

Impact of Triglyceride Levels Beyond Low-Density Lipoprotein Cholesterol After Acute Coronary Syndrome in the PROVE IT-TIMI 22 Trial

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Background and Objectives

- The PROVE IT-TIMI 22 trial demonstrated that LDL-C < 70 mg/dL was associated with greater CHD event reduction than LDL-C < 100 mg/dL after ACS.
- We evaluated the impact of TG in the PROVE IT-TIMI 22 trial, reasoning that if high LDL-C and TG increases CHD risk more than isolated high LDL-C, then the combination of low on-treatment LDL-C and TG would be associated with reduced CHD risk compared to low LDL-C (< 70 mg/dL) alone.

Methods

- **Study Population:**

4,162 patients in The Pravastatin or Atorvastatin Evaluation and Infection Therapy-Thrombolysis In Myocardial Infarction 22 (PROVE IT-TIMI 22) trial

- **Blood Sampling:**

Plasma samples for lipids, lipoproteins, HS-CRP at baseline, 30 d, and 4, 8, 16, 24 months

- **Composite Endpoint:**

Death, myocardial infarction (MI) or recurrent ACS between 30 d and 2 yr follow-up

Methods (2)

Statistical Analysis

Kaplan-Meier event rates after censoring events within 30 days of initial ACS event.

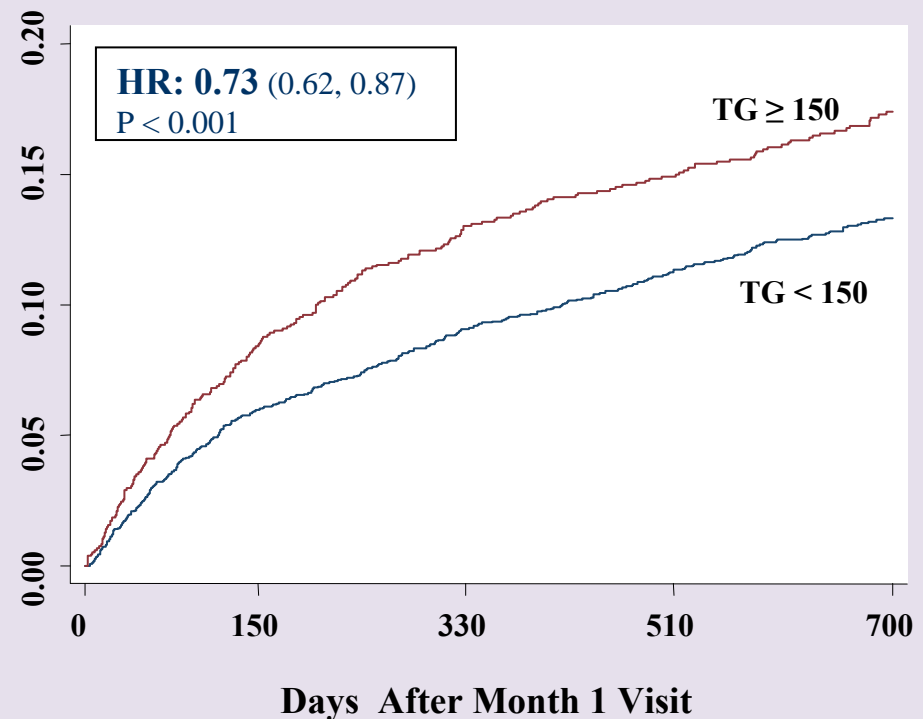
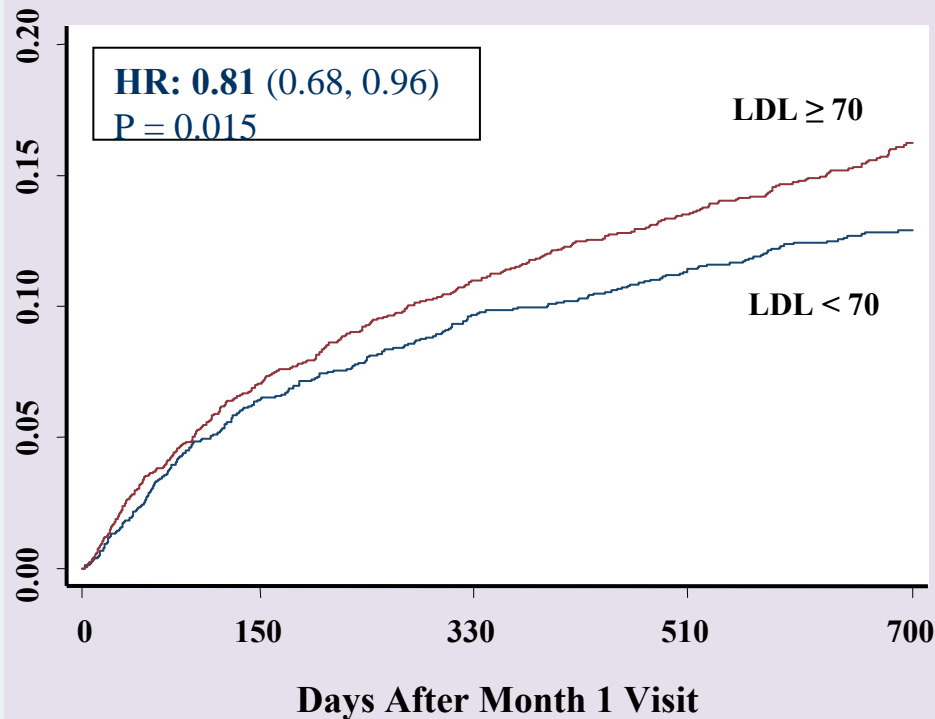
Cox proportional hazards model:

Age, gender, DM, HTN, obesity (BMI \geq 30 kg/m²), cigarette smoking (active), low HDL-C to estimate effect of on-treatment LDL-C (70 mg/dL) and TG (150 mg/dL) within 30 days *or* 4 months of initial ACS event.

CRP (2 mg/L) included to assess triple goal attainment

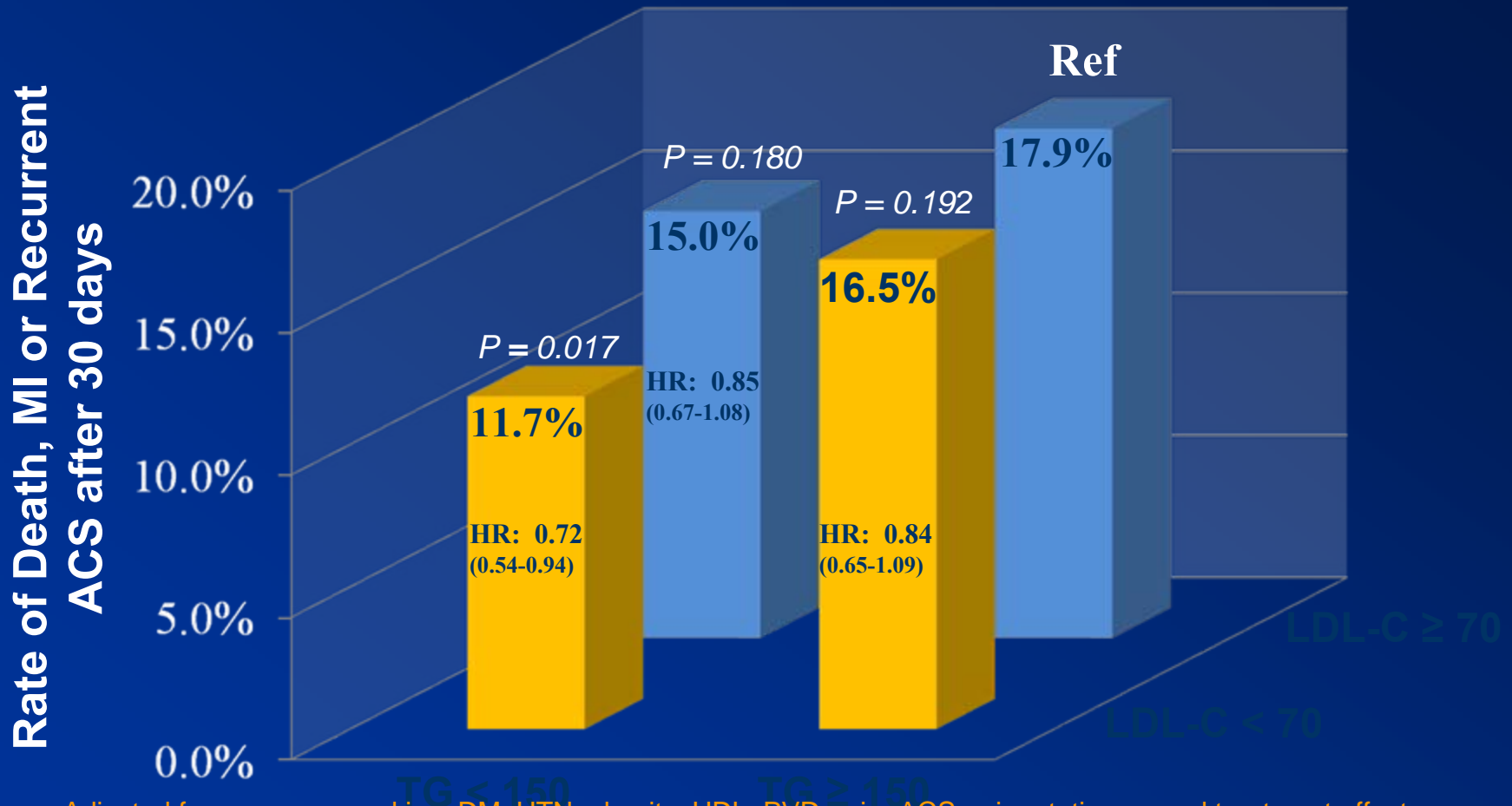
Results

Kaplan-Meier Estimates Based on LDL-C < 70 mg/dL or TG < 150 mg/dL Between 30 days and 2 yr Follow-Up



Results

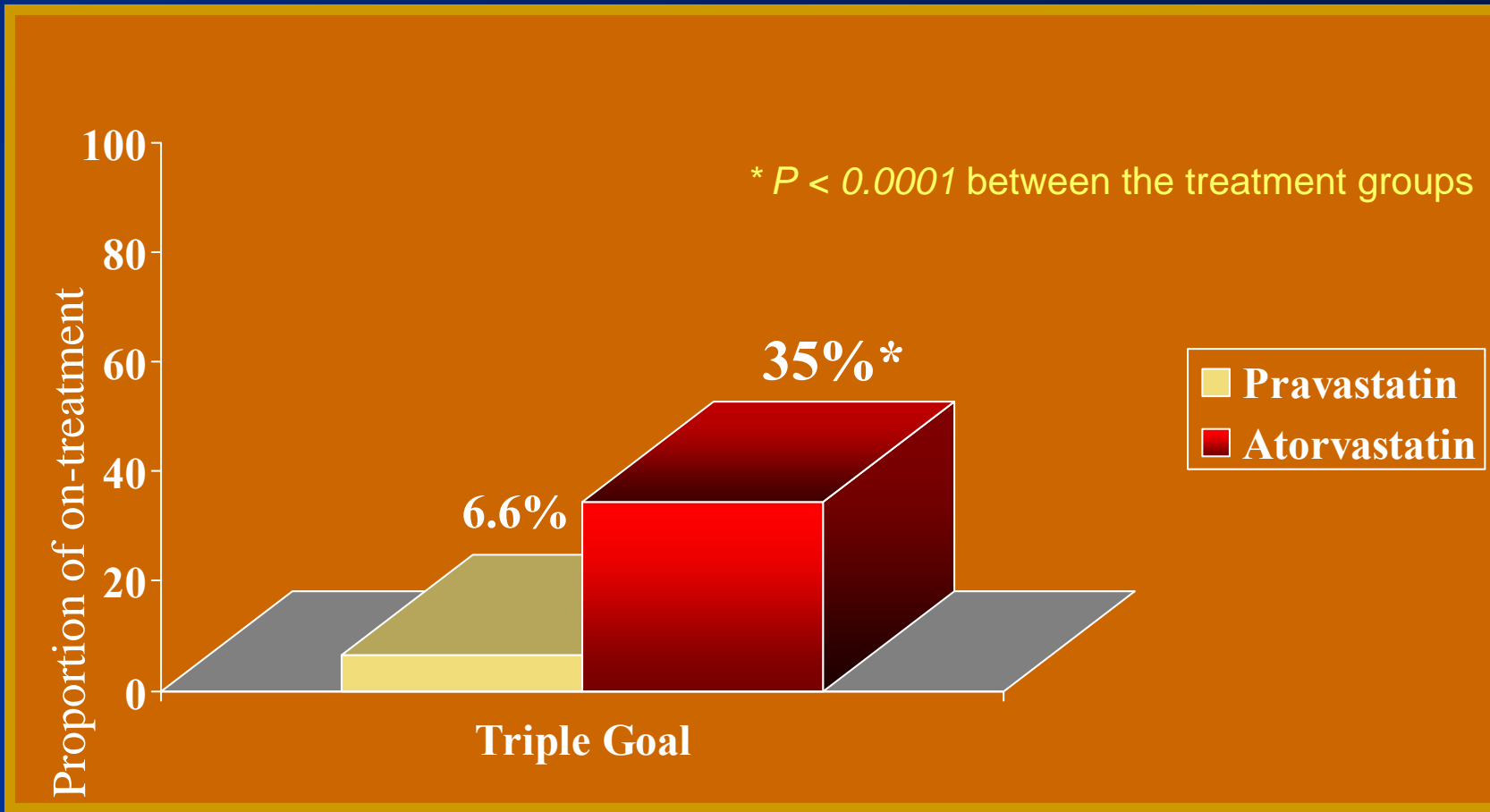
Hazard of Death, MI & Recurrent ACS with on-treatment LDL-C (70 mg/dL) & TG (150 mg/dL)



Adjusted for age, sex, smoking, DM, HTN, obesity, HDL, PVD, prior ACS, prior statin use and treatment effect

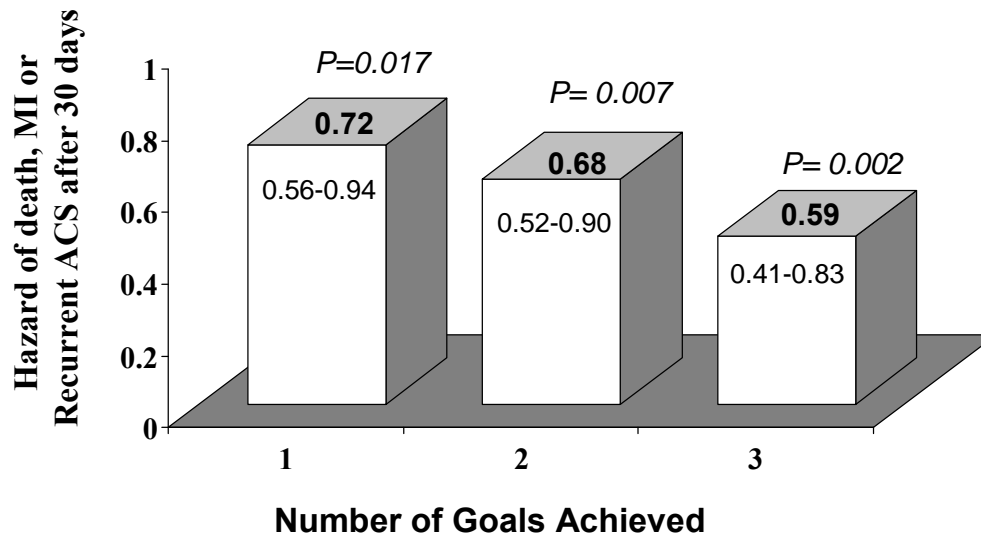
Results

Proportion of Pravastatin (40 mg) and Atorvastatin (80 mg)
Treated Patients Attaining LDL-C < 70, CRP < 2 & TG < 150 at 30 days



Results

Hazard of death, MI and recurrent ACS with number of goals achieved based on LDL-C < 70, CRP < 2 & TG < 150 mg/dL at 30 d



Adjusted for age, sex, smoking, DM, HTN, obesity, HDL, PVD, prior ACS, prior statin use and treatment effect



Conclusions

On-treatment TG < 150 mg/dL was associated with a lower risk of recurrent CHD events independently of the level of LDL-C.

Therefore, these data lend support to the concept that achieving both a low LDL-C and low TG may be important therapeutic parameters following ACS