



# **Arrest to first compression time and survival outcome in witness OHCA.**

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# Introduction

- ▶ Out of hospital cardiac arrest is a serious health condition
  - can lead to detrimental outcomes
- ▶ The effect of EMS response time on patient survival has been evaluated in many studies
  - impact of bystander CPR on critical time intervals for patient outcomes not well known

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# Aims/Hypotheses



- ▶ investigate whether bystander CPR influences the time from arrest to first chest compression.

# Methods



- ▶ Design / setting
  - prospective, international, multi-center cohort study
    - across the Asia-Pacific on out-of-hospital cardiac arrest
    - January 2009 to December 2012
  - Inclusion
    - EMS-treated witnessed OHCA
    - presumed cardiac origin
    - Exclusion
      - no information of CPR started time or OHCA outcomes
      - arrest occurred in ambulance.



# Methods

- ▶ Exposure variable
  - arrest to CPR start and bystander CPR
  
- ▶ Outcome measure
  - Primary endpoint
    - Survival to discharge or 30-day survival
  - Secondary endpoint
    - neurologic recovery at discharge

# Methods



- ▶ Statistical analysis
  - Logistic regression
    - Adjusting possible confounders
  - Interaction analysis
    - Bystander CPR & time to first chest compression
      - On survival outcome



# Significance

- ▶ Expected outcome
  - receiving bystander CPR will be less affected
    - by the amount of time until first compression
  - shorter EMS response time
    - leading to better clinical outcomes
    - be able to provide optimal range of EMS response time