

Participant ID: \_\_\_\_\_ Hospital name: \_\_\_\_\_ Gender:  Male  Female  
 Date of Birth: 19\_\_\_\_ / \_\_\_\_ / \_\_\_\_ or Age: \_\_\_\_\_

**Q. Complications**

Memo: \_\_\_\_\_

Early mortality (<30 days):  Alive  Dead

**Early Complications**  No.  Yes

Date: 20\_\_\_\_ / \_\_\_\_ / \_\_\_\_ (yyyy/mm/dd)

or Post-operative months : \_\_\_\_\_

- Perioperative Myocardial Infarction
- Bleeding
- Valvular Dysfunction
- Graft Occlusion
- Coronary Occlusion
- Other Cardiac Problem
- Non Cardiac Problem

Reoperation :  performed  not performed

memo : \_\_\_\_\_

**Neurologic**  No  Yes

Date: 20\_\_\_\_ / \_\_\_\_ / \_\_\_\_ (yyyy/mm/dd)

or Post-operative months : \_\_\_\_\_

- Stroke
- Transient
- Continuous Coma >=24Hrs

**Renal Failure**  No  Yes

Date: 20\_\_\_\_ / \_\_\_\_ / \_\_\_\_ (yyyy/mm/dd)

or Post-operative months : \_\_\_\_\_

BUN : \_\_\_\_\_ Cr : \_\_\_\_\_

→ Dialysis :  No  Yes →  Transient  
 Permanent

**Vascular**  No  Yes

Date: 20\_\_\_\_ / \_\_\_\_ / \_\_\_\_ (yyyy/mm/dd)

or Post-operative months : \_\_\_\_\_

- Aortic Dissection
- Iliac/Femoral Dissection
- Acute Limb Ischemia

**Infection**  No  Yes

Date: 20\_\_\_\_ / \_\_\_\_ / \_\_\_\_ (yyyy/mm/dd)

or Post-operative months : \_\_\_\_\_

- Sternum-deep
- Sternum-superficial

**Pulmonary**  No  Yes

Date: 20\_\_\_\_ / \_\_\_\_ / \_\_\_\_ (yyyy/mm/dd)

or Post-operative months : \_\_\_\_\_

- Prolonged Ventilation
- Pneumonia
- Pulmonary Embolism

**Others**  No  Yes

Date: 20\_\_\_\_ / \_\_\_\_ / \_\_\_\_ (yyyy/mm/dd)

or Post-operative months : \_\_\_\_\_

- Heart Block
- Cardiac Arrest
- Atrial Fibrillation
- Anticoagulant Complication
- Tamponade
- Gastro-Intestinal Complication
- Multi-system Failure
- DIC
- Liver Dysfunction

↓  
 AST : \_\_\_\_\_ ALT : \_\_\_\_\_ T-Bil : \_\_\_\_\_

Participant ID: ..... Hospital name: ..... Gender:  Male  Female  
 Date of Birth: 19..... / ..... or Age : .....

**R. Event (I)** Date : 20..... / ..... (yyyy/mm)  Myocardial Infarction →( PCI site :  Yes )  CABG  
 Associated lesion (Culprit) or ..... months  PCI →( previous PCI site :  Yes )  Stroke  Cardiac death

prior PCI site restenosis ≥ 51%

+ \* All PCI sites (Auto input)

CABG		
Graft material	Target	Patency
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion

\* All Grafts, Targets (Auto input)

Memo: .....

**S. Event (II)** Date : 20..... / ..... (yyyy/mm)  Myocardial Infarction →( PCI site :  Yes )  CABG  
 Associated lesion (Culprit) or ..... months  PCI →( previous PCI site :  Yes )  Stroke  Cardiac death

prior PCI site restenosis ≥ 51%

+ \* All PCI sites (Auto input)

CABG		
Graft material	Target	Patency
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion

\* All Grafts, Targets (Auto input)

Memo: .....

**T. Event (III)** Date : 20..... / ..... (yyyy/mm)  Myocardial Infarction →( PCI site :  Yes )  CABG  
 Associated lesion (Culprit) or ..... months  PCI →( previous PCI site :  Yes )  Stroke  Cardiac death

prior PCI site restenosis ≥ 51%

+ \* All PCI sites (Auto input)

CABG		
Graft material	Target	Patency
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion

\* All Grafts, Targets (Auto input)

Memo: .....

**U. Event (IV)** Date : 20..... / ..... (yyyy/mm)  Myocardial Infarction →( PCI site :  Yes )  CABG  
 Associated lesion (Culprit) or ..... months  PCI →( previous PCI site :  Yes )  Stroke  Cardiac death

prior PCI site restenosis ≥ 51%

+ \* All PCI sites (Auto input)

CABG		
Graft material	Target	Patency
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion
		<input type="radio"/> Stenosis <input type="radio"/> Occlusion

\* All Grafts, Targets (Auto input)

Memo: .....

Participant ID: \_\_\_\_\_ Hospital name: \_\_\_\_\_ Gender:  Male  Female  
 Date of Birth: 19\_\_\_\_ / \_\_\_\_ / \_\_\_\_ or Age : \_\_\_\_\_

**V. Latest follow-up**

Latest Date: 20\_\_\_\_ / \_\_\_\_ (yyyy/mm) →  Alive  Dead → Death date: 20\_\_\_\_ / \_\_\_\_ (yyyy/mm)  
 or Post-operative months : \_\_\_\_\_ Cause of Death:  Cardiac  Infection

- Neurological  Pulmonary  
 Renal  Other  
 Vascular

Memo: \_\_\_\_\_  
 \_\_\_\_\_

**W. Latest Diabetes status**

Latest Date: 20\_\_\_\_ / \_\_\_\_ (yyyy/mm) or Post-operative months : \_\_\_\_\_

Treatment:  None  Diet  Oral  Insulin

Medicine list below is the same as "C. Baseline status of Diabetes".

HbA1c : \_\_\_\_\_ %

Medication:  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_  
 \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

Urine albumin: \_\_\_\_\_ mg/gCr

Urine protein:  -  +

Retinopathy:  none  NPDR  PDR

Memo: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**X. Medications**

- |   |   |  |
|---|---|--|
| Aspilin: <input type="radio"/> No <input type="radio"/> Yes             | Beta Blockers: <input type="radio"/> No <input type="radio"/> Yes | (ワーファリン)<br>Coumadin: <input type="radio"/> No <input type="radio"/> Yes |
| Other Antiplatelets: <input type="radio"/> No <input type="radio"/> Yes | Statin: <input type="radio"/> No <input type="radio"/> Yes        | Ca Blockers: <input type="radio"/> No <input type="radio"/> Yes          |
| ADP: <input type="radio"/> No <input type="radio"/> Yes                 | ACE: <input type="radio"/> No <input type="radio"/> Yes           | ARB: <input type="radio"/> No <input type="radio"/> Yes                  |
| (パナルジン, プラビックス)   |   | Antiarrhythmics: <input type="radio"/> No <input type="radio"/> Yes      |

## 研究成果

侵襲的冠血行再建が必要な時どちらを選択するべきか？

糖尿病患者

虚血性心疾患の頻度が高く、予後不良

冠動脈バイパス手術(CABG)

長所： より根治的

短所： 侵襲的外科手術

手術費用が高い？

人工心肺を使わない  
手術・動脈グラフト増加

経皮的冠動脈インターベンション(PCI)

長所： 侵襲性が低い

短所： 再狭窄等で何回も必要

長期的には医療費が高い？

薬剤溶出ステントの導入で  
再狭窄減少も生存率不変

最近の傾向

予後及び医療費に関する比較が必要

# 評価方法と特徴

## 主要評価項目

- 術後5年間のMACE(死亡・急性心筋梗塞・狭心症・心不全による入院・突然死・PCI・CABG)発生率を比較する。

## 特徴

- 欧米と背景の異なる本邦での成績
  - CABG/PCIの比率
  - off-pump CABGの割合が高い
  - 動脈グラフト使用頻度が高い
- 糖尿病の重症度に応じた治療法選択
- 冠動脈病変の特徴と治療成績

# 参加施設

国立循環器病センター	東北大学
秋田大学	日本医科大学
福岡大学	岩手医科大学
京都府立医科大学	鹿児島大学
熊本大学	東京女子医科大学
和歌山県立医科大学	近畿大学
小倉記念病院	NTT東日本関東病院
大阪市立総合医療センター	
横浜市立総合医療センター	
榊原記念病院・クリニック	(順不同)

# Demographic Data (1) 2001-2004

CABG PCI p value

---

No. of patients	1243	654	
Age (yrs)	66.3 ± 8.9	65.7 ± 9.7	0.12
Male/Female	993 / 305	476 / 168	0.49
Weight	61.5 ± 13.2	62.9 ± 13.3	0.006
BMI	26.6 ± 41.2	26.2 ± 32.9	0.09
Retinopathy	188 (15%)	117 (18%)	0.01

---



## Demographic Data (2)      2001-2004

	CABG	PCI	p value
--	------	-----	---------

---

### Diabetic Treatment

Oral medication	519 (42%)	324 (50%)	0.001
Insulin	339 (27%)	94 (14%)	<0.0001
HbA1C	7.0 ± 2.3	7.1 ± 1.5	0.73
Hypertension	858 (69%)	458 (70%)	0.27
Hyperlipidemia	678 (55%)	409 (63%)	<0.0001
History of smoking	632 (51%)	318 (49%)	0.004

---

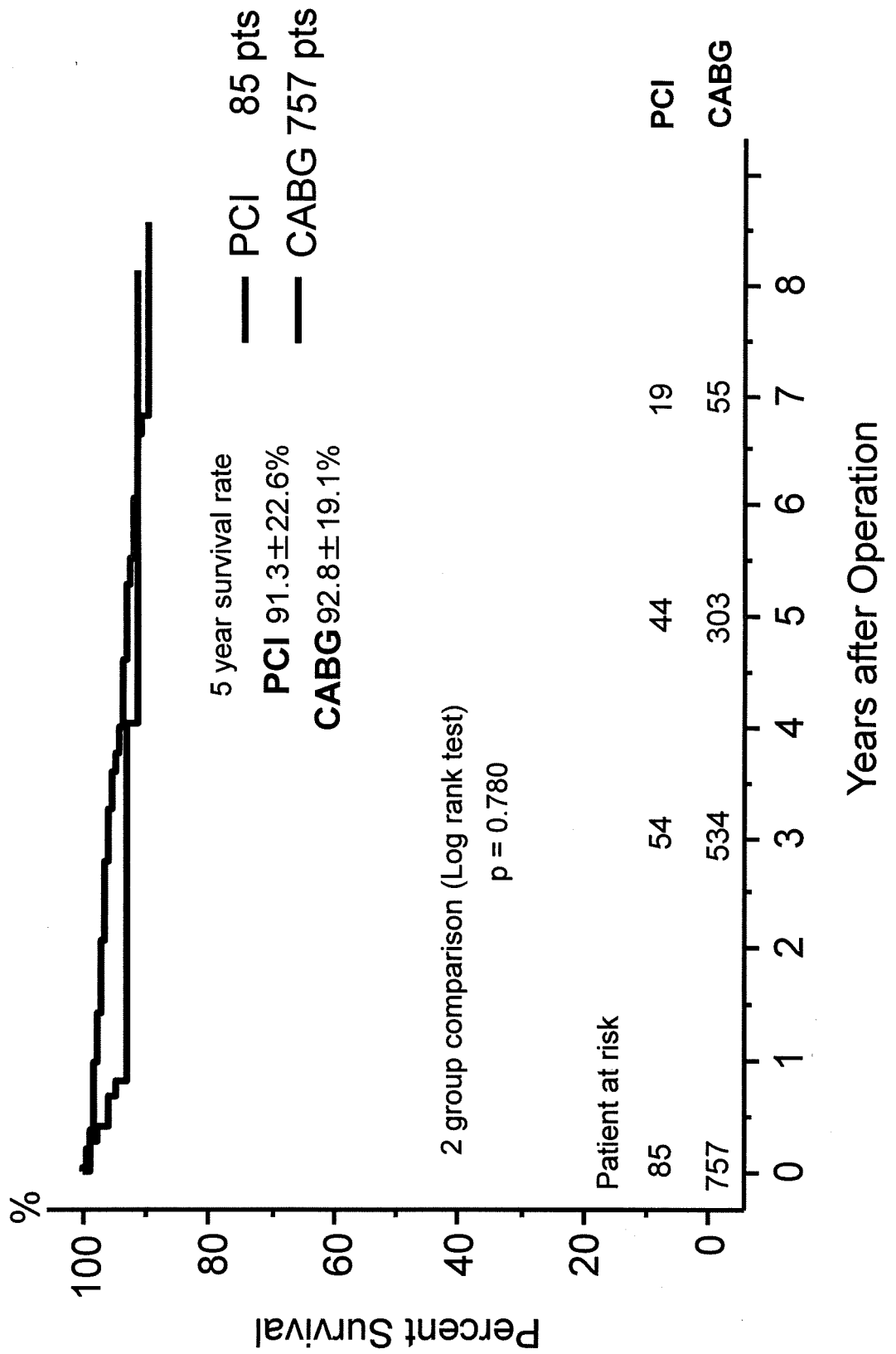
## Demographic Data (3) 2001-2004

	CABG	PCI	p value
Renal Failure	223 (18%)	75 (11%)	0.0005
Dialysis	81 (7%)	32 (5%)	0.929
Peripheral VD	168 (14%)	46 (7%)	<0.0001
CV Disease	277 (22%)	60 (9%)	<0.0001
NYHA III, IV	283 (23%)	75 (11%)	<0.0001
CCS III, IV	322 (26%)	140 (21%)	0.03

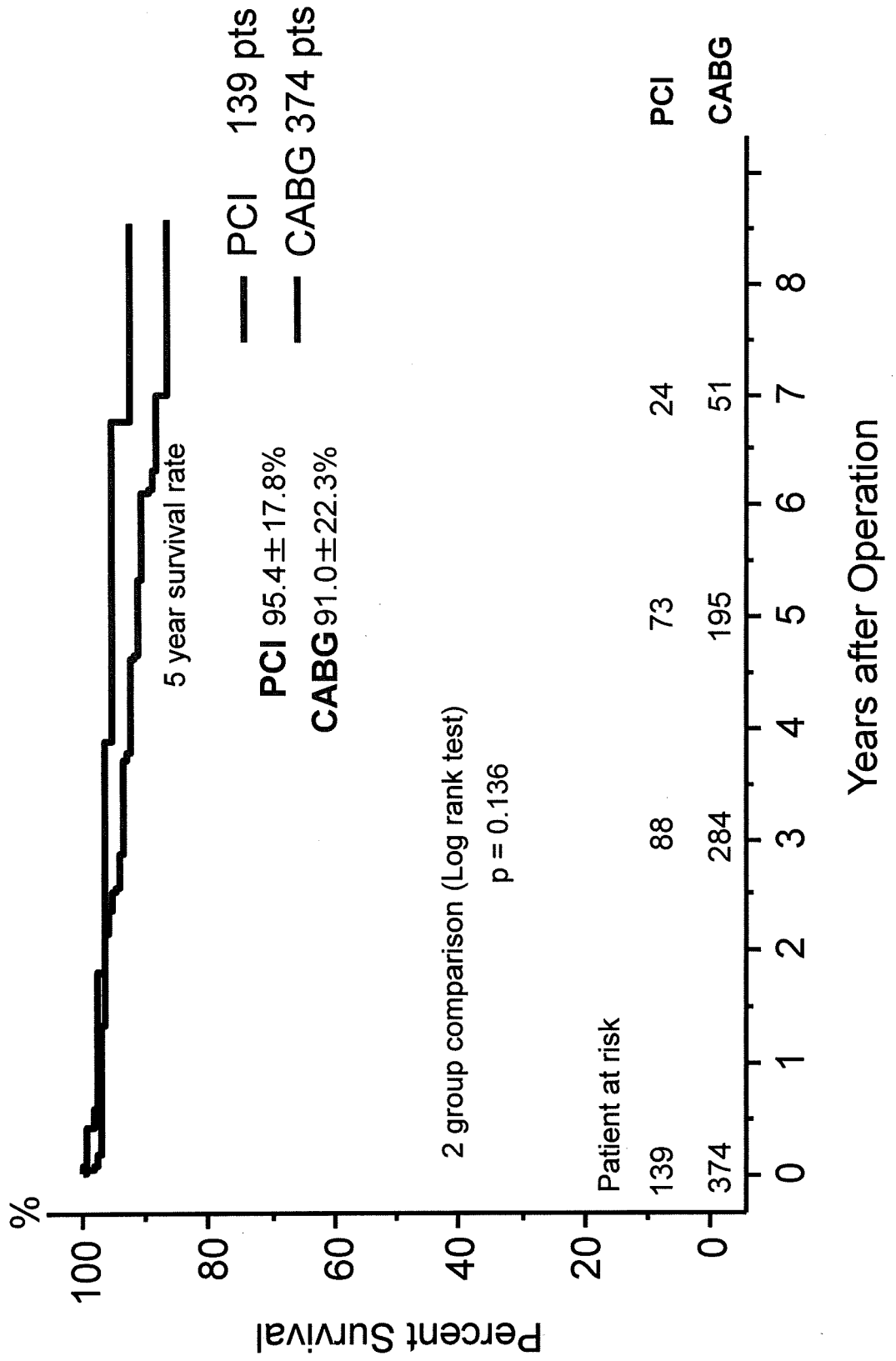
## Demographic Data (4) 2001-2004

	CABG	PCI	p value
<b>Diseased Coronary Artery Vessels</b>			
One	112 (9%)	324 (50%)	<0.0001
Two	374 (30%)	139 (21%)	<0.0001
Three	757 (61%)	85 (13%)	<0.0001
LMT lesion	209 (17%)	10 (2%)	<0.0001
LVEF	55.7 ± 15.4	62.3 ± 20.6	<0.0001

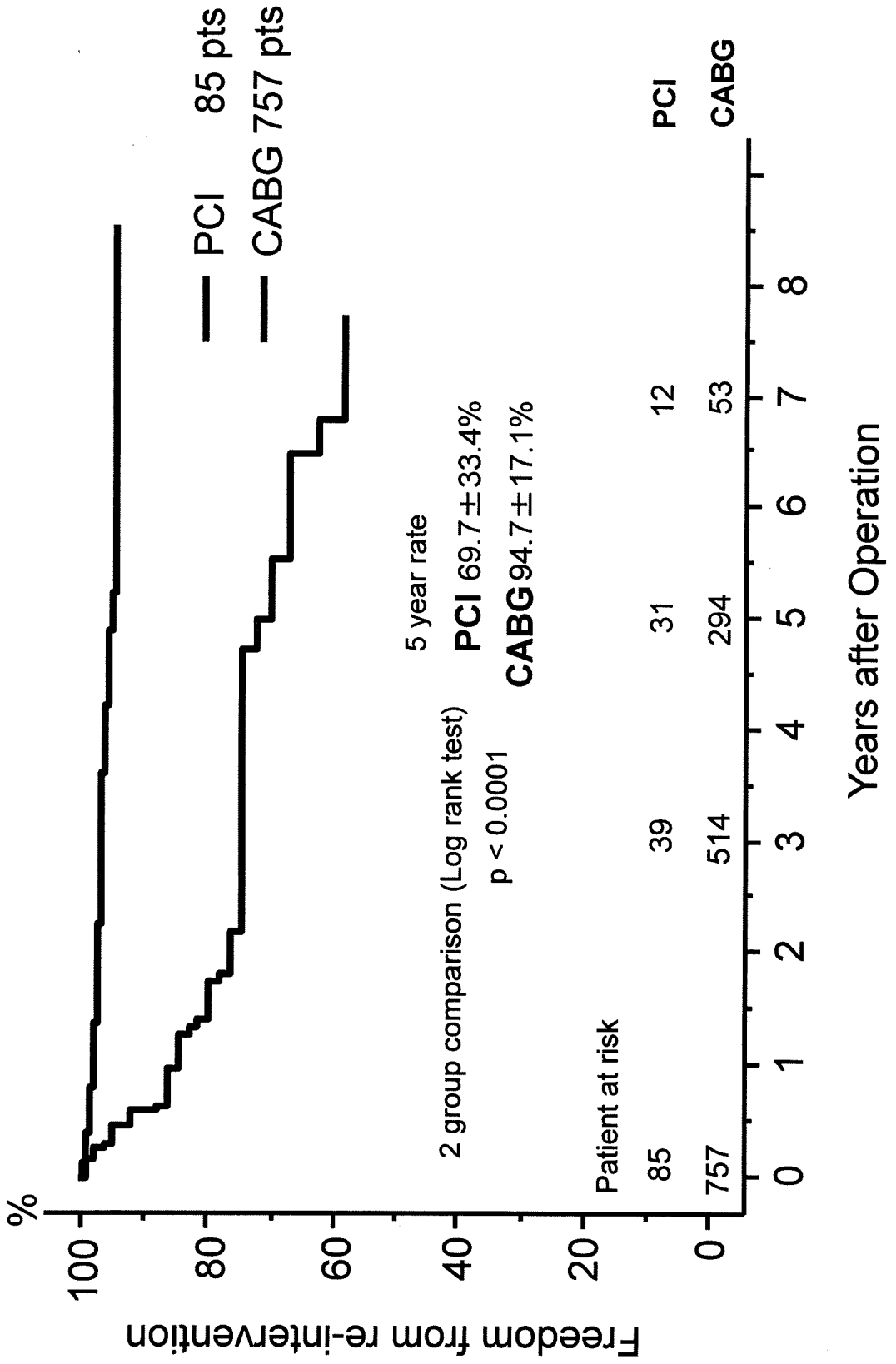
# Survival -- DM with 3 vessel disease



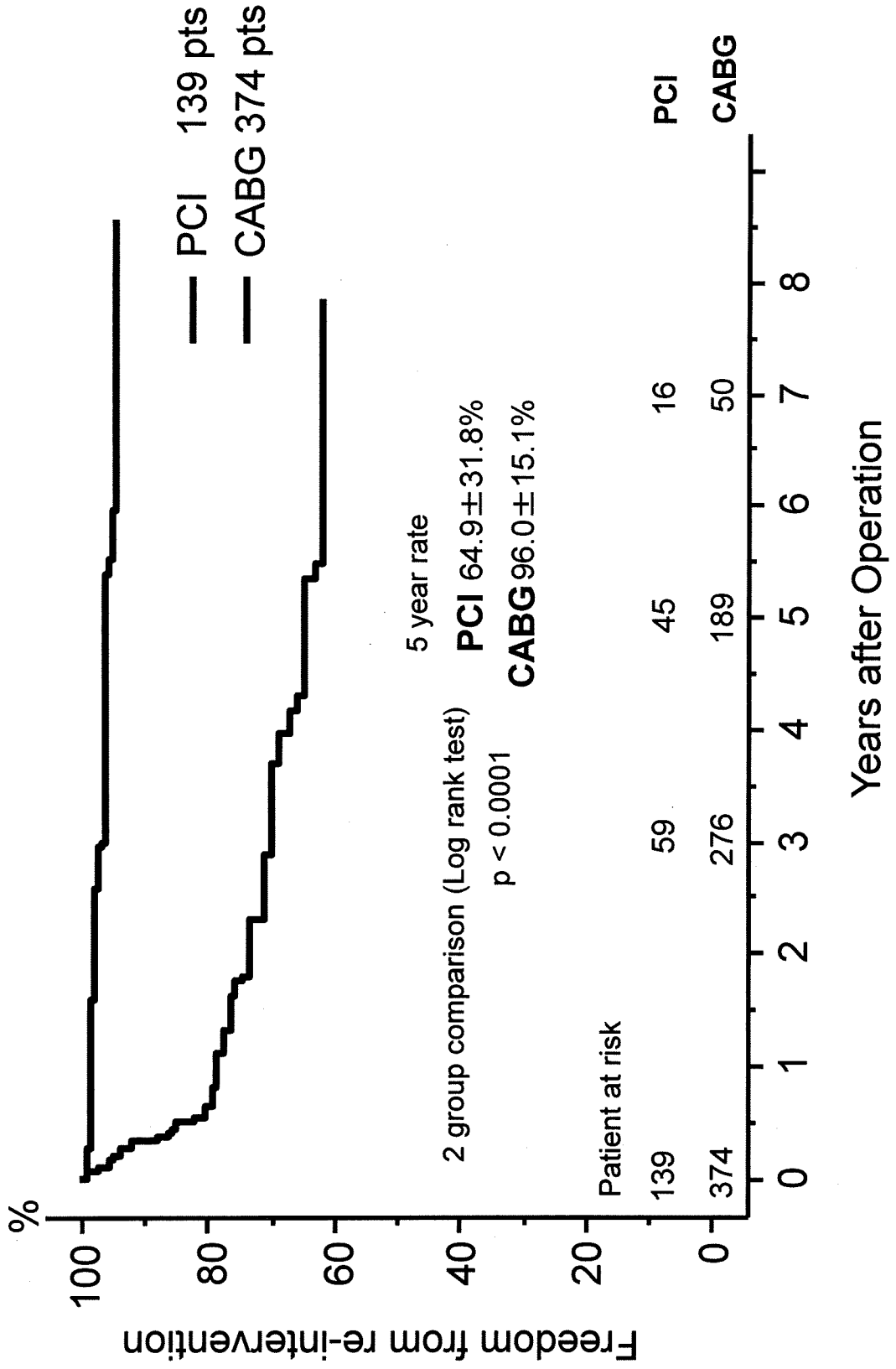
# Survival -- DM with 2 vessel disease



# Freedom from re-intervention after operation DM with 3 vessel disease

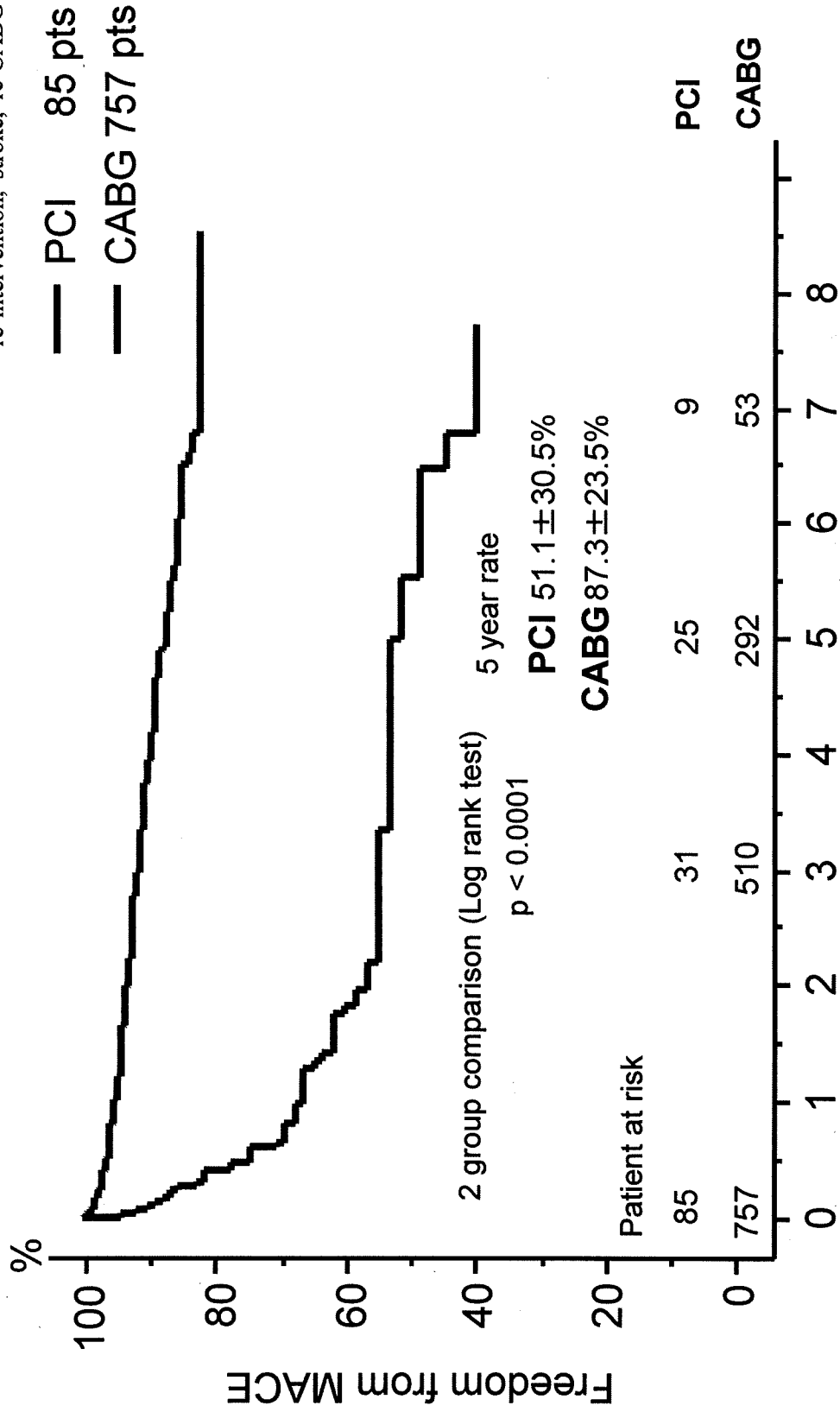


# Freedom from re-intervention after operation DM with 2 vessel disease



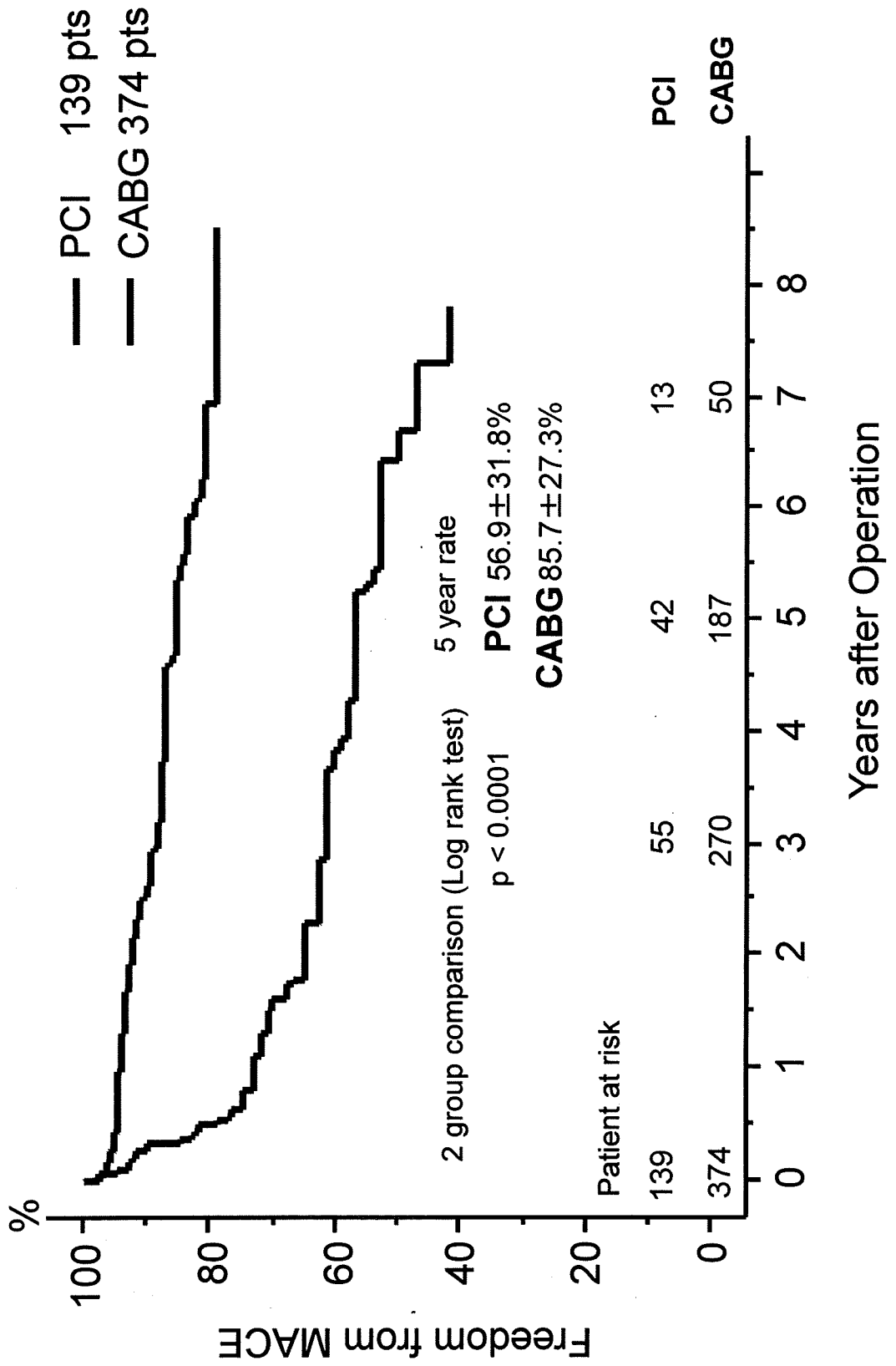
# Freedom from MACE after operation DM with 3 vessel disease

\* MACE = All death, Myocardial Infarction, re-intervention, stroke, re-CABG

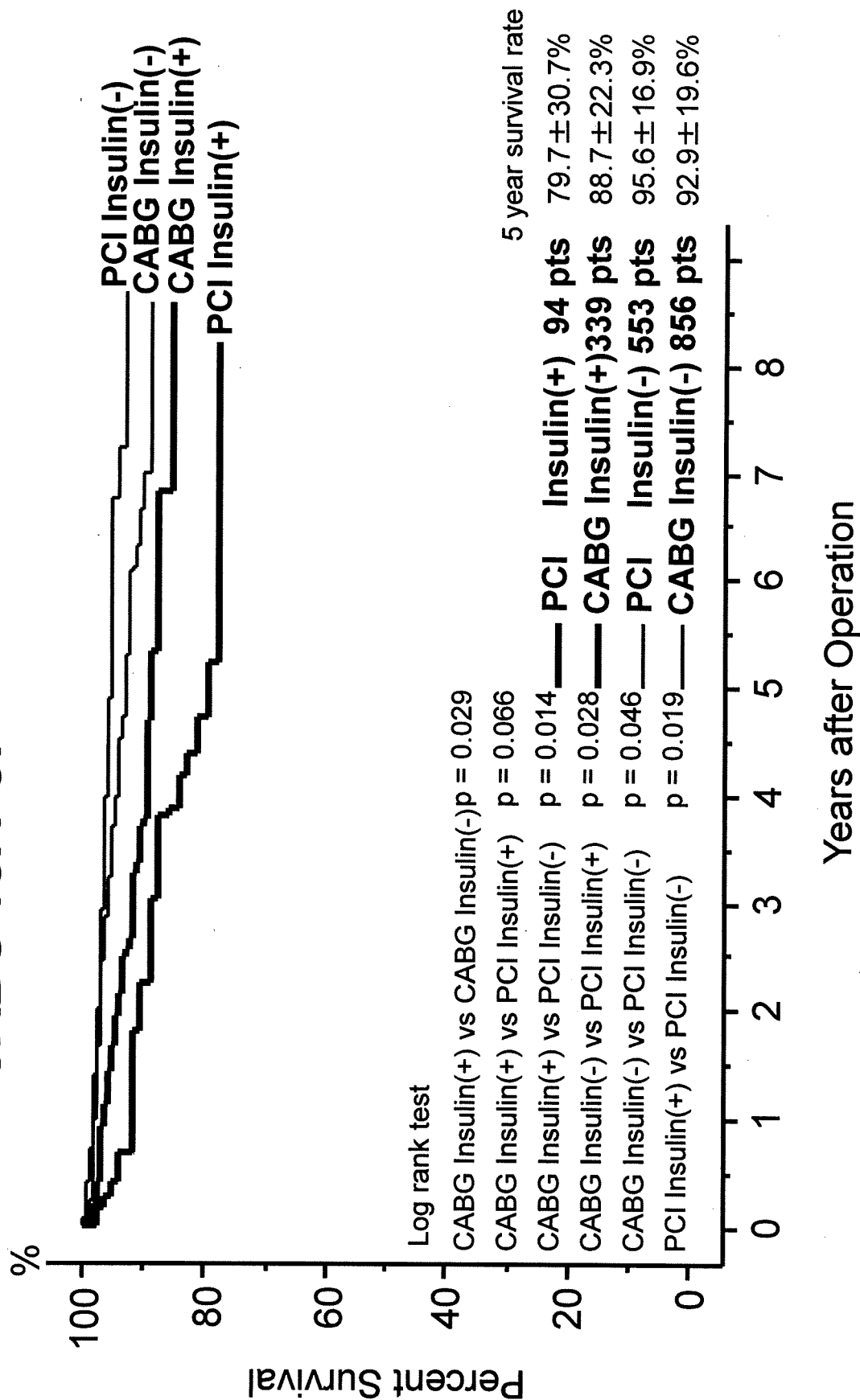




# Freedom from MACE after operation DM with 2 vessel disease

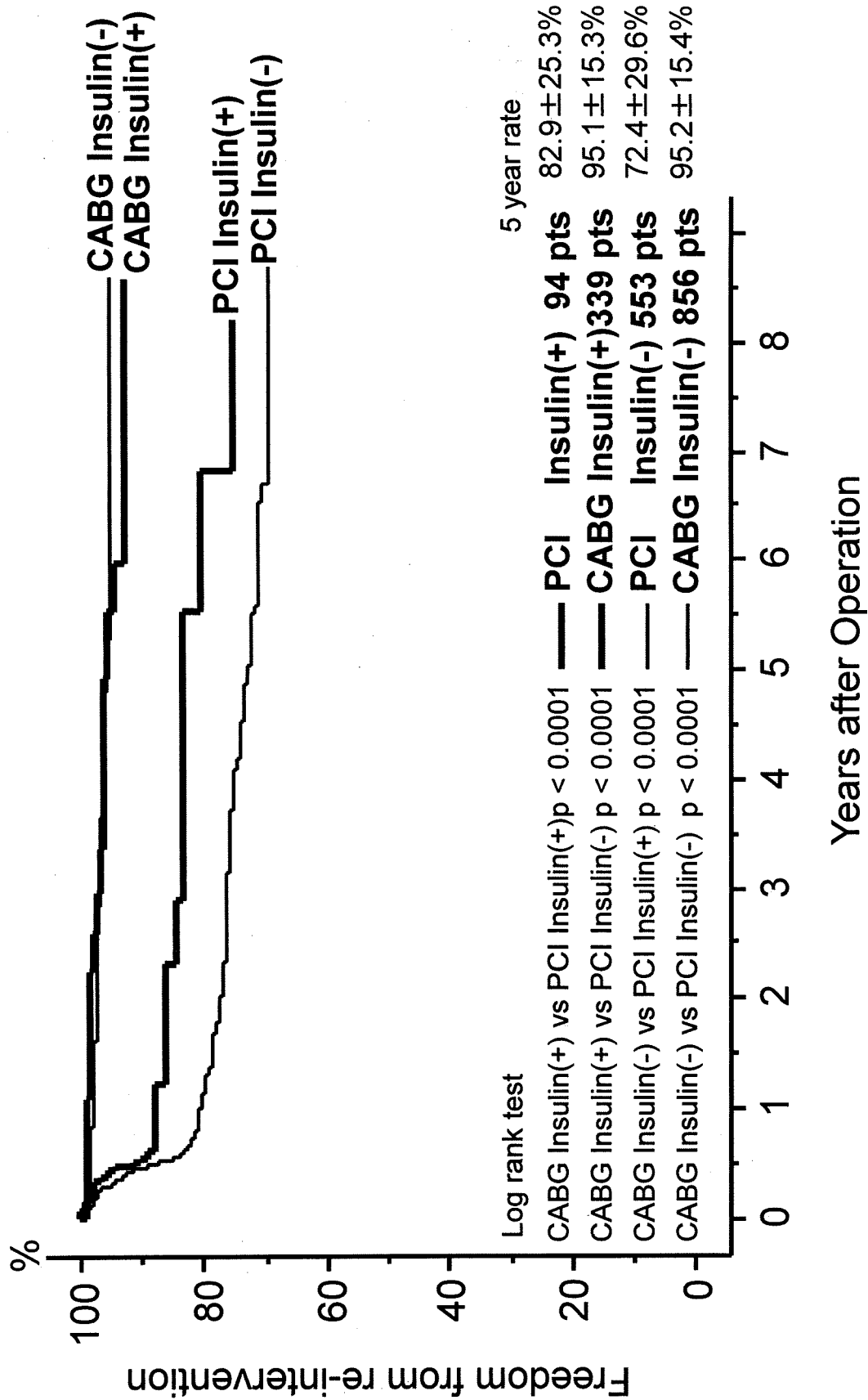


# Survival in Relation to Insulin CABG vs. PCI



# Freedom from re-intervention in relation to Insulin

## CABG vs. PCI



# Freedom from MACE in Relation to Insulin CABG vs. PCI

