

Annual Report of Cardiovascular Surgery 2012
Nagasaki University

2012.1~2012.12

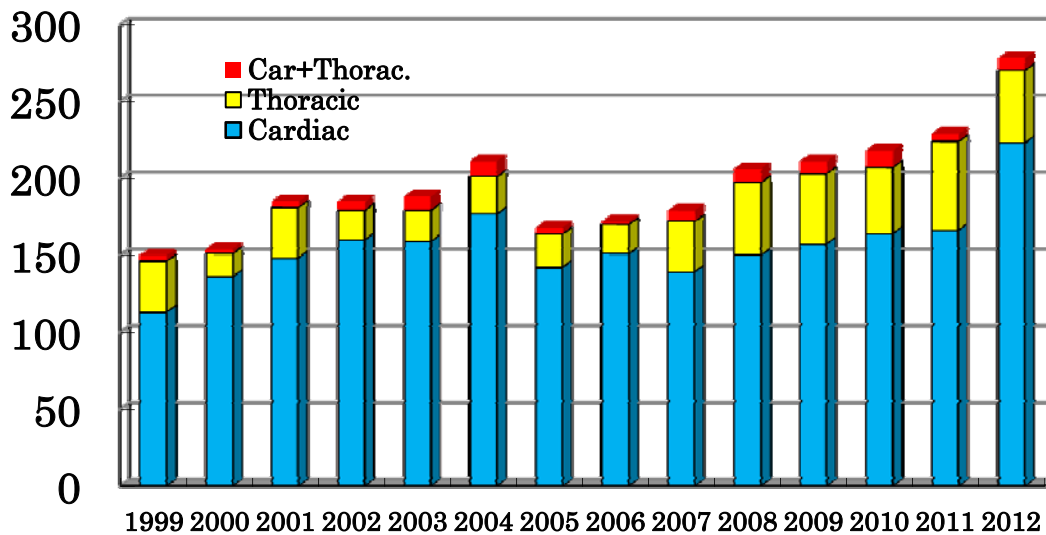
1. Overall	Page
I . Number of Operations and Surgical Mortality	2
II . Mode of Operation	3
III . Age Distribution	3
2. Summary of CardioVascular Division	
I . Number of Operations and Surgical Mortality	4
II . Valvular Heart Disease	5
III . Ischemic Heart Disease	7
IV . Congenital Heart Disease	9
V . Others	9
VI . Maze operation	9
VI . Vascular Disease	10
3. Summary of Hospital Deaths	12

~Overall~

I . Number of Operations and Surgical Mortality

Division	No. Cases	No. OP.	OP. mortality (%)	Hosp. mortality (%)
Cardiac	221	223	6 (2.7)	7 (3.1)
Thoracic	47	47	0	1 (2.1)
Car. + Thoracic	8	8	0	0
Total	276	278	7 (2.5)	8 (2.9)
Abdominal aorta	54	54	1(1.9)	1(1.9)
Peripheral artery	25	25	0	0

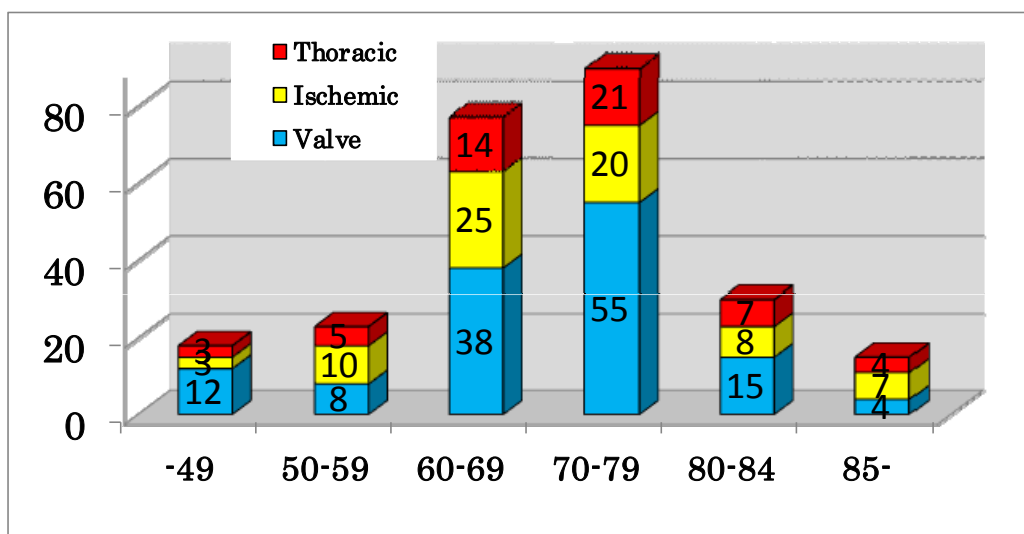
Operations



II. Mode of Operation

	total	Scheduled (%)	Urgent (%)	Emergent (%)
Ischemic	67	47 (70.1)	7 (10.4)	13 (19.4)
Valvular	127	121 (95.3)	2 (1.6)	4 (3.1)
Congenital	8	6 (75.0)	0	2 (25.0)
Others	22	12 (54.1)	2 (9.1)	8 (36.4)
Thoracic aorta	54	35 (64.8)	1 (1.9)	18 (33.3)
Abdominal aorta	54	46 (85.2)	0	8 (14.8)
Peripheral artery	25	9 (36.0)	0	16 (64.0)
Total	357	276 (77.3%)	12 (3.4%)	69 (19.3%)

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 (redo)	133 (14)	135	3 (2.2)	3 (2.2)
Ischemic	92	92	2 (2.2)	3 (3.3)
Congenital	9	9	1(11.1)	1 (11.1)
Others	25	25	0	0
Vascular				
Thoracic aorta (redo) (Stent graft)	55 (8) (16)	55	1 (1.8)	1 (1.8)
Abdominal aorta (Stent graft)	54 (15)	54	1(1.9)	1 (1.9)
Peripheral artery	25	25	0	0

Concomitant Procedure

Valvular(only): 106 cases

CABG(only): 67 cases

Congenital(only): 5 cases

Others : 17 cases

Thoracic aorta(only): 47 cases

Valvular + CABG: 17 cases

Valvular + Thoracic aorta: 5 cases

Valvular + Congenital: 3 cases

Valvular + Others: 4 cases

CABG + Thoracic aorta: 3 cases

CABG+ Others: 3 cases

Valvular + CABG + Others: 1 case

II. Valvular Heart Disease

	No. Cases	No. OP	OP mortality (%)	Hosp. mortality (%)
Aortic *	52	53	1(1.9)	1(1.9)
Mitral	49	49	0	0
Tricuspid	3	4	0	0
Pulmonary	0	0	0	0
Combined				
A+M	3	3	1(33.3)	1(33.3)
A+T	2	2	0	0
M+T	17	17	0	0
A+M+T	6	6	1(16.7)	1(16.7)
M+T+P	1	1	0	0
Total	133	135	3 (2.2)	3 (2.2)

* 自己弁温存大動脈基部置換術 2cases 大動脈弁形成術 3cases

a) Mitral valve disease

Diagnosis

MR	MSr	MsR	MS	MSR	Total	MVR (%)	Repair (%)
58	0	1	1	0	60	10 (14.2%)	60 (85.8%)

b) Mitral valve repair

Etiology

Congenital	Infectious	Degenerati ve- prolapse	Degenerati ve- dilatation	Rheumatic	Ischemic	DCM
1	6	37	4	3	4	5

Post ope. follow up

Jet area	Ope	Post ope. (discharge)	Follow (~12M)
non to trivial (0-2cm ²)	60	55	34
mild (2-4cm ²)	0	4	11
mild to moderate (4-8cm ²)	0	0	1
moderate to severe (8cm ² -)	0	1	0

c) Valve Substitutes implanted

71 Prostheses

	Mechanical	Tissue	Total
AVR	18	42	60
MVR	7	3	10
TVR	0	1	1
PVR	0	0	0
Total	25(35.2)	46(64.8)	71

d) 右小開胸下心臟手術 (MICS)

Procedures	Case
MP	22
PVL repair + TAP	1
ASD	2
PFO	1
Total	26

III. Ischemic Heart Disease

	Total	Isolated CABG	OP. mortality(%)	Hosp. mortality(%)
SVD	9	2	0	0
DVD	18	5	0	0
TVD	30	26	1(3.3%)	2(6.7%)
LMT	35	34	1(2.9%)	1(2.9%)
Total	92	67	2(2.2%)	3(3.3%)

Off pump CABG : 33ases On pump beating CABG : 9cases (1 case converted from Off pump)

a) Conduit

227 (2.5 / patient)

	Artery	SVG	Cases
SVD	5	5	9
DVD	17	17	18
TVD	48	47	30
LMT	47	41	35
Total	117 (52.4%)	110 (47.6%)	92

b) Anastomoses 230(2.5 patient)

b') Anastomoses by OPCAB 31 (2.1 / patient)

No. Anastomoses	No. Cases (%)
1	19
2	26
3	31
4	14
5	2
6	0
Total	92
Total anast.	230

No. Anastomoses	No. Cases (%)
1	5
2	12
3	14
4	2
5	0
Total	33
Total anast.	79

c) Anastomoses

No. Anastomoses	1	2	3	4	5	No. OP
SVD	8	1	0	0	0	9
DVD	9	8	3	0	0	18
TVD	0	5	14	10	1	30
LMT	2	12	14	4	1	35
Total	19	26	31	14	2	92
Total anast.	19	52	93	56	10	230

d) Graft patency

	Anastomoses	Examined	Patent	Rate**	Stenosis*	Rate***
SVG	113	43	41	95.3	2	90.7
Artery	117	49	48	98.0	3	91.8
LITA	80	30	29	96.7	1	93.3
RITA	29	16	16	100	2	93.1
GEA	7	2	2	100	0	100
RA	1	1	1	100	0	100
Total	230	157(77.7%)	154	98.1 (%)	5	94.9 (%)

Intervention : 2 case

*Stenosis : $\geq 90\%$
 **patency rate (excl.stenosis)
 *** patency rate (incl.stenosis)

IV. Congenital Heart Disease

	No. Cases	No. OP.	OP. mortality (%)	Hosp. mortality (%)
ASD	2	2	0	0
VSD	1	1	0	0
PDA	1	1	0	0
TOF	2	2	1(50)	1(50)
Ebstein	1	1	0	0
VSA(Valsalva)	2	2	0	0
Total	9	9	1(11.1)	1(11.1)

V. Others

	No. Cases	No. OP.	OP. mortality (%)	Hosp. mortality (%)
Cardiac tumor	5	5	0	0
Constrictive pericarditis	2	2	0	0
VSP/LV aneurysm	6	6	0	0
Bleeding / LV rupture	4	4	0	0
PE	2	2	0	0
Others	6	6	0	0
Total	25	25	0	0

VI. Maze operation

	No. Cases	Sinus recovery	(%)
Cryoablation	9	4	44.4%
Total	9	4	44.4%

VII. Vascular Disease

a) Replacement site

	No. Cases	No. OP.	OP. mortality (%)	Hosp. mortality (%)
Thoracic				
Ascending aorta	4	4	0	0
Hemiarch	8	8	0	0
Total arch	14	14	0	0
Descending aorta (Stent graft)	21 (16)	21 (16)	0 (0)	1(4.7) (1)
Thoracoabdominal Ao.	8	8	0	0
Total	55	55	0	1(1.8)

	No. Cases	No. OP.	OP. mortality (%)	Hosp. mortality (%)
Abdominal aorta	54	54	1(1.8)	1(1.8)
(Stent graft)	(15)	(15)	0	0
Peripheral artery	25	25	0	0
Total	79	79	1 (1.2)	1 (1.2)

b) Classification of Thoracic aorta

	No. Cases	Hosp. mortality (%)	Operation method	
Dissecting	22	0		
Acute	13	0	Ascending aorta replacement	2
I	7	0	Hemiarch replacement(+AVR)	5
II	3	0	Total arch replacement(+MP)	3
IIIa	2	0	Stent Graft	3
IIIb	1	0		
Chronic	9	0	Total arch replacement	3
I	2	0	Hemiarch replacement	2
II	3	0	Descending aorta replacement	2
IIIa	0	0	Thoracoabdominal Ao. replace.	2
IIIb	4	0		
True	33	0	Total archreplacement(+CABG/MP/TAP)	8
Ascending	3	0	Reimplantation(+MVR)	2
Arch	8	0	Hemiarch replacement(+AVR)	1
Descending	16	1 (6.3)	Descending aorta replacement	3
Thoracoabdominal	6	0	Stent graft	13
			Thoracoabdominal Ao. replace.	6

c) Classification of Abdominal aorta, peripheral artery

	No. Cases	Hosp. mortality (%)	Operation method	
Abdominal aorta	54	0	Graft replacement	37
AAA	52	1(1.9)	Stent Graft	15
Non-ruptured	49	1(2.0)		
Ruptured	3	0	Aorto-femoral bypass	2
ASO	2	0		
Peripheral artery	25	0	Thrombectomy	11
ASO	9	0	Bypass grafting	9
Acute arterial occlusion	11	0	Plasty	1
Aneurysm	4	0	Others	3
Traumatic	1	0		
Others	0	0		

～ 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 7cases

1	○原 ○子	F	62	AS MSR TR HD MAC	2012/2/24	待機	16
				AVR MVR TAP	2012/3/6	無	左室破裂
2	○口 ○勝	M	69	AMI IABP HD p/o CEA	2012/4/30	緊急	90
				CABG	2012/7/25	無	Sepsis 脳出血
3	○岡 ○ヨ	F	83	AMI CD(B) p/o TEVAR	2012/5/9	緊急	12
				CABG	2012/5/19	無	bleeding
4	○田 ○則	M	62	Re- PS MR TR p/o TOF p/o TAP	2012/8/1	待機	25
				Re-RVOTR MP TVR	2012/8/20	無	右心不全
5	○平 ○臣	M	65	MS ASR HD NOMI	2012/9/25	待機	29
				AVR MVR 大量小腸切除	2012/10/29	無	NOMI
6	○田 ○子	F	83	AS PMI	2012/10/11	待機	12
				AVR CABG	2012/10/20	無	LOS
7	○浦 ○	M	82	AP VT	2012/12/11	待機	5
				CABG	2012/12/15	無	VT MNMS

Thoracic aorta 1 case

1	○永 ○雄	M	69	CD(B) 大動脈-食道瘻	2012/3/29	緊急	55
				TEVAR(stent graft)	2012/7/28	無	食道瘻

Abdominal aorta 1 case

1	○松 ○幸	M	61	AAA OMI p/o CABG OCI	2012/11/22	待機	18
				Y grafting	2012/12/9	有	bleeding

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。