# Impact of wait times on late postprocedural mortality after successful transcatheter aortic valve replacement

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## Objective

This study aims to investigate the impact of transcatheter aortic valve implantation (TAVI) wait times on 1-year mortality in patients successfully treated with TAVI

## Study design

Prospective, single-centre, observational study

## Materials and methods

- Consecutive patients treated with TAVI at Caen University Hospital between January 2013 and August 2019 were included in the study
- Wait times were defined as the interval from date of referral by a general cardiologist to the date of the TAVI procedure
- The primary endpoint was all-cause mortality at 1 year; other outcomes of interest were rehospitalisation for a cardiac event, stroke or transient ischemic attack, new cardiac pacemaker, acute kidney injury, and bleeding at 1-year follow-up
- The relationship between the primary endpoint and wait time was assessed through statistical analysis of baseline variables (age, sex, body mass index), Society for Thoracic Surgeons (STS) score*, medical history of diabetes, chronic kidney disease (CKD) and severe left ventricular systolic dysfunction (defined as left ventricular ejection fraction, LVEF ≤ 30%)

*Society for Thoracic Surgeons (STS) score calculates the risk of operative mortality and morbidity of adult cardiac surgery based on patient demographic and clinical variables

## Key results

- Out of 383 patients included in the study, death occurred in 21 (5.5%) and 55 (14.4%) at 30 days and 1 year, respectively
- Patients who died had a higher STS score, and more often CKD, LVEF ≤30%, right ventricular failure, and less transfemoral approaches
- Most importantly, patients who died had longer TAVI wait times (168±113 vs 140.2± 77.5 days; p=0.01) compared to those alive at 1 year
- For every additional week patients spent on the waiting list, there was a 2% increase in rate of mortality 1-year post-TAVI (independent of other correlates of mortality)

## Limitations

- Due to the observational nature of the study, there may have been additional correlates of outcomes that were not considered
- The time of symptom onset was not known in this study, therefore the time from referral to TAVI may underestimate the effect of long waiting times on outcomes
- The centre conducting the study is located in Caen, a French city in the semi-rural Normandie region, therefore the results may not apply to all regions

## Conclusions

- Patients awaiting TAVI represent a growing population
- Increased wait times were independently associated with a relative increase in mortality by 2% per week
- These findings should highlight to physicians and health system administrators the need to reduce delays to minimise avoidable patient deaths

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