

Coronary Artery Surgery Results 2014, 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), 2014

Total cases : 13,717

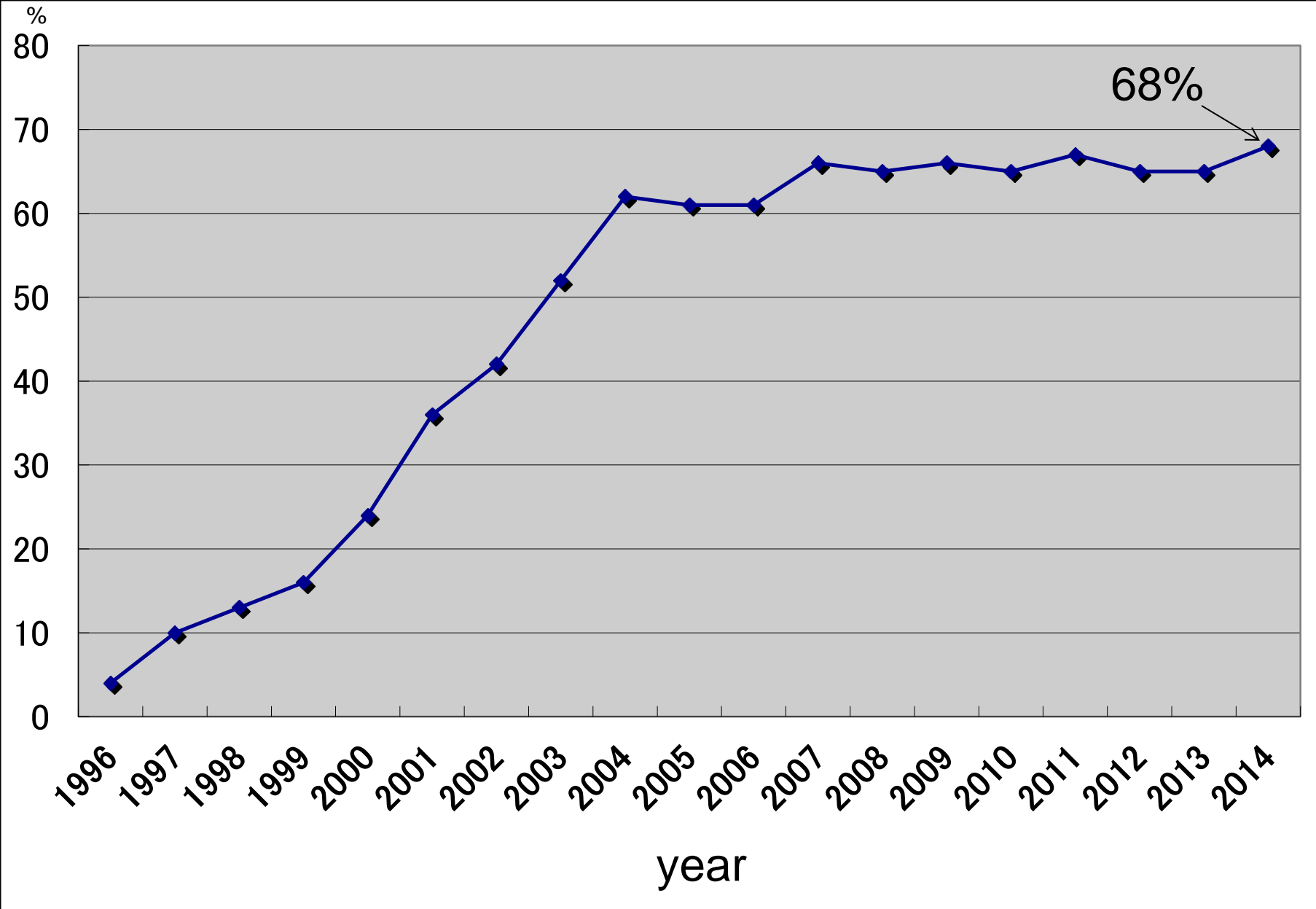
Isolated CABG : 9,768 (71%) (previous year:71%)

Concomitant CABG : 3,949 (29%) (previous year:29%)

Isolated CABG

Initial elective : 8,165	Extra initial elective :1,603
Off-pump : 5,532	Off-pump : 902
On-pump : 2,633	On-pump : 701
(Off-pump rate : 68%)	(Off-pump rate : 56%)
(previous year : 65%)	(previous year : 52%)

Changes in OPCAB frequency rate of initial elective CABG



Total cases of initial elective :8,165(100%)

On-pump (cardiac arrest) :1,696(20.8%)
On-pump (cardiac beating) : 937(11.5%)
Off-pump (total cases) :5,532(67.7%)
Off-pump (complete) :5,392
On-pump (convert) : 140

OPCAB complete rate :97.5%

Off to on-pump convert rate : 2.5%
(previous year:2.3%)

Mortality of isolated CABG:1.70%
(previous year:1.75%)

Mortality of initial elective CABG:1.03%
(previous
year:1.08%)

On-pump (cardiac arrest) :1.00%

On-pump (cardiac beating) :2.56%

Off-pump (total cases) :0.78%

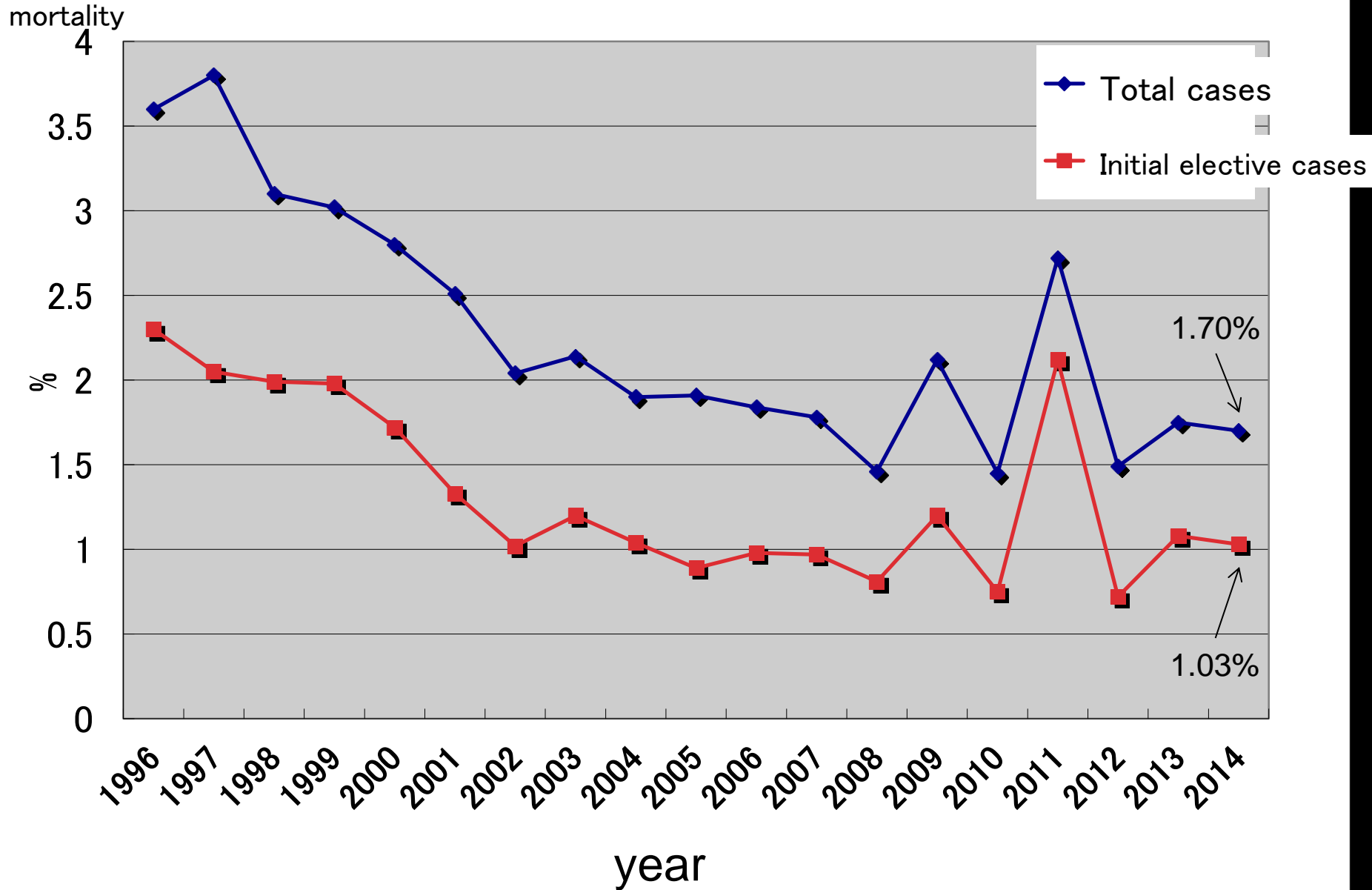
Off-pump (complete) :**0.72%**

(previous year:0.82%)

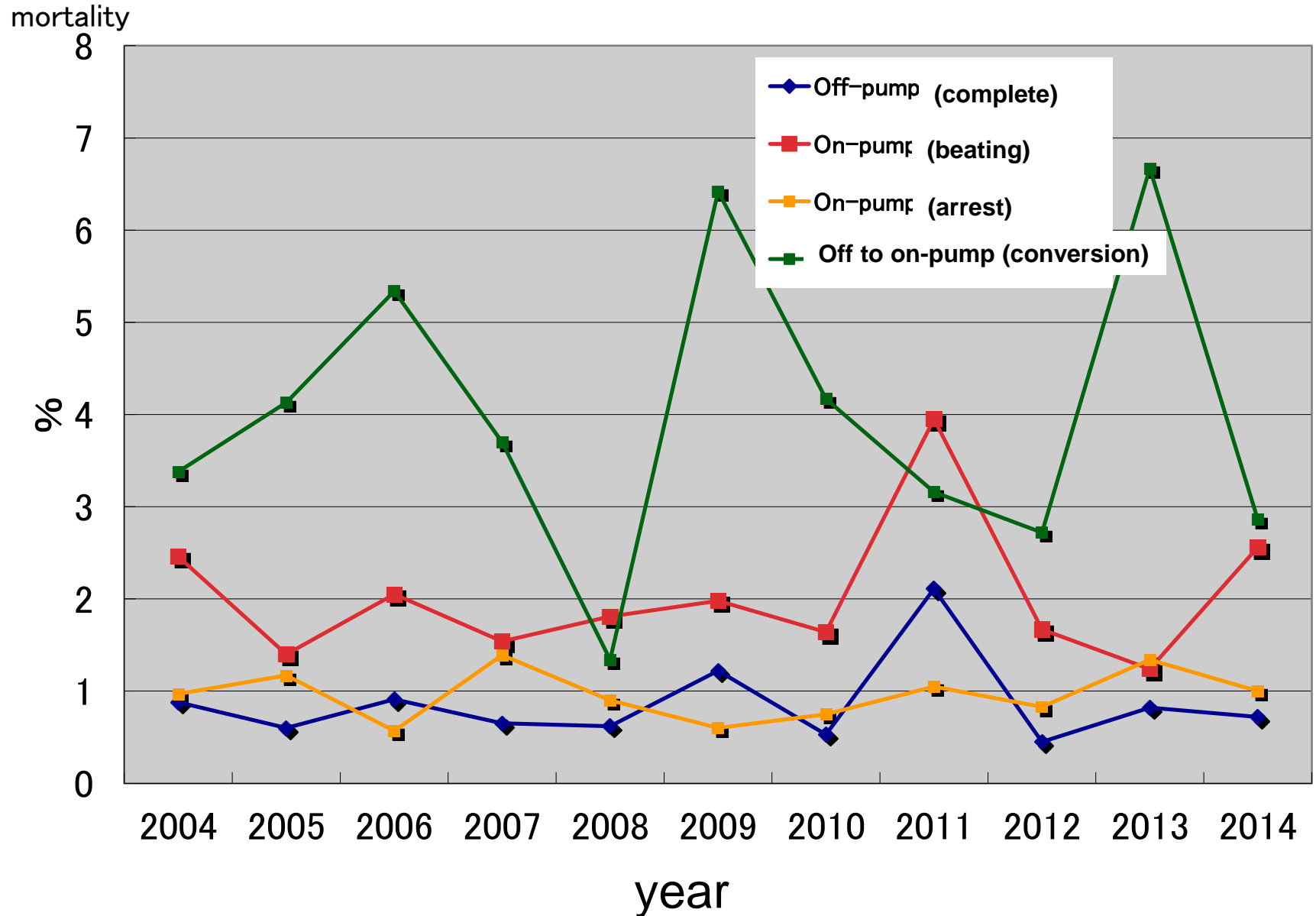
On to on-pump (convert) :**2.86%**

(previous year:6.67%)

Changes in mortality of CABG

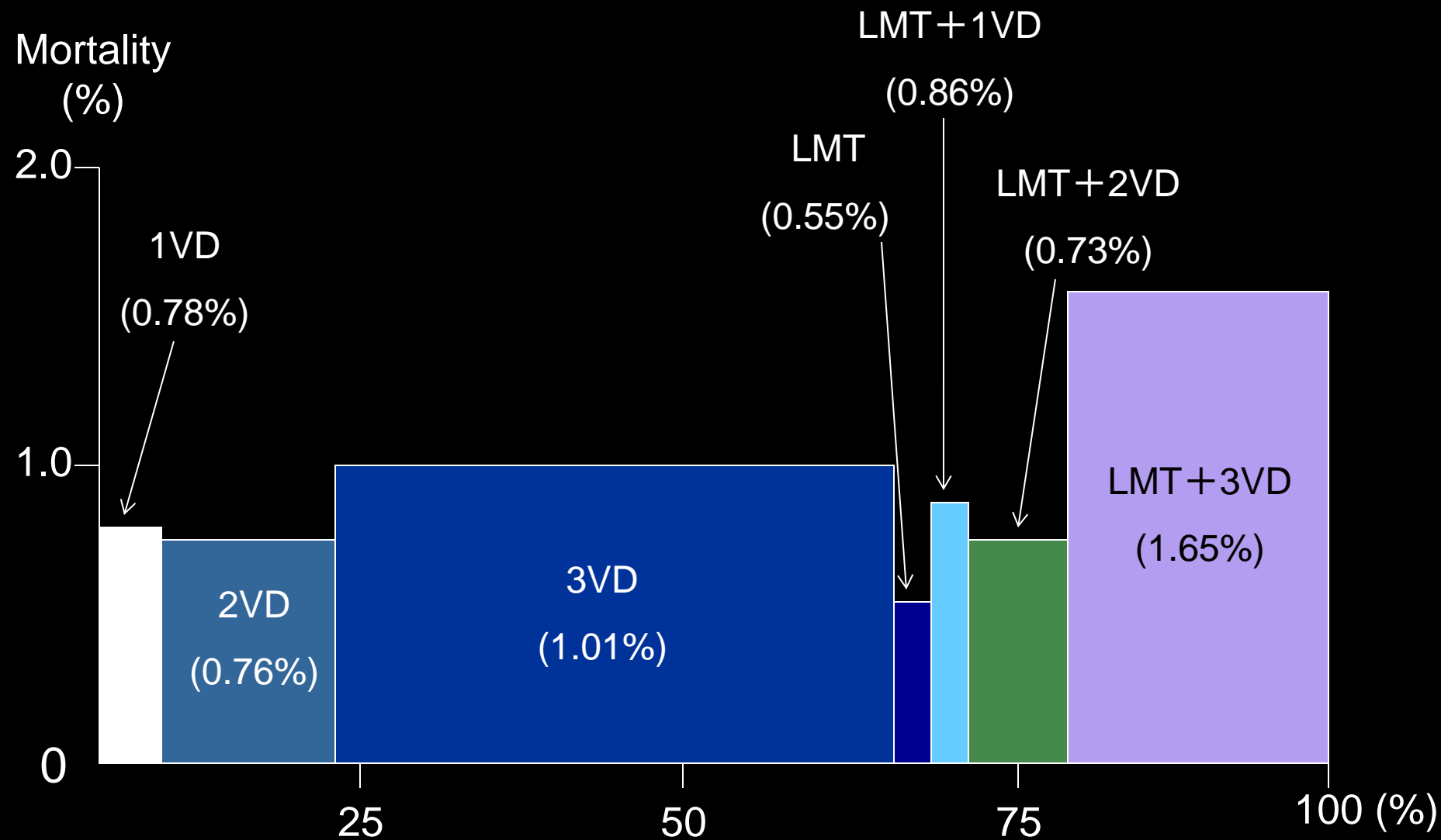


Changes of mortality for procedures (Initial elective CABG)



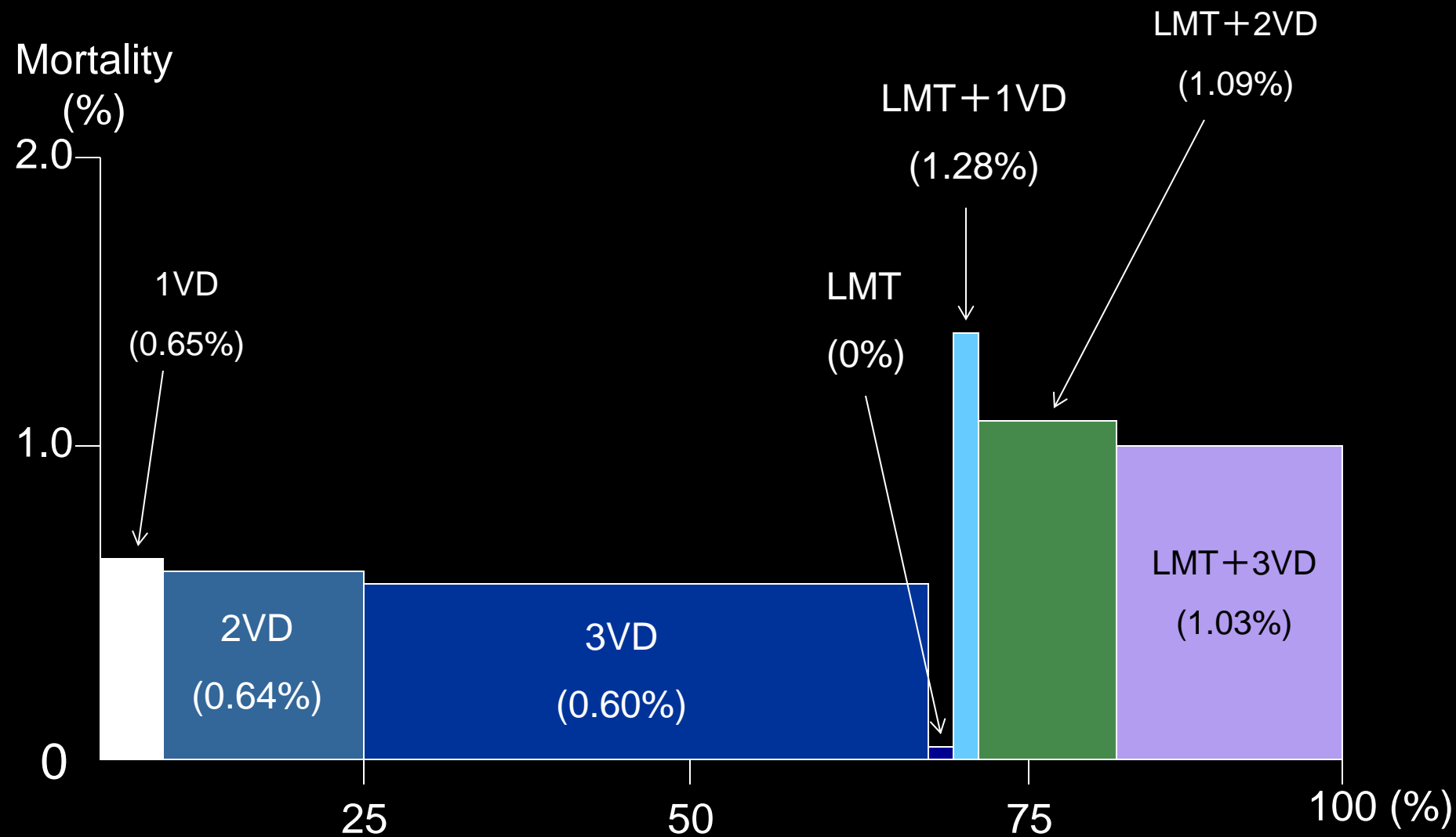
Surgical results according to diseased vessels

(Initial elective cases : 8,165, mortality:1.03%)



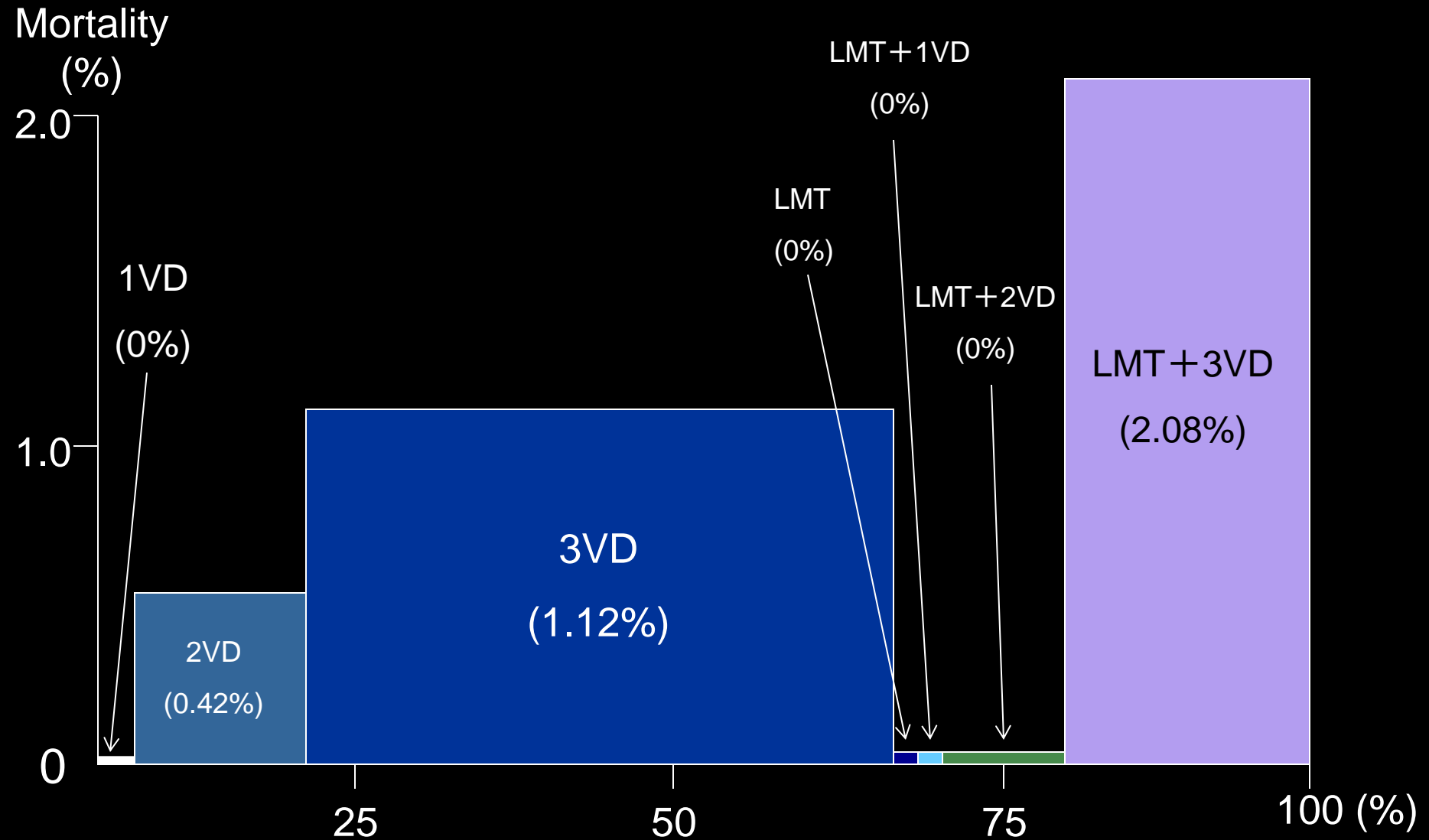
Surgical results according to diseased vessels

(Initial elective off-pump (complete): 5,392, mortality:0.72%)



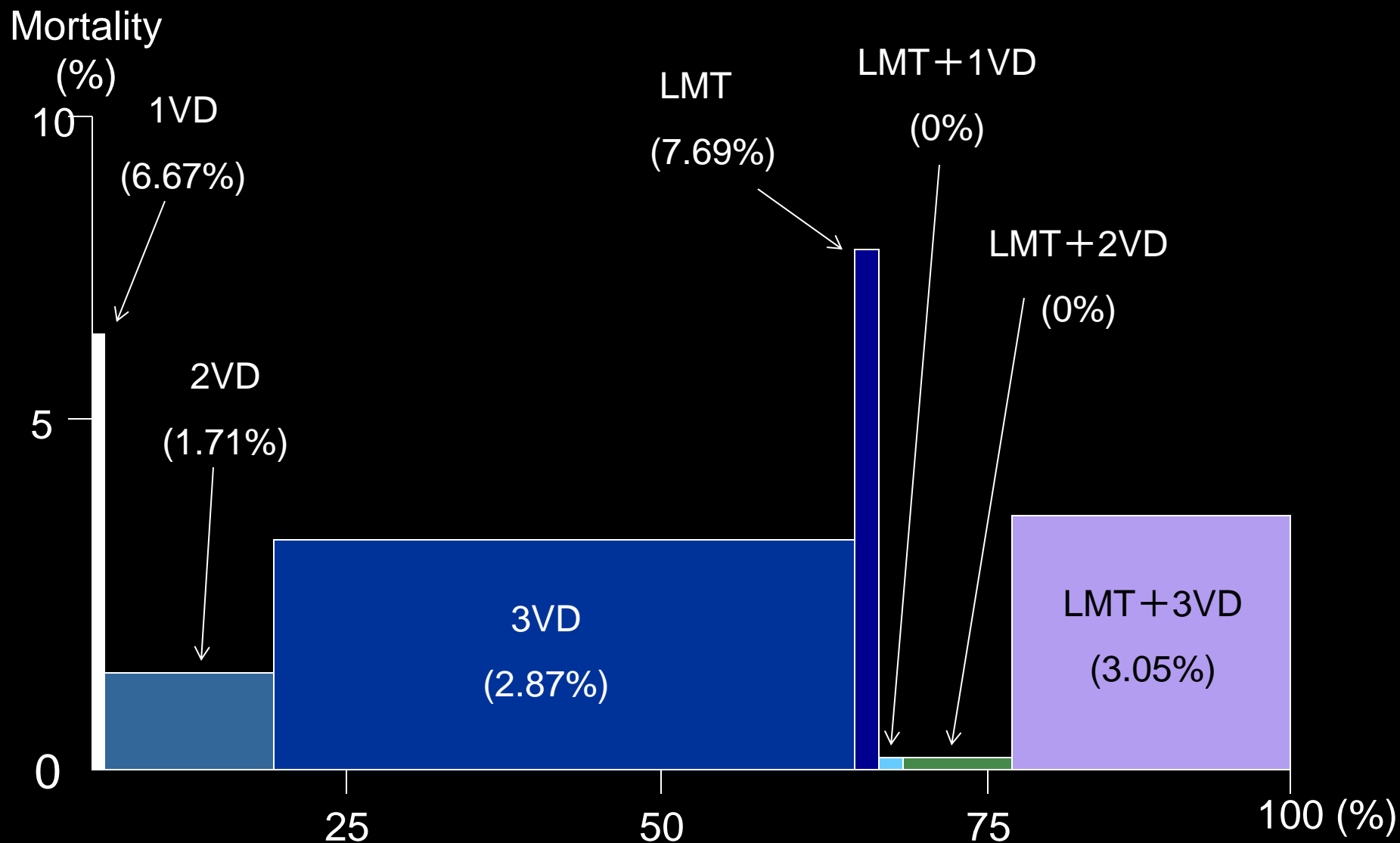
Surgical results according to diseased vessels

(Initial elective on-pump (arrest): 1,696, mortality:1.00%)



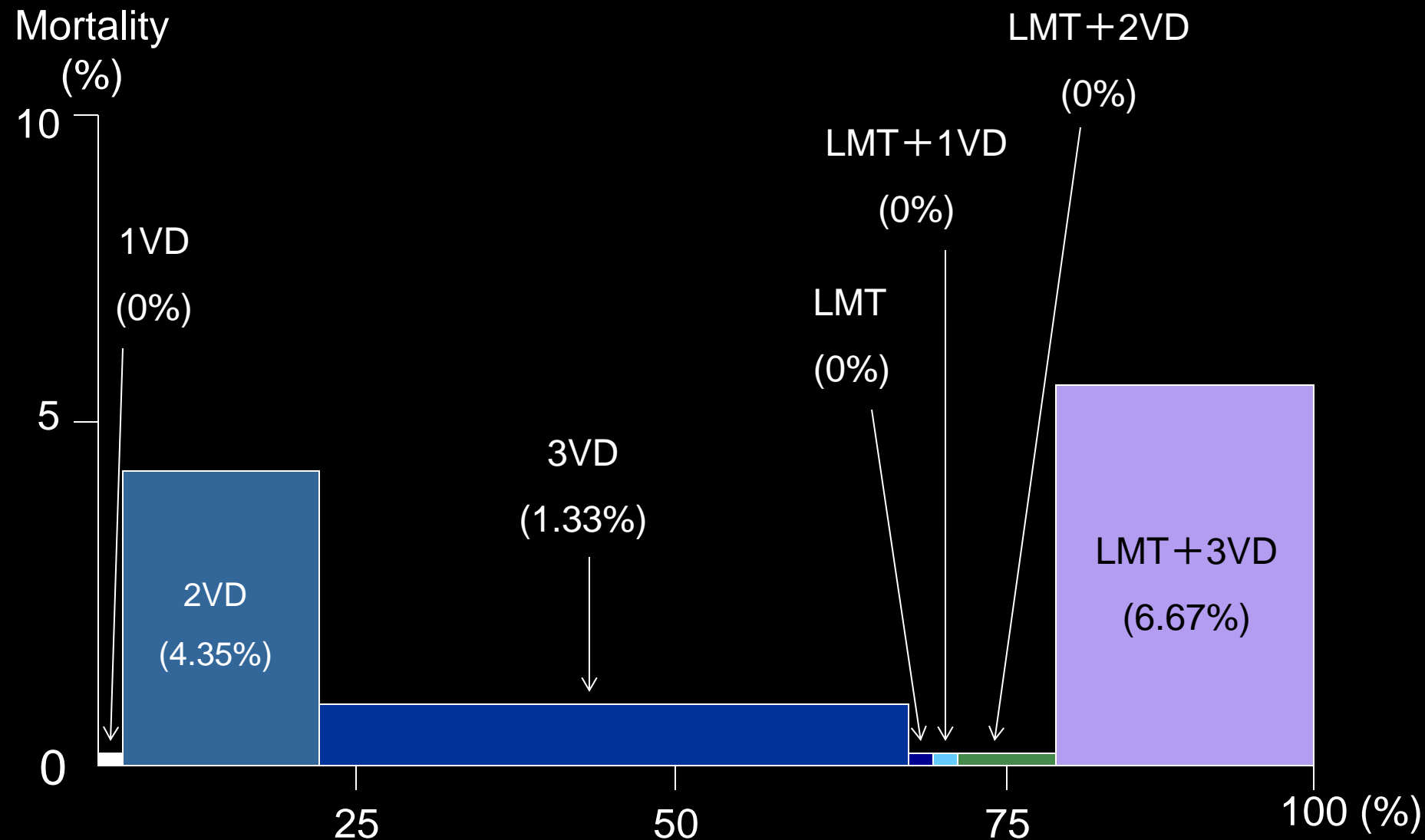
Surgical results according to diseased vessels

(Initial elective on-pump (beating) : 937, mortality:2.56%)



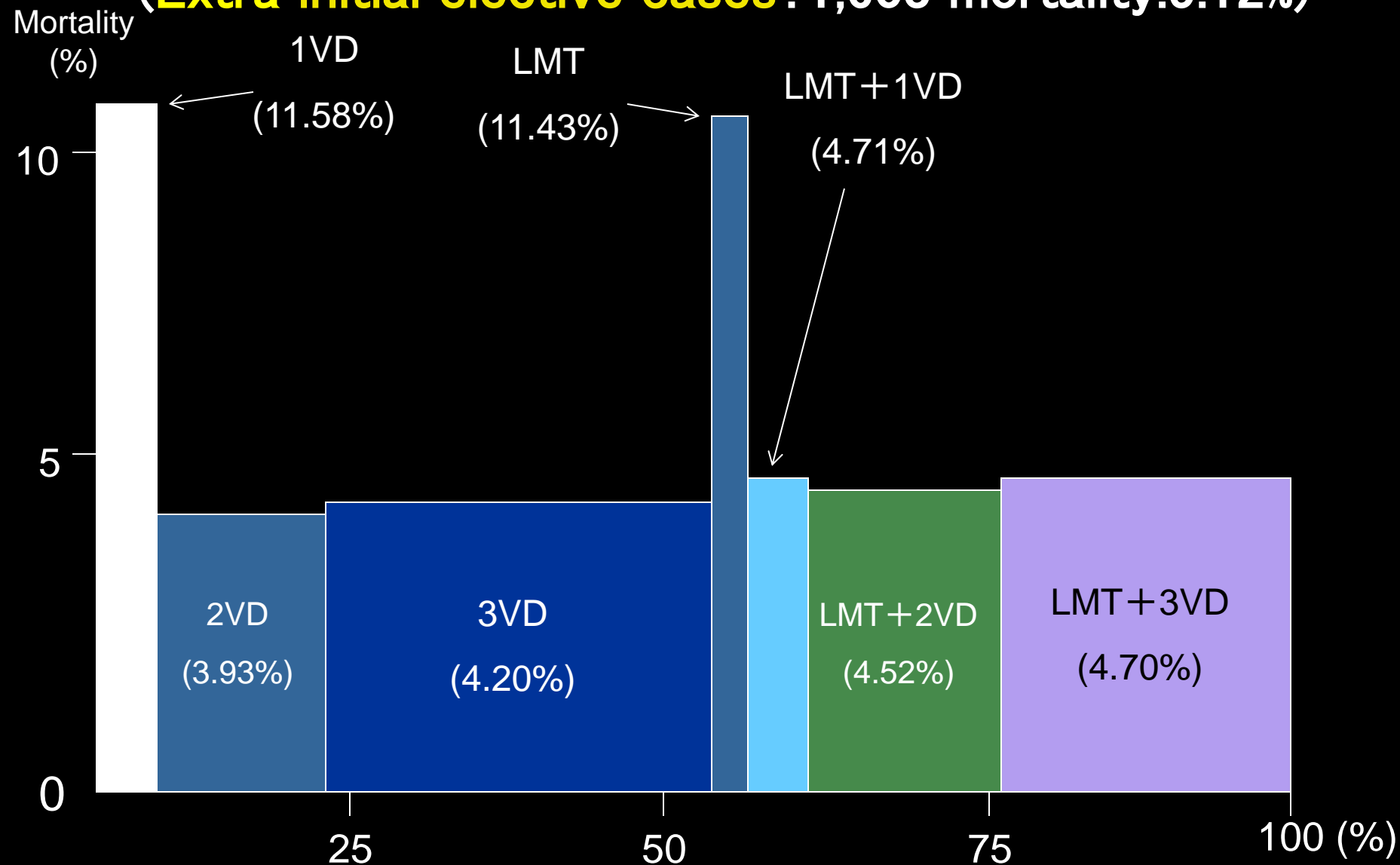
Surgical results according to diseased vessels

(Initial elective off to on-pump (conversion): 140, mortality:2.86%)



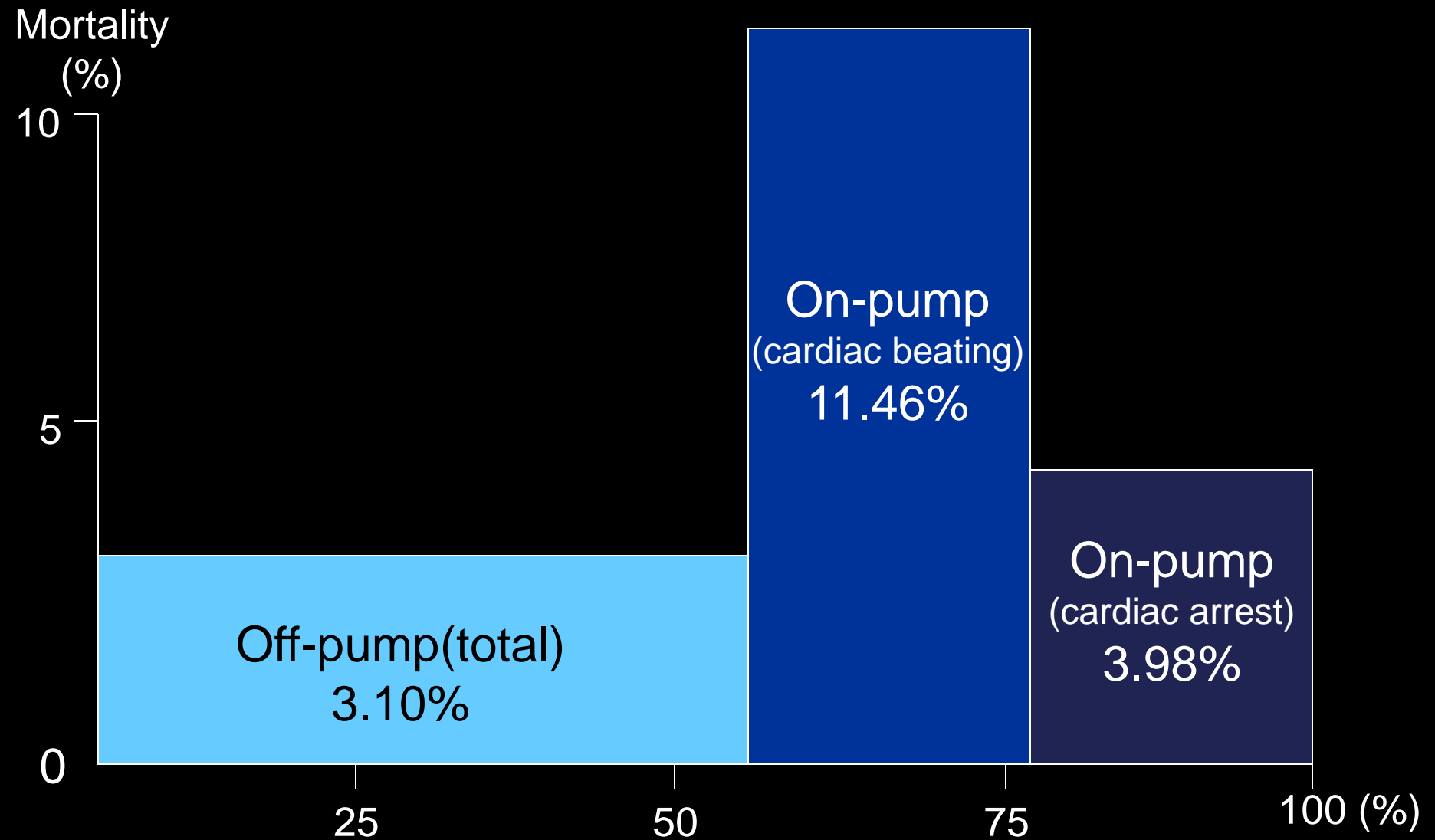
Surgical results according to diseased vessels

(Extra initial elective cases : 1,603 mortality:5.12%)



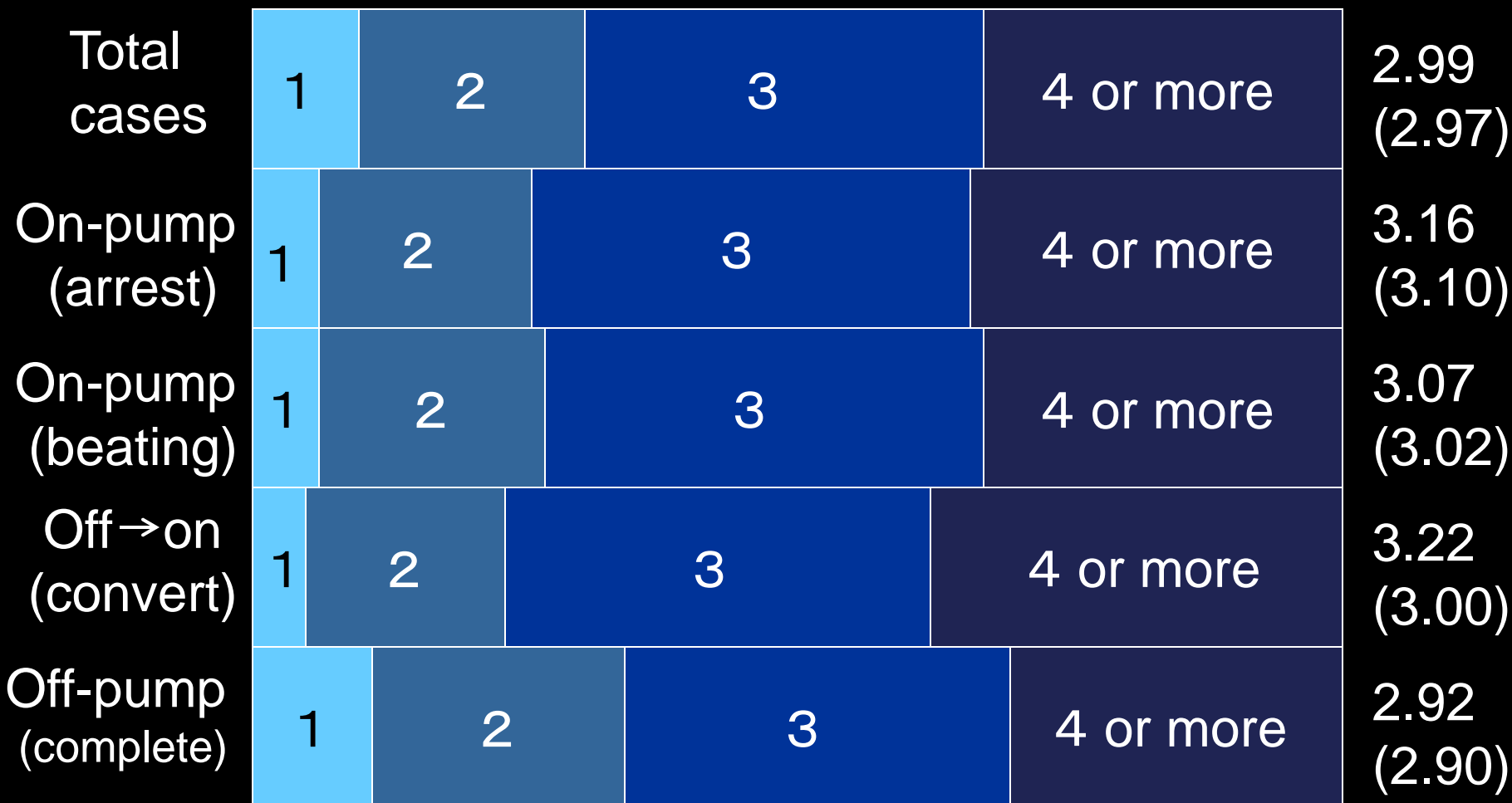
Surgical results according to procedures

(**Except initial elective cases** : 1,603, mortality:5.12%)

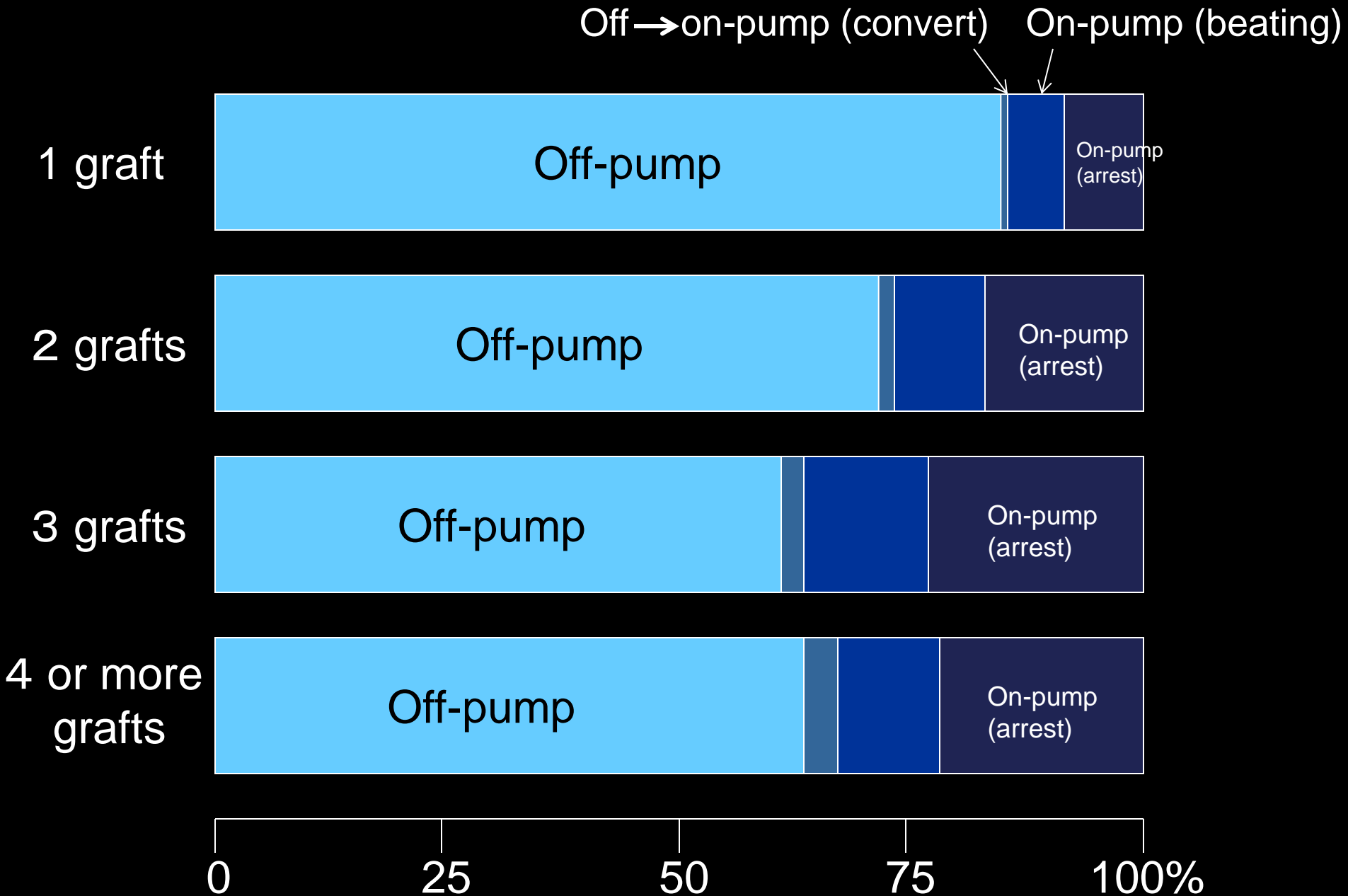


Number of grafts according to surgical procedures

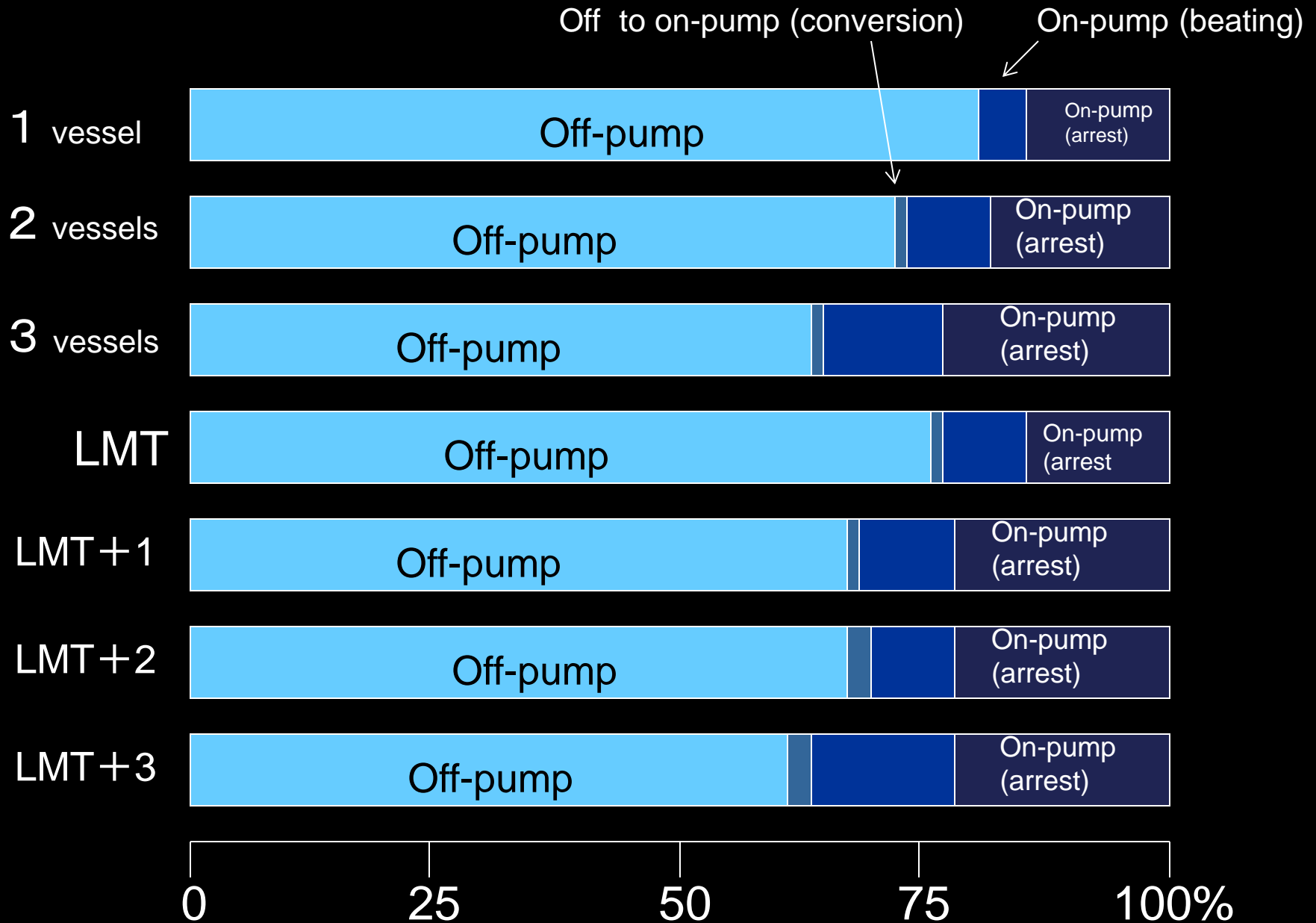
mean No. of grafts
(previous)



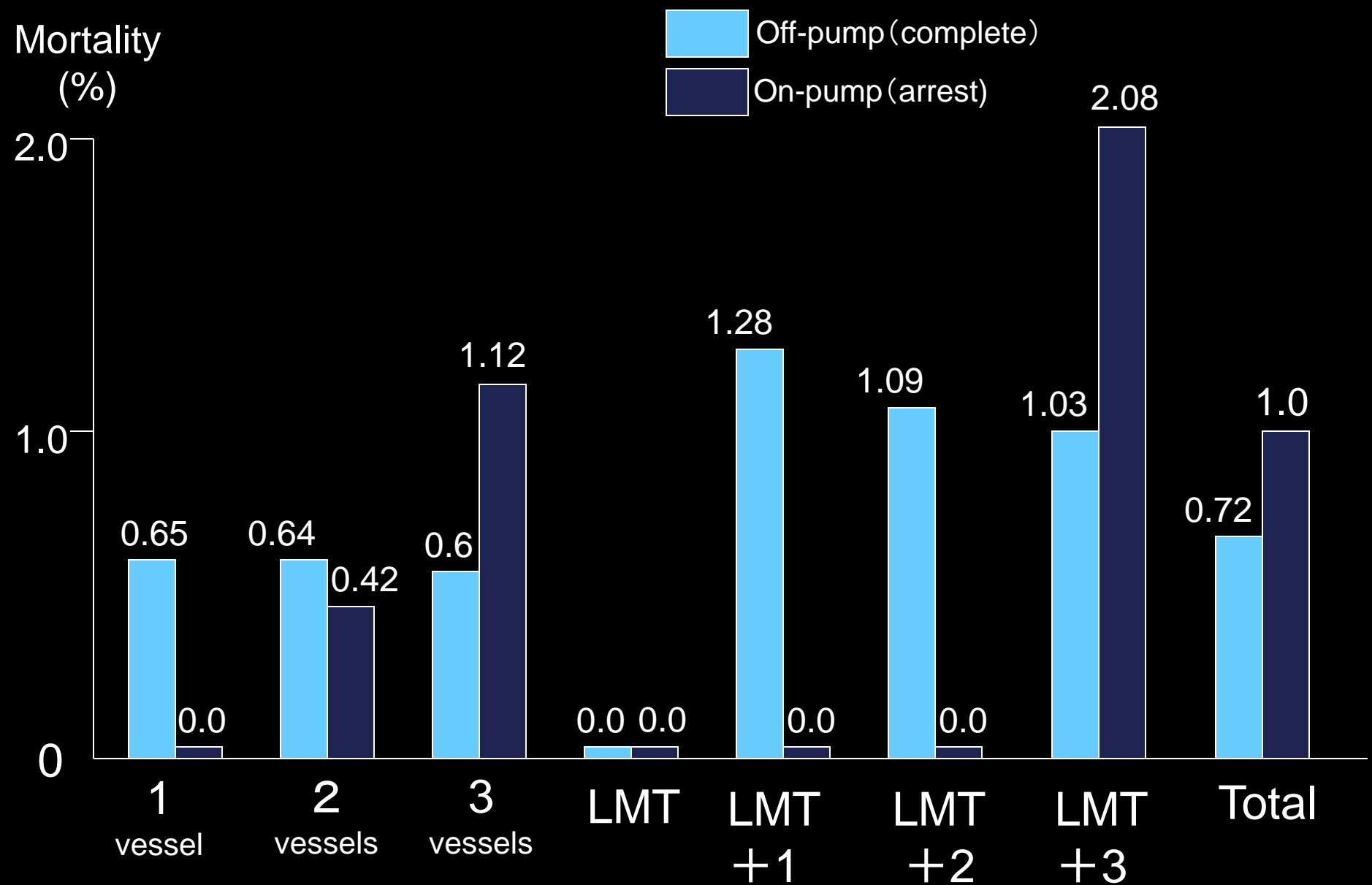
Surgical procedures according to number of grafts



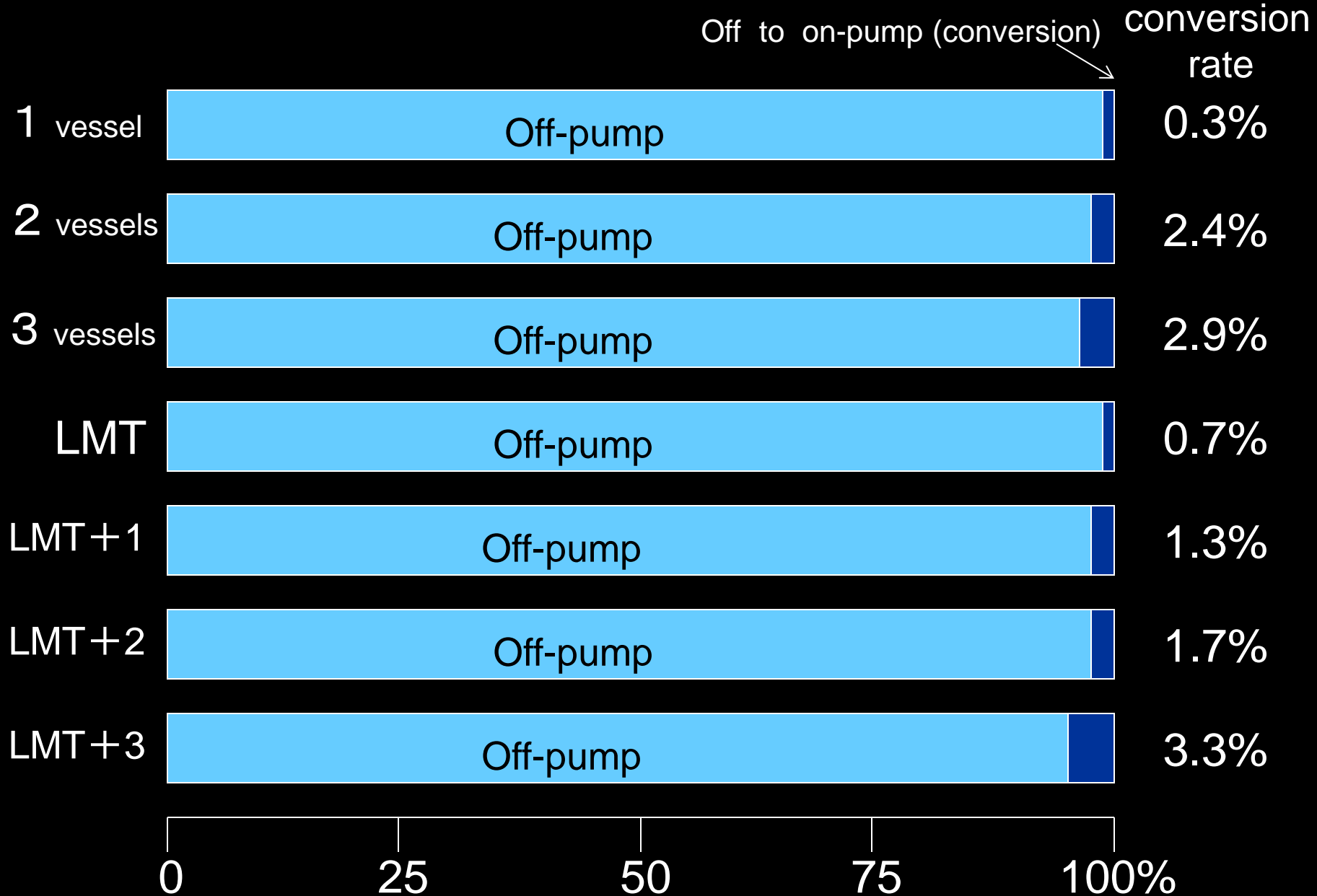
Surgical procedures according to diseased vessels



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

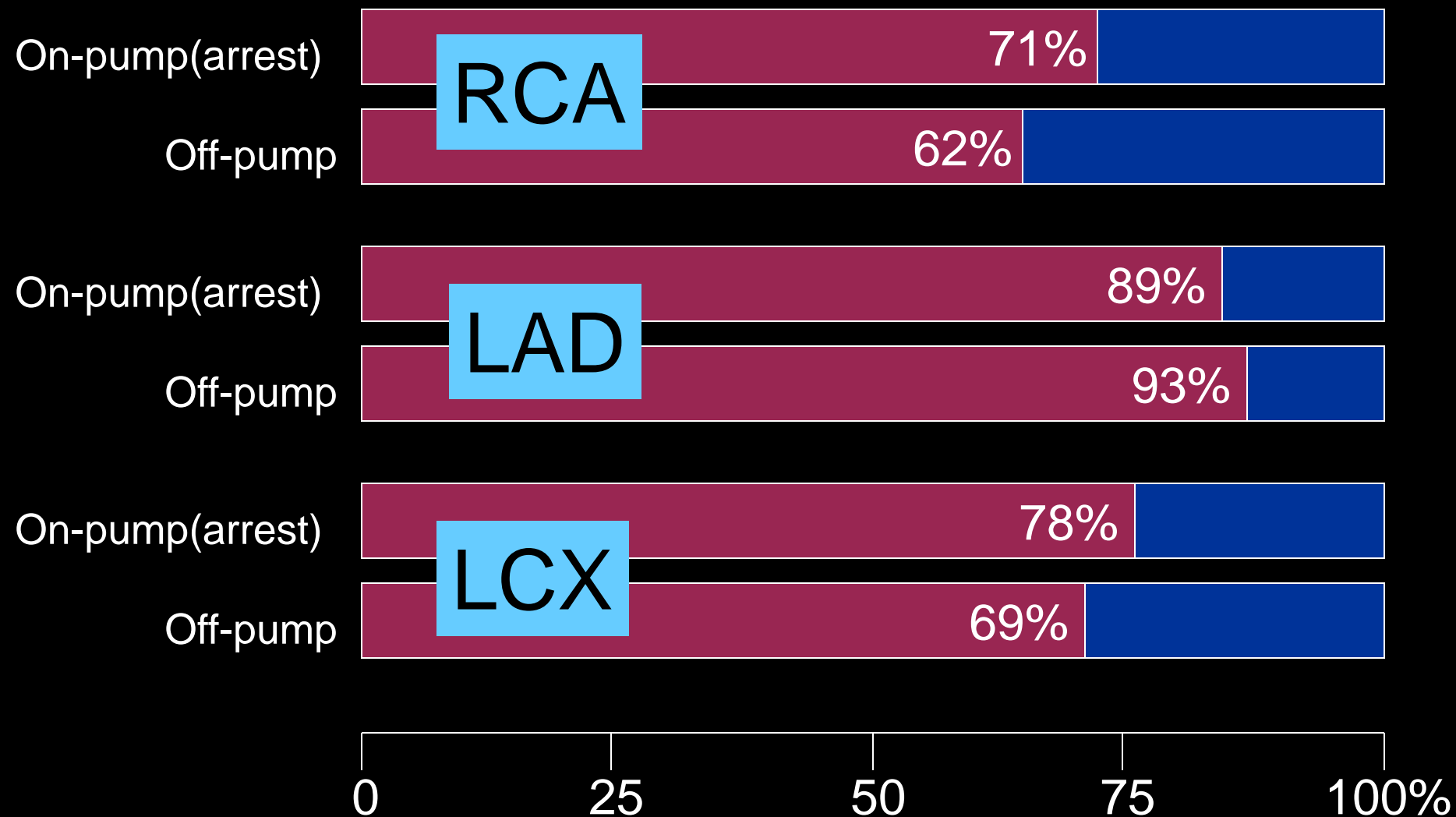


Off to on-pump conversion rate according to diseased vessels (total:2.5%)

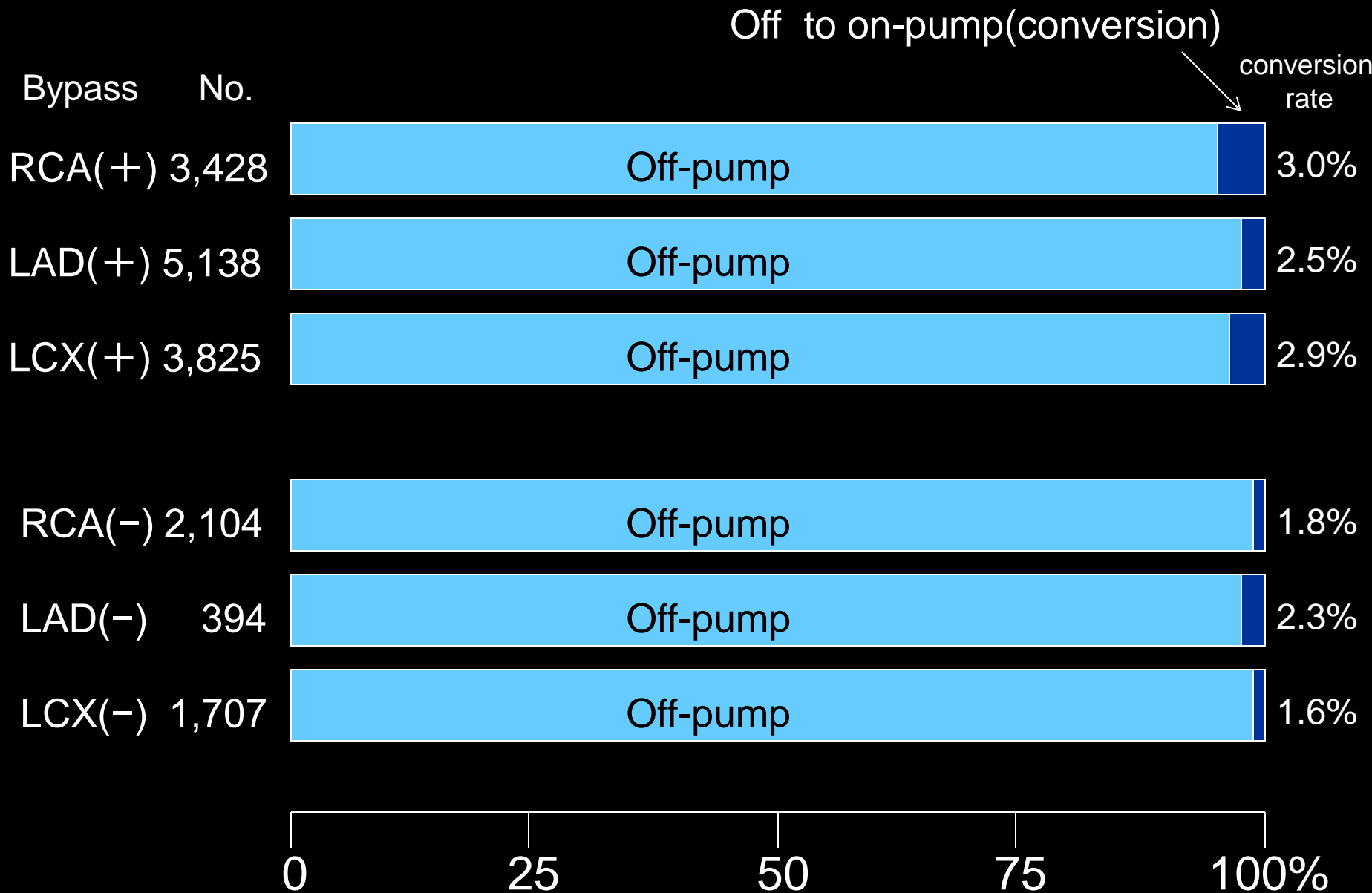


On-pump (arrest) vs. off-pump (Initial elective CABG)

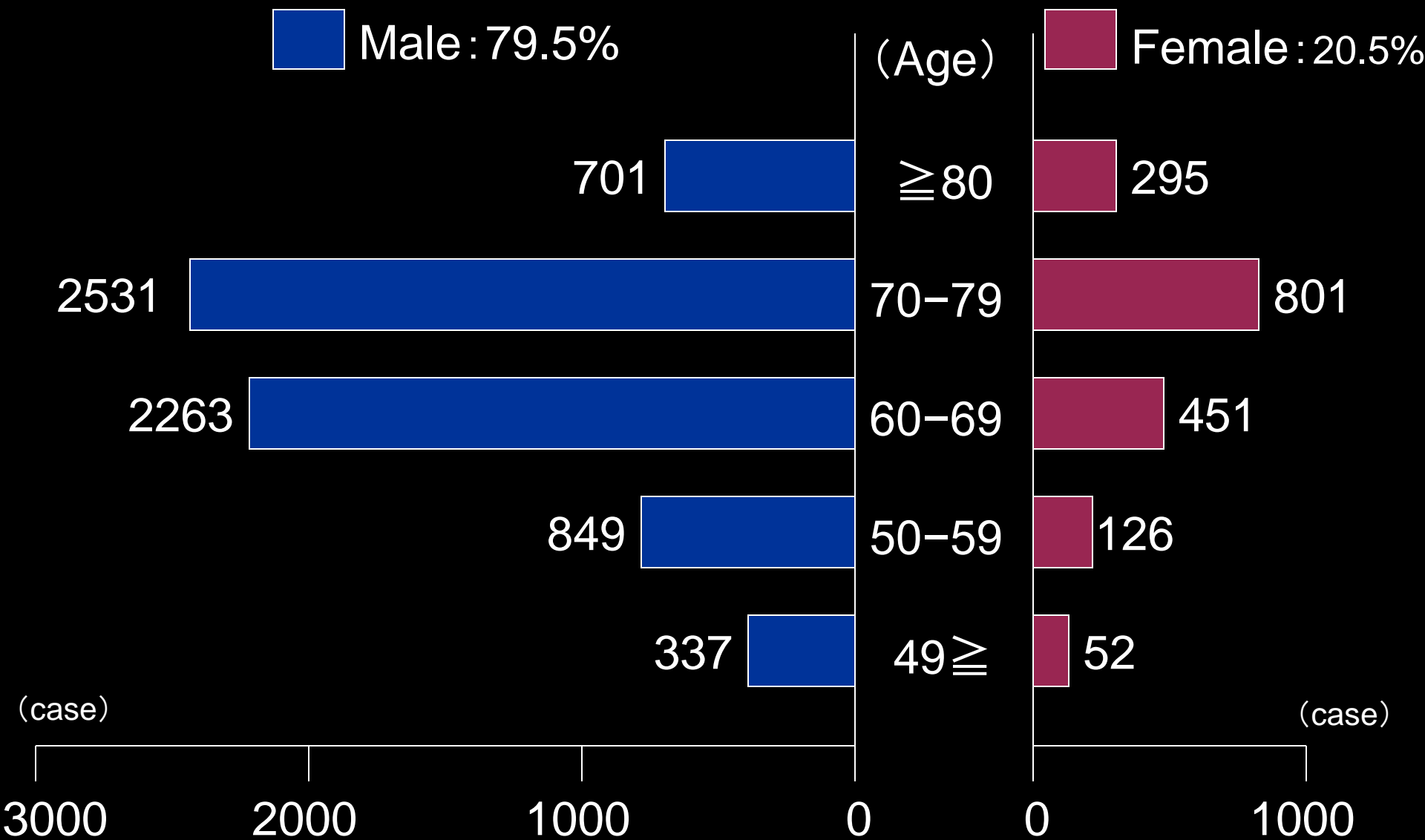
bypass+
bypass-



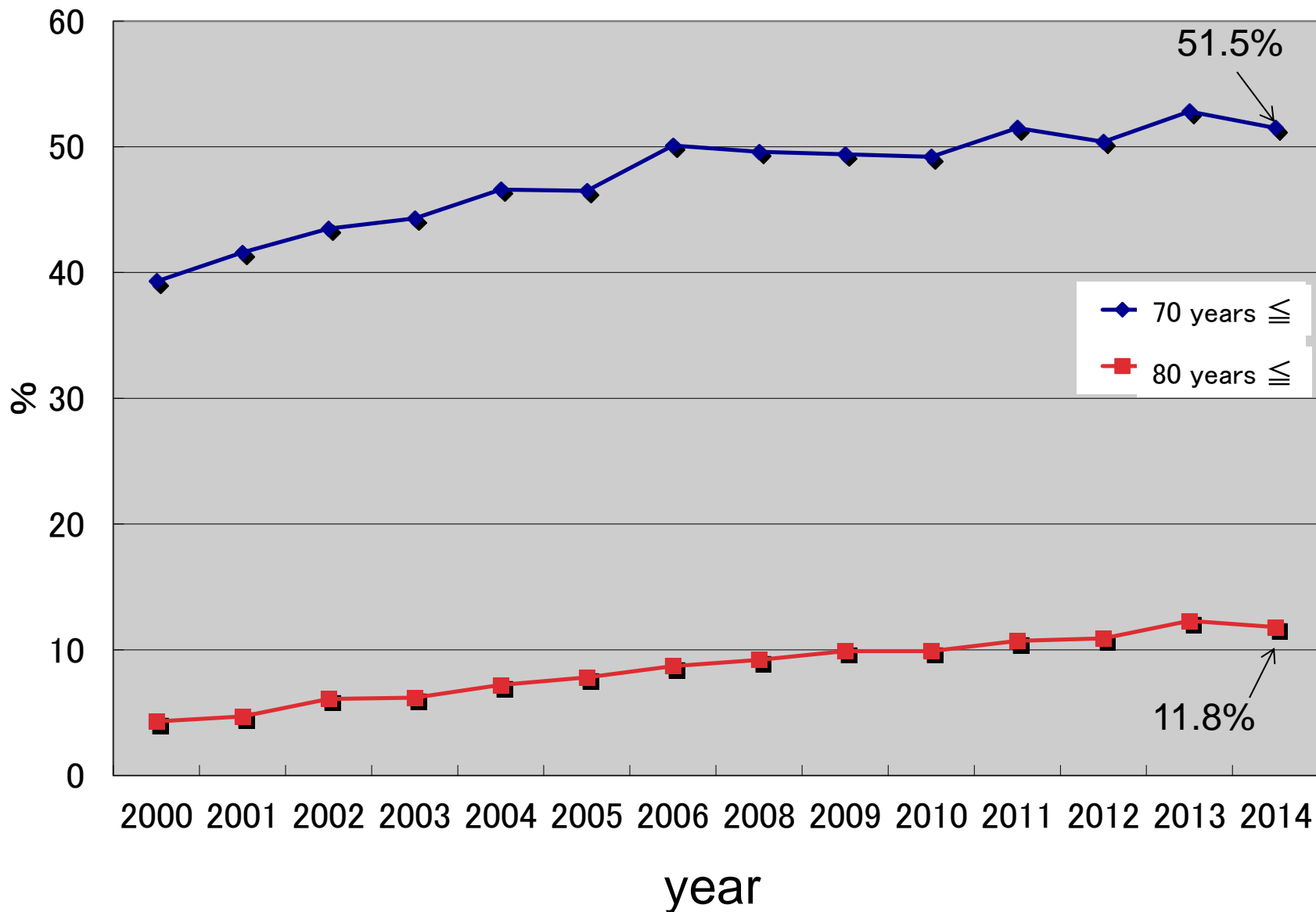
Off-pump vs. off to on-pump conversion (Initial elective CABG)



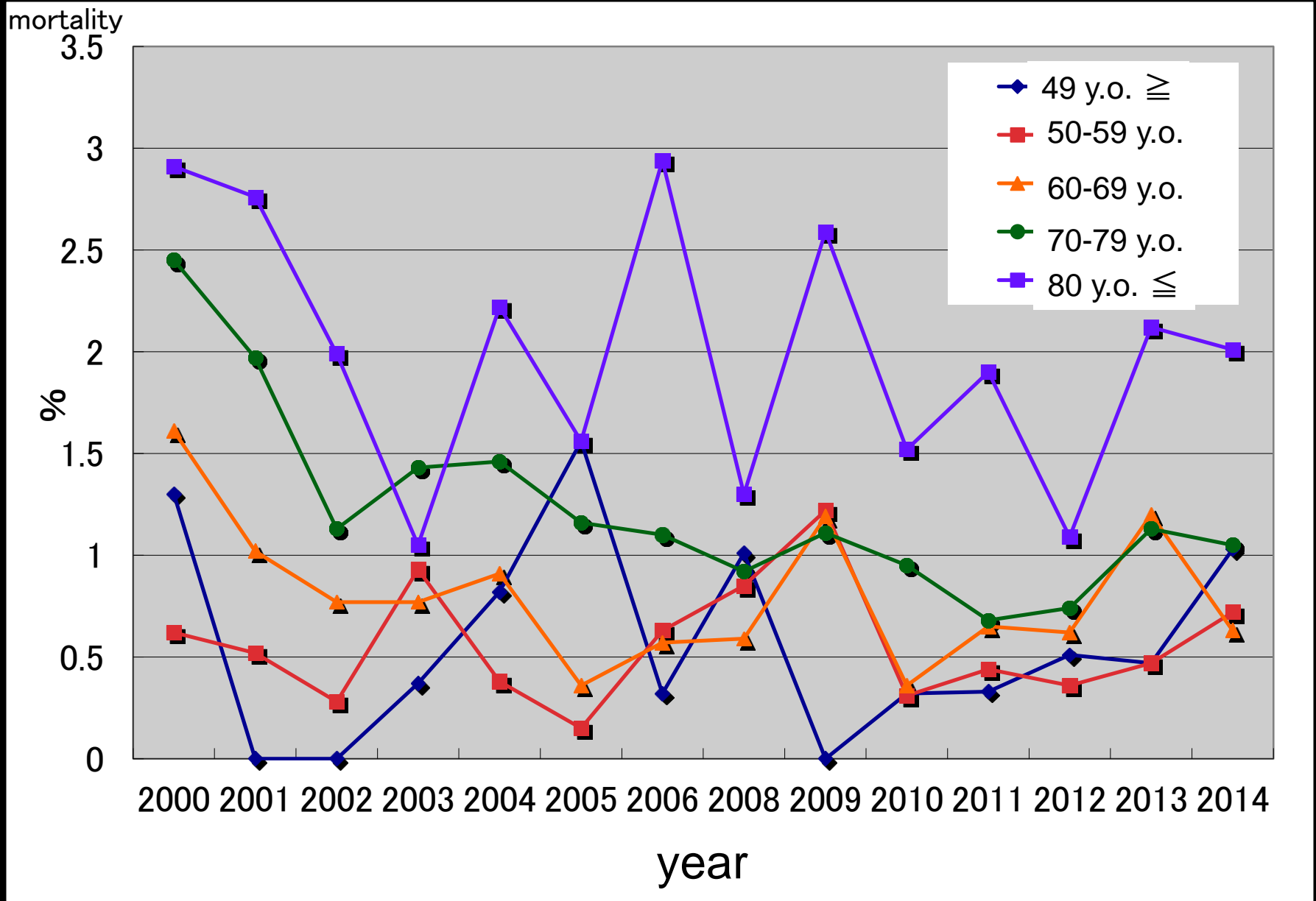
Age distribution (Initial elective cases)



Changes of rate in elderly patients (initial elective cases)

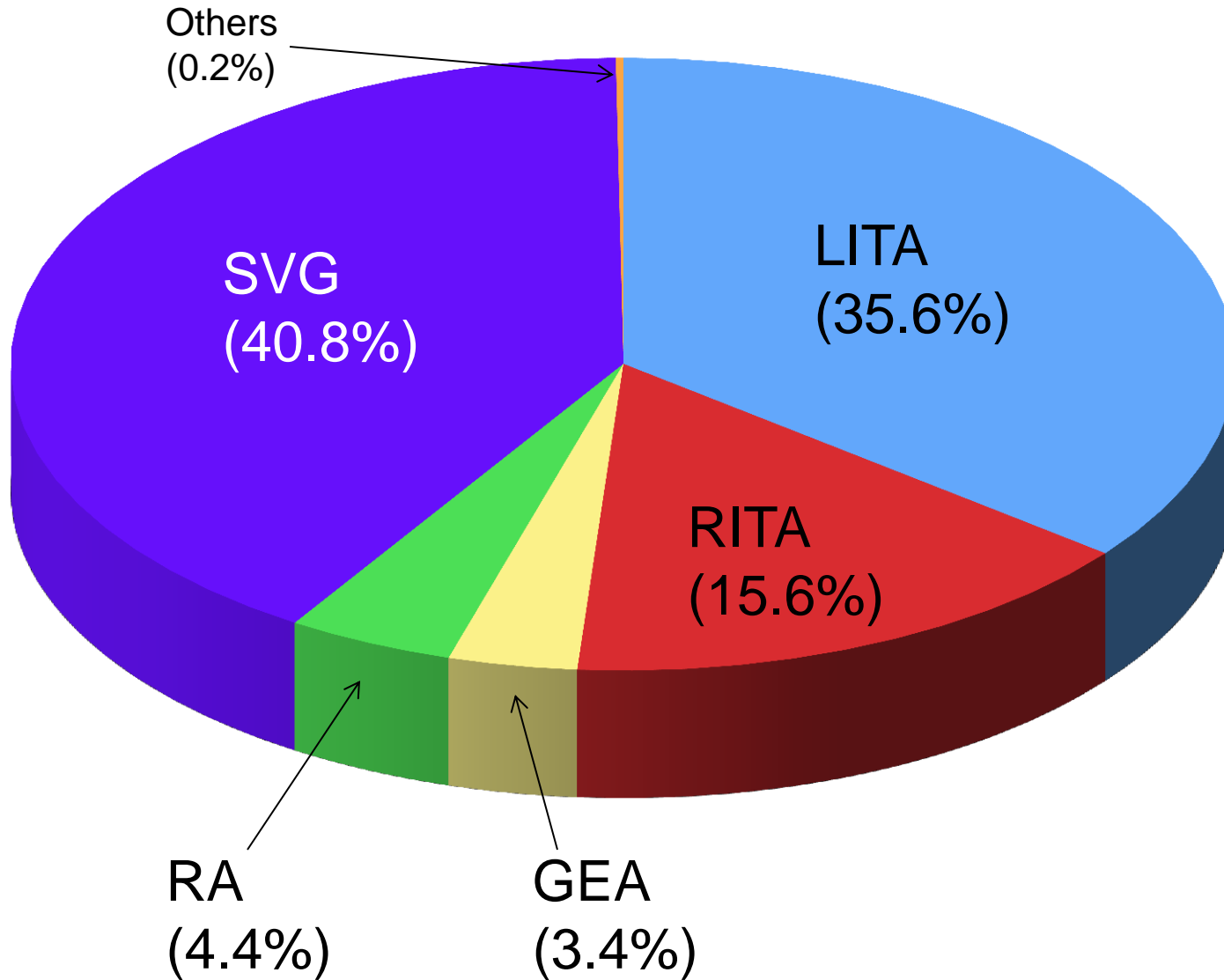


Changes in mortality according to age (Initial elective cases)

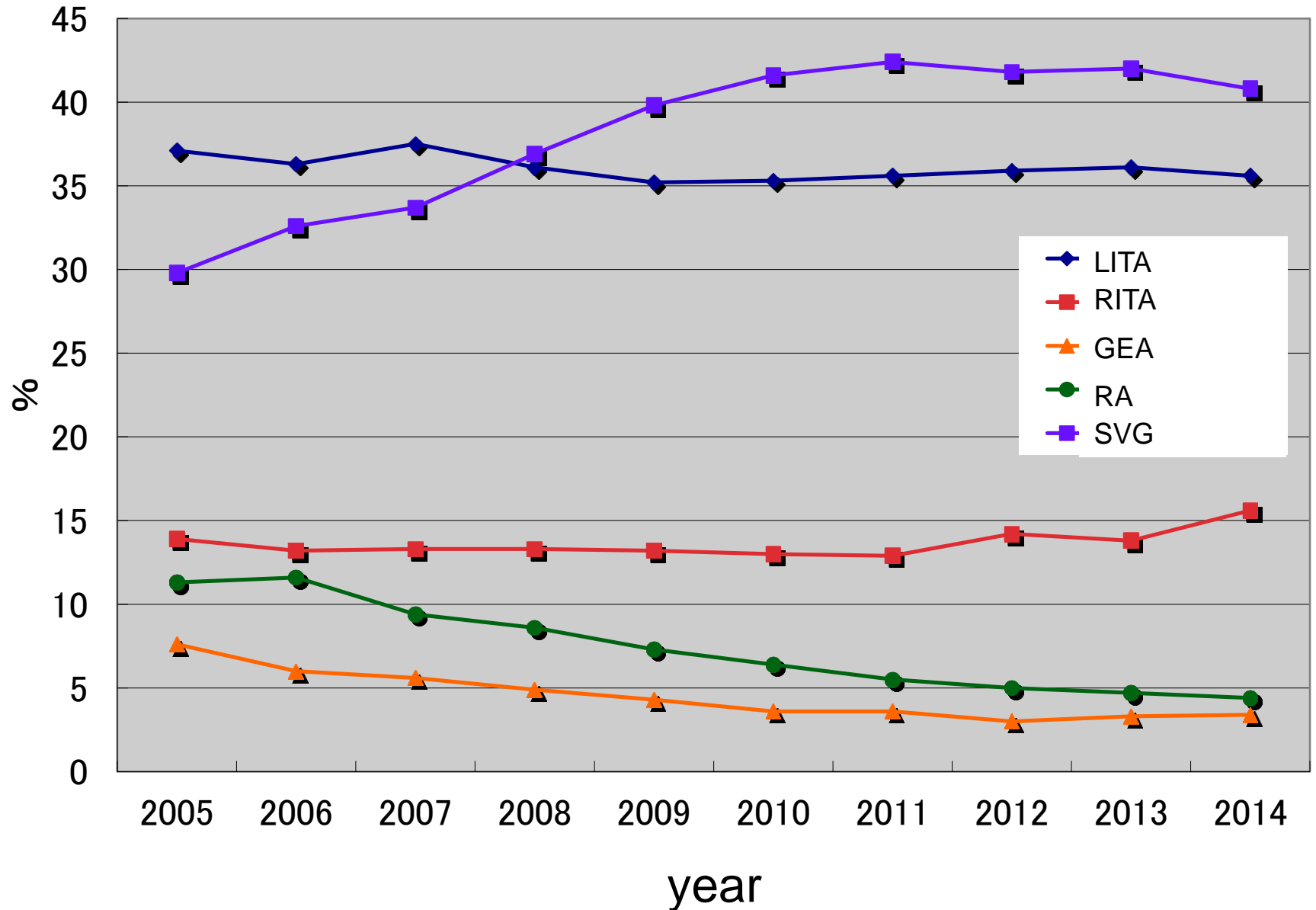


Graft selection

(Total number of grafts : 26,191 grafts)

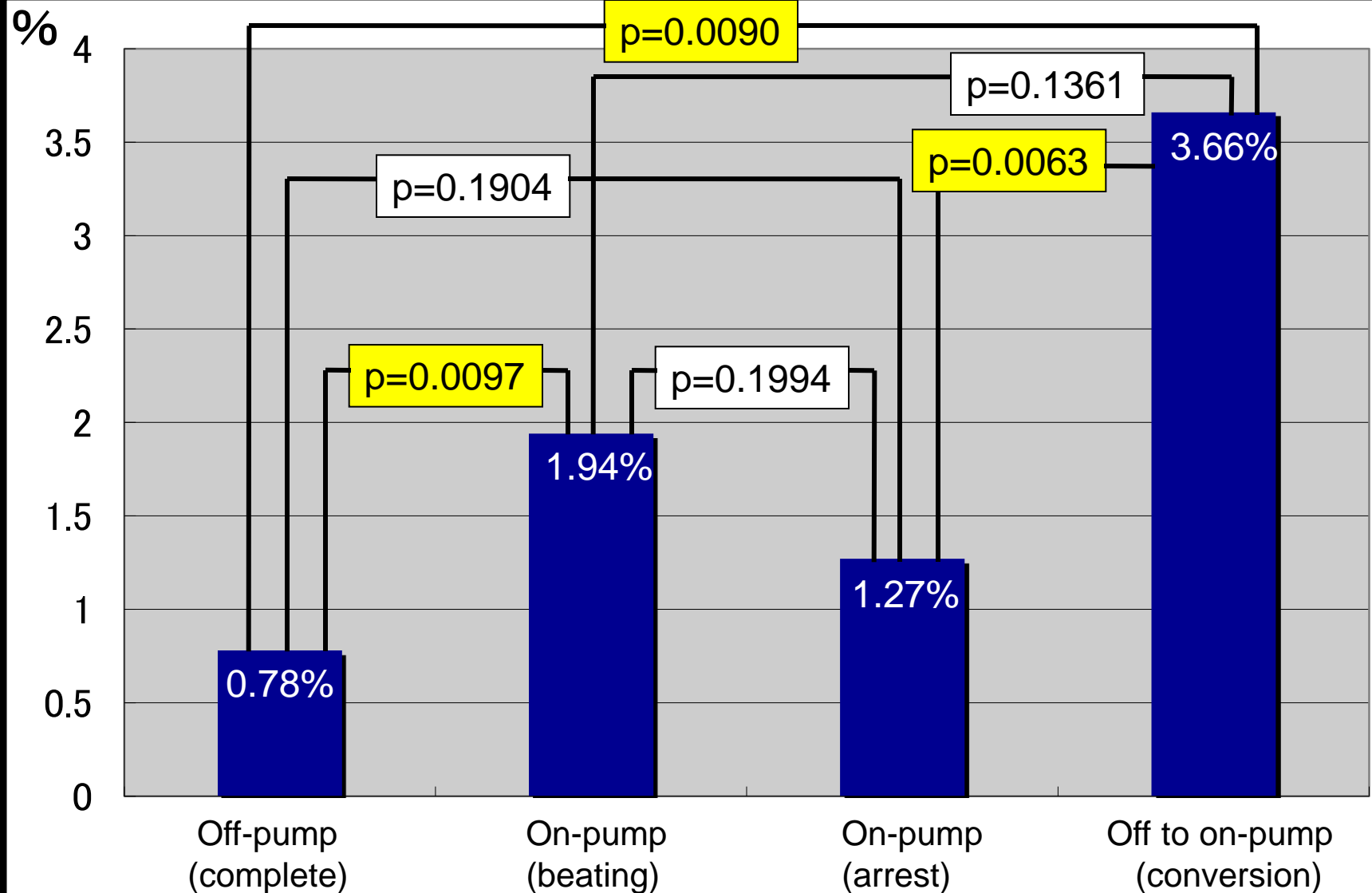


Changes in graft selection



Complication rate of postoperative stroke according to surgical procedures

Total complication rate : 106/9768(isolated CABG) = 1.09%



Results of emergency CABG after complications of PCI (within 24 hours after PCI)

Total cases : 78

Frequency rate : 78 / 9768 (isolated CABG) ; 0.8%

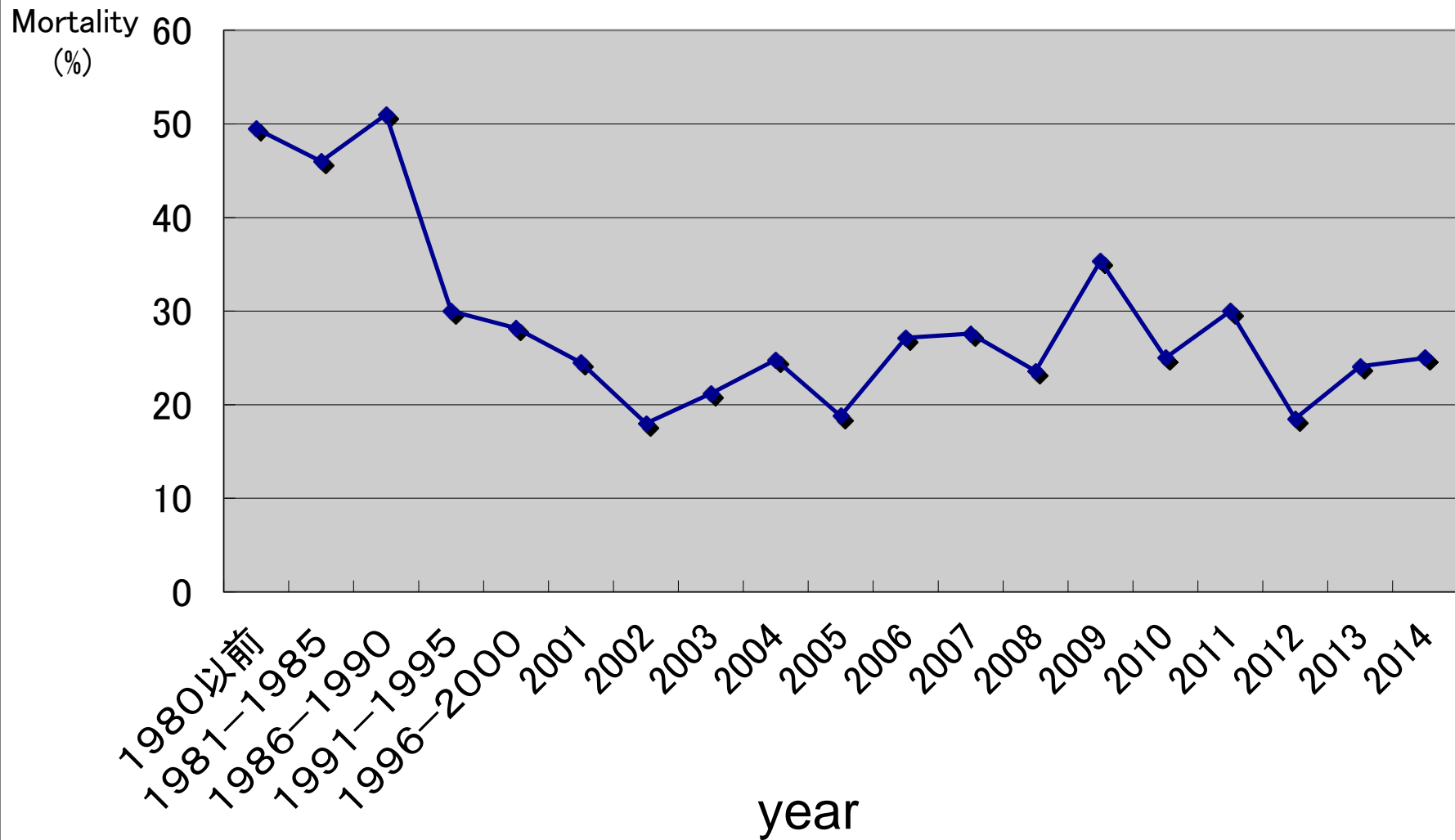
Death cases : 14

Mortality: 17.9%

Results according to surgical procedures

	cases	death cases	mortality(%)
1 vessel bypass	30	4	13.33
2 vessels bypass	17	7	41.14
3 vessels bypass	22	1	4.55
4 vessels bypass	5	0	0
Others procedures	4	2	50

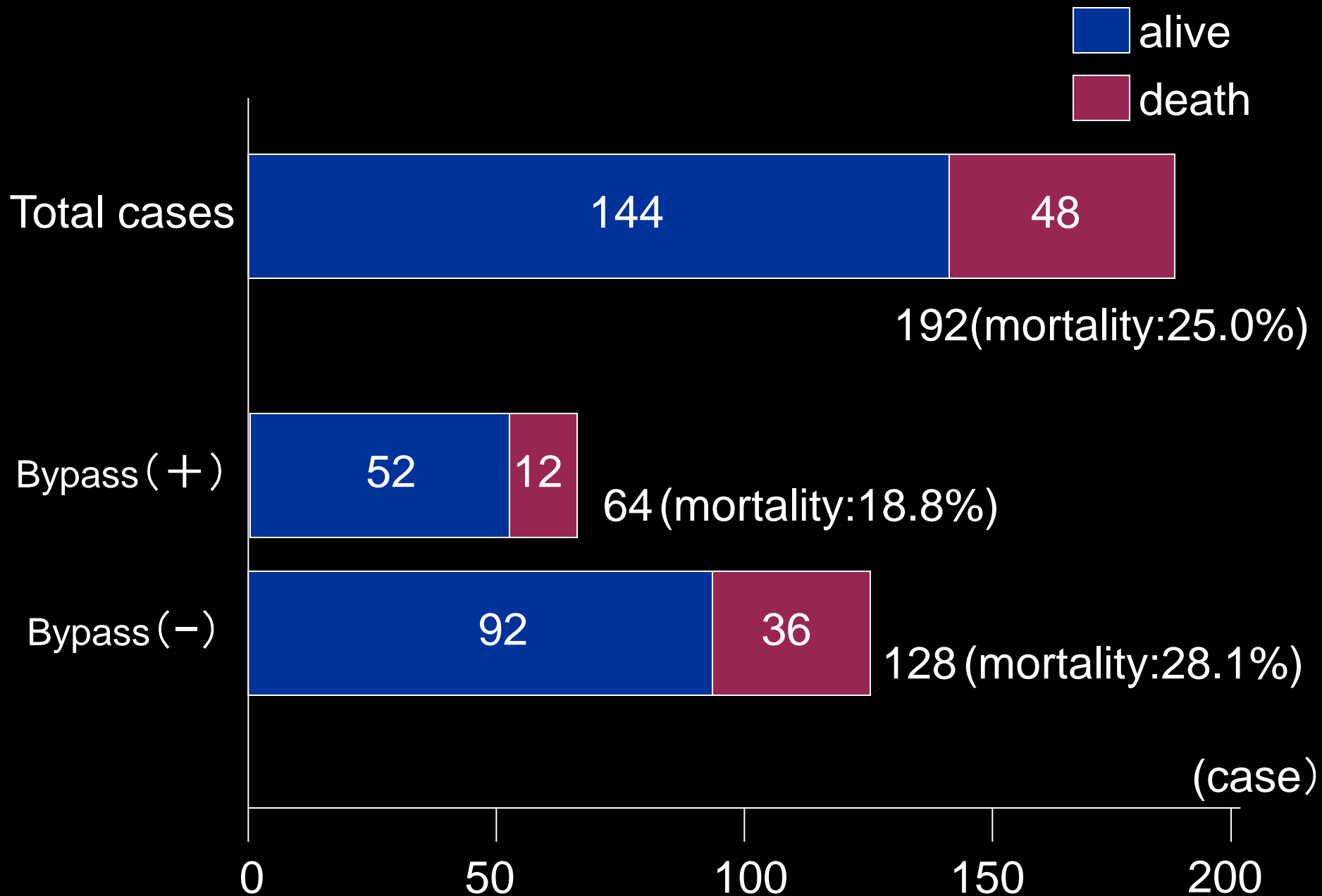
Changes in mortality of VSP



2014;

Total cases: 192、death cases: 48 (Mortality: 25.0%)

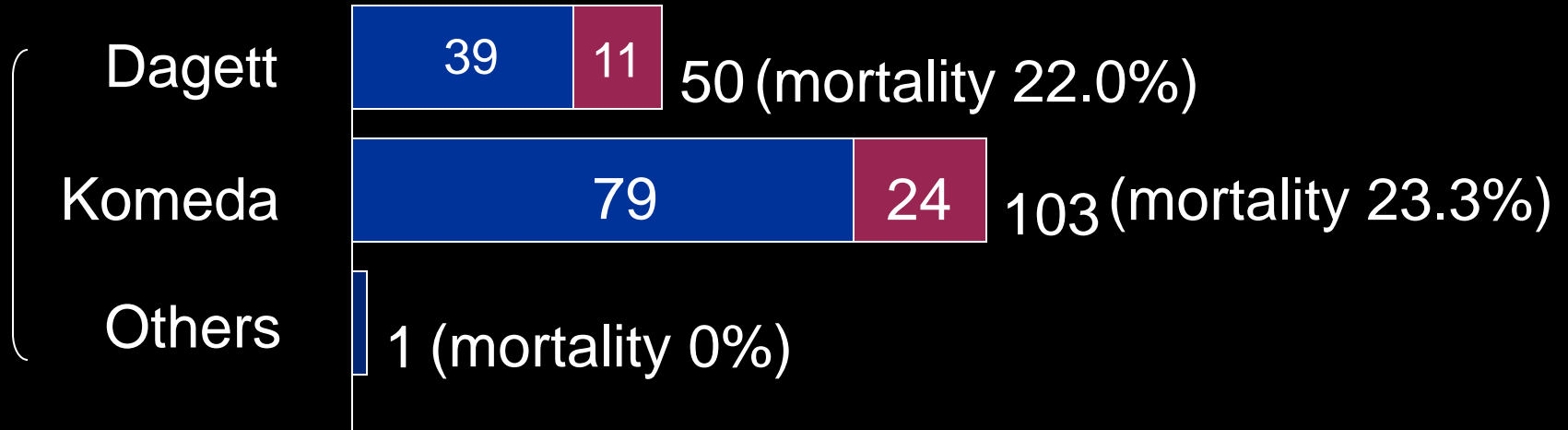
Results of VSP (1)



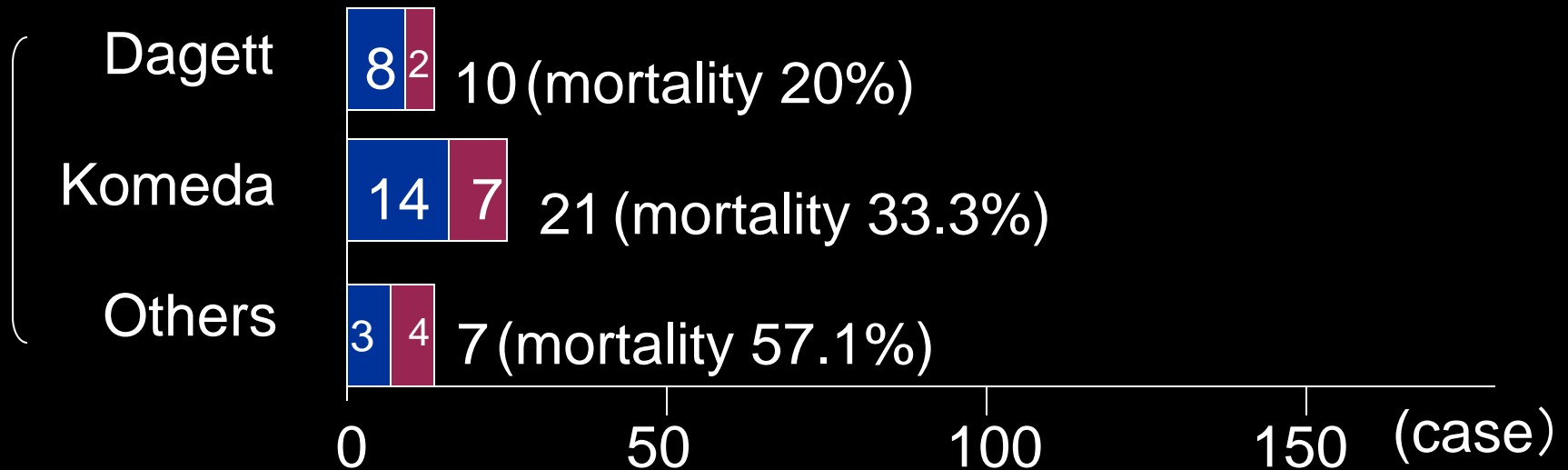
Results of VSP (2)



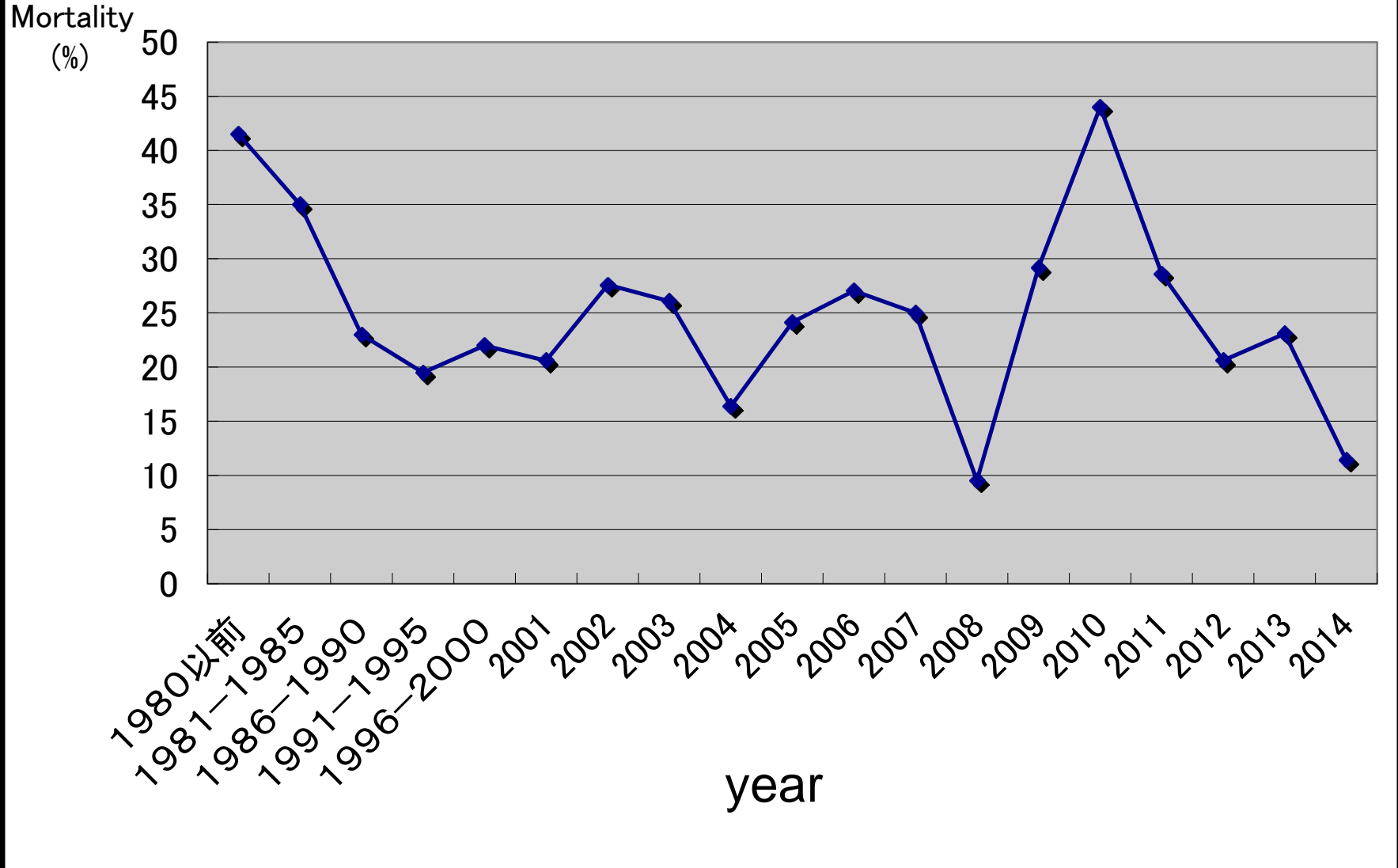
Anterior infarction (mortality 22.7%)



Post-inferior infarction (mortality 34.2%)



Changes in results of papillary muscle rupture

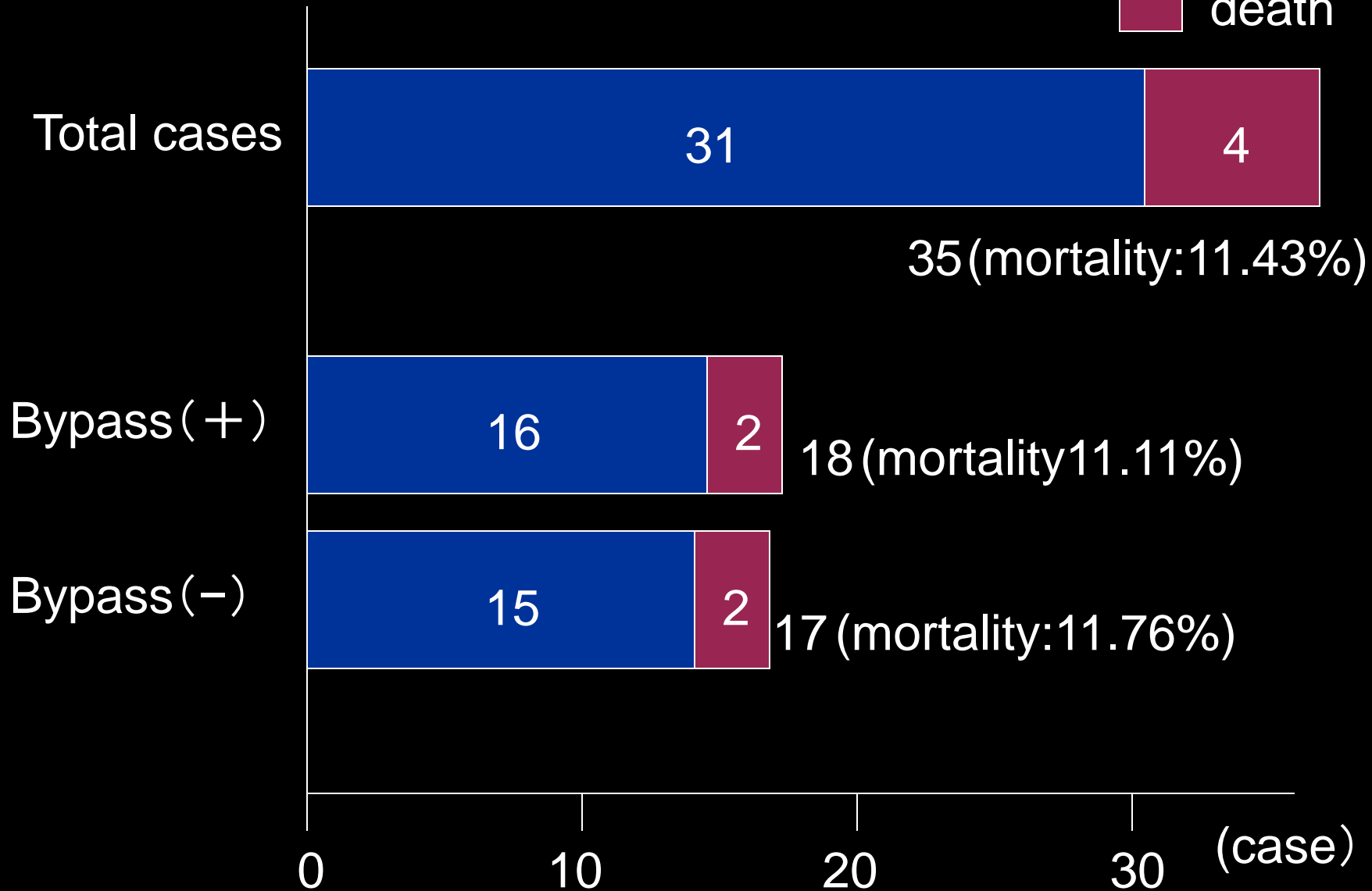


2014;

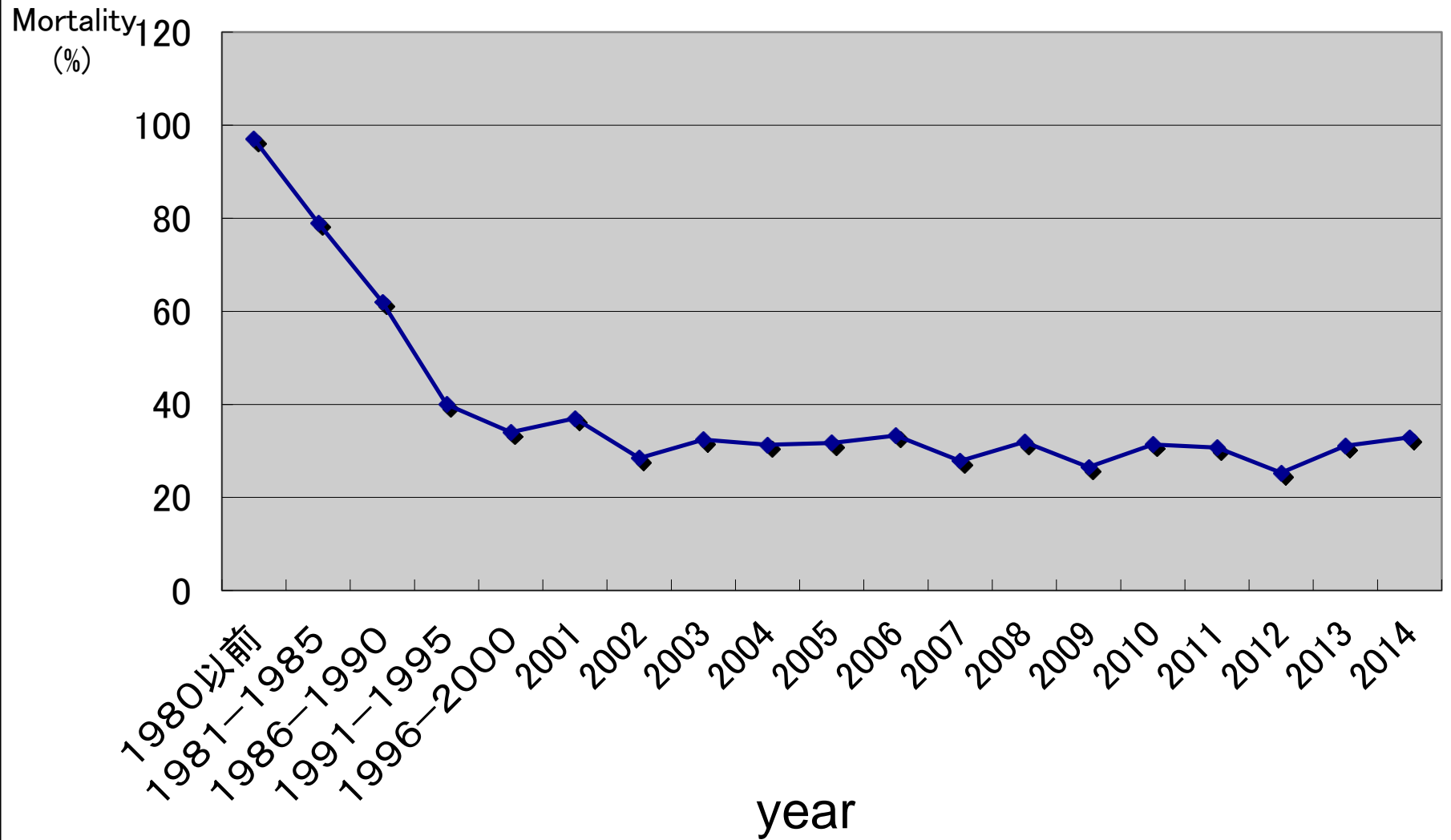
Total cases : 35、death cases : 4(mortality : 11.4%)

Results of papillary muscle rupture

alive
death



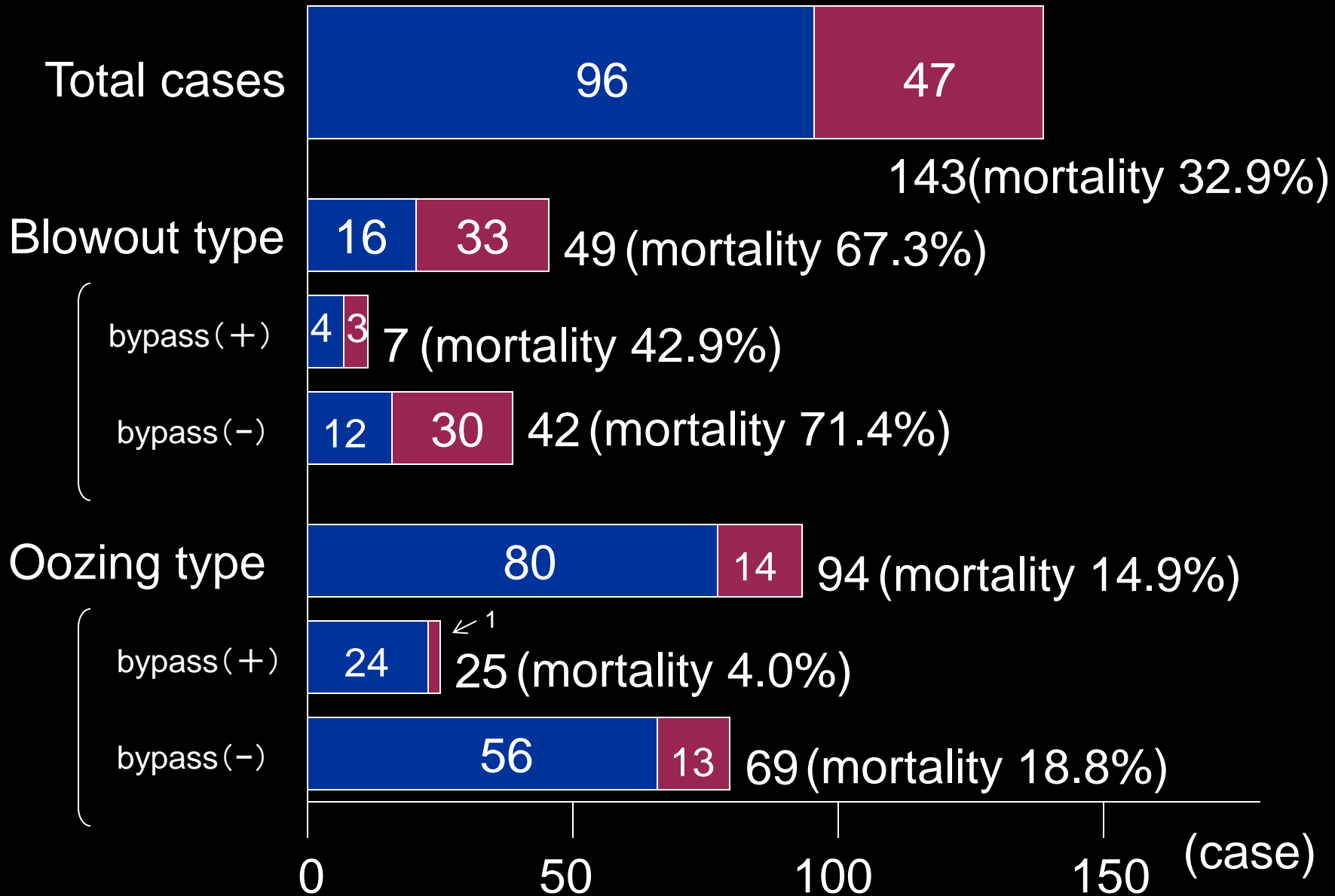
Changes in mortality of cardiac rupture



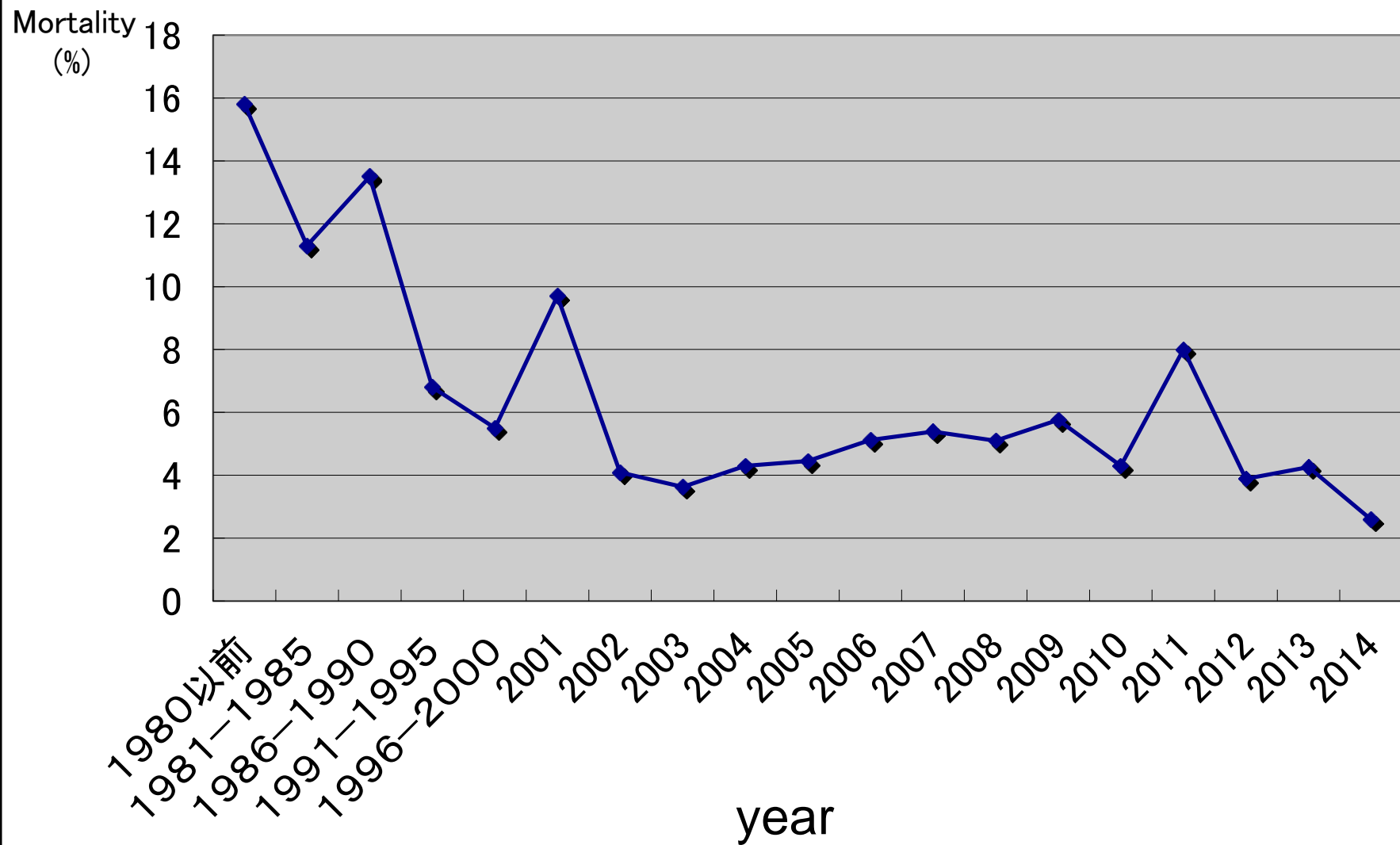
2014;

Total cases: 143, death cases: 47 (mortality: 32.9%)

Results of cardiac rupture



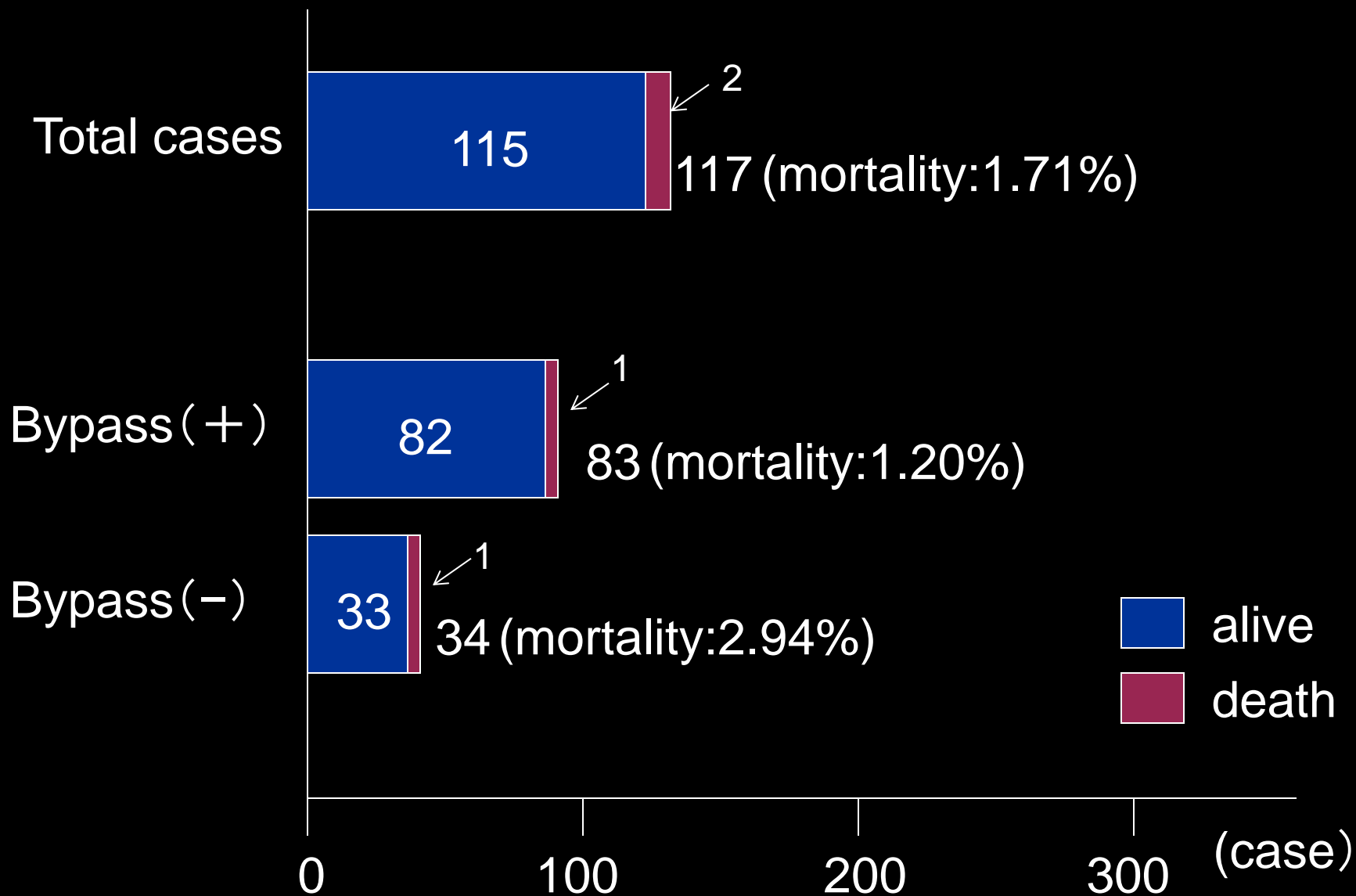
Changes in mortality of left ventricle aneurysm



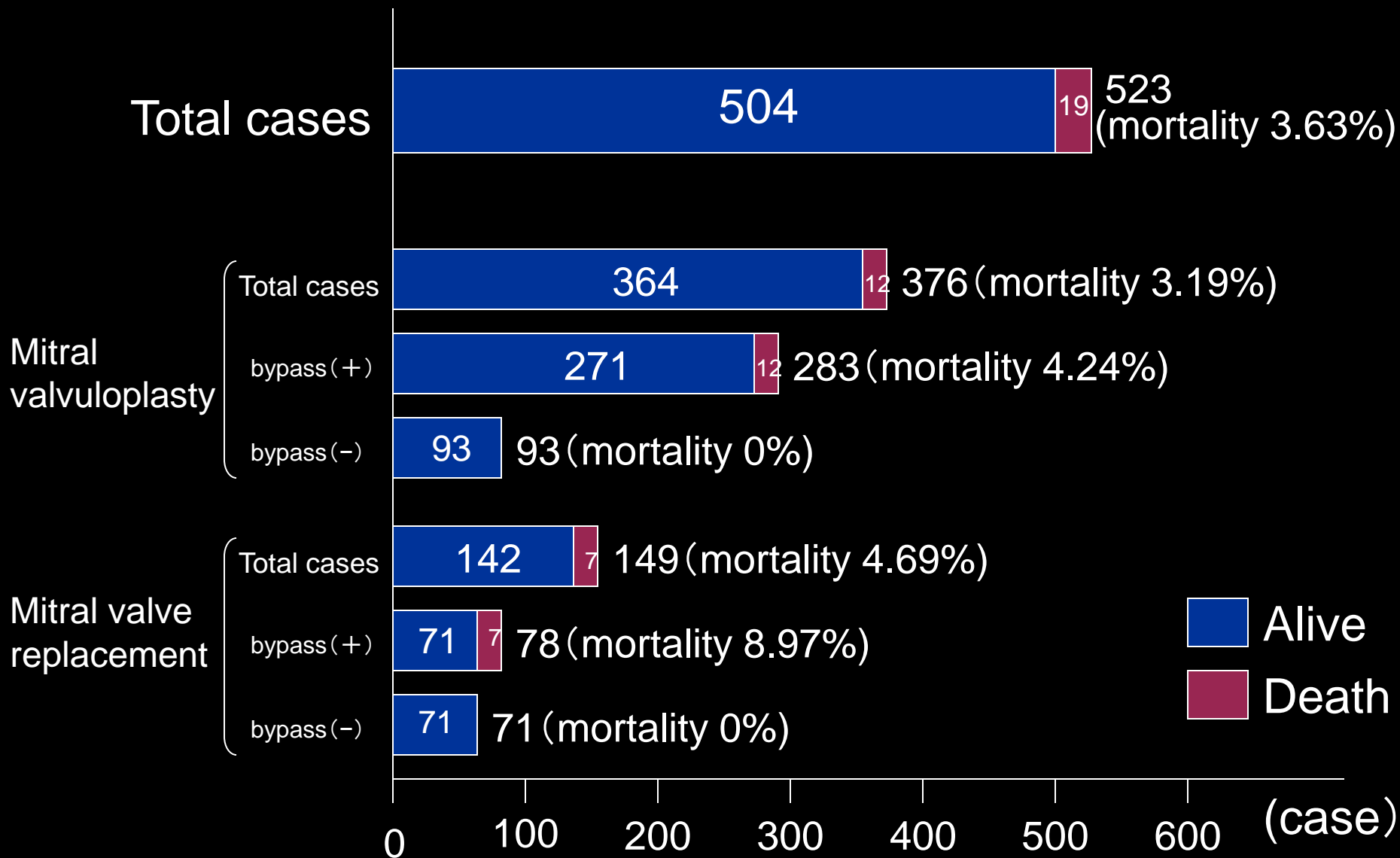
2014;

Total cases: 193、death cases;5 (mortality : 2.59%)

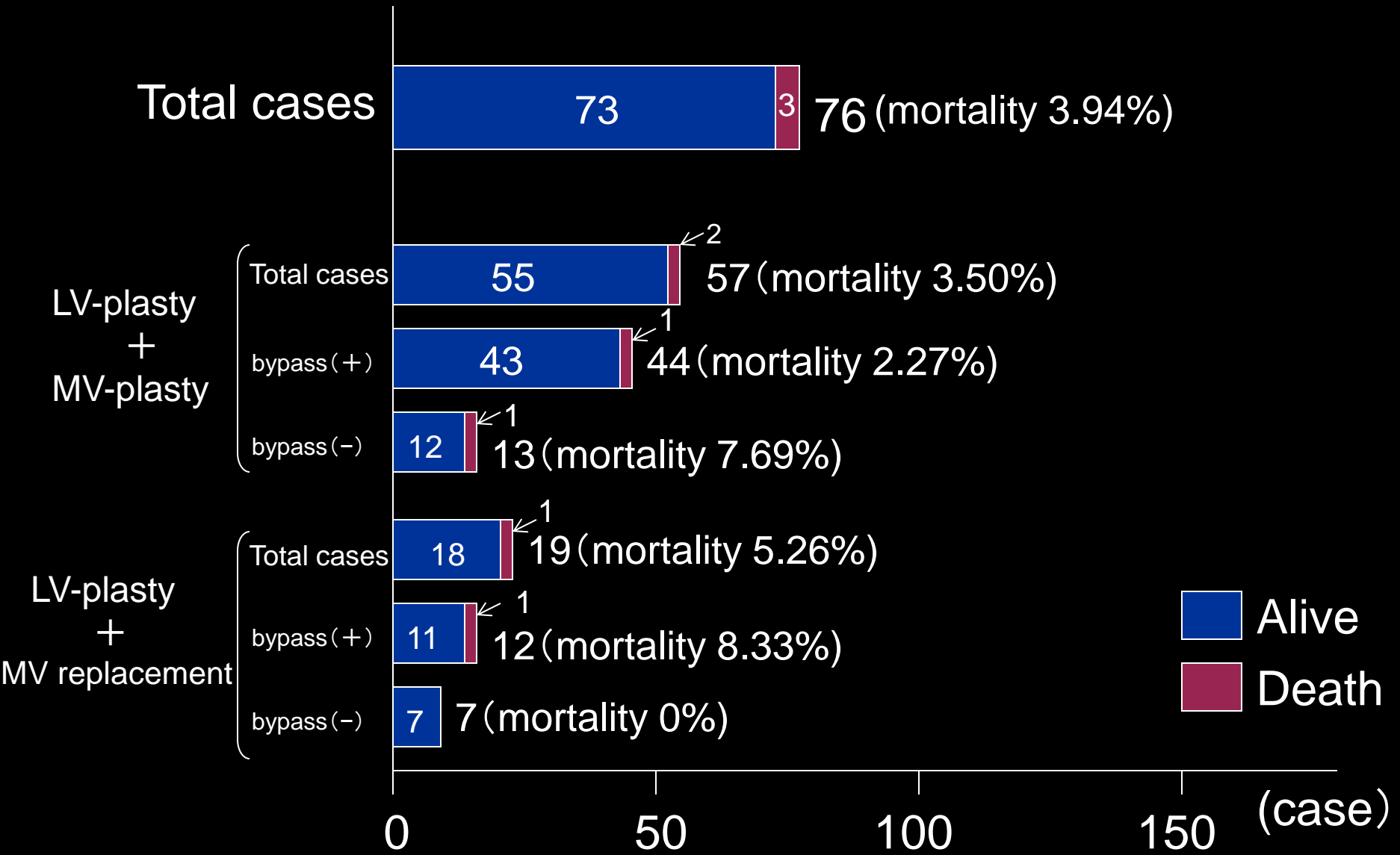
Results of left ventriculoplasty and/or aneurysmectomy



Results of mitral valvuloplasty and replacement for 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 1.70%, and 1.03% respectively, indicating excellent results.**
- 2. Of all initial elective CABG, 68% cases underwent off-pump CABG (OPCAB), showing high frequency rate. The mortality of OPCAB was 0.72%, which was very low.**
- 3. Of 4 or more bypass surgery, 63.7% cases underwent OPCAB.**
- 4. CABG cases have been getting older ; the rate of 70 or more years old was 51.5%、80 or more years old was 11.8%.**
- 5. The frequency use rate of arterial grafts was 59%, on the other hand, that of vein graft (41%) gradually increased in recent years.**

Conclusions (2)

- 6. Postoperative stroke rate of CABG was 1.09% and that of OPCAB was 0.75%, which was significantly lower than those of on-pump (arrest) and on-pump (beating).**
- 7. Emergency CABG after complications of PCI were performed 0.8% of isolated CABG cases, demonstrating high mortality (17.9%).**
- 8. 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.**