



Children's Hospital Colorado  
Heart Institute

# Evaluation of Aspirin Responsiveness Testing in Patients After Treatment of

## Acute Kawasaki Disease (KD)

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### Background

- Kawasaki Disease (KD) is an inflammatory illness associated with coronary artery vasculitis
- Treatment for KD is IVIG and aspirin; Infliximab is used for those who are IVIG resistant or have coronary artery dilation (Z-score >2.5) at diagnosis
- Due to persistent inflammation, KD patients may be at higher risk for aspirin non-responsiveness.

### Hypothesis

Patients with KD who require infliximab (for presumed IVIG-refractory inflammation or for coronary artery involvement at presentation) will also demonstrate aspirin non-responsiveness when tested with thromboelastography (TEG) with platelet mapping.

### Methods



- Retrospective cohort analysis of 67 individuals admitted to Children's Hospital Colorado with KD from May 2016-Jan 2019



- Z-scores (LMCA, LAD, RCA) collected admission & discharge
- Lab values (WBC, CRP, ESR, platelet count) collected admission, discharge, & follow-up
- TEG with platelet mapping collected at follow-up (≥60% arachidonic acid inhibition is "responsive to aspirin")



- Pairwise comparison with two sample t-test for continuous values
- Fisher exact test for categorical values
- Paired t-test for coronary Z-scores from admission & discharge

### Results

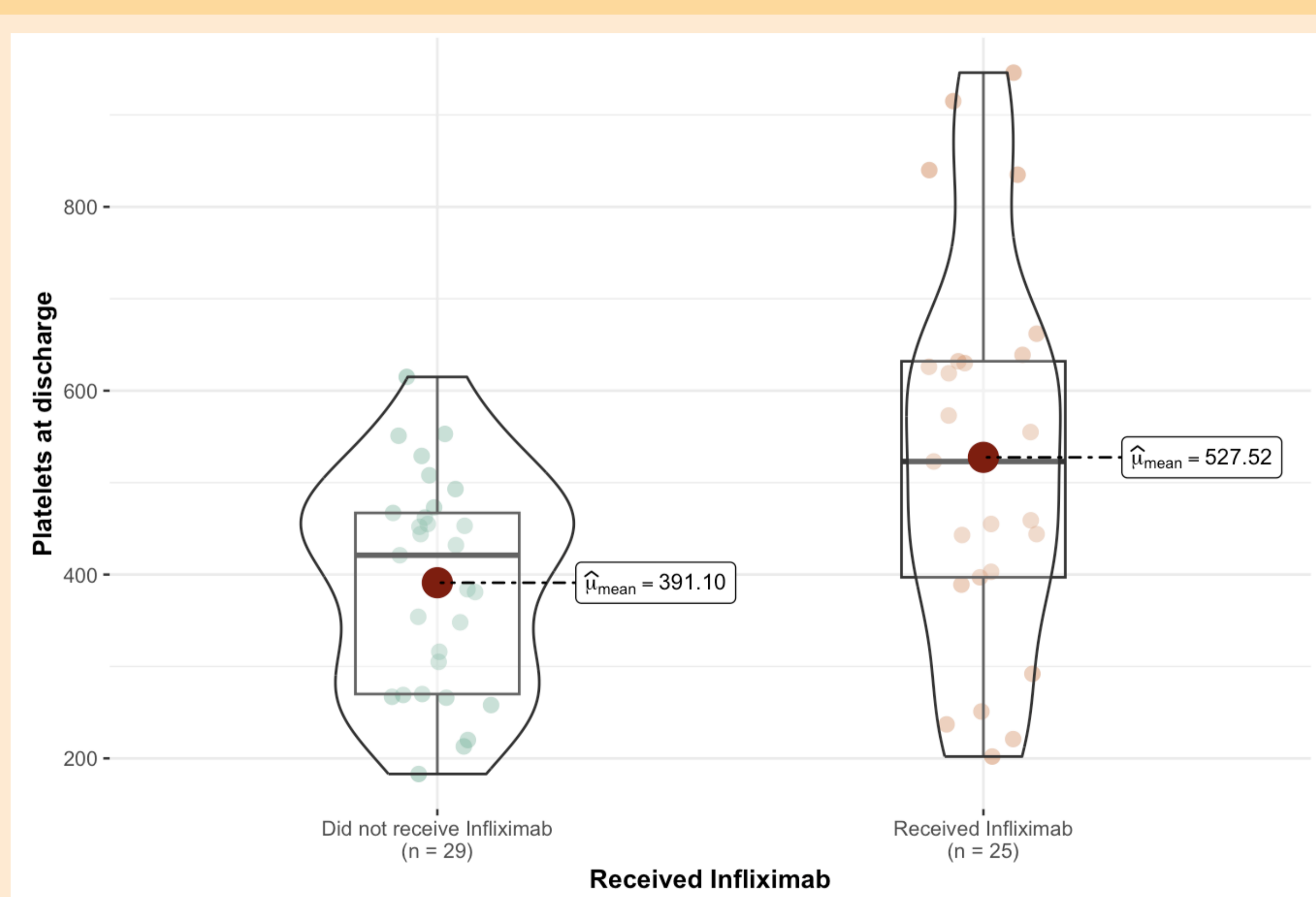


31 patients received infliximab

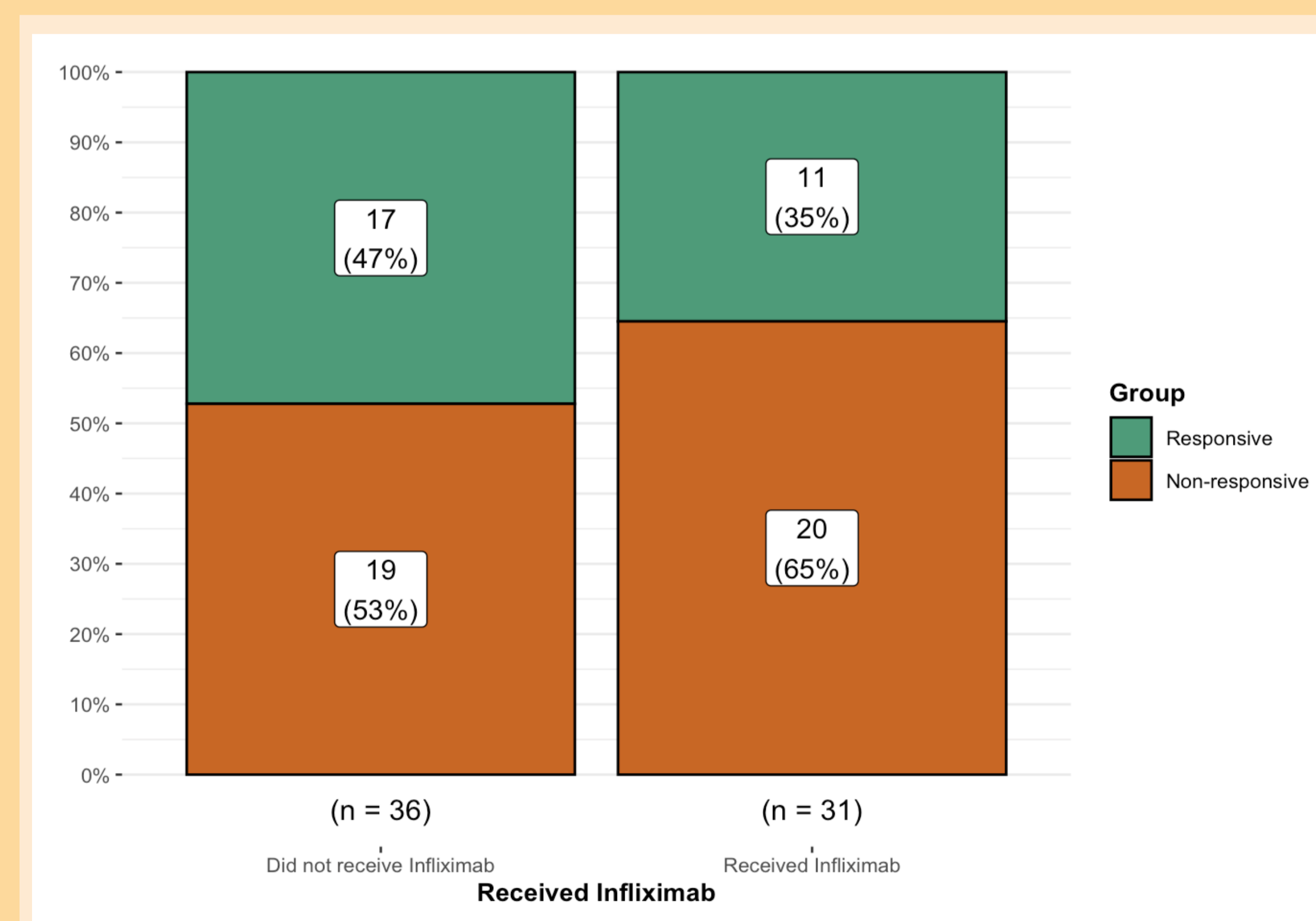


36 patients did not receive infliximab

No statistical demographic or weight difference between two cohorts



Those who received infliximab had **higher platelets at discharge** (p=0.007) and **WBC at follow-up** (p=0.038)



**No difference in aspirin responsiveness** between groups. 58% of total patients were nonresponsive at follow-up

Patients who received infliximab had **significantly reduced coronary artery Z-scores** at discharge

- LMCA Z-score reduction  $1.03 \pm 1.27$  to  $0.58 \pm 1.13$  (p=0.021)
- LAD Z-score reduction  $2.78 \pm 3.63$  to  $1.92 \pm 3.31$  (p<0.001)

### Conclusions

- Aspirin responsiveness did not differ between groups
- High overall aspirin non-responsiveness observed (58%)
- Patients requiring infliximab had higher platelet counts at discharge and WBC counts at follow-up
- Z-score decrease observed with infliximab

### References

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