# Patterns, Predictors and Outcomes of Pacemaker Implantation after TAVR

## *Insights From the CENTER2 Study*

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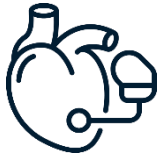
# Disclosure of Relevant Financial Relationships

I, Gijs Broeze DO NOT have any financial relationships to disclose.

# Background



Permanent pacemaker (PPM) implantation due to conduction abnormalities are a common complication after TAVR

Most published data reflect outcomes up to 2020

Valve designs and PPM guidelines have evolved in recent years

# Aim of the Study

Evaluate the temporal trends, predictors and outcomes for permanent pacemaker implantation following TAVR

# Methods

**CENTER2 study**: patient-level database
25,771 patients who underwent TAVR between 2007 and 2022

56% female

81.3 ± 6.8 years

EuroSCORE II
3.7 (IQR 2.2-6.1)

Logistic regression analyses performed to test for temporal trends and to identify predictors

# Incidence rates

Overall PPM implantation rate: 14.8%

Self-expanding valves

18.2%

VS

Balloon-expandable valves

9.8%

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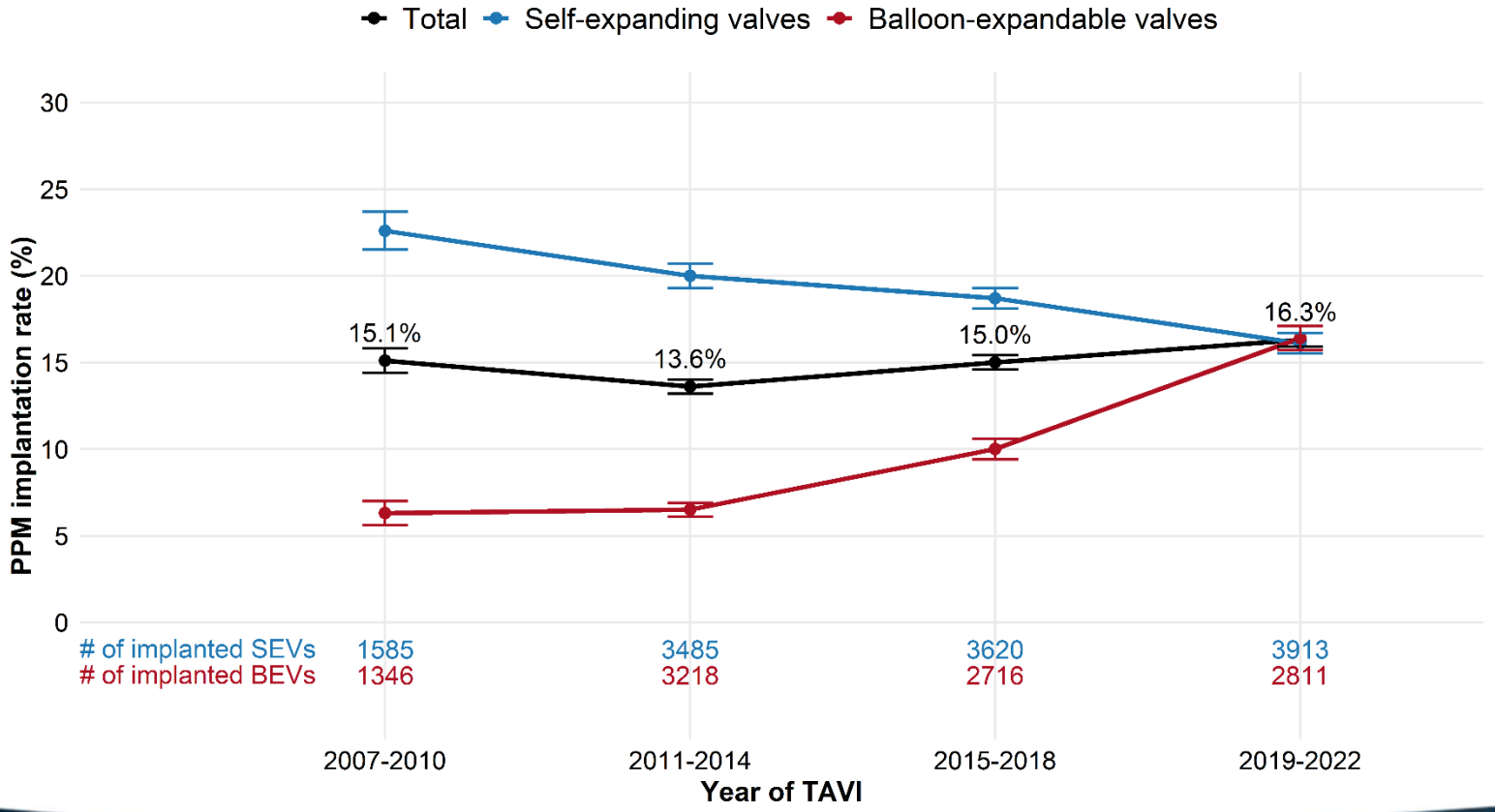
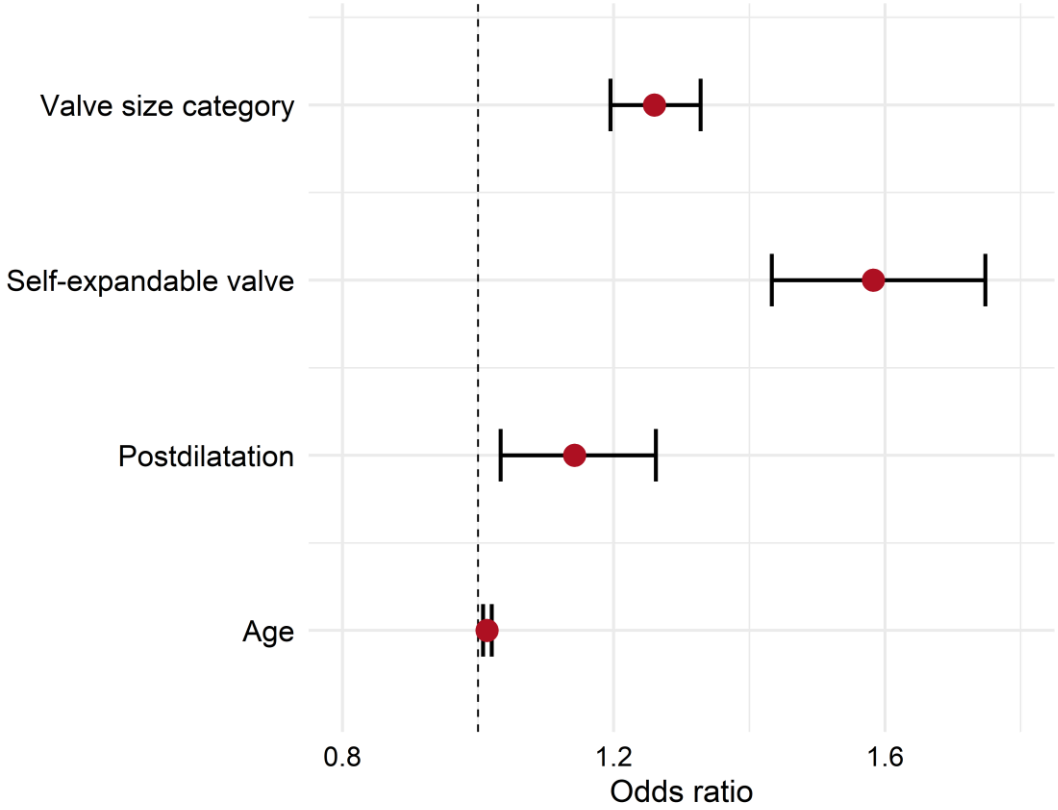
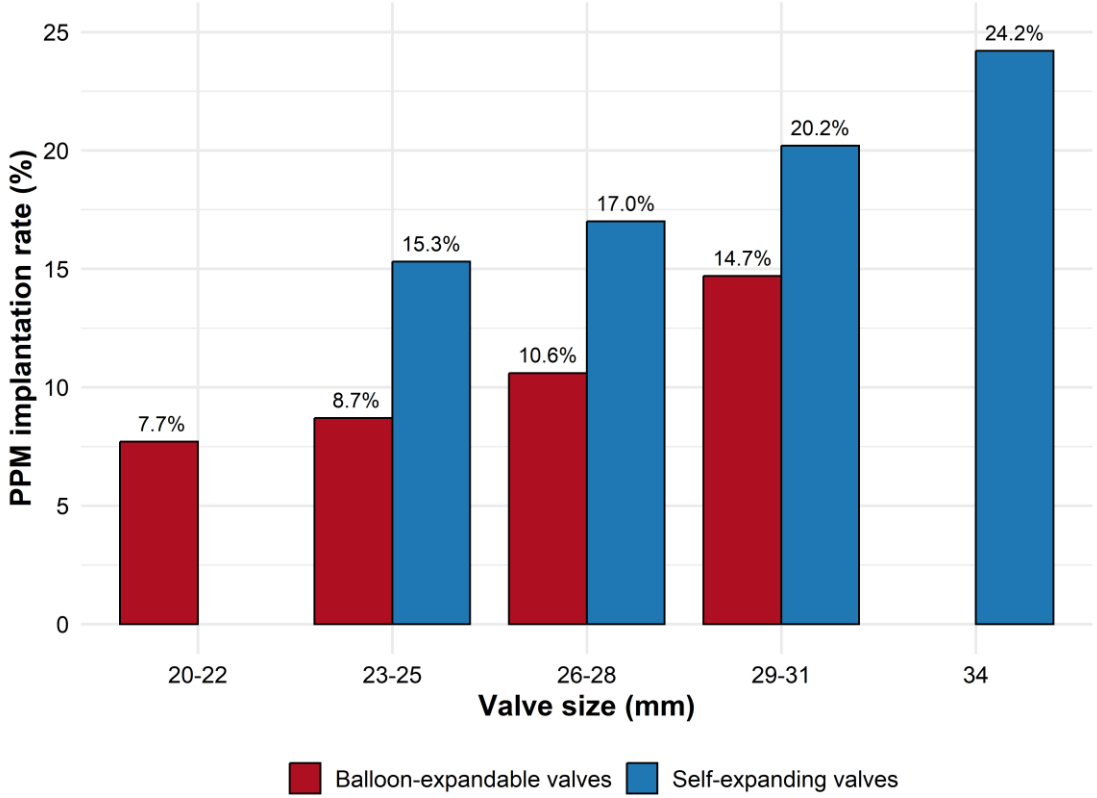
# Temporal trends



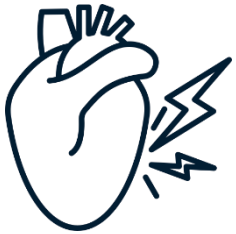
# Independent predictors for PPM implantation

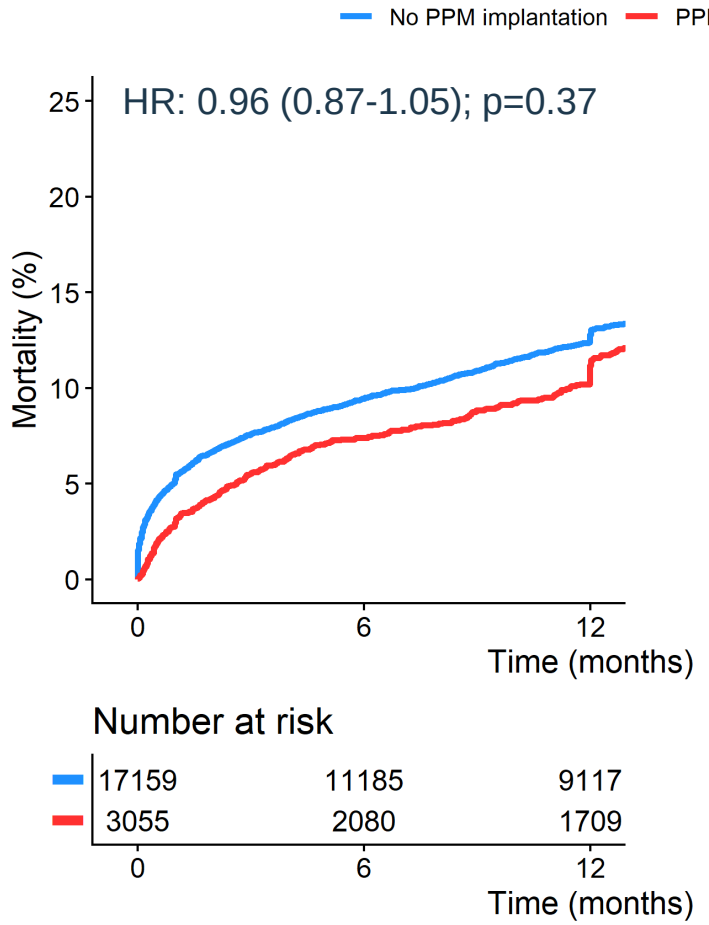


# Influence of valve size on PPM implantation rate

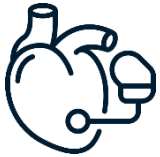


# 30-day outcomes

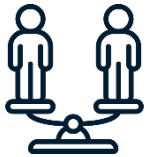
| | Stroke | Major bleeding | MI | New-onset AF |
|---|---|---|---|---|
| |  |  |  |  |
| **OR (95% CI)** | 1.1 (0.9-1.4) | 1.1 (0.9-1.3) | 1.0 (0.7-1.5) | |
| **p-value** | 0.55 | 0.14 | 0.97 | |
| |  |  |  |  |


No PPM implantation
PPM implantation
HR: 0.96 (0.87-1.05); p=0.37
Mortality (%)
25
20
15
10
5
0
0
6
12
Time (months)
Number at risk
17159
11185
9117
3055
2080
1709
0
6
12
Time (months)

# Conclusions



The rate of PPM implantation increases over time
Important predictors are the implantation of a SEV, postdilatation and valve size



PPM implantation does not affect outcomes up to 2 years after TAVR

Observational cohort study with risk on selection bias

Personalized treatment plans are important to reduce the risk on PPM implantation