

Coronary artery surgery results 2011, 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), 2011

Total cases : 12,425

Isolated CABG : 8,990 (72%) (previous year:74%)

Concomitant CABG : 3,435 (28%) (previous year:26%)

Isolated CABG

Initial elective	: 7,454	Extra initial elective	: 1,536
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Off-pump	: 4,972	Off-pump	:
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847 On-pump	: 2,482	On-pump	:
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689			
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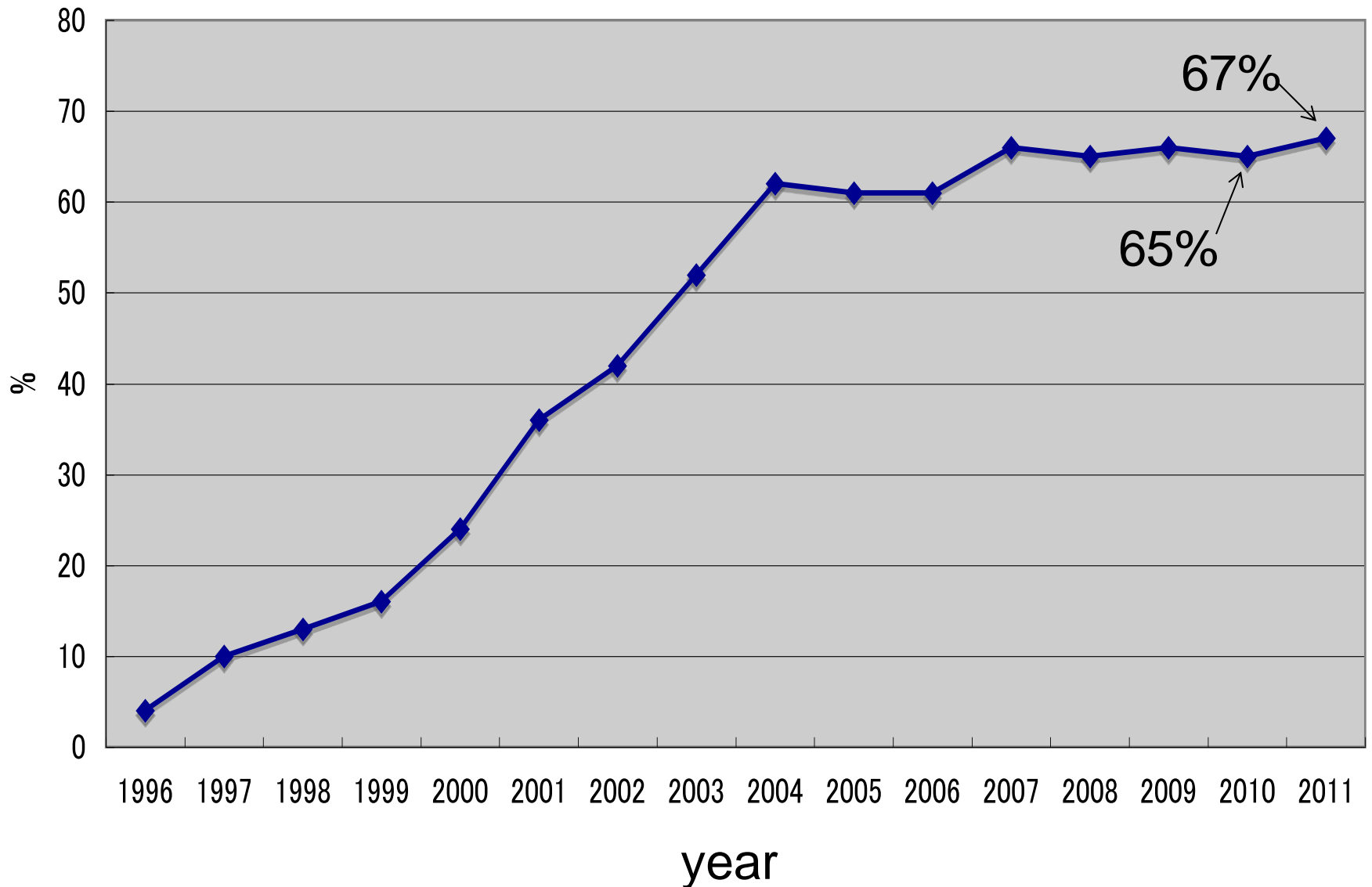
(Off-pump rate : 67%)

(previous year : 65%)

(Off-pump rate : 55%)

(previous year : 53%)

Changes in OPCAB frequency rate of initial elective CABG



Total cases of initial elective :7,454(100%)

On-pump (cardiac arrest) :1,622(21.8%)

On-pump (cardiac beating) : 860(11.5%)

Off-pump (total cases) :4,972(66.7%)

Off-pump (complete) :4,782

On-pump (convert) : 190

OPCAB complete rate :96.2%

Off to on-pump convert rate : 3.8%

(previous year:2.3%)

Mortality of isolated CABG:2.72%
(previous year:1.45%)

Mortality of initial elective CABG:2.12%
(previous
year:0.75%)

On-pump (cardiac arrest) :1.05%

On-pump (cardiac beating) :3.95%

Off-pump (total cases) :2.15%

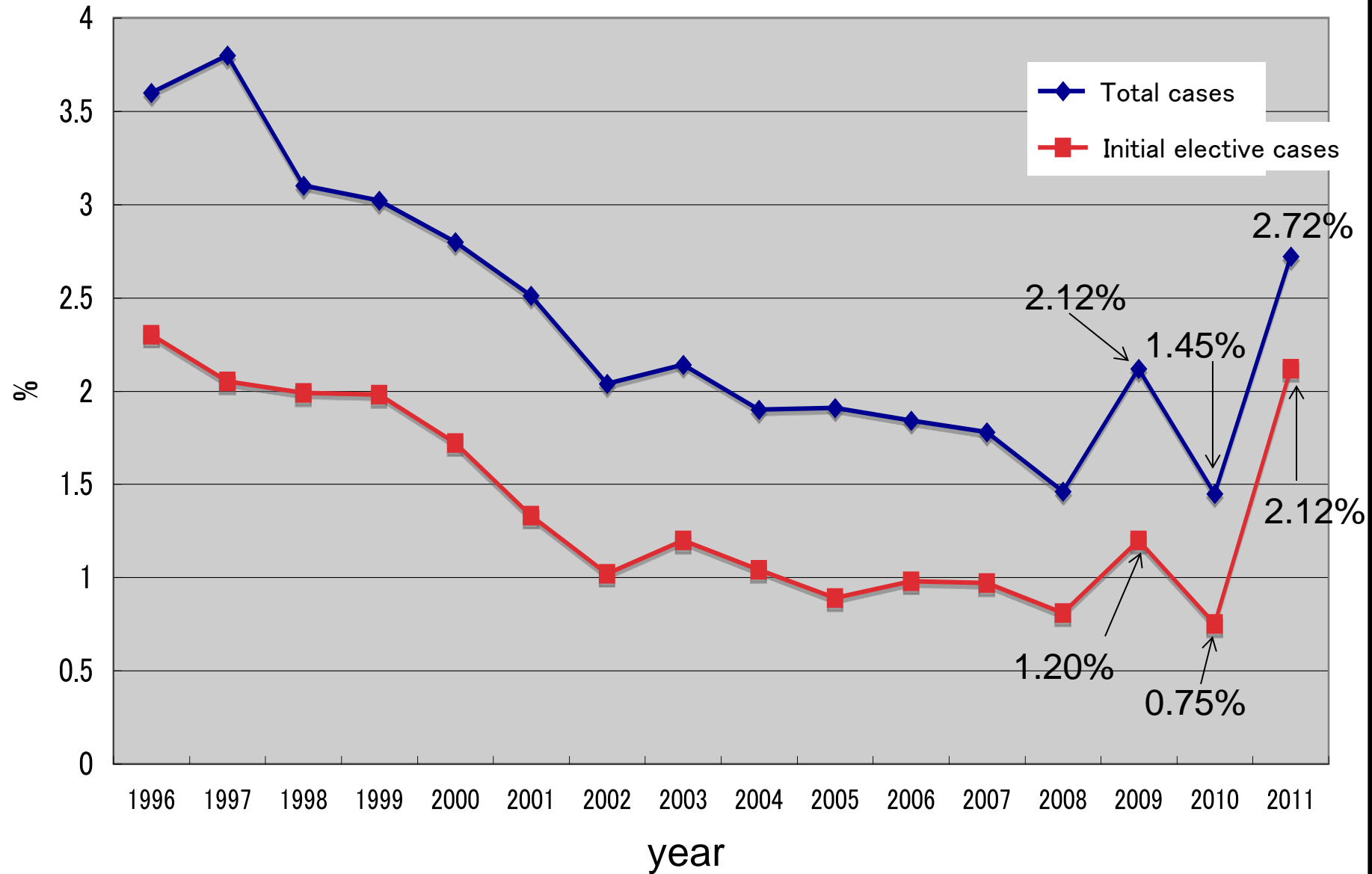
Off-pump (complete) :**2.11%**

(previous year:0.53%)

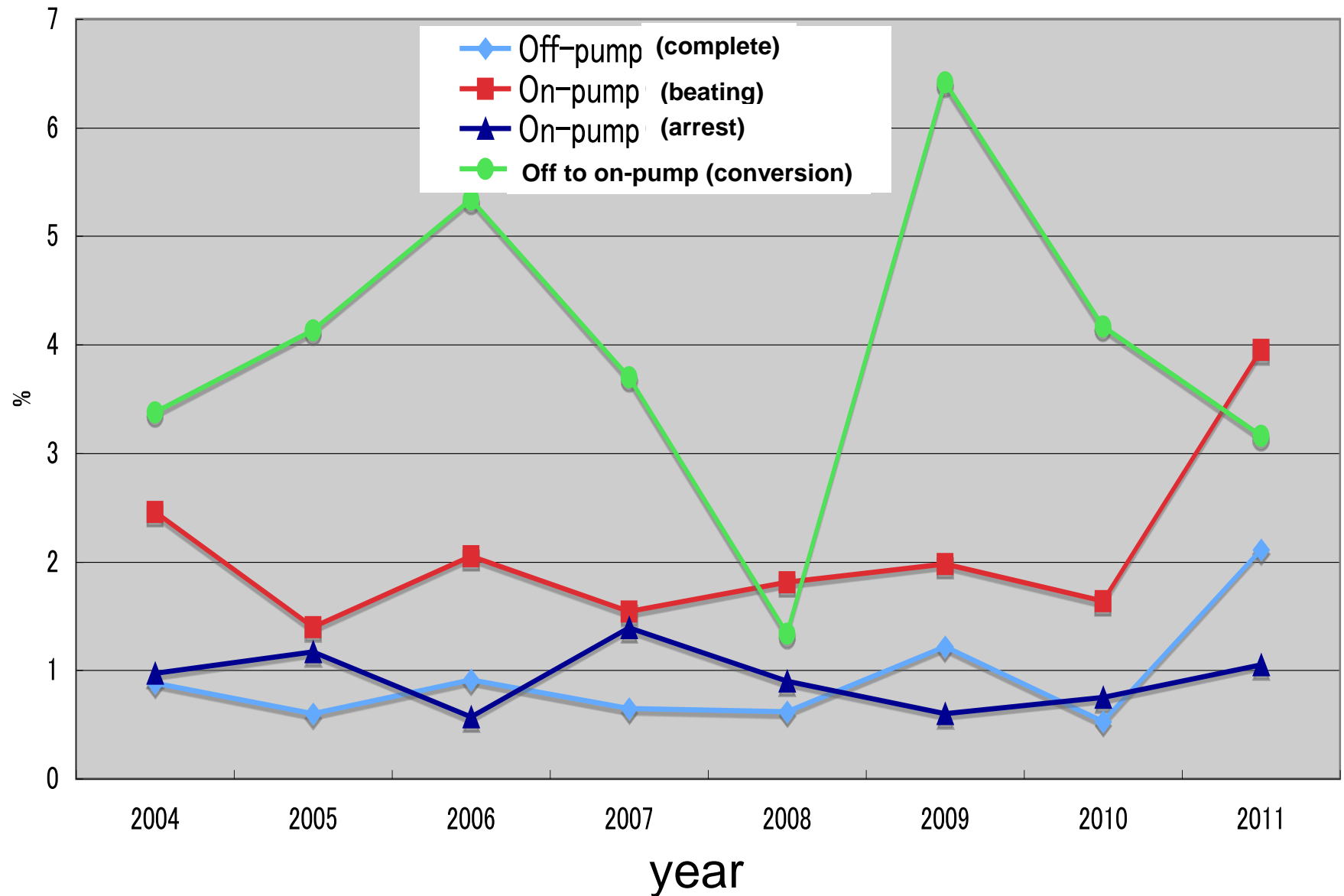
On to on-pump (convert) :**3.16%**

(previous year:4.17%)

Changes in mortality of CABG

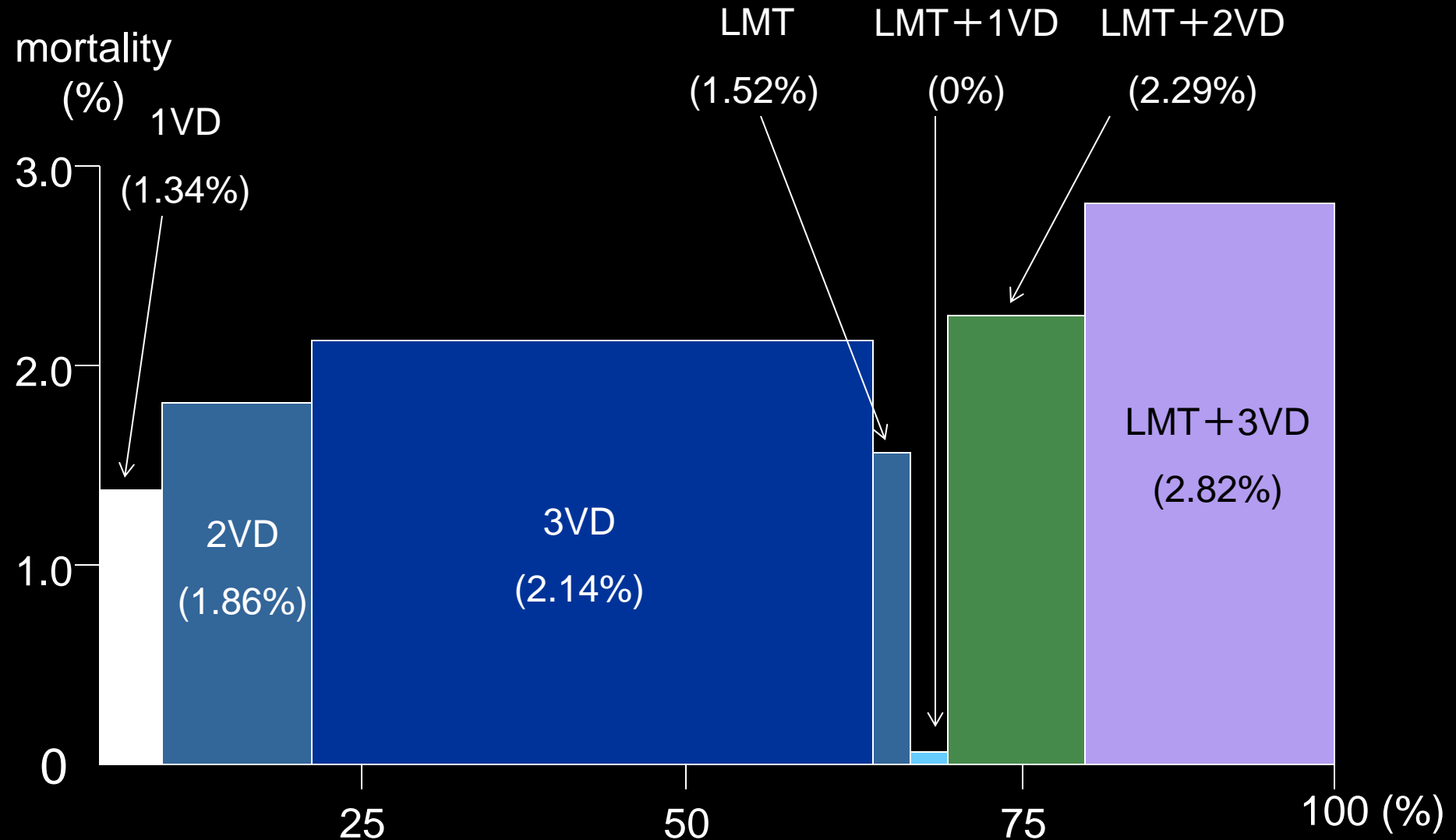


Changes of mortality for procedures (Initial elective CABG)



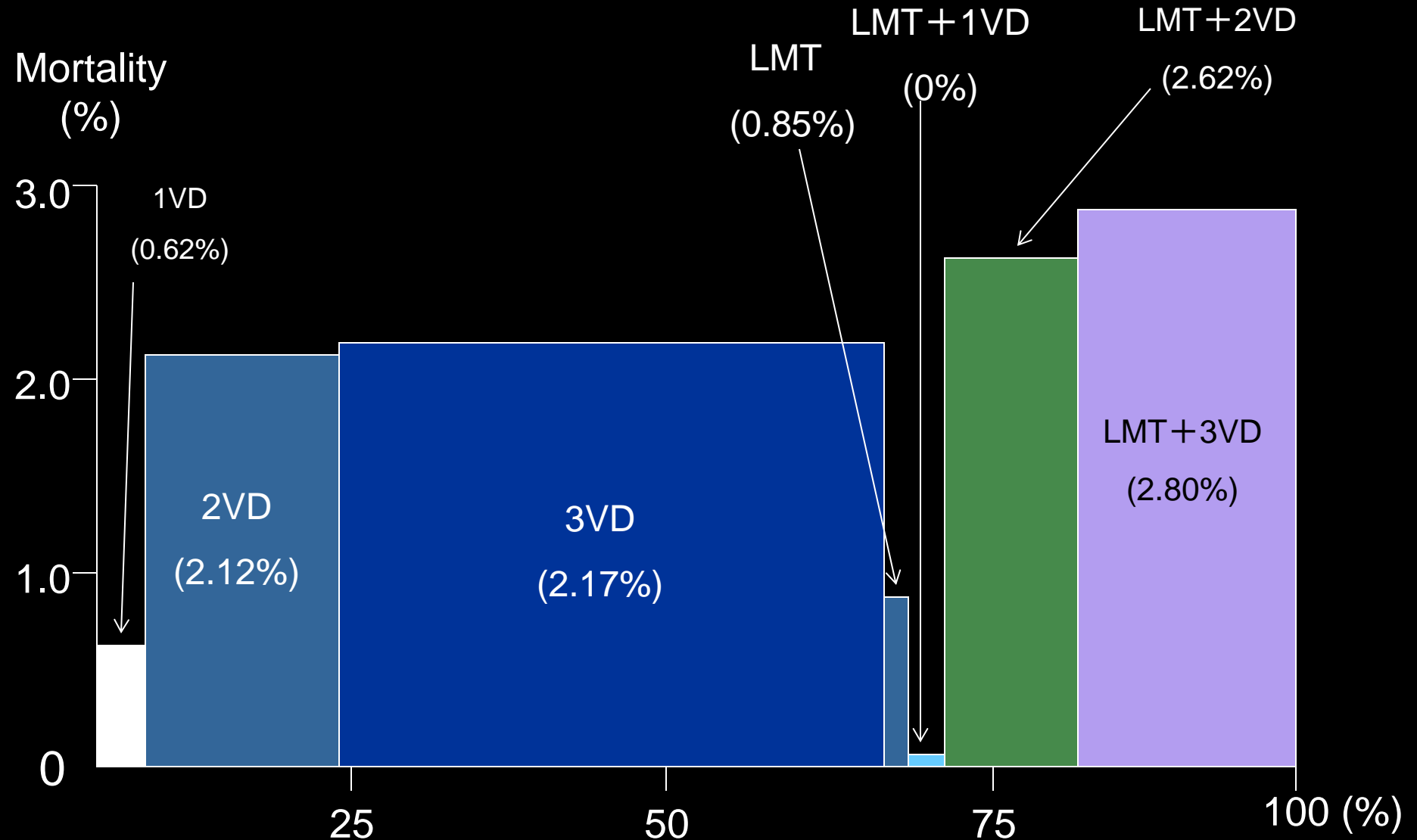
Surgical results according to diseased vessels

(Initial elective cases : 7,454, mortality:2.12%)



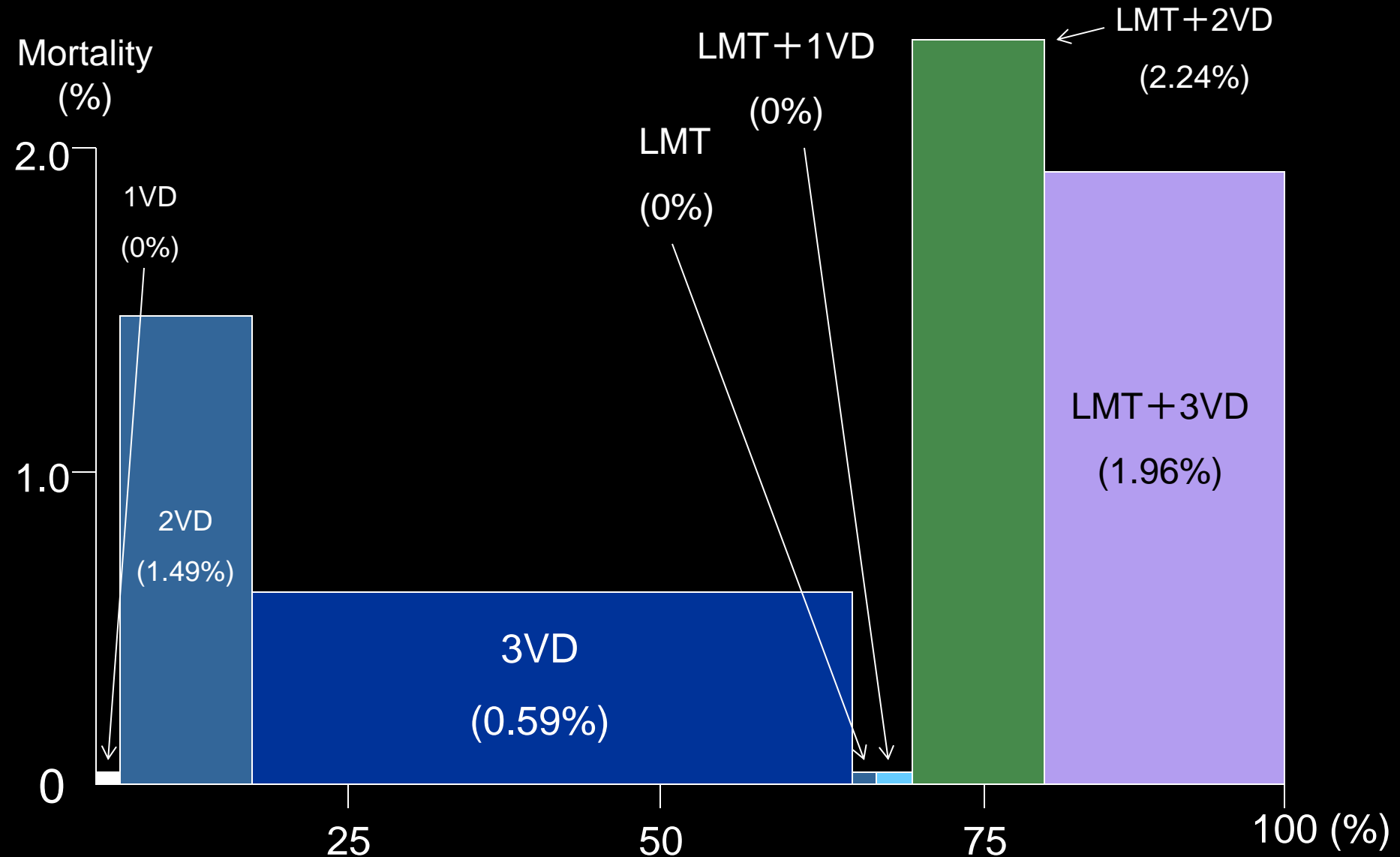
Surgical results according to diseased vessels

(Initial elective off-pump (complete): 4,782, mortality: 2.11%)



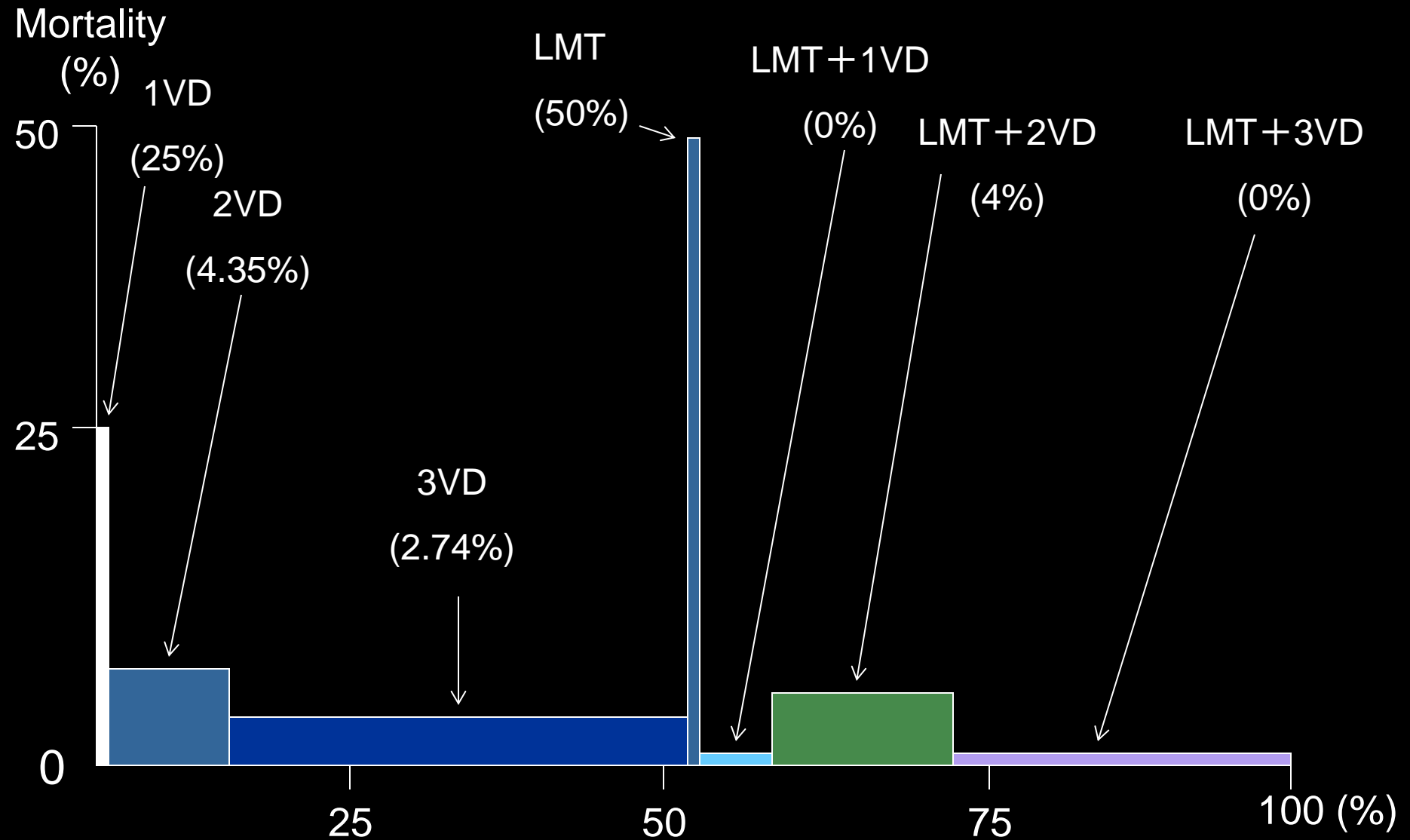
Surgical results according to diseased vessels

(Initial elective on-pump (arrest): 1,622, mortality:1.05%)



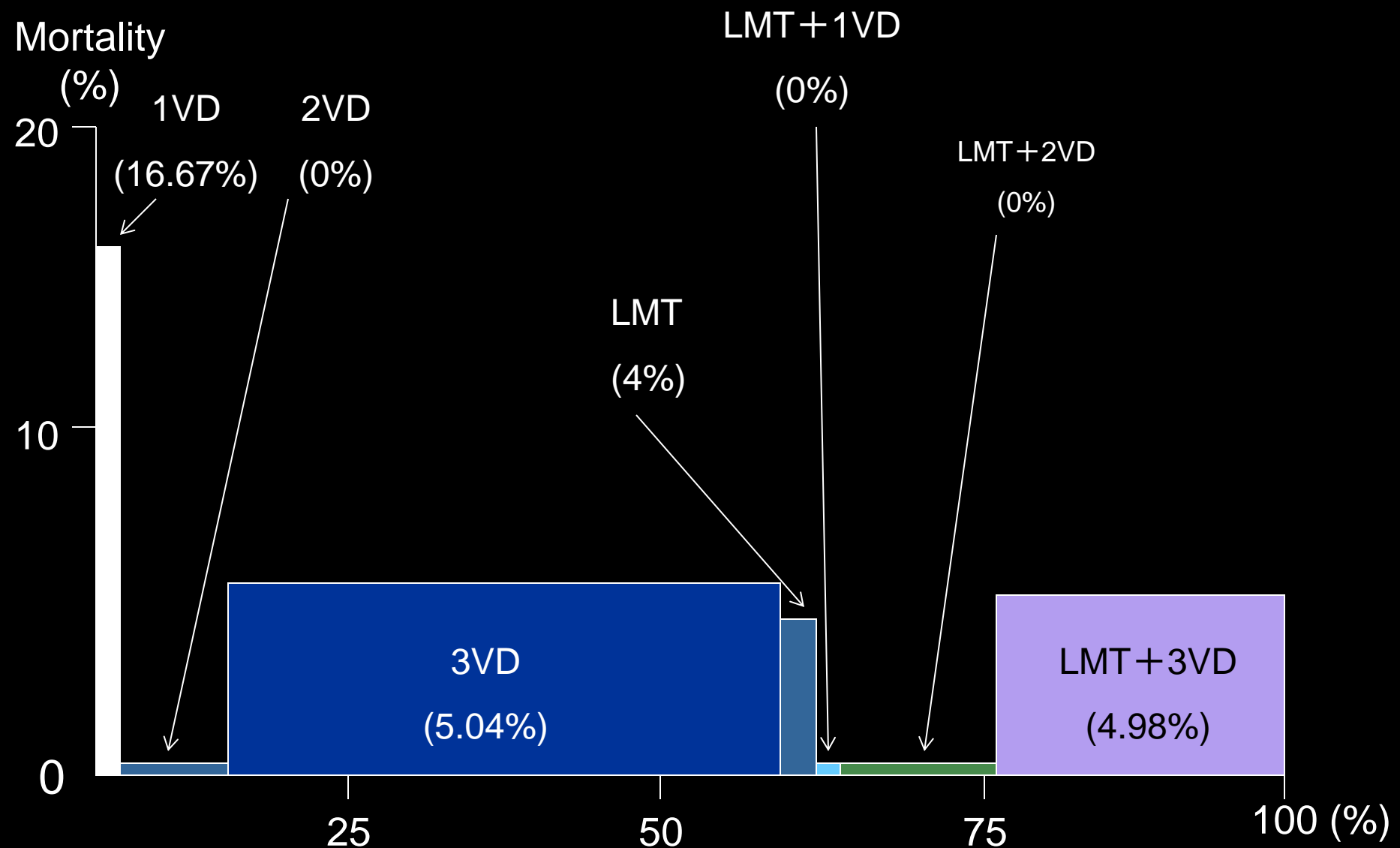
Surgical results according to diseased vessels

(Initial elective off to on-pump (conversion): 190, mortality:3.16%)



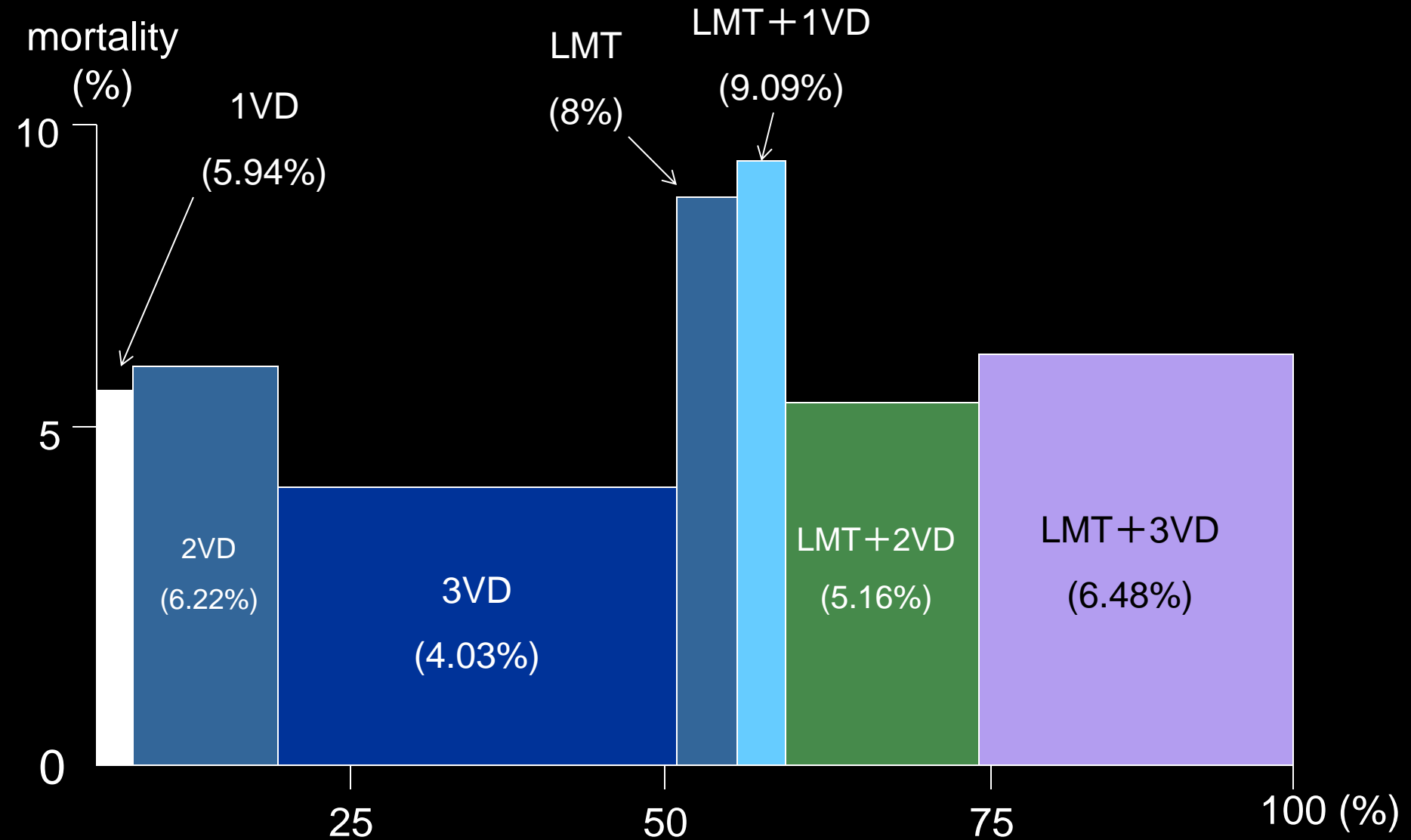
Surgical results according to diseased vessels

(Initial elective on-pump (beating): 860, mortality:3.95%)

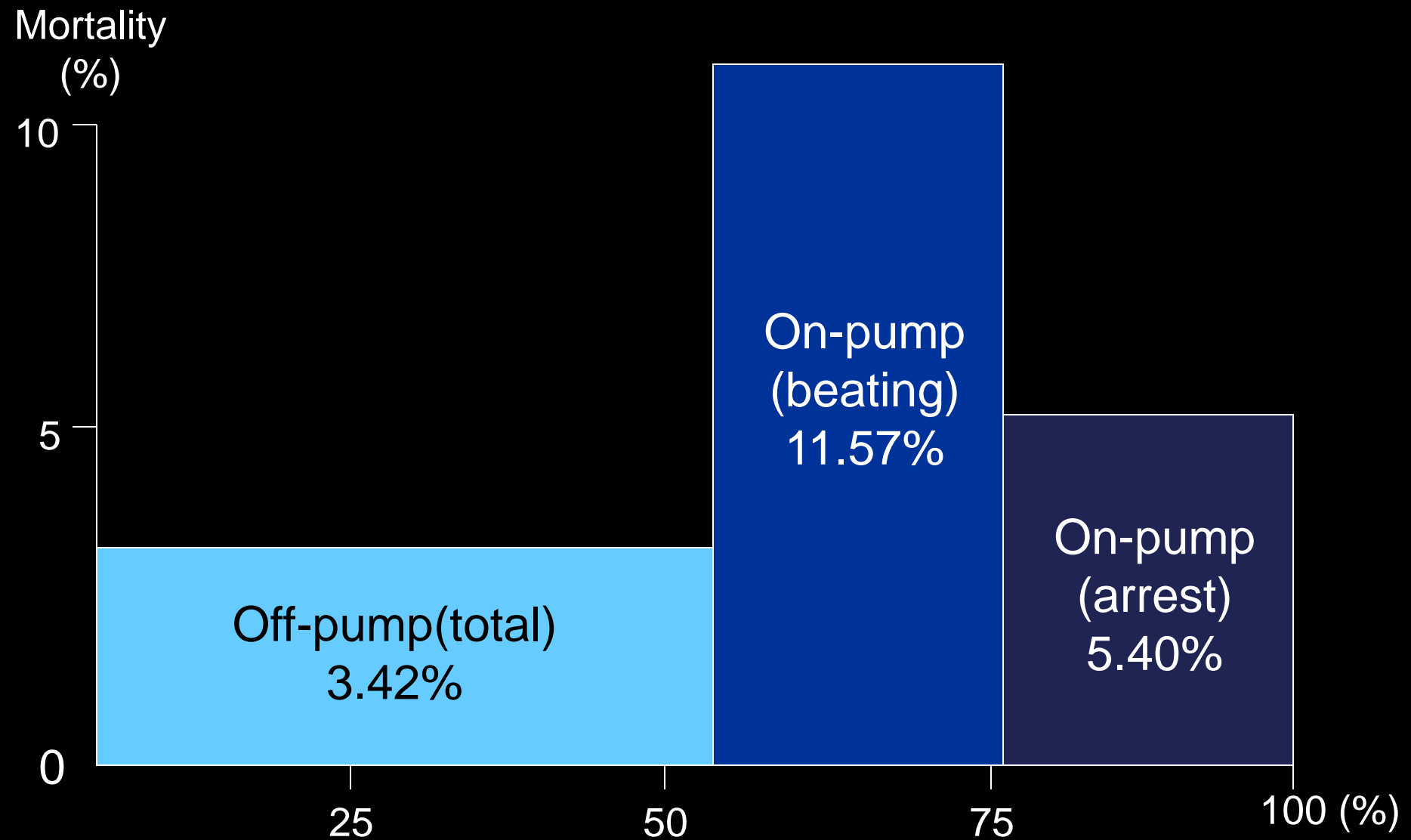


Surgical results according to diseased vessels

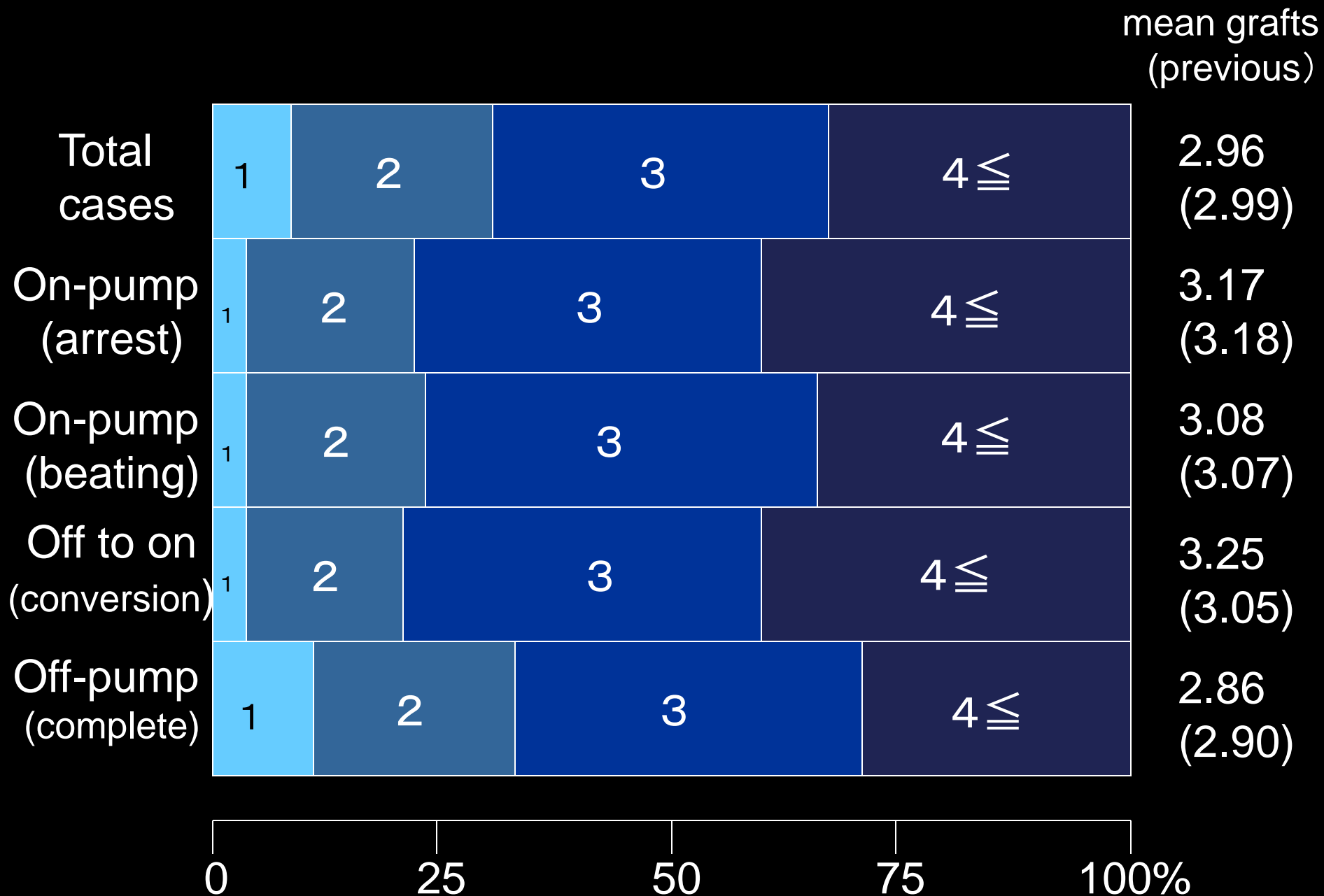
(Extra initial elective cases: 1,536, mortality:5.66%)



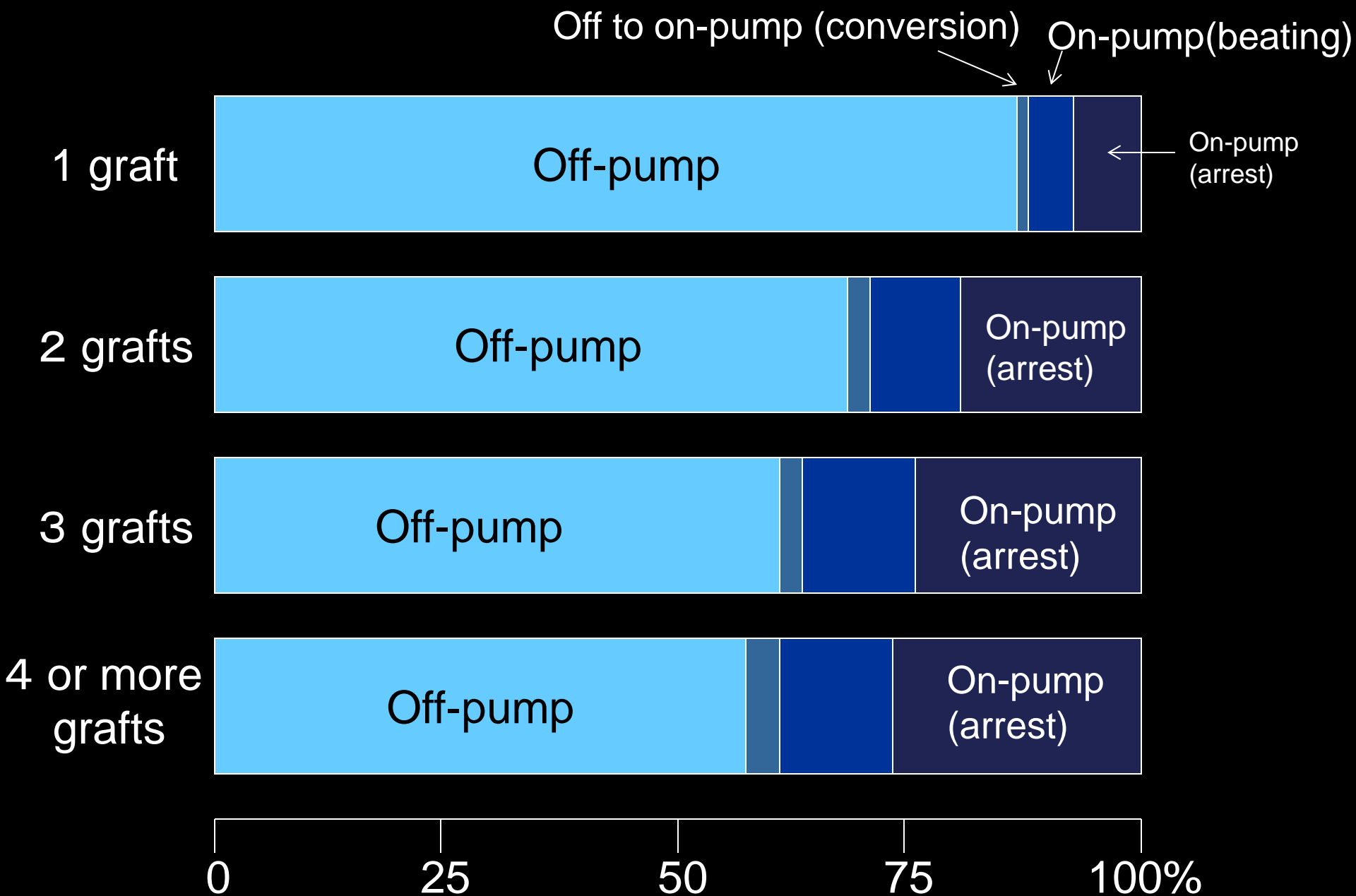
Surgical results according to procedures (**Except initial elective cases** : 1,536, mortality:5.66%)



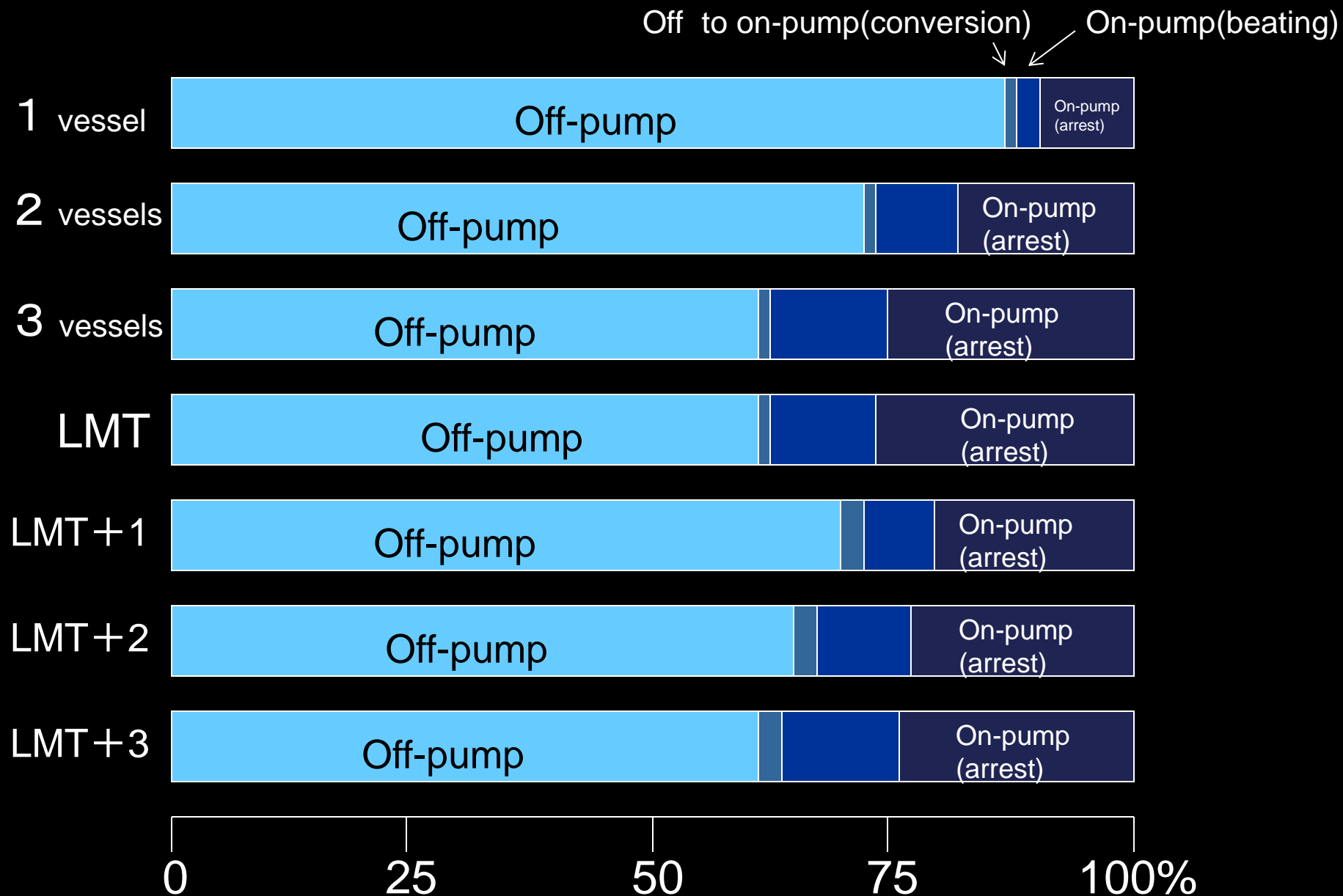
Number of grafts according to surgical procedures



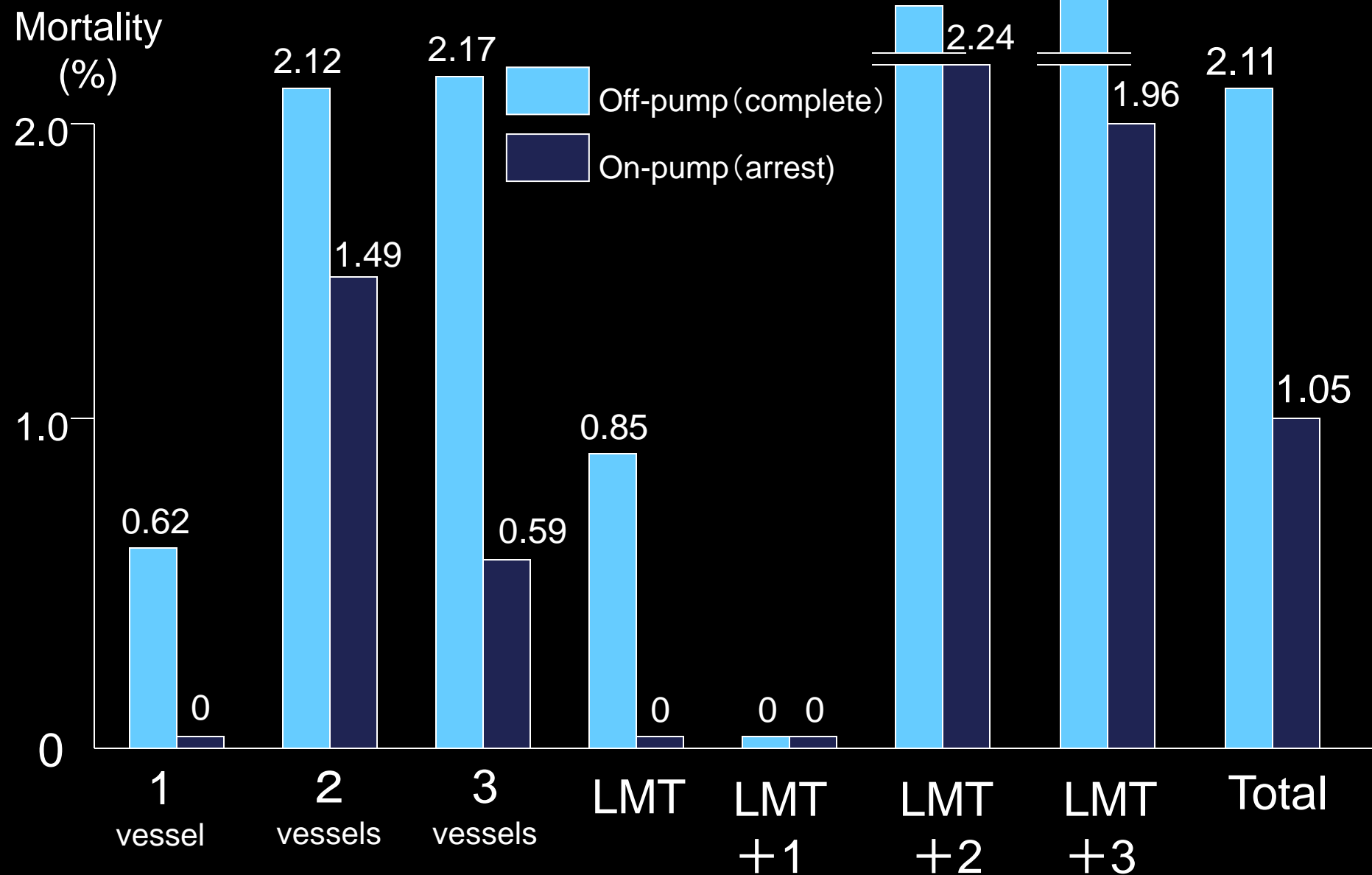
Surgical procedures according to number of grafts



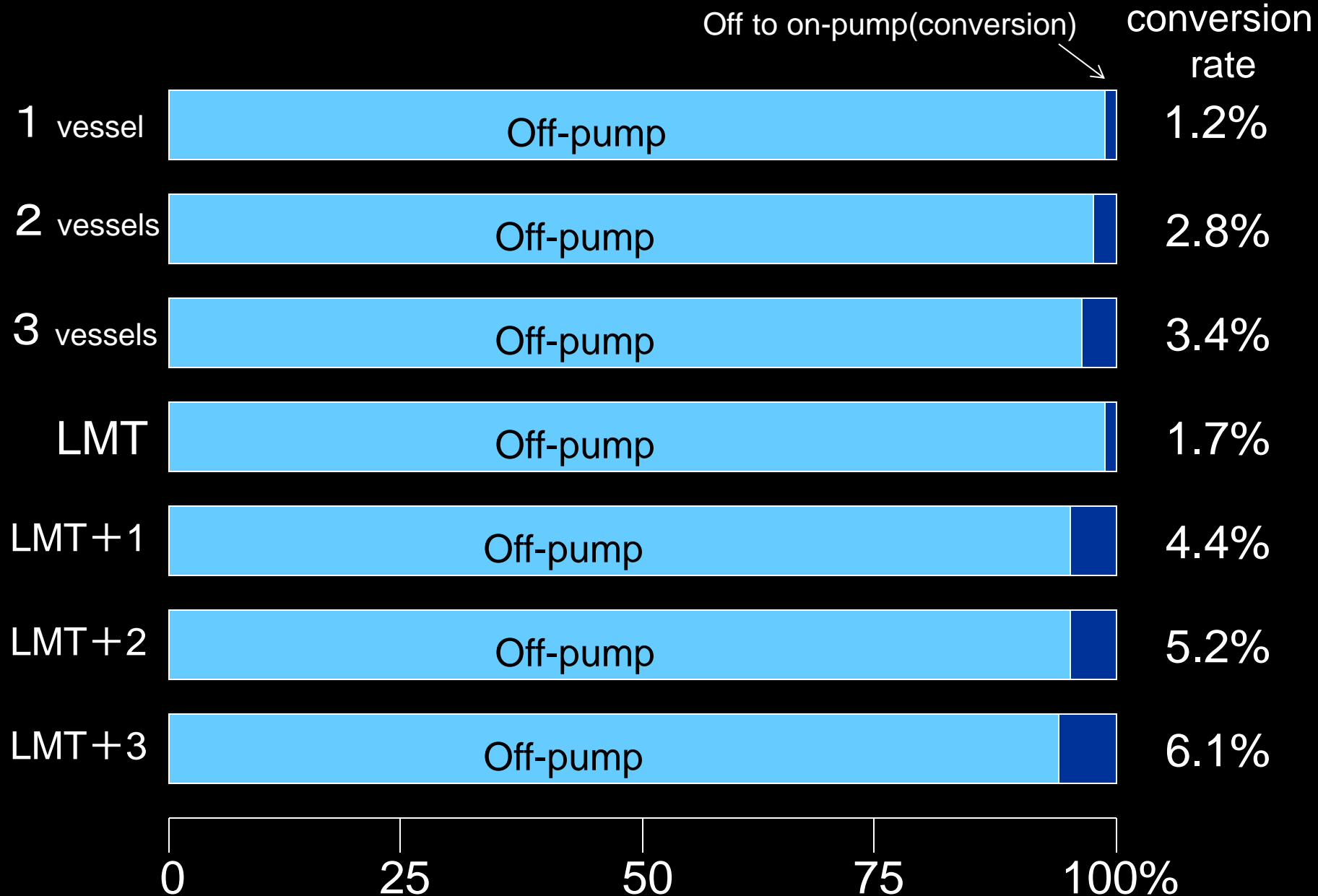
Surgical procedures according to diseased vessels



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

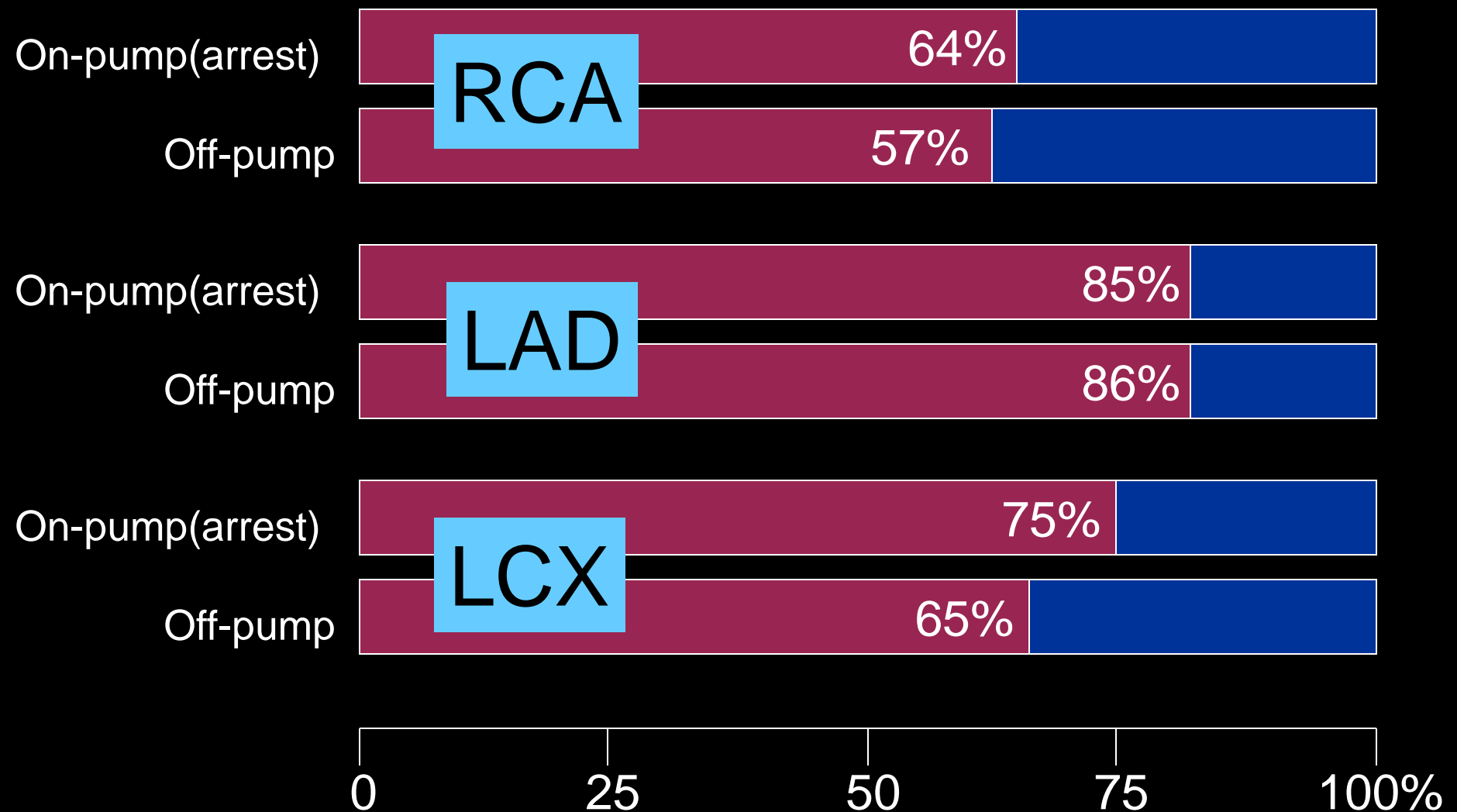


Off to on-pump conversion rate according to diseased vessels (total:3.8%)

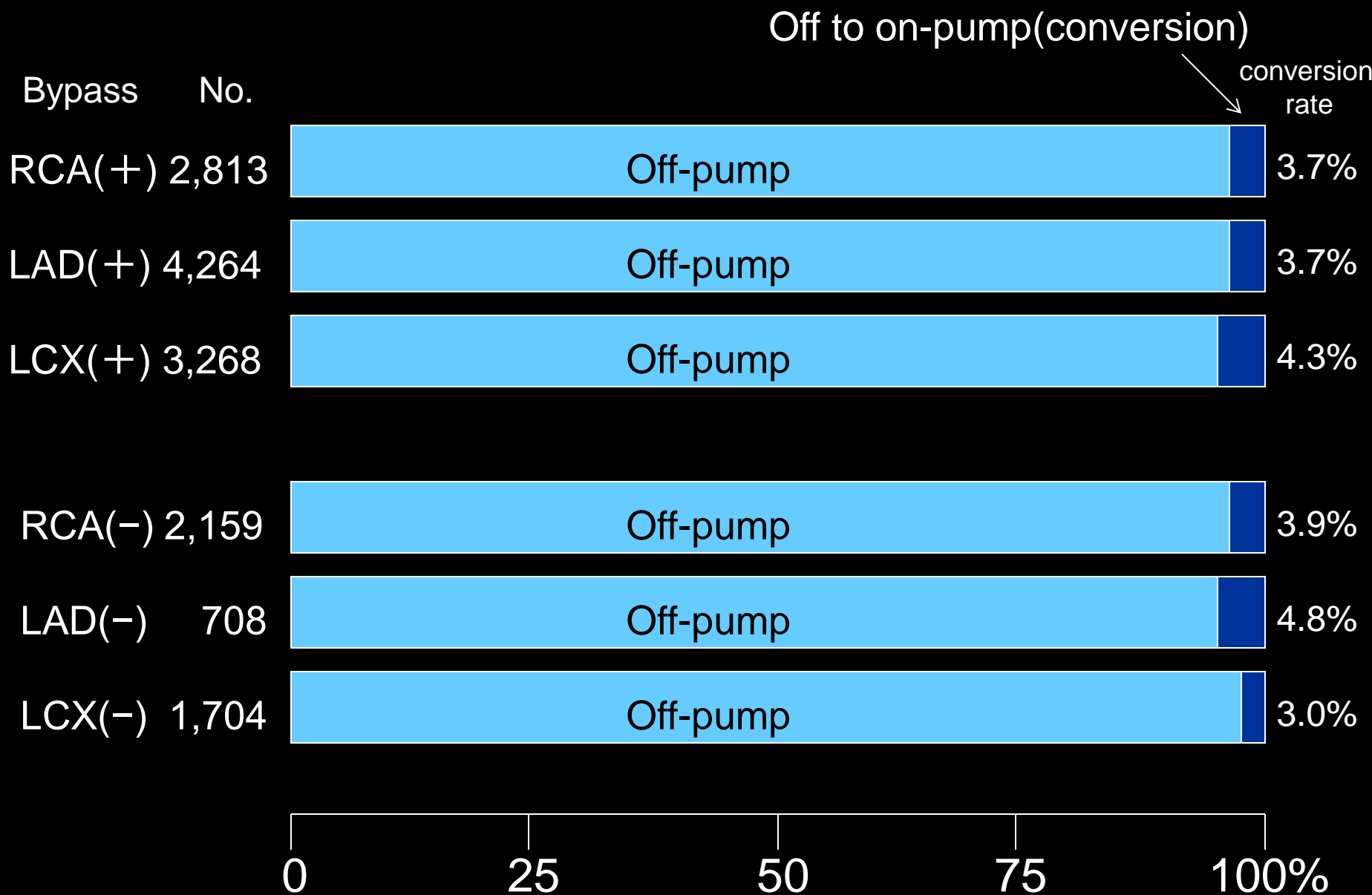


On-pump (arrest) vs. off-pump (Initial elective CABG)

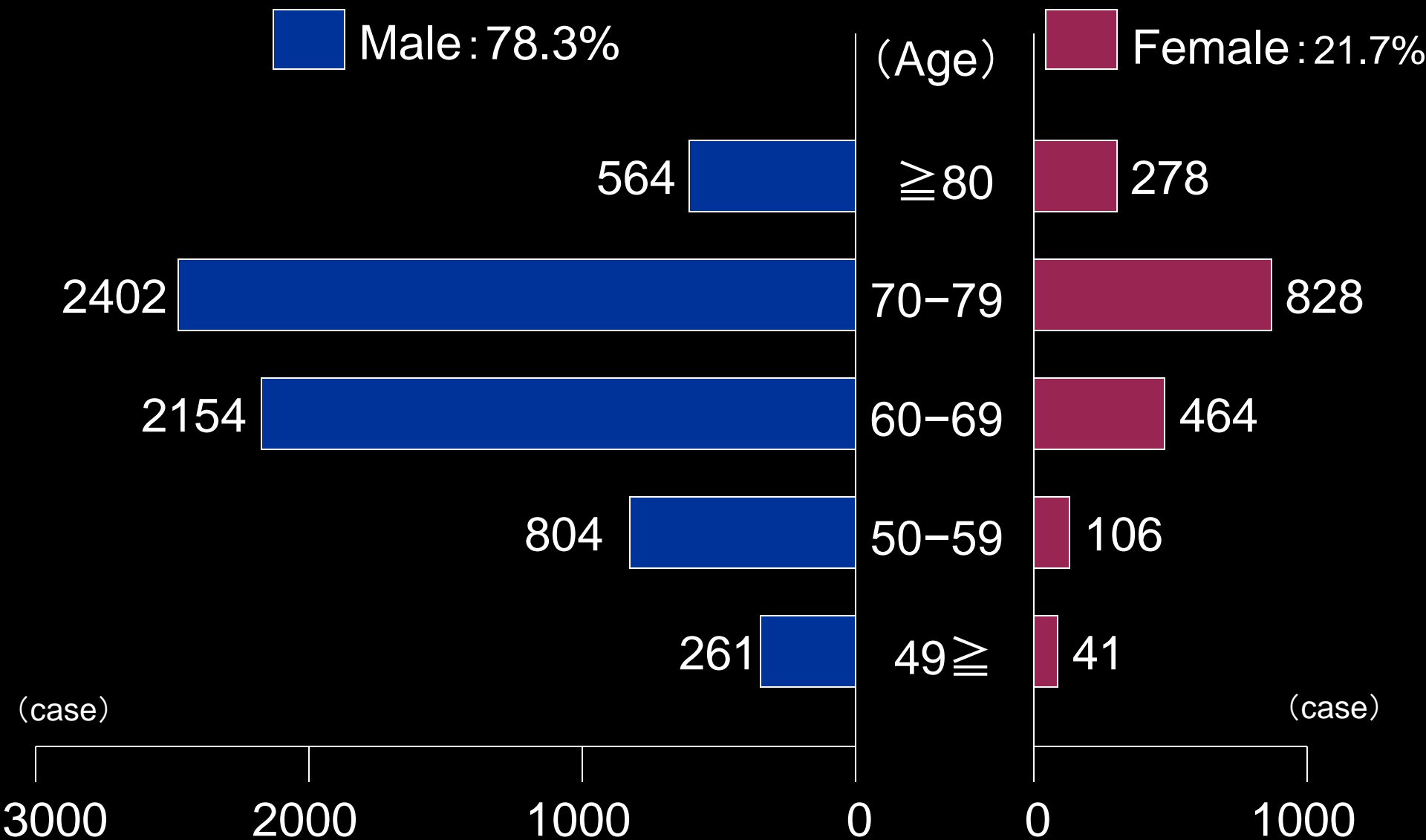
bypass+
bypass-



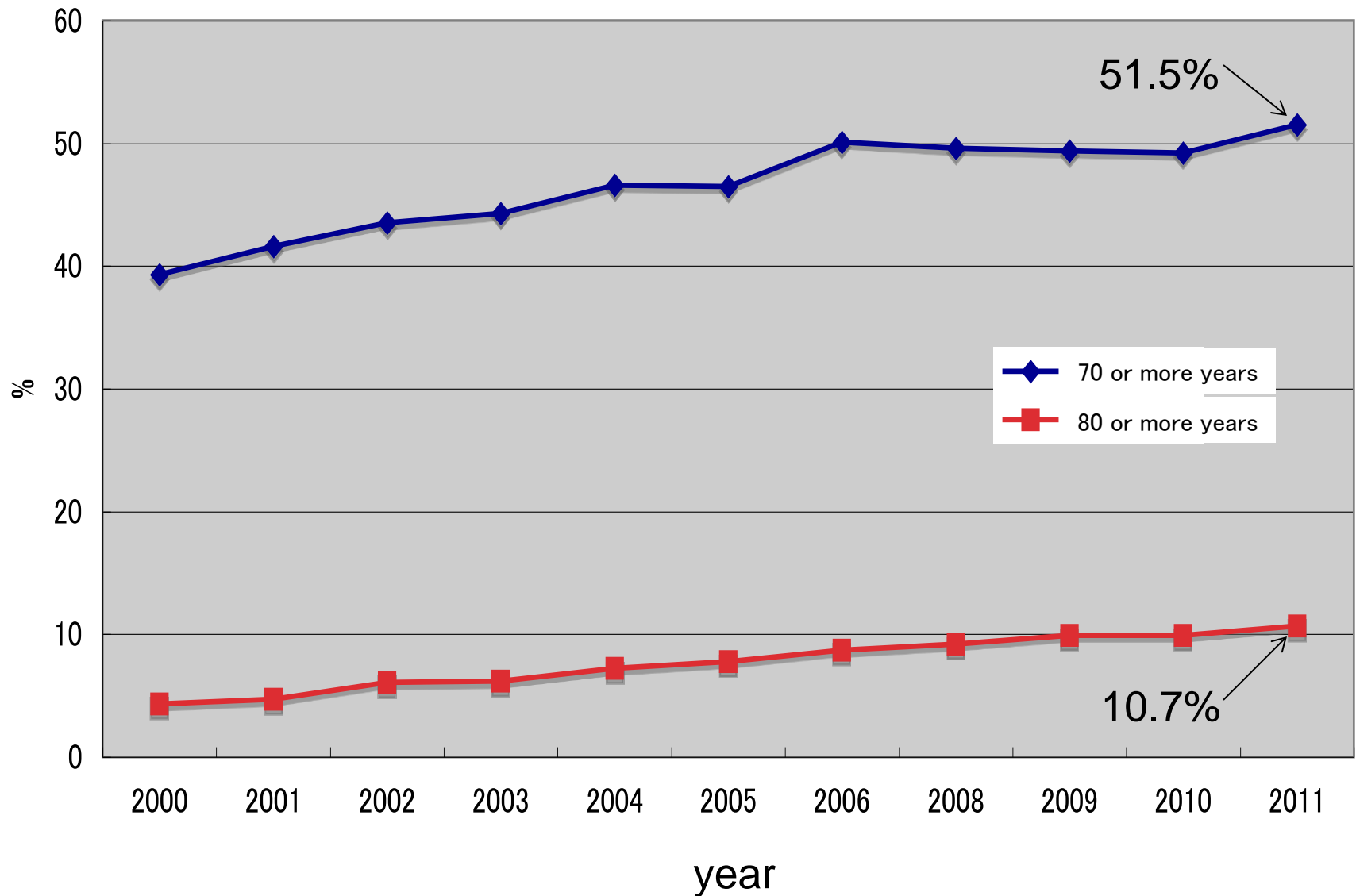
Off-pump vs. off to on-pump conversion (Initial elective CABG)



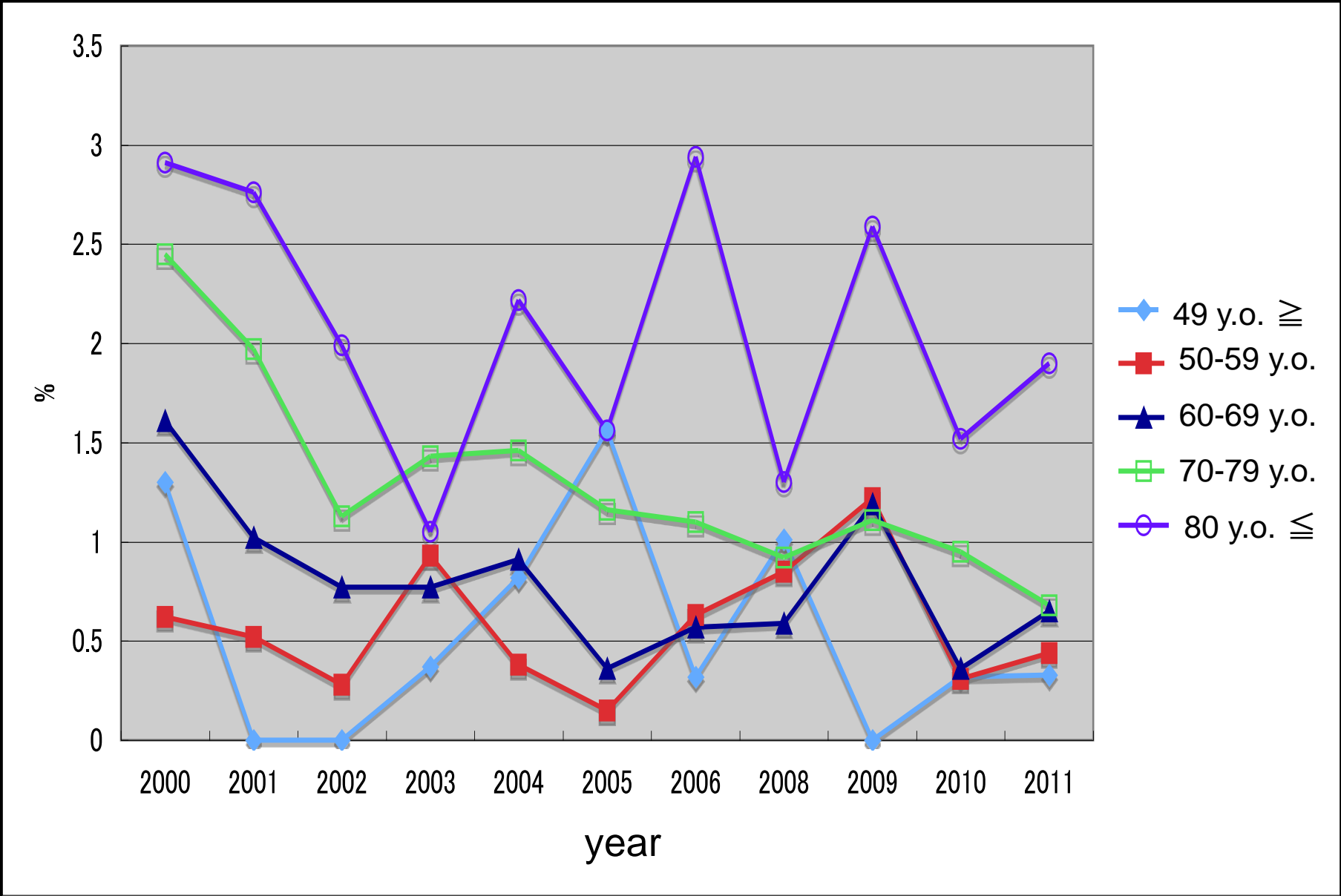
Age distribution (Initial elective cases)



Changes in elderly patients (Initial elective cases)

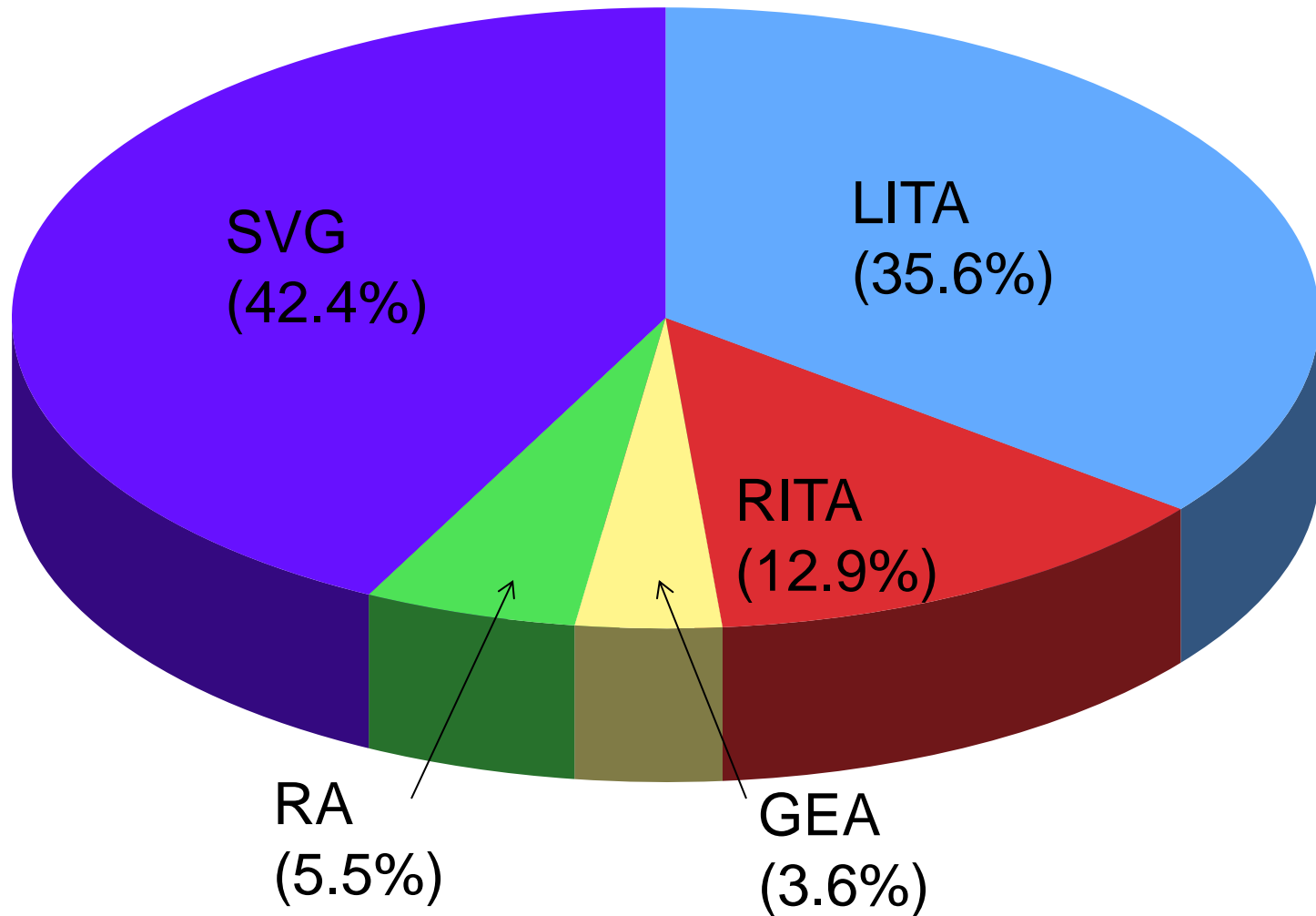


Changes in mortality according to age (Initial elective cases)

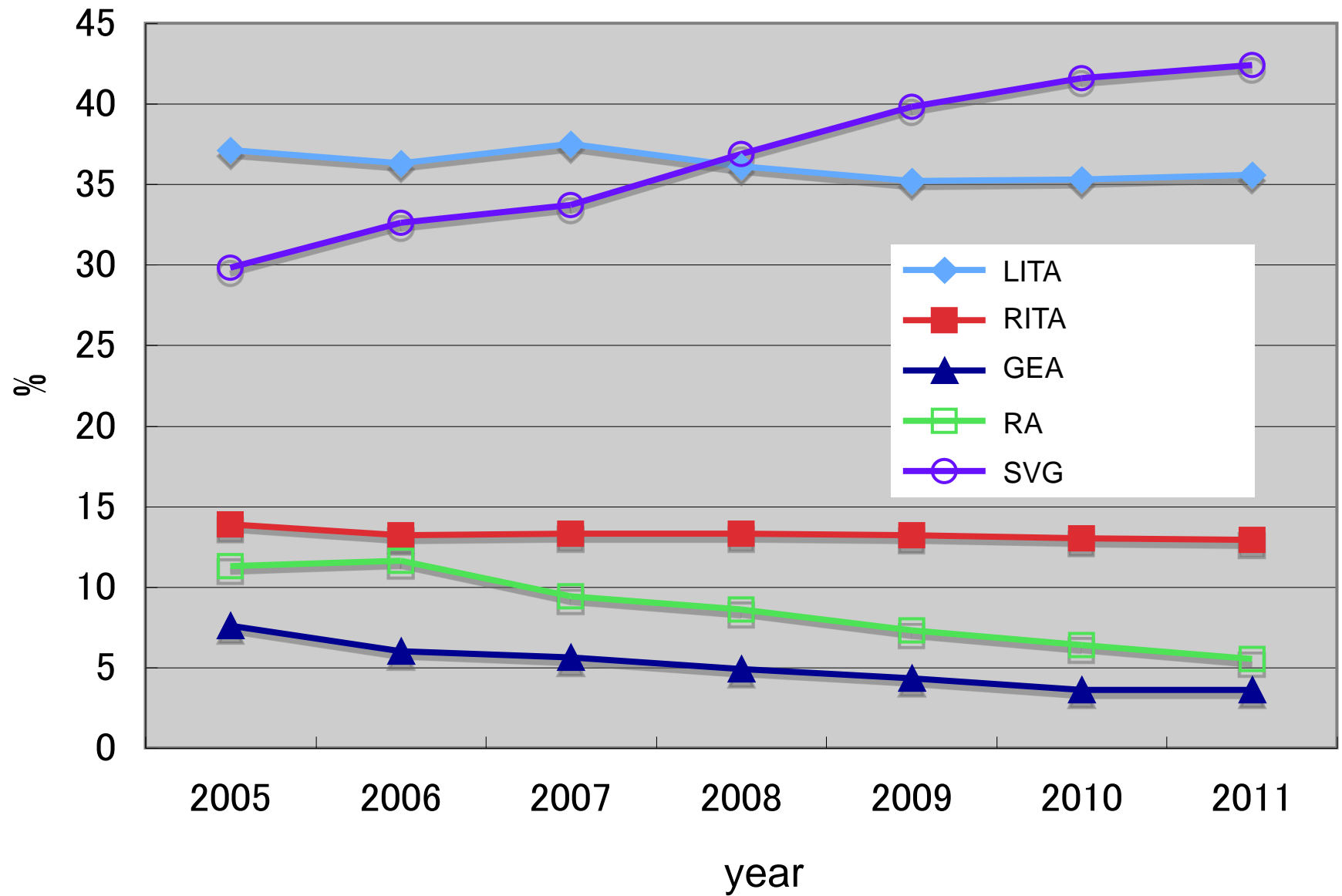


Graft selection

(Total number of grafts: 24,110 grafts)

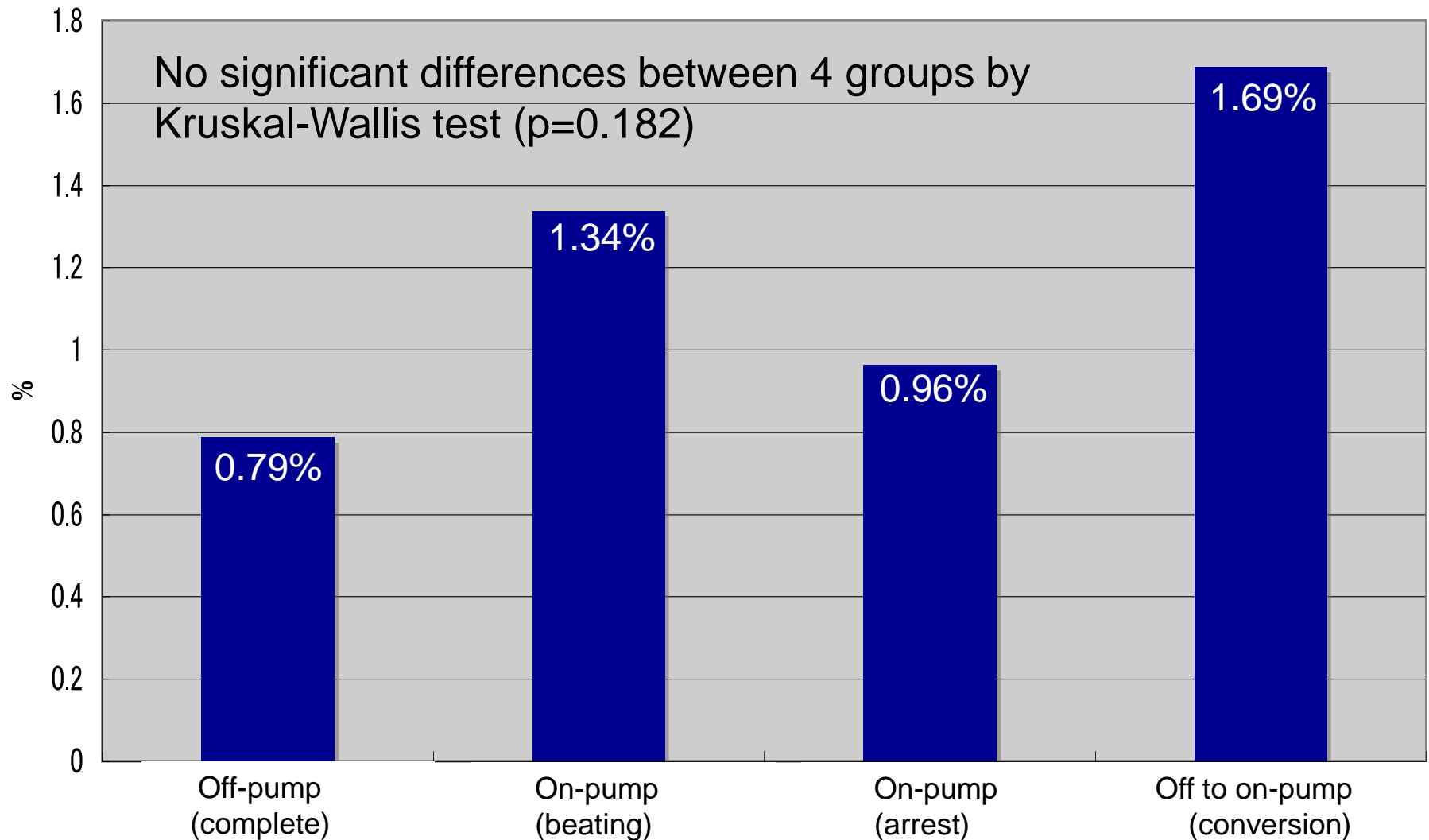


Changes in graft selection



Complication rate of postoperative stroke according to surgical procedures

Total complication rate : $83/8990(\text{isolated CABG}) = 0.92\%$



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

Total cases : 94

Frequency rate : 94 / 8990 (isolated CABG) ; 1.0%

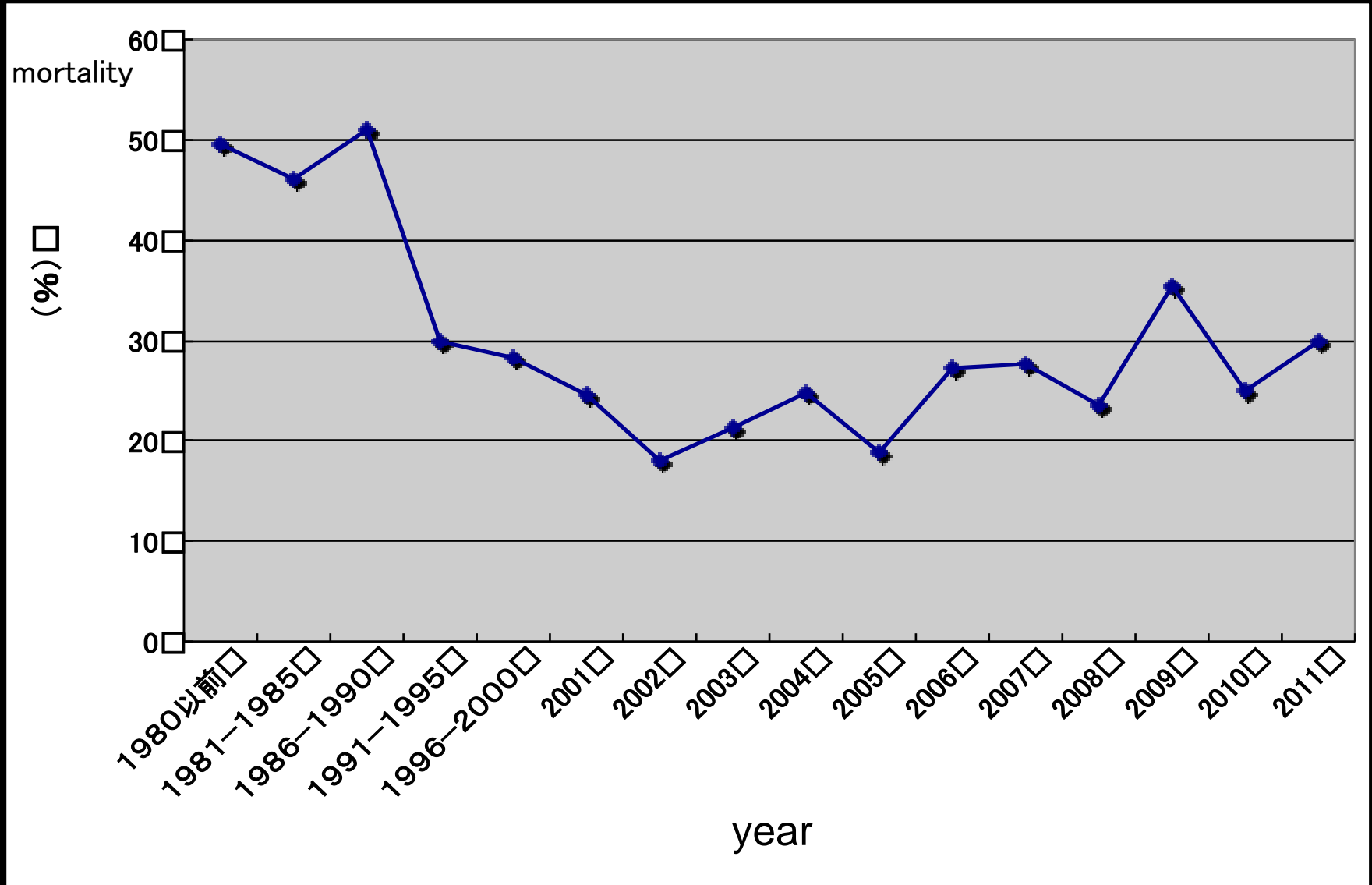
Death cases : 16

Mortality: 17.02%

Results according to surgical procedures

	cases	death	cases	mortality(%)
1 vessel bypass	31	6		19.35
2 vessels bypass	29	3		10.34
3 vessels bypass	21	3		14.29
4 vessels bypass	5	0		0
Othrer procedures	8	4		50.00

Changes in mortality of VSP



2011;

Total cases: 184、death cases: 56(Mortality: 30.4%)

Results of VSP (1)

alive
death

Total cases

128

56

184(mortality:30.4%)

Bypass (+)

46

23

69 (mortality:33.3%)

Bypass (-)

82

33

115 (mortality:28.7%)

(case)

0

50

100

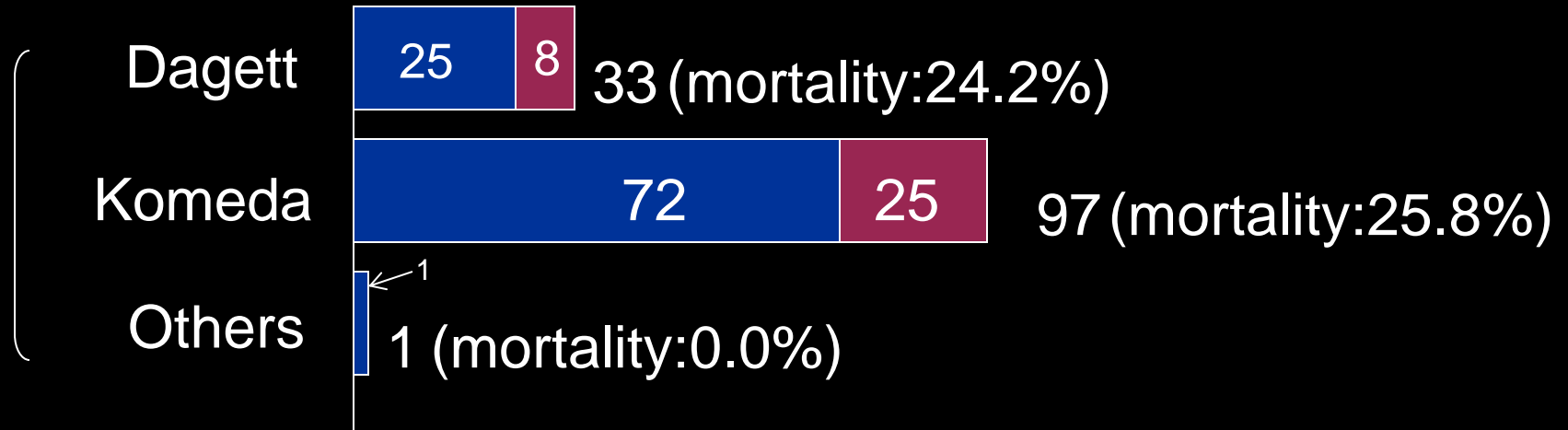
150

200

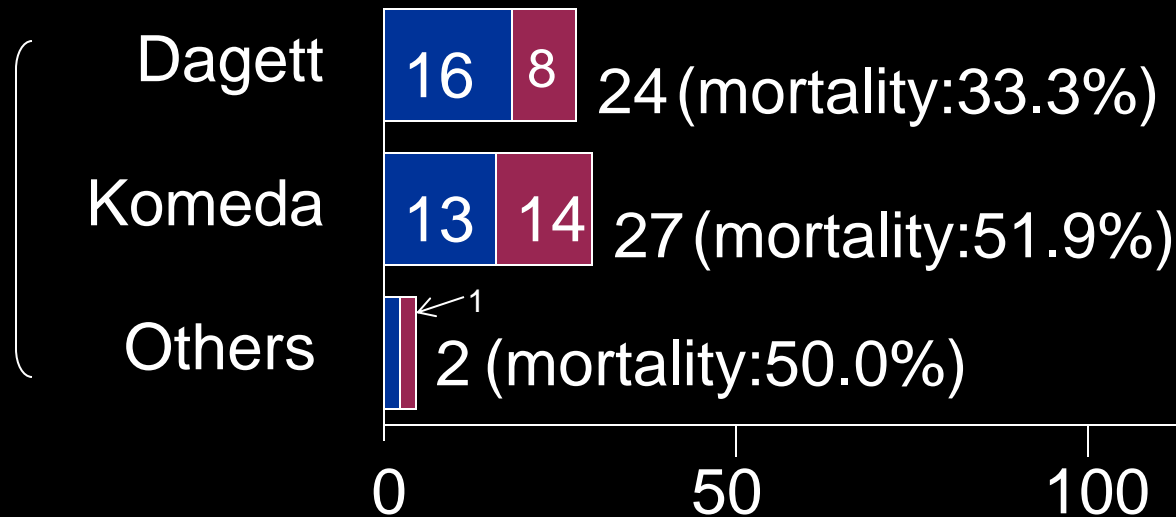
Results of VSP (2)

alive
death

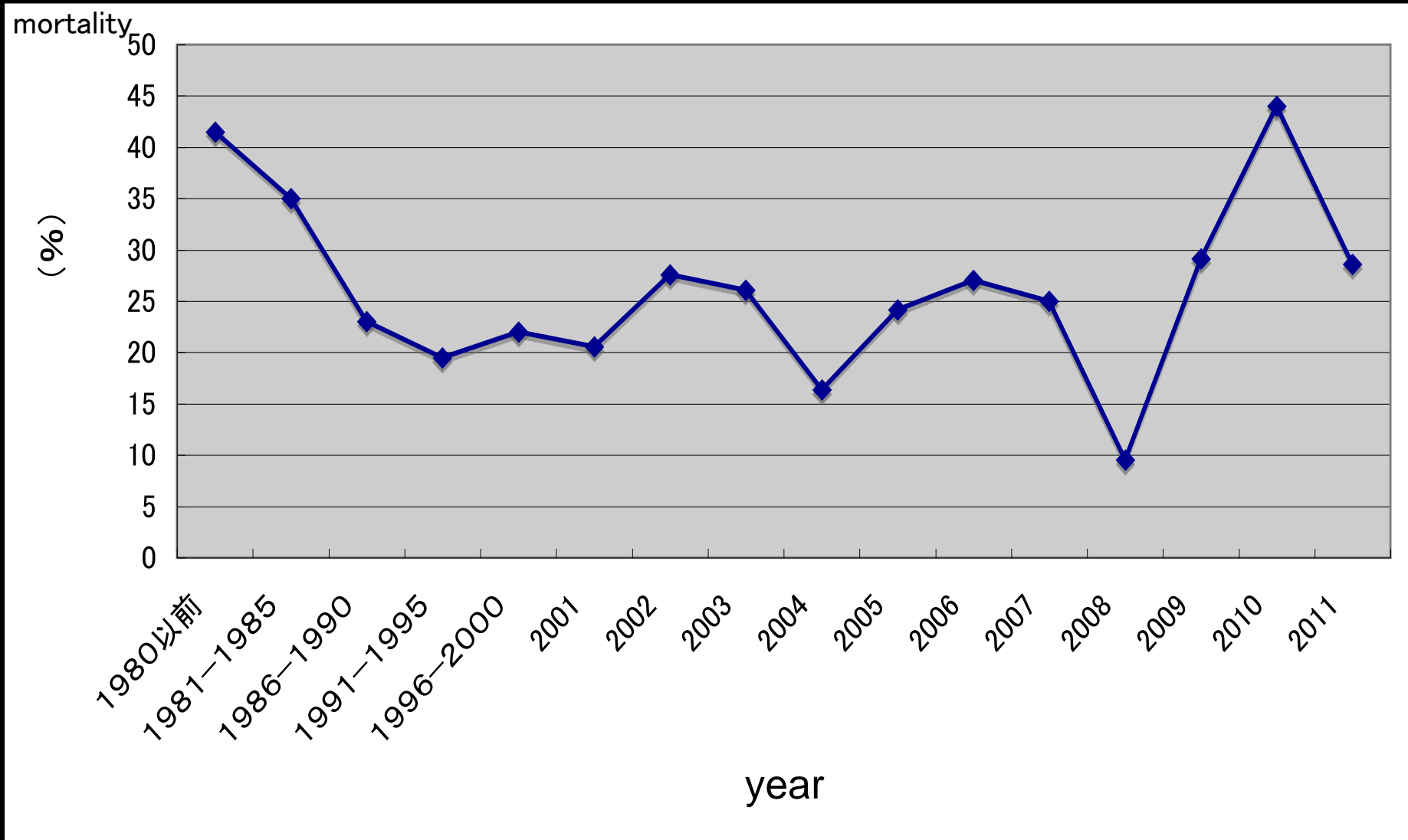
Anterior infarction (mortality 25.2%)



Post-inferior infarction (mortality 43.4%)



Changes in mortality of papillary muscle rupture of LV



2011;

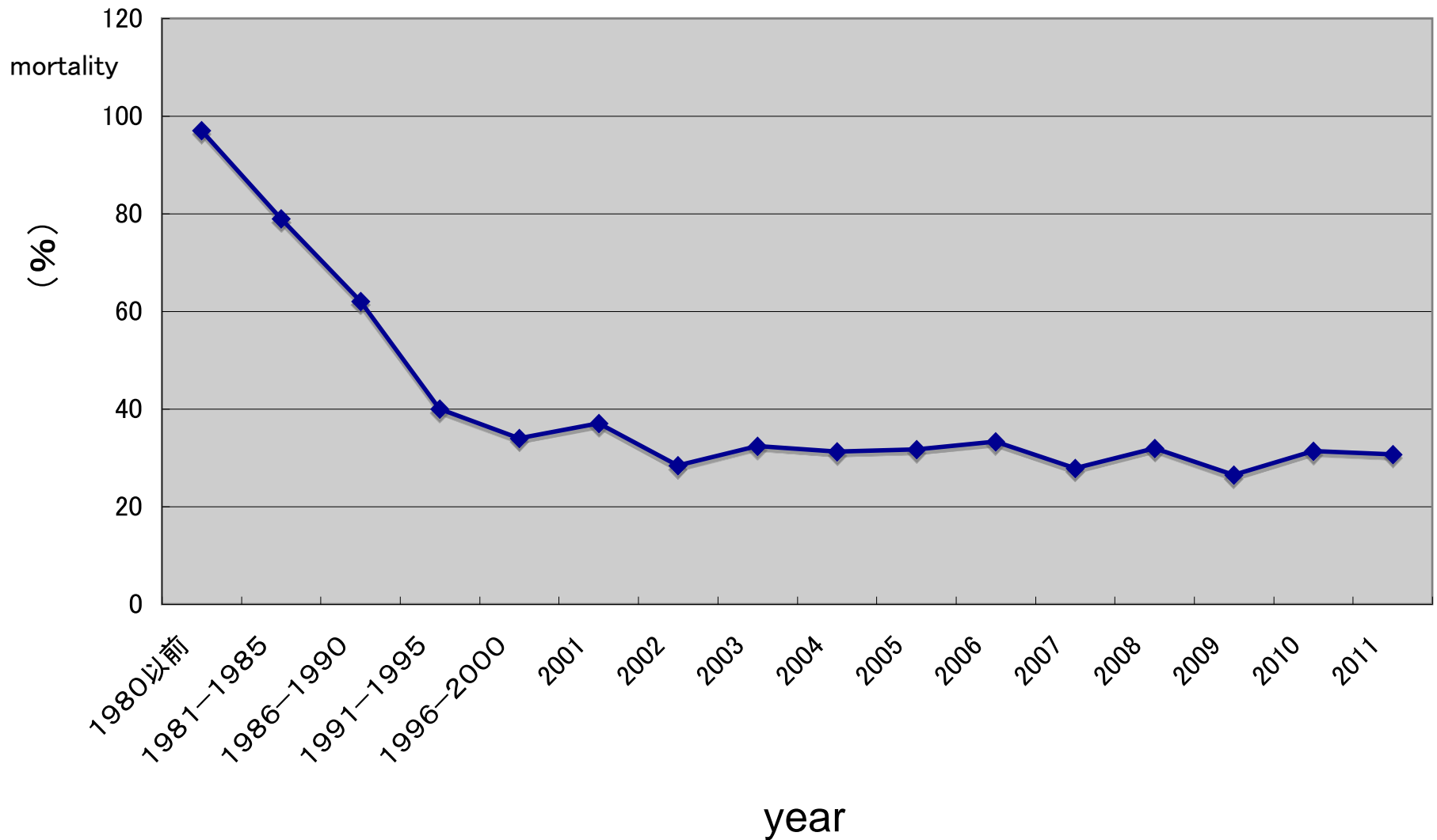
Total cases: 21、death cases: 6 (mortality: 28.6%)

Results of papillary muscle rupture

alive
death



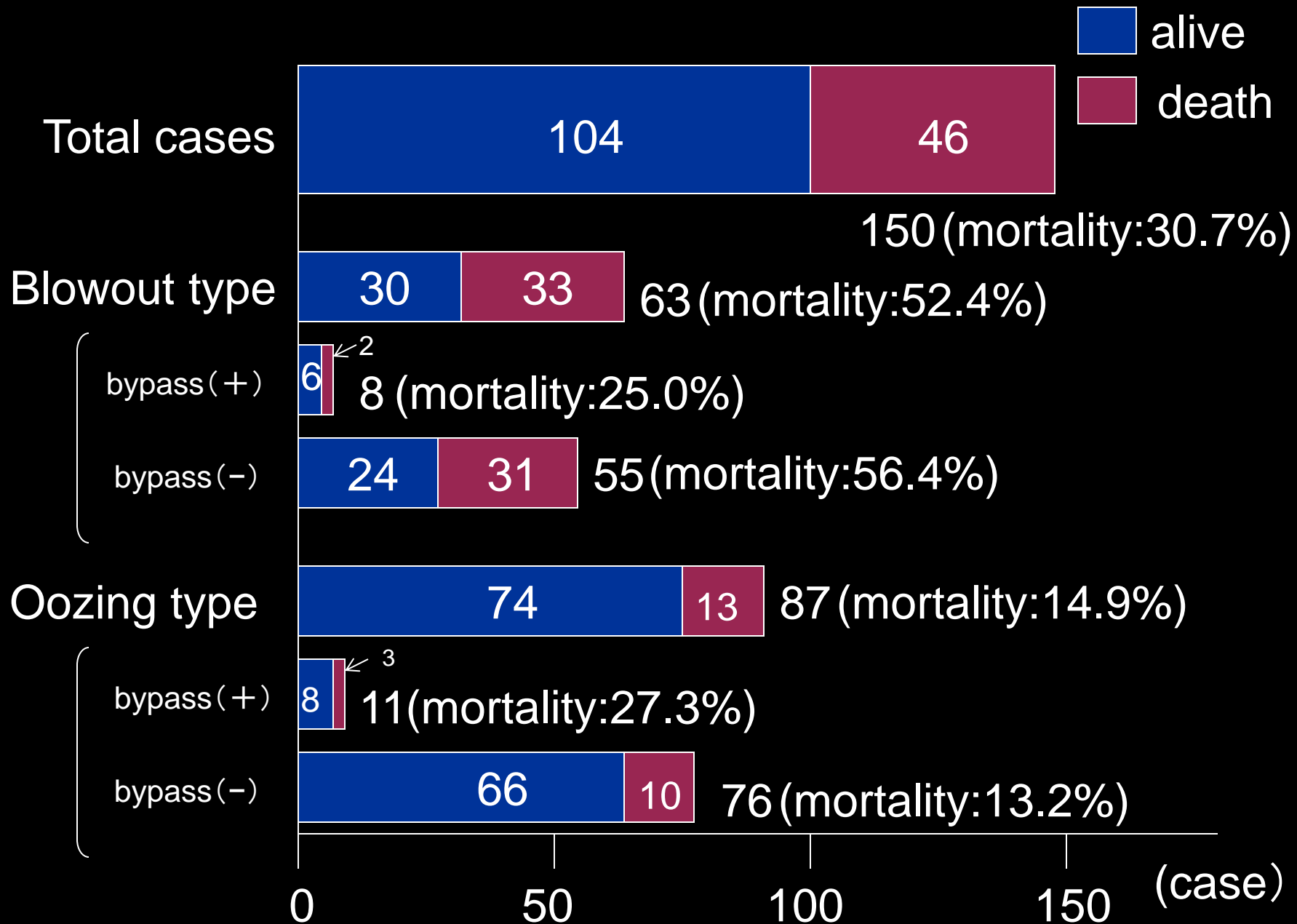
Changes in mortality of cardiac rupture



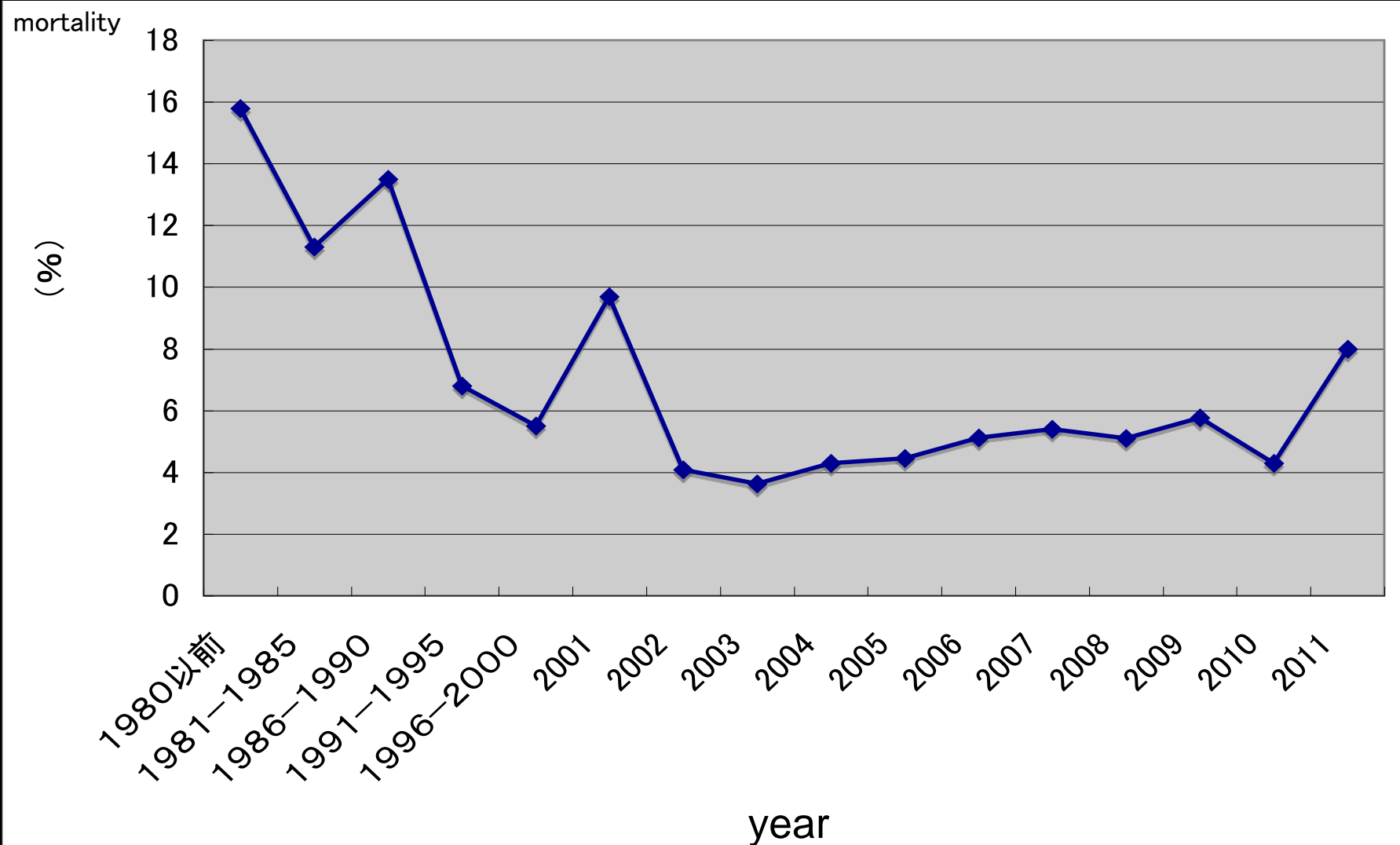
2011;

Total cases: 150、death cases: 46 (mortality: 30.7%)

Results of cardiac rupture



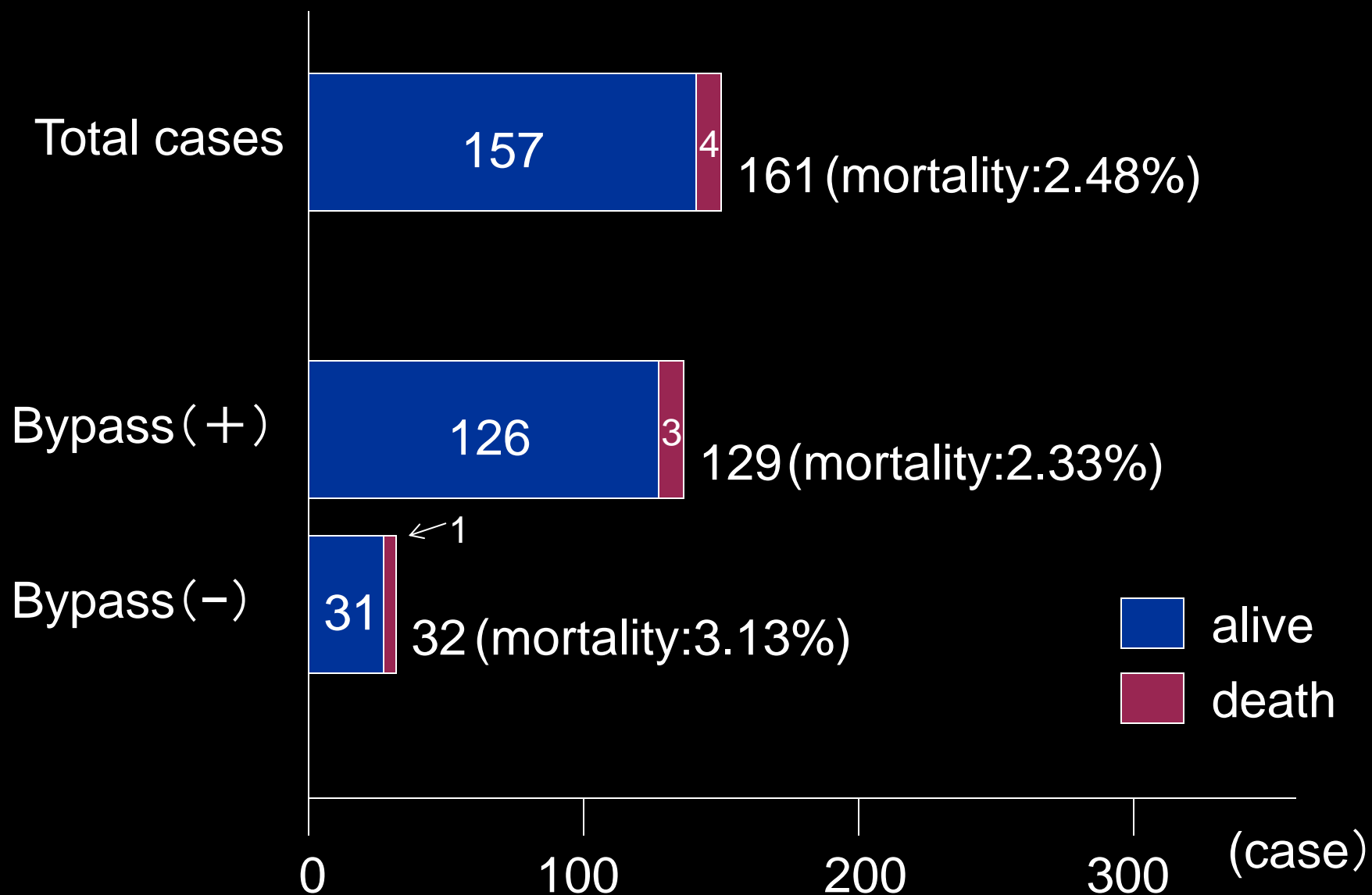
Changes in mortality of left ventricle aneurysm



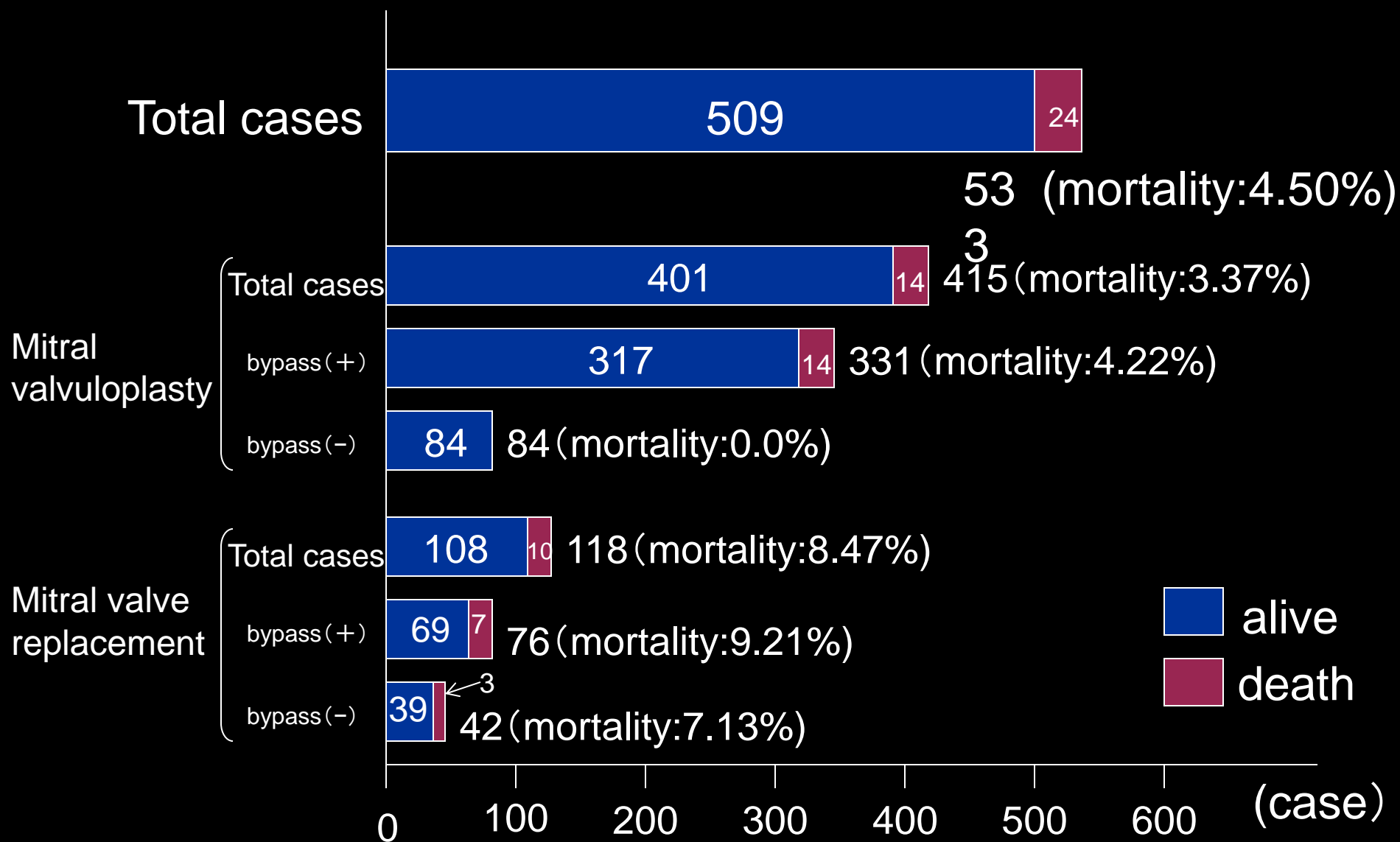
2011;

Total cases: 286、death cases 23 (mortality: 8.0%)

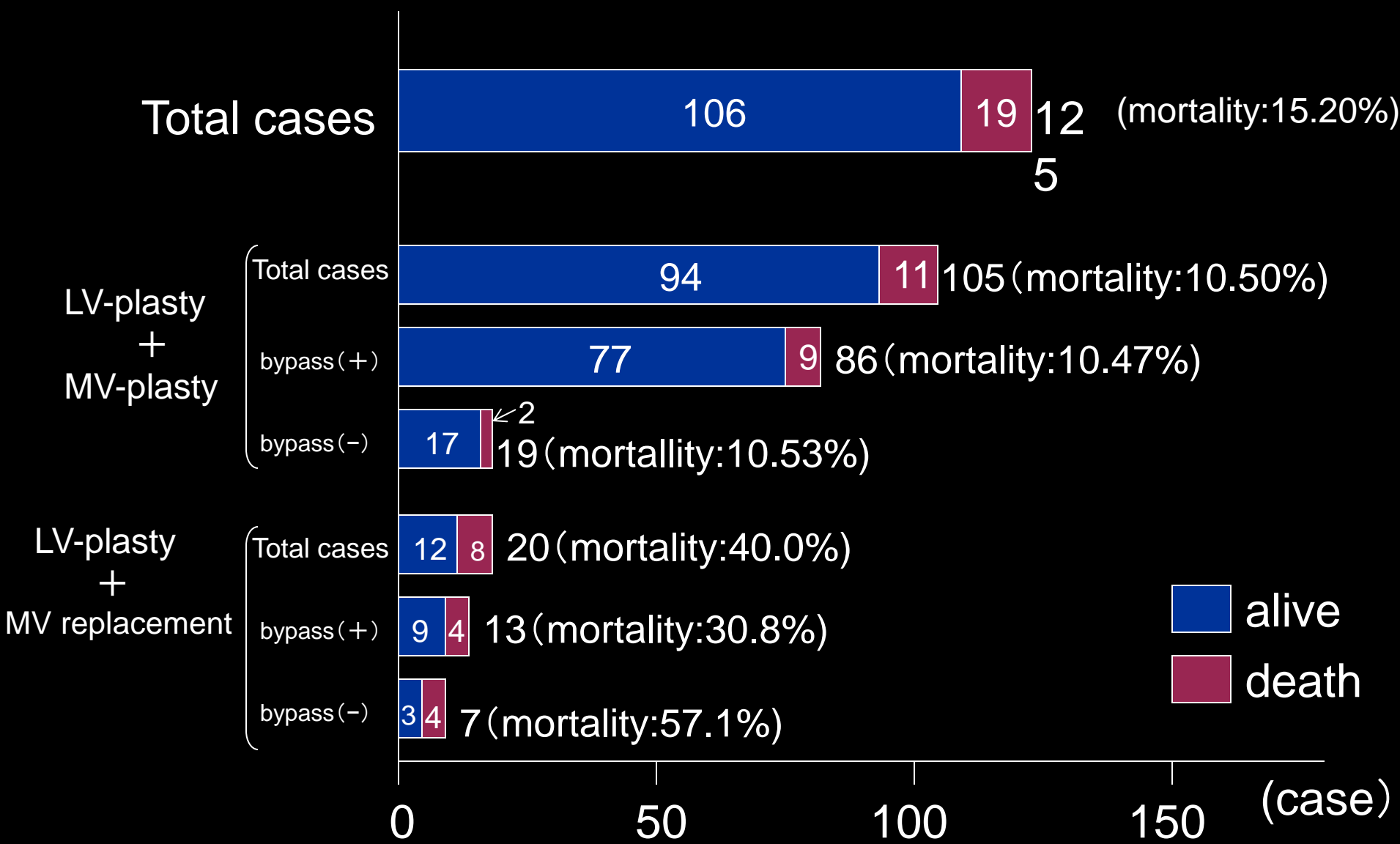
Results of left ventricular-plasty (including left ventriculectomy) against LV aneurysm and/or ischemic cardiomyopathy



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 2.72%, and 1.45% respectively, indicating worst results, in last 10 years.
3. Of all initial elective CABG, 67% cases underwent off-pump CABG (OPCAB), showing high frequency rate. The mortality of OPCAB was 2.11%, which was highest value, in recent years.
4. Of 4 or more bypass surgery, 57% cases underwent OPCAB.
5. CABG cases have been getting older ; the rate of 70 or more years old was 52%、80 or more years old was 11%.

Conclusions (2)

6. The frequency use rate of arterial grafts was 58%, on the other hand, that of vein graft (42%) gradually increased in recent years.
7. Postoperative stroke rate of CABG was 0.92% and there were no significantly differences between surgical procedures.
8. Emergency CABG after complications of PCI were performed 1.0% of isolated CABG cases, demonstrating high mortality (17.0%).
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.