Annual Report of Cardiovascular Surgery 2009
Nagasaki University

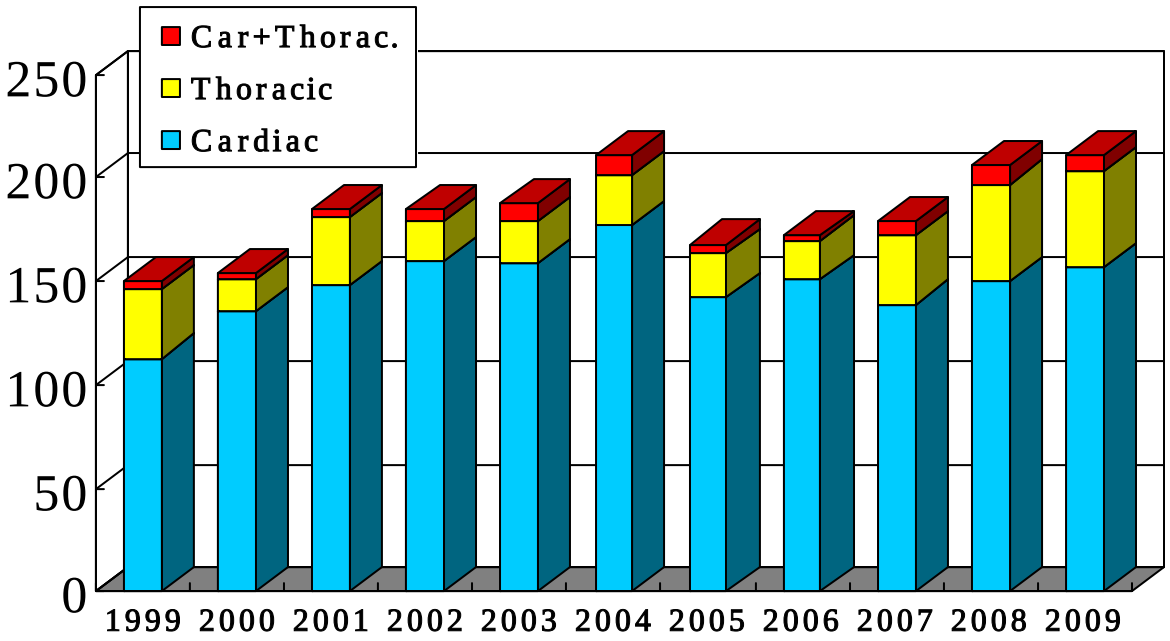
2009.1～2009.12

～Overall～

Ⅰ. Number of Operations and Surgical mortality

Division	No. Cases	No. OP.	OP. mortality (%)	Hosp. mortality (%)
Cardiac Thoracic	157 45	157 46	4 (2.5) 3 (6.7)	4 (2.5) 3 (6.7)
Car. + Thoracic	8	8	0	0
Total	210	211	7 (3.3)	7 (3.3)
Abdominal aorta Periphearal artery	74 30	74 30	1 (1.4) 1 (3.3)	1 (1.4) 1 (3.3)

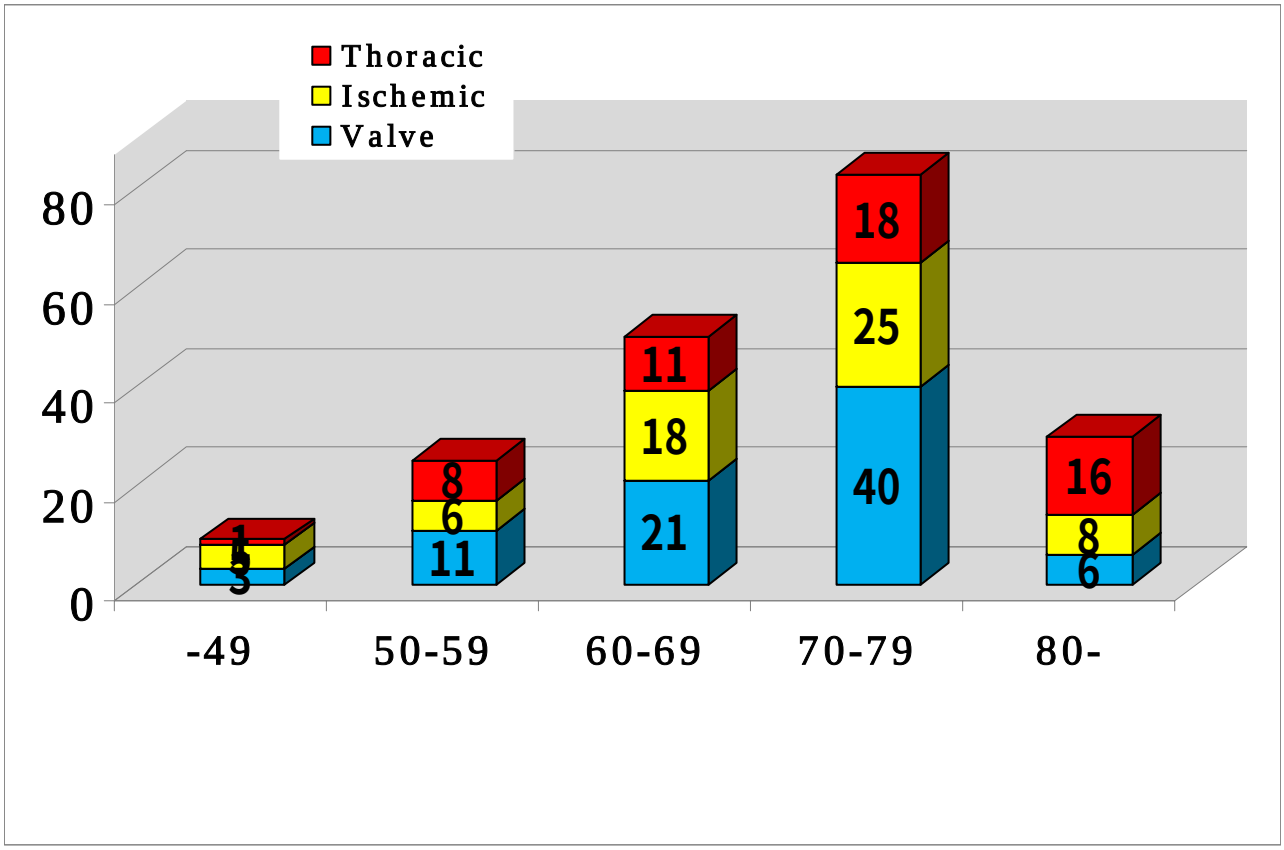
Operations



Ⅱ. Mode of Operation

	total	Scheduled (%)	Urgent (%)	Emergent (%)
Ischemic	62	52 (83.8)	4 (6.5)	6 (9.7)
Valvular	81	71 (87.6)	8 (9.9)	2 (2.5)
Congenital	5	5 (100)	0	0
Others	9	5 (55.5)	0	4 (44.5)
Thoracic aorta	54	33 (61.1)	2 (3.7)	19 (35.2)
Abdominal aorta	74	68 (91.9)	0	6 (8.1)
Peripheral artery	30	12 (40.0)	0	18 (60.0)
Total	315	246 (78.1%)	14 (4.4%)	55 (17.5%)

Ⅲ. Age Distribution



～Summary of Cardio-Vascular Division～

Ⅰ. Number of Operations and Surgical Mortality

	No. Cases	No. OP.	OP. mortality (%)	Hosp. mortality (%)
Cardiac				
Valvular	87	87	1 (1.5)	1 (1.5)
(redo)	(8)			
Ischemic	77	77	2 (2.6)	2 (2.6)
(redo)	(1)			
Congenital	5	5	0	0
Others	9	9	1 (11.1)	1 (11.1)
Vascular				
Thoracic aorta	53	54	3 (5.6)	3 (5.6)
(redo)	(2)			
(Stent graft)	(19)			
Abdominal aorta	74	74	1 (1.4)	1 (1.4)
(Stent graft)	(34)			
Peripheral artery	30	30	1 (3.3)	1 (3.3)

Concomitant Procedure
Valvular(only): 69 cases
CABG(only): 62 cases
Thoracic aorta(only): 46 cases
Valvular + CABG: 12 cases
Valvular + Thoracic aorta: 5 cases
Valvular + Congenital: 1 cases
CABG + Thoracic aorta: 3 cases

Ⅱ. Valvular Heart Disease

	No. Cases	No. OP	OP mortality (%)	Hosp. mortality (%)
Aortic *	38	38	1 (2.6)	1 (2.6)
Mitral	25	25	0	0
Tricuspid	2	2	0	0
Pulmonary	0	0	0	0
Combined				
A+M	8	8	0	0
M+T	12	12	0	0
A+M+T	2	2		
Total	87	87	1 (1.5)	1 (1.5)

*** Bentall ope 2cases**

a) M-repair

Diagnosis

MR	MSr	MsR	MS	MSR	Total		MVR (%)	Repair (%)
32	0	0	0	0	32		11 (25.6%)	32 (74.4%)

Etiology

Congenital	Infectious	Degenerative	Ischemic	DCM
0	4	22	3	3

Post ope. follow up

Jet area	No. Ope	Post ope. (discharge)	Follow (～12M)
non to trivial (0-2cm2)	32	30	28
mild (2-4cm2)	0	2	2
mild to moderate (4-8cm2)	0	0	1
moderate to severe (8cm2-)	0	0	1

b) Valve Substitutes implanted 64 Prostheses

	Mechanical	Tissue	Total
AVR	23	25	48
MVR	7	4	11
TVR	0	5	5
PVR	0	0	0
Total	30	34	64

Ⅲ. Ischemic Heart Disease

	Total	Isolated CABG	OP. mortality(%)	Hosp. mortality(%)
SVD	15	4	0	0
DVD	4	3	0	0
TVD	34	31	2 (5.9)	2 (5.9)
LMT	24	24	0	0
Total	77	62	2 (2.6)	2 (2.6)

Off pump CABG : 12 cases **On pump beating CABG : 8 cases**

a) Conduit **195 (2.5 / patient)**

	Artery	SVG	Cases
SVD	9	6	15
DVD	3	5	4
TVD	57	52	34
LMT	33	30	24
Total	102 (52.3%)	93 (47.7%)	77

b) Anastomoses **222 (2.7 patient)**

No. Anastomoses	No. Cases (%)
1	16
2	15
3	24
4	19
5	2
6	1
Total	77
Total anast.	210

b') Anastomoses by OPCAB
29 (2.4 / patient)

No. Anastomoses	No. Cases (%)
1	2
2	4
3	5
4	1
5	0
Total	12
Total anast.	29

c) Anastomoses

No. Anastomoses	1	2	3	4	5	6	No. OP
SVD	15	0	0	0	0	0	15
DVD	0	3	1	0	0	0	4
TVD	0	2	14	15	2	1	34
LMT	1	10	9	4	0	0	24
Total	16	15	24	19	2	1	77
Total anast.	16	30	72	76	10	6	210

c) Graft patency

	Anastomoses	Examined	Patent	Rate**	Stenosis*	Rate***
SVG	108	74	74	100	0	100
Artery	102	82	81	98.8	0	98.8
LITA	64	54	53	98.1	0	98.1
RITA	32	22	21	95.5	0	95.5
GEA	6	6	6	100	0	100
Total	210	156(74.2%)	154	98.7(%)	0	98.7(%)

Intervention : 1 case Redo CABG : 1 case *Stenosis : ≧90%

**patency rate (excl.stenosis)

*** patency rate (incl.stenosis)

Ⅳ. Congenital Heart Disease

	No. Cases	No. OP.	OP. mortality (%)	Hosp. mortality (%)
ASD	4	4	0	0
PDA	1	1	0	0
Total	5	5	0	0

Ⅴ. Others

	No. Cases	No. OP.	OP. mortality (%)	Hosp. mortality (%)
Cardiac tumor	1	1	0	0
Constrictive pericarditis	2	2	0	0
Coronary AV fistula	1	1	0	0
DCM VAS implantation	1	1	1 (100)	1 (100)
Transplantation	2	2	0	0
Others	2	2	0	0
Total	9	9	1 (11.1)	1 (11.1)

Ⅵ. Maze operation

	No. Cases	Sinus recovery	(%)
Atricure	2	1	50
Cryoablation	6	5	83.3
Total	8	6	75.0

Ⅶ. Vascular Disease

a) Replacement site

	No. Cases	No. OP.	OP. mortality (%)	Hosp. mortality (%)
Thoracic				
Ascending aorta	0	0	0	0
Hemiarch	18	18	1 (5.6)	1 (5.6)
Total arch	11	11	1 (9.1)	1 (9.1)
Descending aorta	23	24	1 (4.2)	1 (4.2)
(Stent graft)	(19)	(19)		
Thoracoabdominal Ao.	1	1	0	0
Total	53	54	3 (5.6)	3 (5.6)

	No. Cases	No. OP.	OP. mortality (%)	Hosp. mortality (%)
Abdominal aorta	74	74	1 (1.4)	1 (1.4)
(Stent graft)	(34)	(34)	0	0
Peripheral artery	30	30	1 (3.3)	1 (3.3)
Total	104	104	2 (1.9)	2 (1.9)

b) Classification of Thoracic aorta

	No. Cases	Hosp. mortality (%)	Operation method	
Dissecting	30	2 (6.7)		
Acute	17	2 (11.8)	Total arch replacement	3
Ⅰ	12	2 (16.6)	Hemiarch replacement (+Bentall)	12
Ⅱ	3	0	Stent Graft	2
ⅢⅠa	0	0		
ⅢⅠb	2	0		
Chronic	13	0	Total arch replacement(+AVR)	1
Ⅰ	2	0	Hemiarch replacement (+AVR)	3
Ⅱ	3	0	Hemiarch replacement +Bentall	1
ⅢⅠa	3	0	Descending aorta replacement	3
ⅢⅠb	5	0	Stent graft	5
True	24	1 (4.2)	Total arch replacement(+CABG)	7
Ascending	3	0	Hemiarch replacement(+AVR)	2
Arch	10	1 (10.0)	Descending aorta replacement(+CABG)	2
Descending	15	0	Stent graft	12
Thoracoabdominal	1	0	Thoracoabdominal Ao. replace.	1

c) Classification of Abdominal aorta, peripheral artery

	No. Cases	Hosp. mortality (%)	Operation method	
Abdominal aorta	74	1 (1.4)	Graft replacement	35
AAA	69	1 (1.5)	Stent Graft	34
Non-ruptured	65	0		
Ruptured	4	1 (25.0)		
ASO	5	0	Ao-bifemoral bypass	4
			Plasty	1
Peripheral artery	30	1 (3.3)		
ASO	9	1 (11.1)	Thrombectomy	11
Acute arterial occlusion	11	0	Bypass grafting	7
Aneurysm	6	0	Grafting	5
Traumatic	1	0	Plasty	6
Others	3	0	Coil embolization	1

～ Summary of Hospital death ～

No.	氏名	性	年齢	診断	手術日	緊/待	術後日数
				術式	死亡日	剖検	死因

Cardiac 3 cases

1	○田 ○子	F	77	U-AP OMI HD ASO	2009/1/27	緊	19
				CABG x 2 LV plasty	2009/2/14	無	Sepsis
2	○中 ○蔵	M	75	AMI LC	2009/10/27	準緊	37
				CABG x 3	2009/12/2	有	腸管虚血
3	○崎 ○子	F	79	ASR	2009/6/17	待機	9
				AVR CABG	2009/6/25	有	AMI

Thoracic aorta 3 cases

1	○嶋 ○子	F	83	AD(A) malperfusion	2009/1/13	緊	1
				部分弓部置換 MVR CABG	2009/1/14	無	AMI
2	○目 ○信	M	67	TAA P/O TAAA HD	2009/3/26	待機	21
				Stent garfting 頚動脈再建	2009/12/6	無	脳梗塞
3	○永 ○夫	M	50	AD(A) malperfusion AMI	2009/12/31	緊	shock
				弓部全置換術 CABG	2010/1/1	無	AMI

Other and Abdominal aorta 3 cases

1	○本 ○奈	F	20	DCM	2009/7/1	緊	27
				LVAS装着術	2009/7/27	無	肺出血
2	○岡 ○子	F	75	ASO	2009/3/30	待機	38
				Axillo-bi femoral bypass	2009/5/7	無	sepsis
3	○橋 ○江	F	78	ruptured AAA	2009/3/20	緊	1
				grafting	2009/3/21	無	腸管虚血

各種データの解釈

1) OP mortality: 術後30日以内の全死亡。
Hospital mortality: 術後院内での全死亡。(他科転科後の他病死も含む。他院転院後の手術関連死も含む)

2) Mode of Operation: 二つ以上のカテゴリーを含む手術は主病変と考えられるいずれかのカテゴリーに分類。ただし、CABG＋弁/大血管手術はそれぞれ弁、大血管手術としてカウント。Bentall手術は大血管手術としてカウント。

3) Number of Operations and Surgical Mortality: 各手術手技の延べ数を合算。
例：CABG + MP + As.Ao.置換→Ischemic, Valvular, Thoracic aortaのそれぞれに加算。
Bentall OP→Valvular, Thoracic aortaのそれぞれに加算。

4) Valvular Heart Disease: 弁に対する操作を行った(付加手術の有無にかかわらず)症例数、手術数を計算。

5) Ischemic Heart Disease: CABGを行った(付加手術の有無にかかわらず)症例数を計算。

6) Vascular Disease: Ascending aortaに対する手術はBentall OPを含む。