

P3.189: Lorlatinib-Associated Hyperlipidemia and Subsequent Cardiometabolic Events in ALK-Rearranged NSCLC

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INTRODUCTION

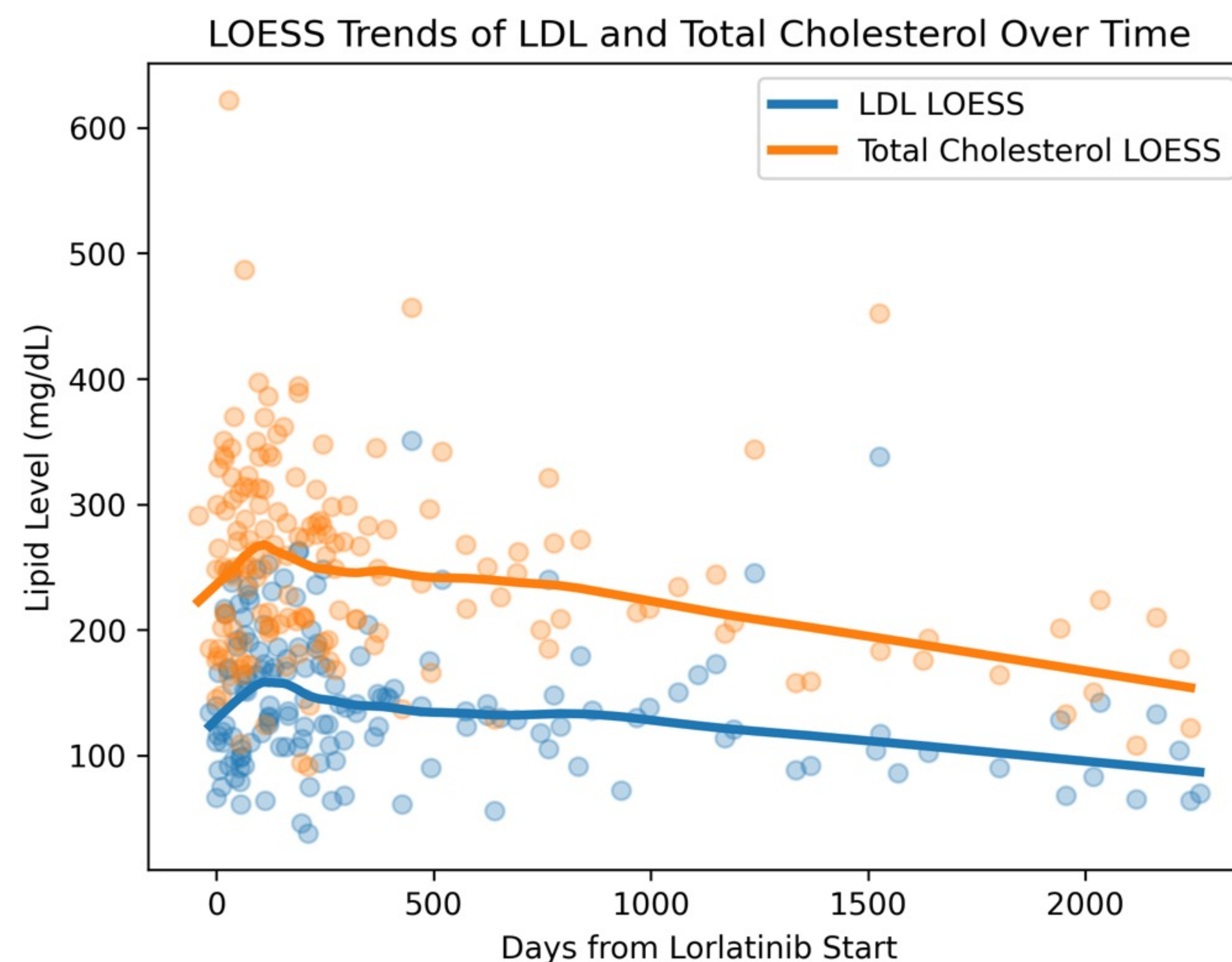
- Lorlatinib is used for treatment of patients with ALK-rearranged NSCLC and is associated with hyperlipidemia.
- There is paucity of data on cardiometabolic outcomes and optimal management of hyperlipidemia.
- In this study, we report real-world short-term and long-term cardiometabolic outcomes of patients treated with lorlatinib at our institution.

METHODS

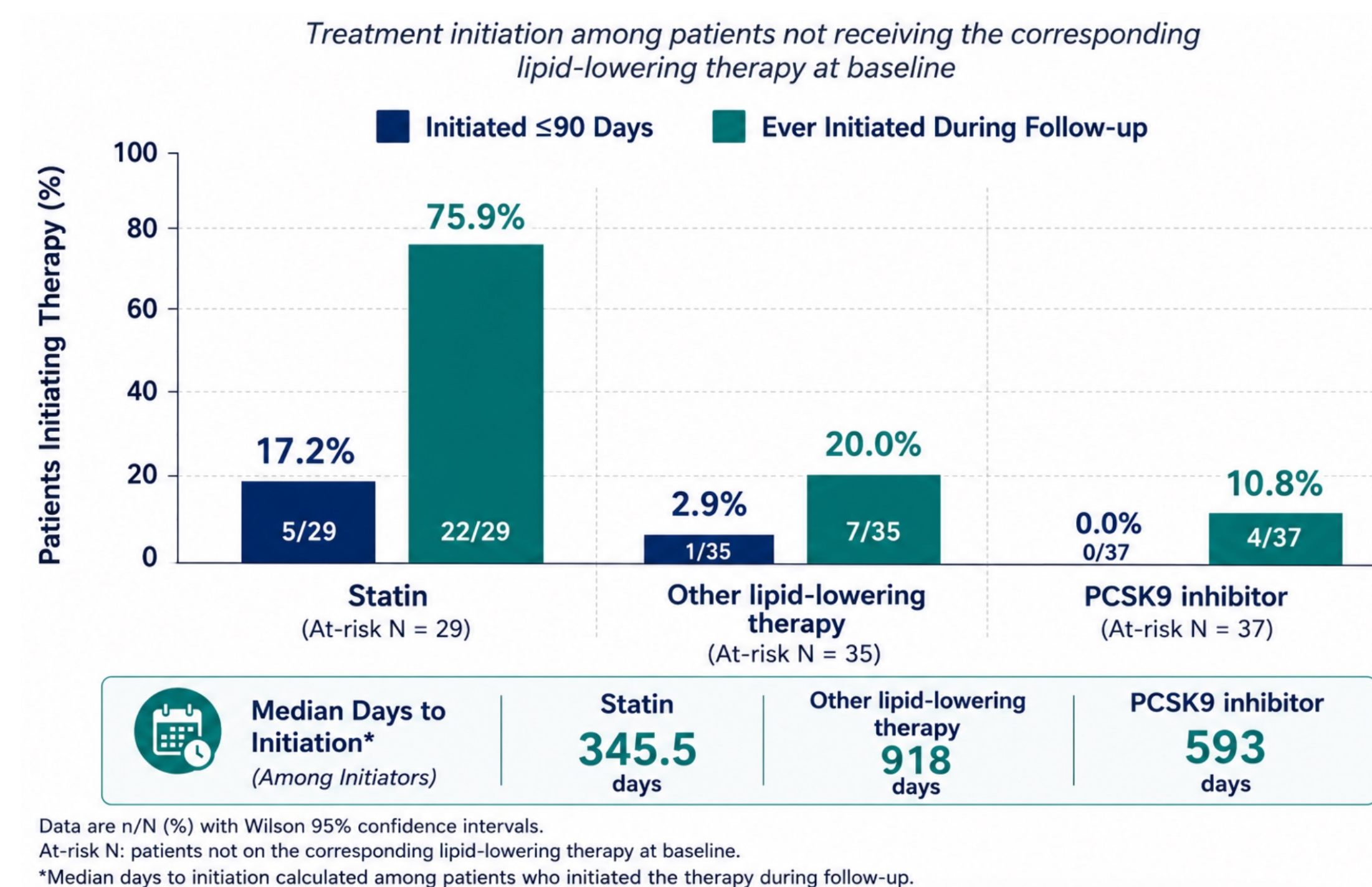
- This was a retrospective study of patients treated with lorlatinib at Rush University Medical Center from 2017-2025.
- Patients were identified via pharmacy records.
- Collected data included baseline and subsequent lipid profiles, lipid-lowering therapies and cardiovascular events.
- Analyses included longitudinal mixed-effects modeling, time-to-event analyses, and Fisher's exact test.

RESULTS

- Thirty-seven patients were included with median age of 59.8 years.
- Most were male (n=19, 51.4%), white (n= 22, 59.5%), without history of tobacco use (n=25, 67.6%).
- Evaluable patients had baseline or first on-treatment lipid values ≤14 days.
- CNS metastases were present in 5 (13.5%) patients.
- During follow-up, 11 (29.7%) patients died; among decedents, the median time from lorlatinib start to death was 109 days (IQR 76–334).

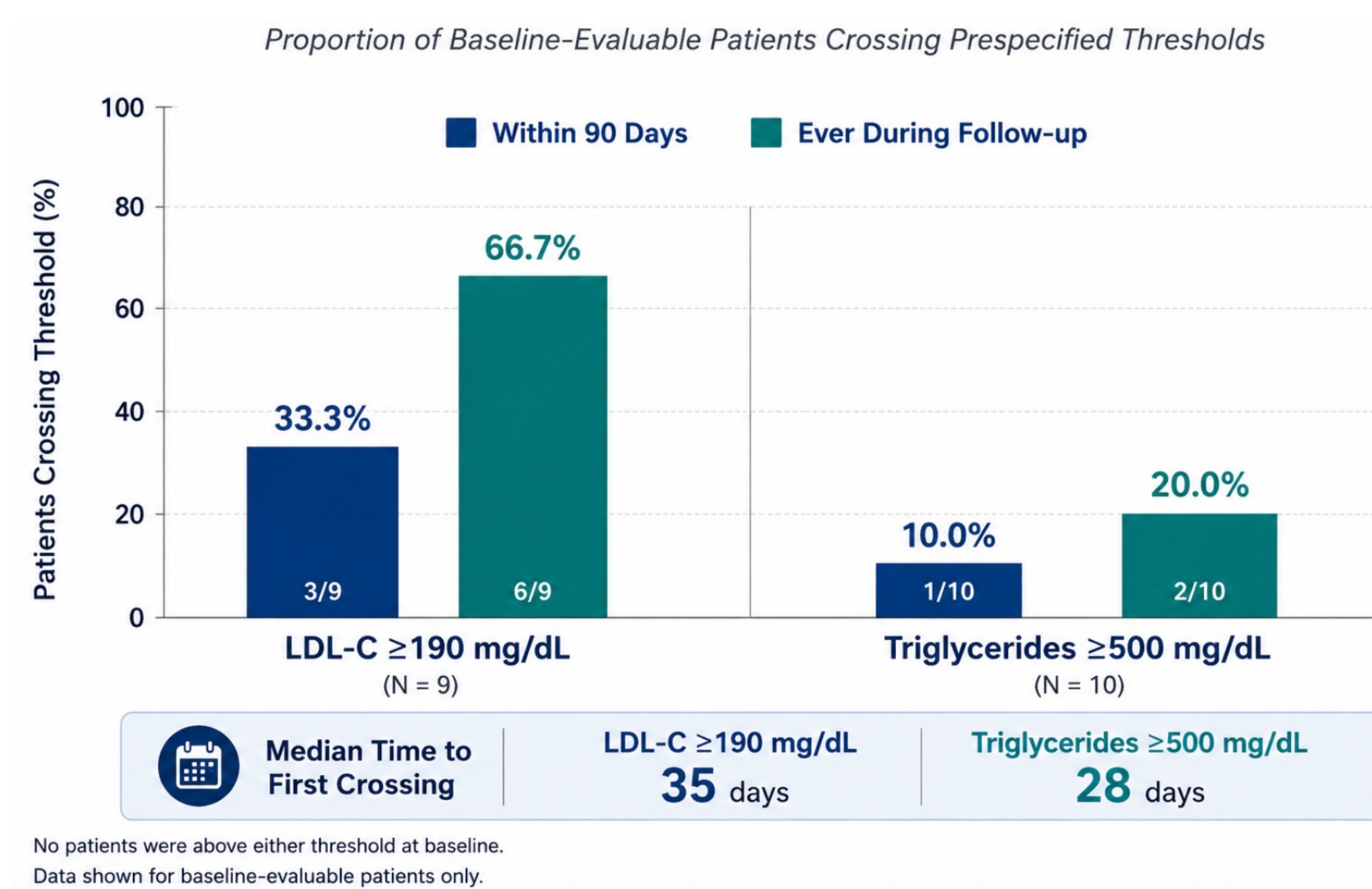


Longitudinal trajectories of LDL and total cholesterol following lorlatinib initiation: Scatter points represent individual LDL and total cholesterol measurements. Solid lines represent locally weighted scatterplot smoothing (LOESS) curves.



Data are n/N (%) with Wilson 95% confidence intervals.
At-risk N: patients not on the corresponding lipid-lowering therapy at baseline.
*Median days to initiation calculated among patients who initiated the therapy during follow-up.

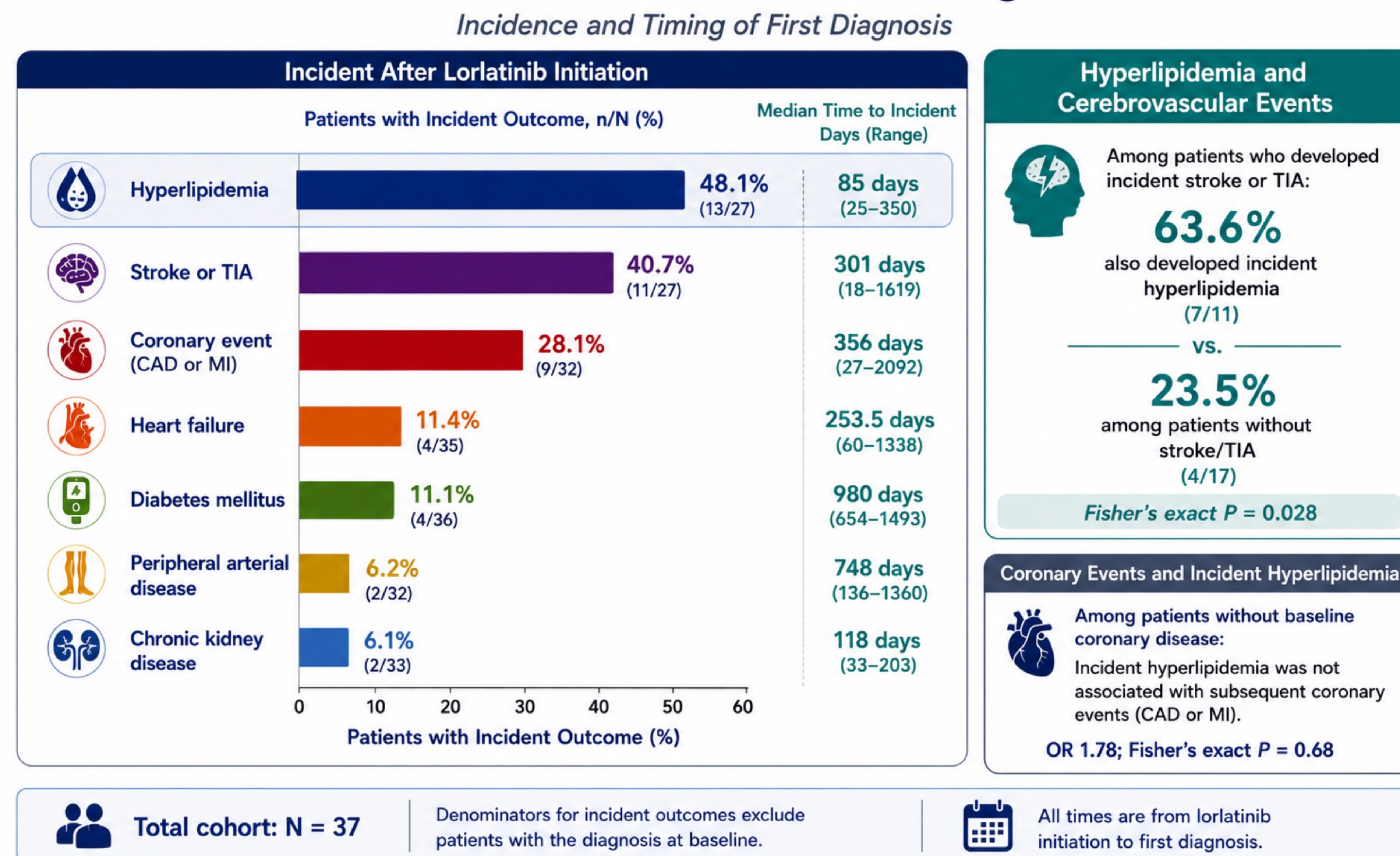
Initiation of lipid-lowering therapy.



No patients were above either threshold at baseline.
Data shown for baseline-evaluable patients only.

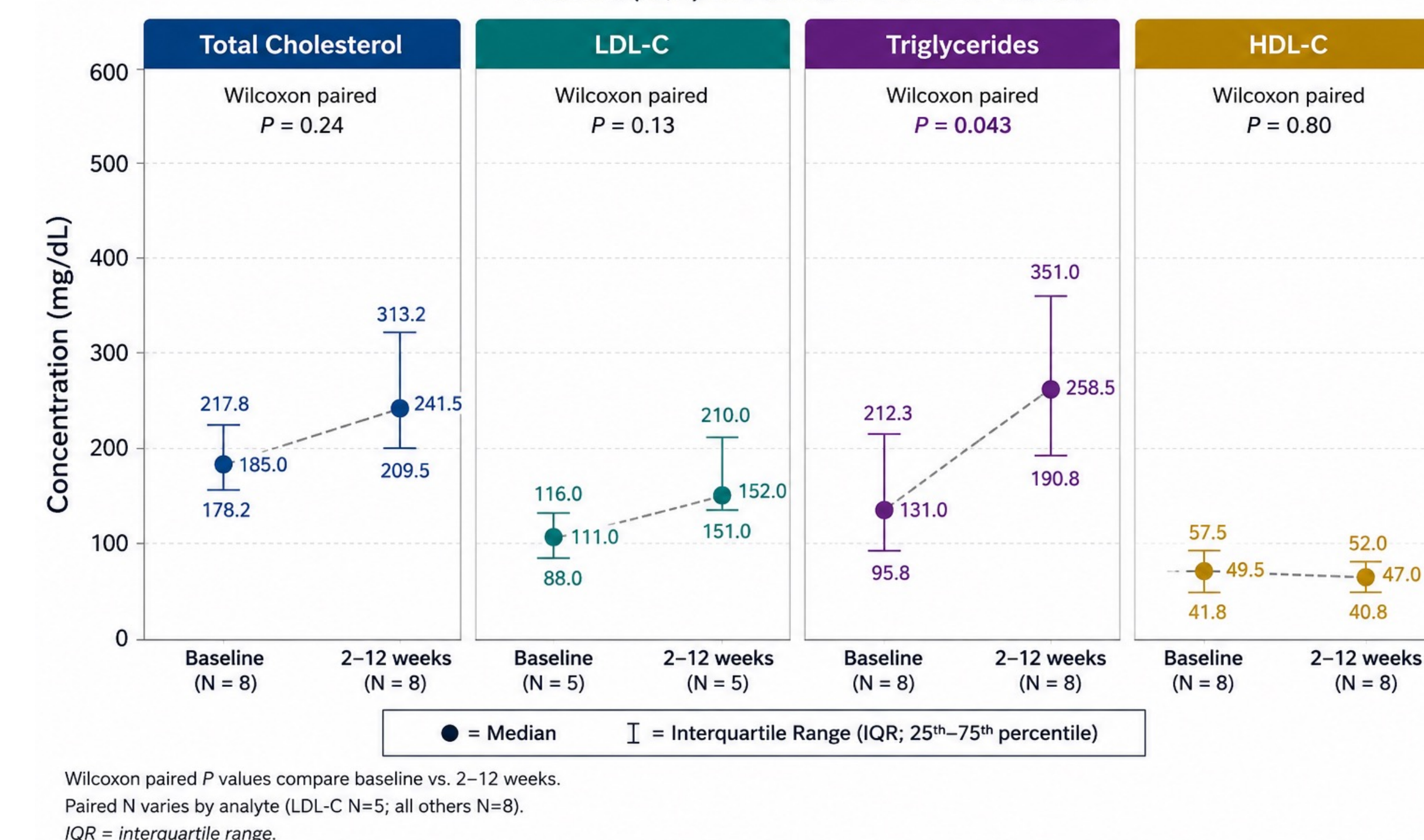
Clinically significant lipid elevations following lorlatinib initiation.

Incident Cardiometabolic Outcomes Following Lorlatinib Initiation



CAD = coronary artery disease; MI = myocardial infarction; TIA = transient ischemic attack.

Early Changes in Lipid Parameters After Lorlatinib Initiation



DISCUSSION AND CONCLUSION

- Lorlatinib use was characterized by early-onset hyperlipidemia, subsequent intensification of lipid-lowering therapy, and cardiometabolic events later during treatment.
- These findings underscore the importance of early lipid surveillance and longitudinal monitoring for downstream cardiovascular complications.

CONTACT AND DISCLAIMERS

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References available upon request.
OpenAI was used to assist with creation of some visuals.

