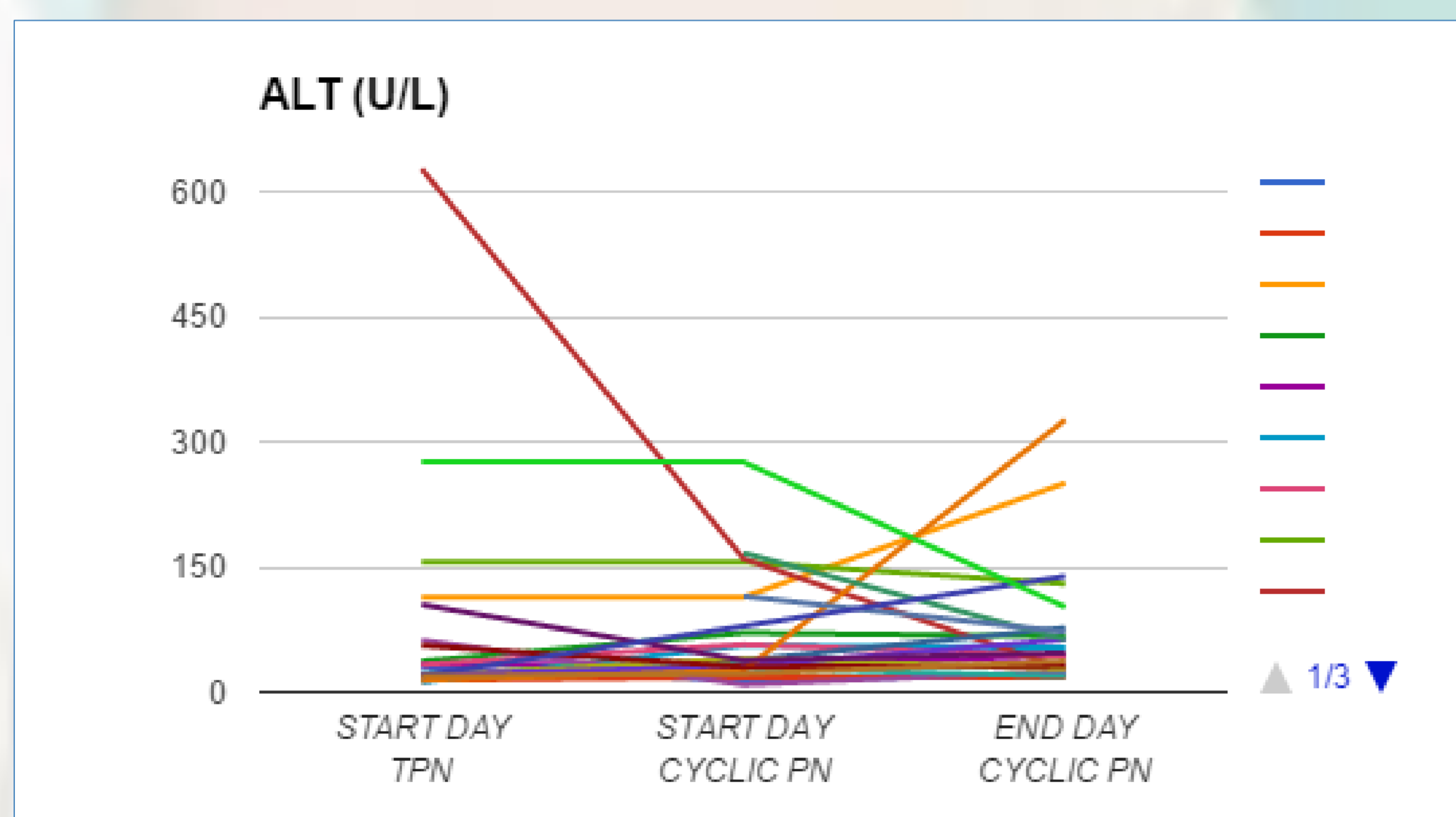
S. Hernández Rojas¹, E. Ramos Santana¹, I. Plasencia García¹,

C. Fraile Clemente¹, M. Suárez González¹, R. Mesa Expósito¹, J. Merino Alonso¹.

¹Hospital Nuestra Señora de la Candelaria, Farmacia Hospitalaria, Santa Cruz de Tenerife, Spain

Background

Patients receiving total parenteral nutrition (TPN) long-term often present some complications as liver and biliary disorders. The most common hepatic markers are elevated bilirubin, alkaline phosphatase (AP), gamma glutamyl transpeptidase (GGT) and transaminases (ALT/AST). Strategies to face these complications are setting caloric intake of TPN and cyclic infusion.

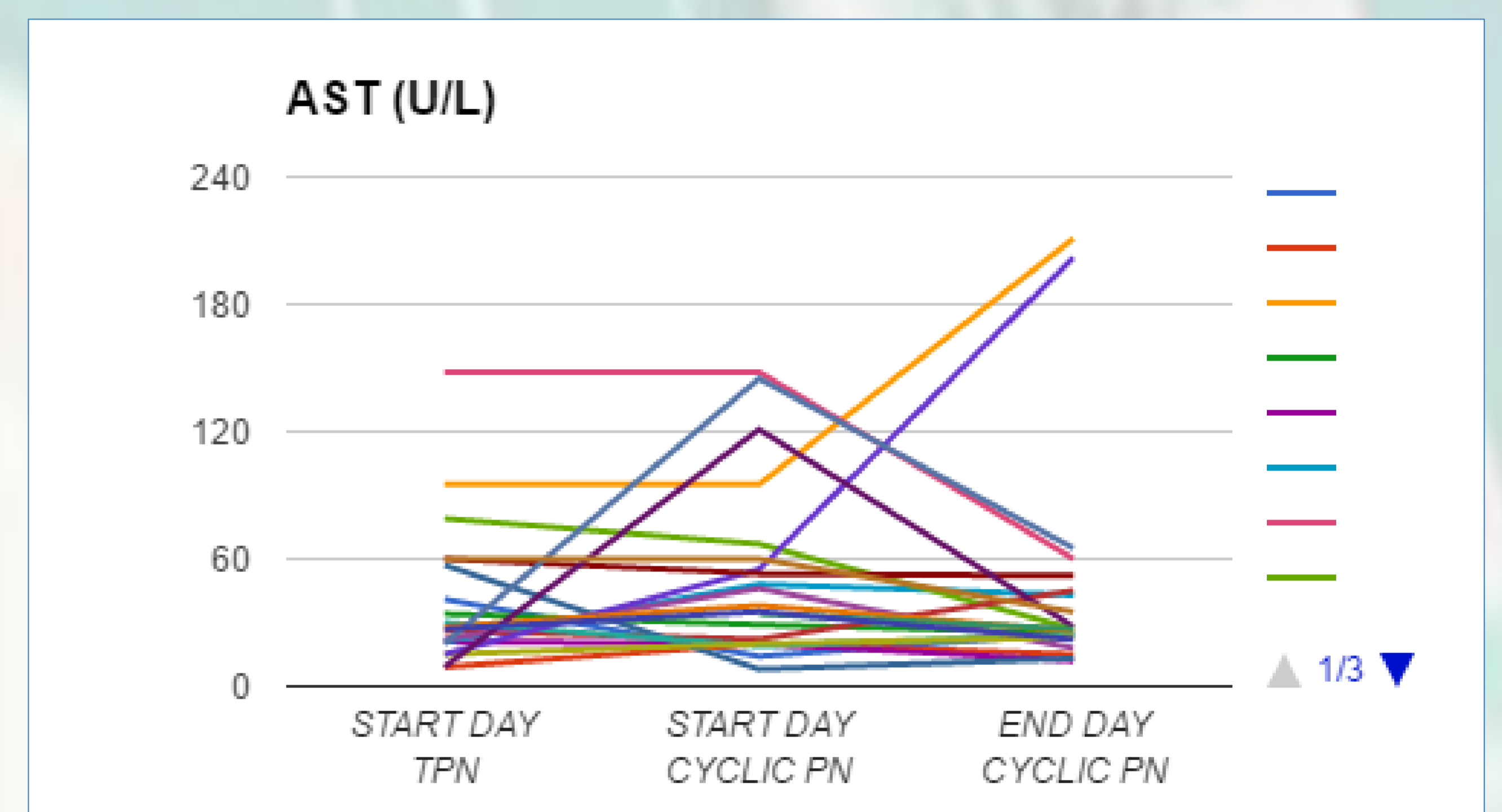


Purpose

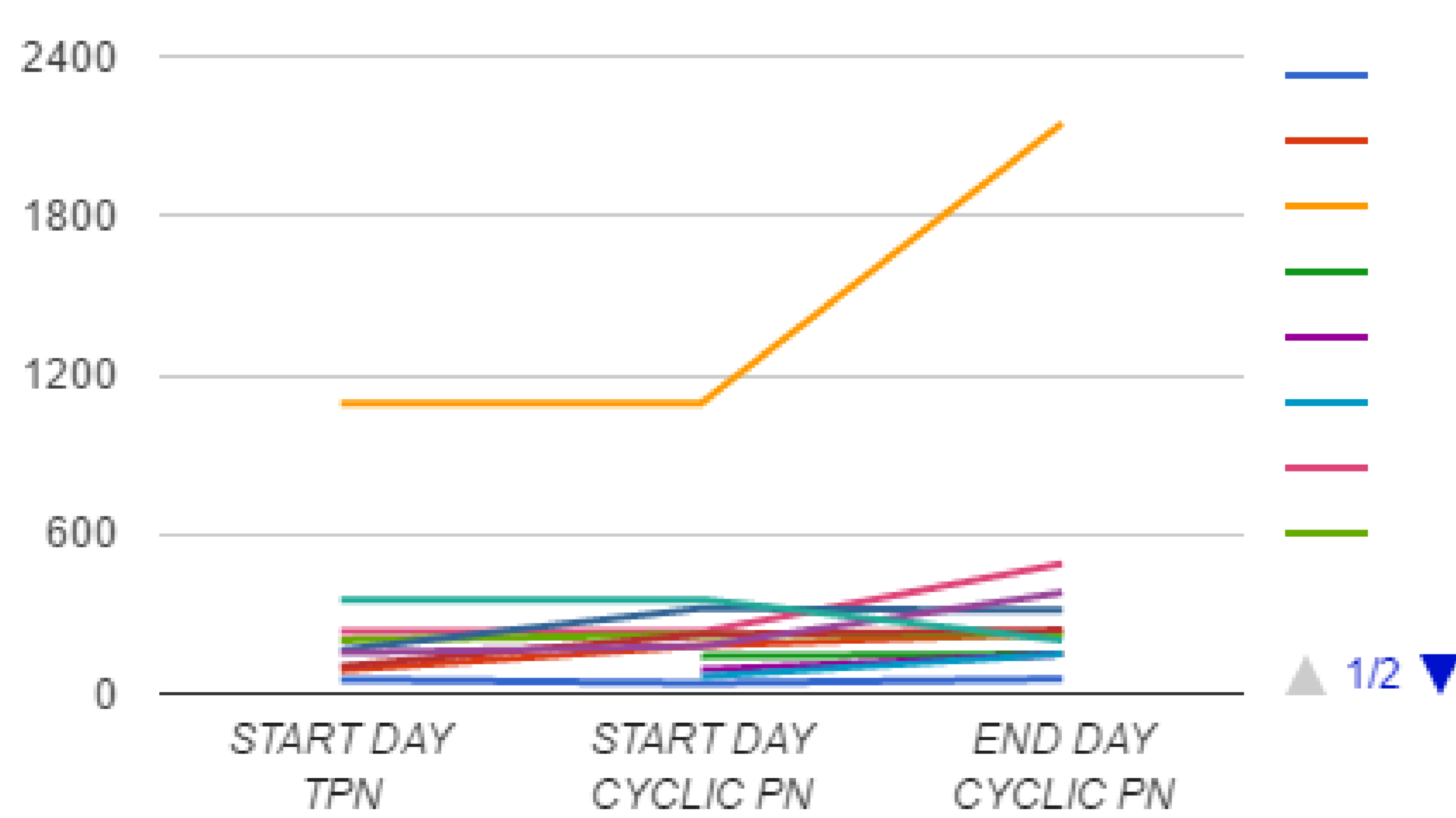
Analyze the variation in liver enzymes in passing from a continuous infusion of 24 hours to a cyclic PN.

Material and methods

Retrospective study conducted between July and September 2016. Included 23 patients with TPN for more than seven days and that had changed the infusion time. Following data was collected: starting day of the PN, start day and end day of cyclic PN, and variation of bilirubin, GGT, ALT/AST and AP.



ALKALINE PHOSPHATASE (U/L)



Results

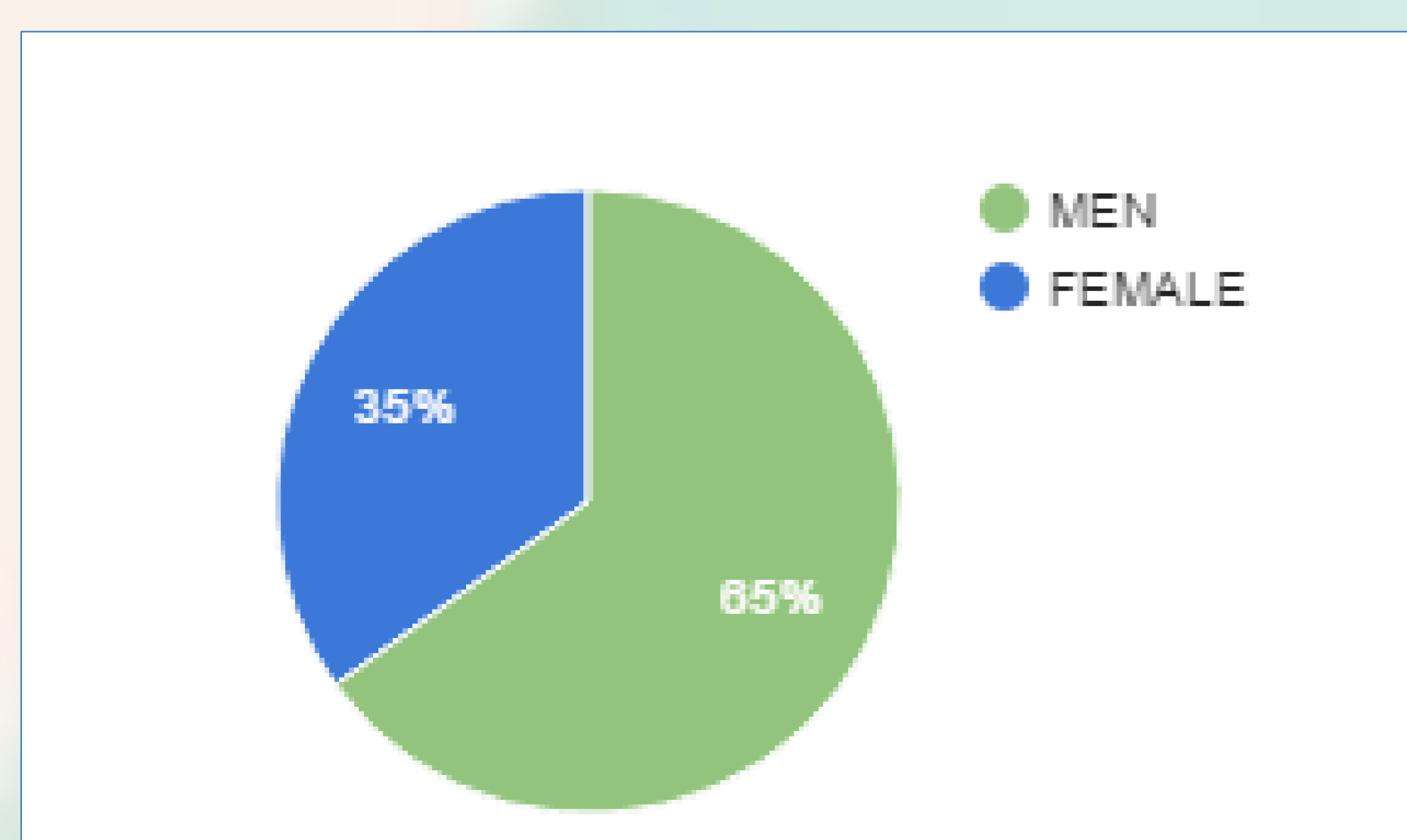
65% were men with a mean age of 56 years and 35% female with a mean of 51 years.

Mean time taken to start cycling was 9.3 days, with a mean of 20.39 days with TPN and a mean of 11.09 days of cyclic PN.

When starting the cyclic PN no data was available in a 52.17% about bilirubin, 47.82% in the case of alkaline phosphatase, 8.69% in AST and 4.35% both in the case of GGT as ALT.

After the PN:

- 83.33% increased their levels of alkaline phosphatase and just 16.67% decreased levels.
- 66.67% decreased their AST compared to 33.33% increased their levels.
- 63.64% increased their levels of gamma-GT versus 36.36% decreased.
- 54.55% increased their levels of bilirubin, 36.6% decreased and 9.09% did not change.
- 50% increased their levels of ALT versus 45.45% decreased and 4.55% did not change



Conclusion

Based on the results obtained from the sample, our population did not benefit from cyclic PN, following increasing levels of enzyme markers of cholestasis. We should consider whether the selection of patients to cycle the PN is correct, in several patients the data of enzymes of cholestasis were not available or were previously raised at the beginning of the TPN, which could be indicative of a cause of intrahepatic cholestasis.

