

Coronary artery surgery results 2010, in Japan

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

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Official home-page of JACAS : <http://www.jacas.org>

Coronary artery bypass grafting (CABG), 2010

Total cases : 12,789

Isolated CABG : 9,429 (74%) (previous year:75%)

Concomitant CABG : 3,369 (26%) (previous year:24%)

Isolated CABG

~~Initial elective : 7,975~~ ~~Extra initial elective : 1,454~~

Off-pump : 5,193 Off-pump :

765 On-pump : 2,782 On-pump :

689

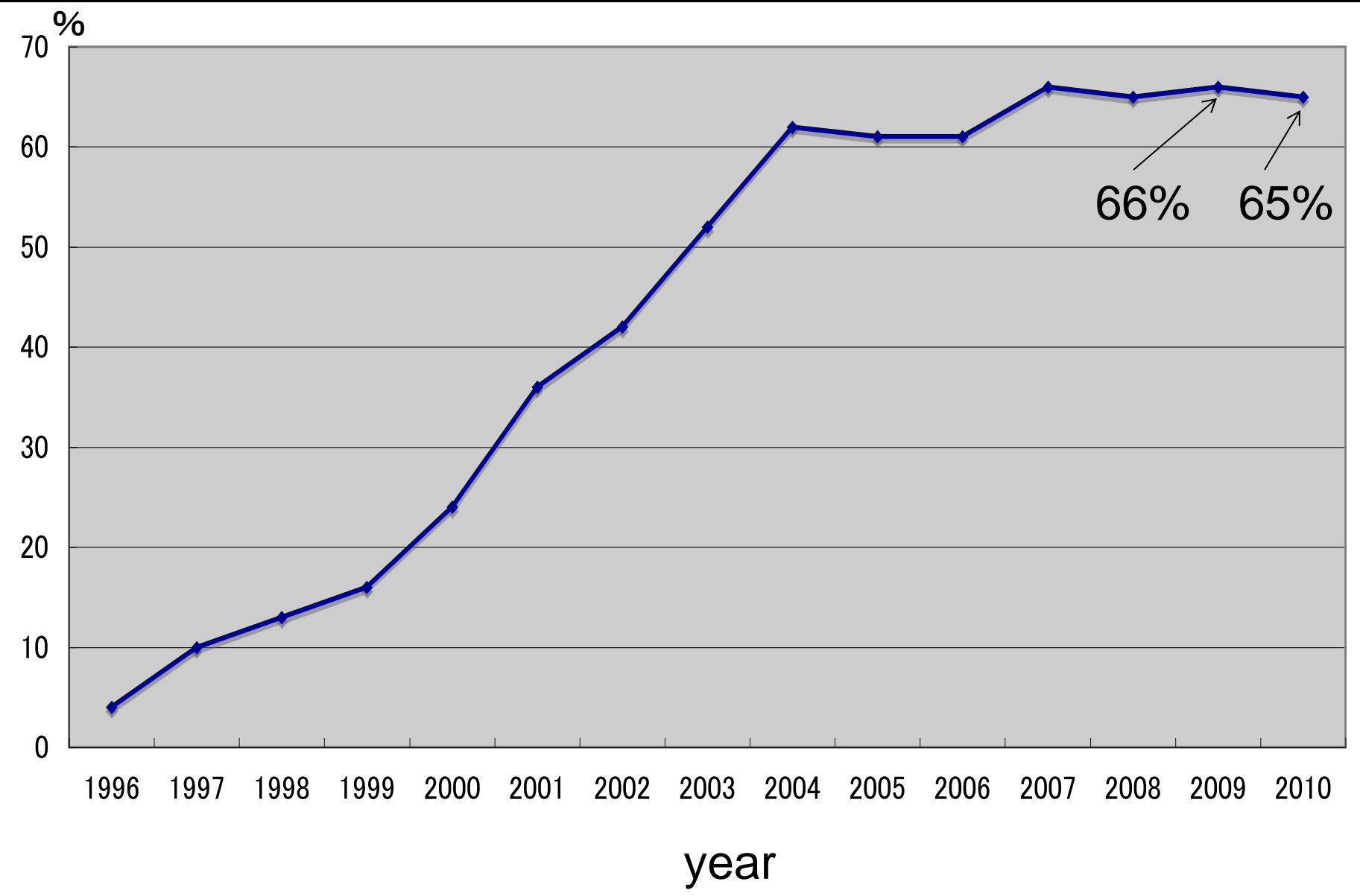
(Off-pump rate : 65%)

(Off-pump rate : 53%)

(previous year : 66%)

(previous year : 50%)

Changes in OPCAB frequency rate of initial elective CABG



Total cases of initial elective :7,975(100%)

On-pump (cardiac arrest) :1,987(24.9%)
On-pump (cardiac beating) : 795(10.0%)
Off-pump (total cases) :5,193(65.1%)
Off-pump (complete) :5,073
On-pump (convert) : 120

OPCAB complete rate :97.7%

Off to on-pump convert rate : 2.3%
(previous year:1.8%)

Mortality of isolated CABG:1.45%
(previous year:2.12%)

Mortality of initial elective CABG:0.75%
(previous
year:1.20%)

On-pump (cardiac arrest) :0.75%

On-pump (cardiac beating) :1.64%

Off-pump (total cases) :0.62%

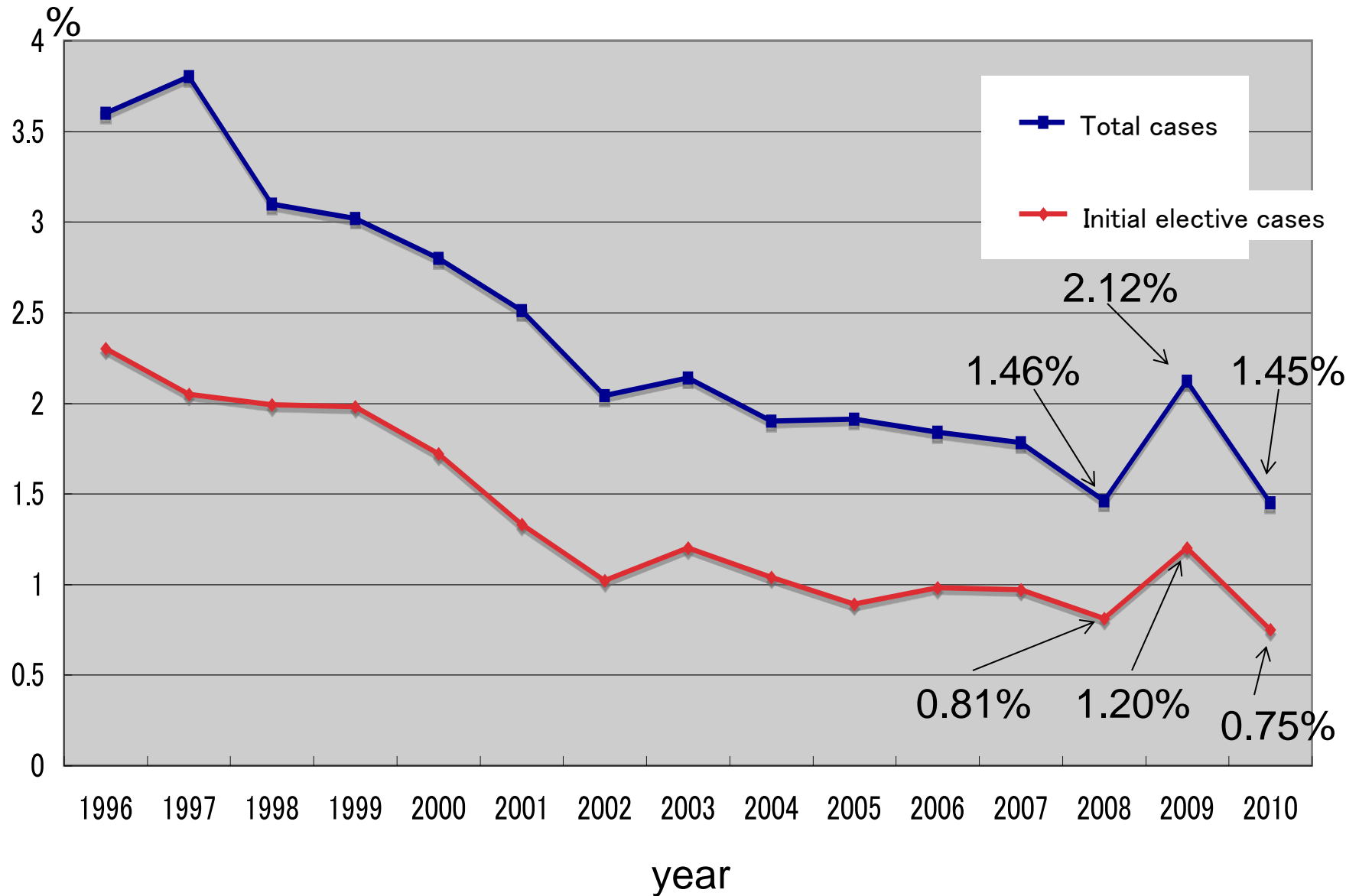
Off-pump (complete) :**0.53%**

(previous year:1.22%)

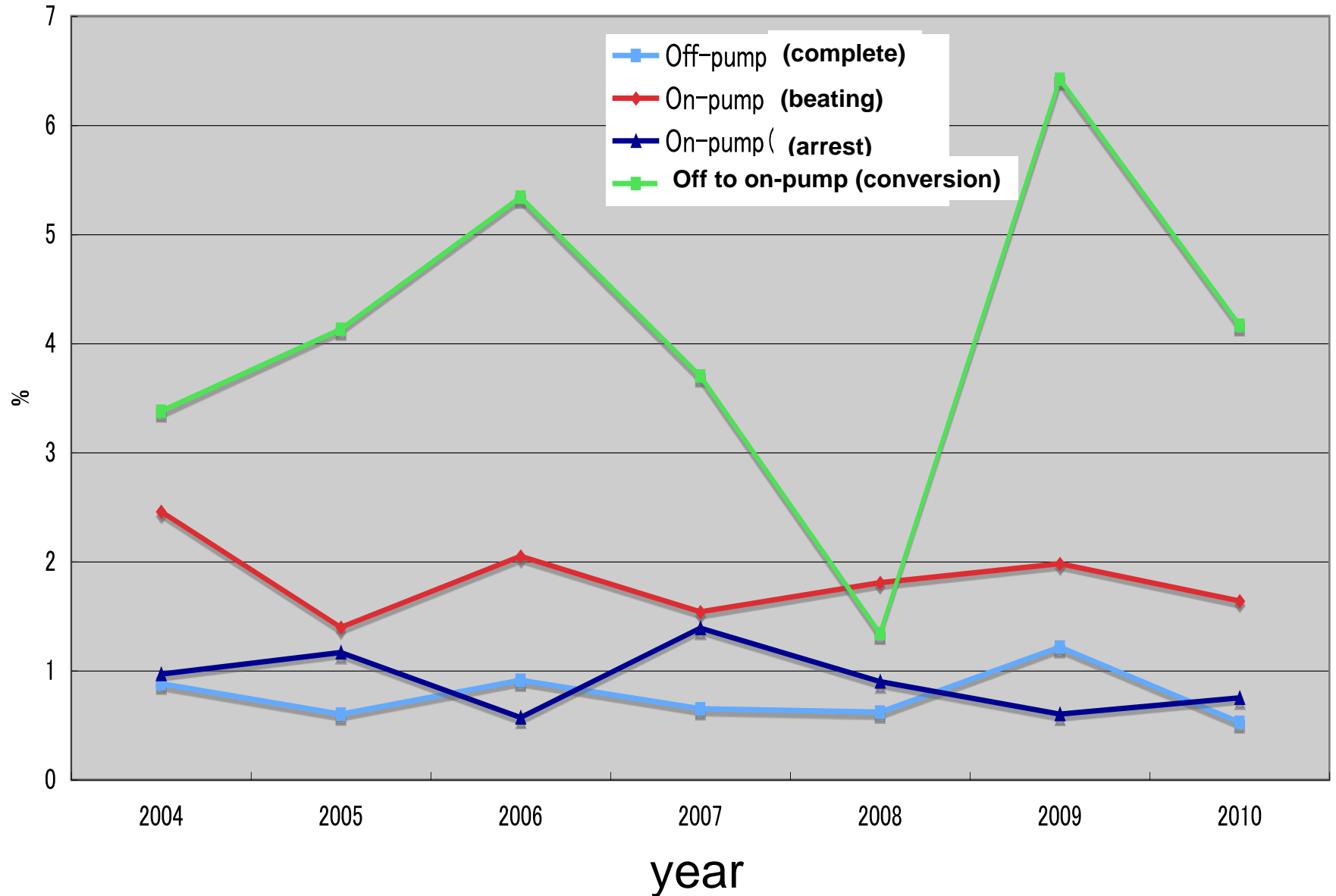
On to on-pump (convert) :**4.17%**

(previous year:6.42%)

Changes in mortality of CABG

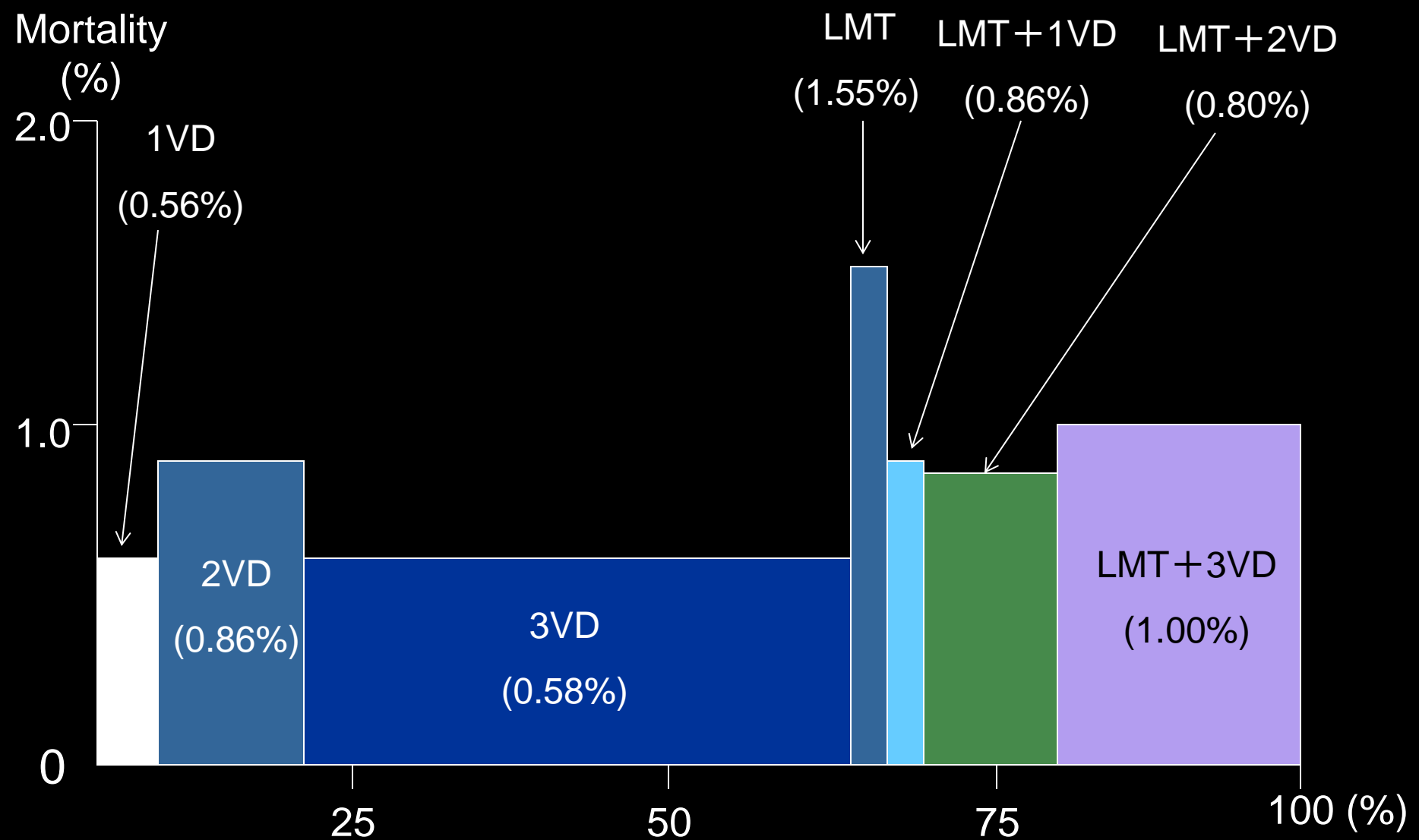


Changes of mortality for procedures (Initial elective CABG)



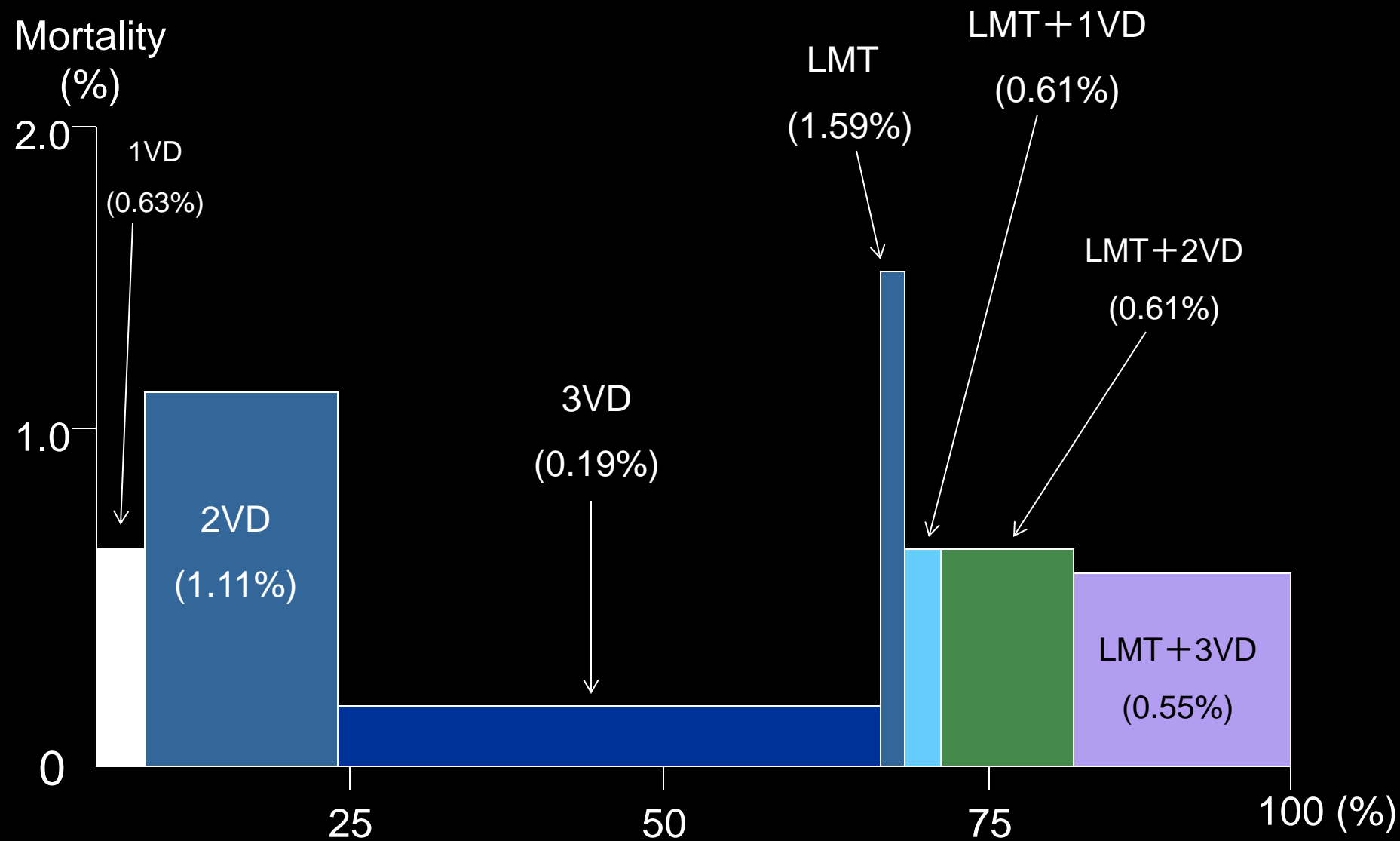
Surgical results according to diseased vessels

(Initial elective cases : 7,975, mortality:0.75%)



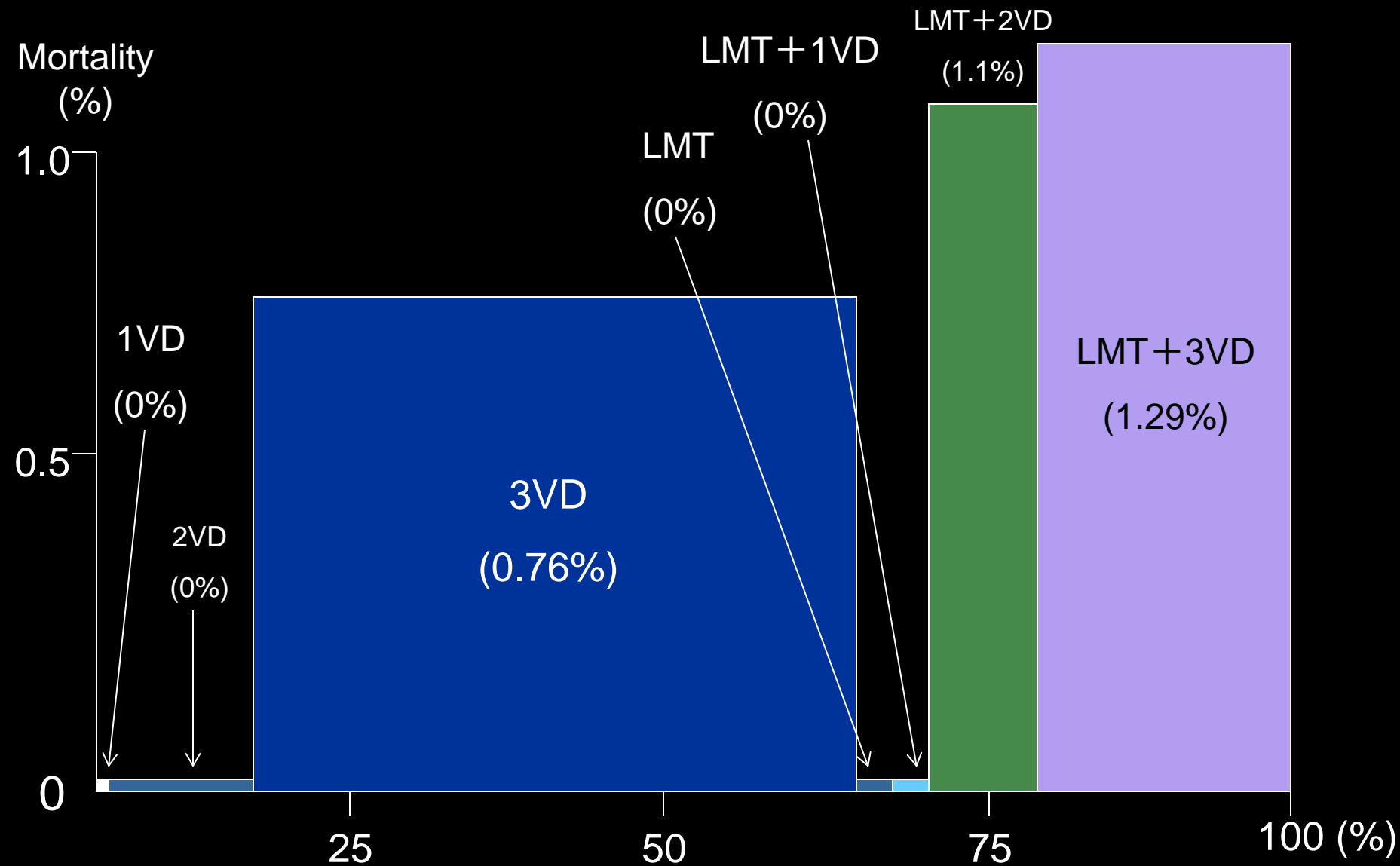
Surgical results according to diseased vessels

(Initial elective off-pump (complete): 5,073, mortality:0.53%)



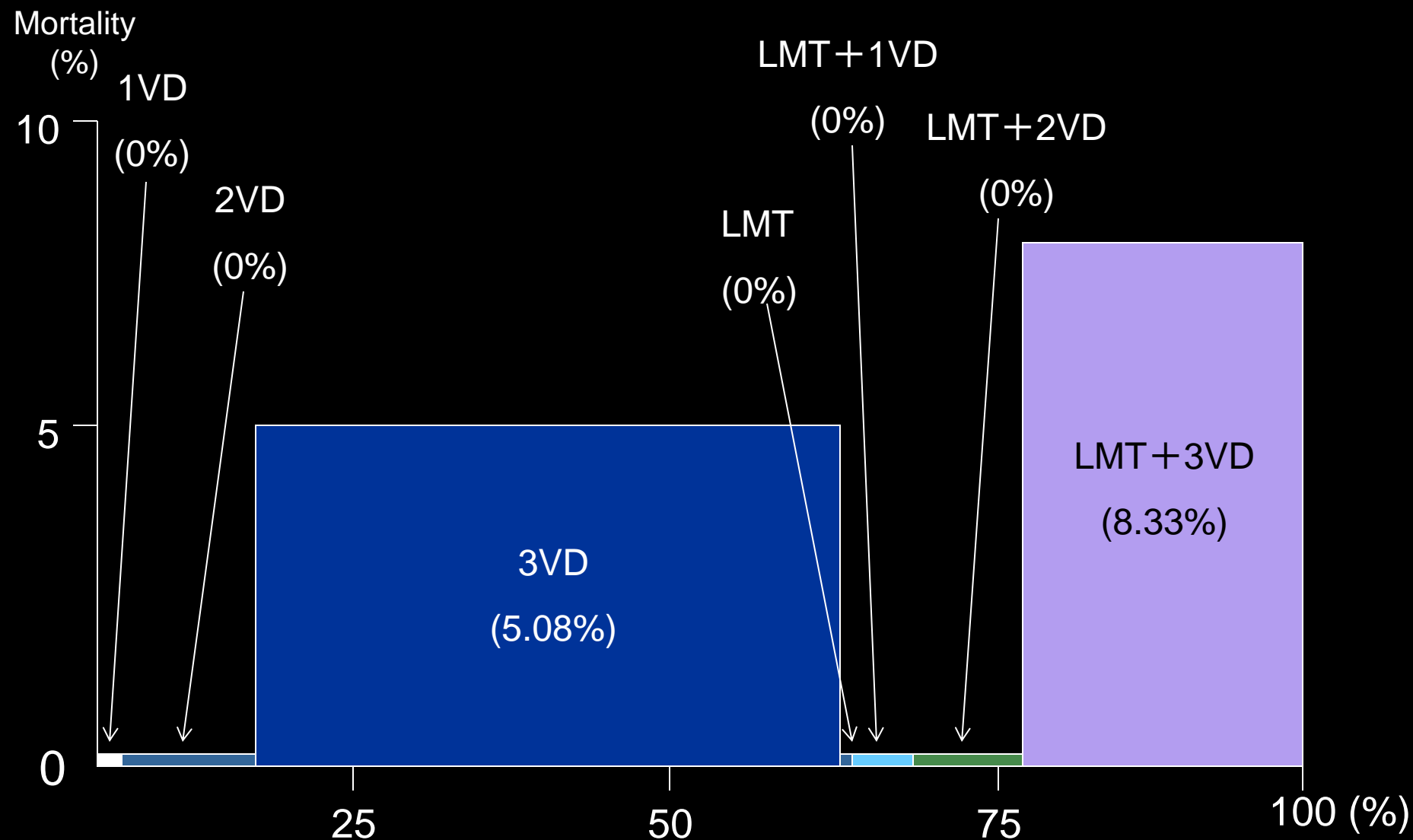
Surgical results according to diseased vessels

(Initial elective on-pump (arrest) : 1,987, mortality:0.75%)



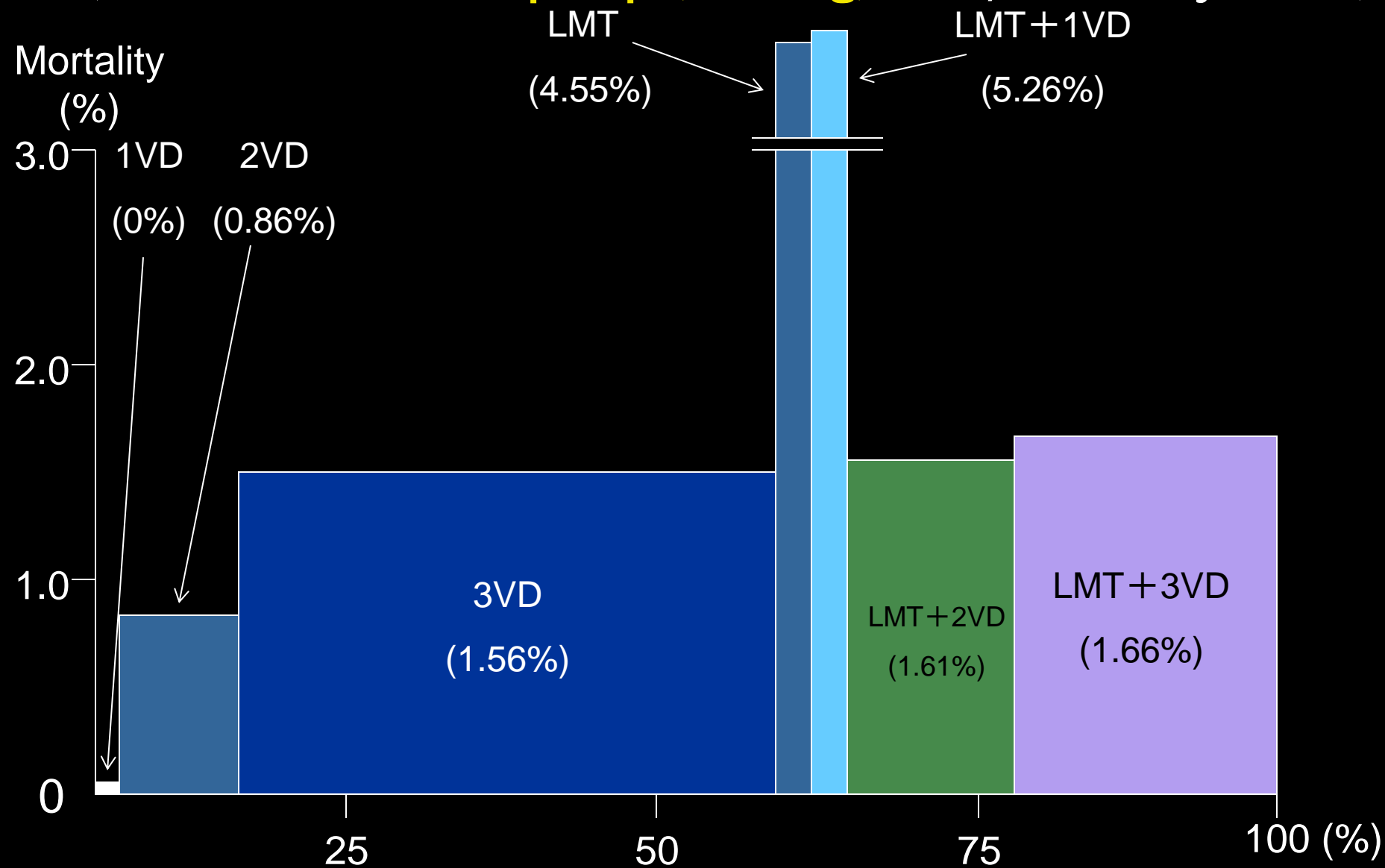
Surgical results according to diseased vessels

(Initial elective off to on-pump (conversion): 120, mortality:4.17%)



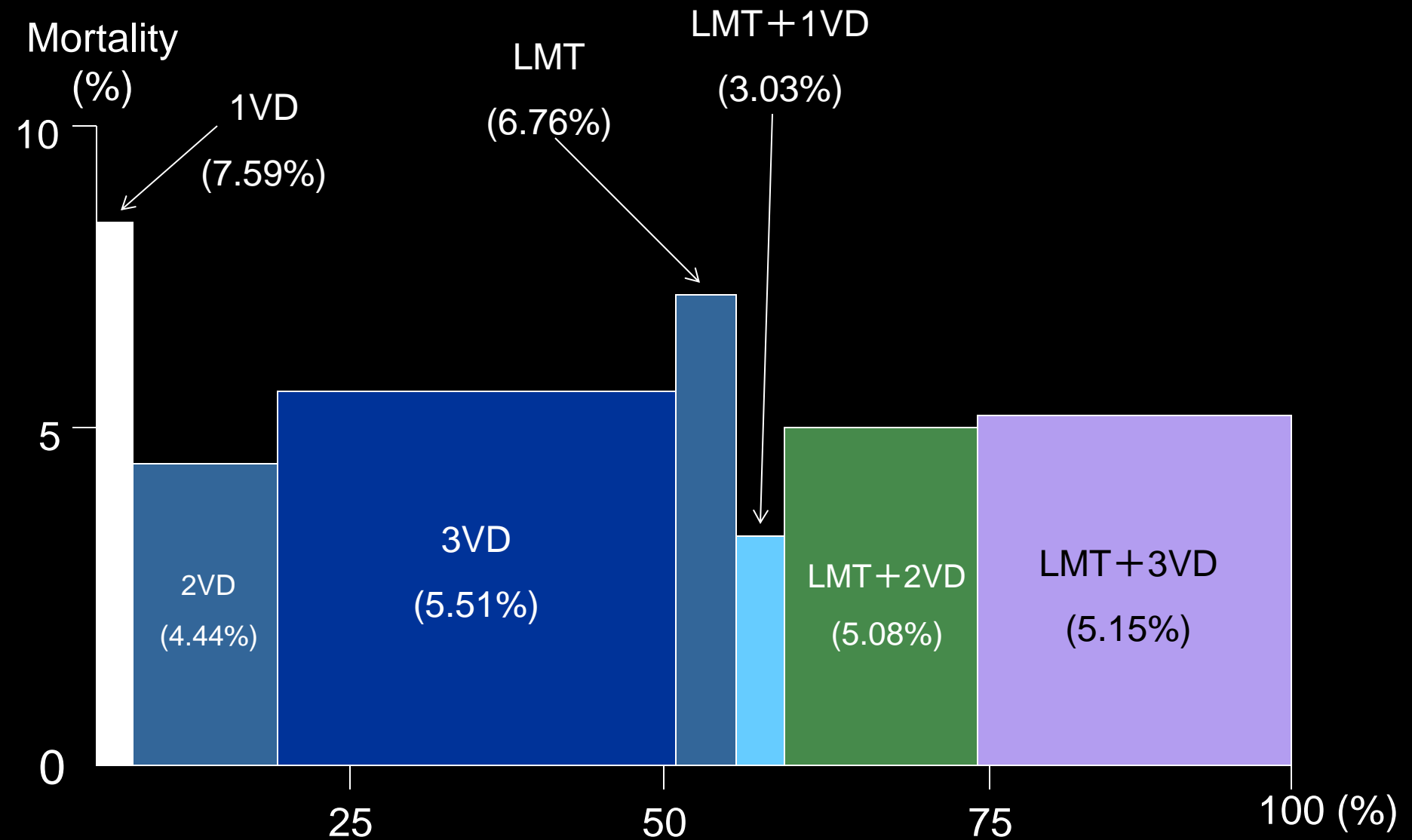
Surgical results according to diseased vessels

(Initial elective on-pump (beating): 795, mortality: 1.64%)



Surgical results according to diseased vessels

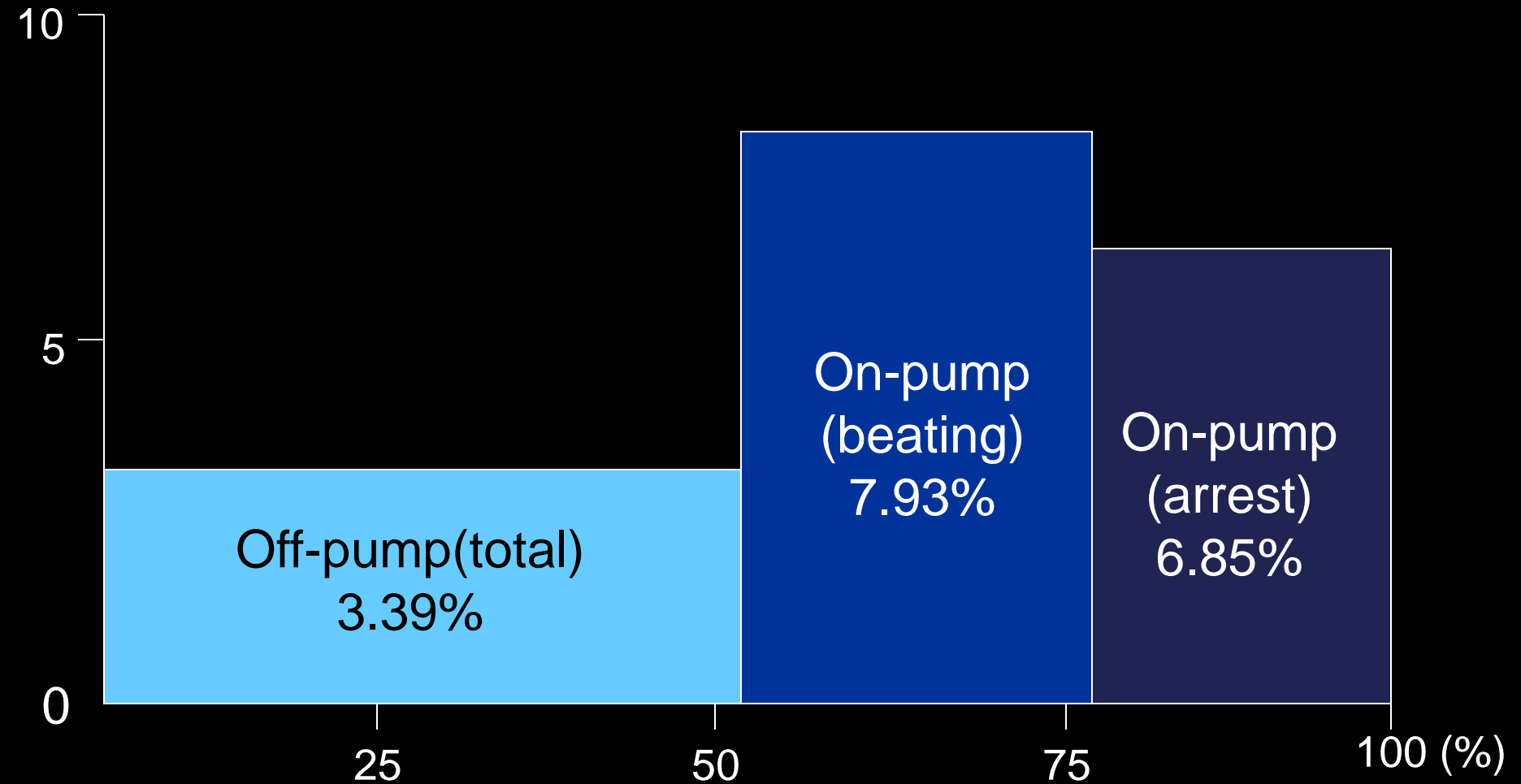
(Extra initial elective cases: 1,454, mortality:5.30%)



Surgical results according to procedures

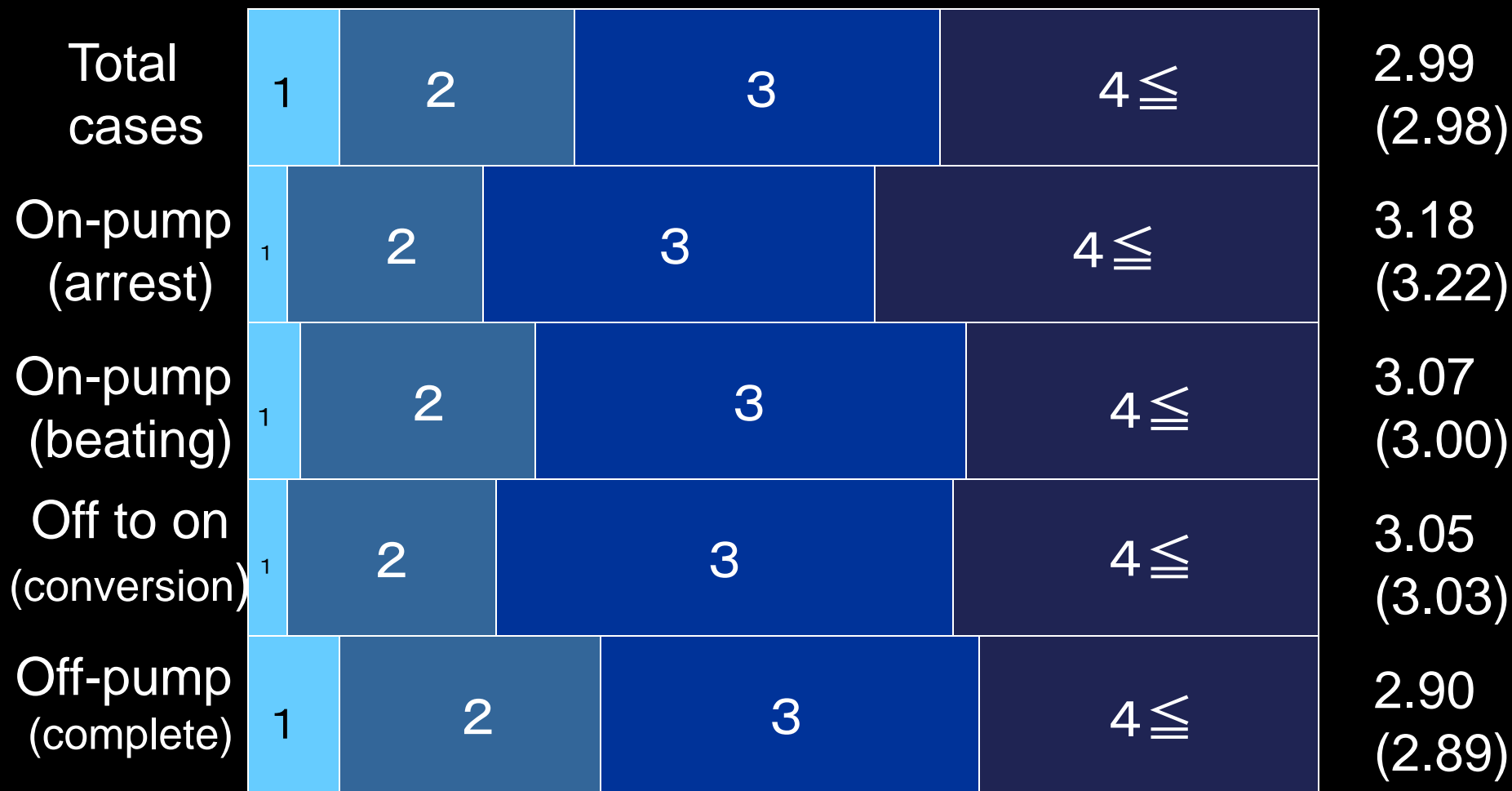
(**Except initial elective cases** : 1,454, mortality:5.30%)

Mortality
(%)



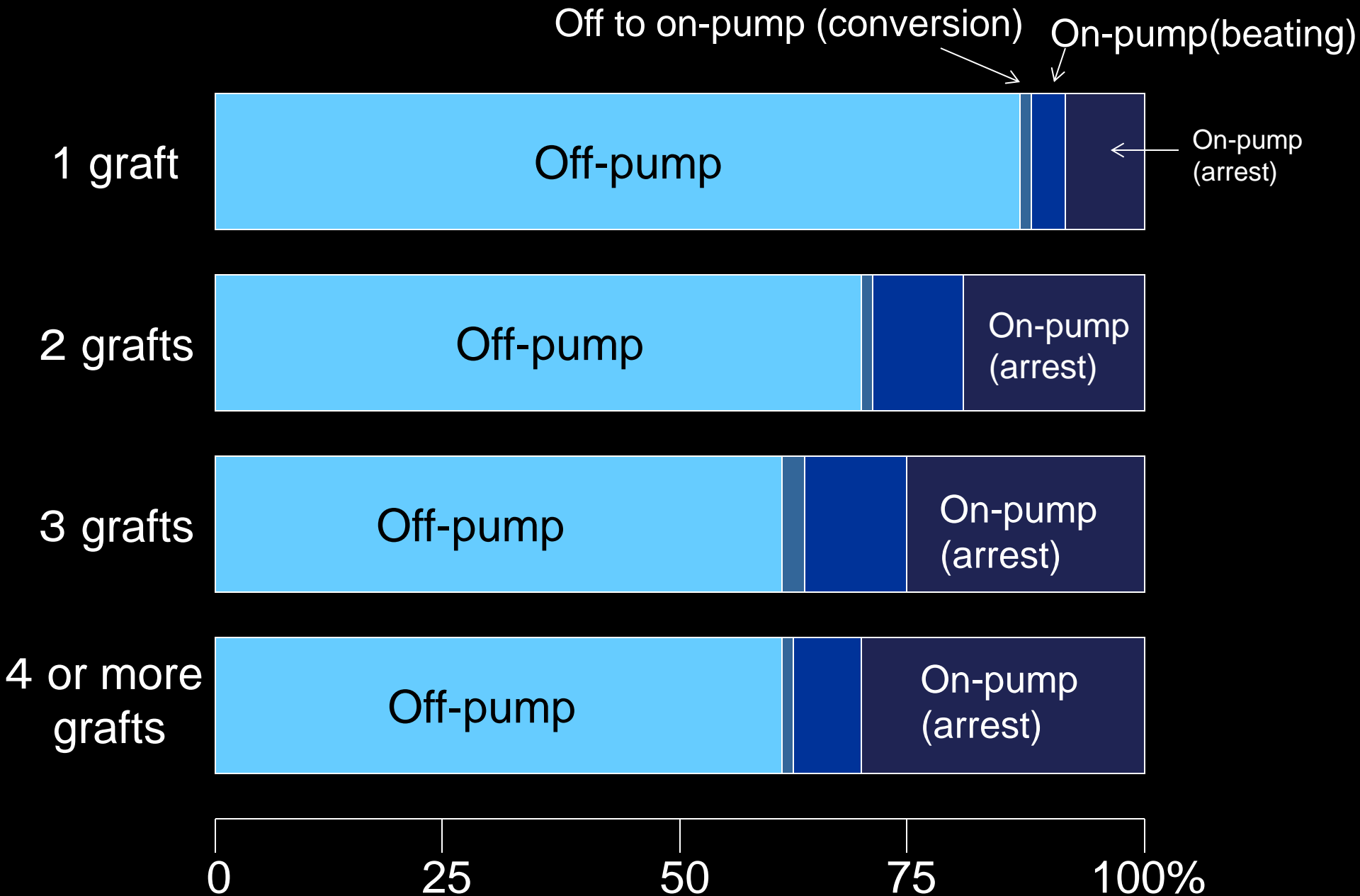
Number of grafts according to surgical procedures

mean grafts
(previous)

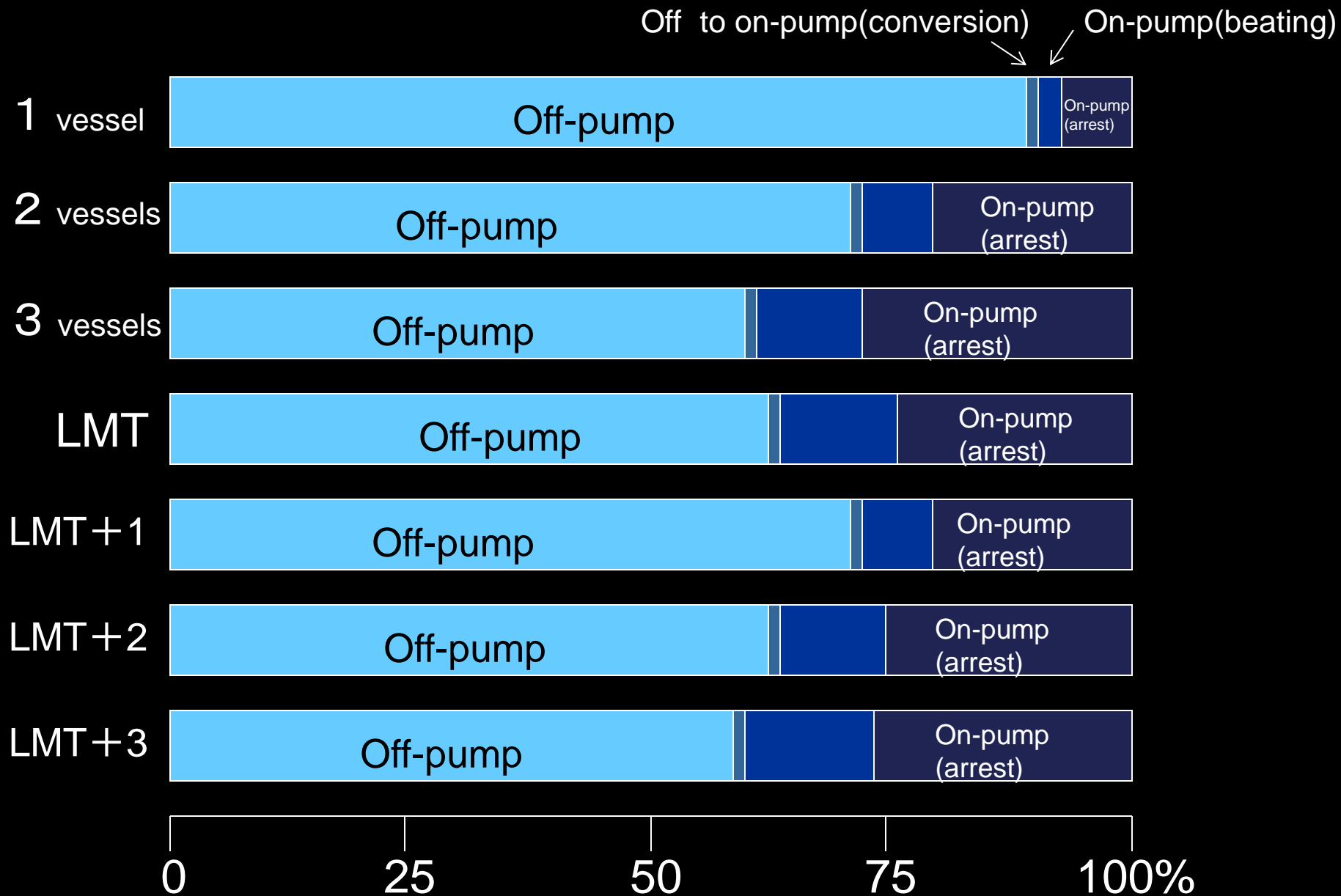


0 25 50 75 100%

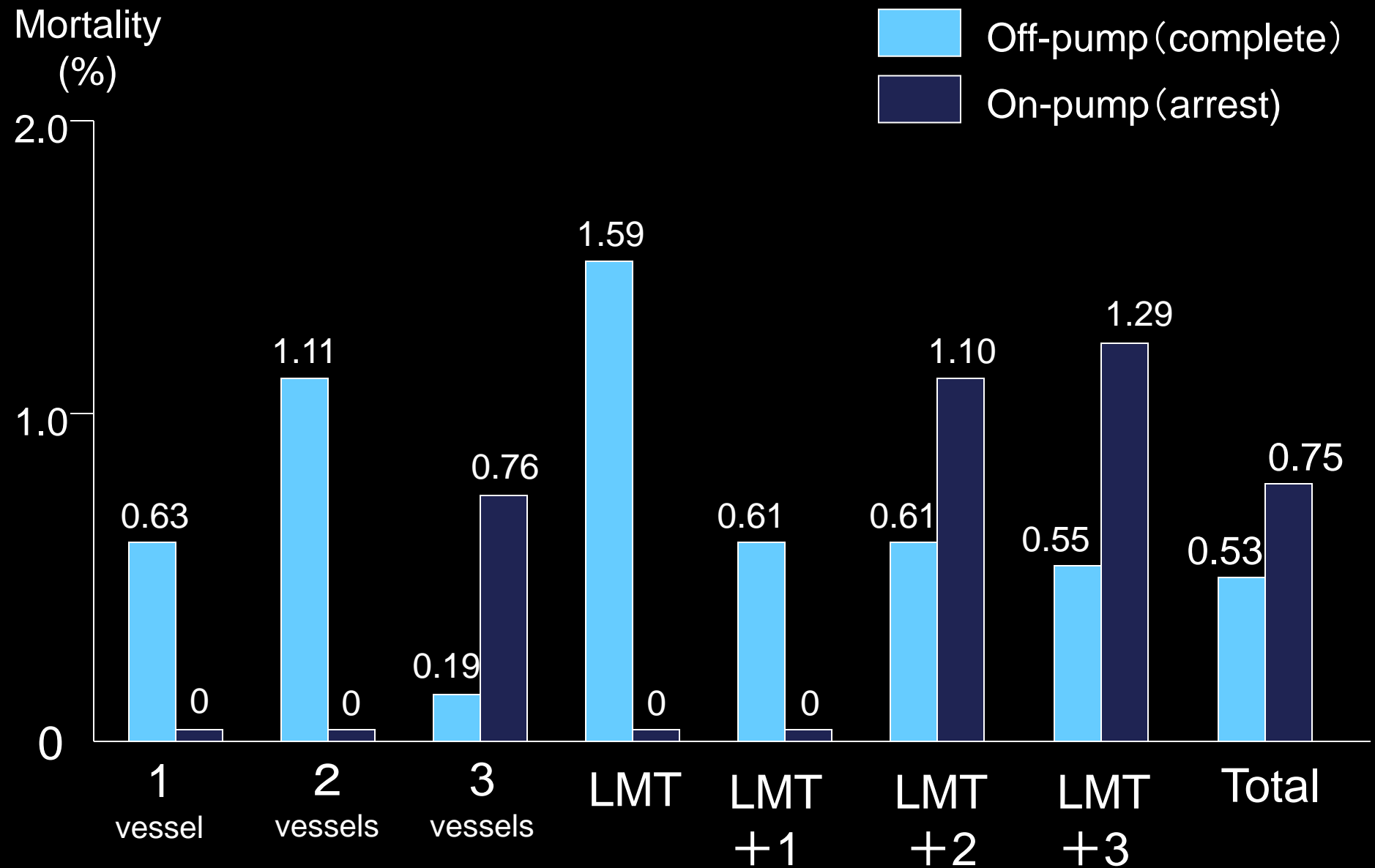
Surgical procedures according to number of grafts



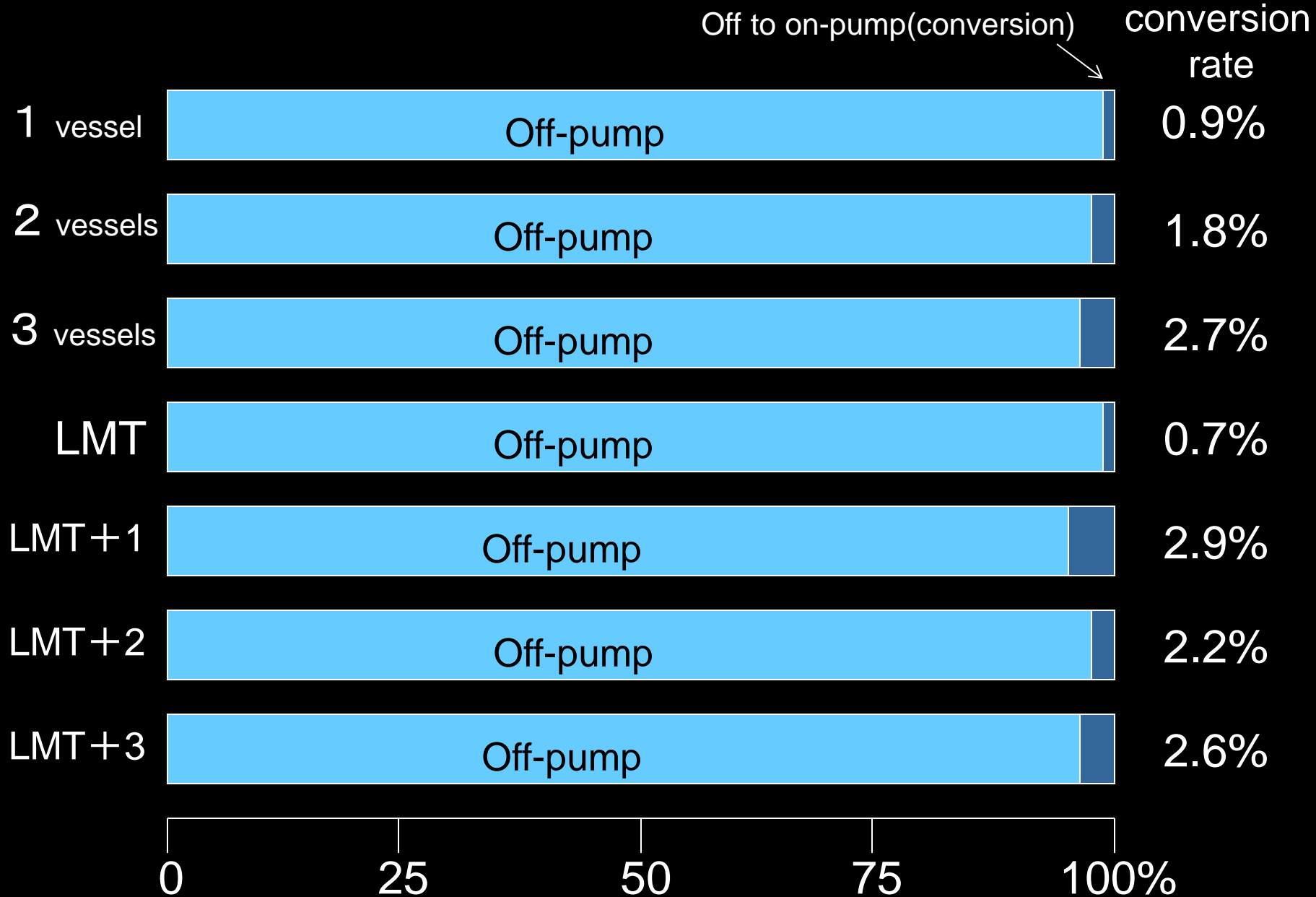
Surgical procedures according to diseased vessels



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

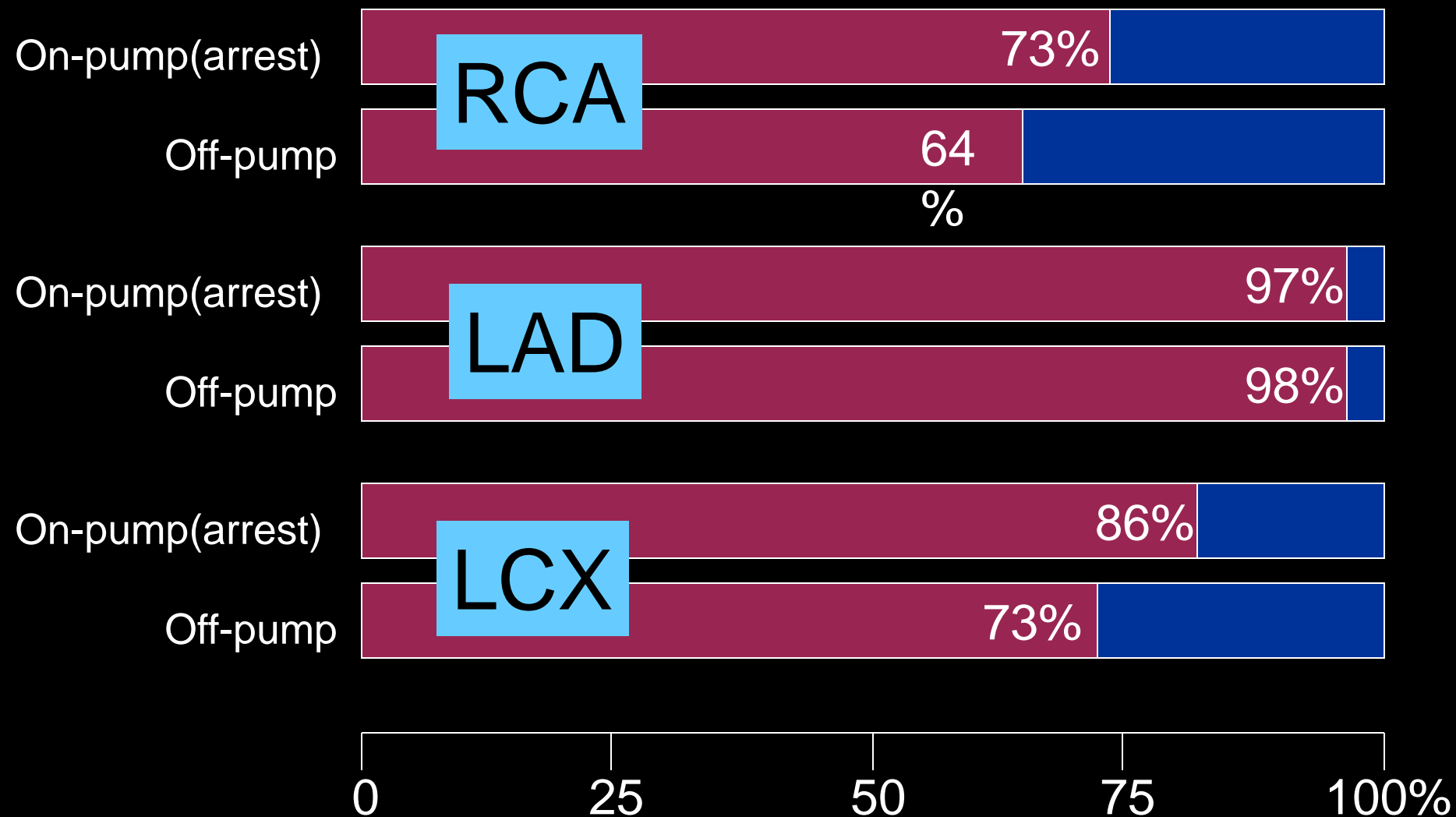


Off to on-pump conversion rate according to diseased vessels (total:2.3%)

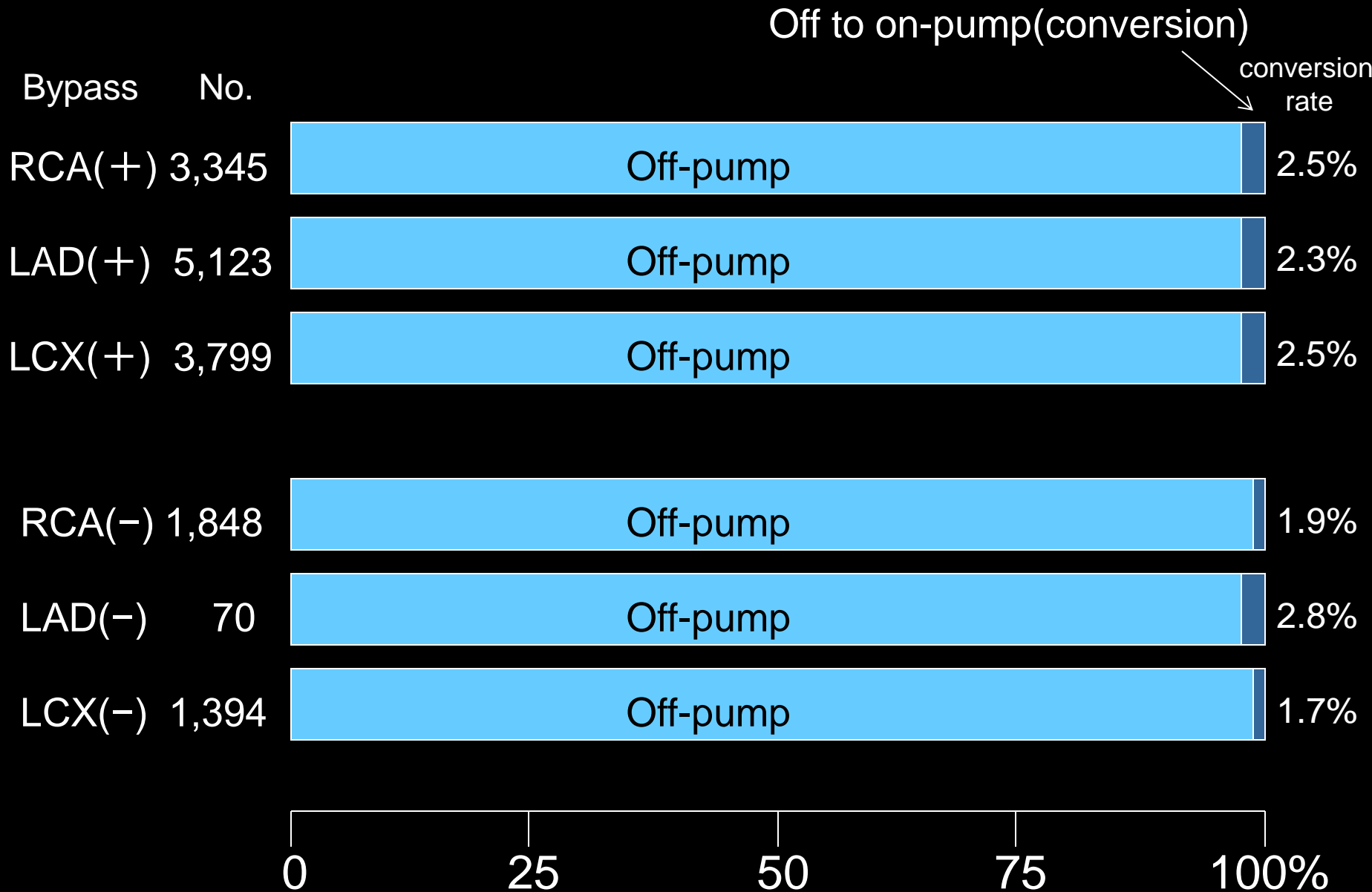


On-pump (arrest) vs. off-pump (Initial elective CABG)

bypass+
bypass-



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



Age distribution (Initial elective cases)

Male : 78.8%

(Age)

Female : 21.2%

511

≥ 80

281

2352

70-79

796

2341

60-69

459

842

50-59

118

Mortality : 0.62%
(previous : 1.01%)

267

$49 \geq$

49

Mortality : 1.00%
(previous : 2.10%)

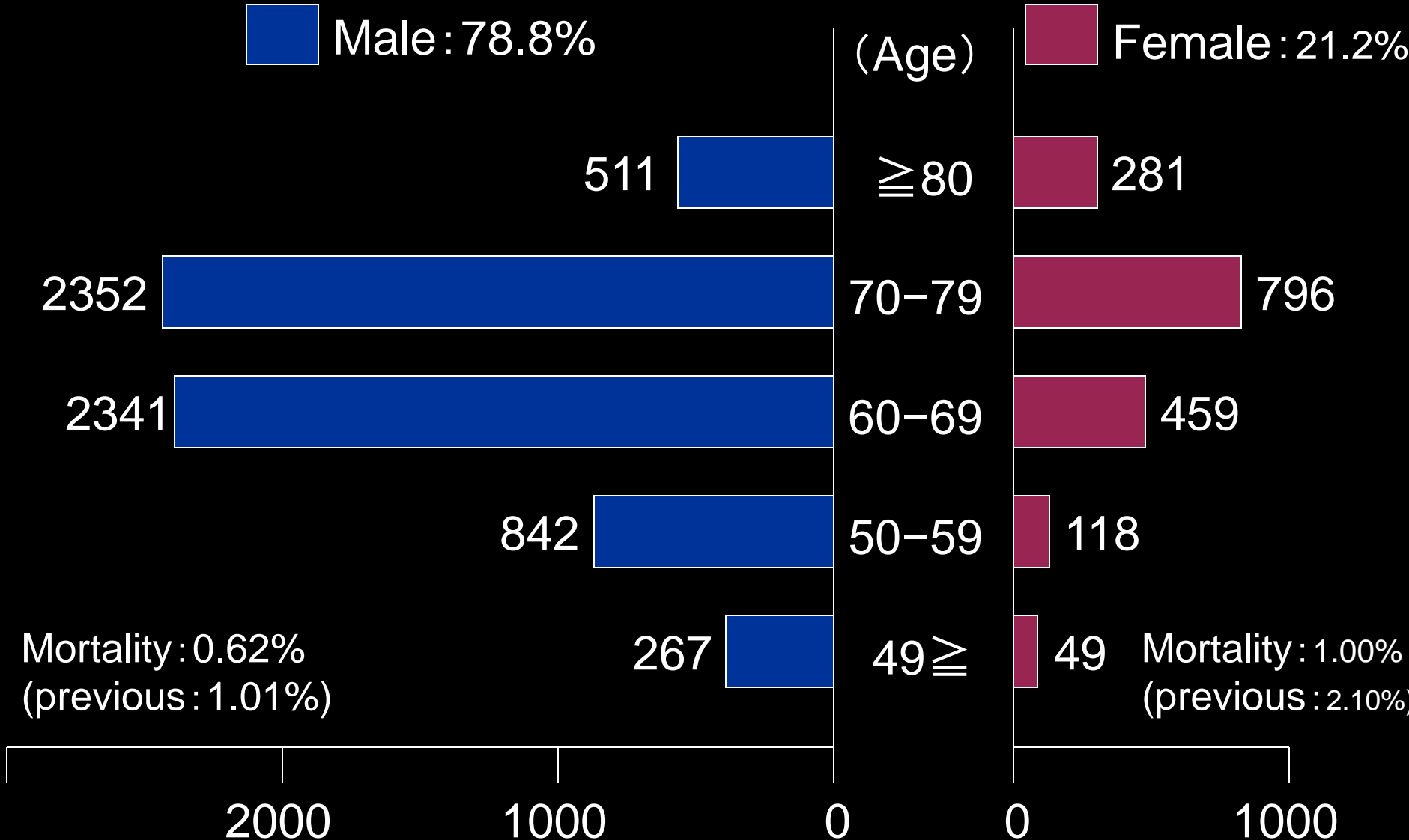
2000

1000

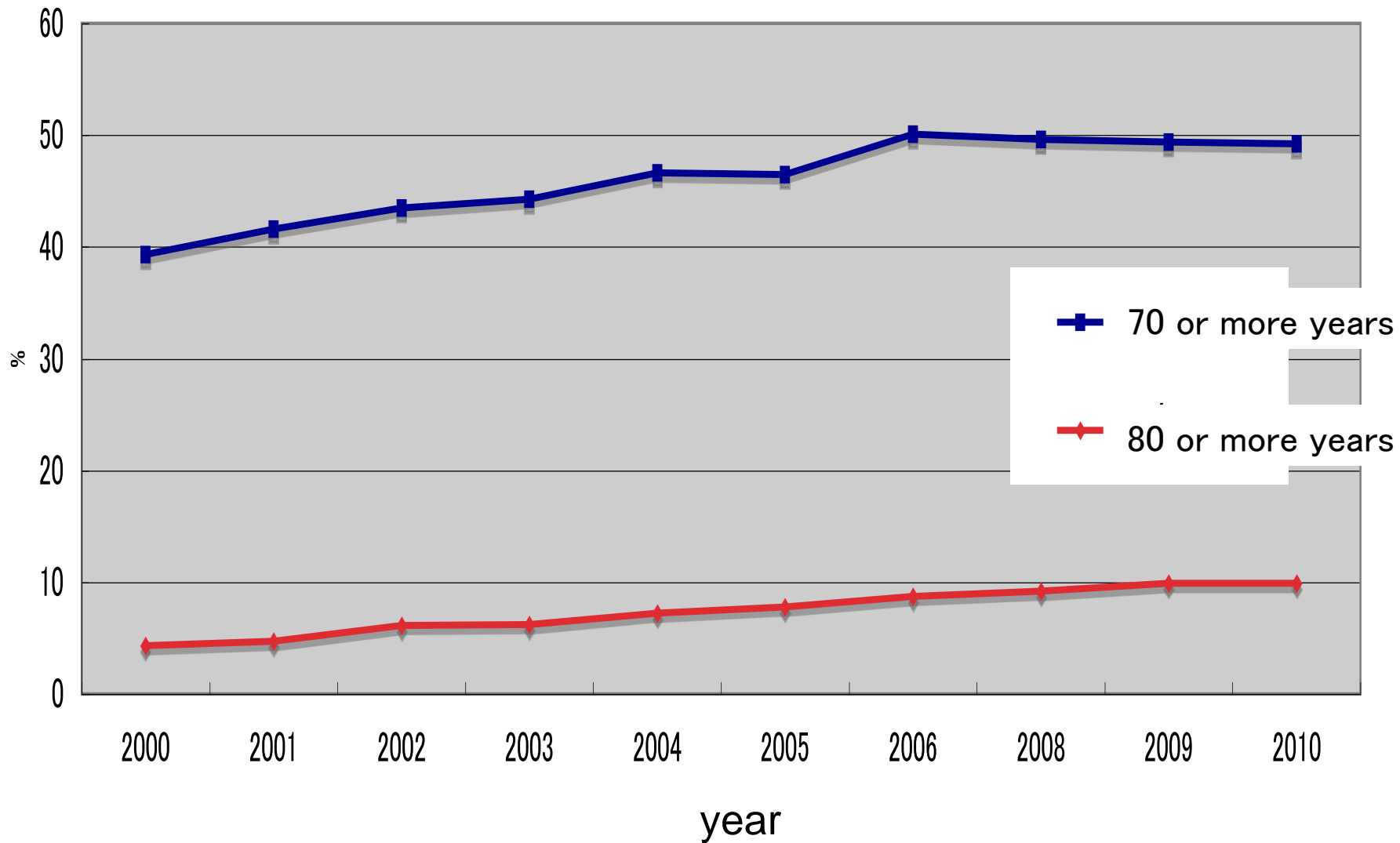
0

0

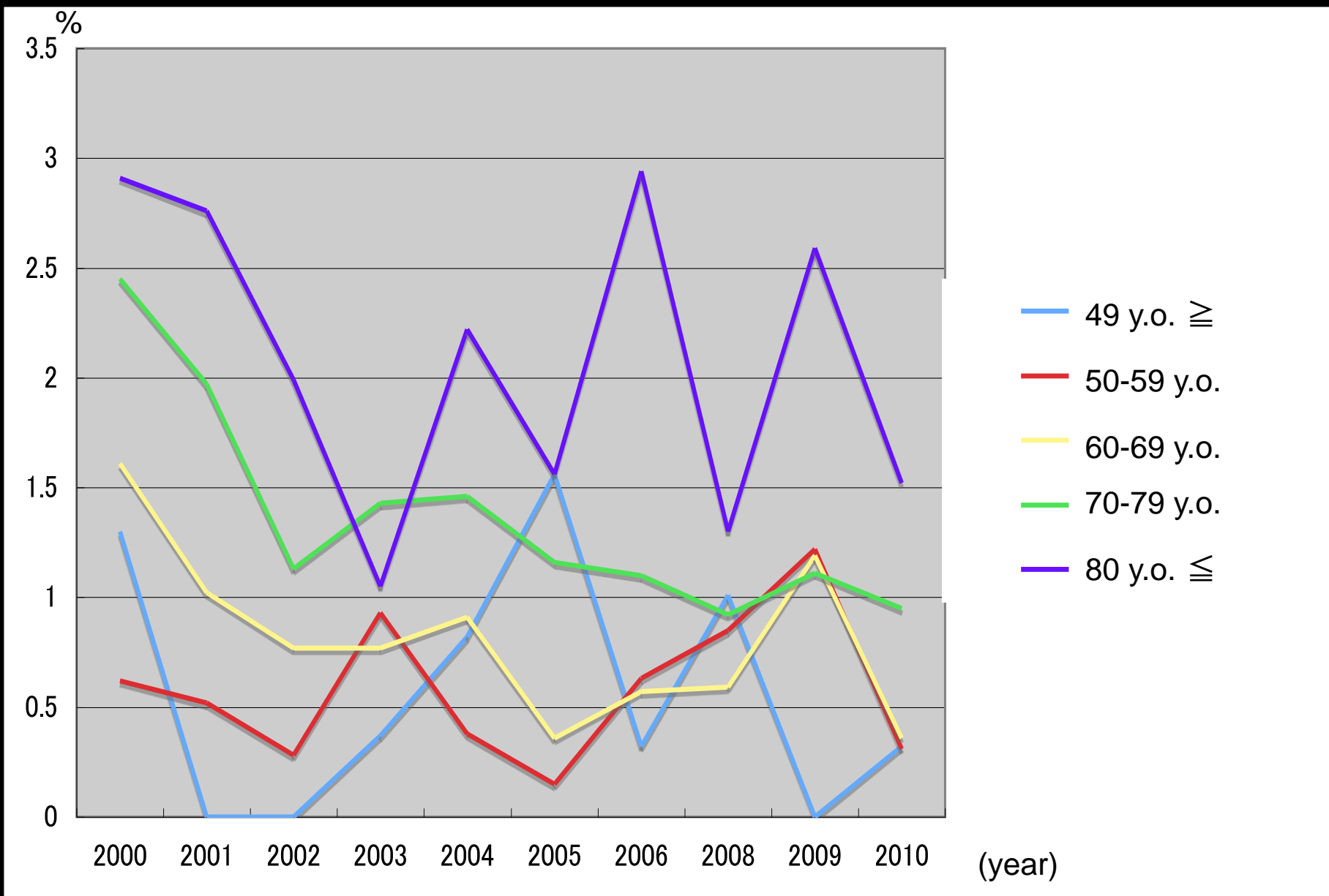
1000



Changes in elderly patients (Initial elective cases)

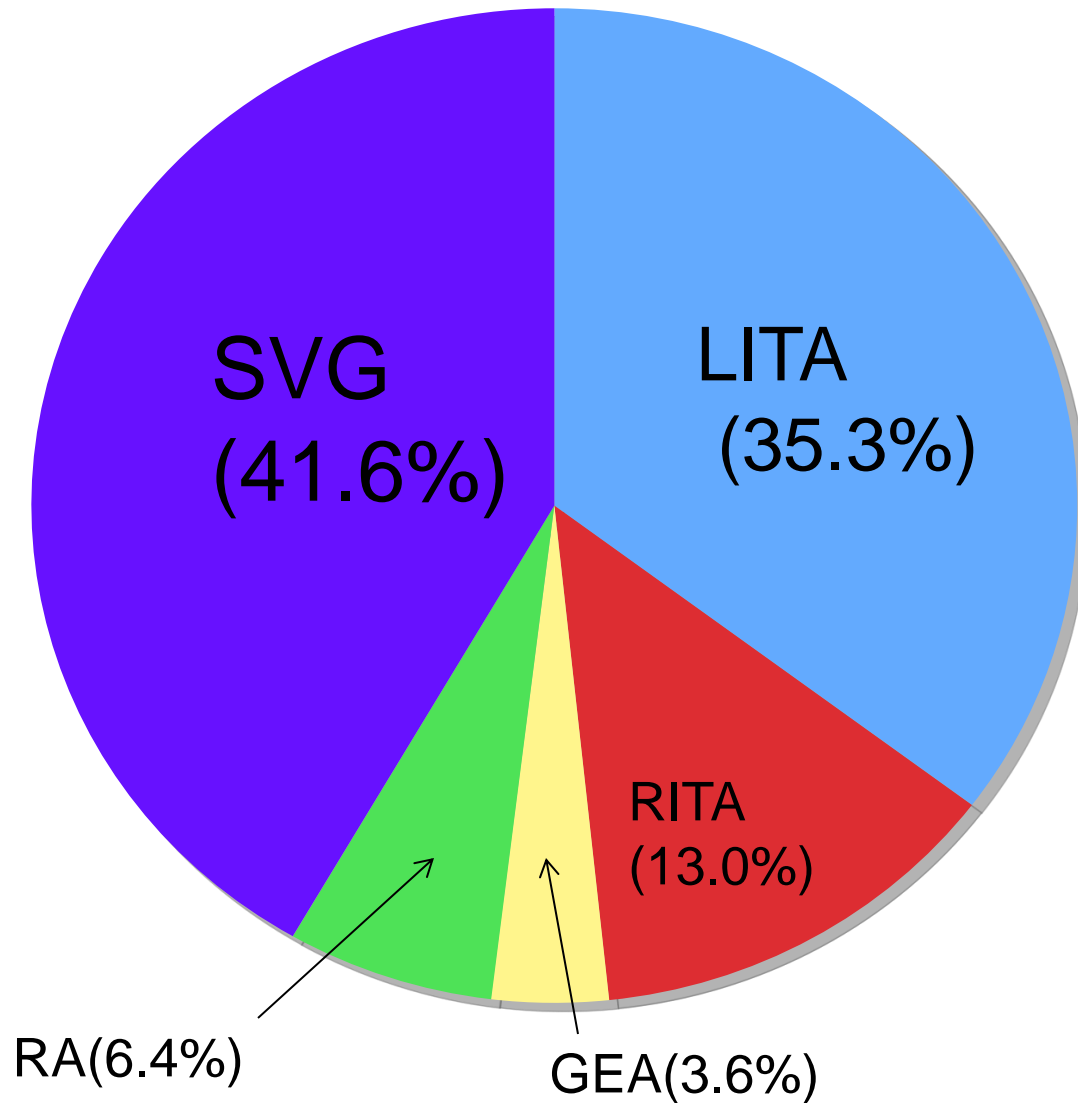


Changes in mortality according to age (Initial elective cases)

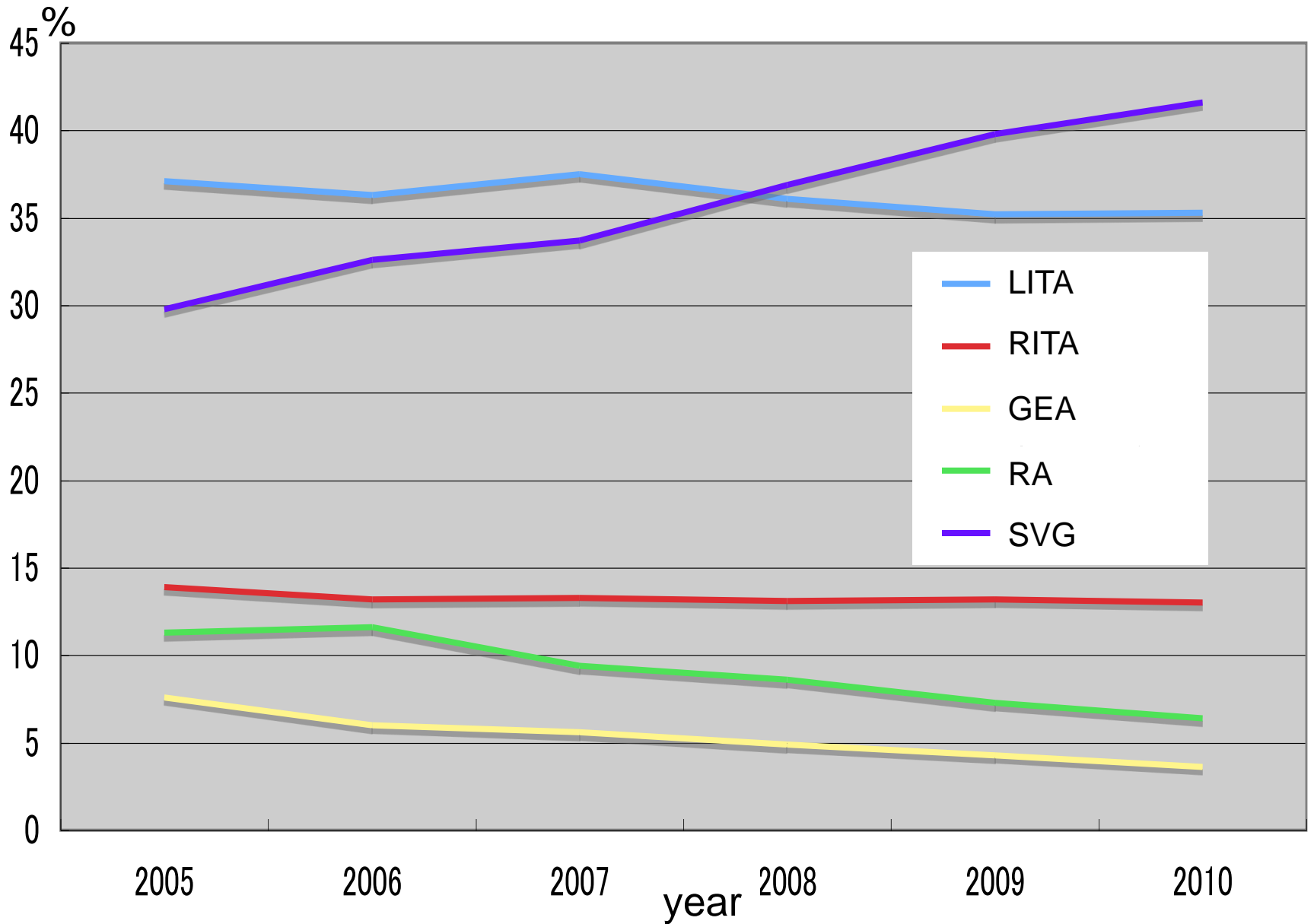


Graft selection

(Total number of grafts : 24,925 grafts)

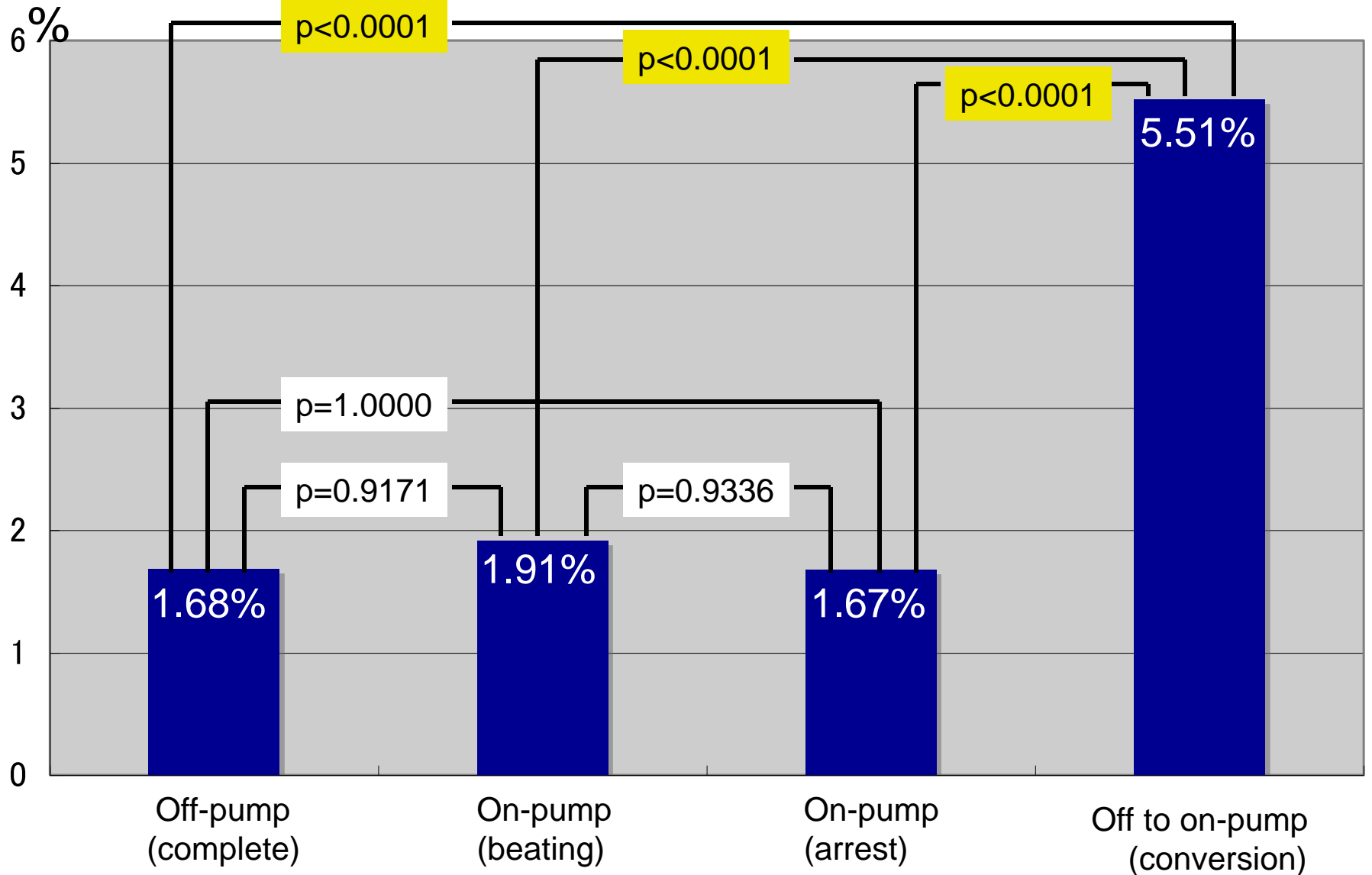


Changes in graft selection

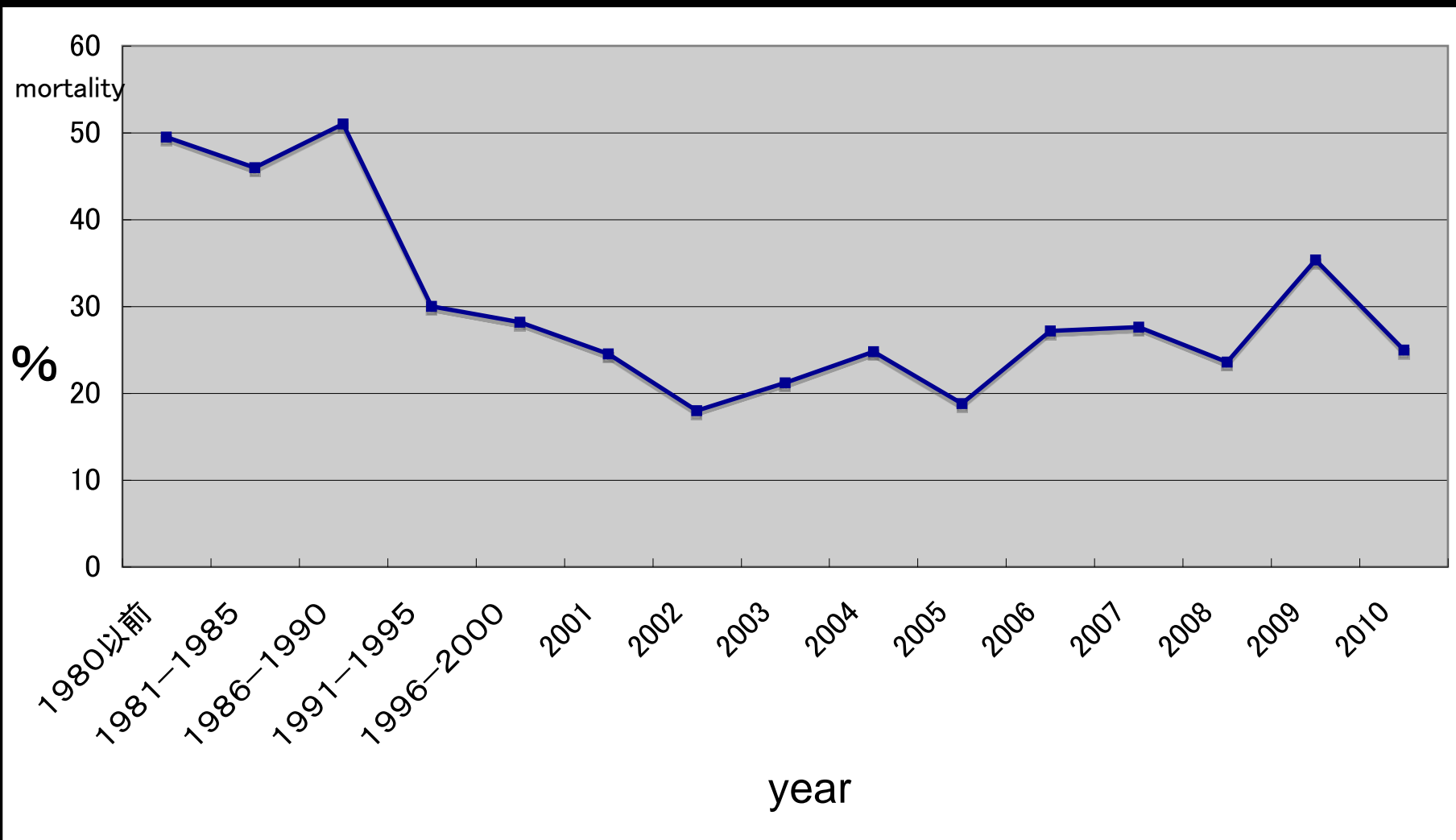


Complication rate of postoperative stroke according to surgical procedures

Total complication rate: 83/8990 (isolated CABG) = 1.77%



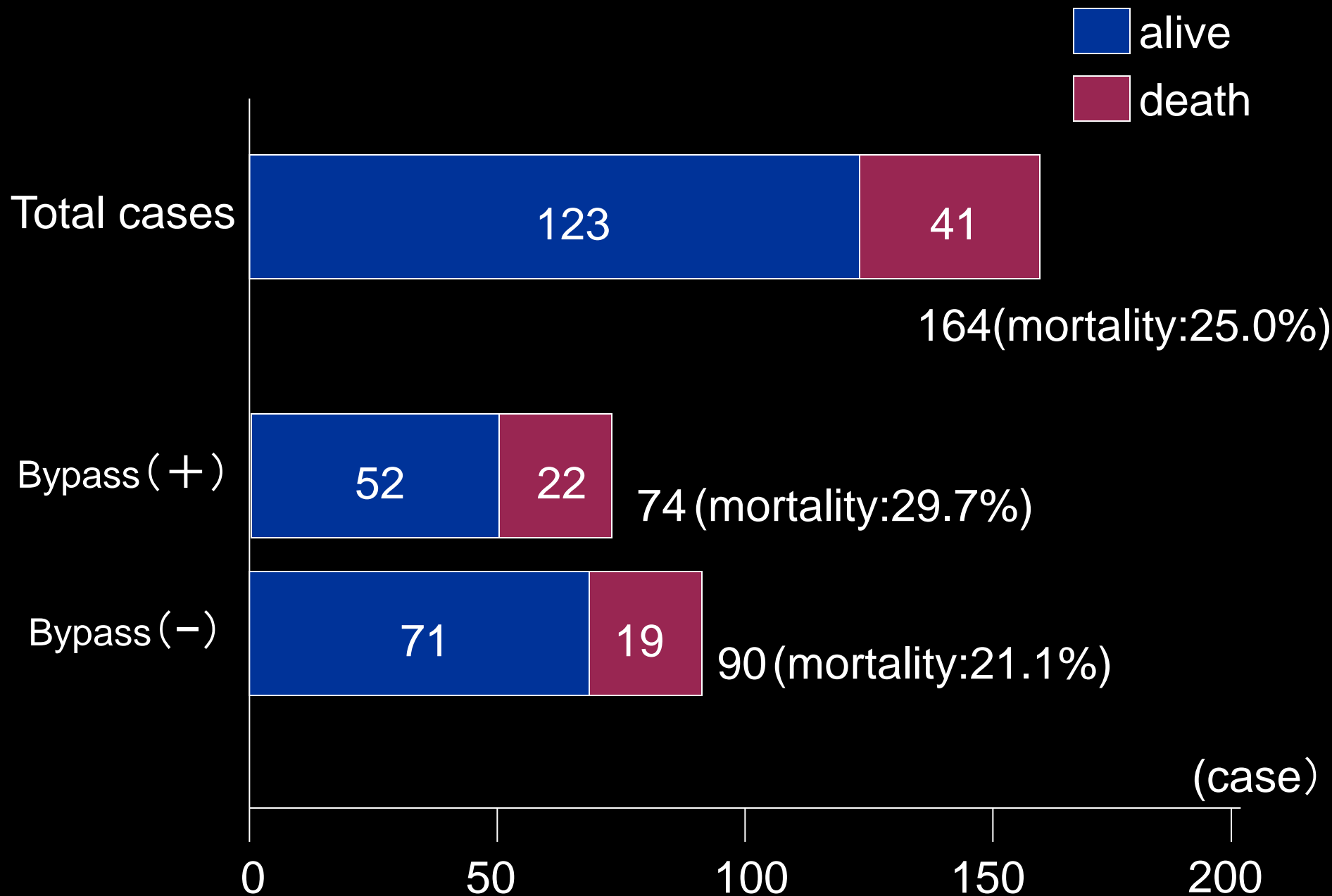
Changes in mortality of VSP



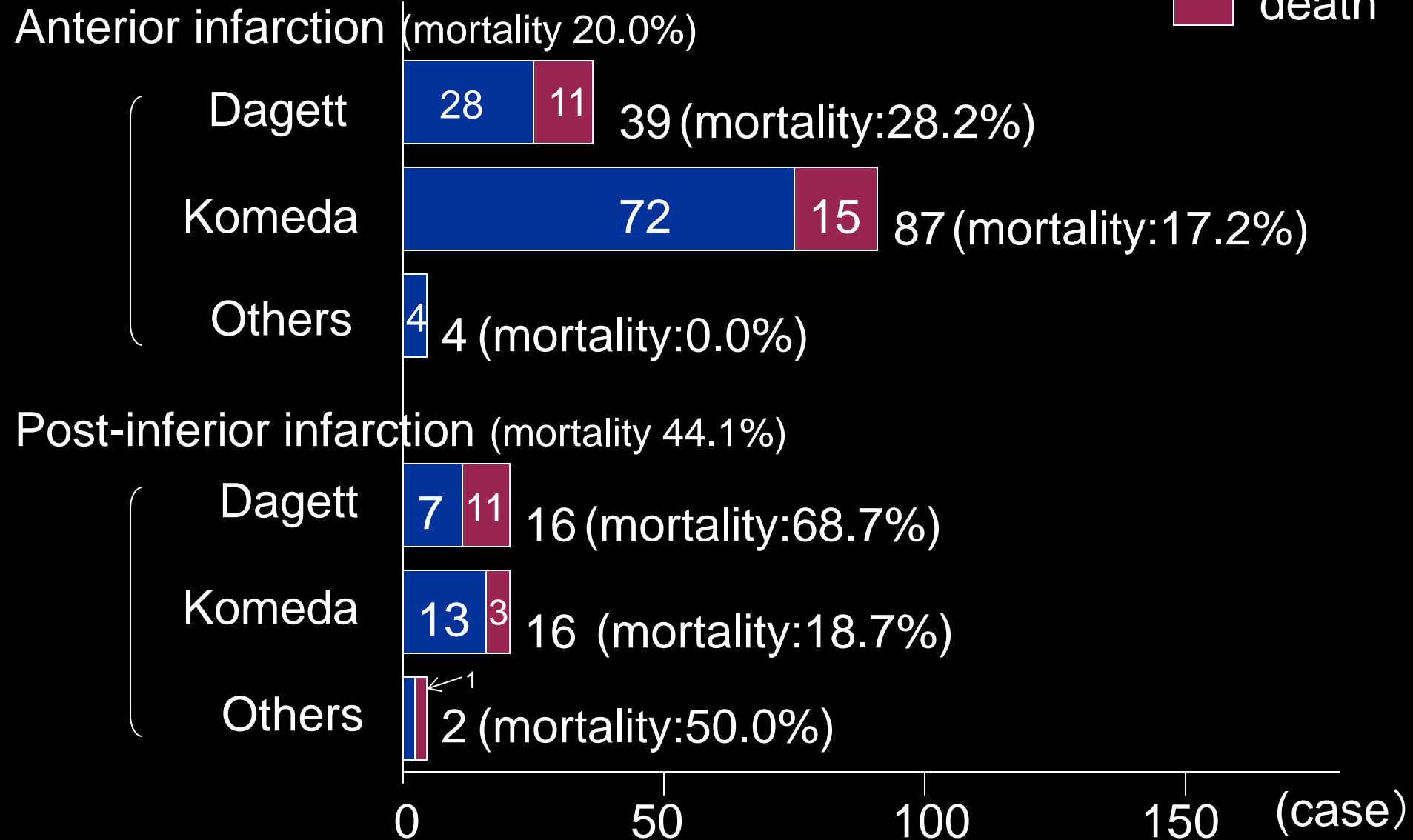
2010;

Total cases: 164、death cases: 41(Mortality: 25.0%)

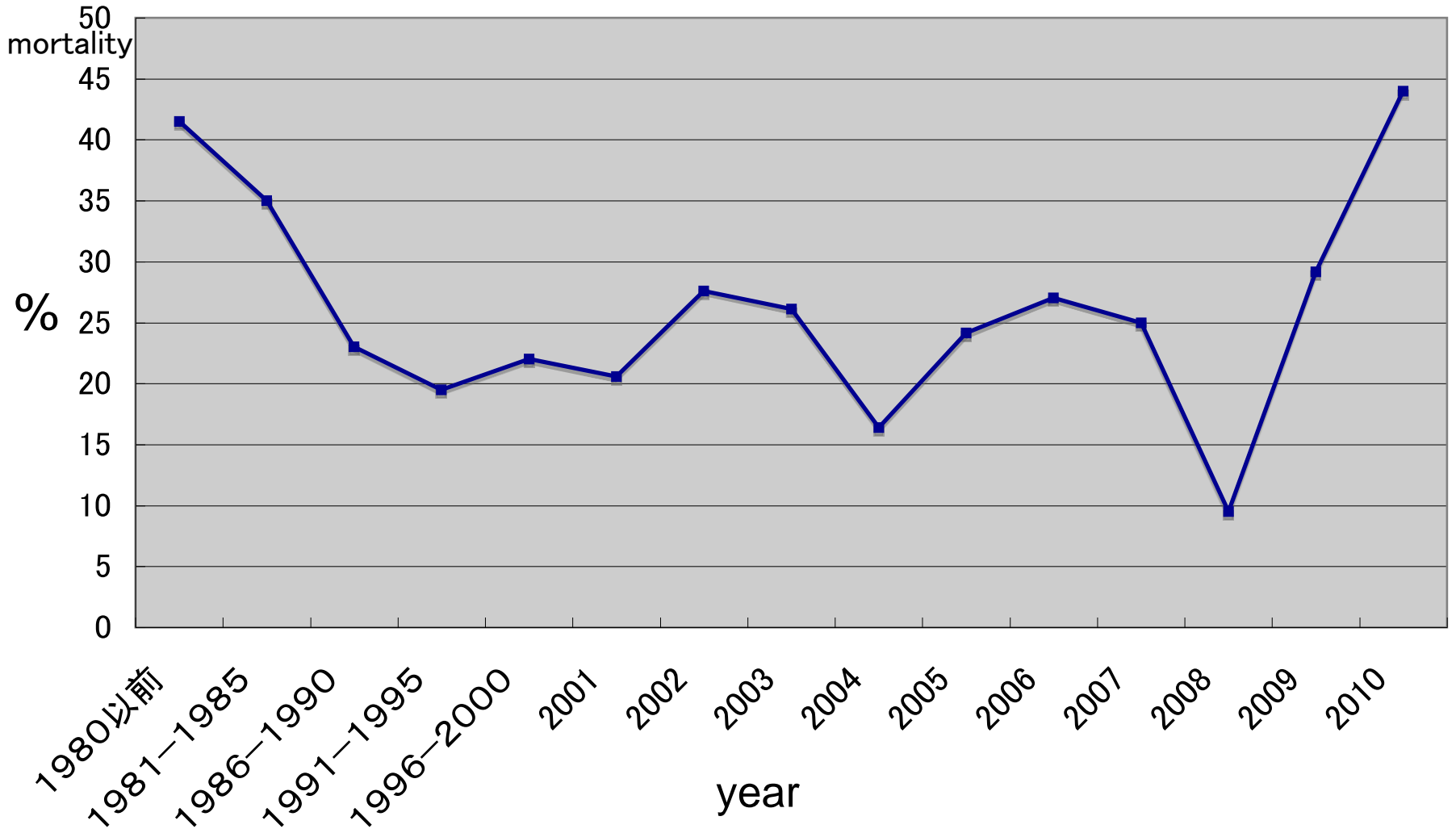
Results of VSP (1)



Results of VSP (2)



Changes in mortality of papillary muscle rupture of LV

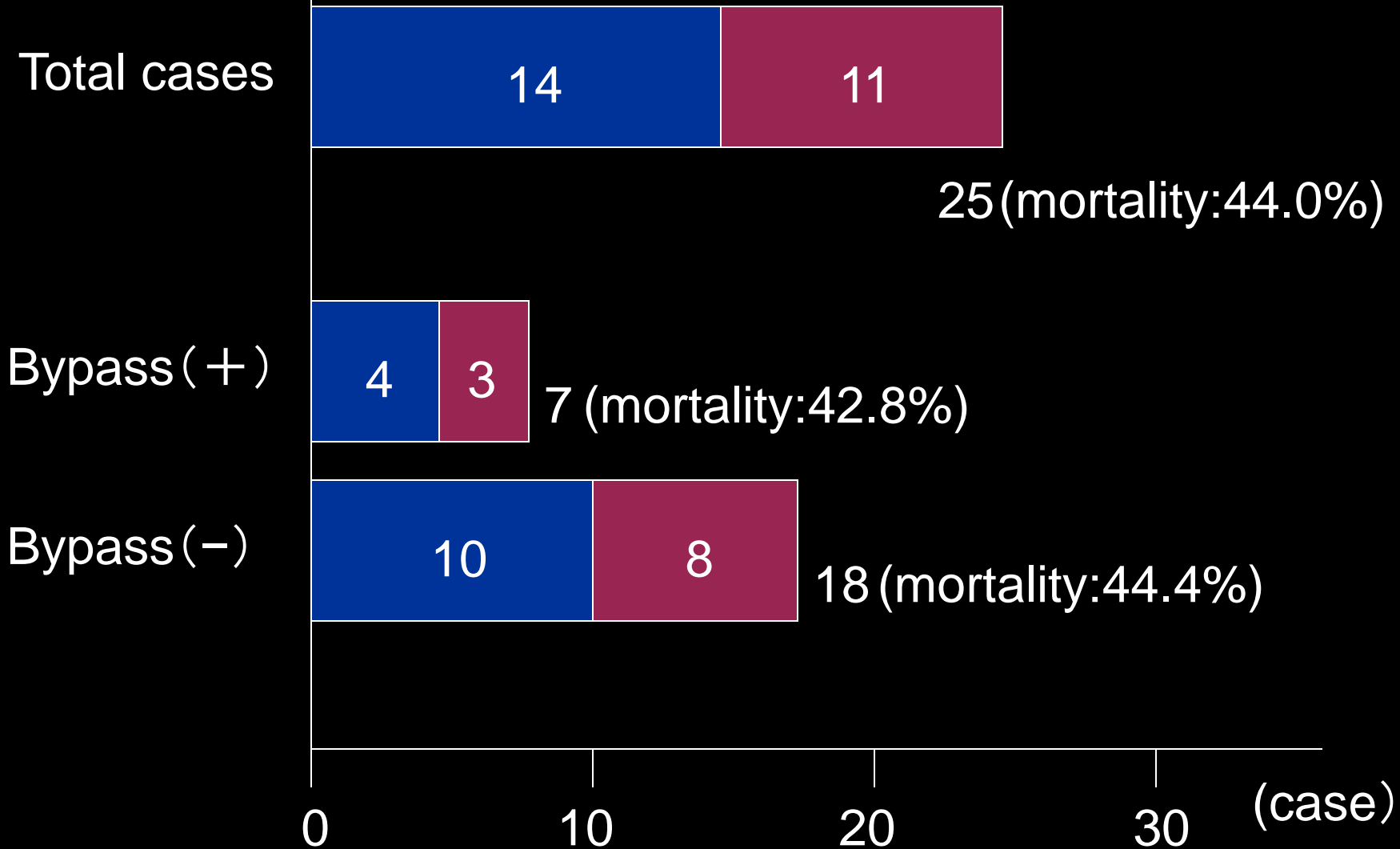


2010;

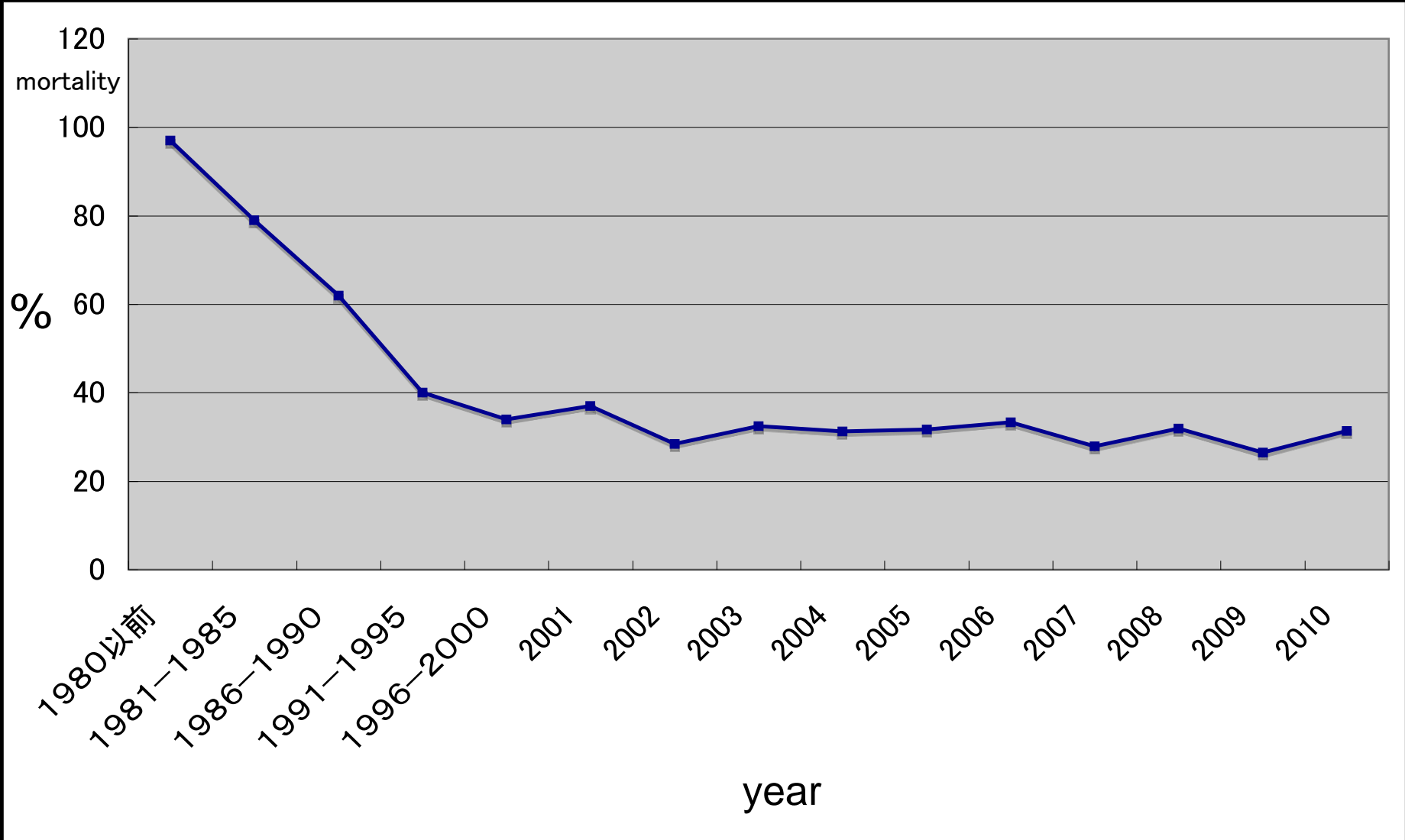
Total cases: 25、death cases: 11(mortality: 44.0%)

Results of papillary muscle rupture

alive
death



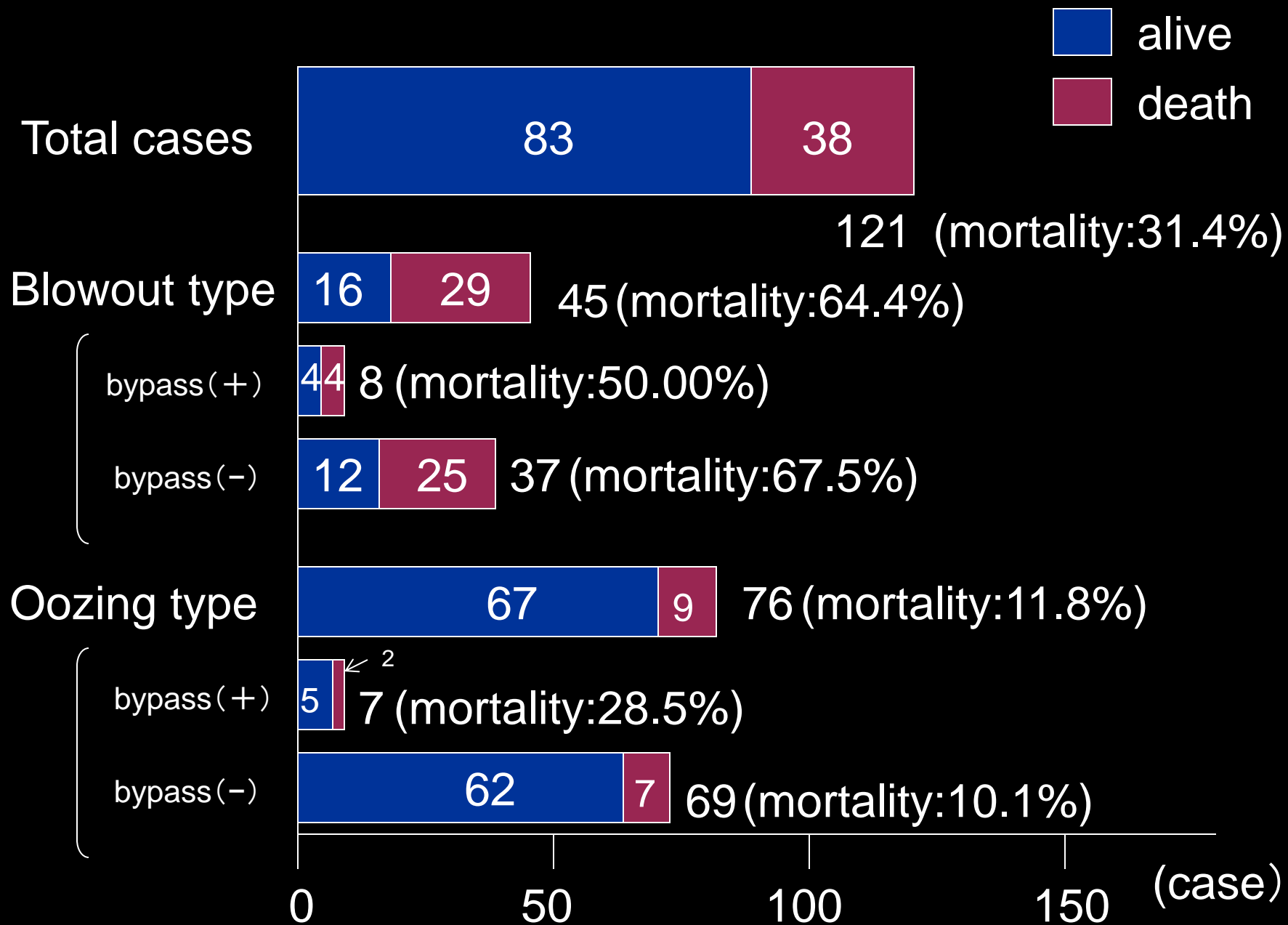
Changes in mortality of cardiac rupture



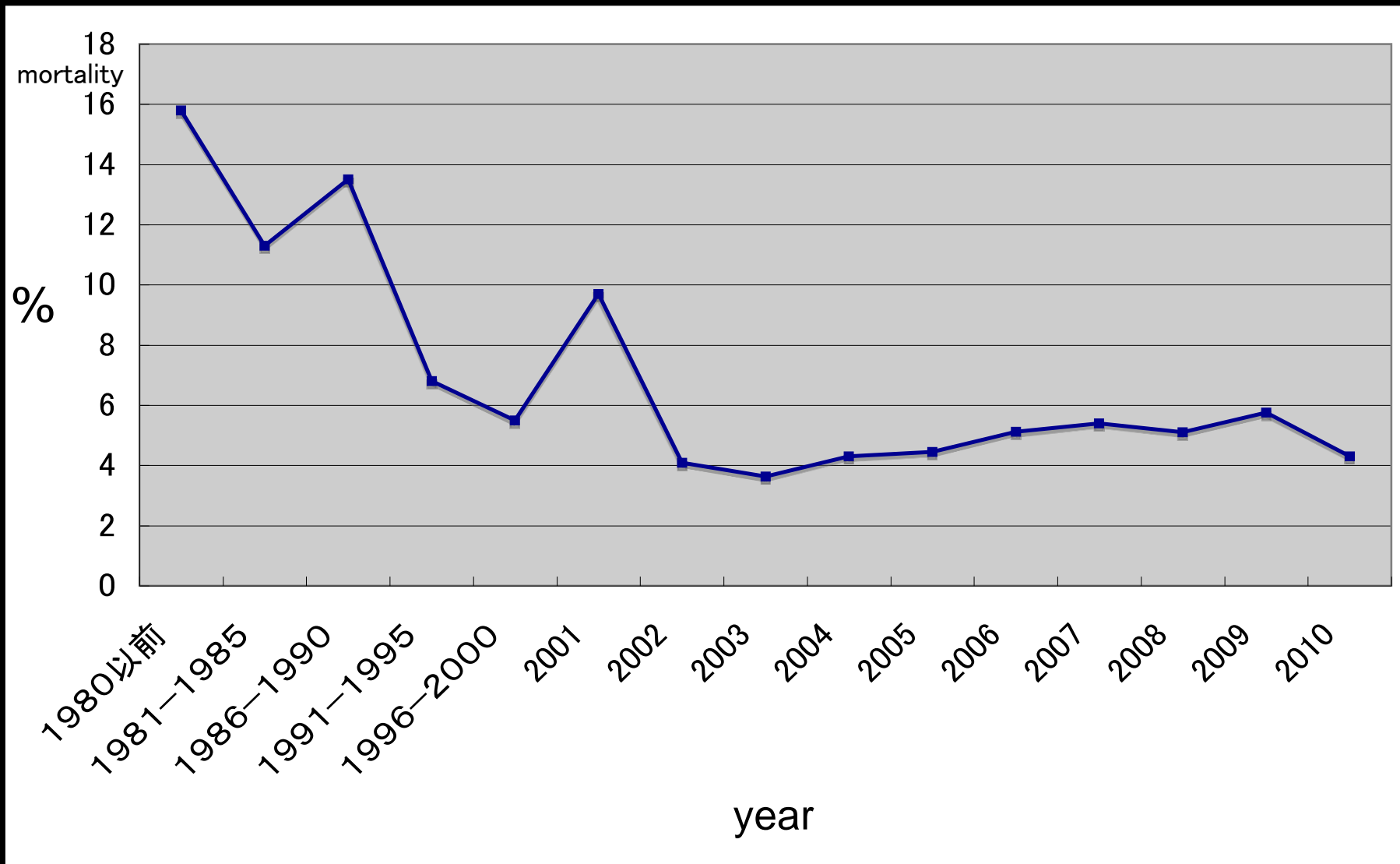
2010;

Total cases: 121、death cases: 38 (mortality: 31.4%)

Results of cardiac rupture



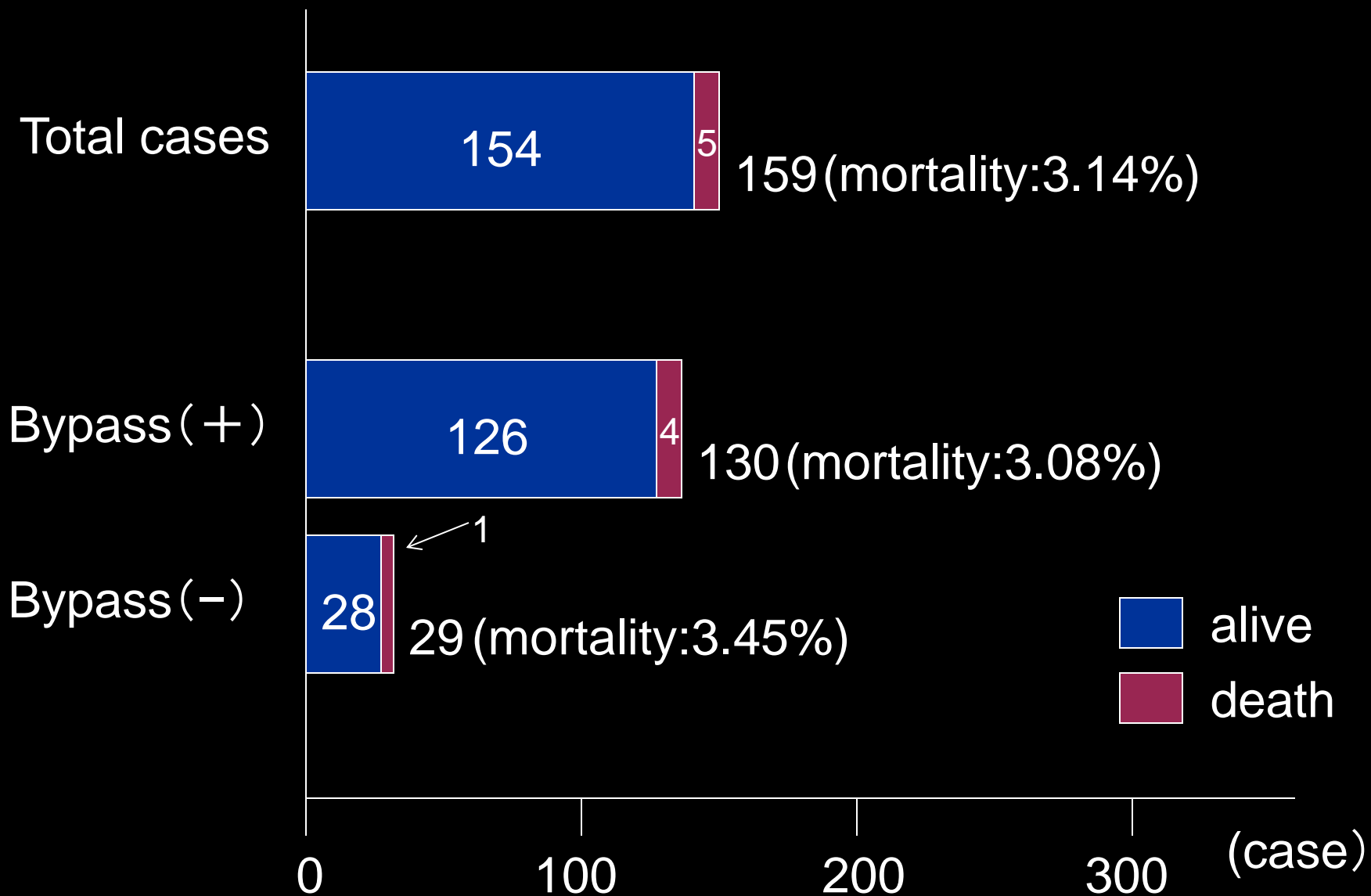
Changes in mortality of left ventricle aneurysm



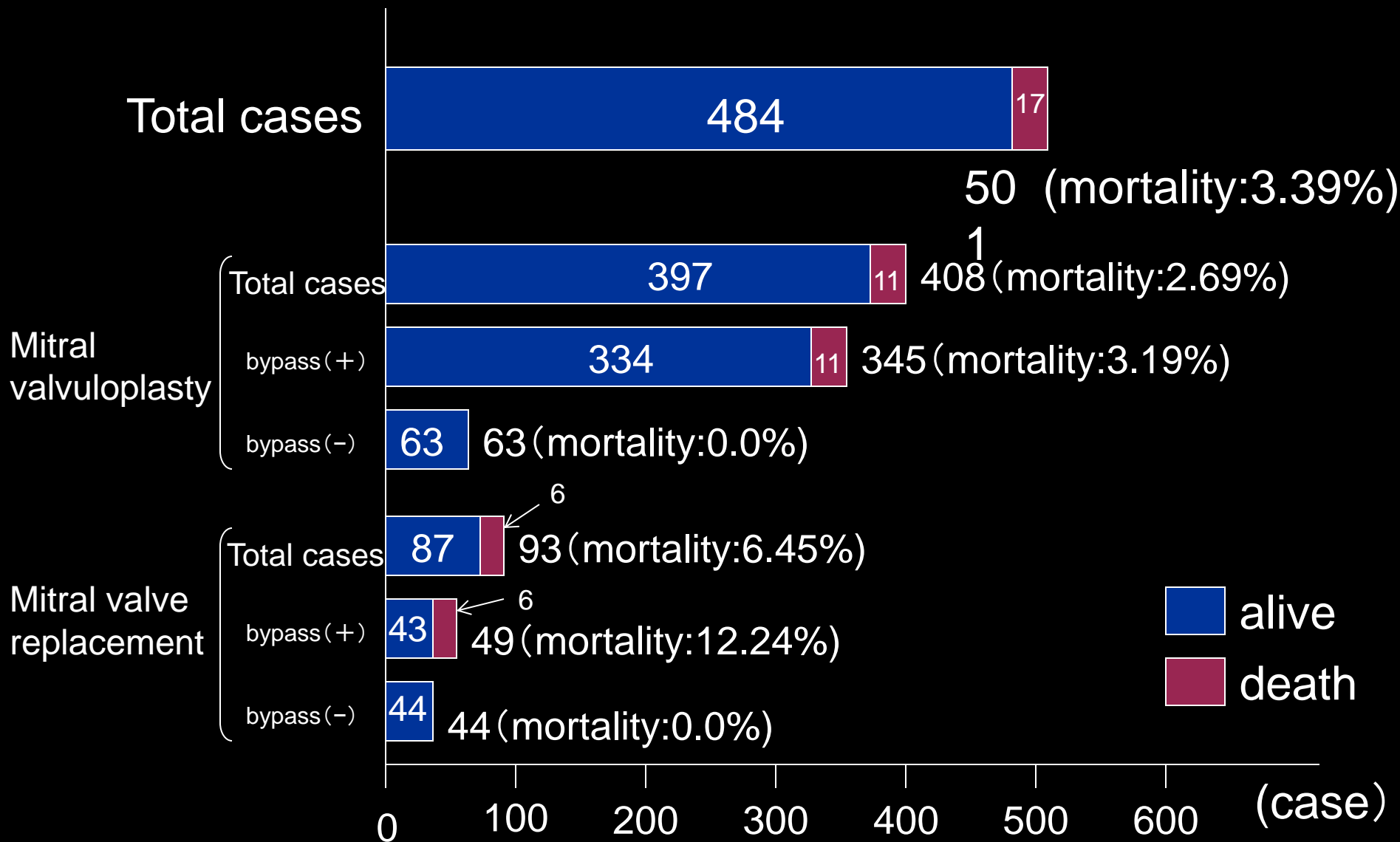
2010;

Total cases: 277、death cases 12 (mortality: 4.3%)

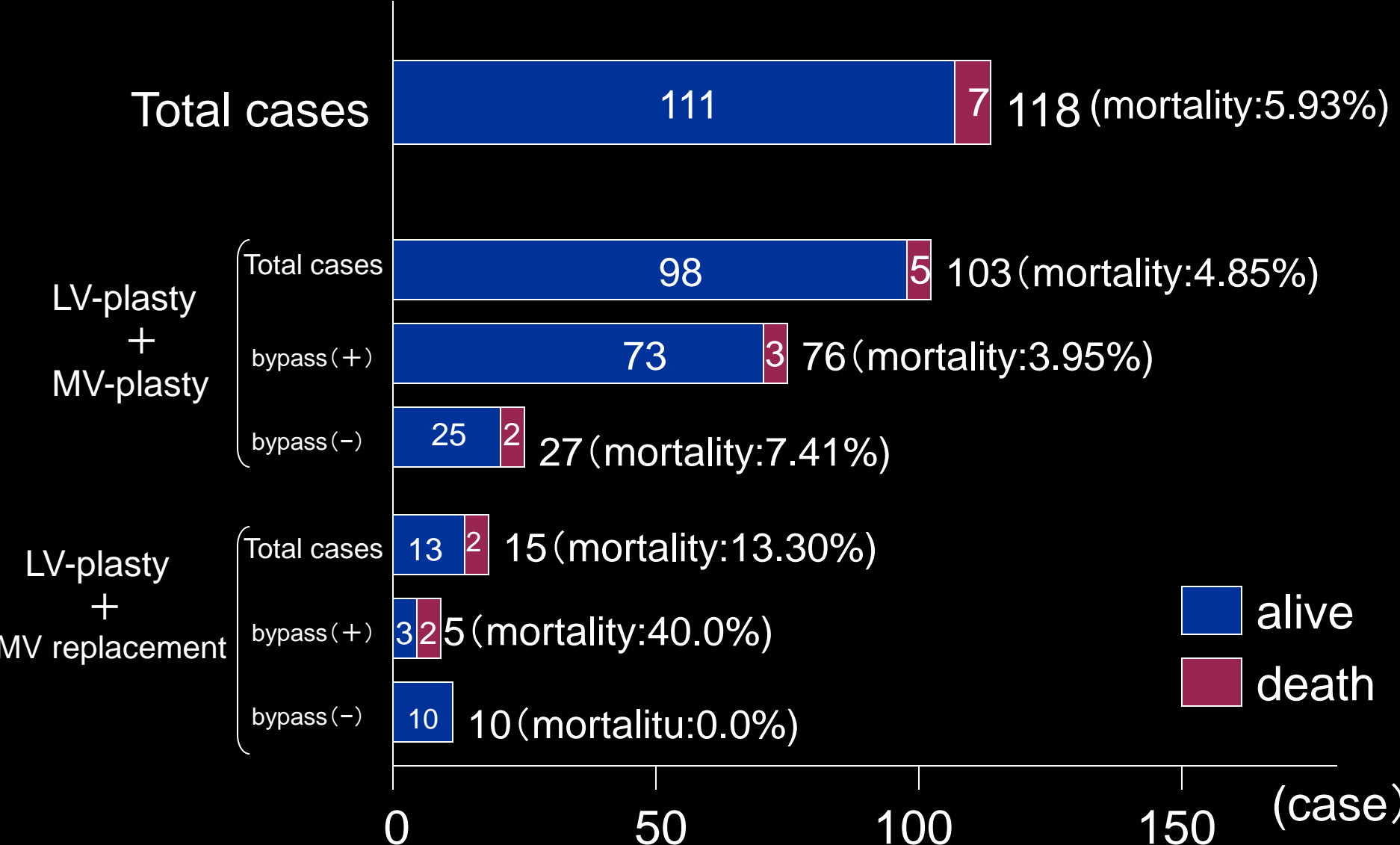
Results of left ventricular-plasty (including left ventriculectomy) against LV aneurysm and/or ischemic cardiomyopathy



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 rate of isolated CABG was reduced, in contrast, that of concomitant surgery with CABG was increased.
2. The mortality of isolated CABG and initial elective CABG were 1.45%, and 0.75% respectively, indicating best results, since this survey started.
3. Of all initial elective CABG, 65% cases underwent off-pump CABG (OPCAB), showing high frequency rate. The mortality of OPCAB was 0.53%, which was lowest value, in recent years.
4. The mean number of grafts for CABG was 2.99, which increased than that of last years, indicating more bypass performed.
5. Of 1 or more bypass surgery, 60% cases underwent OPCAB

Conclusions (2)

6. CABG cases have been getting older ; the rate of 70 or more years old was 50%、80 or more years old was about 10%.
7. The frequency use rate of arterial grafts was 58%, on the other hand, that of vein graft (42%) gradually increased in recent years.
8. Postoperative stroke rate of CABG was 1.77% and that of off to on-pump CABG was significantly lower than those of other procedures.
9. As for the results of complications after myocardial infarction, post-inferior wall VSP, rupture of papillary muscle of LV, and blowout type of cardiac rupture were still bad, indicating high mortality.