



# Sex-based Differences in the Impact of Baseline Plasma Uricemia on Long-term Mortality Risk Following Acute Coronary Syndrome: A 26-Year Follow-up Study

G. Berton, D. Merotto, ML. Dario, C. Rocco, R. Palmieri, A. Dal Bo, P. Visentin, MF. Gulino, F. Cavuto, HT. Mahmoud

The ABC Study on Heart Disease Association-Foundation-ONLUS, Conegliano, Italy



REGIONE DEL VENETO



ULSS2  
MARCA TREVIGIANA

## BACKGROUND/INTRODUCTION

The impact of plasma uricemia levels on long-term mortality following ACS remains uncertain, particularly regarding sex differences

### Study Aim:

To evaluate the association between uricemia during ACS and all-cause mortality over 26 years, with focus on sex-based differences

## RESULTS

### Demographics

- Mean age:  $66.2 \pm 1.9$  years
- 30% female
- Baseline uricemia:  $5.7 \pm 1.8$  mg/dL
- Higher in males ( $p=0.02$ )

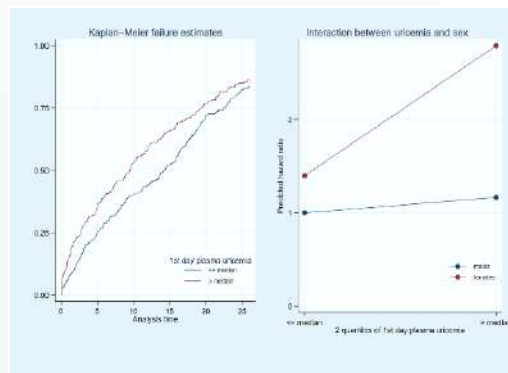
### Outcome

- 26-year follow-up
- 483/571 (85%) died

### Key Findings:

**baseline uricemia was significantly associated with all-cause mortality**

- Univariable HR: 1.08 per mg/dL ( $p<0.0001$ )
- Multivariable HR: 1.07 ( $p=0.003$ )
- Significant interaction with sex (HR=1.12,  $p=0.02$ )
- **Females: HR=1.17 ( $p=0.001$ )** **Males: not significant**



## METHODS

Study cohort: 571 unselected ACS patients discharged alive from CCU (3 hospitals)

Baseline clinical data gathering during the first seven days of hospitalization

Survival analysis: Cox regression with uricemia as continuous variable

Interaction tested between uricemia & sex; analyses adjusted for age, sex, Killip class, cholesterol, diabetes

Follow-up period: 26 years (7,091 person-years)

Measurements: Days 1 and 7 of hospitalization

## CONCLUSIONS

### Sex-Specific Impact of Uricemia on Mortality

- Elevated uricemia during ACS predicts greater long-term mortality risk in females
- No significant association observed in males

- Highlights need for sex-specific risk stratification in ACS
- Supports incorporating uricemia into post-ACS management for women
- Further investigation needed on mechanisms underlying sex differences

### Clinical Implications

Consider routine uricemia monitoring in female ACS patients for improved risk stratification and personalized follow-up care