

# **Coronary artery surgery results 2005, in Japan**

**The President of Japanese Association  
for Coronary Artery Surgery (JACAS)**

**Yukiyasu Sezai**

# Coronary artery bypass grafting (CABG), 2005

Total cases : 12,207

---

Isolated CABG : 9,827

Concomitant CABG : 2,380

## Isolated CABG

Initial elective : 8,089      Extra initial elective : 1,738

Off-pump : 4,936      Off-pump :

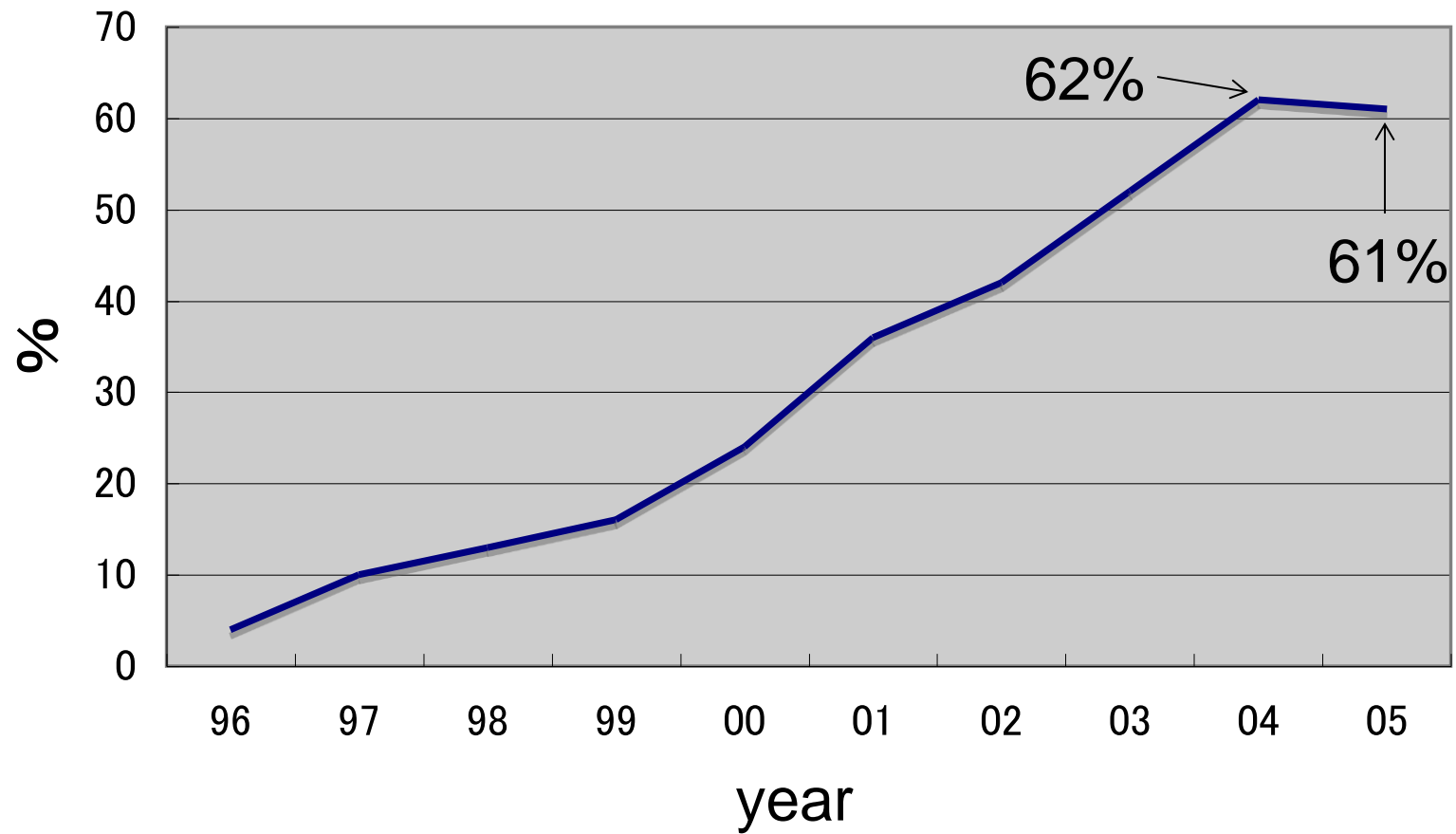
820      On-pump : 3,153      On-pump :

918

(Off-pump rate : 61%)

---

# Changes in OPCAB frequency rate of initial elective CABG



**Total cases of initial elective :8,089(100%)**

---

**On-pump (cardiac arrest) :2,725(33.7%)**

**On-pump (cardiac beating) : 428( 5.4%)**

**Off-pump (total cases) :4,936(61.0%)**

**Off-pump (complete) :4,815**

**On-pump (convert) : 121**

---

**OPCAB complete rate :97.5%**

**Off to on-pump convert rate : 2.5%**  
**(previous year:3.8%)**

**Mortality of isolated CABG:1.91%**  
(previous year:1.95%)

**Mortality of initial elective CABG:0.89%**  
(previous  
year:1.04%)

---

On-pump (cardiac arrest) :1.17%

On-pump (cardiac beating) :1.40%

Off-pump (total cases ) :0.68%

Off-pump (complete) :0.60%

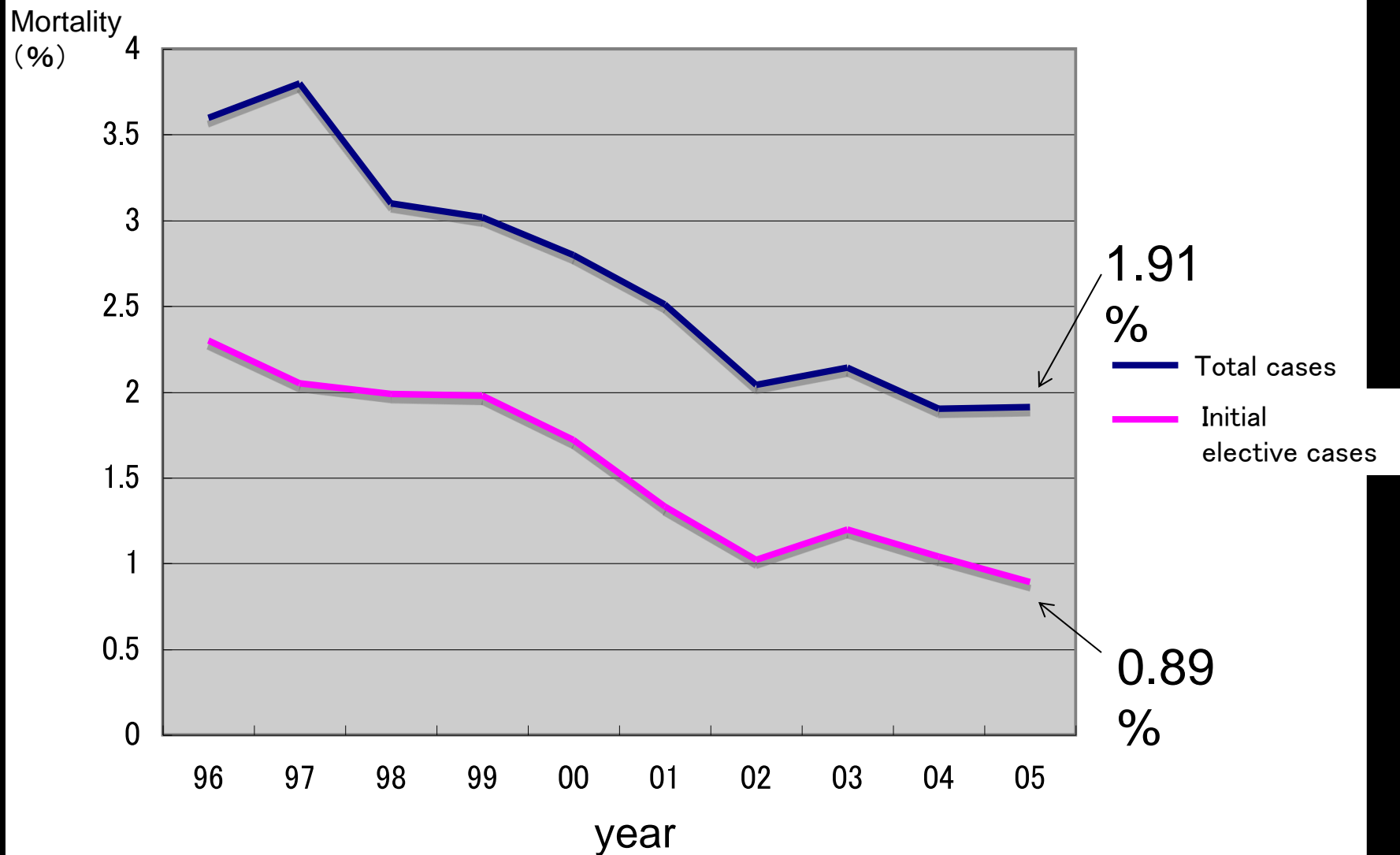
(previous year:0.88%)

On to on-pump (convert) :4.13%

(previous year:3.38%)

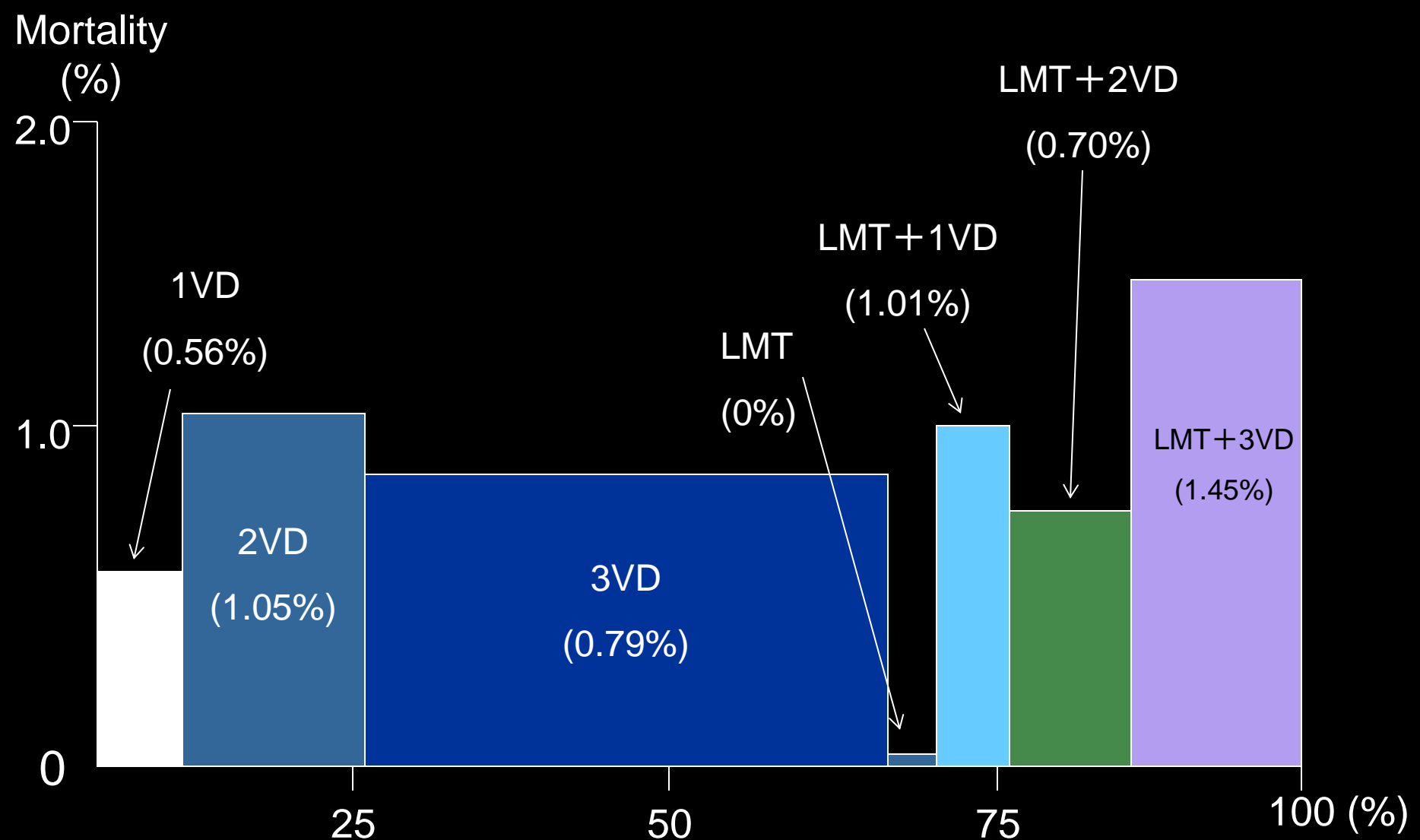
---

# Changes in mortality of CABG



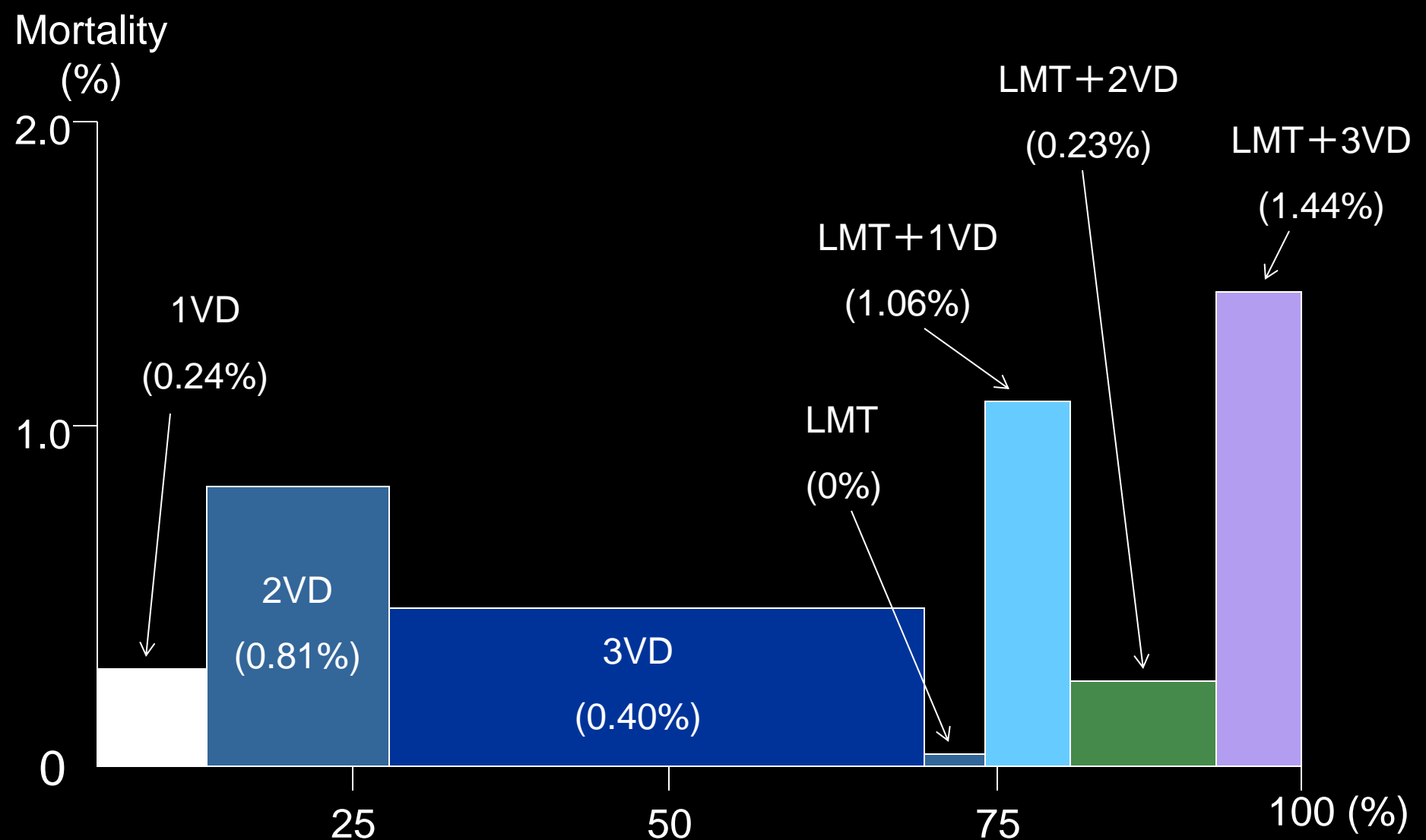
# Surgical results according to diseased vessels

(Initial elective cases : 8,089, mortality:0.89%)



# Surgical results according to diseased vessels

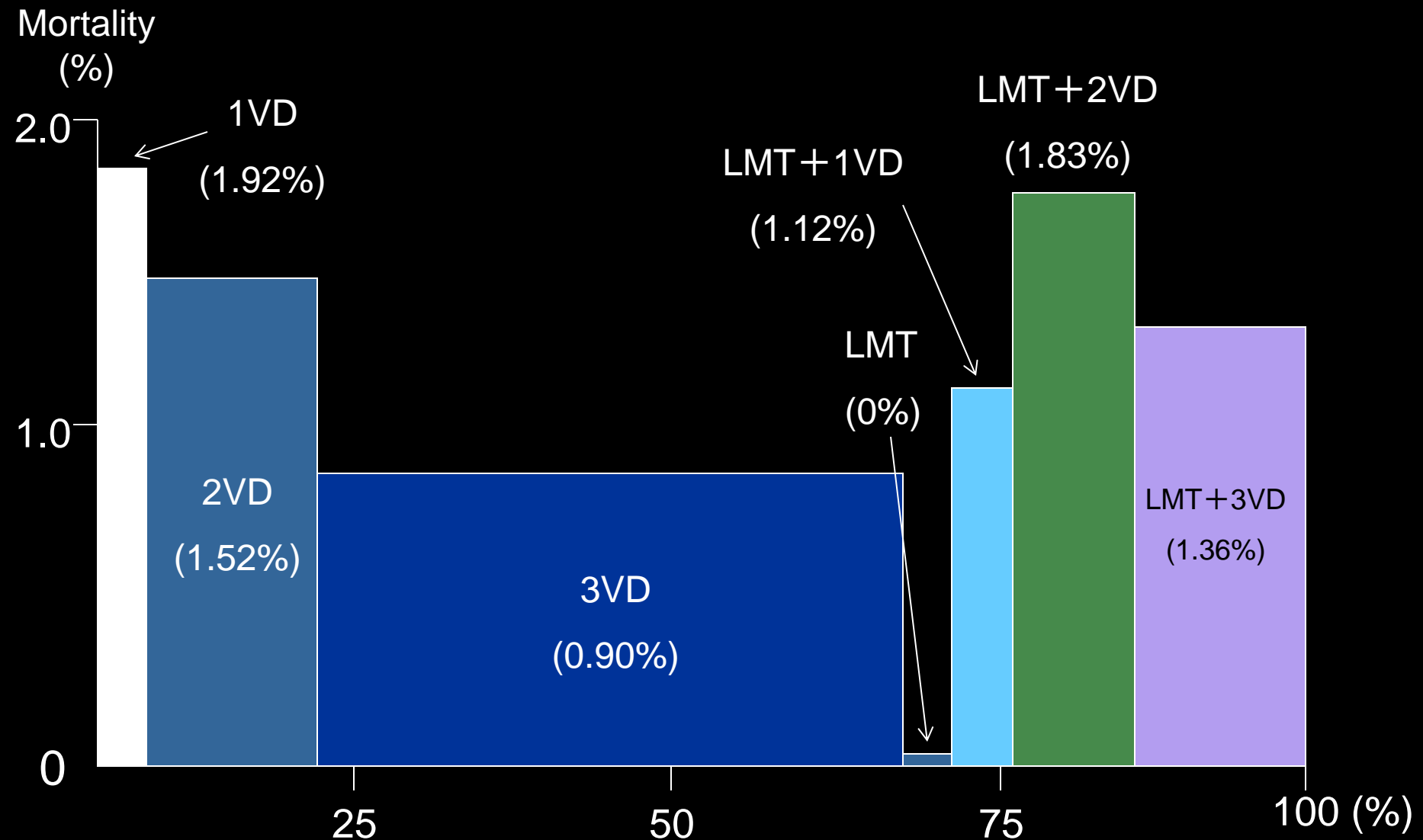
**(Initial elective off-pump (complete): 4,815, mortality: 0.60%)**





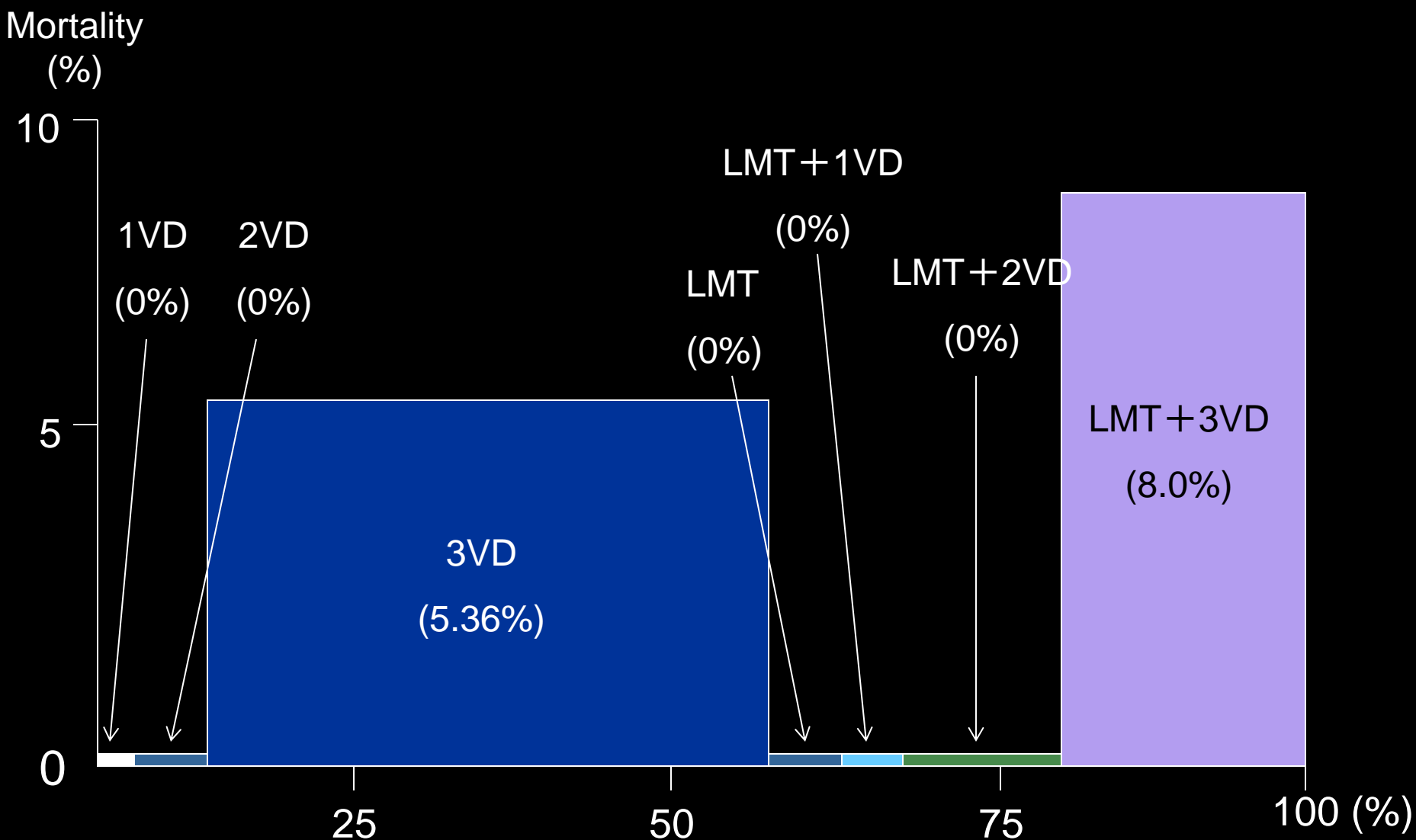
# Surgical results according to diseased vessels

(Initial elective on-pump (arrest): 2,725, mortality: 1.17%)



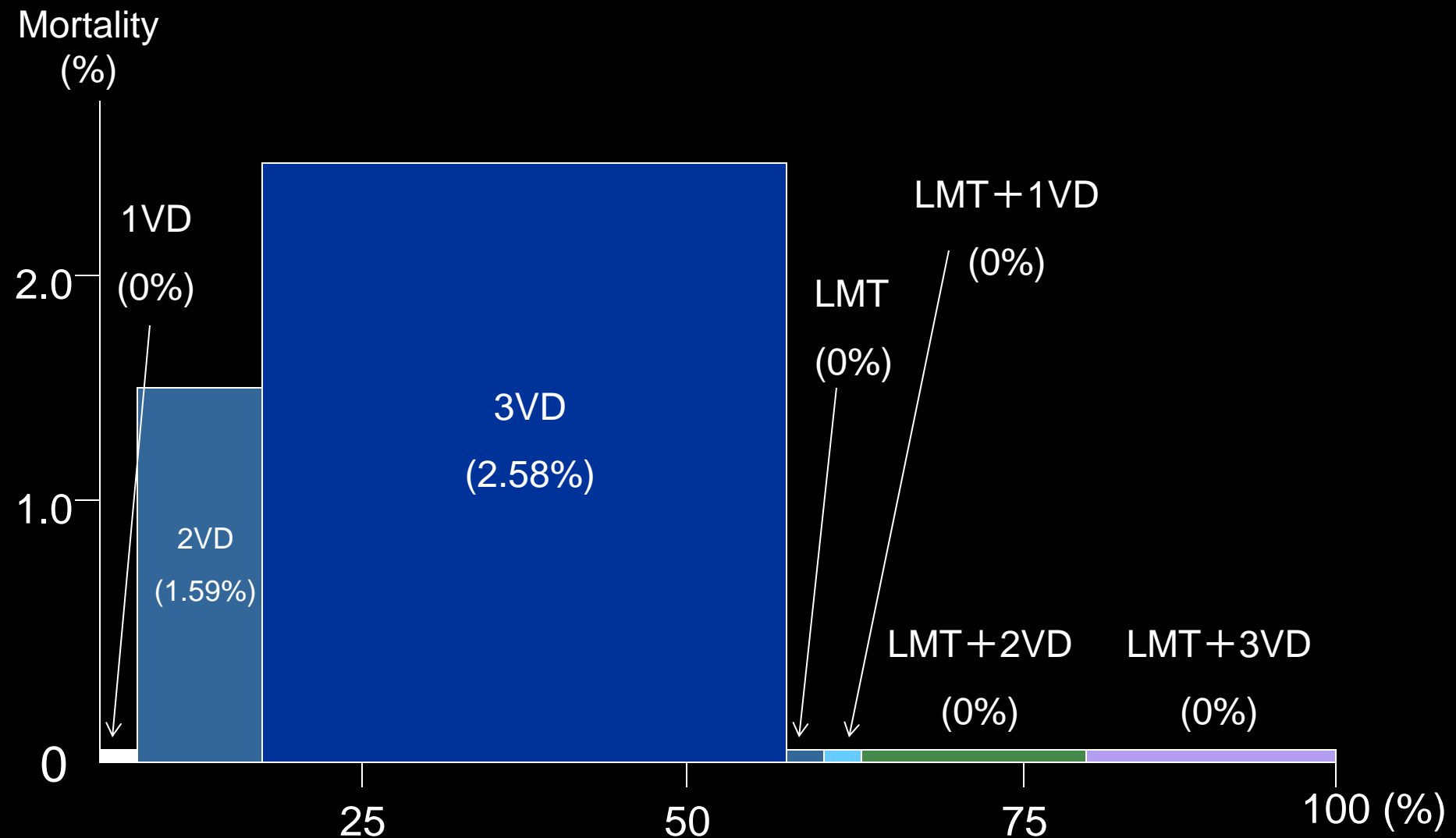
# Surgical results according to diseased vessels

(Initial elective off to on-pump (conversion): 121, mortality: 4.13%)



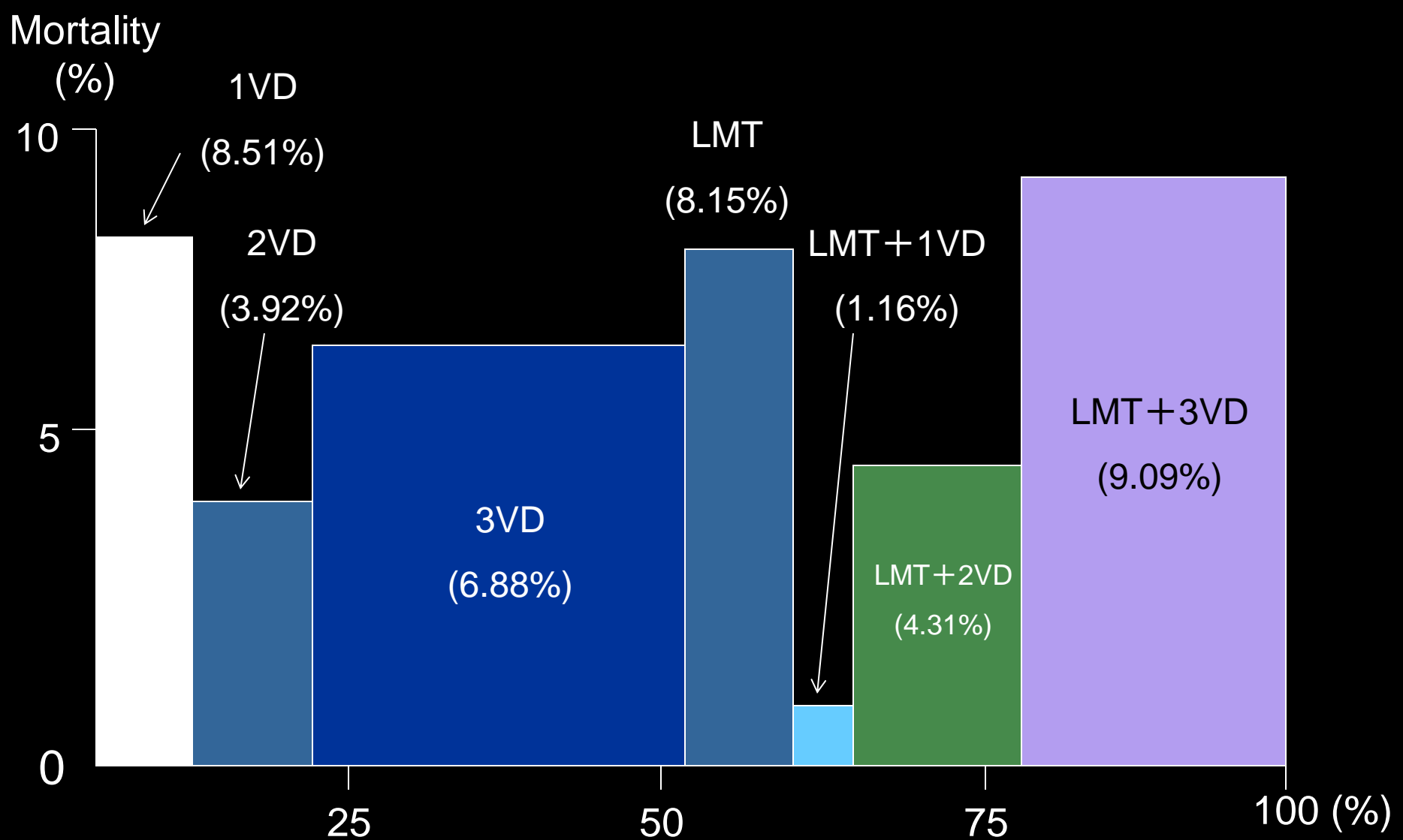
# Surgical results according to diseased vessels

(Initial elective on-pump (beating): 428, mortality:1.40%)



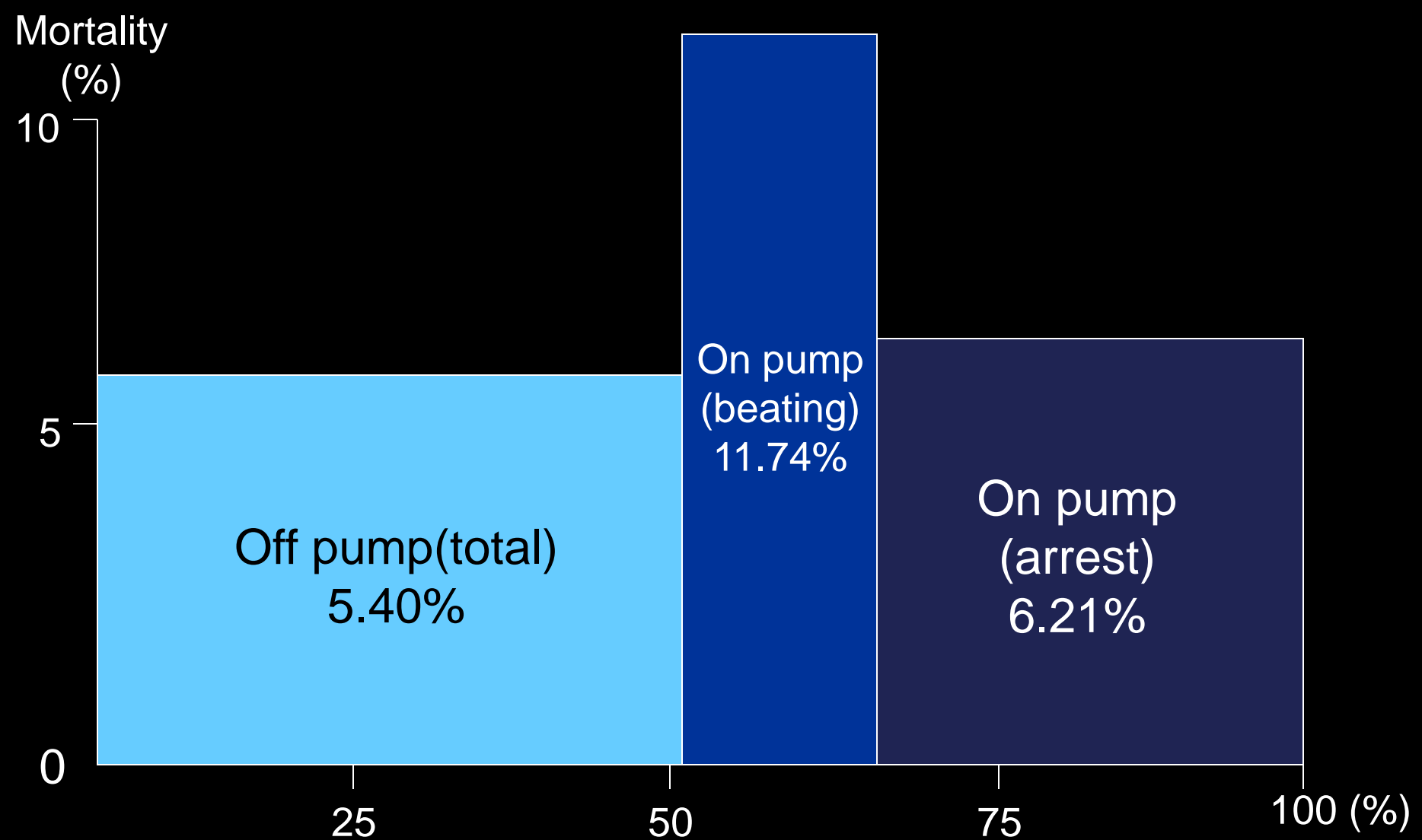
# Surgical results according to diseased vessels

(Extra initial elective cases: 1,738, mortality:6.67%)

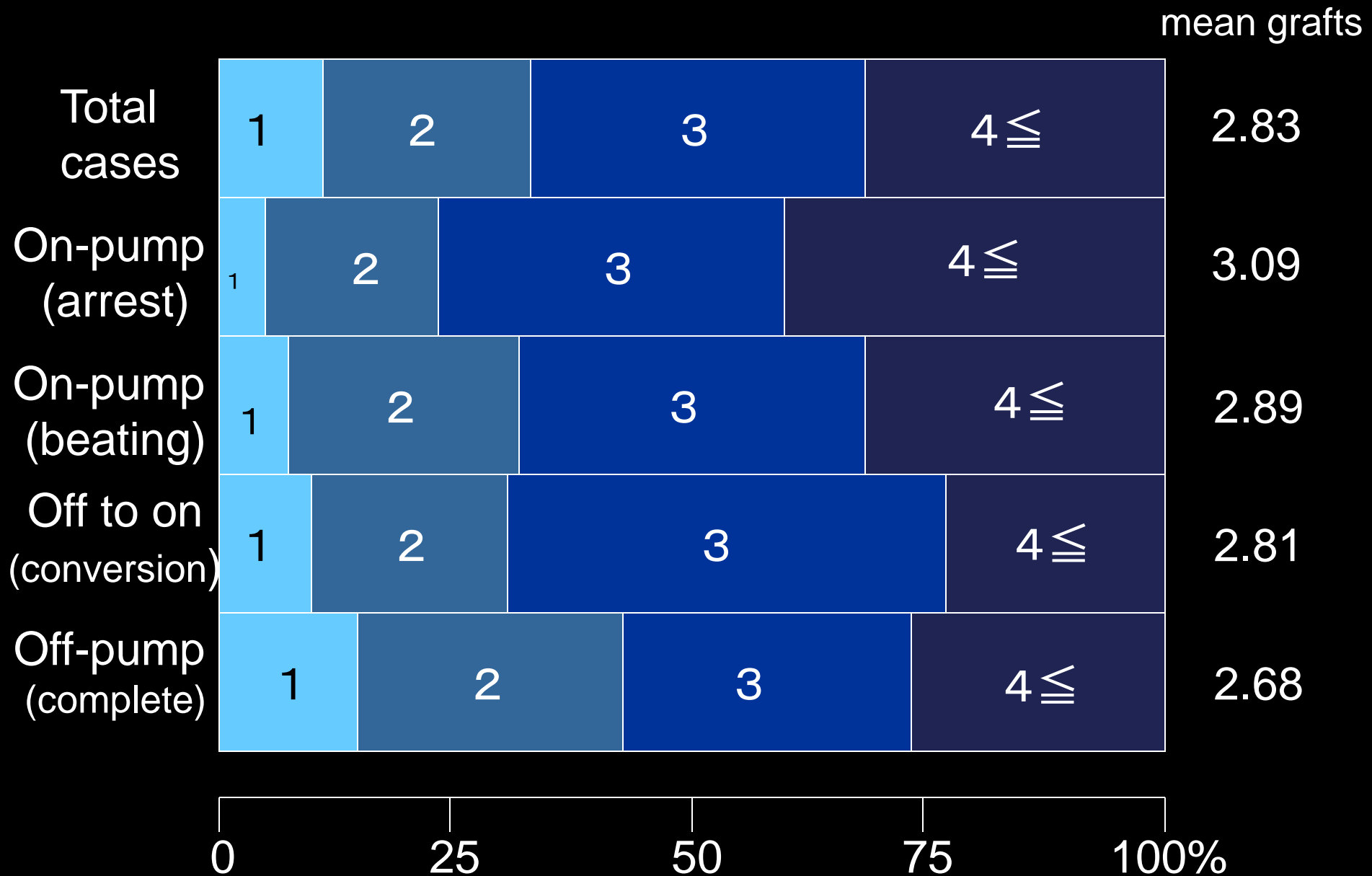


# Surgical results according to procedures

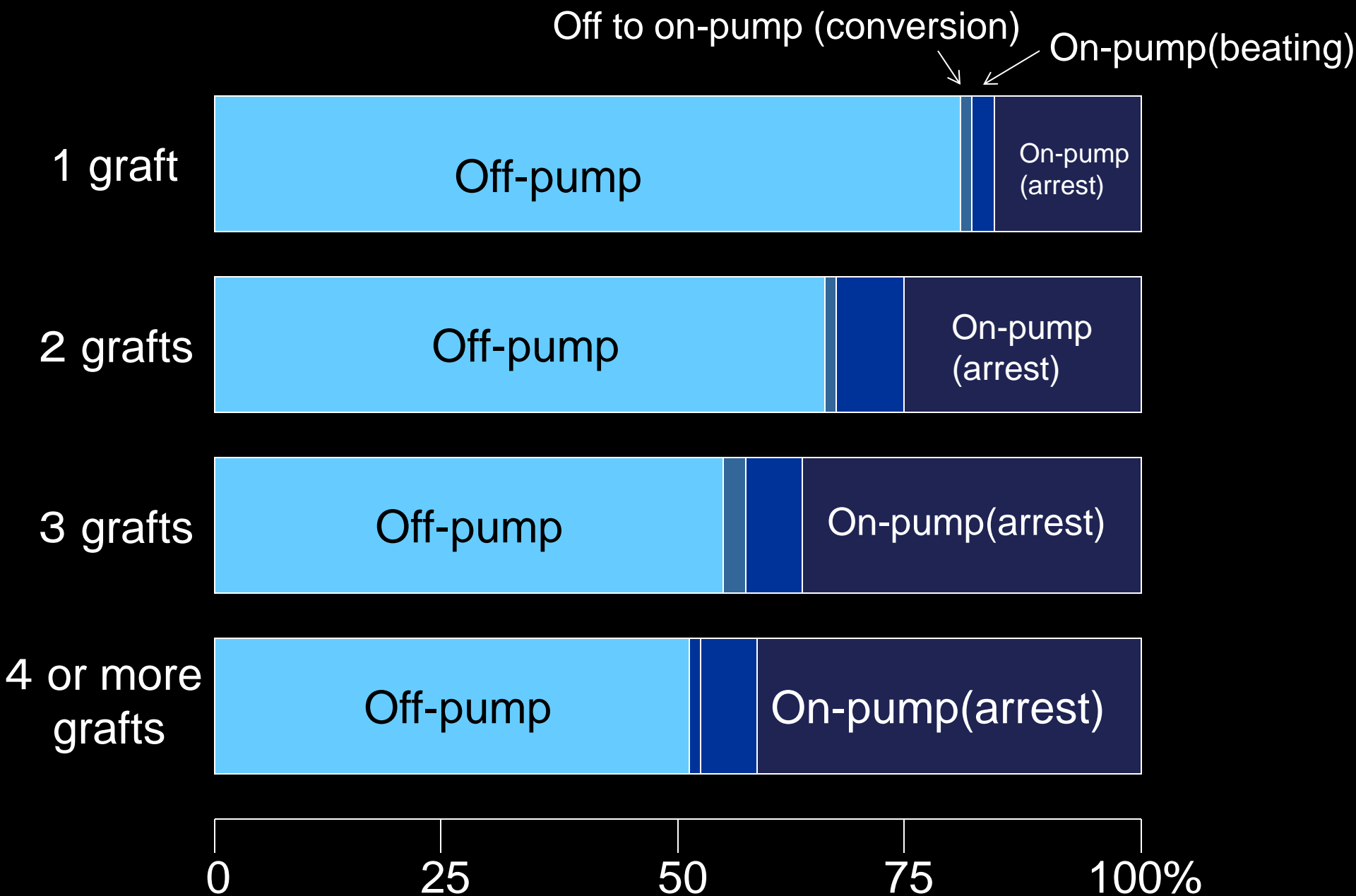
(**Except initial elective cases** : 1,738, mortality:6.67%)



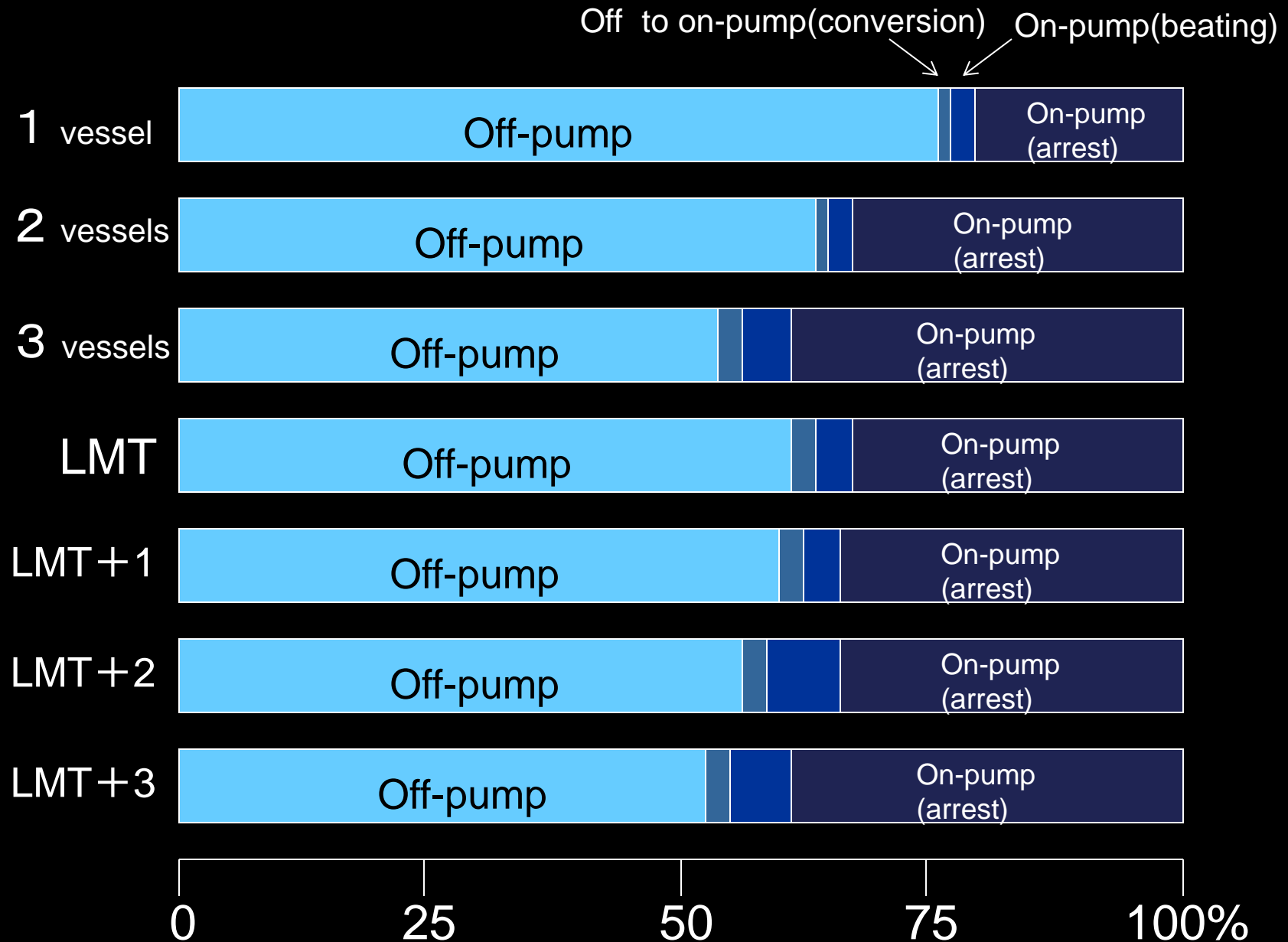
# Number of grafts according to surgical procedures



# Surgical procedures according to number of grafts

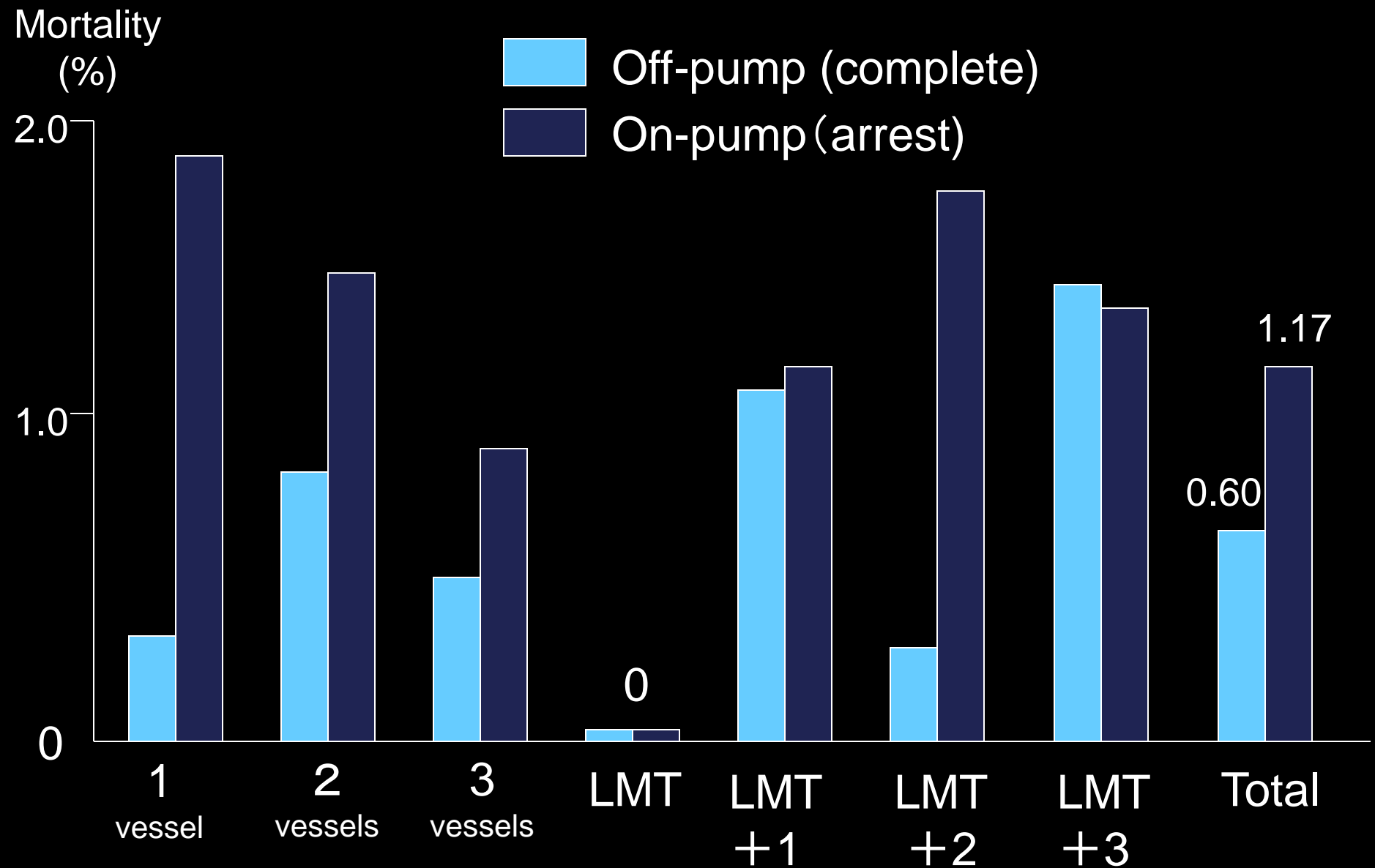


# Surgical procedures according to diseased vessels

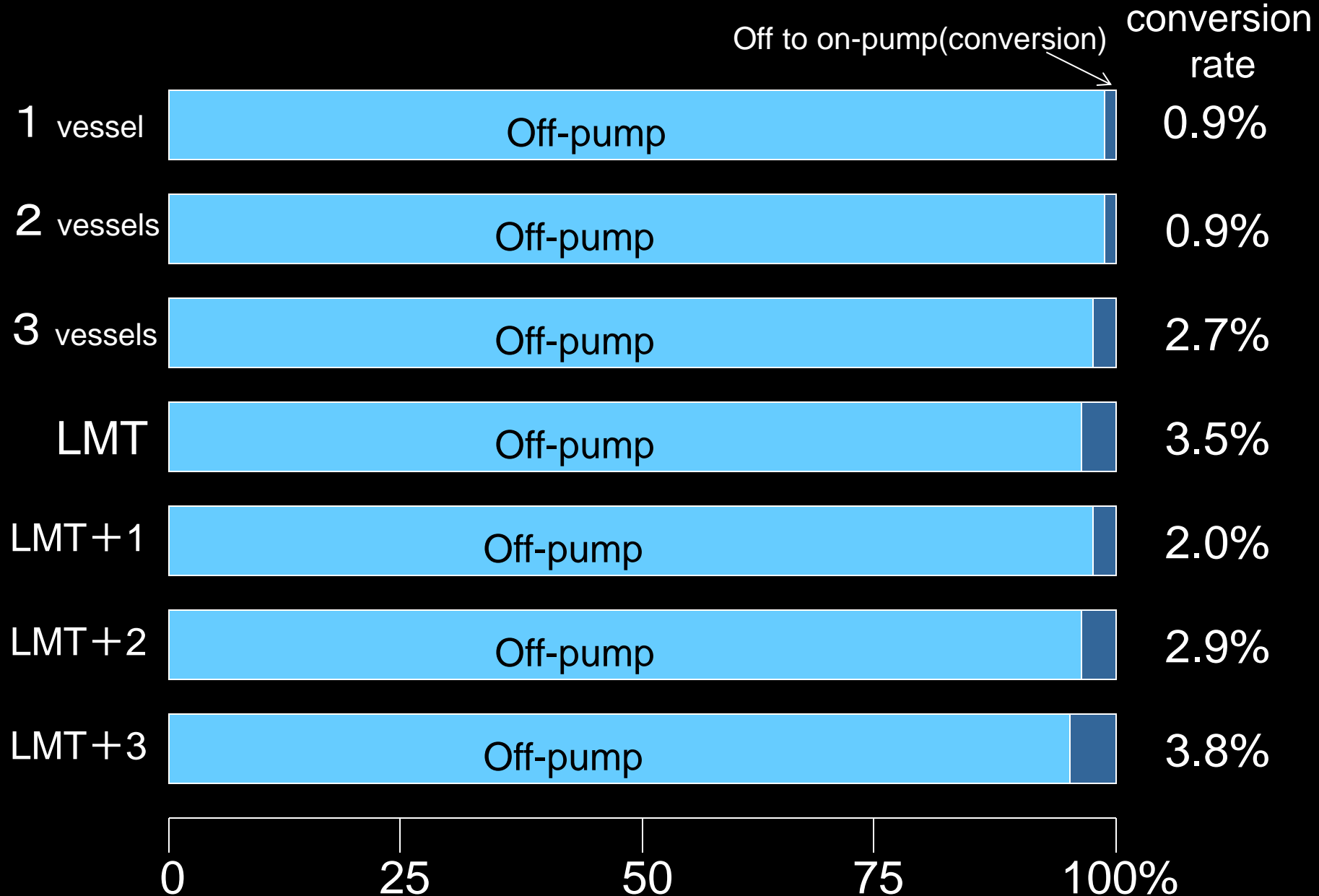




# Surgical results of off-pump(complete) vs. on-pump(arrest) according to diseased vessels

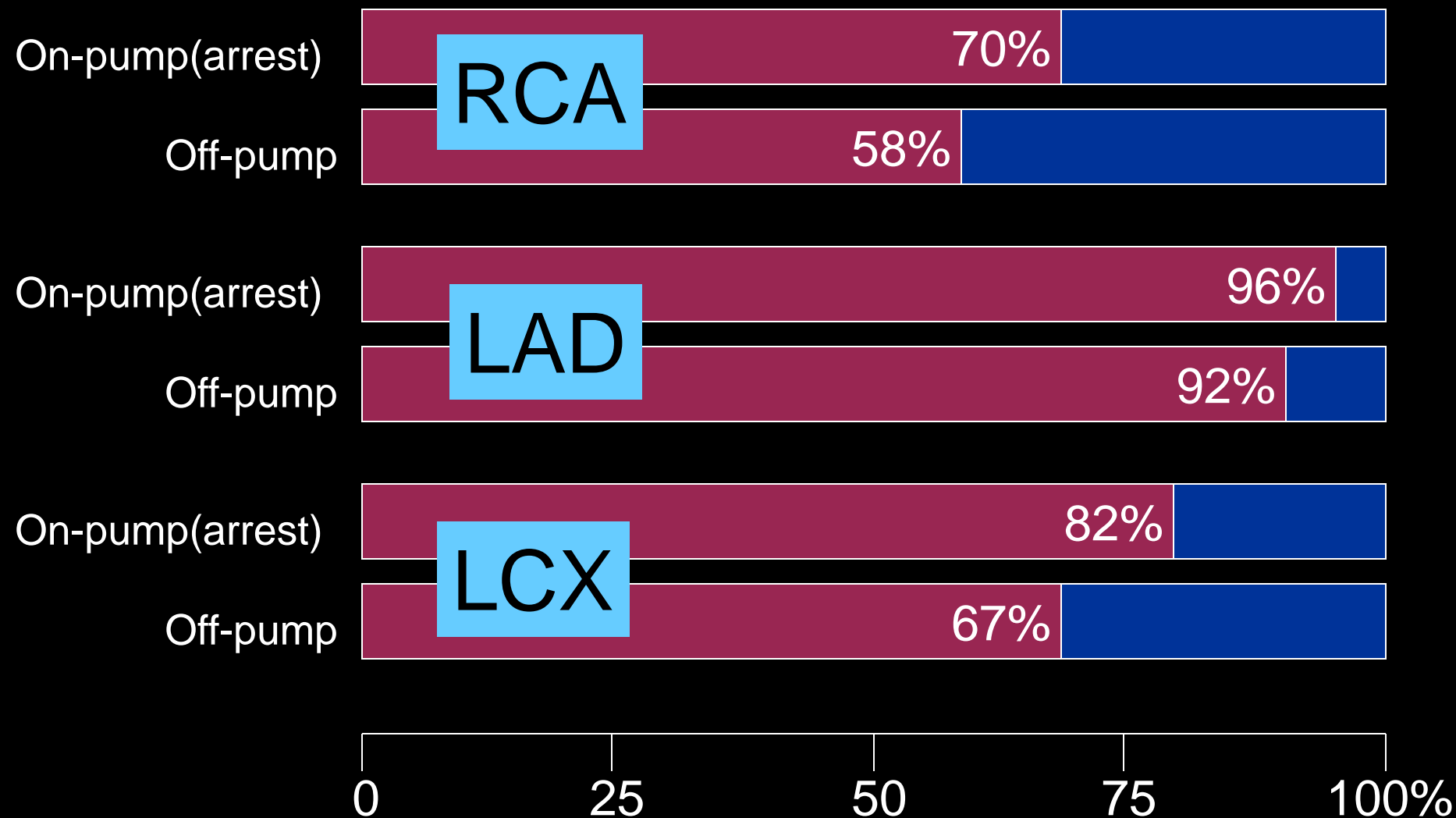


# Off to on-pump conversion rate according to diseased vessels (total:2.5%)

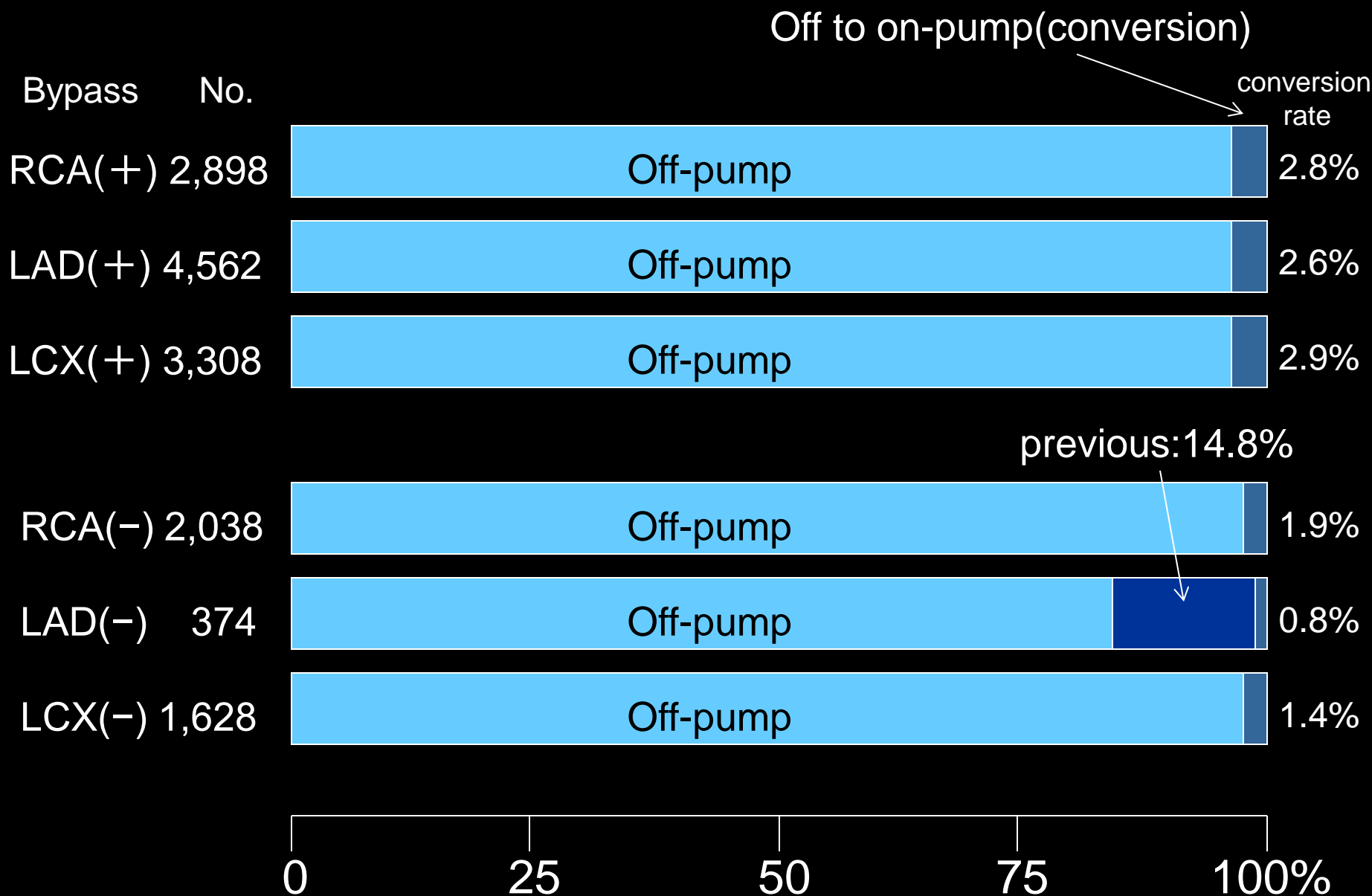


# On-pump (arrest) vs. off-pump (Initial elective CABG)

bypass+  
bypass-



# Off-pump vs. off to on-pump conversion (Initial elective CABG)

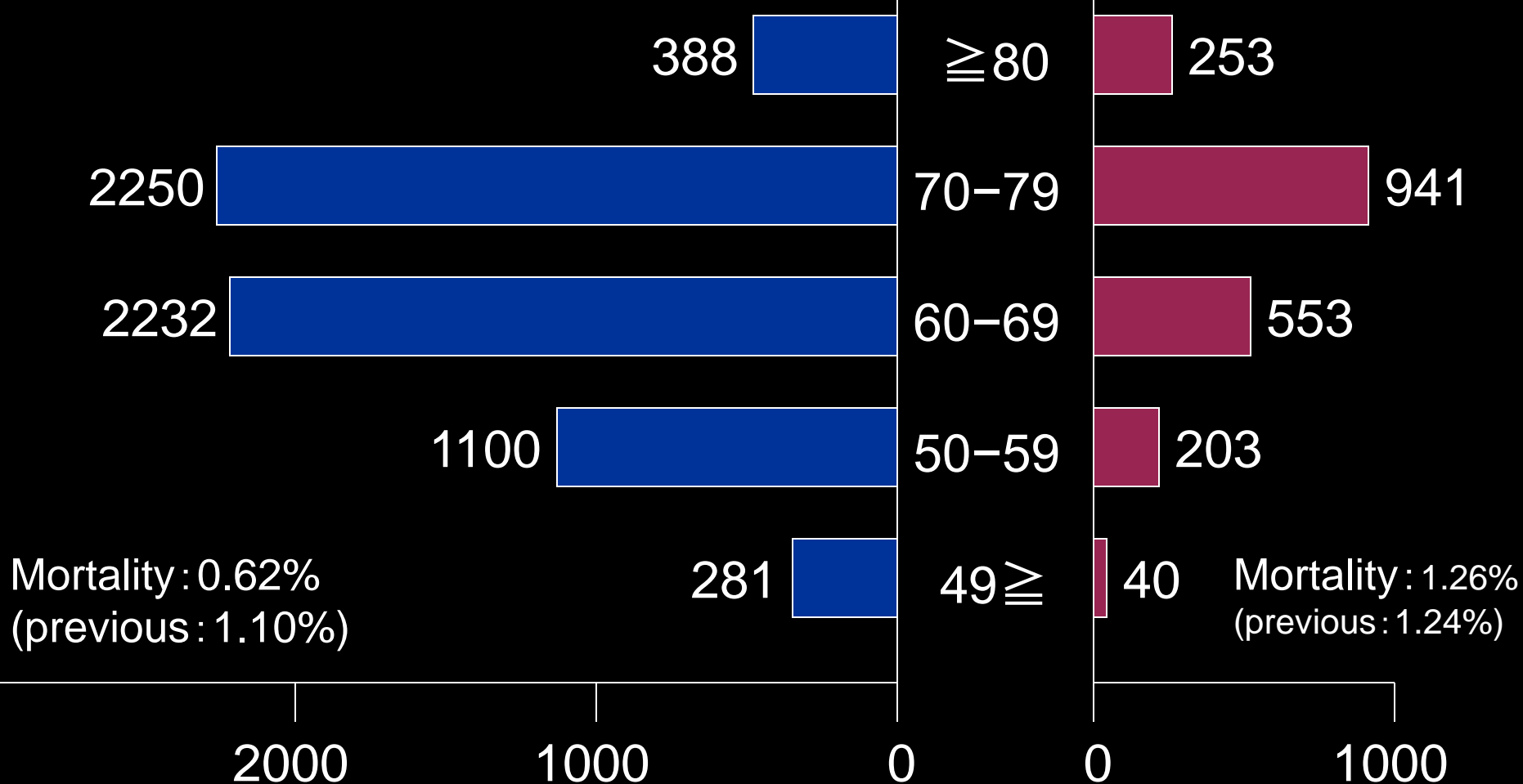


# Age distribution (Initial elective cases)

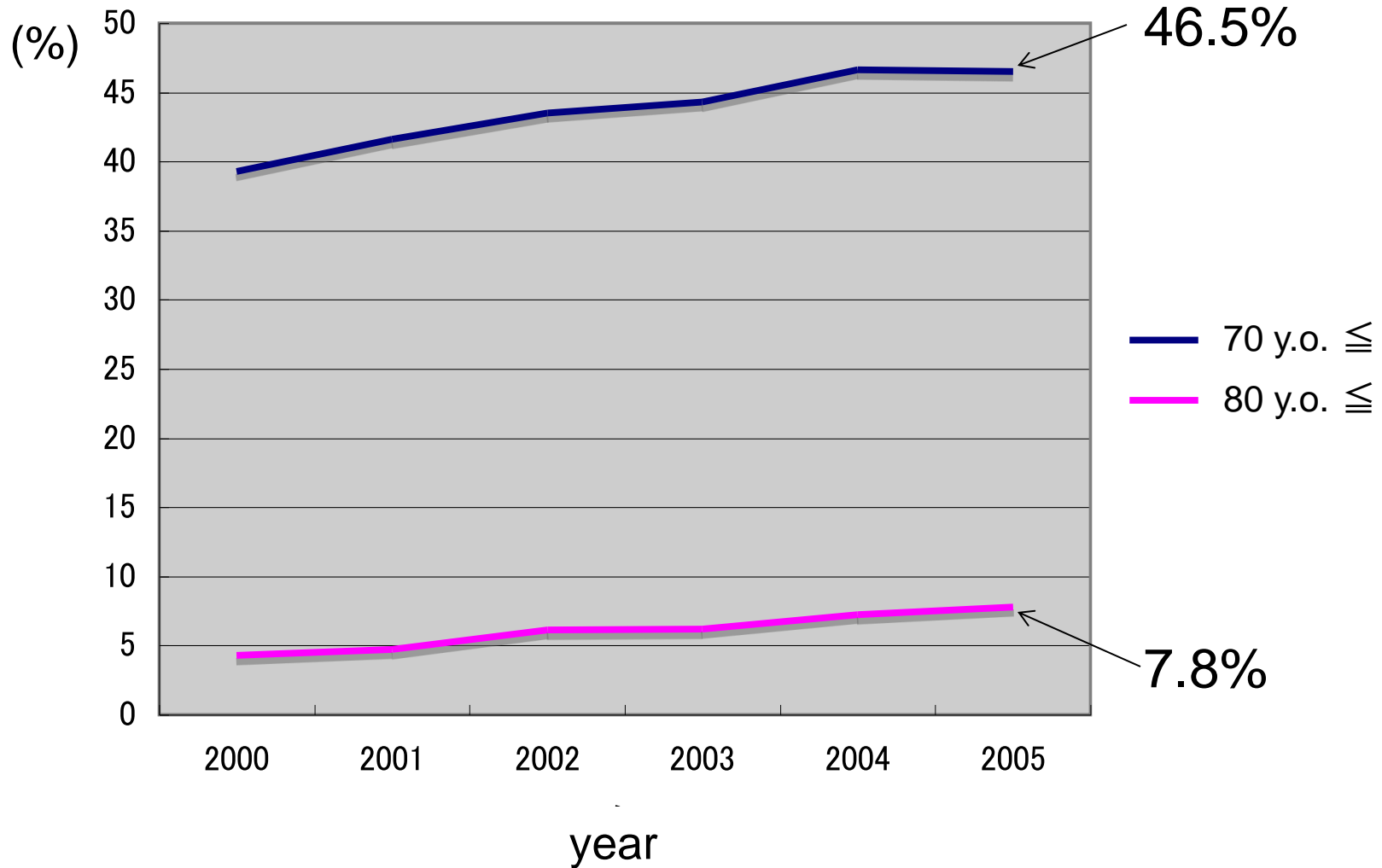
Male: 75.8%

(Age)

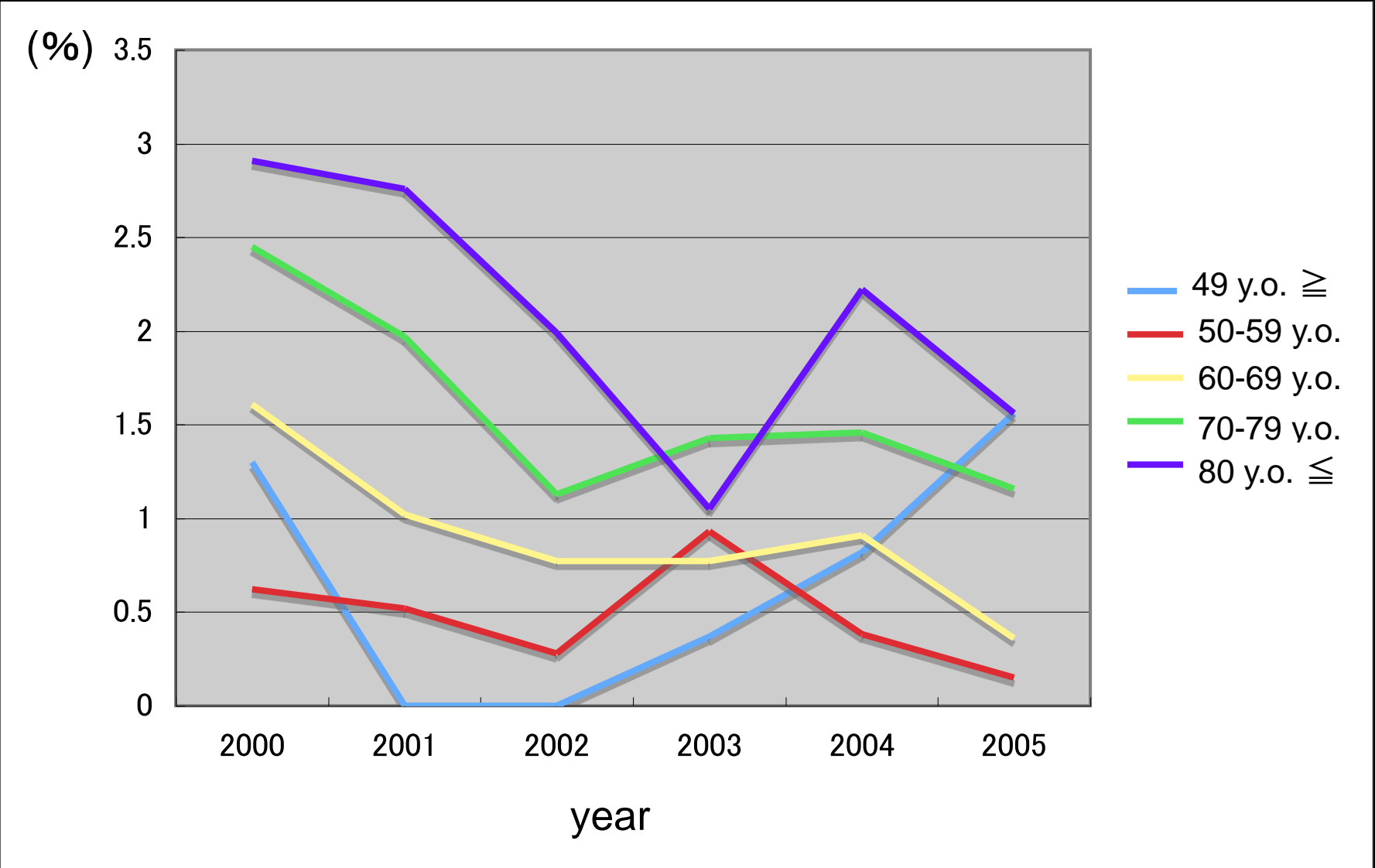
Female: 24.2%



# Changes in elderly patients (Initial elective cases)

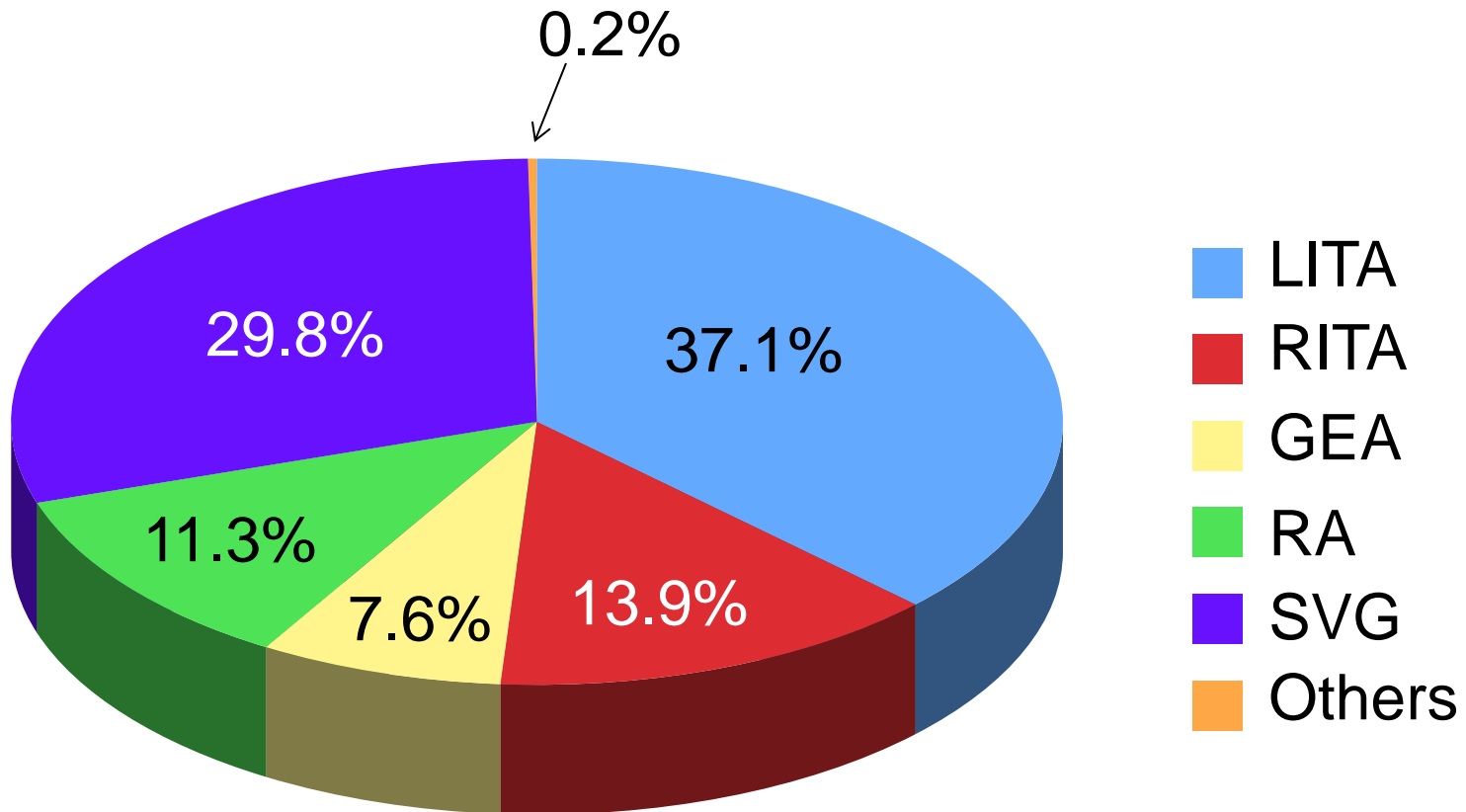


# Changes in mortality according to age (Initial elective cases)



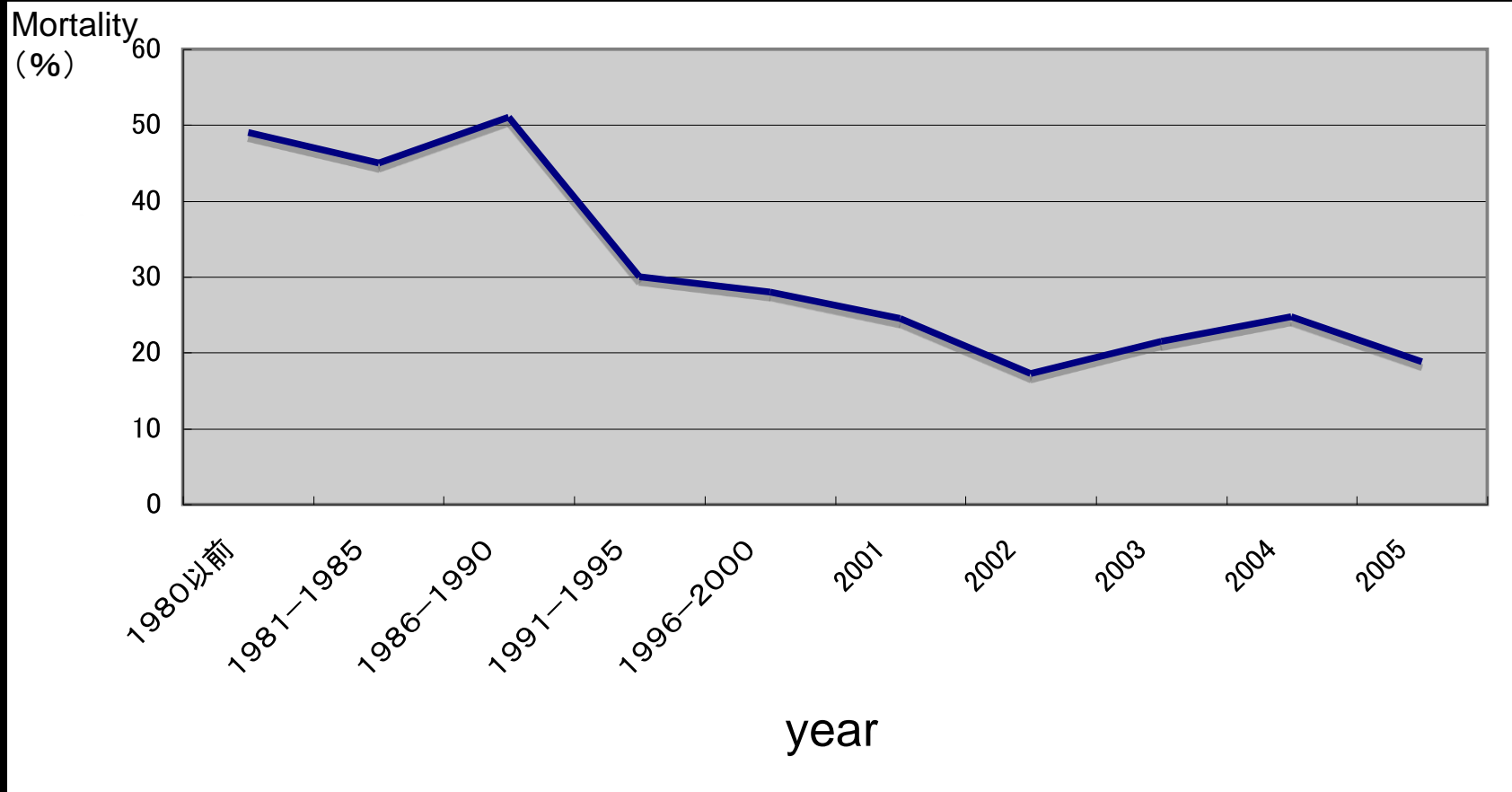
# Graft selection

(Total number of grafts : 24,7484grafts)





# Changes in mortality of VSP

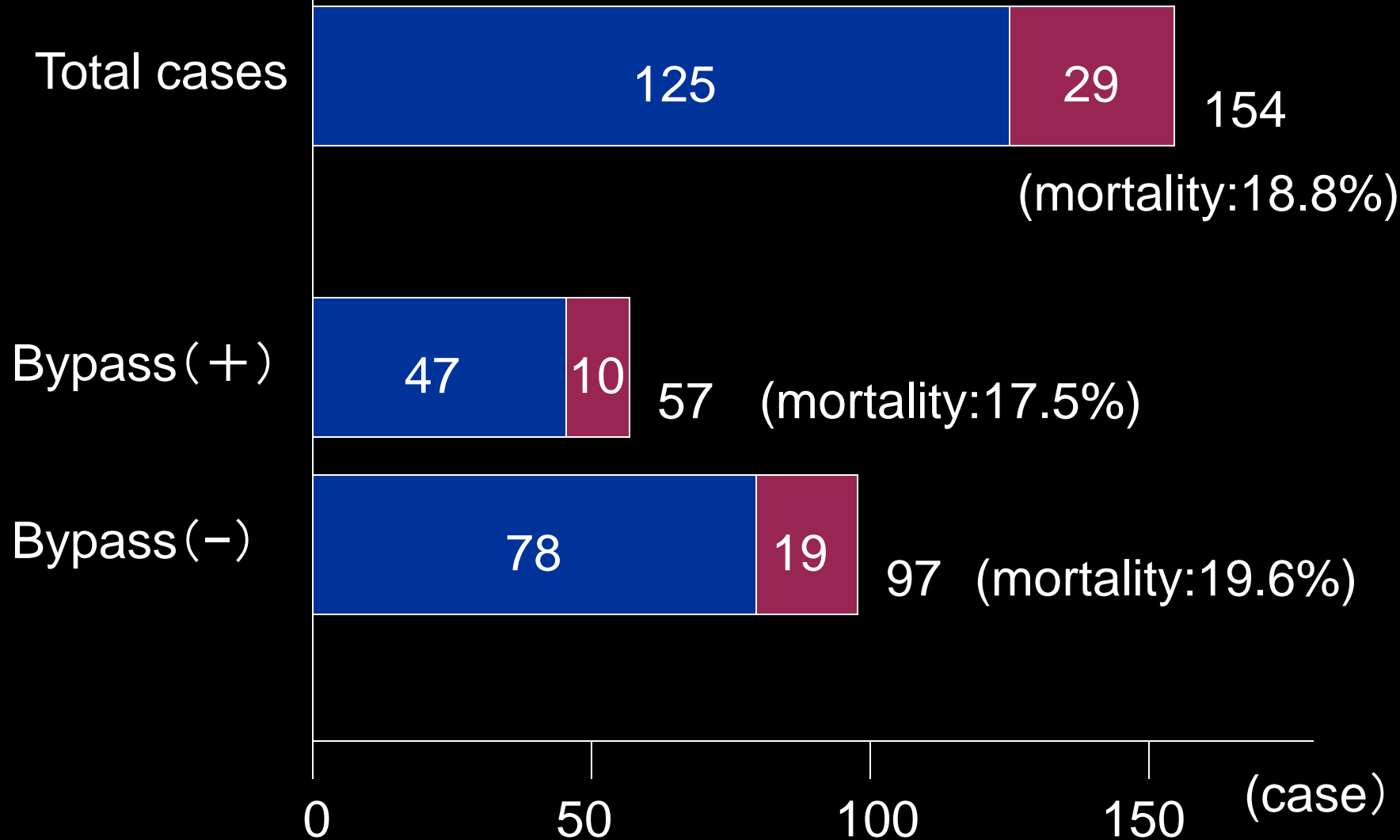


2005;

Total cases: 154、death cases: 29(Mortality: 18.83%)

# Results of VSP (1)

alive  
death

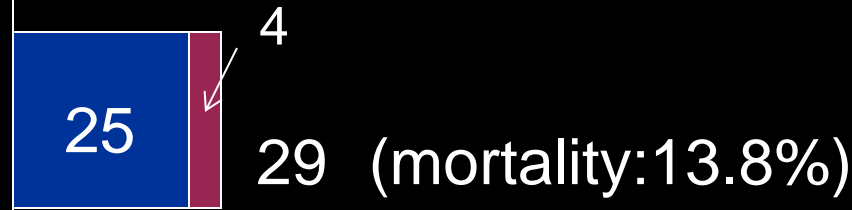


# Results of VSP (2)

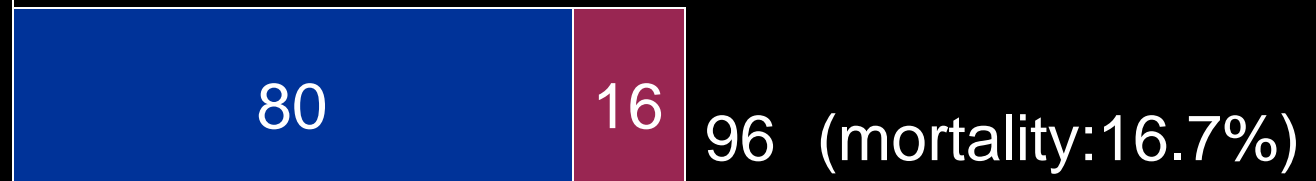
生存  
死亡

Anterior infarction (mortality:16.0%)

Dagett



Komeda



Post-inferior infarction (mortality:31.0%)

Dagett

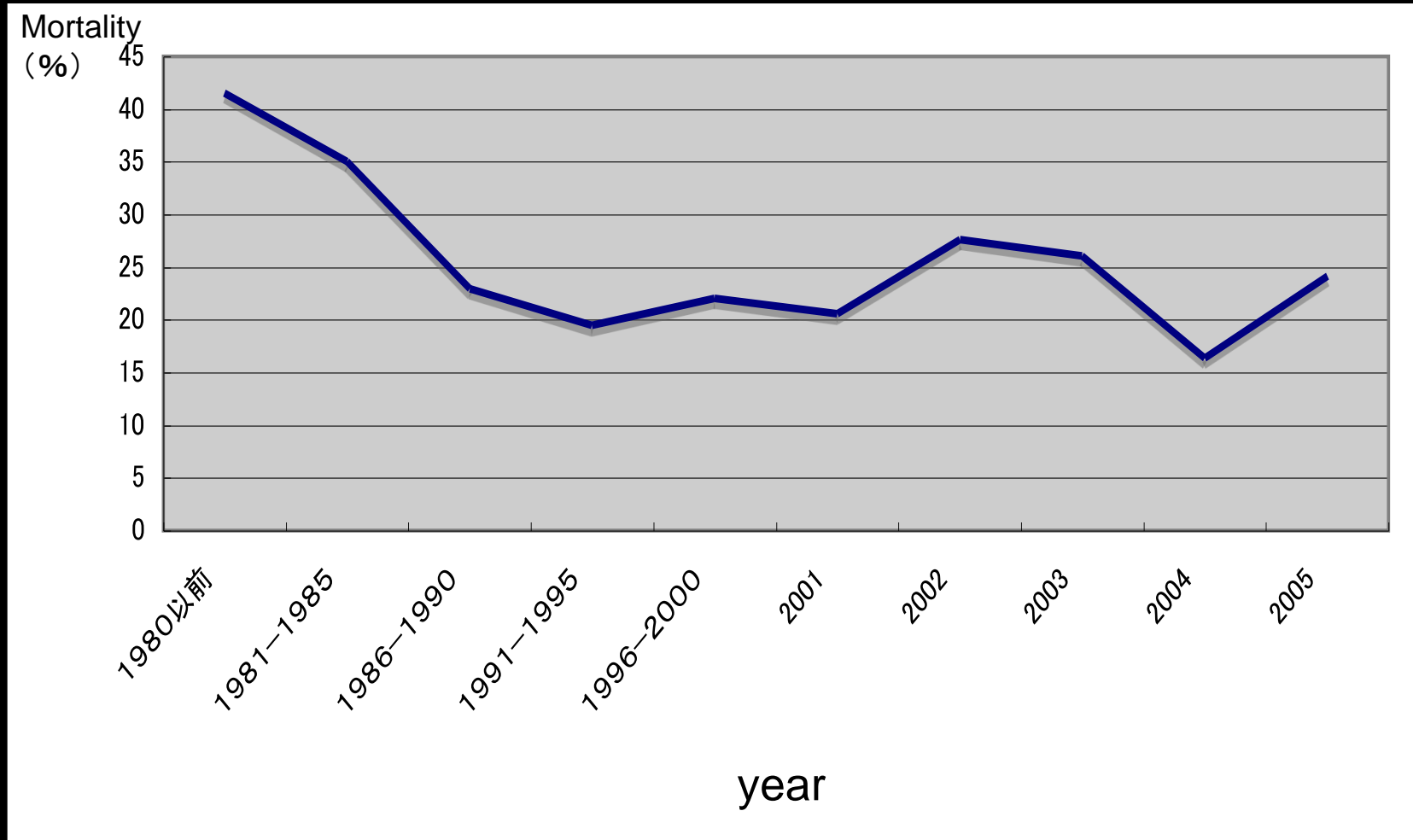


Komeda



0 50 100 150 (case)

# Changes in mortality of papillary muscle rupture of LV

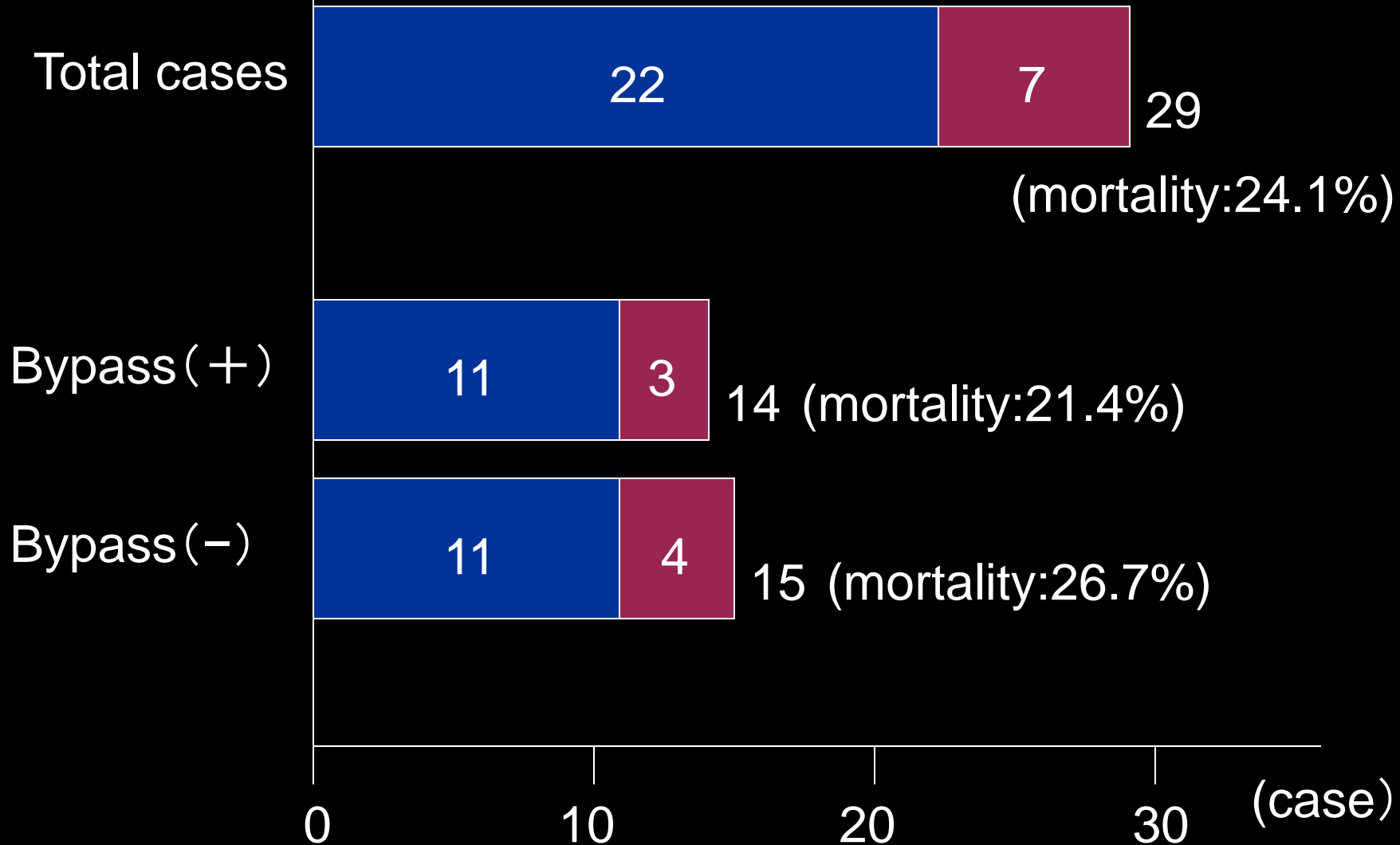


2005;

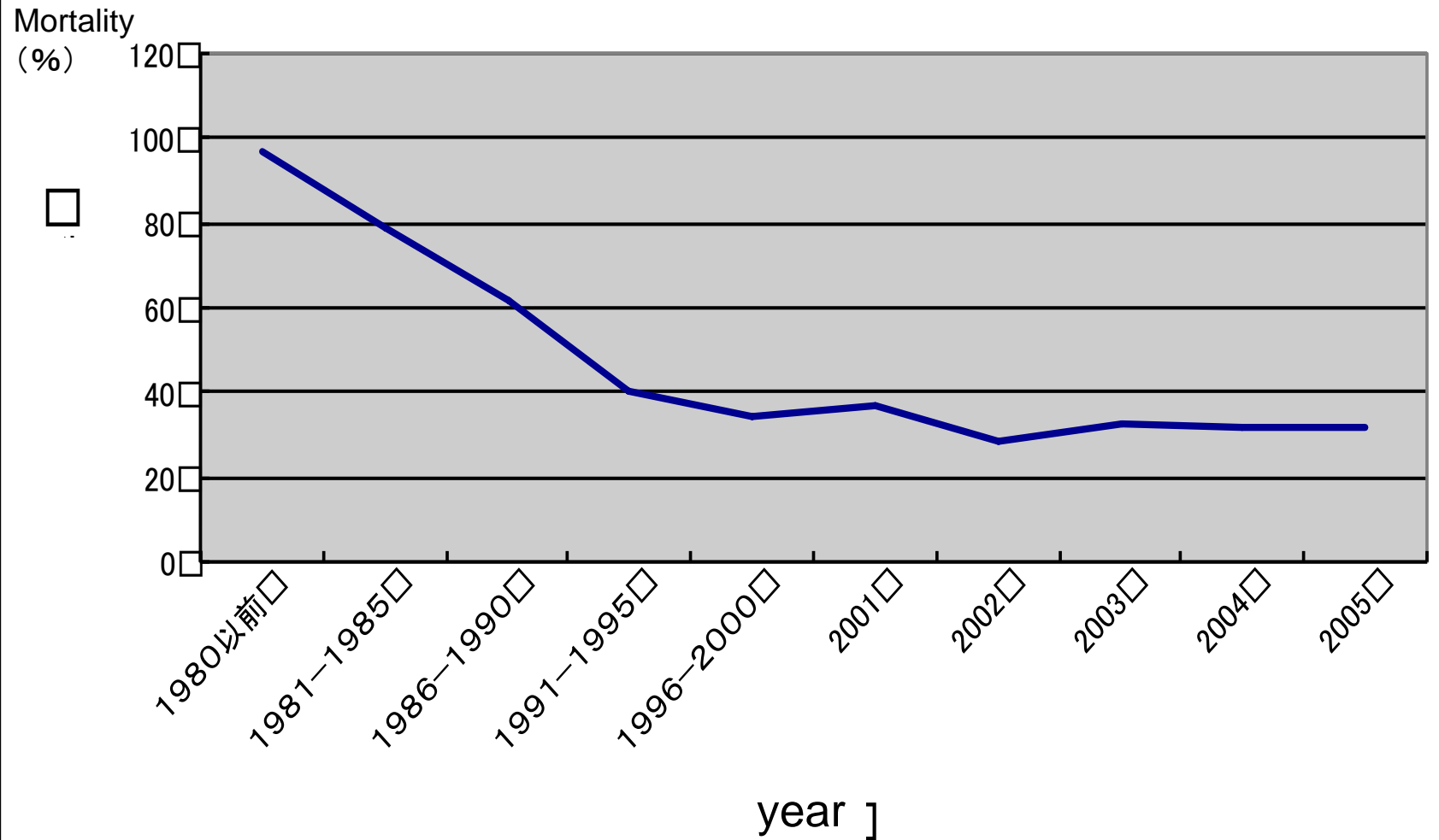
Total cases: 29、death cases: 7(mortality: 24.14%)

# Results of papillary muscle rupture

alive  
death



# Changes in mortality of cardiac rupture

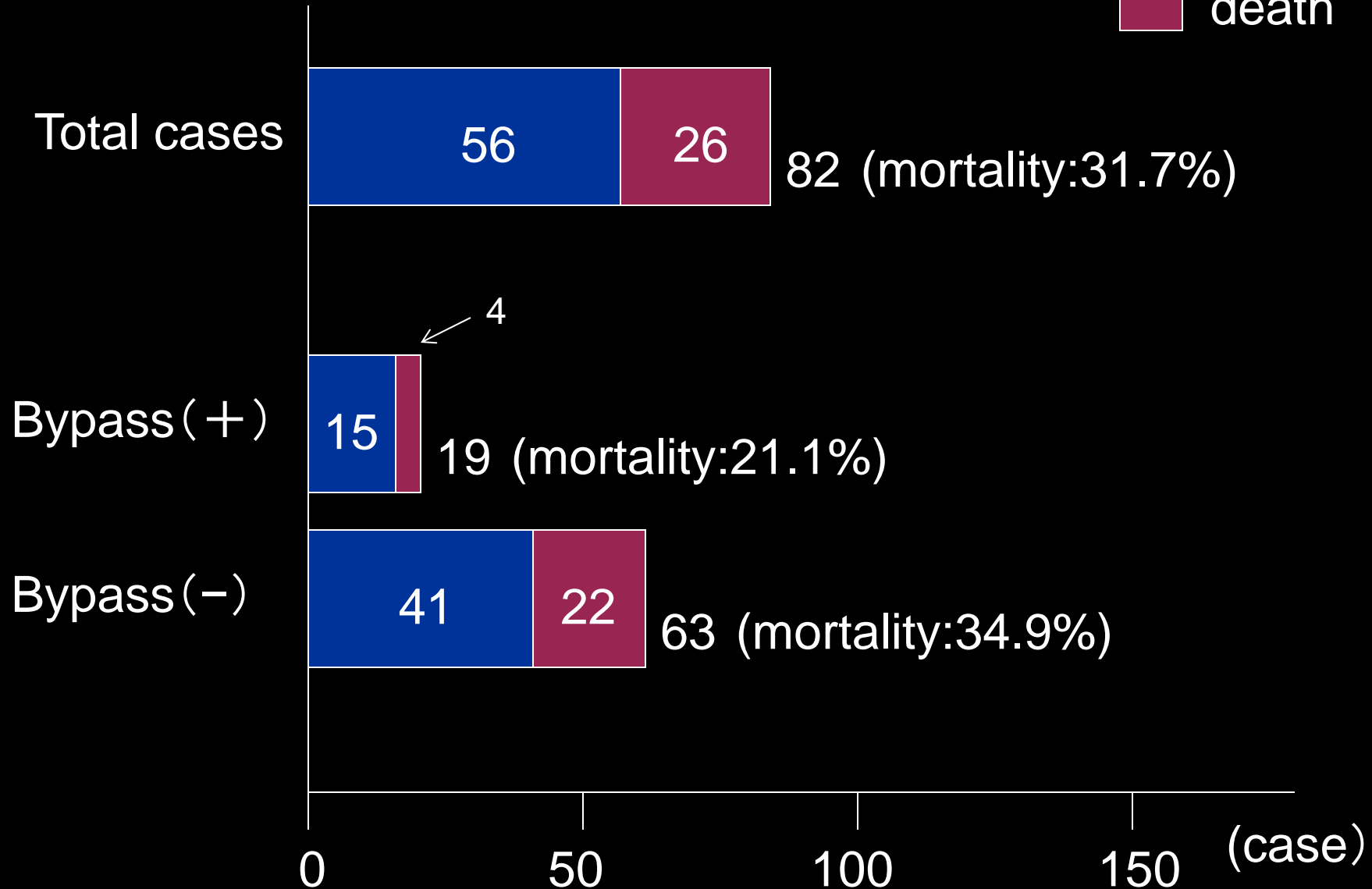


2005;

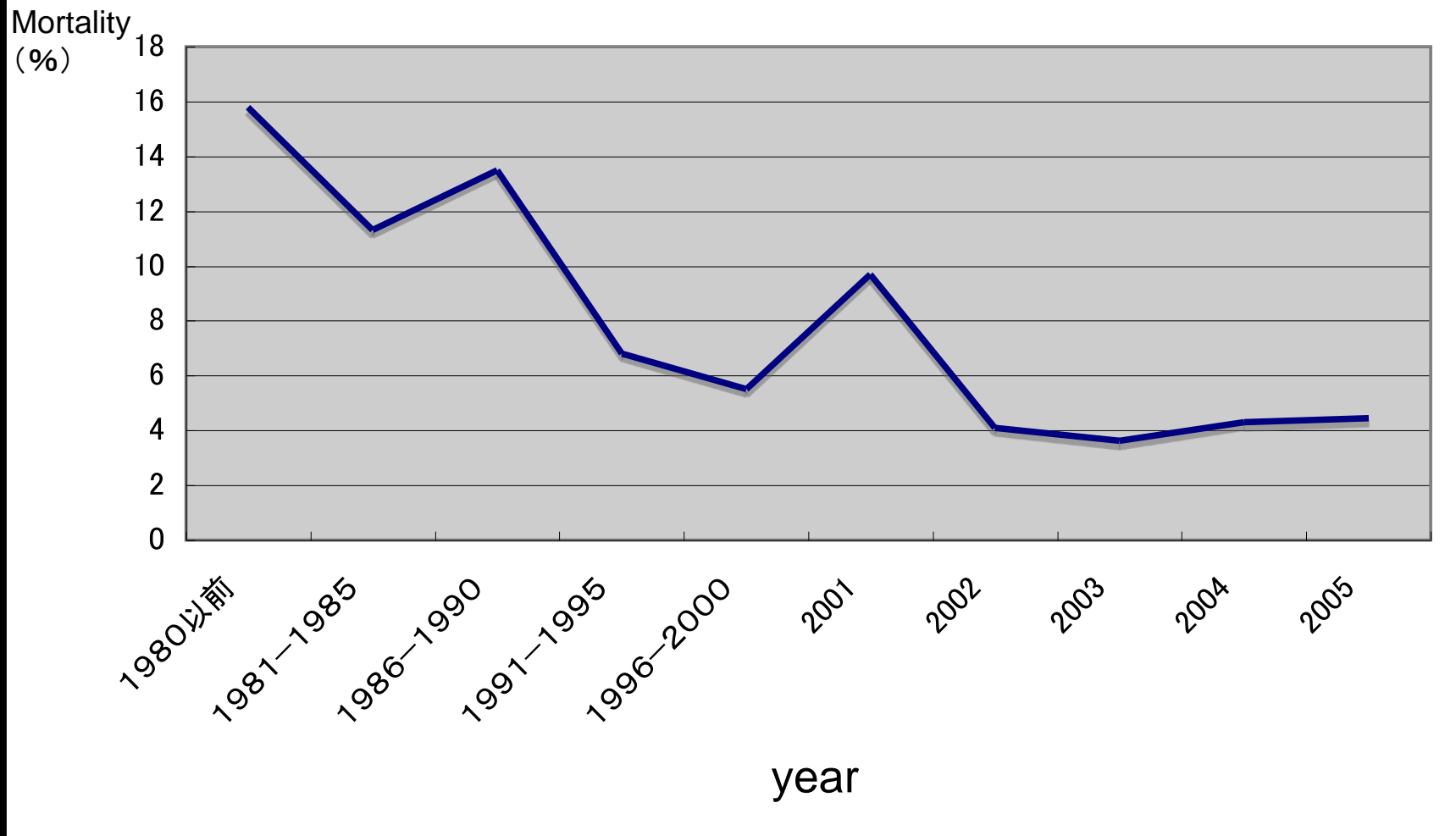
Total cases: 82、death cases: 26 (mortality: 31.71%)

# Results of cardiac rupture

alive  
death



# Changes in mortality of left ventricle aneurysm

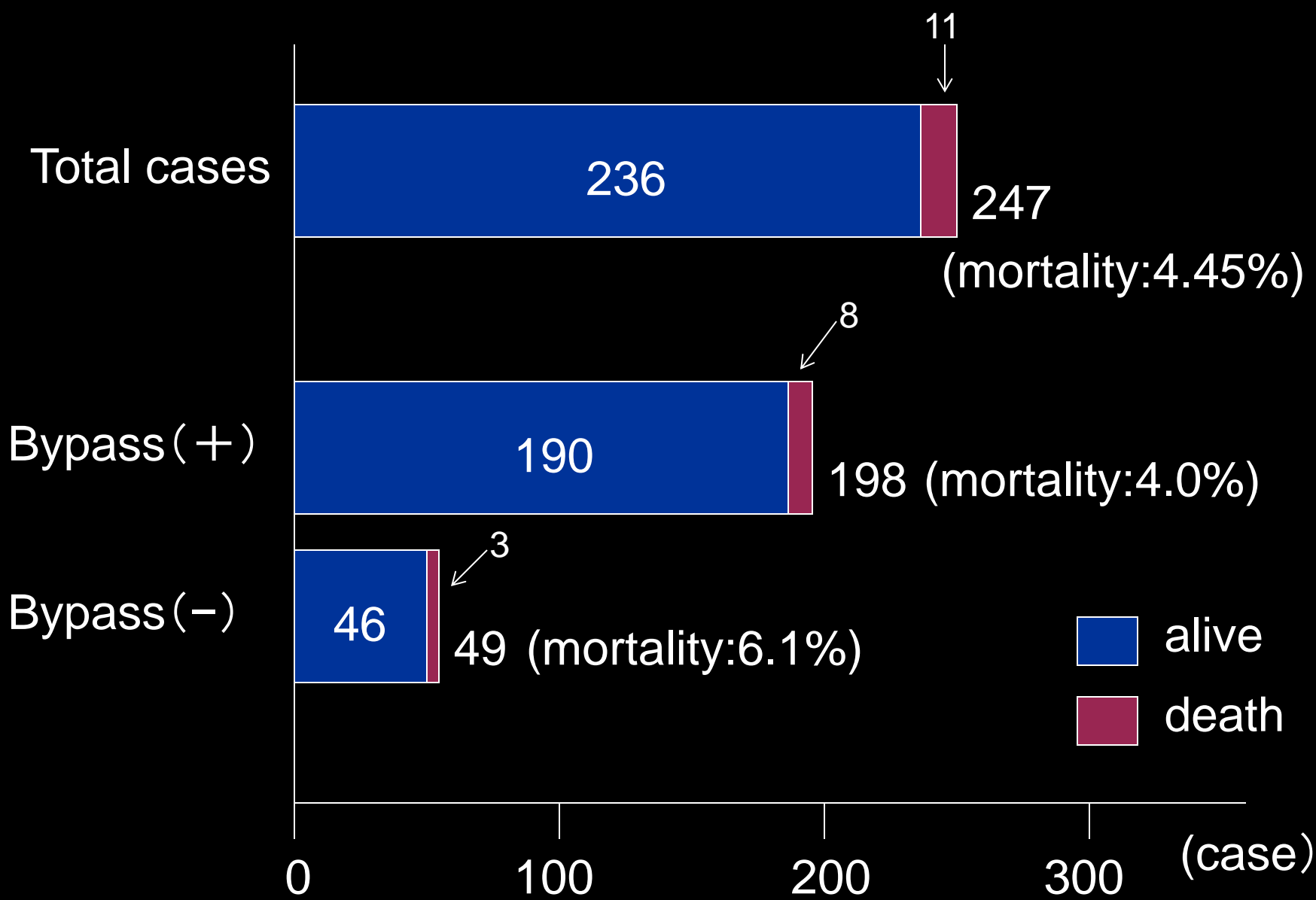


2005;

Total cases: 245、death cases 11 (mortality: 4.45%)

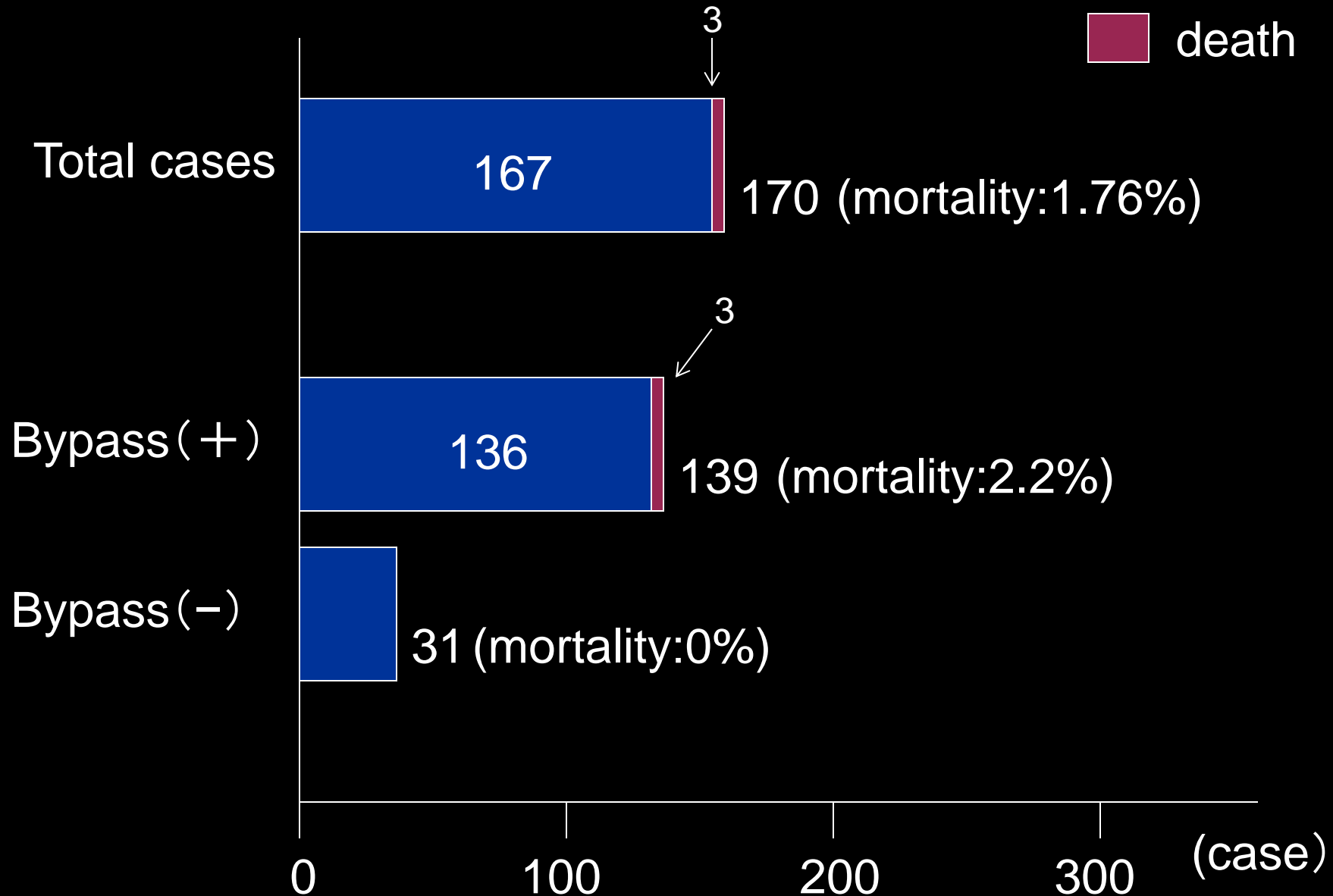


# Results of left ventricular-plasty (including left ventriculectomy) against LV aneurysm and/or ischemic cardiomyopathy



# Results of left ventriculectomy

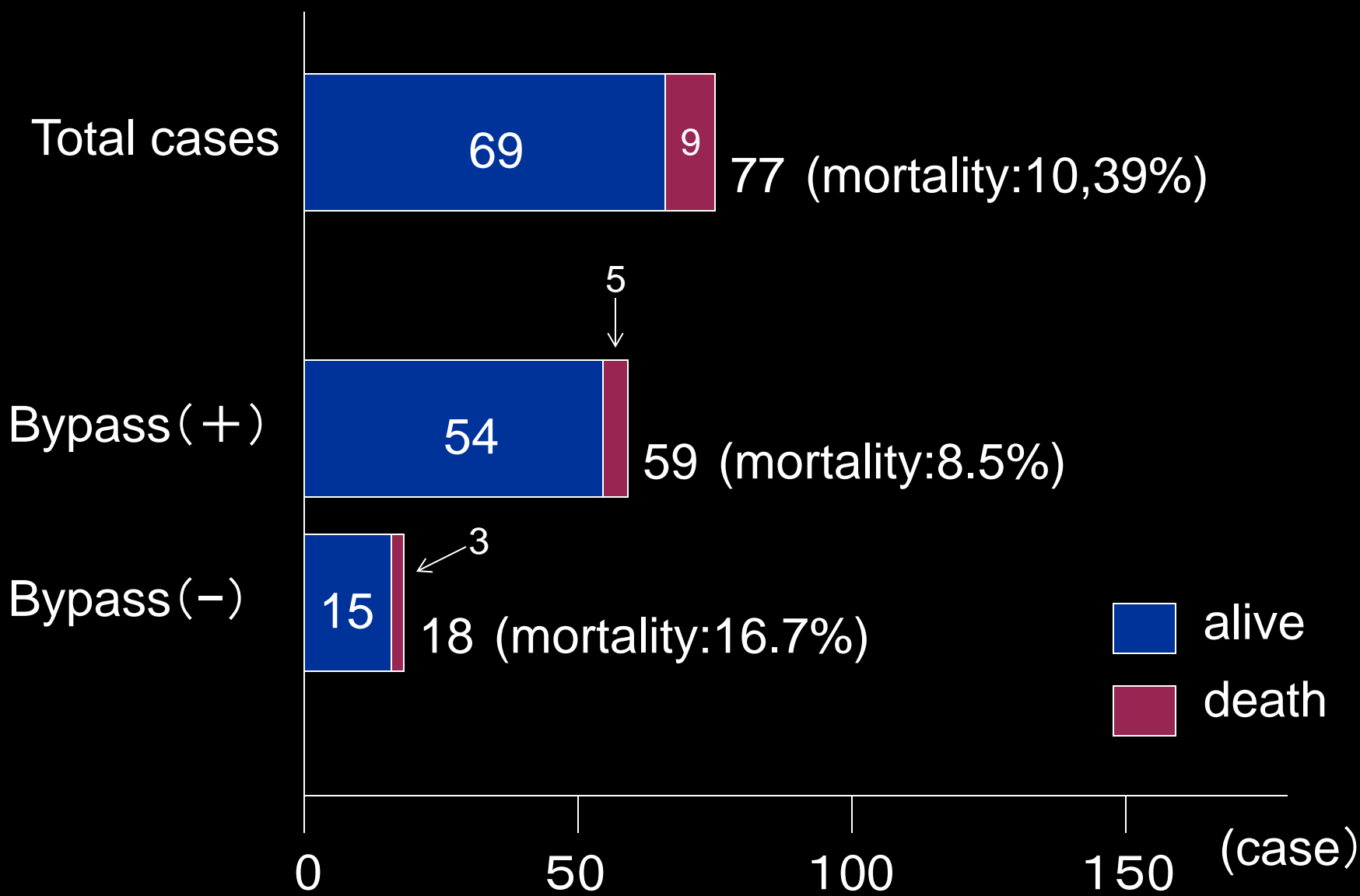
alive  
death



# Results of mitral valvuloplasty and replacement against ischemic mitral regurgitation



# Results of LV aneurysm and or ischemic cardiomyopathy concomitant with mitral valve regurgitation



## Conclusions (1)

1. The mortality of isolated CABG and initial elective CABG were 1.91%, and 0.89% respectively, indicating better results than that of previous year.
2. Of all initial elective CABG, 61% cases underwent off-pump CABG (OPCAB), showing high frequency rate. The mortality of OPCAB was 0.60%, showing excellent results.
3. The frequency rate of off to on-pump CABG was 4.13%, which was high rate.
4. The mean number of grafts for CABG was 2.83, which increased than that of last years, indicating more bypass performed.

## Conclusions (2)

6. Of 4 or more bypass surgery, about 50% cases underwent OPCAB.

7. CABG cases have been getting older ; the rate of 70 or more years old was 50%. The surgical results of those cases improved.

6. The frequency use rate of arterial grafts was about 70%, on the other hand, that of vein graft was 30%.

7. As for the results of complications after myocardial infarction, the mortality of those cases has been getting better.