ACTIVE AND PLACEBO TREATMENT

DATA ANALYSIS

Overview

Study Group

364

Active Group

392

Placebo Group

Responders and Nonresponders

Active Group	No responders, **364** nonresponders
Placebo Group	**7** responders, **385** nonresponders

Key Focus: Comparing blood marker changes between treatment groups and between responders/nonresponders

Blood Marker Analysis – Active vs Placebo

Statistical Test: Mann-Whitney U test to compare blood marker changes

Key Findings:

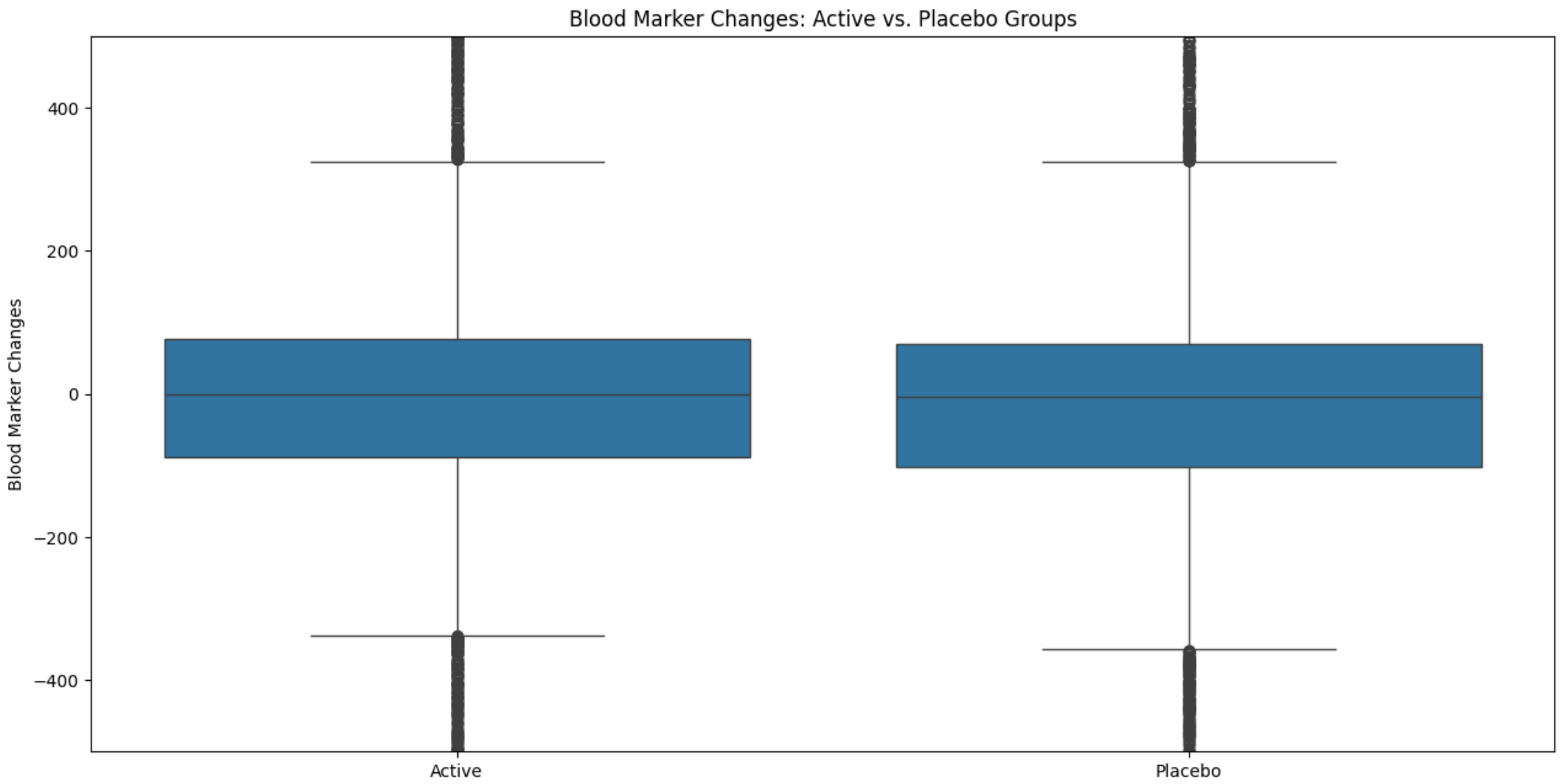
CCL2
Significant difference
(p = 0.0224)

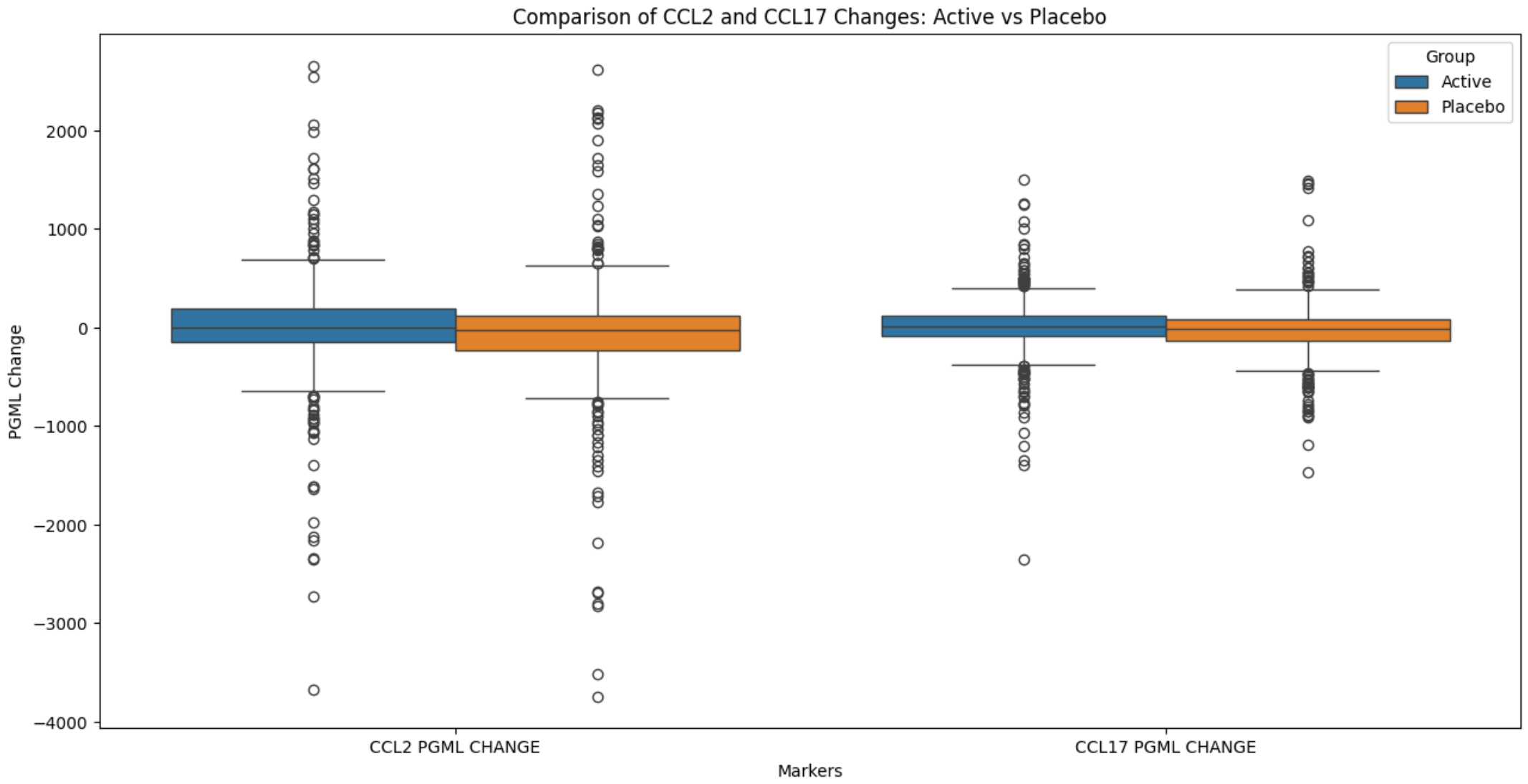
CCL17
Significant difference
(p = 0.0365)

Showed statistically significant differences between Active and Placebo groups could be potential biomarkers for treatment efficacy

CXCL10 & TSLP

Need further investigation


Blood Marker Changes: Active vs. Placebo Groups
Blood Marker Changes
400
200
0
−200
−400
Active
Placebo


Comparison of CCL2 and CCL17 Changes: Active vs Placebo
Group
Active
Placebo
PGML Change
2000
1000
0
−1000
−2000
−3000
−4000
CCL2 PGML CHANGE
CCL17 PGML CHANGE
Markers

Responders vs Nonresponders within Active Group

Active Group

CCL2 showed a significant difference between Responders and Nonresponders ($p = 0.007$) no responders in the Active group, so insights are limited, but CCL2 could indicate treatment response in future studies.

Responders vs Nonresponders within Placebo Group

Placebo Group

No significant differences in blood markers between Responders and Nonresponders suggests clinical improvements in the placebo group are not tied to blood marker changes.

Next Steps

Visualizations	Create more detailed visualizations of significant markers (CCL2, CCL17, CXCL10, TSLP)	
Correlation Analysis	Tells why these markers differ.	
Advanced Analysis	• Multivariate analysis • Logistic regression models	Help to identify which markers are most predictive of treatment response and explain the interactions between specific markers and the treatment.
Clinical Relevance	Investigate if the identified markers (CCL2, CCL17) are clinically meaningful	