
TAVI

# TAVI – analysis of patients enrolled between 2008-12 and 2016-06

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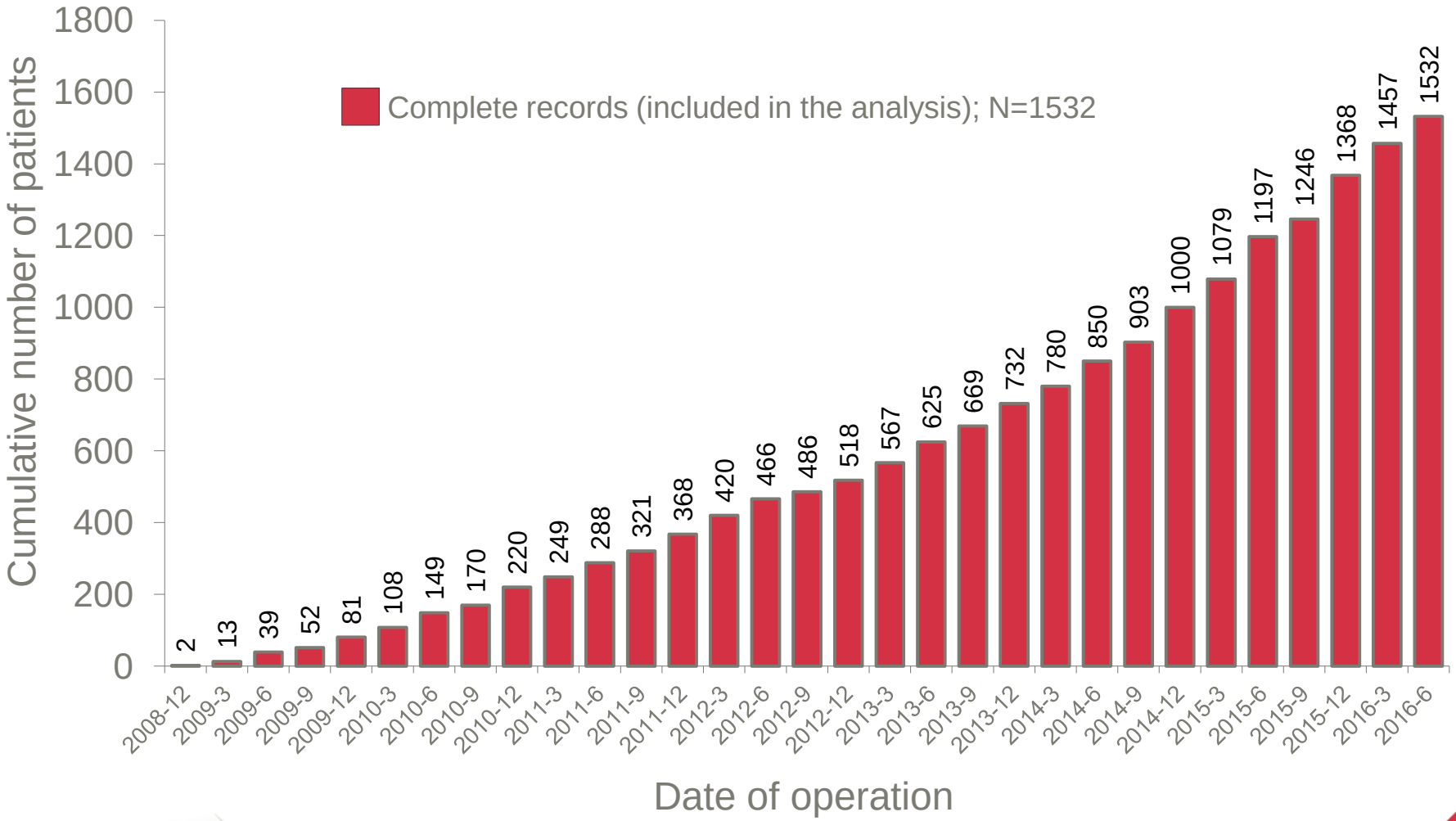
*Odborný garant ČKS*

# Enrollment in time

Register TAVI contains 1419 patients enrolled between 2008-12 and 2016-06 (export September 19, 2016).



# Centres

| Centre | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|---|
| Třinec | 0 | 13 | 35 | 50 | 53 | 73 | 80 | 89 | 57 |
| IKEM Praha | 2 | 22 | 19 | 18 | 24 | 30 | 35 | 44 | 11 |
| FNKV Praha | 0 | 13 | 24 | 18 | 19 | 24 | 33 | 41 | 0 |
| CKTCH Brno | 0 | 11 | 19 | 18 | 14 | 19 | 28 | 48 | 11 |
| FNHK – 1. IK | 0 | 12 | 26 | 17 | 19 | 17 | 26 | 38 | 9 |
| Nem. České Budějovice | 0 | 4 | 4 | 10 | 2 | 17 | 10 | 14 | 21 |
| FN Olomouc – I. interní klinika | 0 | 0 | 6 | 4 | 4 | 3 | 4 | 34 | 26 |
| Nemocnice Na Homolce | 0 | 0 | 2 | 2 | 0 | 8 | 19 | 26 | 12 |
| ÚnL – Kardiologické odd. | 0 | 4 | 4 | 7 | 10 | 8 | 6 | 9 | 10 |
| FN Plzeň | 0 | 0 | 0 | 0 | 2 | 10 | 17 | 16 | 0 |
| VFN Praha | 0 | 0 | 0 | 4 | 3 | 5 | 10 | 9 | 7 |
| Total | 2 | 79 | 139 | 148 | 150 | 214 | 268 | 368 | 164 |

Register TAVI contains 1532 patients enrolled between 2008-12 and 2016-06 (export September 19, 2016).

TAVI

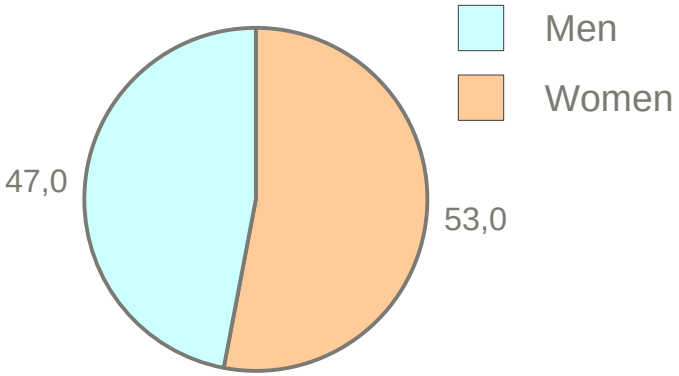
# TAVI – description of patients at entry

# Age and sex of patients

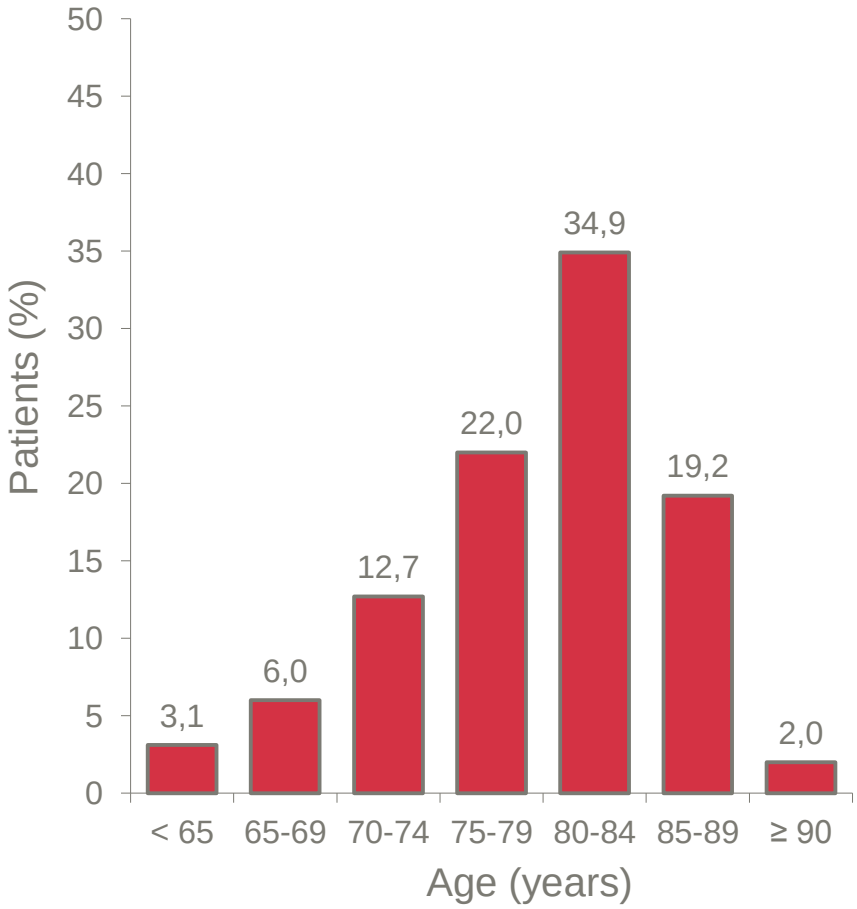
TAVI

N = 1532

*Sex* (%):




*Age*:




*Age summary*:

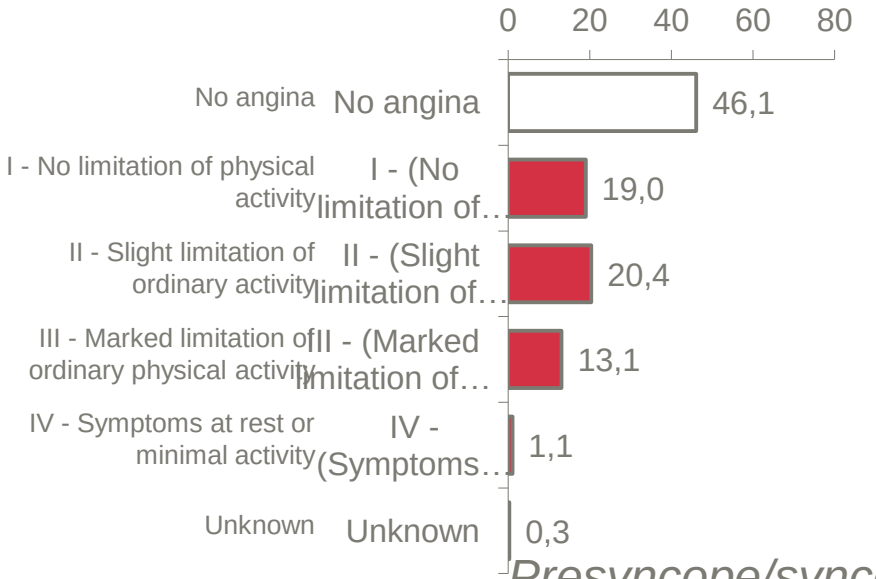
| | Mean | Median | 5th-95th percentile | Min-Max |
|---|---|---|---|---|
| Women | 81 | 81 | 70-89 | 54-94 |
| Men | 79 | 80 | 65-89 | 43-95 |
| Total | 80 | 81 | 67-89 | 43-95 |

# CCS, NYHA, presyncope/syncope

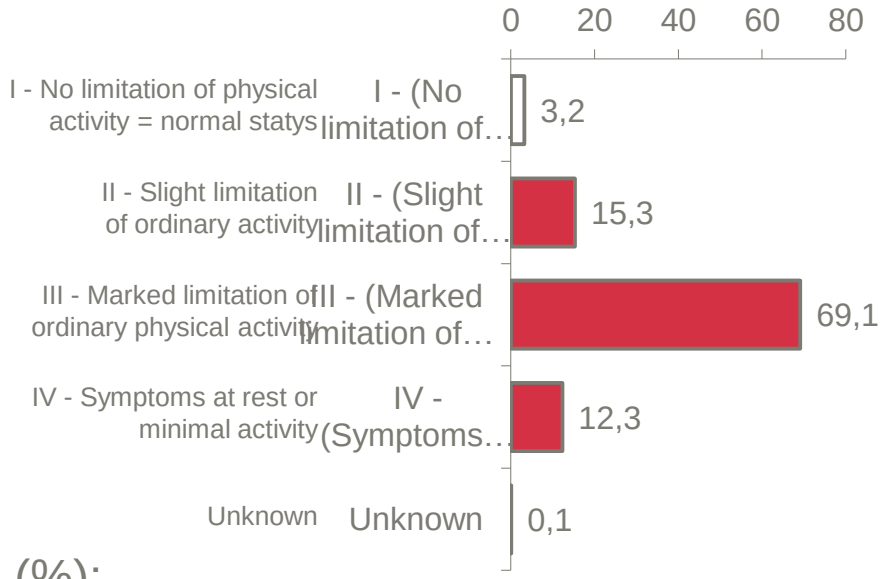
TAVI

N = 1532

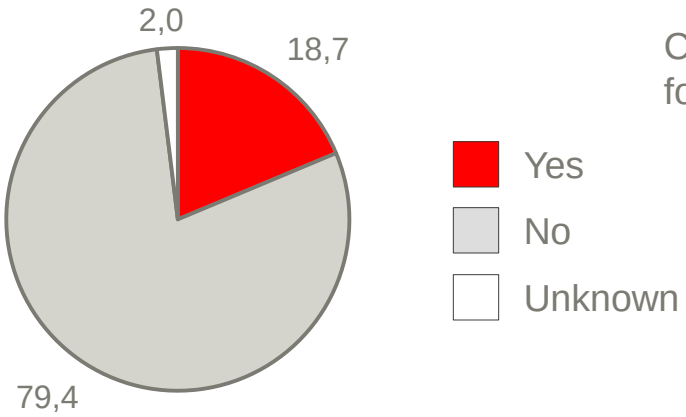
*CCS* (%):




*NYHA* (%):




*Presyncope/syncope* (%):

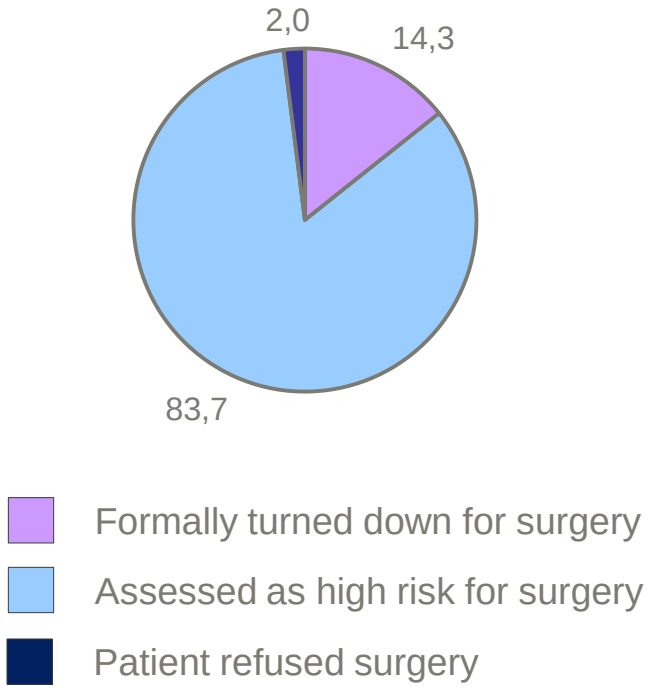



Critical pre-operative status was found in 12 patients (0.8%).

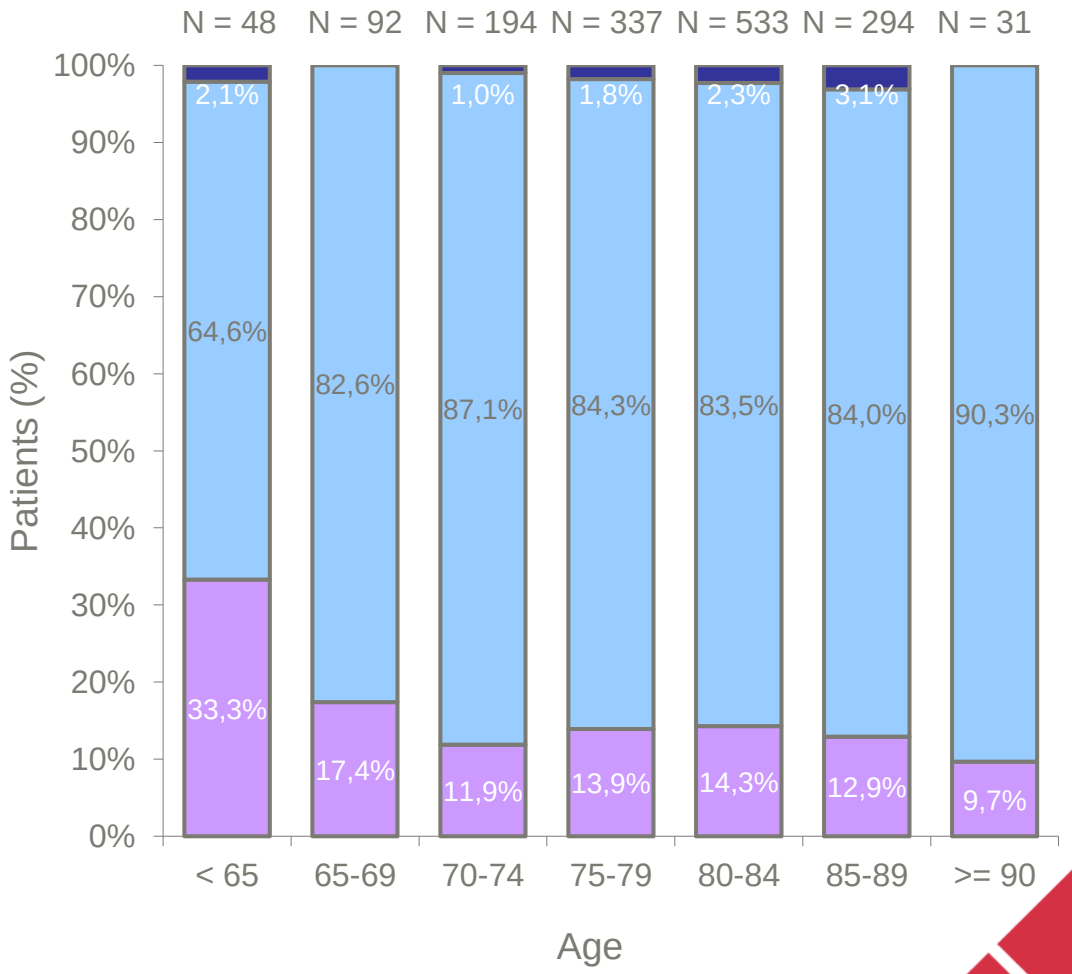
# Primary reason for TAVI

TAVI

N = 1532




*Primary reason for TAVI by age:*

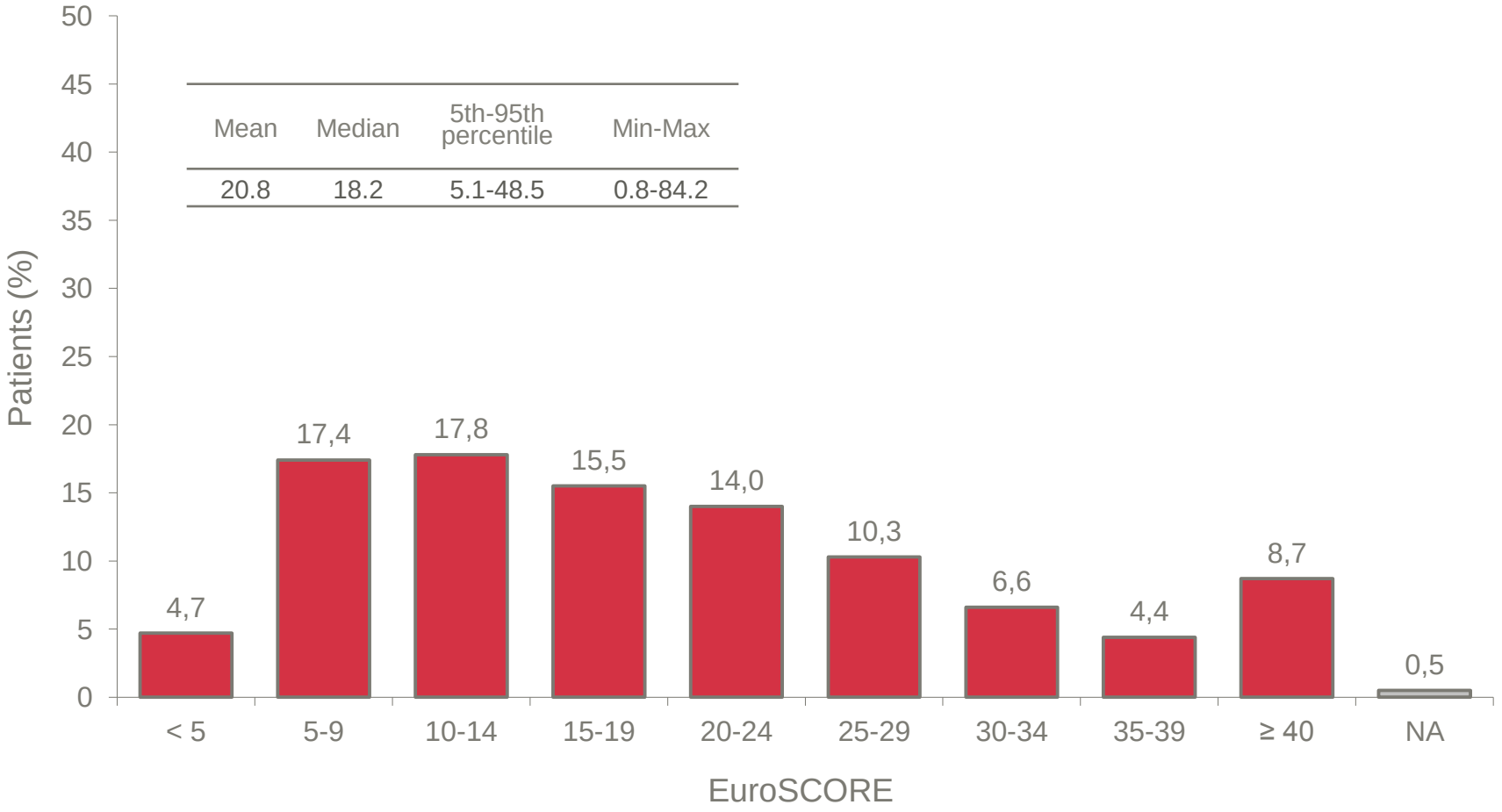


# EuroSCORE

TAVI

N = 1532

| Mean | Median | 5th-95th percentile | Min-Max |
|---|---|---|---|
| 20.8 | 18.2 | 5.1-48.5 | 0.8-84.2 |

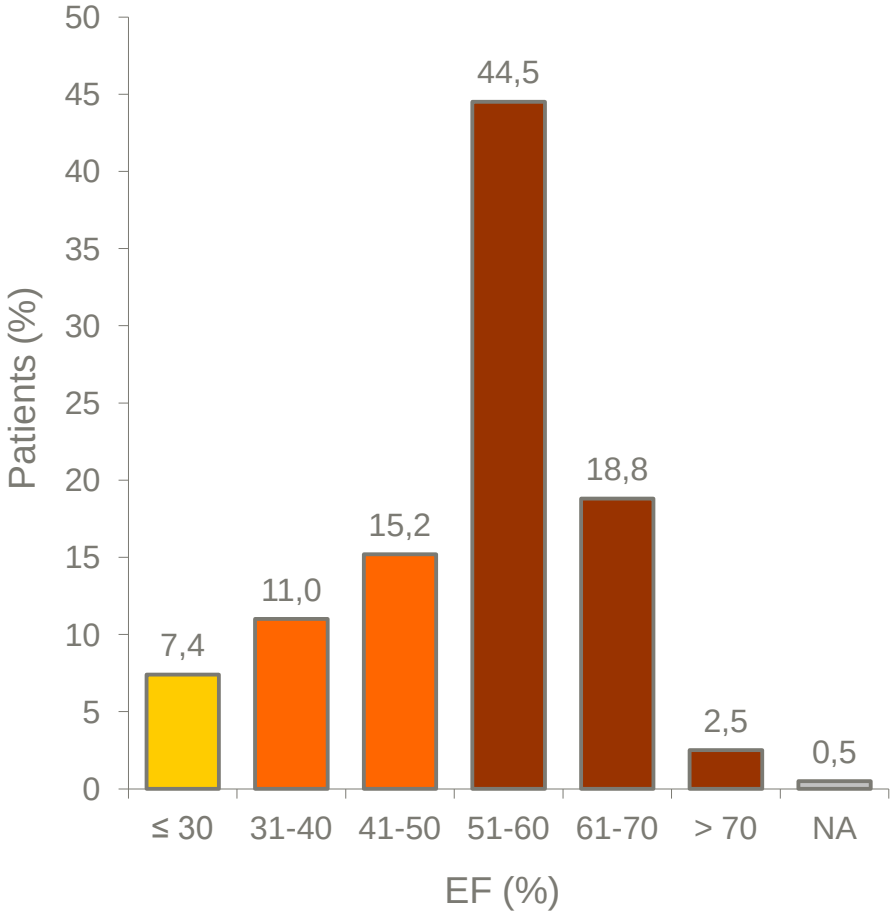


# Ejection fraction

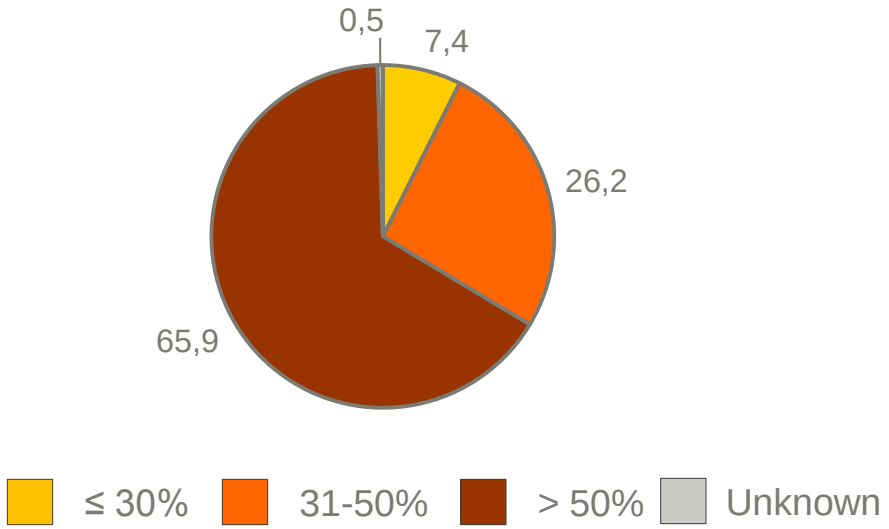
TAVI

N = 1532

*Ejection fraction* (%):




*Ejection fraction (EuroScore categories)*:



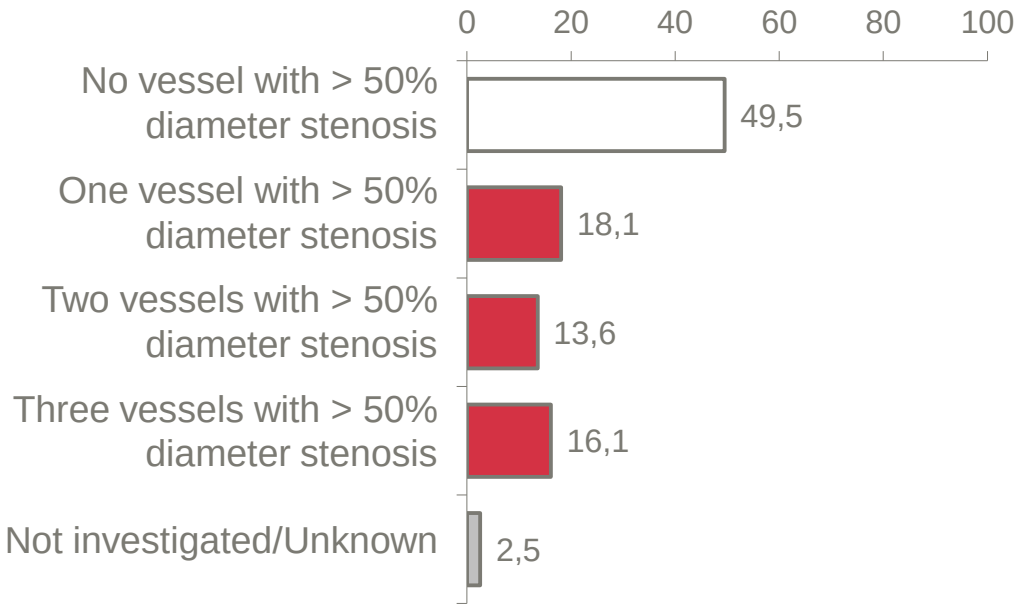

| Mean | Median | 5th-95th percentile | Min-Max |
|---|---|---|---|
| 54 | 60 | 30-70 | 10-85 |

# Extent of coronary vessels and left main steam disease

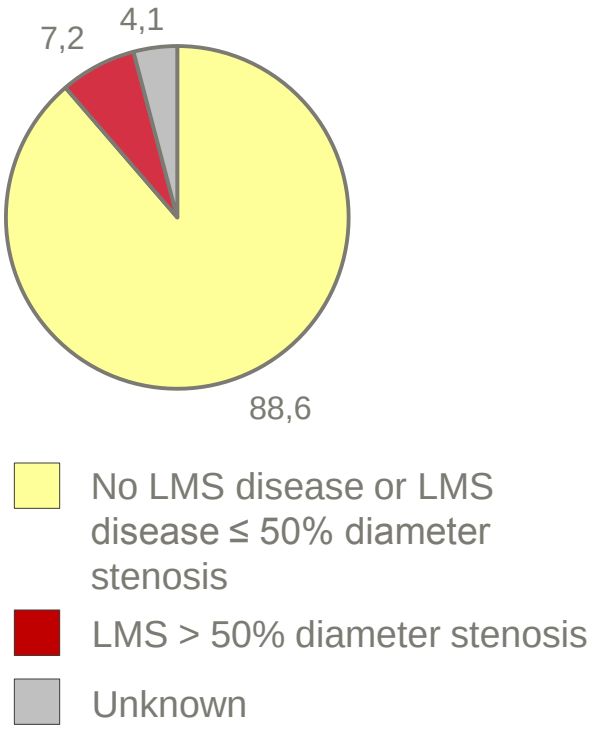
TAVI

N = 1532

*Extent of coronary vessel disease* (%):




*Left main stem disease* (%):



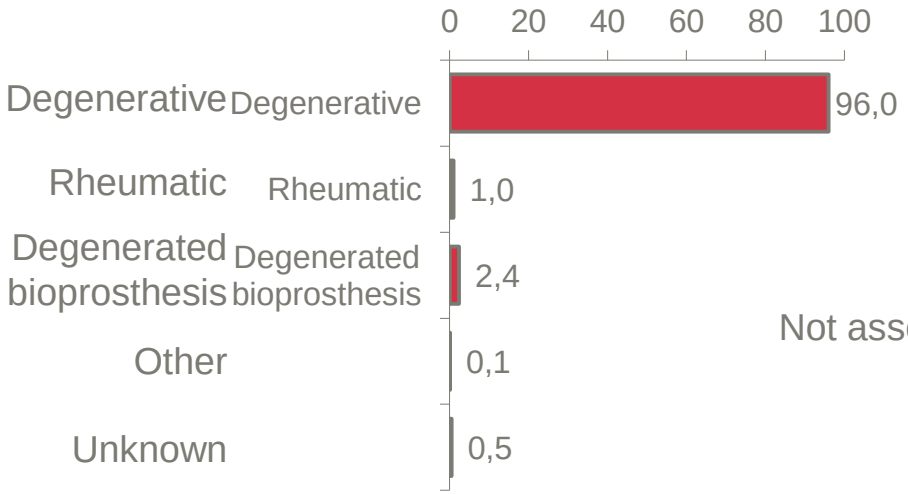
# Aortic valve pathology and aetiology

TAVI

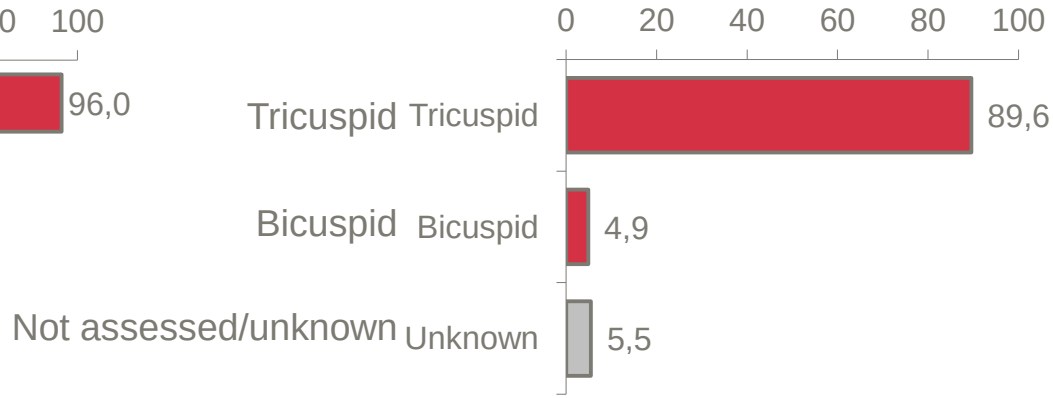
N = 1532

- Aortic valve pathology:
  - Stenosis in 1511 (98.6%) patients
  - Regurgitation 13 (0.8%) patients.
- 0.8% of pathological cases are classified as severe (N = 12).

*Aortic valve aetiology* (%):




*Aortic valve aetiology degenerative details* (%):



TAVI

# Procedure description

# Implantation procedure description I

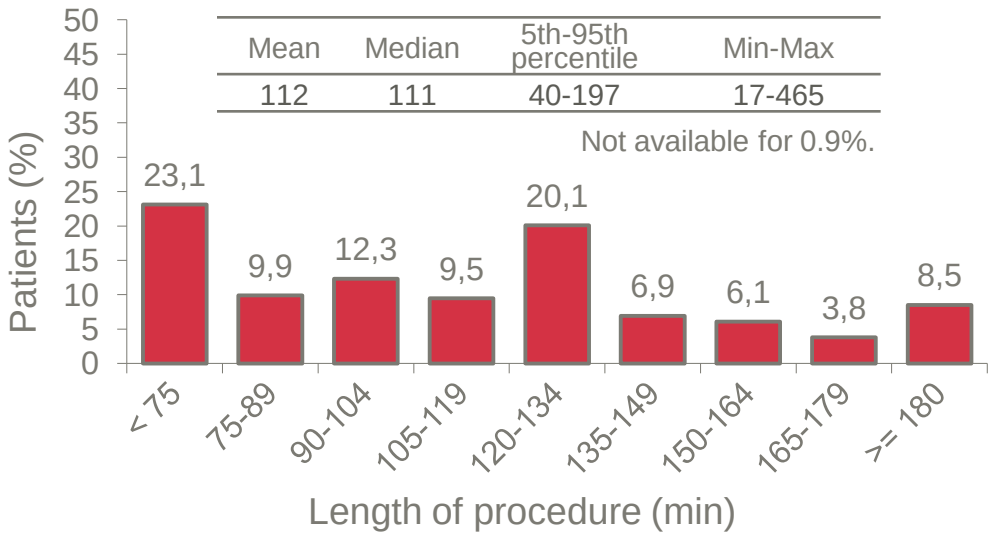
TAVI

N = 1532

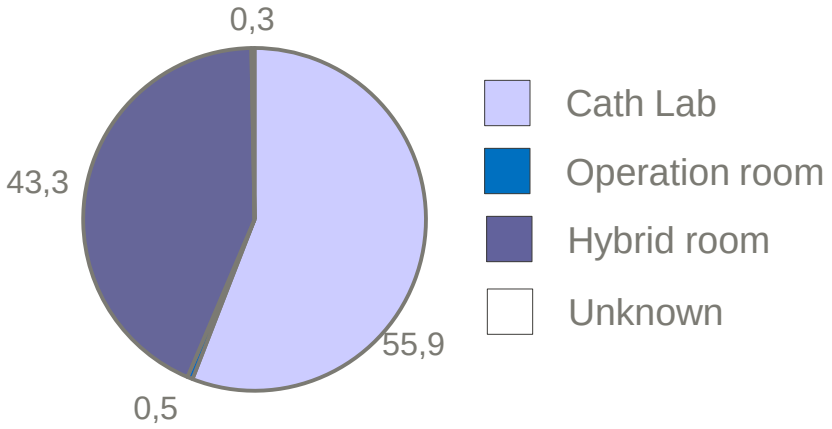
*Time of procedure* (min):

| Mean | Median | 5th-95th percentile | Min-Max |
|---|---|---|---|
| 112 | 111 | 40-197 | 17-465 |

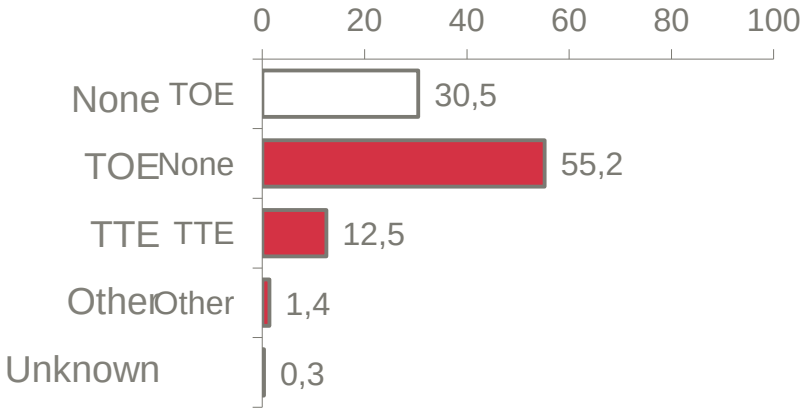
Not available for 0.9%.



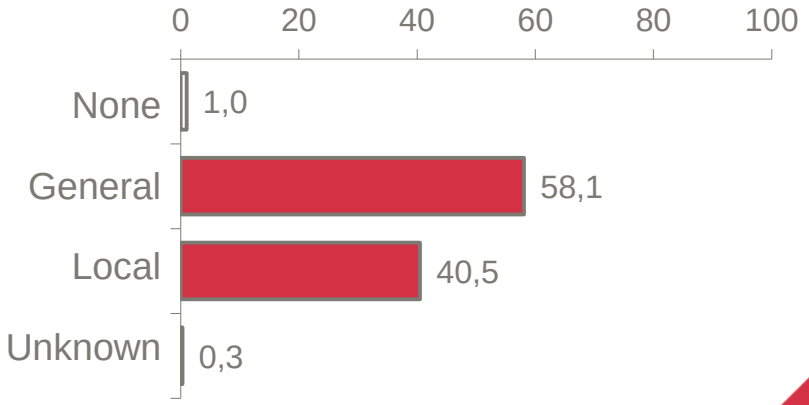

*Site of implantation* (%):




*Periprocedural imaging* (%):




*Anaesthesia* (%):

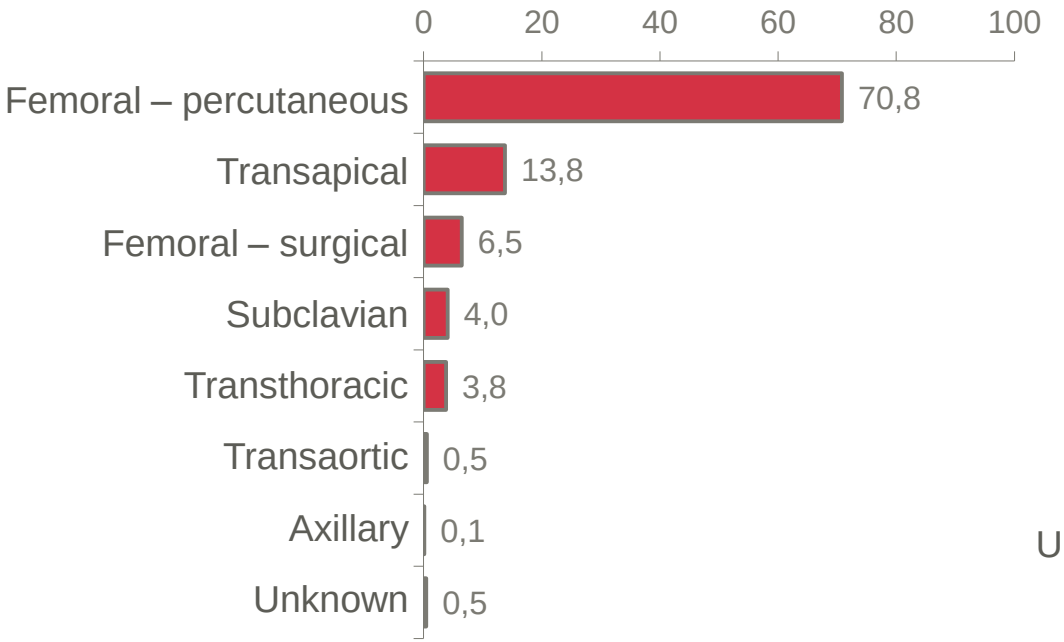


# Implantation procedure description III

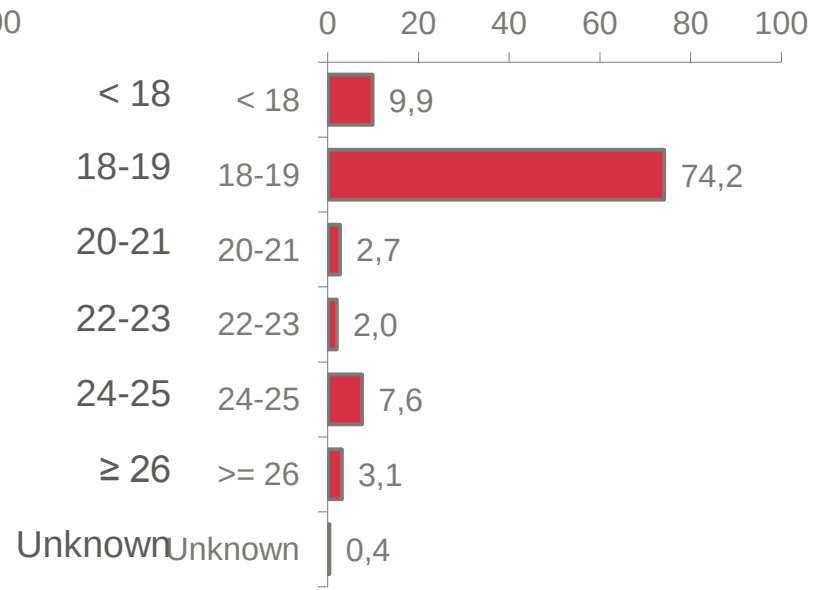
TAVI

N = 1532

*Delivery approach* (%):




*Sheath size (French)* (%):

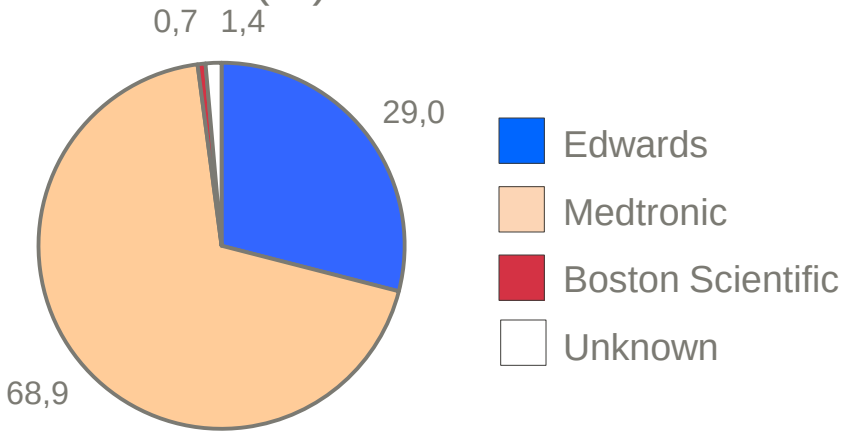


# Valve characteristics

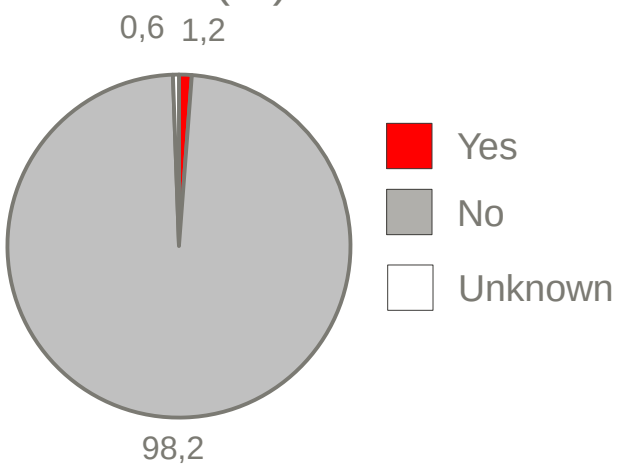
TAVI

N = 1532

*Manufacturer* (%):




*Device failure* (%):

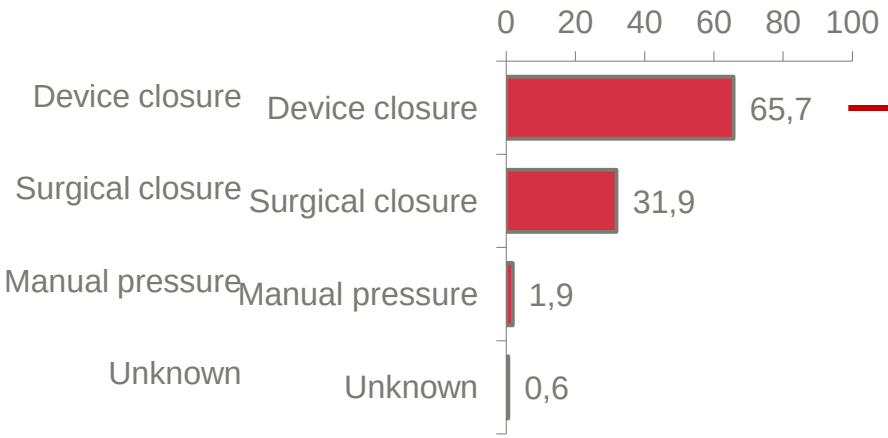


# Vascular closure and valve deployment

TAVI

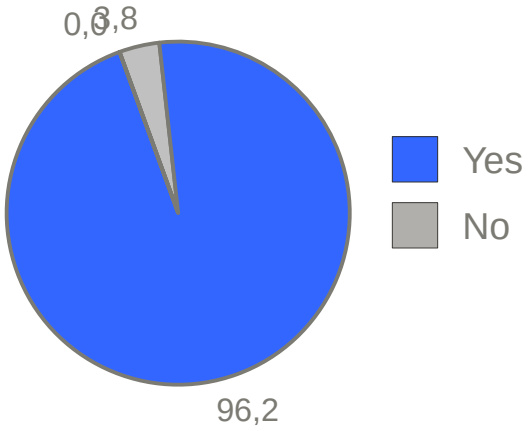
N = 1532

*Vascular Closure Technique* (%):

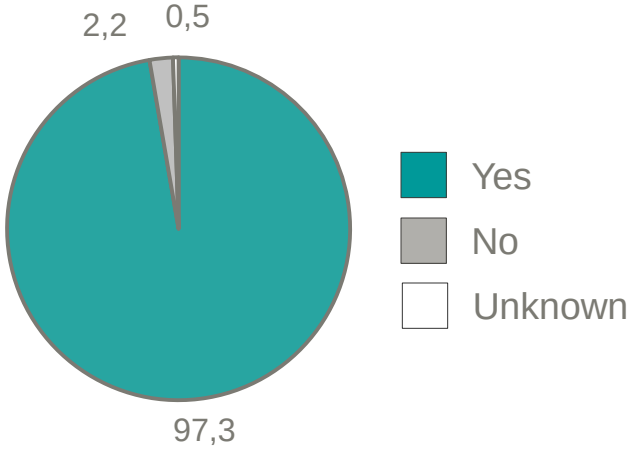



N = 1006

*Device closure successful* (%):




*Valve successfully deployed* (%):



TAVI

# In-hospital status of patients

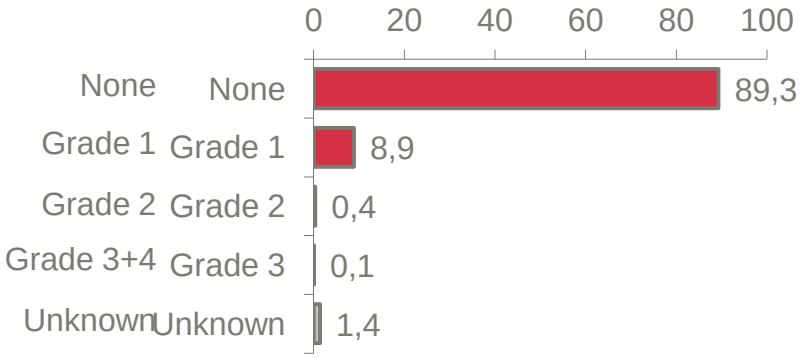
# Aortic leakage and mitral regurgitation

TAVI

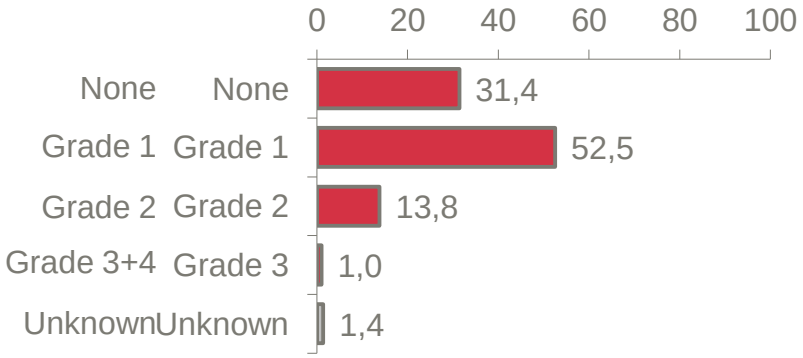
N = 1473*

**59 patients deceased before discharge*

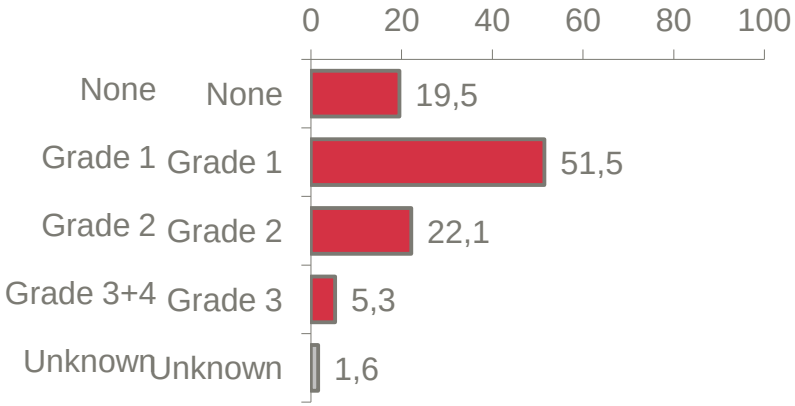
*Post implant aortic leakage Central* (%):



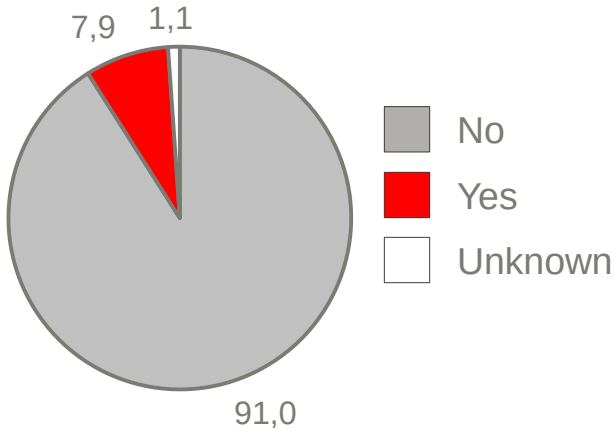

*Post implant aortic leakage Peri-prothesis* (%):




*Mitral regurgitation* (%):




*Pericardial effusion* (%):



# In-hospital Biology II

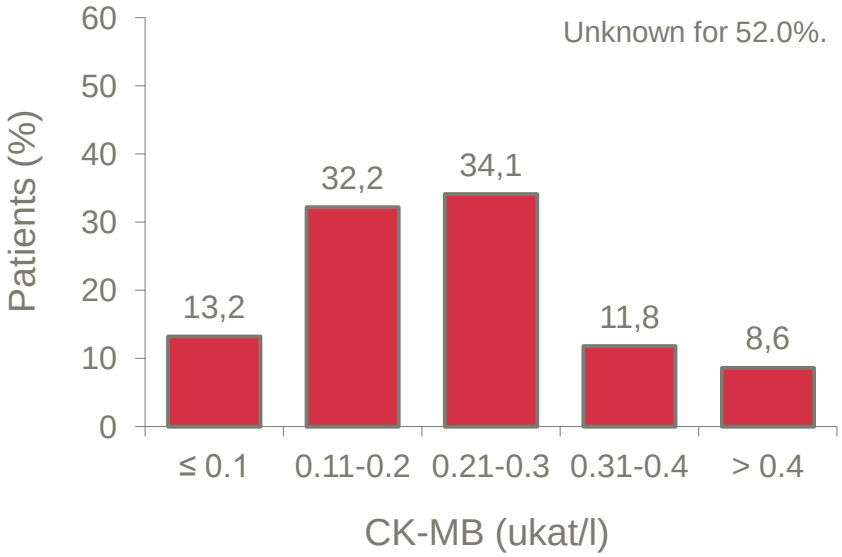
TAVI

N = 1532

*CK-MB pre-procedure (ukat/l)*:

| Mean | Median | 5th-95th percentile | Min-Max |
|---|---|---|---|
| 0.28 | 0.21 | 0.00-0.52 | 0.00-13.09 |

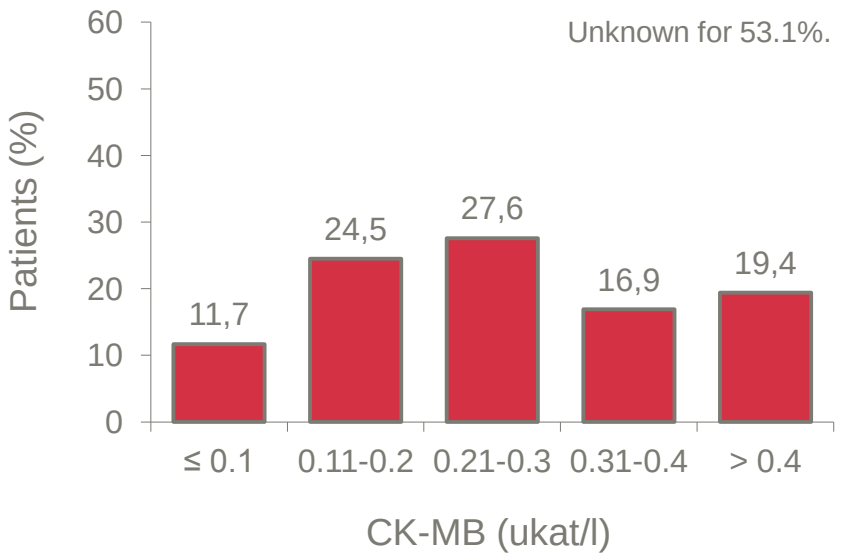
Unknown for 52.0%.




*CK-MB post-procedure (12 hrs) (ukat/l)*:

| Mean | Median | 5th-95th percentile | Min-Max |
|---|---|---|---|
| 0.37 | 0.25 | 0.00-0.78 | 0.00-17.00 |

Unknown for 53.1%.



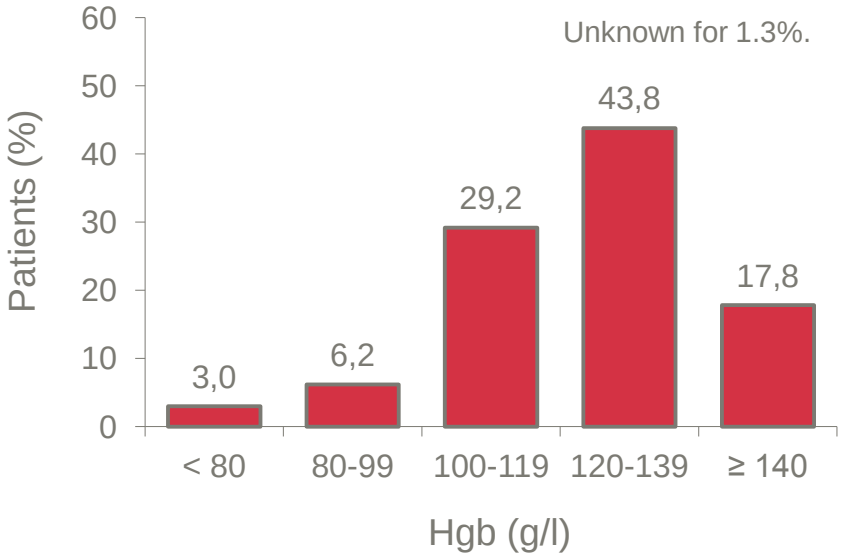
# In-hospital Biology III

TAVI

N = 1532

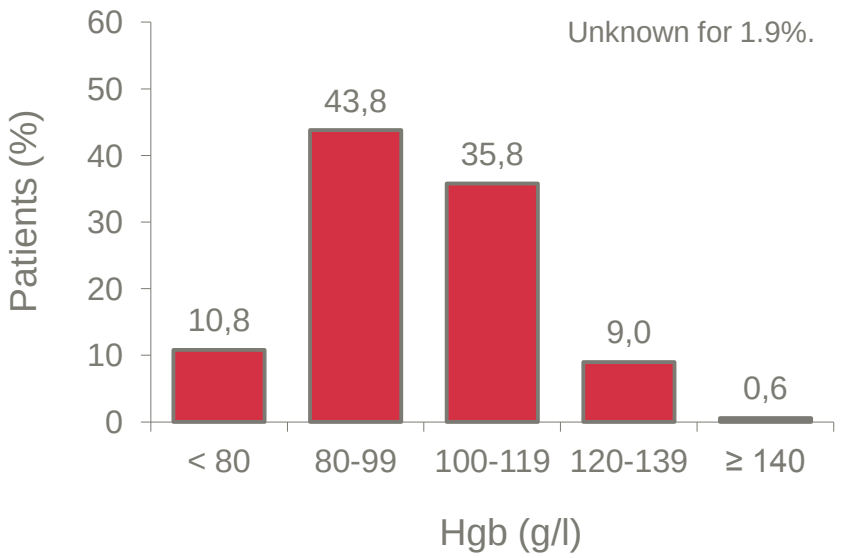
*Hemoglobin pre-procedure (g/l):*

| Mean | Median | 5th-95th percentile | Min-Max |
|---|---|---|---|
| 121 | 124 | 93-150 | 9-171 |




*Hemoglobin post-procedure (g/l):*

| Mean | Median | 5th-95th percentile | Min-Max |
|---|---|---|---|
| 97 | 98 | 72-125 | 7-169 |

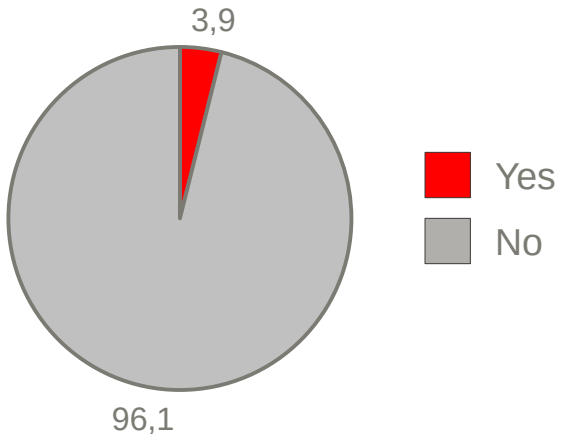


# Mortality

TAVI

N = 1532

*In-hospital mortality:*



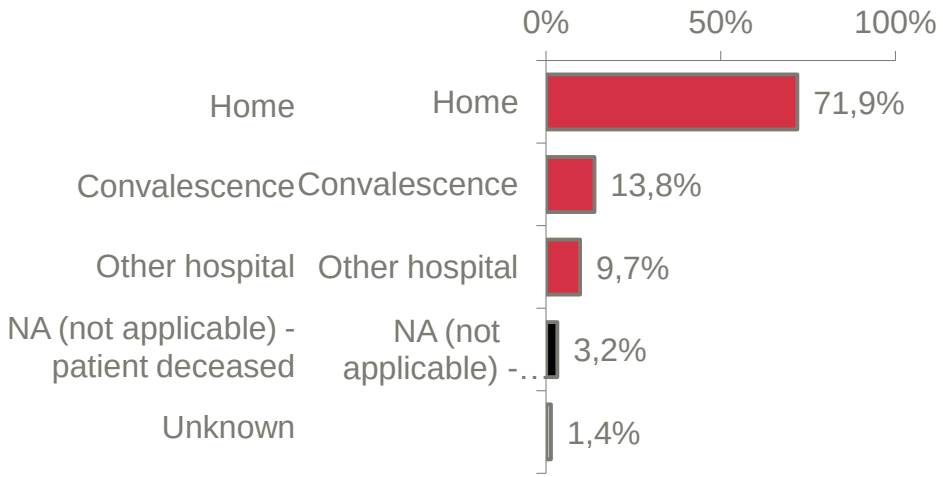

*Classification of death:*

| Cause | N = 59 |
|---|---|
| **Classification of death** | |
| Cardio-vascular causes | 42 |
| Non cardio-vascular causes | 14 |
| Unknown | 3 |
| **Cardio-vascular causes** | |
| Heart failure | 16 |
| Myocardial infarction | 4 |
| Cardiac pathway disturbances | 4 |
| Cardiac arrhythmia | 2 |
| Acute arterial ischemia | 2 |
| Other | 14 |
| **Non cardio-vascular causes** | |
| Multi-organ failure | 7 |
| Infection | 5 |
| Renal failure | 1 |
| Other | 1 |

# Discharge

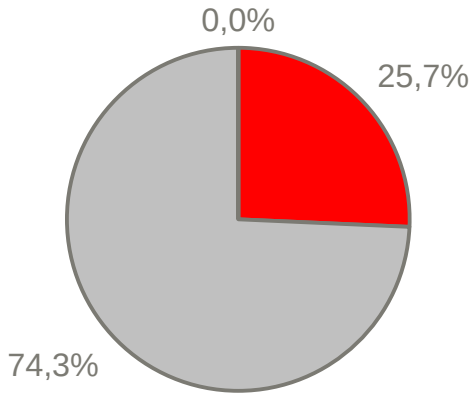
N = 1532

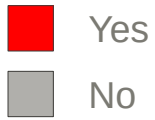
*Discharge destination from cardiothoracic ward*:



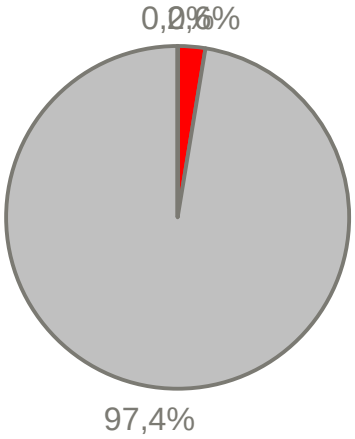

*Medication at discharge (N = 1473)*:

*Warfarin*




*Pradaxa*



TAVI

# Follow-up

# 3-year follow-up

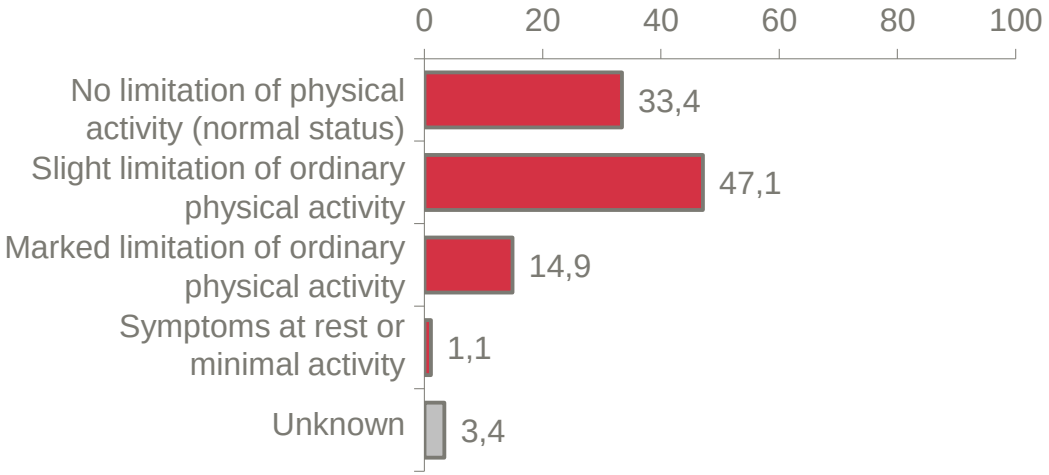
TAVI

N = 350

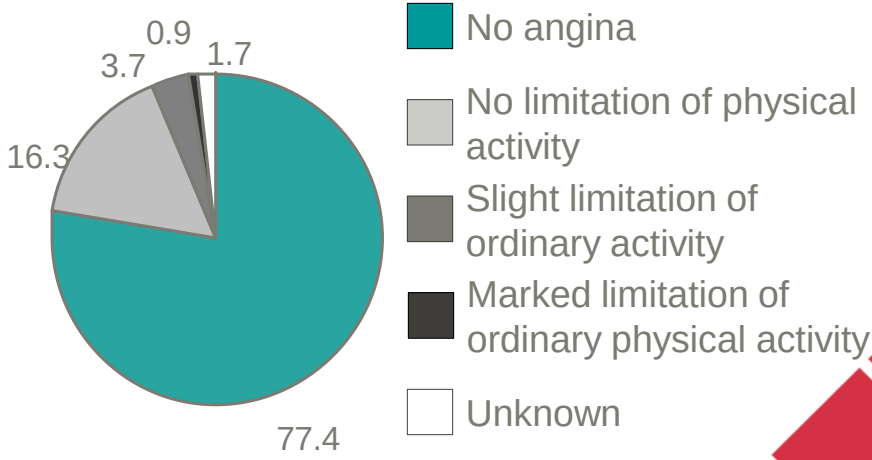
*48 patients deceased between 2 years and 3 years after implantantion*

| Complication | N (%) |
|---|---|
| Permanent PM - new indication | 14 (4.0%) |
| Hospitalization for valve-related or cardiac decompensation | 12 (3.4%) |
| Stroke | 7 (2.0%) |
| Mitral valve apparatus damage dysfunction | 7 (2.0%) |
| TIA/RIND | 3 (0.9%) |
| Prosthetic thrombosis | 3 (0.9%) |
| Major vascular complications | 1 (0.3%) |
| Prosthetic endocarditis | 1 (0.3%) |
| ICD - new indication | 1 (0.3%) |
| Ventricular septal perforation | 0 (0.0%) |
| CRT- new indication | 0 (0.0%) |

## *NYHA dyspnoea status* (%)




## *CCS angina status*



# 5-year follow-up

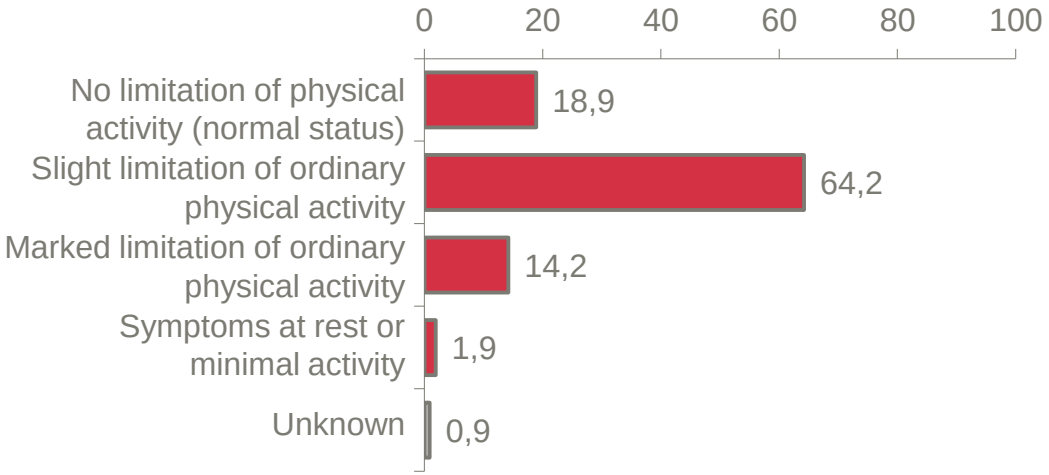
TAVI

N = 106

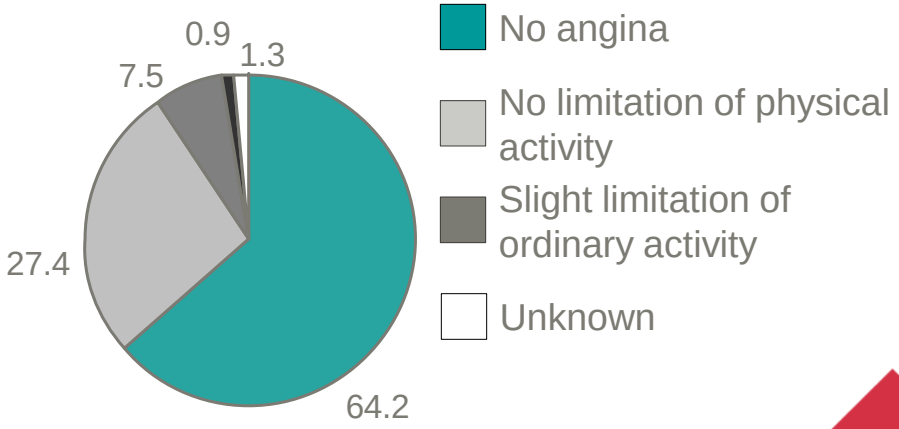
*27 patients deceased between 4 years and 5 years after implantantion*

| Complication | N (%) |
|---|---|
| Hospitalization for valve-related or cardiac decompensation | 4 (3.8%) |
| Permanent PM - new indication | 2 (1.9%) |
| Stroke | 1 (0.9%) |
| TIA/RIND | 1 (0.9%) |
| Prosthetic endocarditis | 1 (0.9%) |
| CRT- new indication | 1 (0.9%) |
| Major vascular complications | 0 (0.0%) |
| Ventricular septal perforation | 0 (0.0%) |
| Mitral valve apparatus damage dysfunction | 0 (0.0%) |
| Prosthetic thrombosis | 0 (0.0%) |
| ICD - new indication | 0 (0.0%) |

*NYHA dyspnoea status* (%)




*CCS angina status*



TAVI

# Long – term mortality

# Long-term mortality

TAVI

N = 1532

| Time | Cumulative mortality |
|---|---|
| 1 month | 4.2% (3.2%; 5.2%) |
| 12 months | 14.2% (12.2%; 16.2%) |
| 24 months | 24.1% (21.3%; 26.9%) |
| 36 months | 32.3% (28.9%; 35.6%) |
| 48 months | 42.3% (38.3%; 46.4%) |
| 60 months | 54.1% (49.2%; 59.1%) |