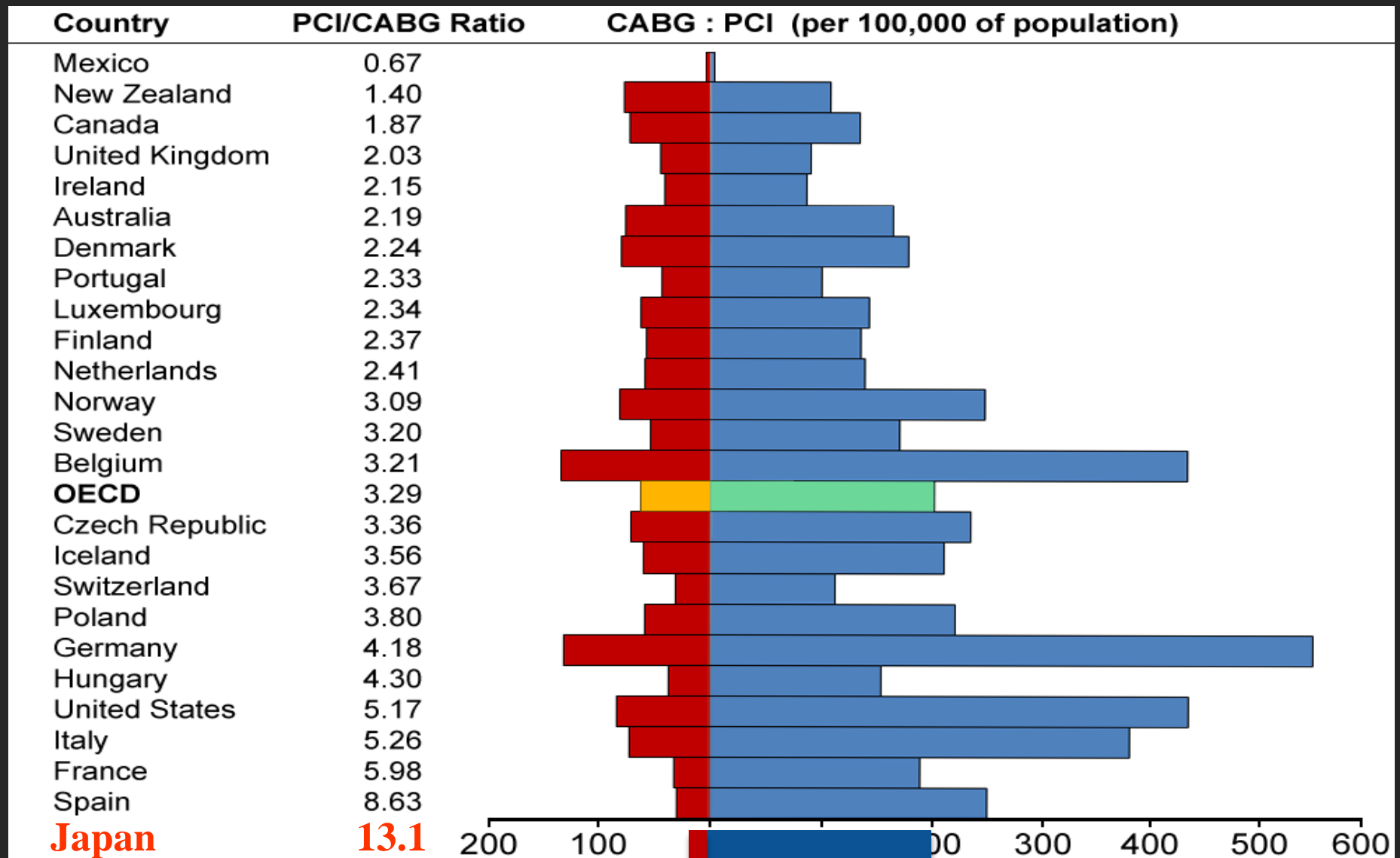


# CABG From Around the World: Prospects and Challenges The View from Japan

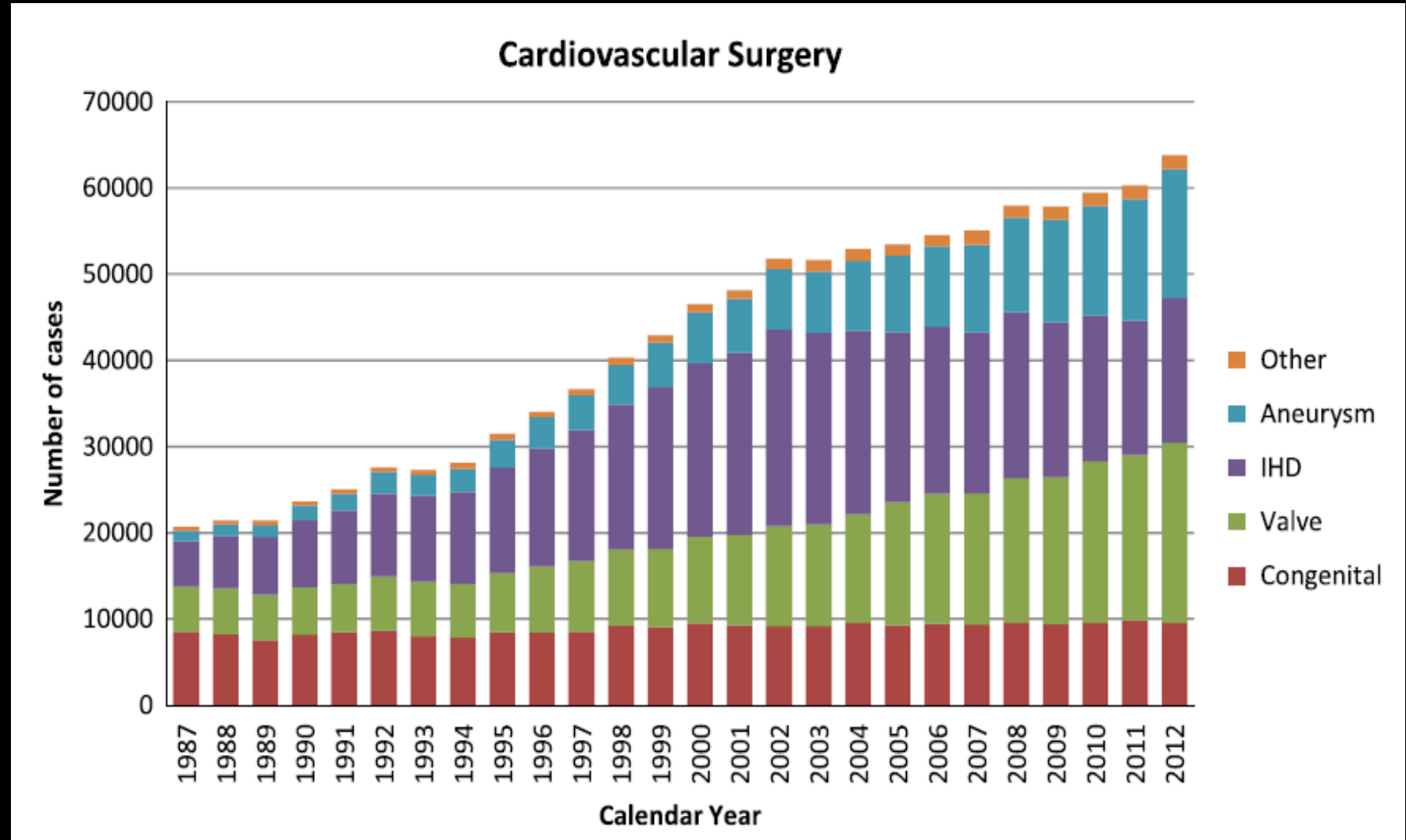
Department of Cardiovascular Surgery  
National Cerebral and Cardiovascular Center  
Osaka, Japan

AATS International Coronary Congress in New York  
August 23, 2015

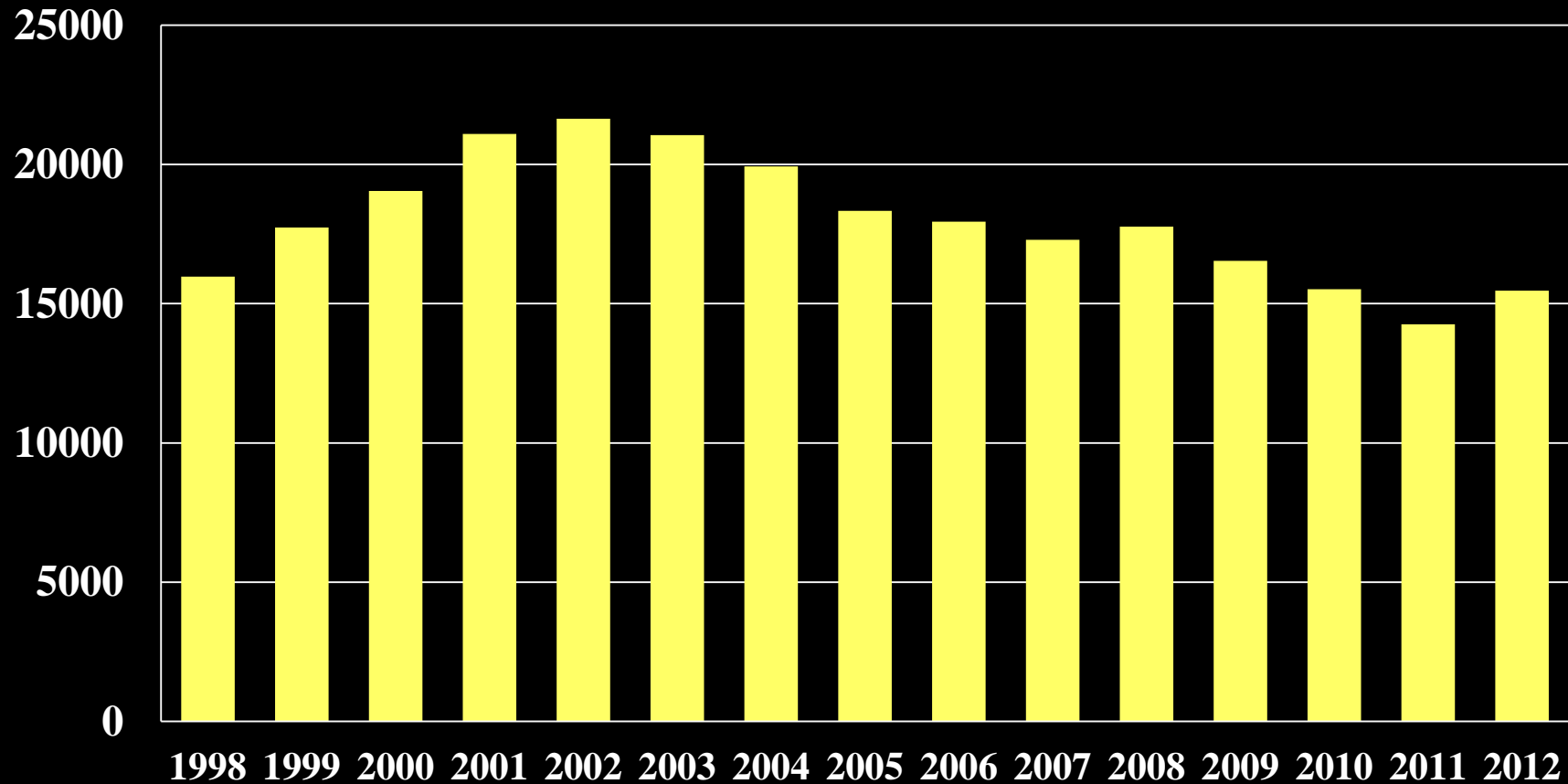
# PCI to CABG Ratio in the World



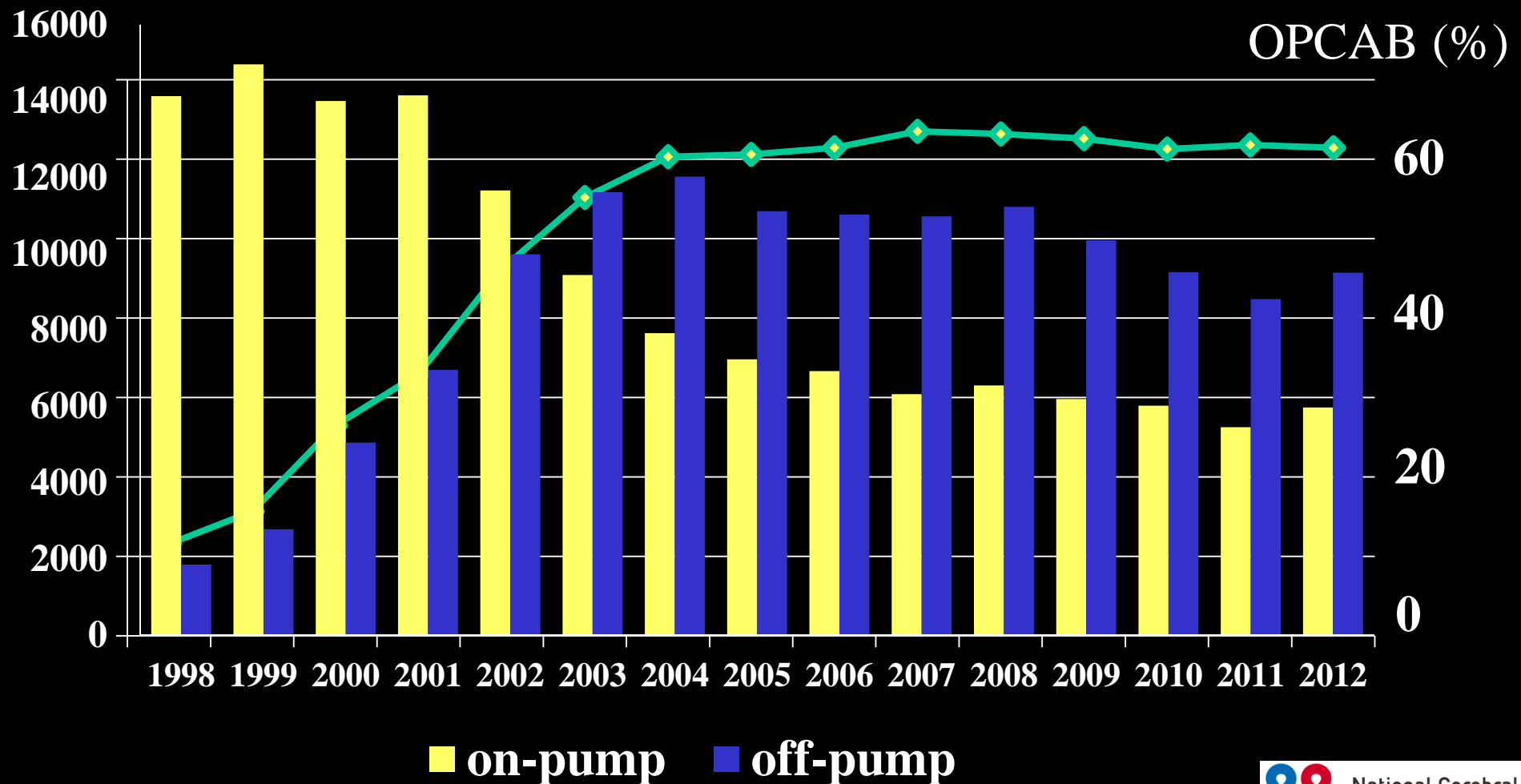
# Annual Number of Cardiovascular Surgery in Japan (JATS database)



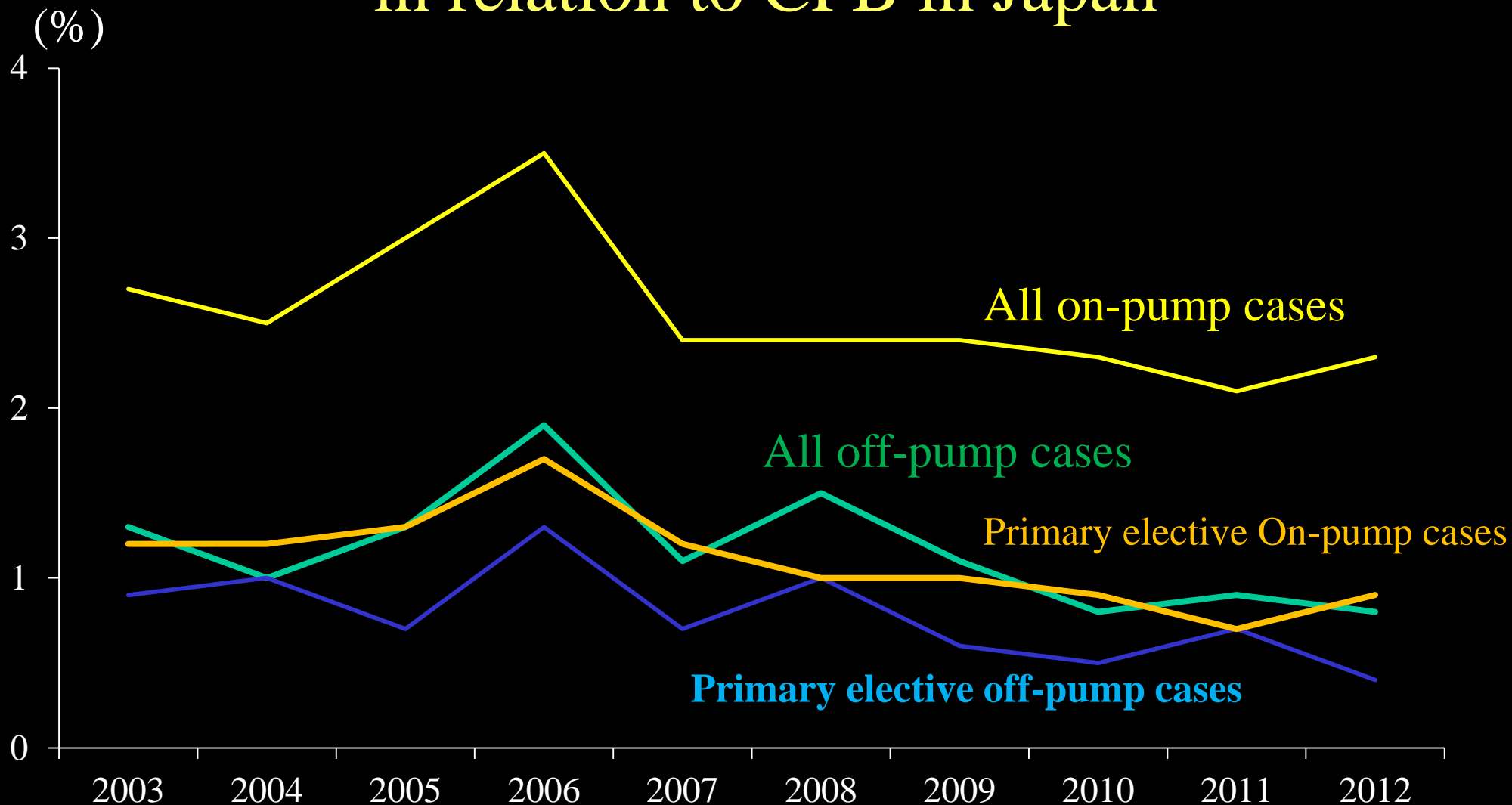
# Annual number of CABG cases in Japan



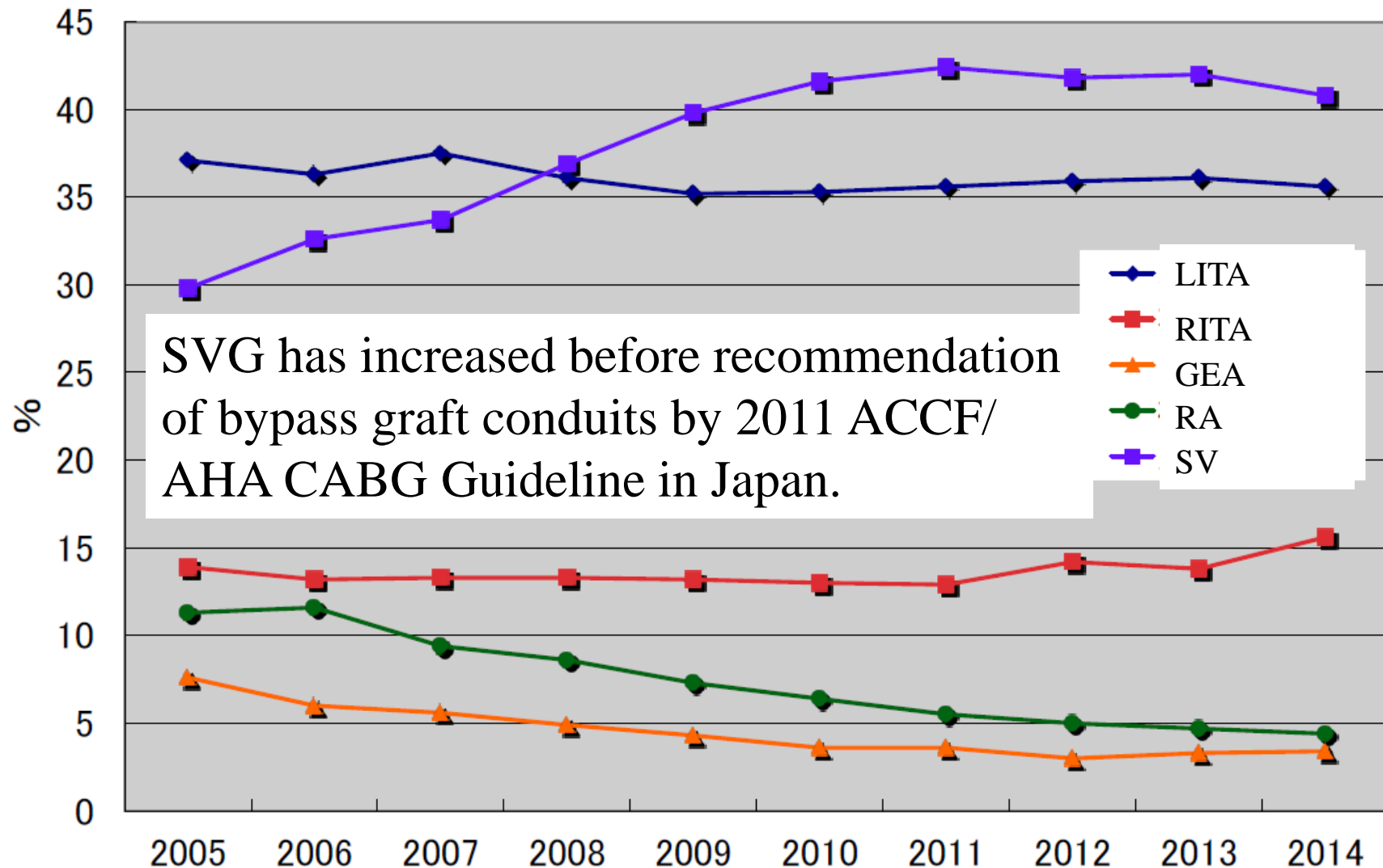
# Annual number of CABG cases and percentage of OPCAB in Japan



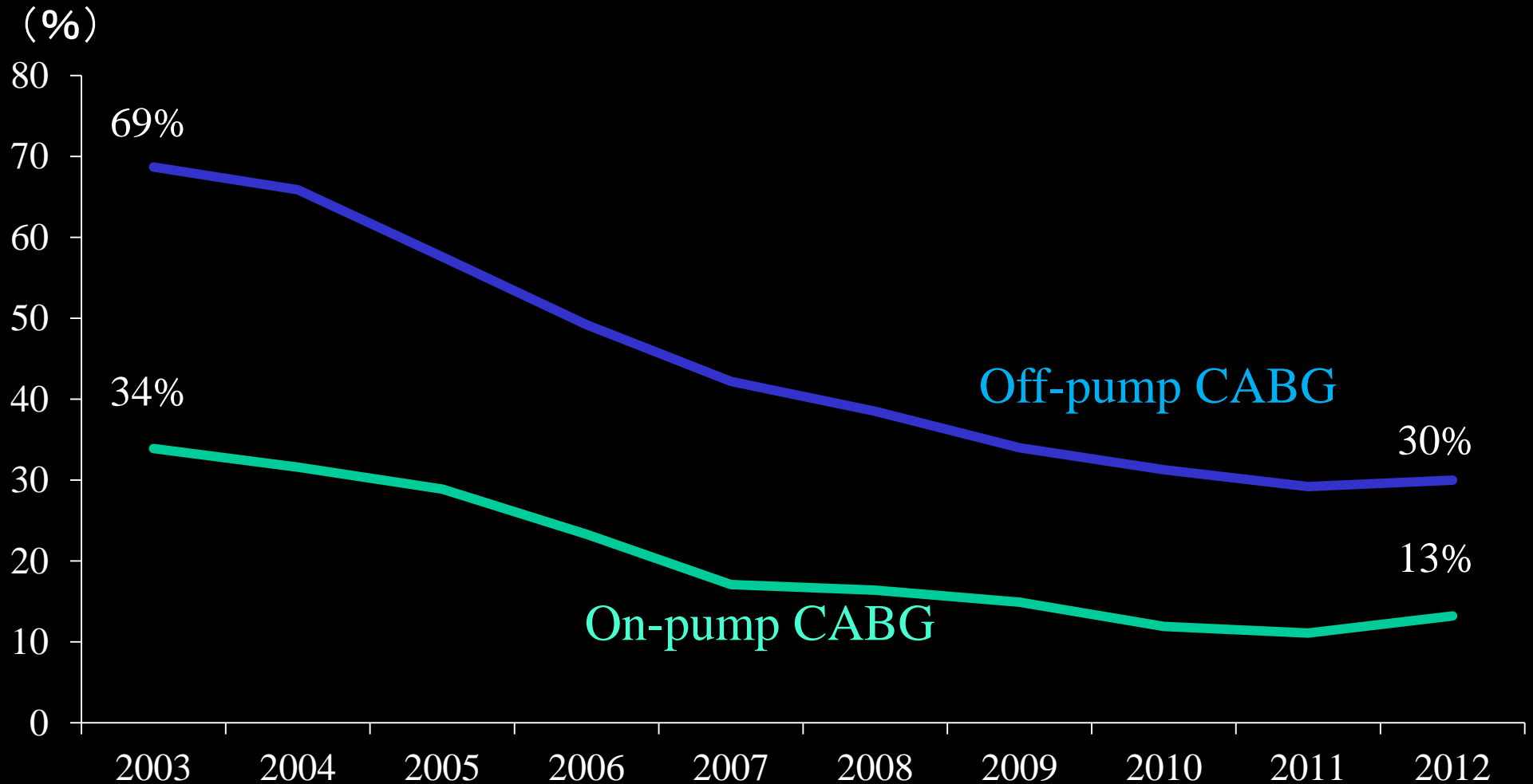
# Annual change of operative mortality in relation to CPB in Japan



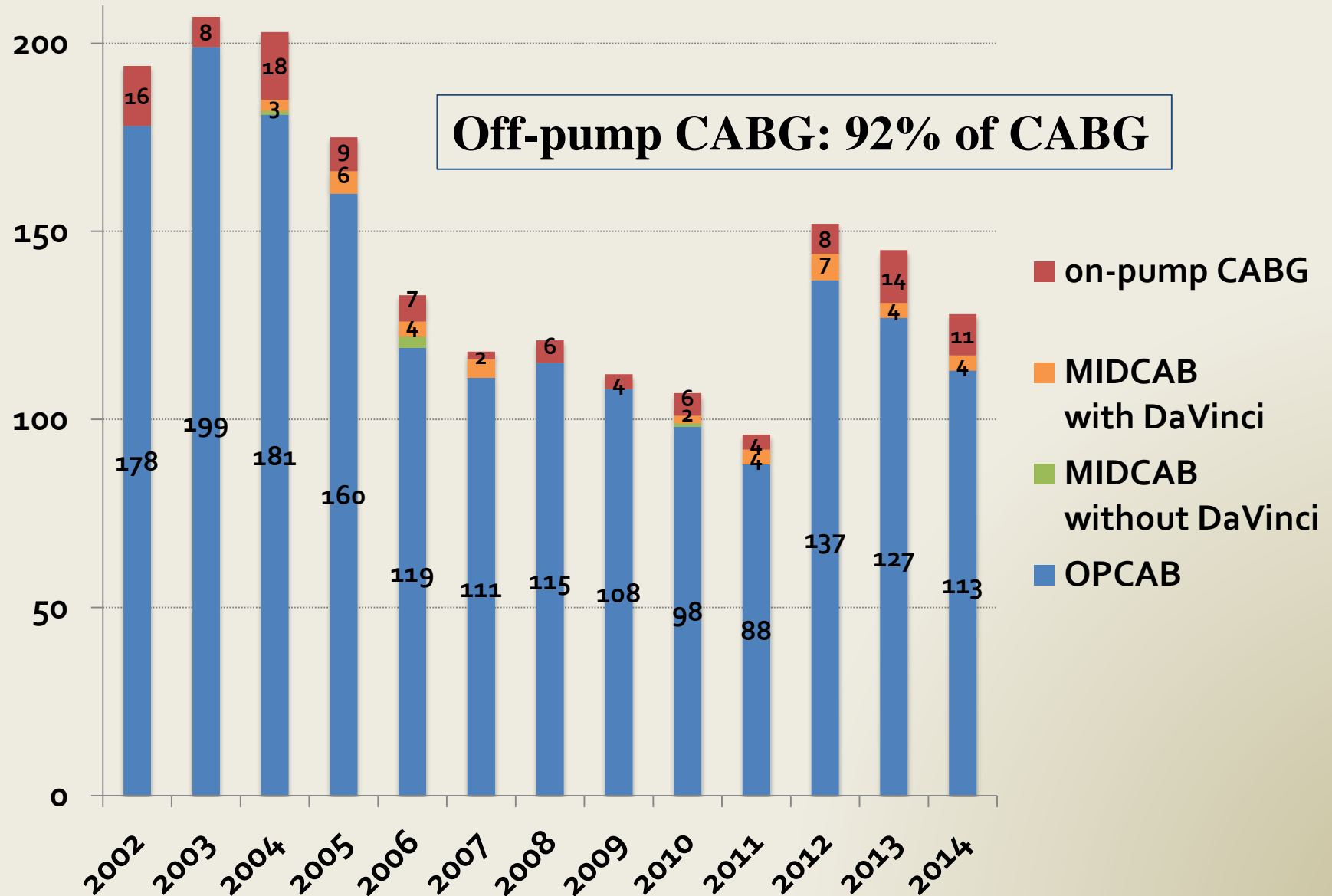
# Annual change of graft materials in Japan



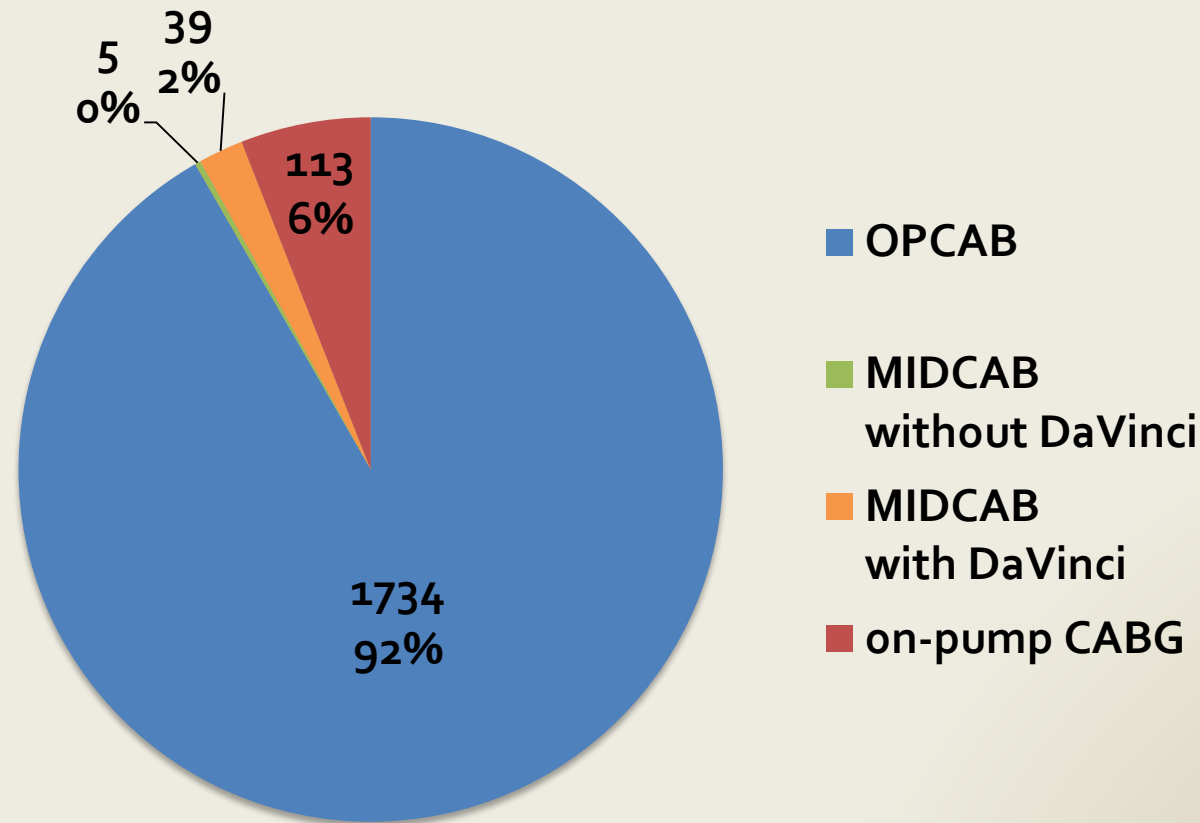
# Frequency of Total Arterial CABG in Japan



# Annual Number of Isolated CABG in NCVC



# Distribution of CABG in NCVC (2002-2014)



- **Aorta no-touch total arterial OPCAB: 1557 pts (90 % of OPCAB)**

*Why do we use arterial grafts in OPCAB  
in my institute?*



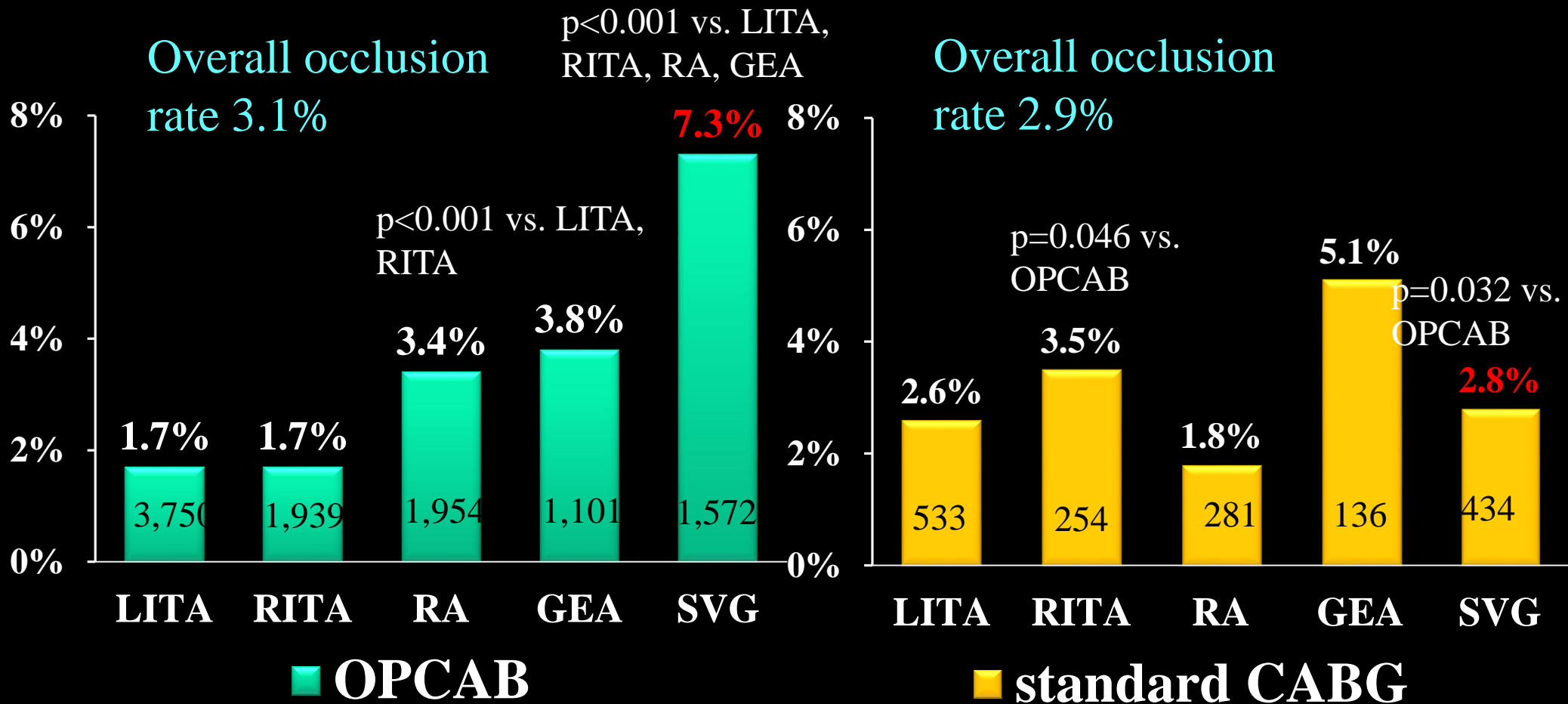
# Off-pump coronary artery bypass sacrifices vein graft patency:

Meta-analysis of randomized trials

	OPCAB	CCAB	Risk Diff.
Arterial graft	398/422 (94%)	414/431 (96%)	2.0% (-1.2-5.2)
Venous graft	385/515 (74%)	492/626 (79%)	<u>5.0% (0.2-7.8)</u>
Overall graft	857/1006 (85%)	1008/1146 (88%)	3.0% (0.6-5.4)

Takagi H. J Thorac Cardiovasc Surg 2007;133: e2-3

# Overall bypass occlusion rate in relation to graft material and CPB in Japan



The 23<sup>rd</sup> EACTS Annual Meeting in Vienna, Oct 19, 2009

# Is there a hypercoagulable state after off-pump coronary artery bypass surgery? What do we know and what can we do?

Paul A. Kurlansky, MD

J Thorac Cardiovasc Surg 2003;126:7-10

----decrease in platelet count and activation of fibrinolysis were more profound in on-pump CABG, whereas the activation of fibrinogen and other acute phase reactants (consistent with the deposition of thrombus at surgical sites of injury) seemed to be more evident during the first postoperative day in patients undergoing OPCAB. Therefore, **patients undergoing OPCAB might well be expected to be more prone to graft closure.**

# Summary

1. OPCAB has been performed in more than 60% of CABG cases in Japan. Operative mortality of OPCAB was lower than that of on-pump CABG.
2. Flow competition of arterial grafts decreased total arterial OPCAB. Saphenous vein grafts is more frequently used (40%) than 9 years ago (30%).
3. Graft patency of SVG in OPCAB was 4.5% worse than that in standard CABG in Japan. Total arterial OPCAB should not be abandoned.