

Coronary artery surgery results 2013, in Japan

**The President of Japanese Association
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Official home-page of JACAS : <http://www.jacas.org>

Coronary artery bypass grafting (CABG), 2013

Total cases : 15,265

Isolated CABG : 10,815 (71%) (previous year:71%)

Concomitant CABG : 4,450 (29%) (previous year:29%)

Isolated CABG

Initial elective : 9,187 Extra initial elective : 1,628

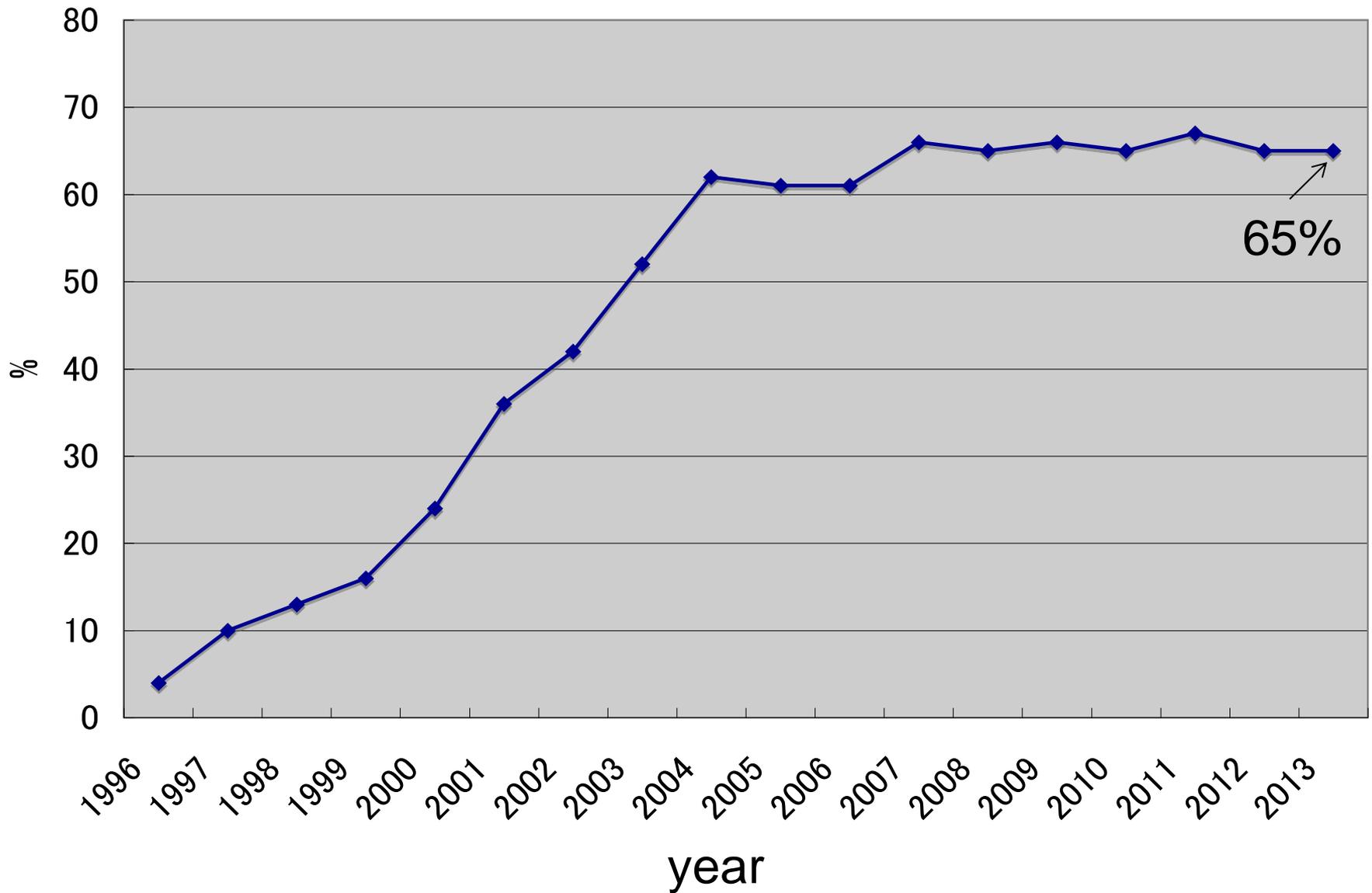
Off-pump : 5,965 Off-pump : 854

On-pump : 3,222 On-pump : 774

(Off-pump rate : 65%) (Off-pump rate : 52%)

(previous year : 65%) (previous year : 53%)

Changes in OPCAB frequency rate of initial elective CABG



Total cases of initial elective :9,187(100%)

On-pump (cardiac arrest)	:2,170(22.6%)
On-pump (cardiac beating)	:1,052(11.5%)
Off-pump (total cases)	:5,965(64.9%)
Off-pump (complete)	:5,830
On-pump (convert)	: 135

OPCAB complete rate :97.7%

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

Mortality of isolated CABG:1.75%
(previous year:1.49%)

Mortality of initial elective CABG:1.08%
(previous
year:0.72%)

On-pump (cardiac arrest) :1.34%

On-pump (cardiac beating) :1.24%

Off-pump (total cases) :0.96%

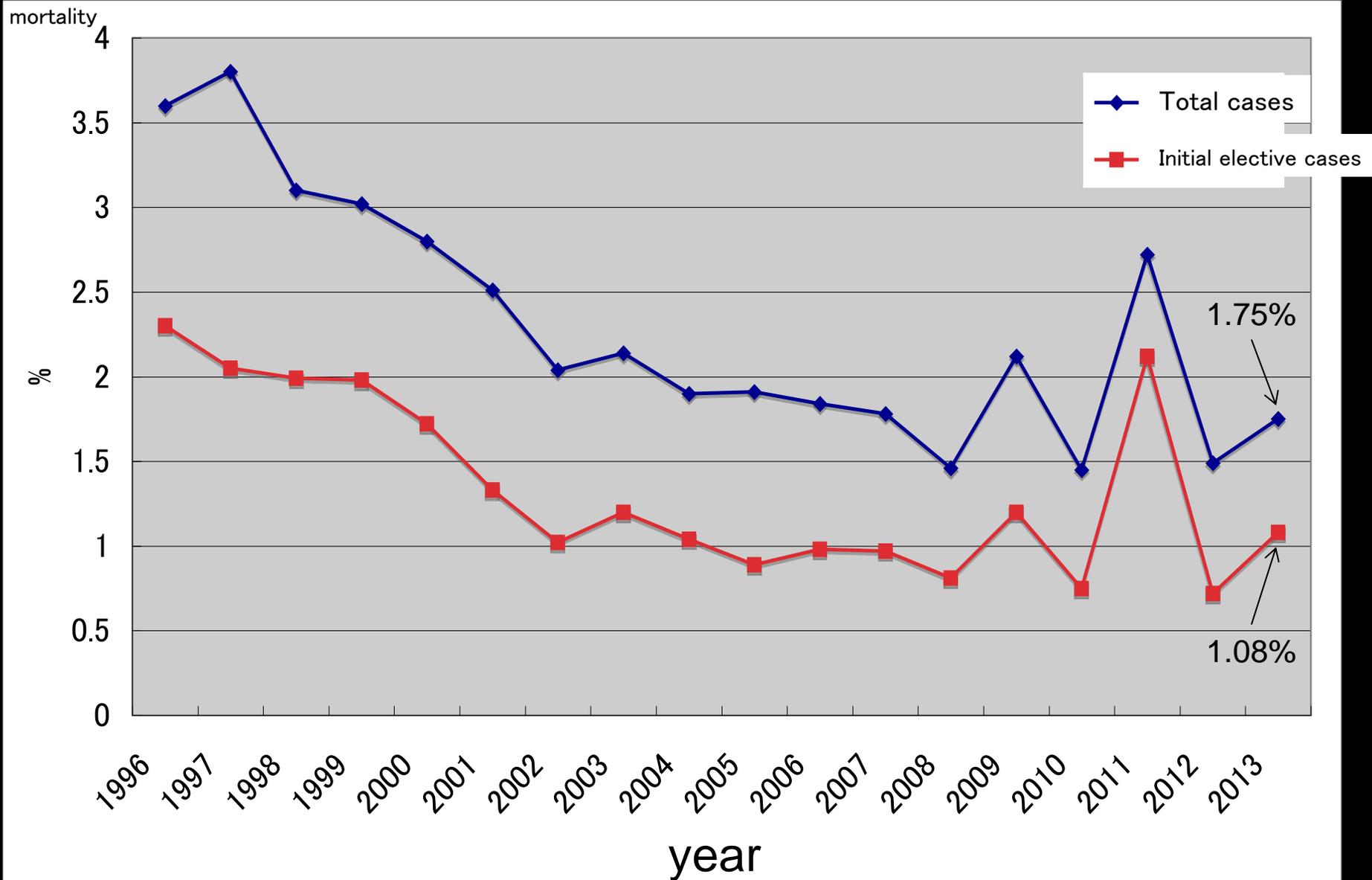
Off-pump (complete) :**0.82%**

(previous year:0.45%)

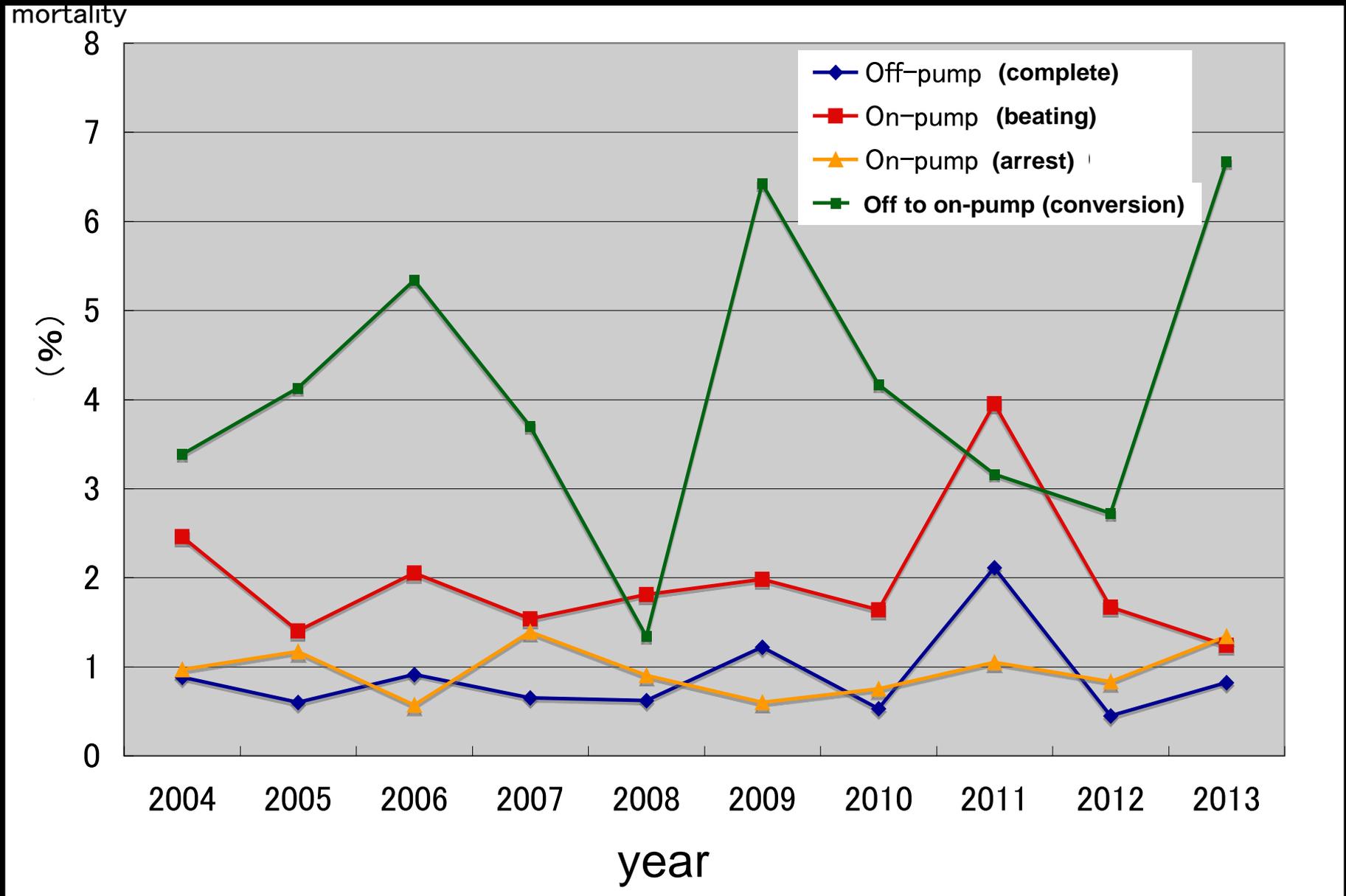
On to on-pump (convert) :**6.67%**

(previous year:2.72%)

Changes in mortality of CABG

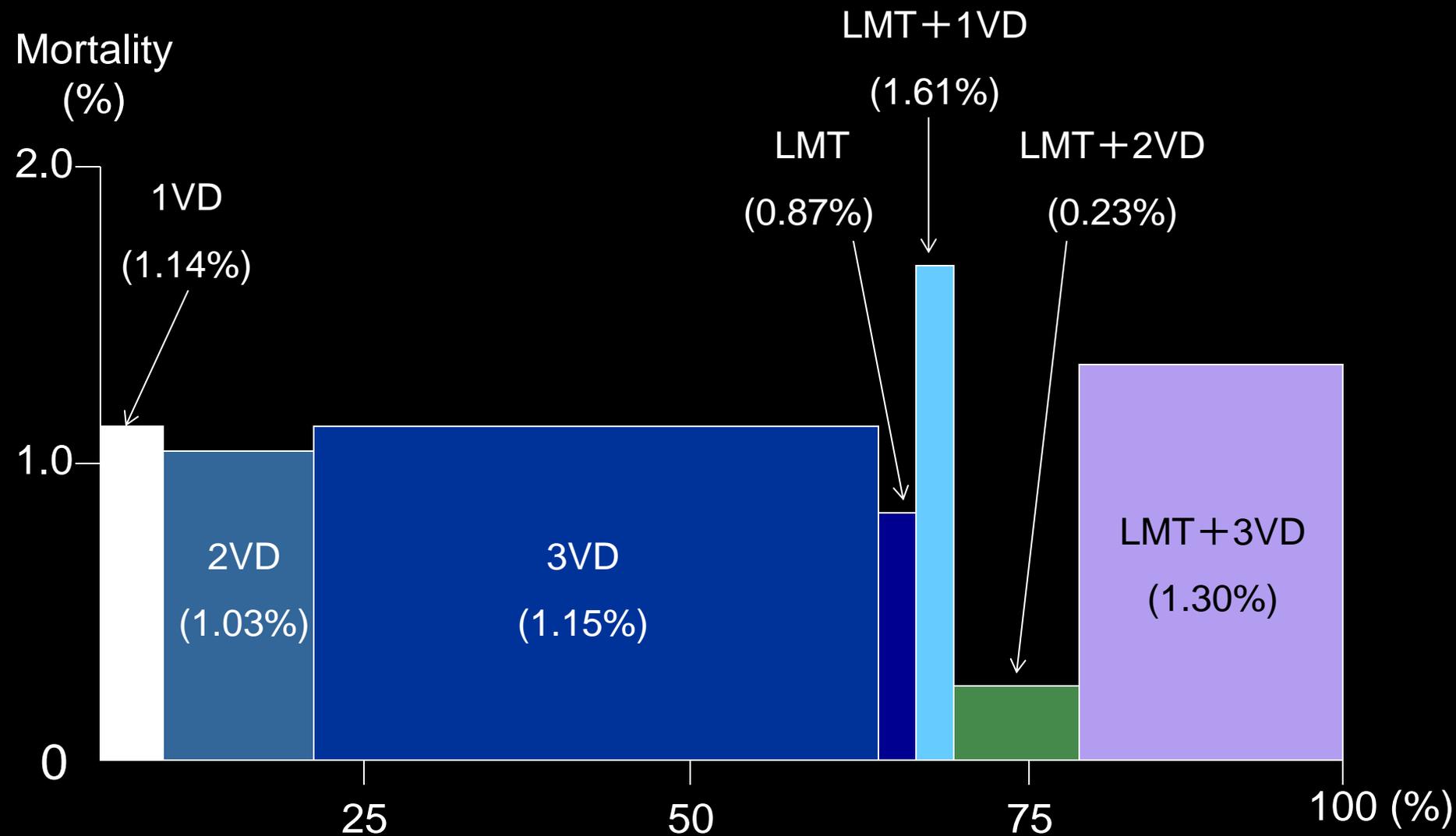


Changes of mortality for procedures (Initial elective CABG)



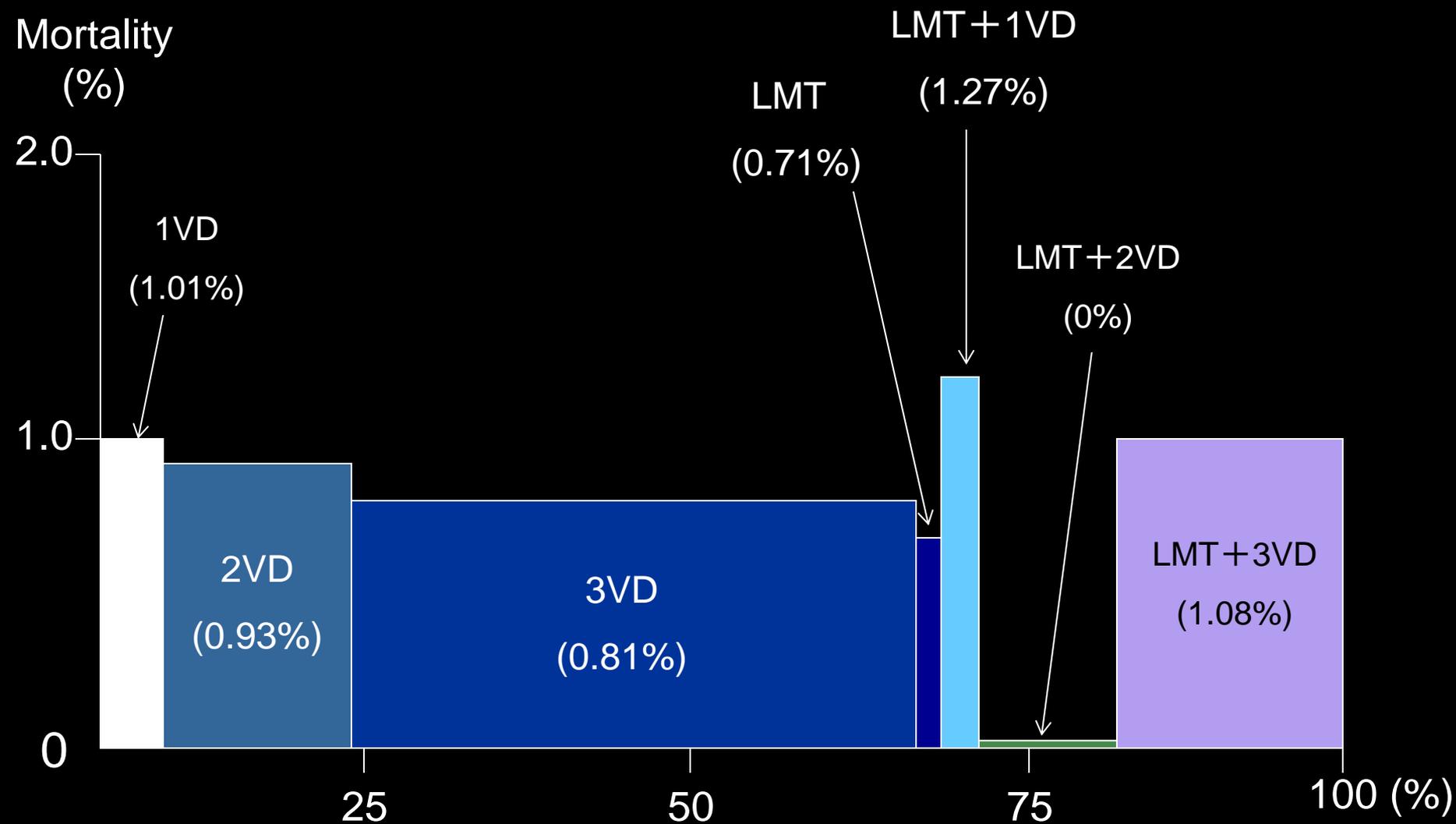
Surgical results according to diseased vessels

(Initial elective cases : 9,187, mortality:1.08%)



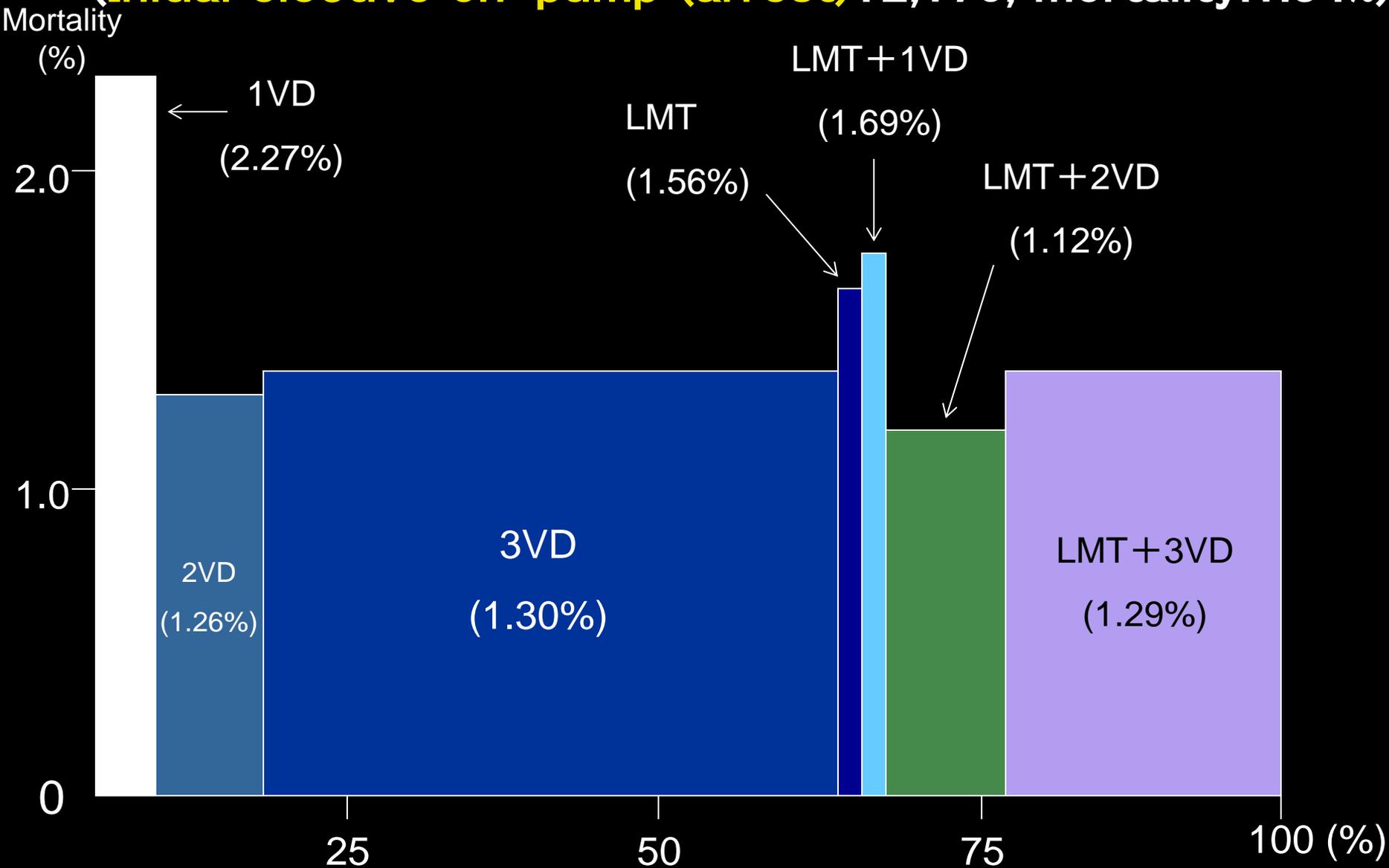
Surgical results according to diseased vessels

(Initial elective off-pump (complete): 5,830, mortality:0.82%)



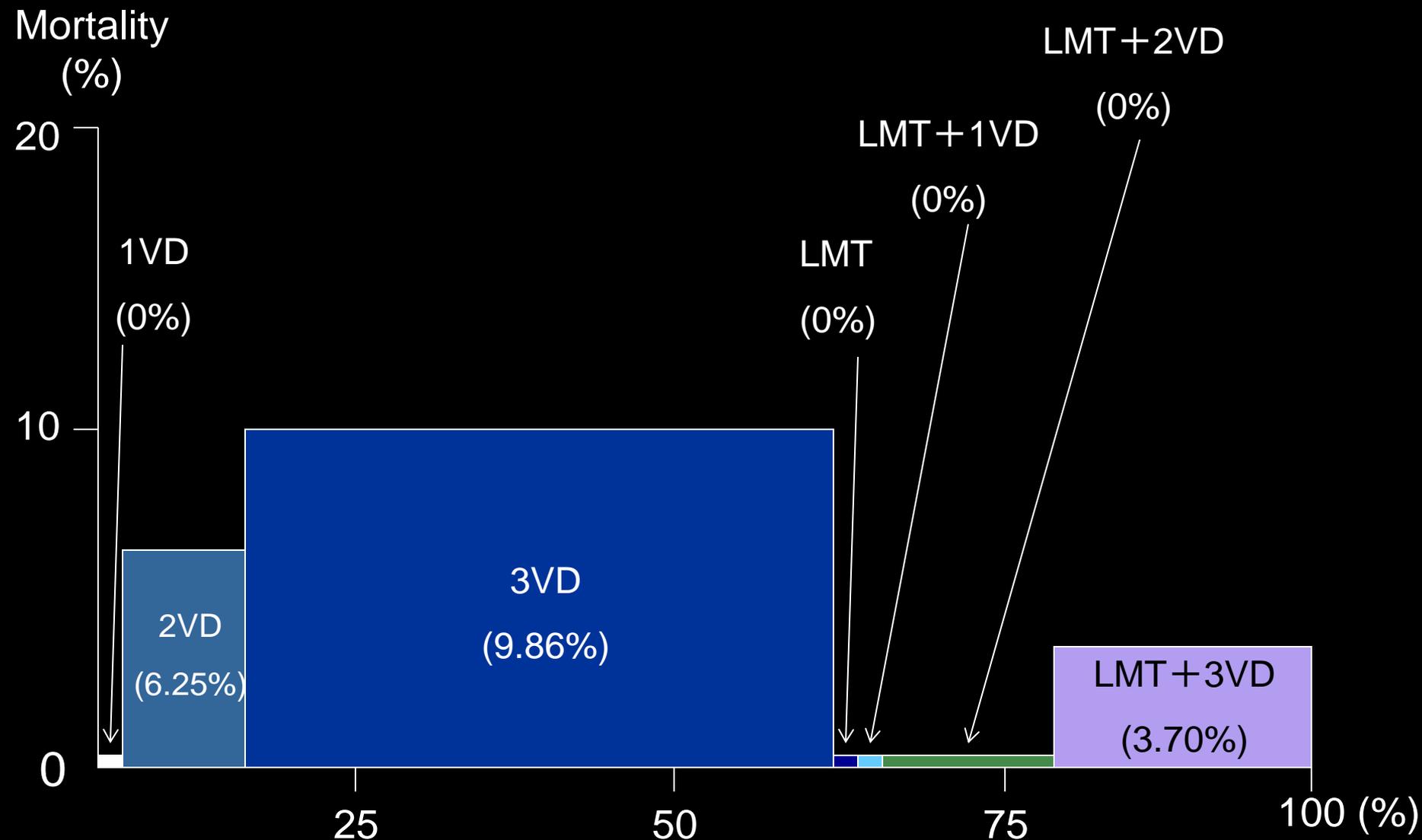
Surgical results according to diseased vessels

(Initial elective on-pump (arrest): 2,170, mortality: 1.34%)



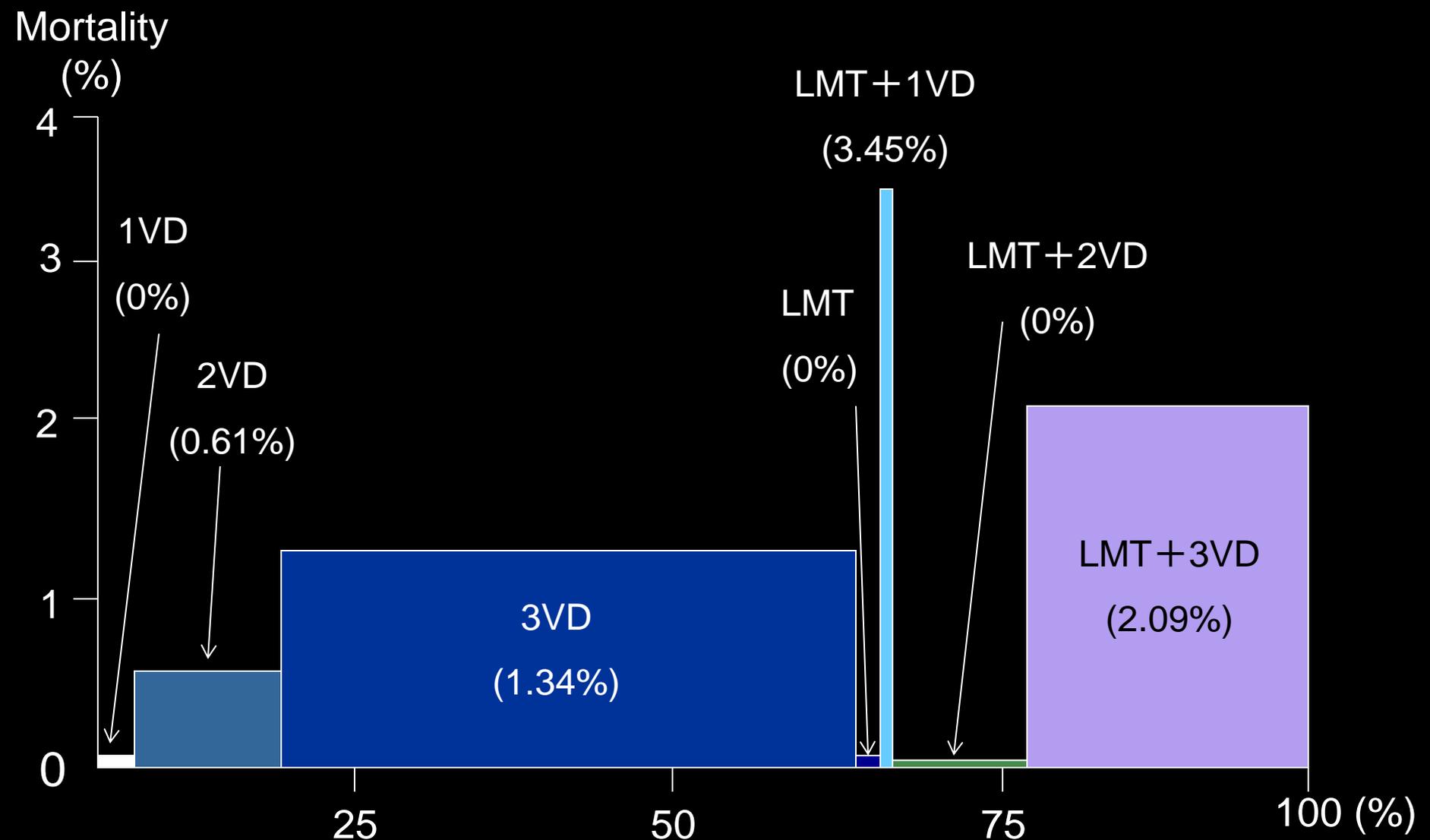
Surgical results according to diseased vessels

(Initial elective off to on-pump (conversion): 135, mortality:6.67%)



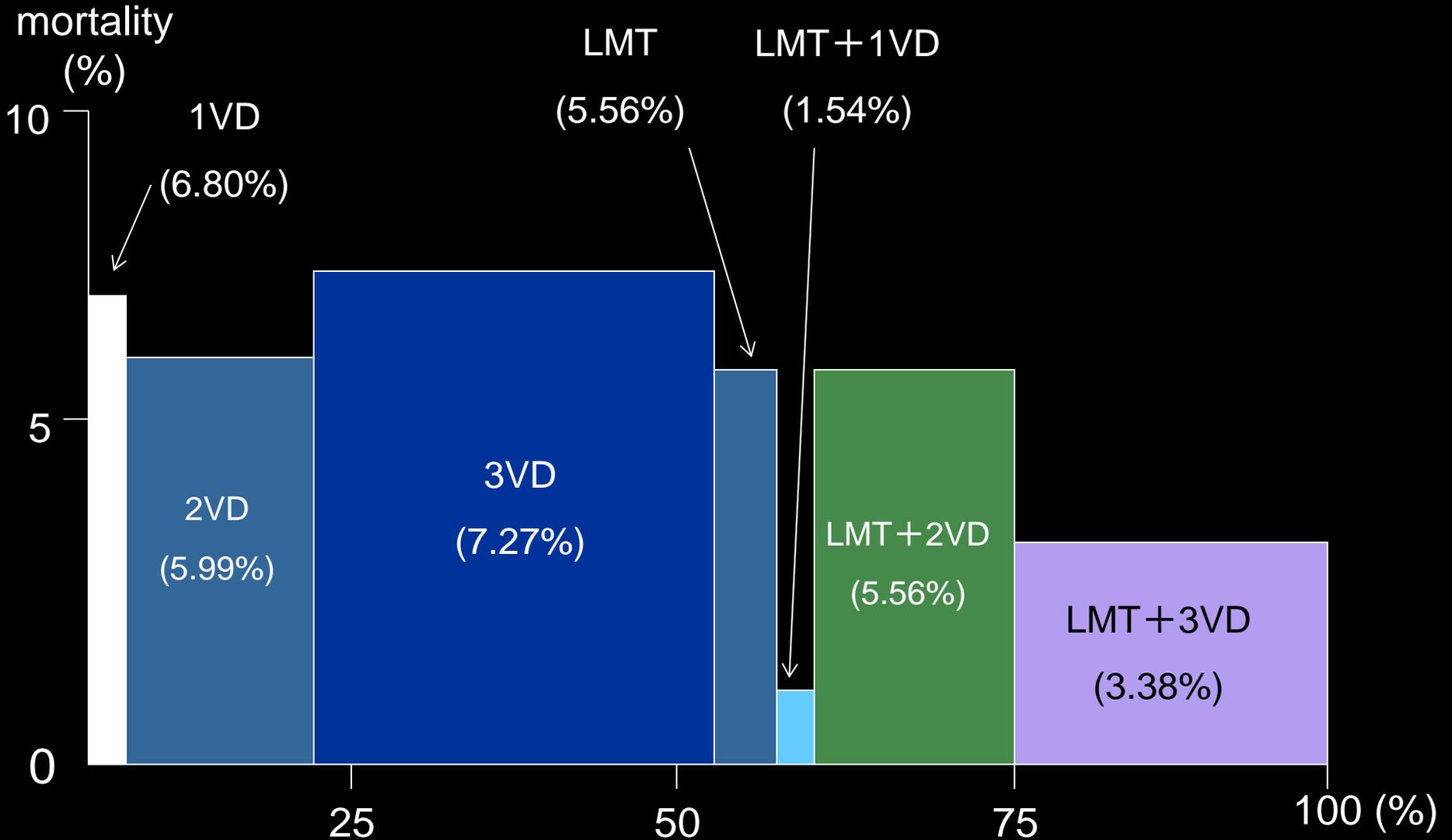
Surgical results according to diseased vessels

(Initial elective on-pump (beating): 1,052, mortality:1.24%)



Surgical results according to diseased vessels

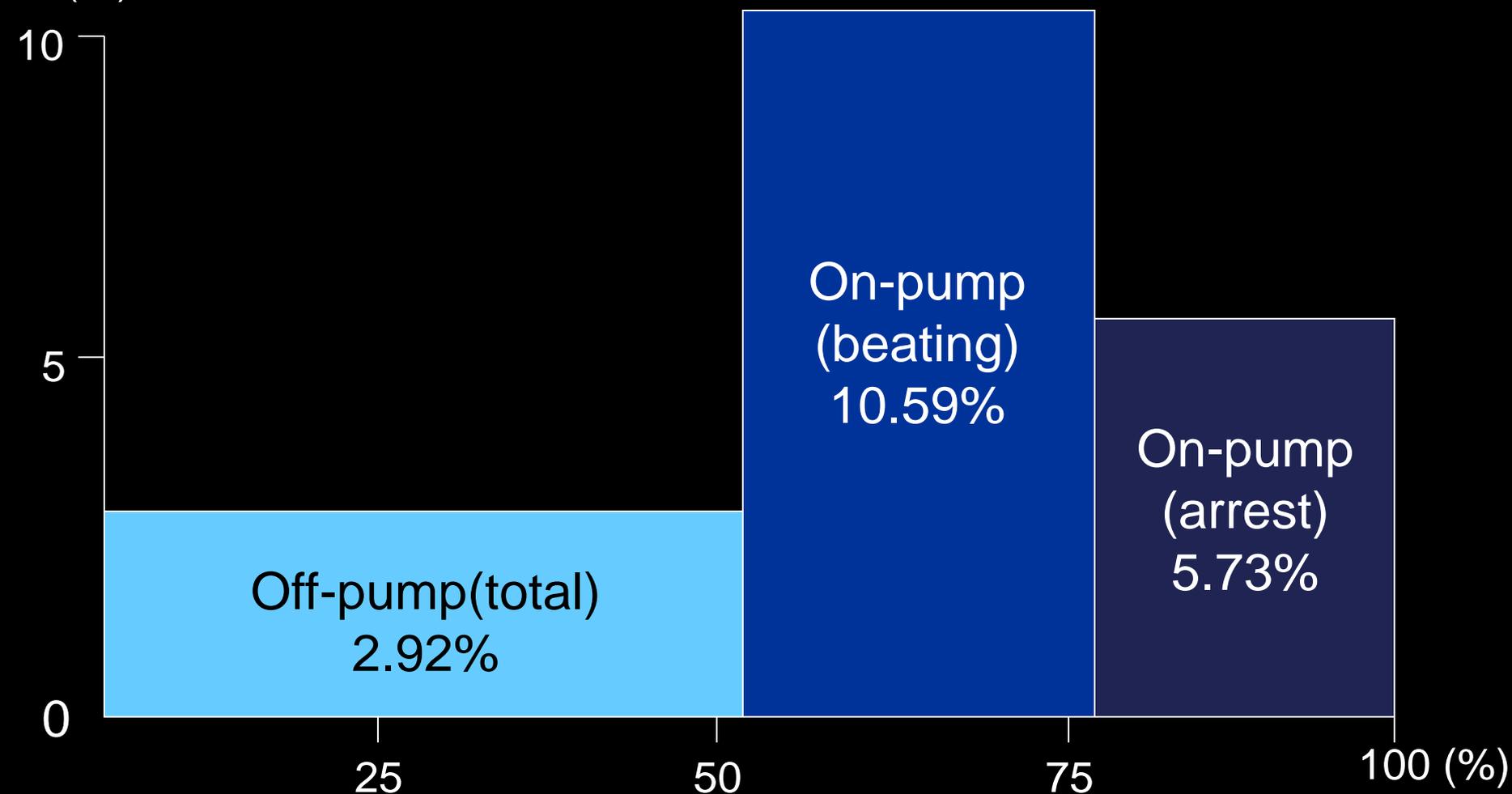
(Extra initial elective cases: 1,628, mortality:5.53%)



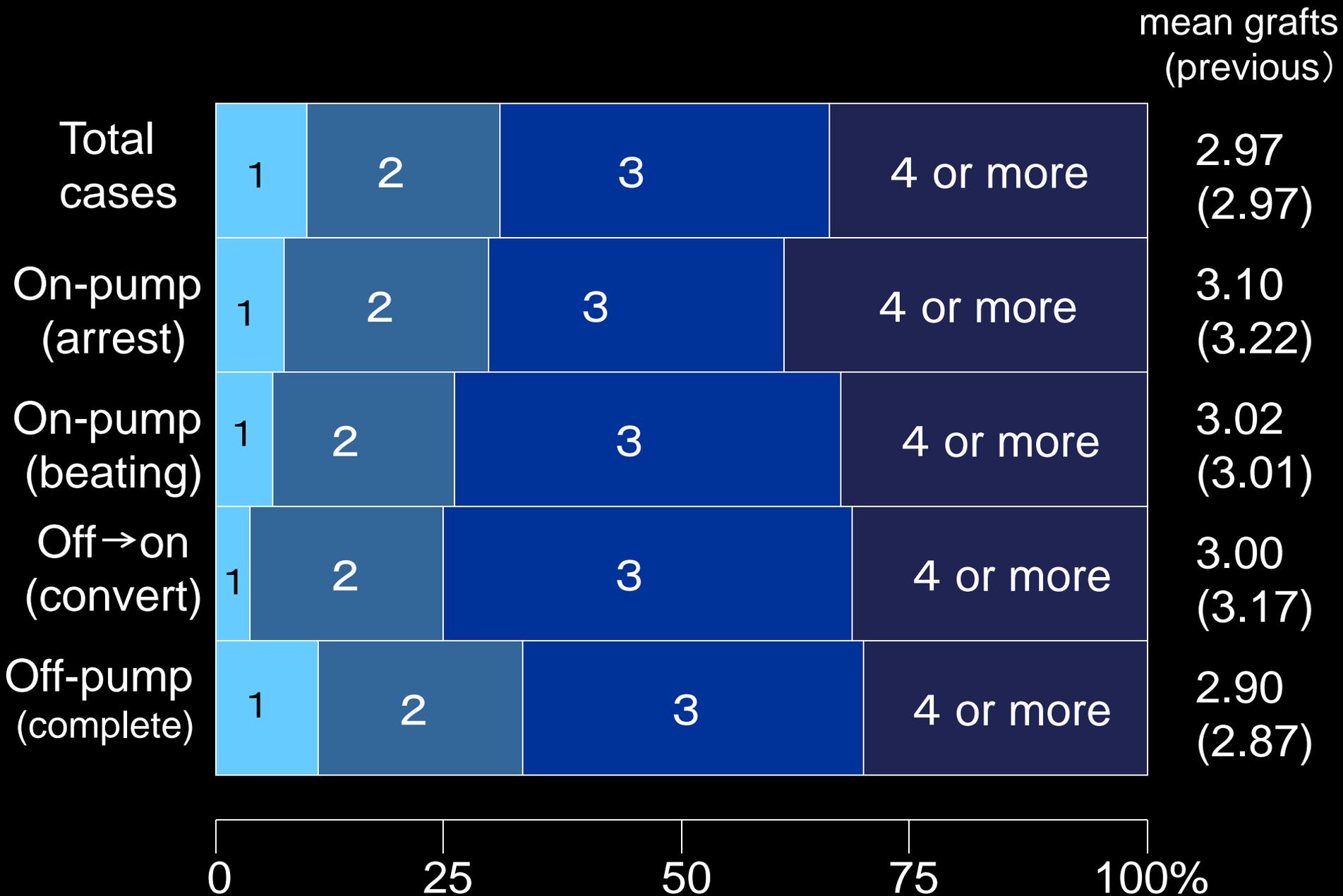
Surgical results according to procedures

(**Except initial elective cases** : 1,628, mortality:5.53%)

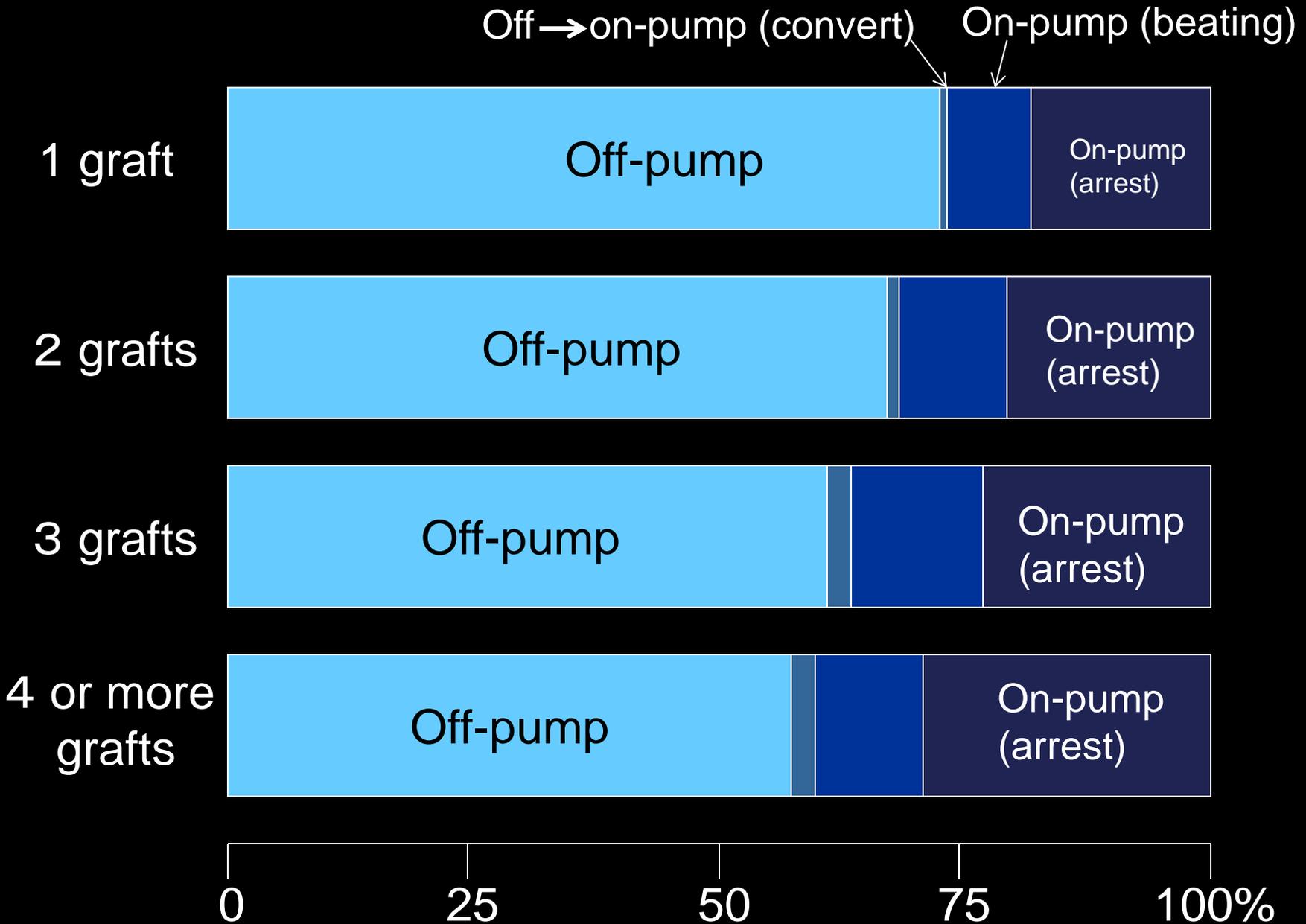
Mortality
(%)



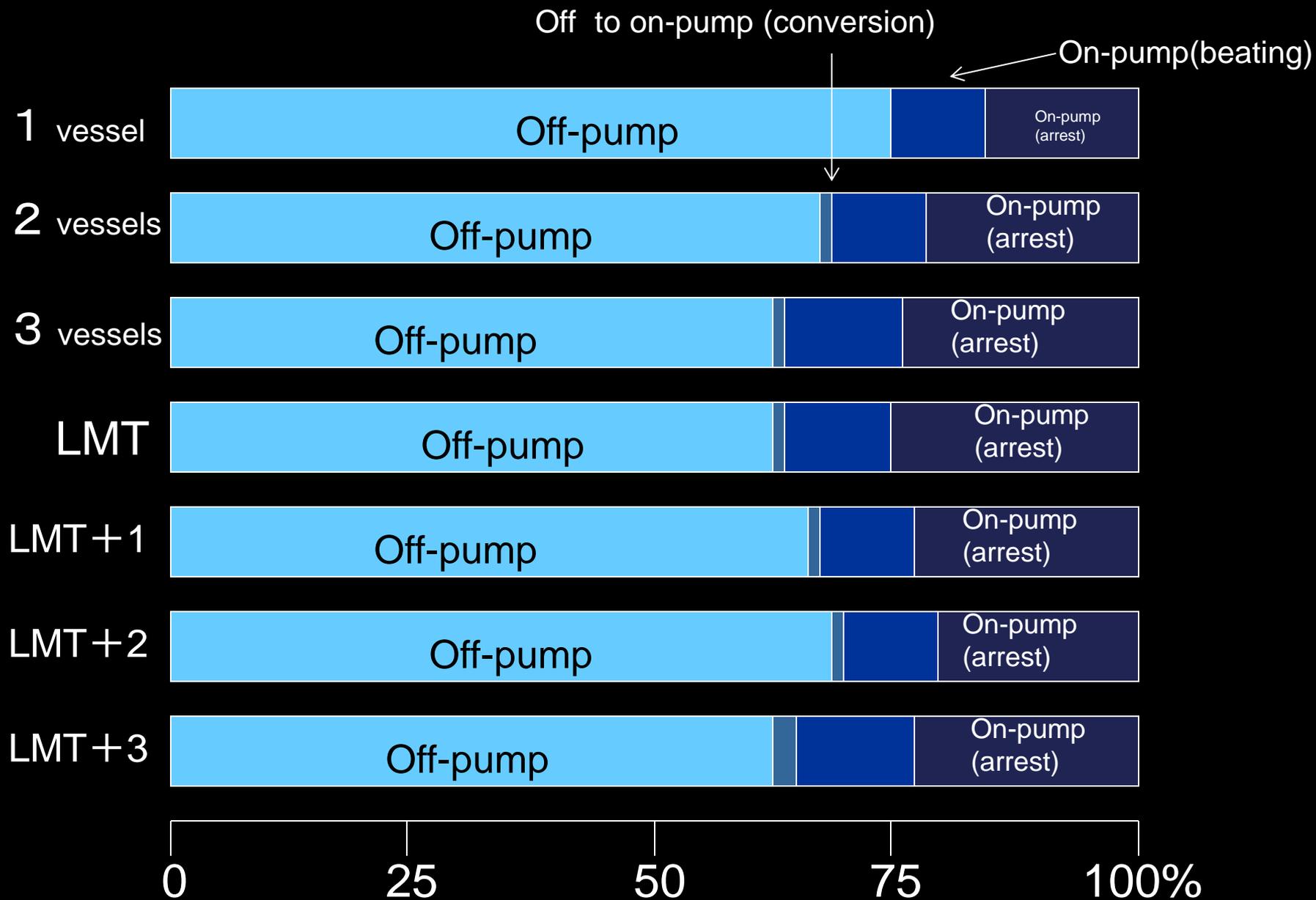
Number of grafts according to surgical procedures



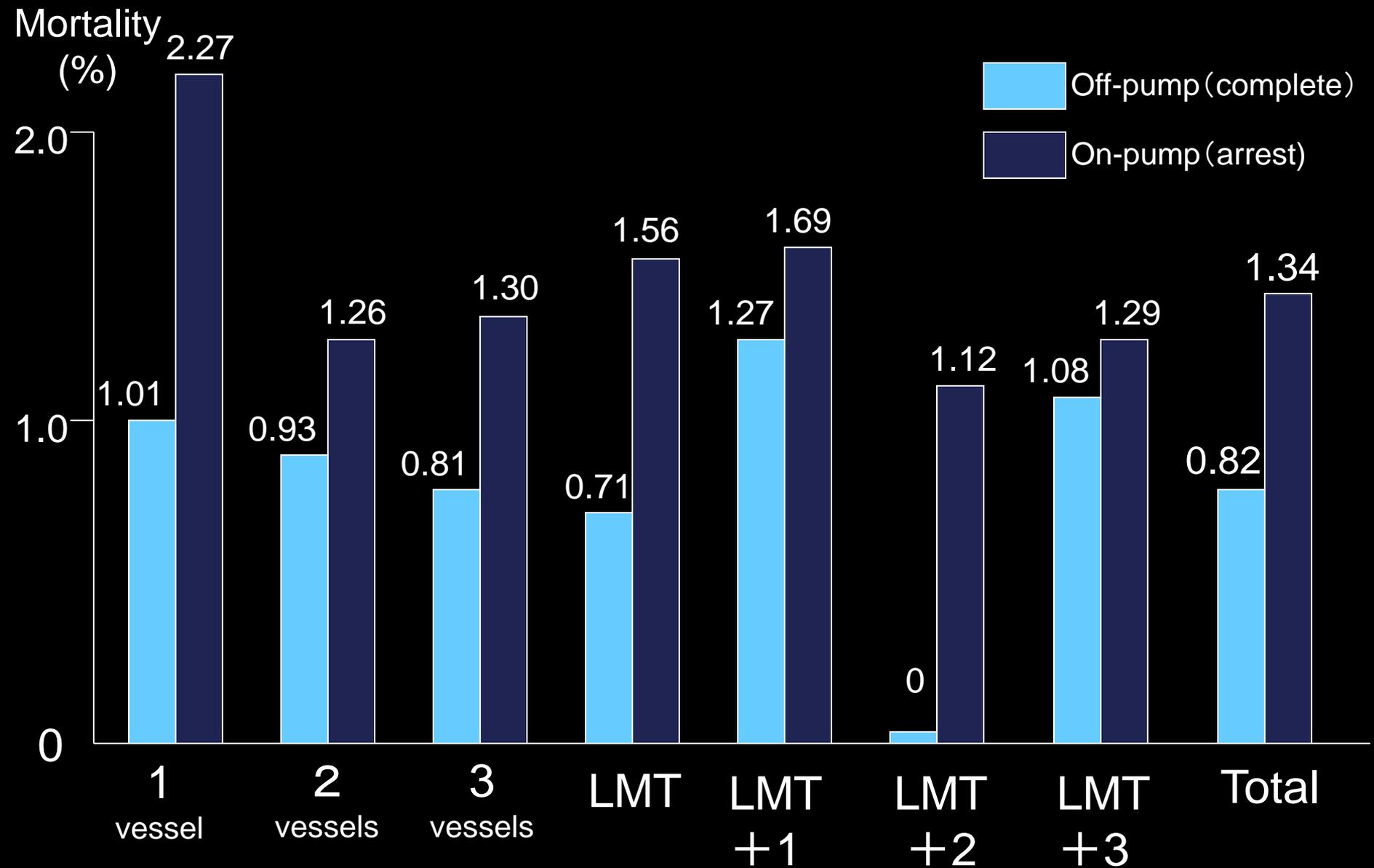
Surgical procedures according to number of grafts



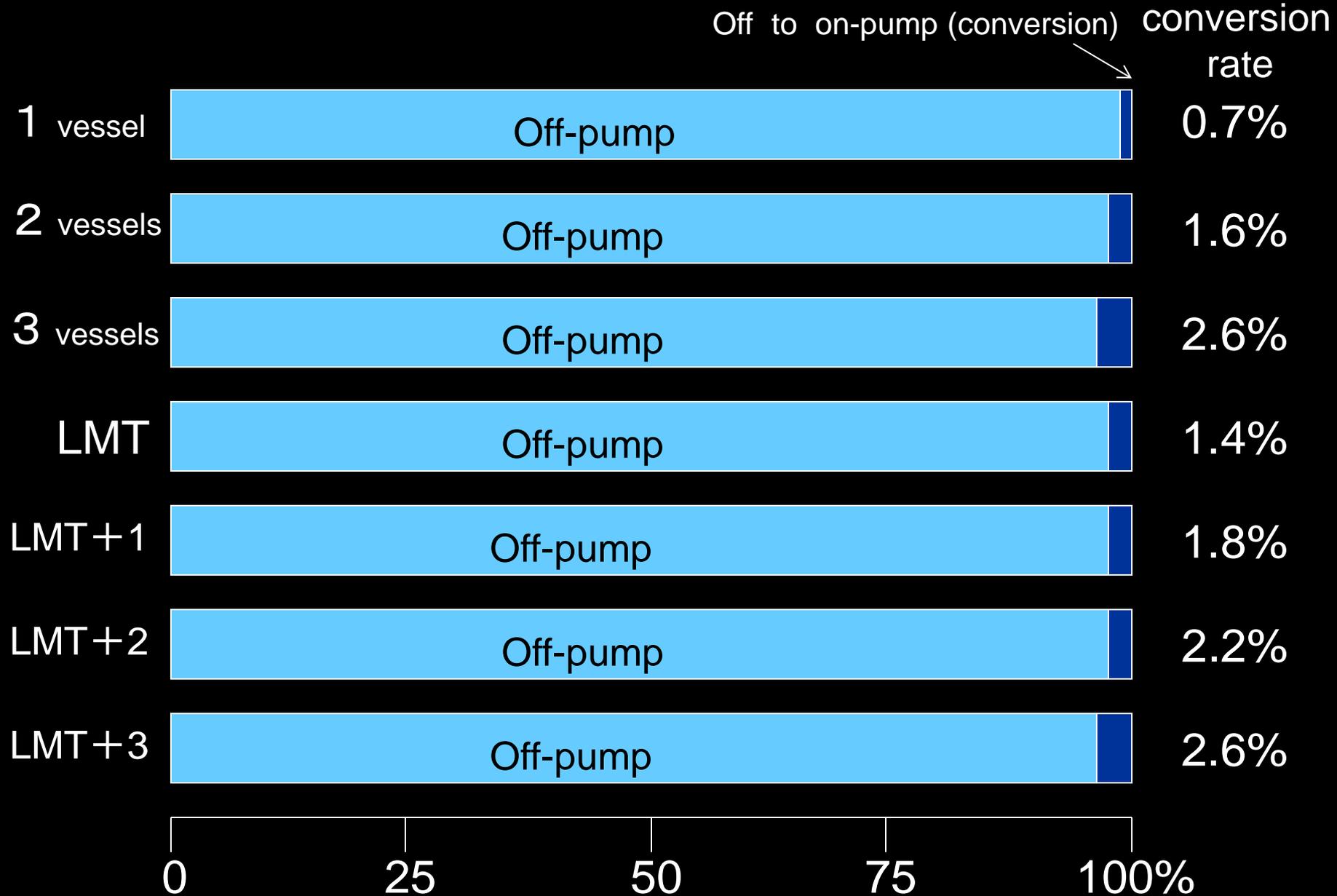
Surgical procedures according to diseased vessels



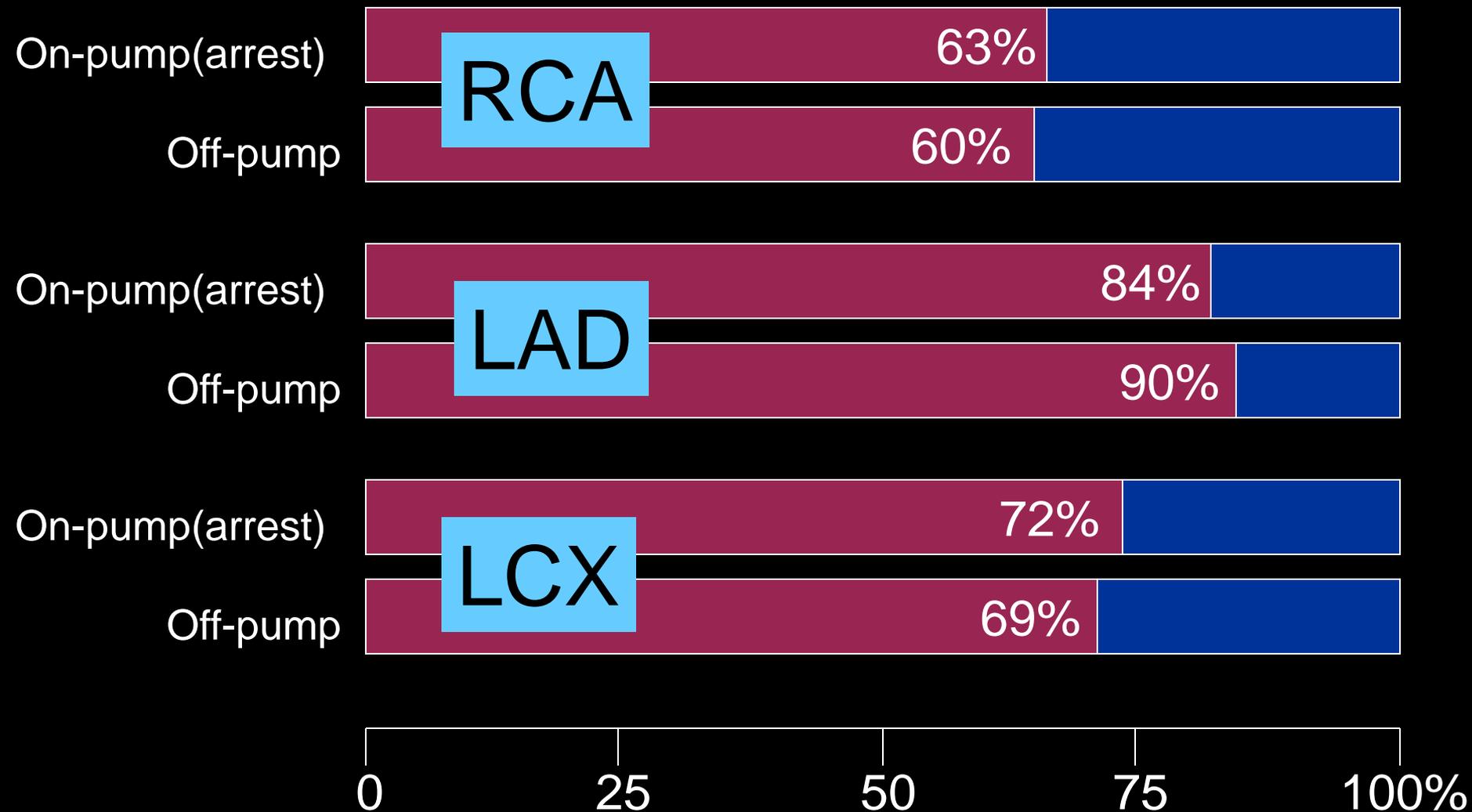
Surgical results of off-pump(complete) vs. on-pump(arrest) according to diseased vessels



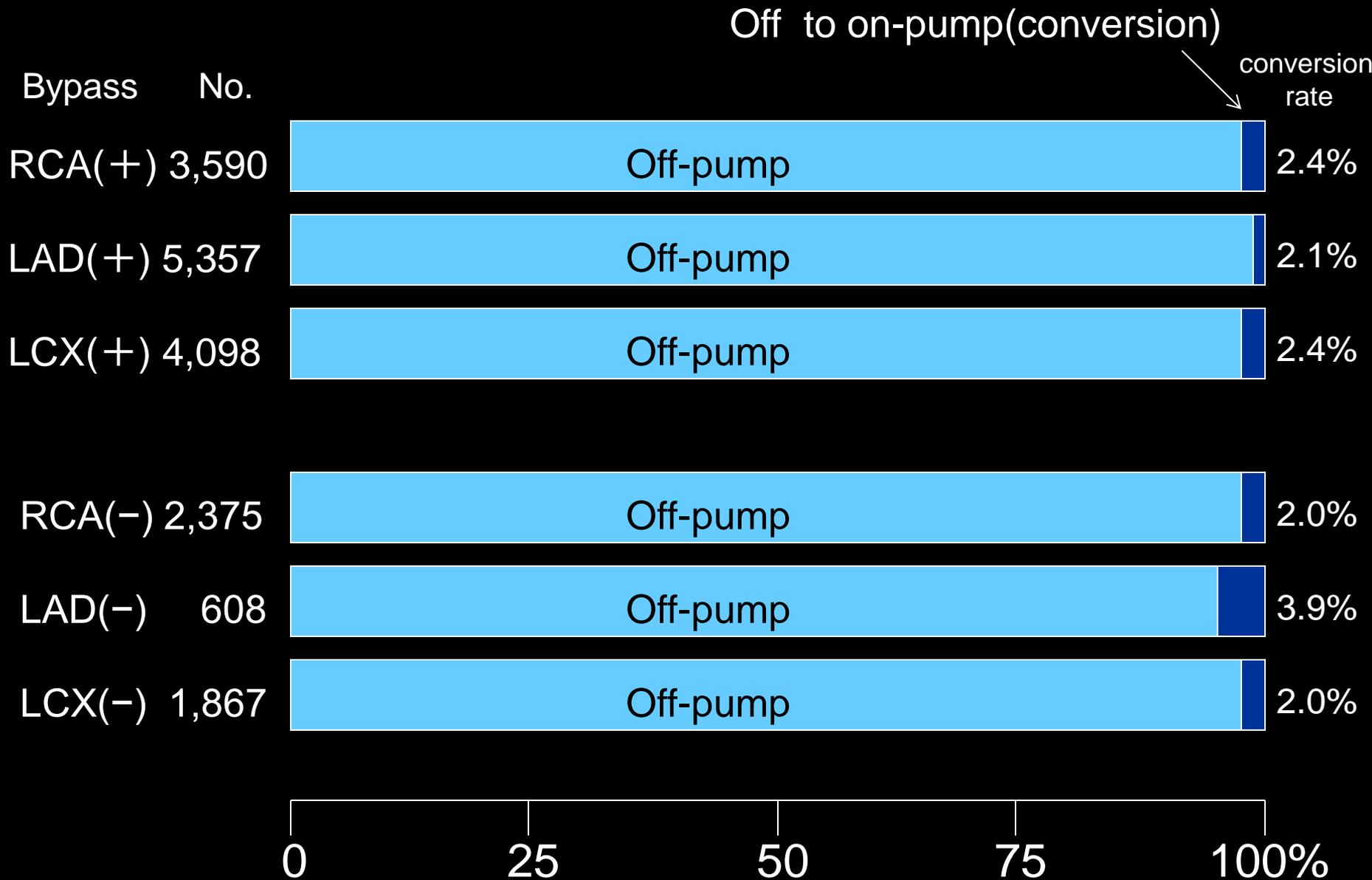
Off to on-pump conversion rate according to diseased vessels (total:2.3%)



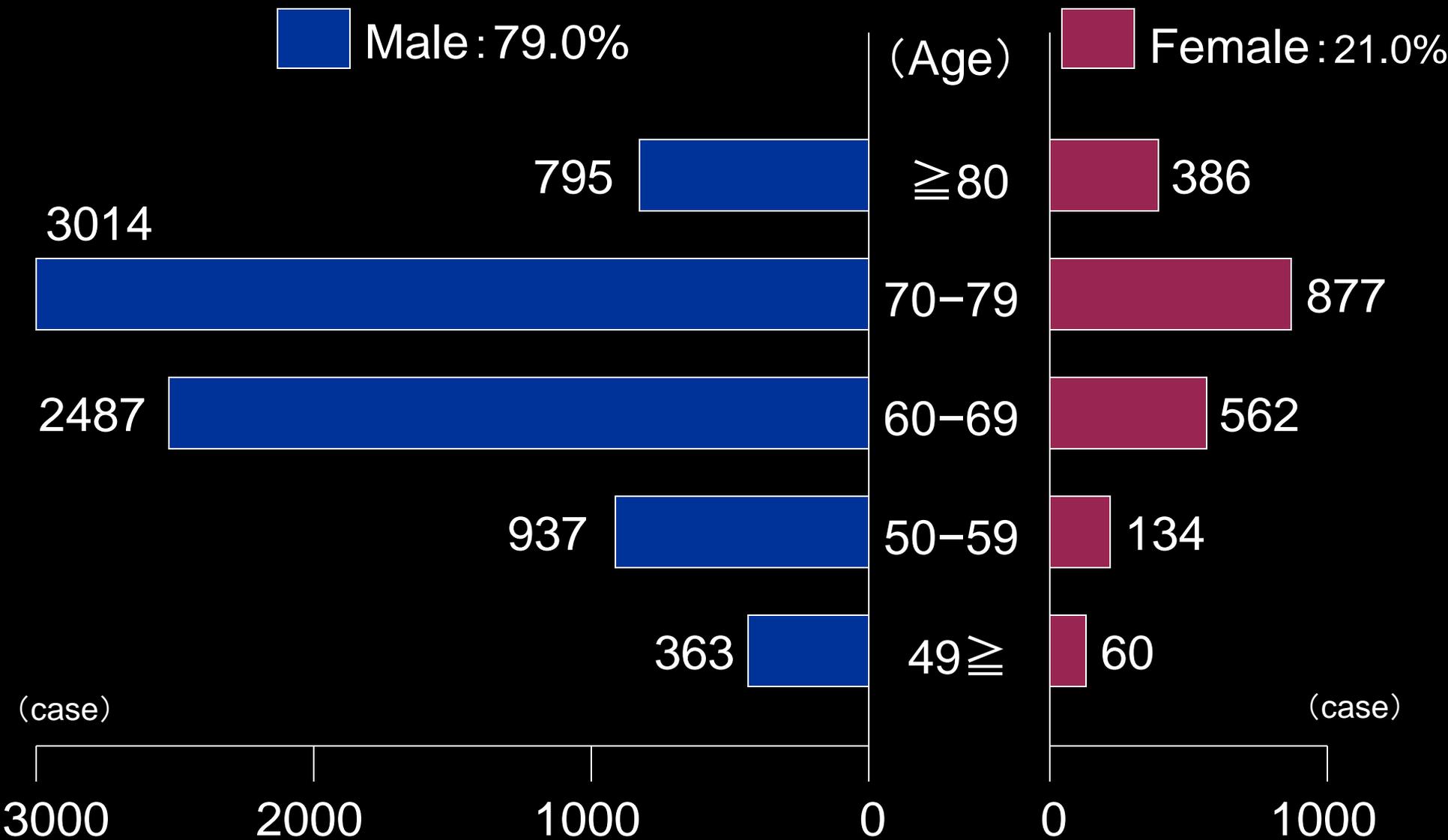
On-pump (arrest) vs. off-pump (Initial elective CABG)



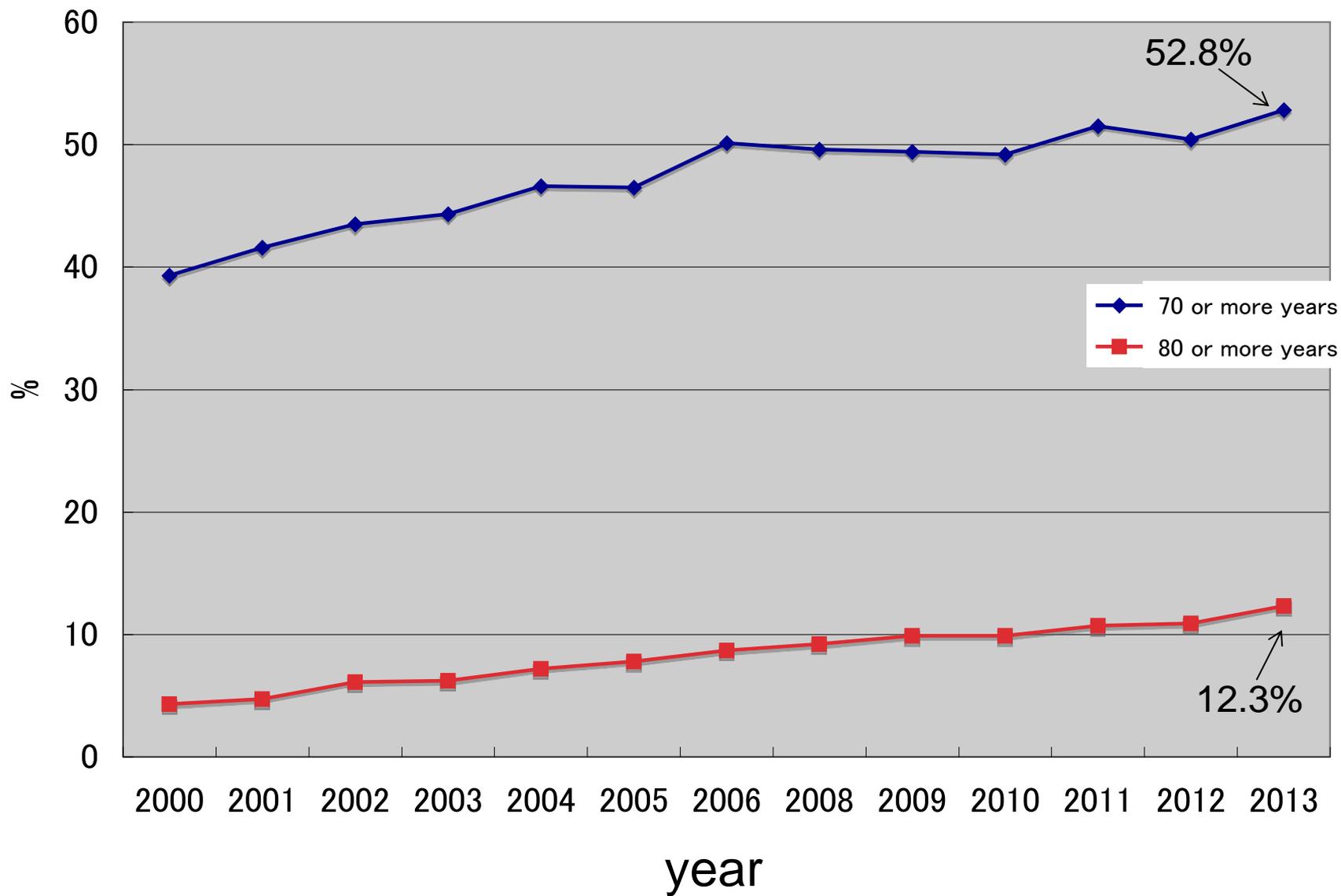
Off-pump vs. off to on-pump conversion (Initial elective CABG)



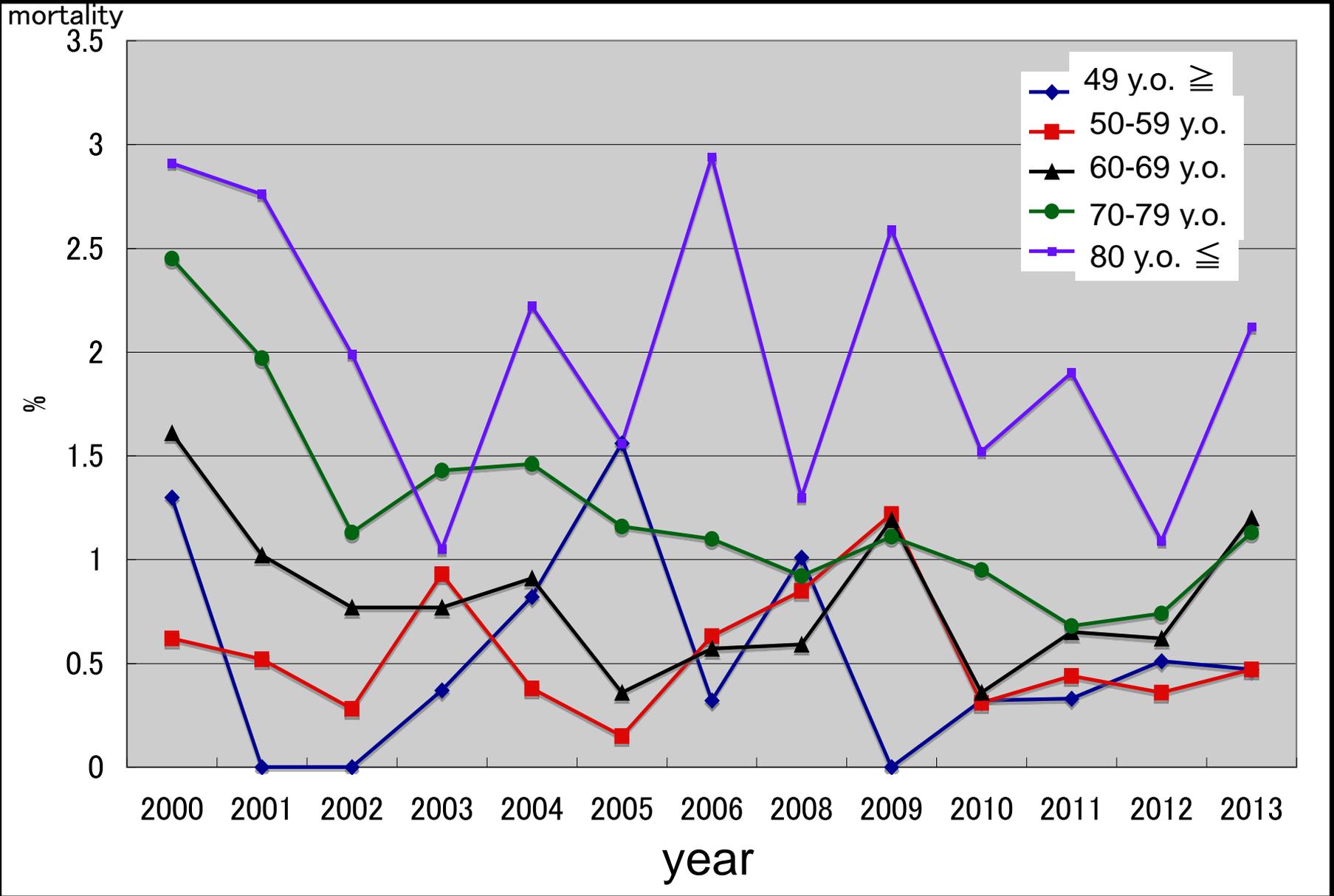
Age distribution (Initial elective cases)



Changes in elderly patients (Initial elective cases)

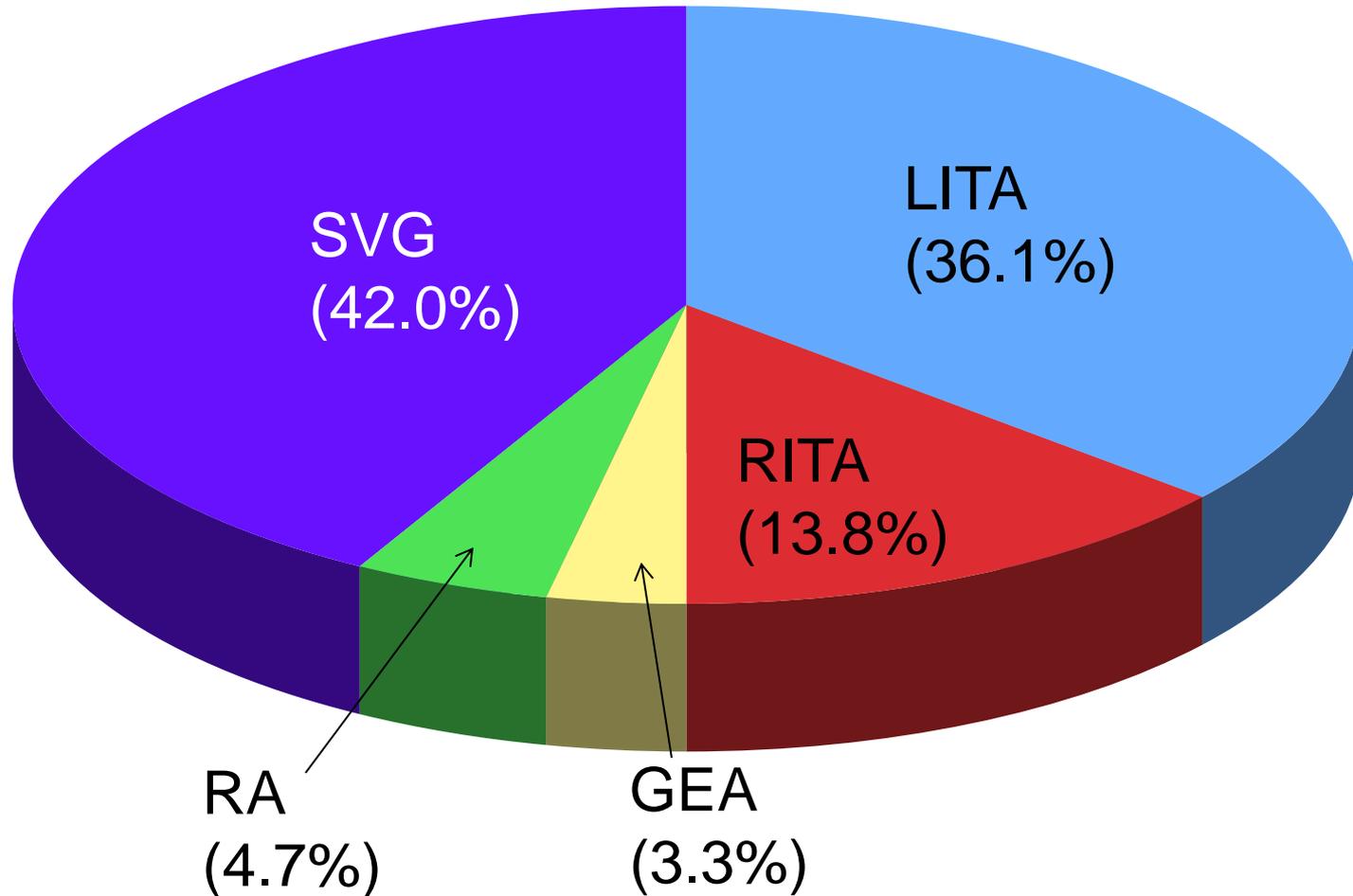


Changes in mortality according to age (Initial elective cases)

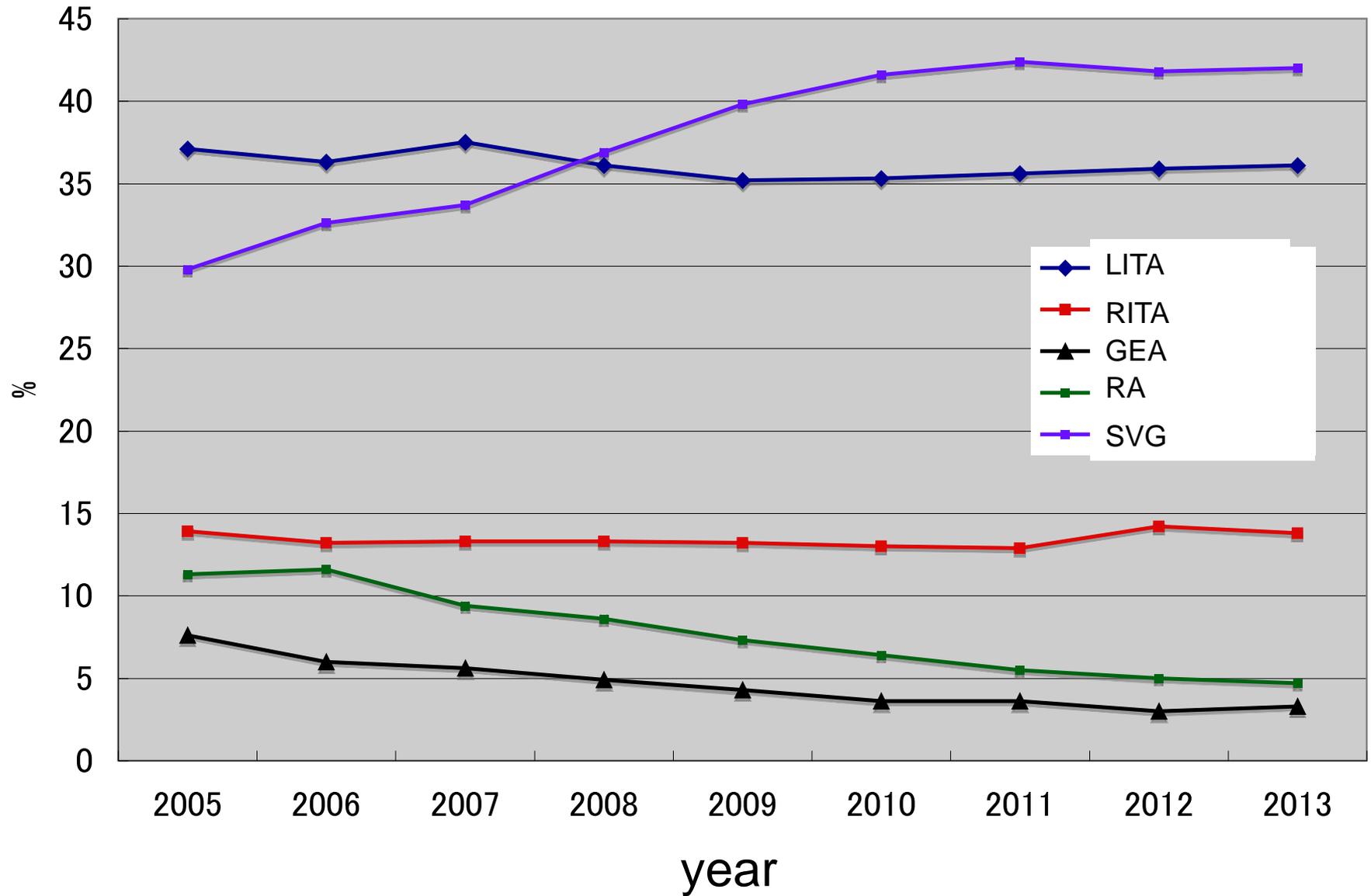


Graft selection

(Total number of grafts : 28,526 grafts)

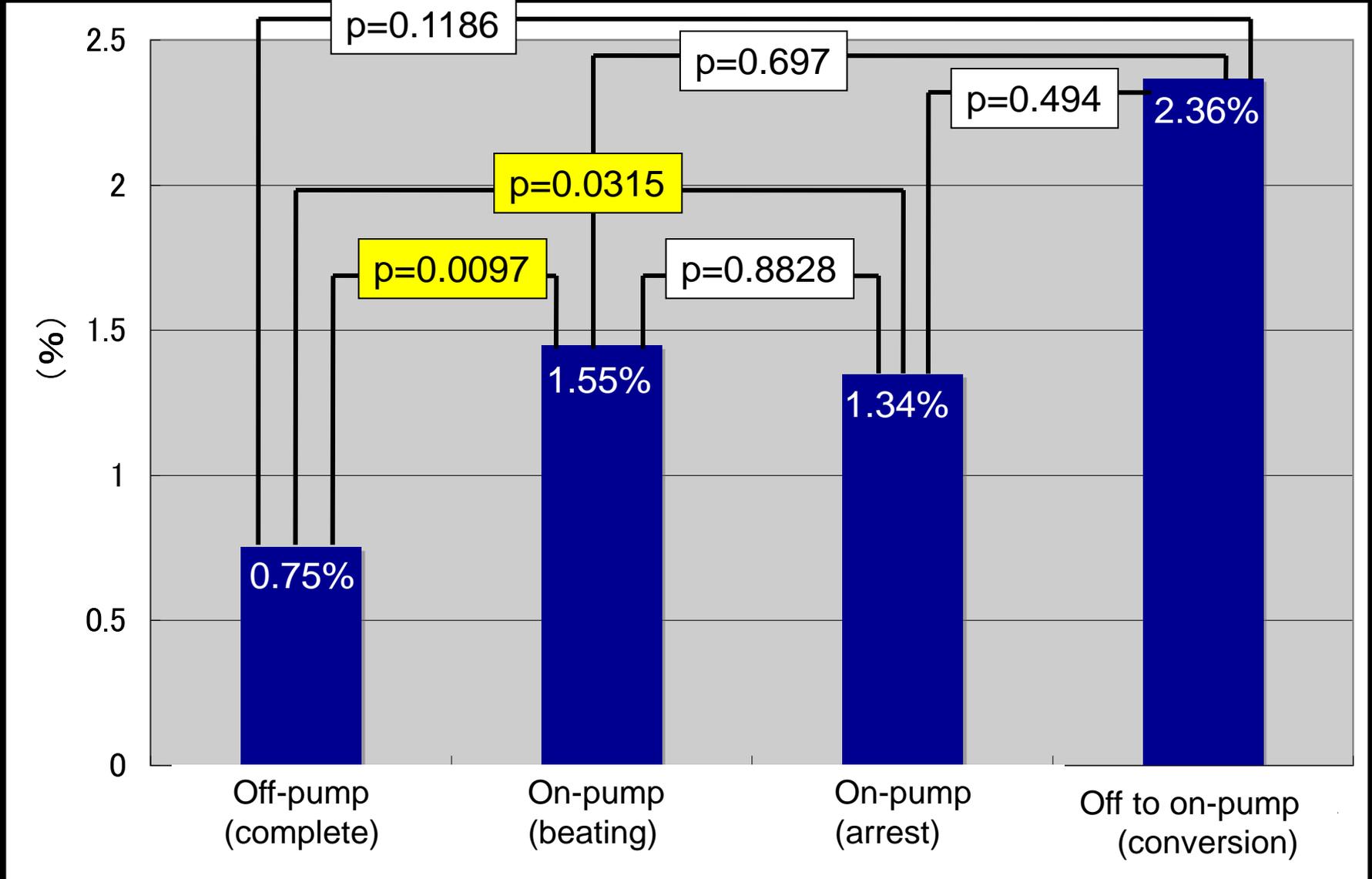


Changes in graft selection



Complication rate of postoperative stroke according to surgical procedures

Total complication rate: 111/10815 (isolated CABG) = 1.02%



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

Total cases : 80

Frequency rate : 80 / 10815 (isolated CABG) ; 0.7%

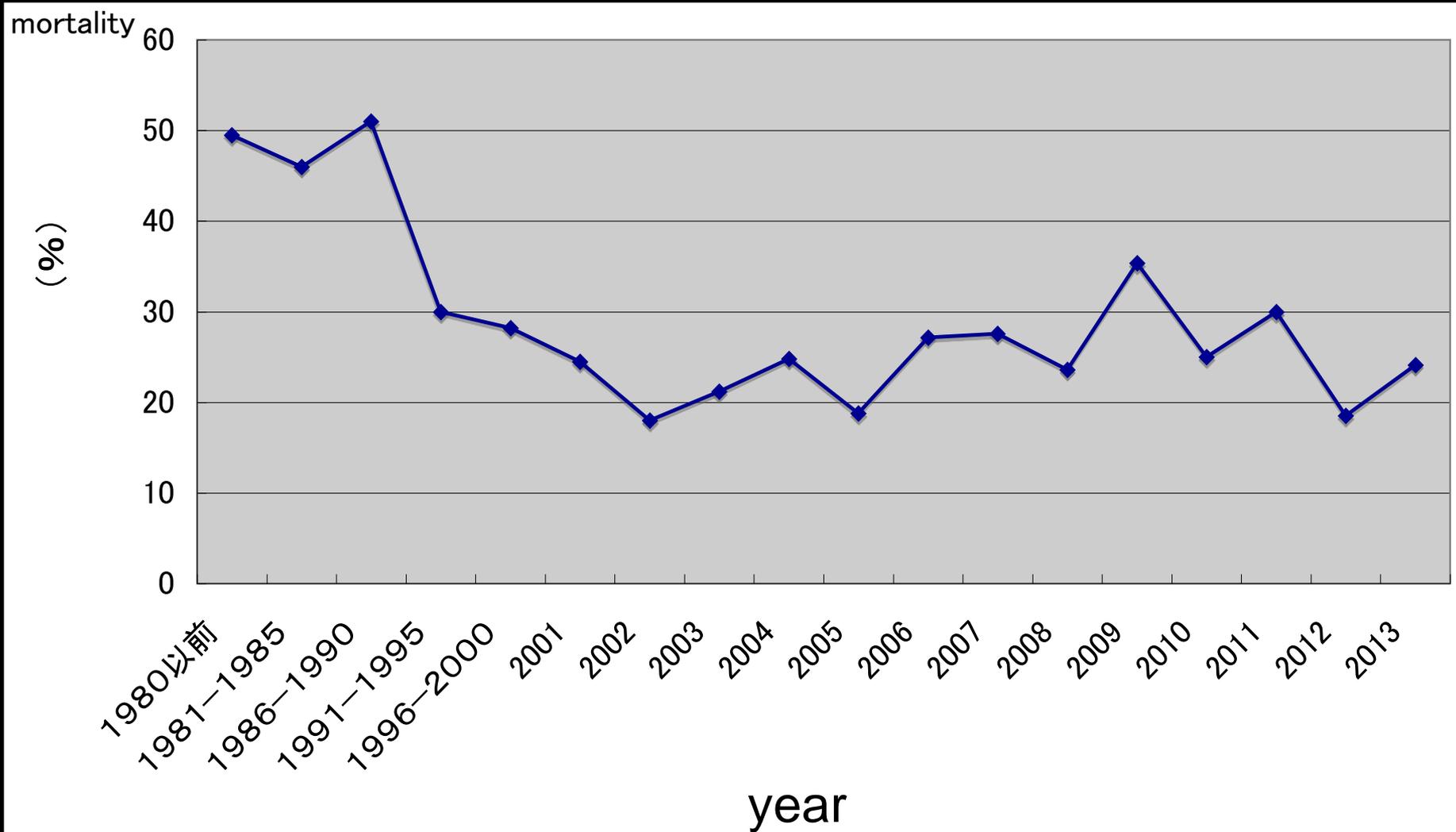
Death cases : 11

Mortality: 13.8%

Results according to surgical procedures

	cases	death cases	mortality(%)
1 vessel bypass	22	2	9.09
2 vessels bypass	22	3	13.64
3 vessels bypass	27	6	22.22
4 vessels bypass	8	0	0
Others procedures	1	0	0

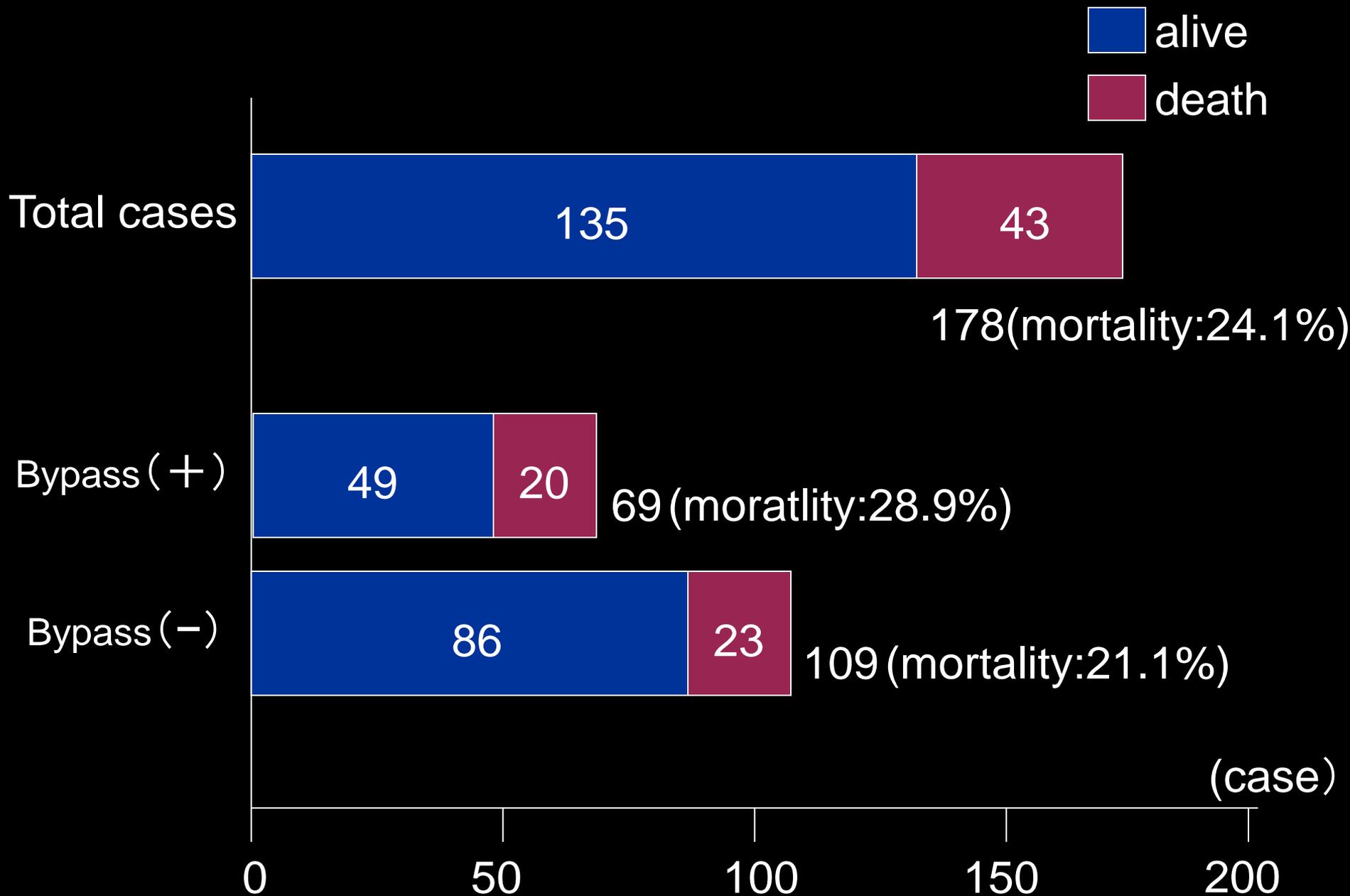
Changes in mortality of VSP



2013;

Total cases: 178、death cases: 43 (Mortality: 24.1%)

Results of VSP (1)



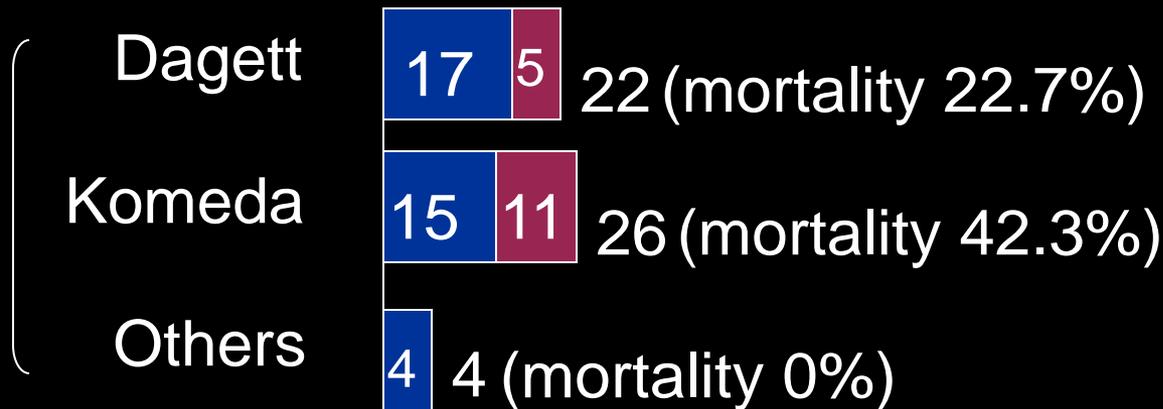
Results of VSP (2)



Anterior infarction (mortality 21.4%)

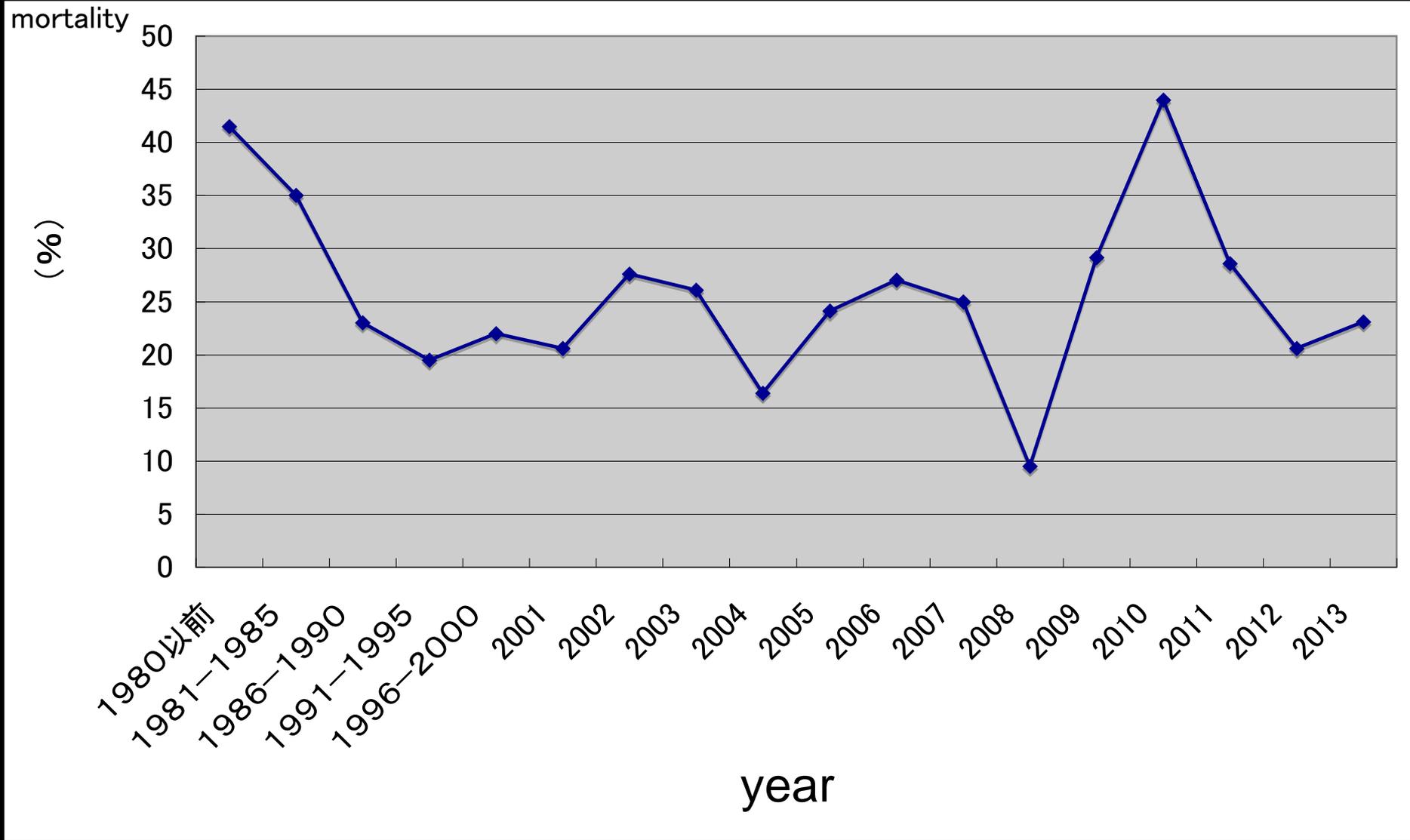


Post-inferior infarction (mortality 30.7%)



0 50 100 150 (case)

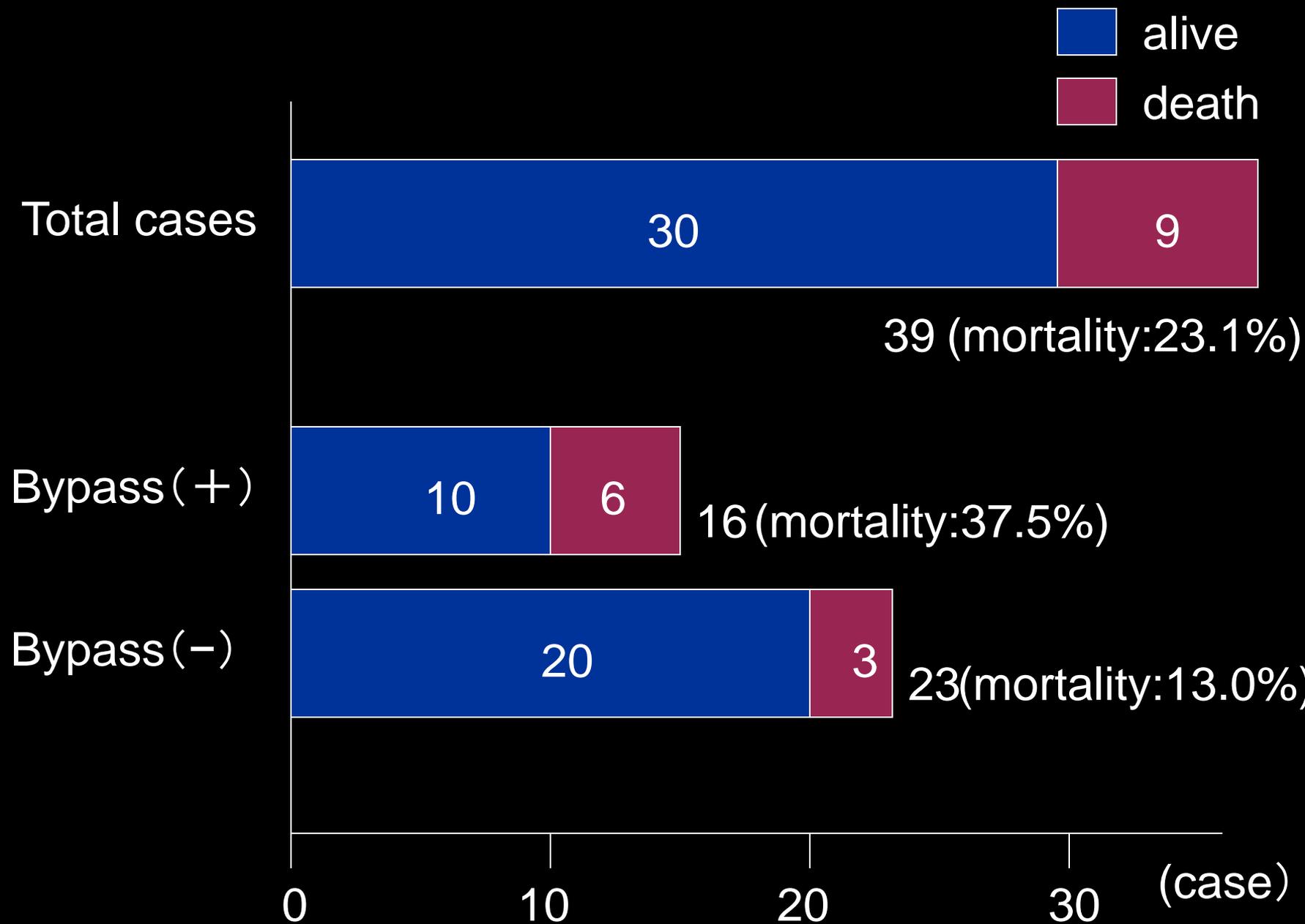
Changes in mortality of papillary muscle rupture of LV



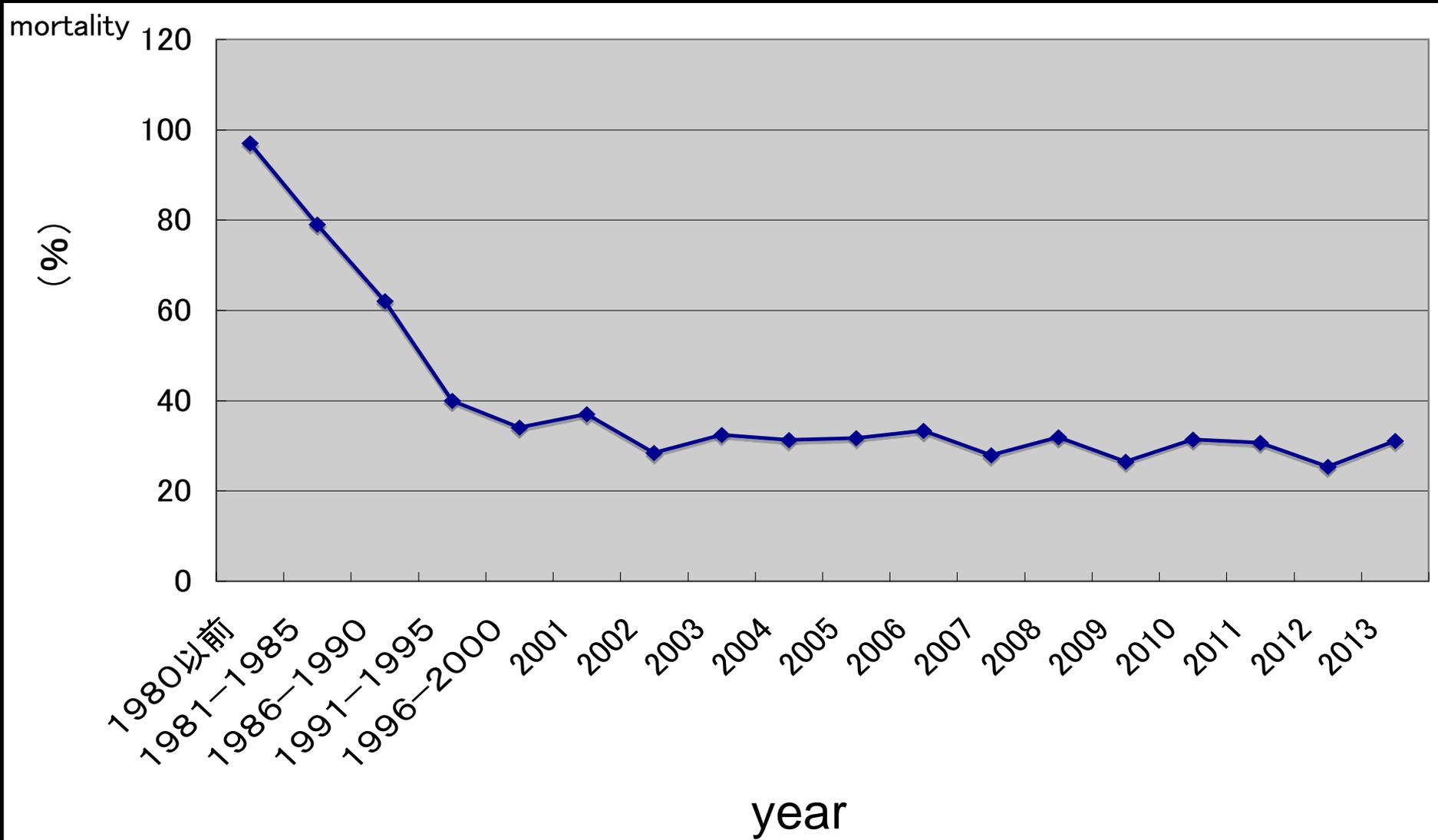
2013;

Total cases: 39、death cases: 9 (mortality: 23.1%)

Results of papillary muscle rupture



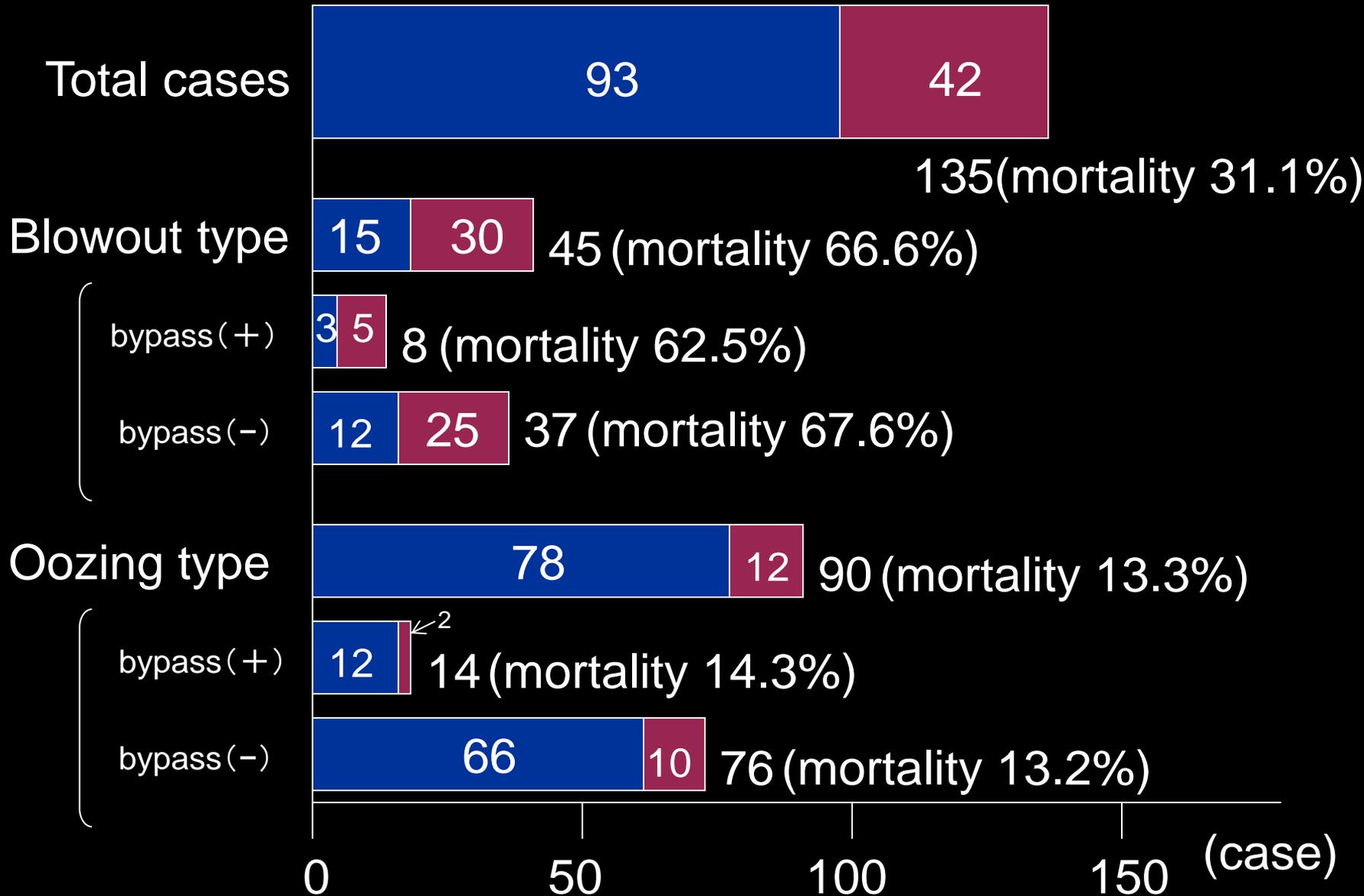
Changes in mortality of cardiac rupture



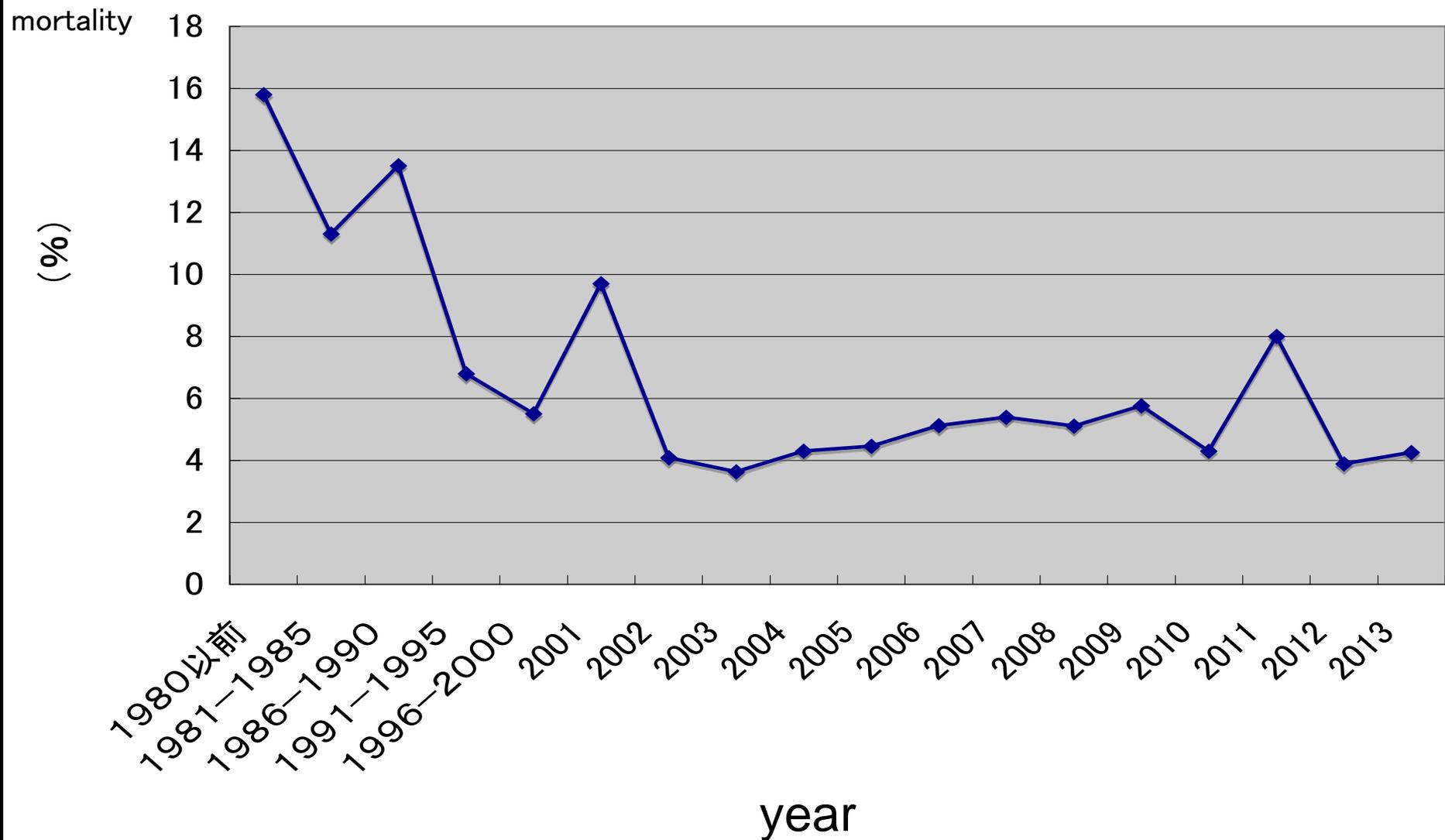
2013;

Total cases: 135、death cases: 42 (mortality: 31.1%)

Results of cardiac rupture



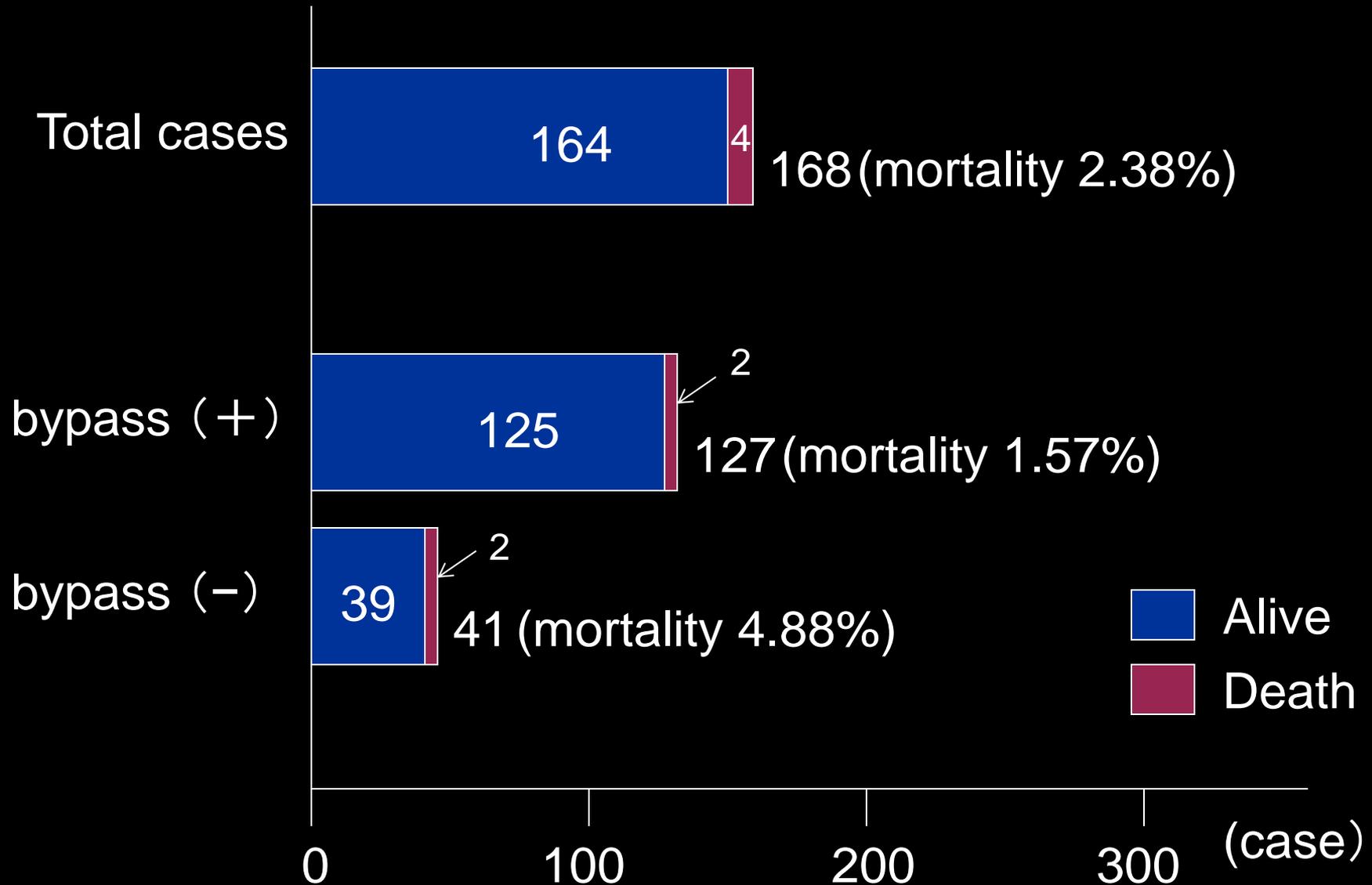
Changes in mortality of left ventricle aneurysm



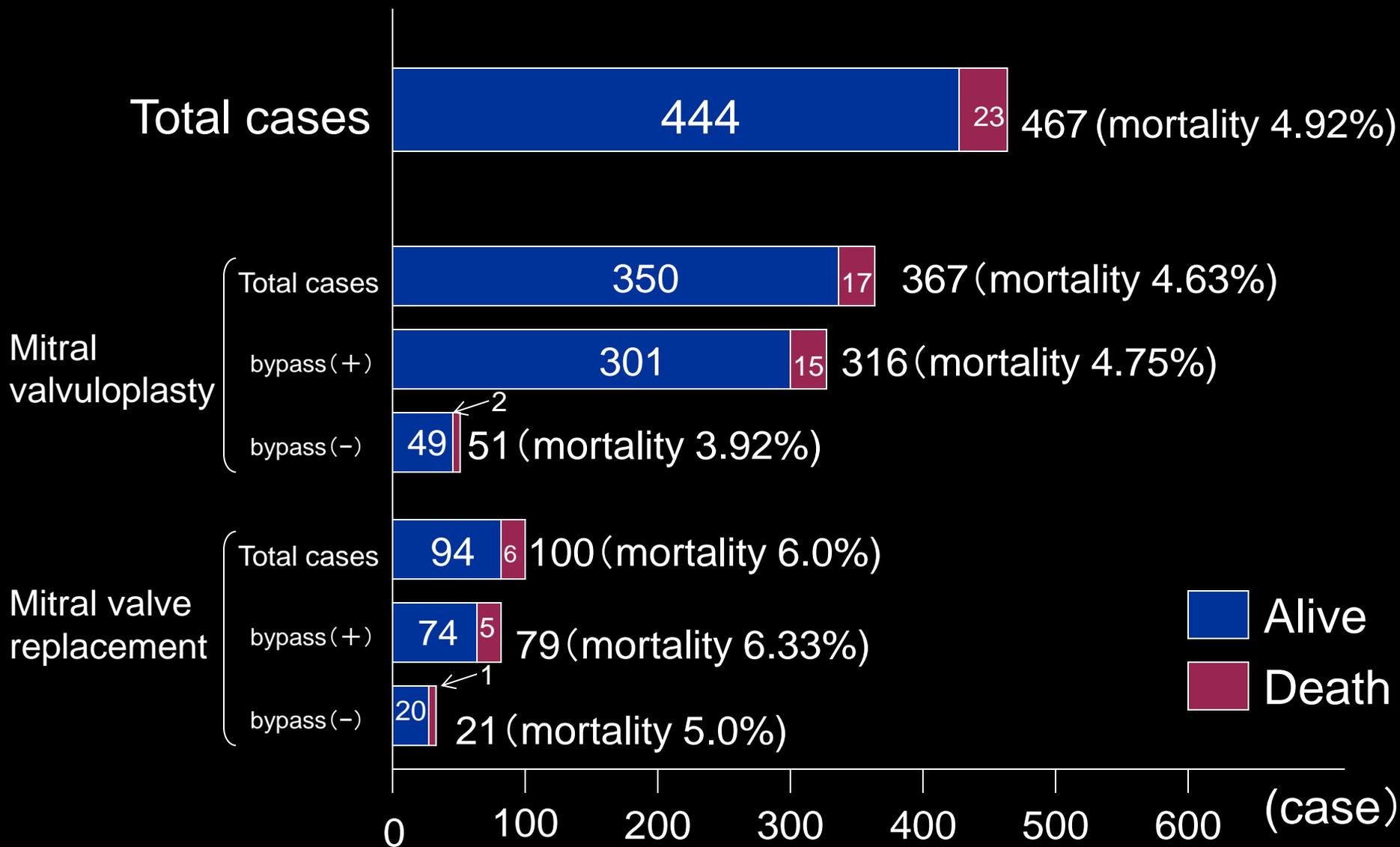
2013;

Total cases: 282, death cases 12 (mortality: 4.26%)

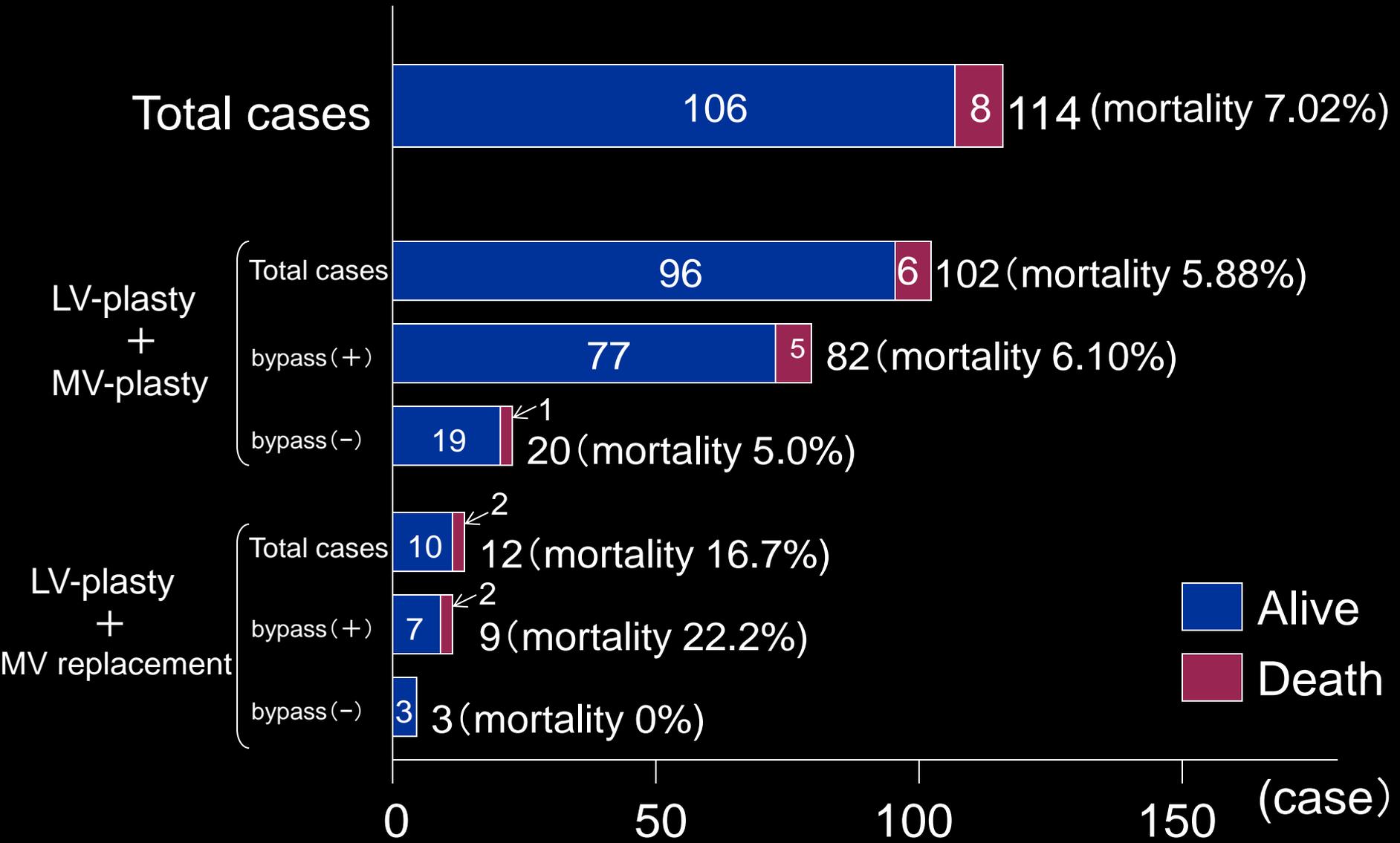
Results of left ventricular-plasty (including left ventriculectomy) against LV aneurysm and/or ischemic cardiomyopathy



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 mortality of isolated CABG and initial elective CABG were 1.75%, and 1.08% respectively, indicating excellent results.**
- 2. Of all initial elective CABG, 65% cases underwent off-pump CABG (OPCAB), showing high frequency rate. The mortality of OPCAB was 0.82%, which was very low.**
- 3. Of 4 or more bypass surgery, 59% cases underwent OPCAB.**
- 4. CABG cases have been getting older ; the rate of 70 or more years old was 52.8%、80 or more years old was 12.3%.**
- 5. The frequency use rate of arterial grafts was 58%, on the other hand, that of vein graft (42%) gradually increased in recent years.**

Conclusions (2)

- 6. Postoperative stroke rate of CABG was 1.02% 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 0.7% of isolated CABG cases, demonstrating high mortality (13.8%).**
- 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.**