Report from the database committee

New data from the year 2008

Y. Van Belleghem: member database

B. Stockman: chairman database

01/05/2010

Participating centers 2001-2008.

	2001	2002	2003	2004	2005	2006	2007	2008
active centers	29	29	29	29	29	29	28	28
participating centers core data set	27	28	29	29	29	28	28	27
participating summary only	2	1	-	-	-	-	-	-
participating full data set	n.a.	n.a.	12	16	14	13	16	?
not participating	-	-	-	-	-	1	-	1

General Cardiac Surgery includes

- – The traditional cardiac operation with or without ECC (CABG, OPCAB, Valve, HTX, HLTX, Ascending Aorta and Arch, Congenital procedures)
- – Assist devices and ECMO/ECLS
- – Surgery of the descending aorta
- – Cardiac wounds
- – Pericardiectomy
- – Other congenital procedures: shunts, coarctation..
- – Introduction and removal of IABP

01/05/2010

Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

All Cardiac operations

	2001	2002	2003	2004	2005	2006	2007	2008
cardiac operations	11437	12773	13635	13694	12920	12876	12918	12356

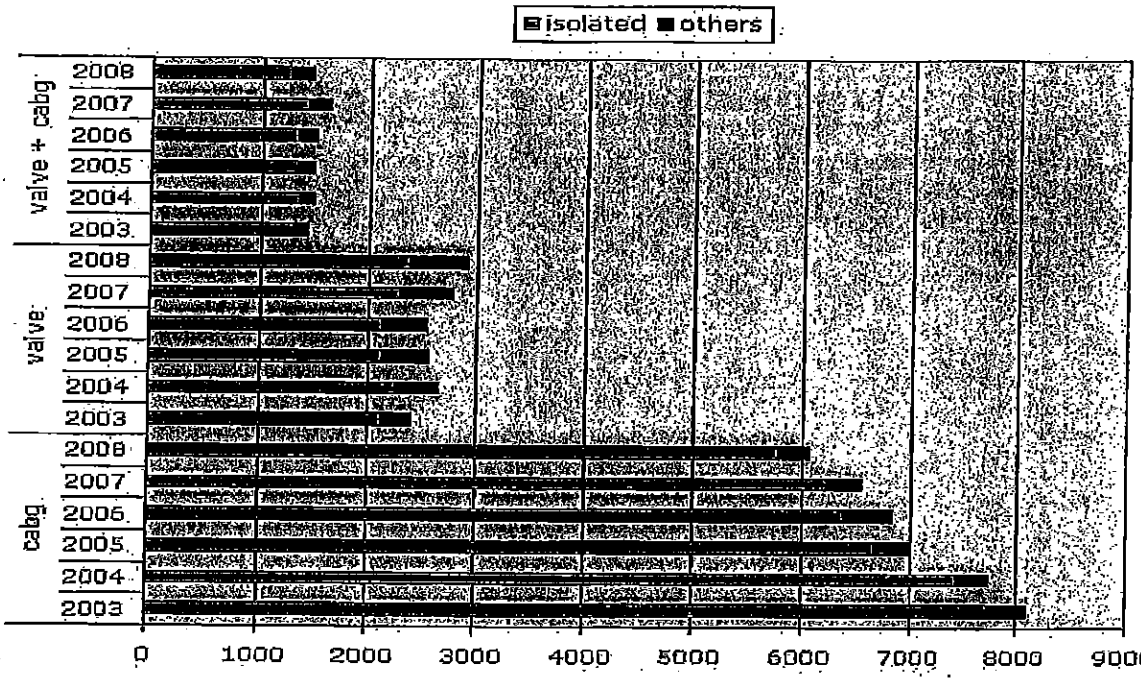
2008:
-mean 457,6 / centre
-median 364 / centre

Reduction 9.7 % tov 2004

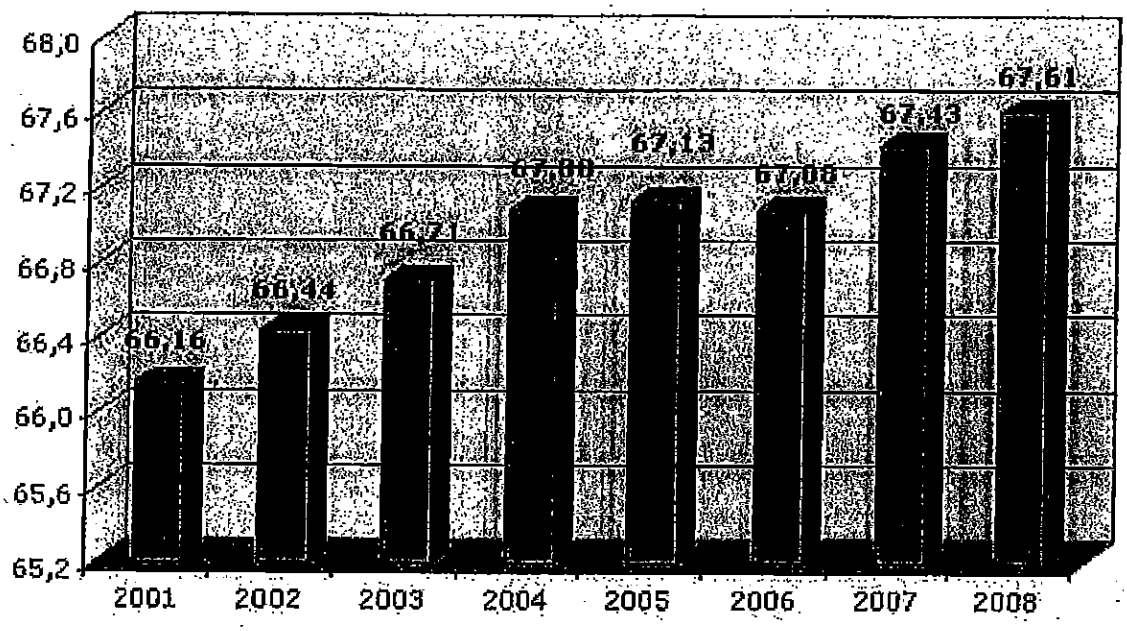
01/05/2010

Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

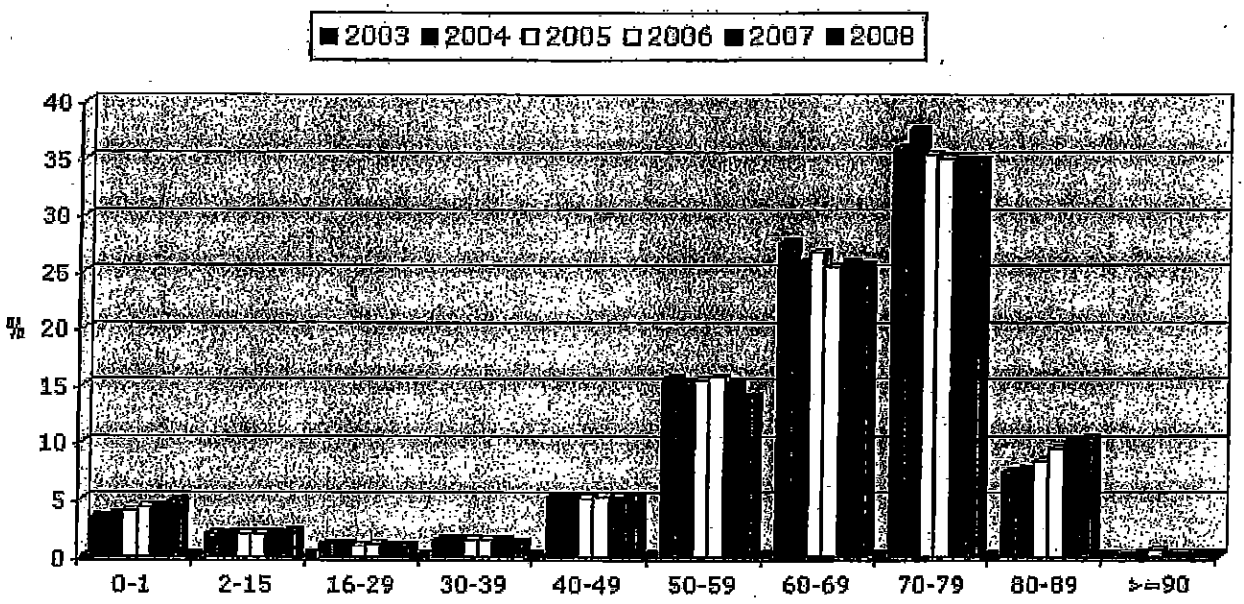
Evolution of numbers - procedures



Evolution of mean age in cardiac operations - adults (≥16 years)



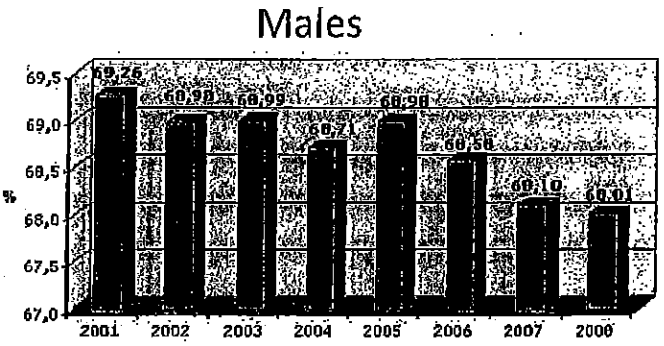
Evolution age distribution

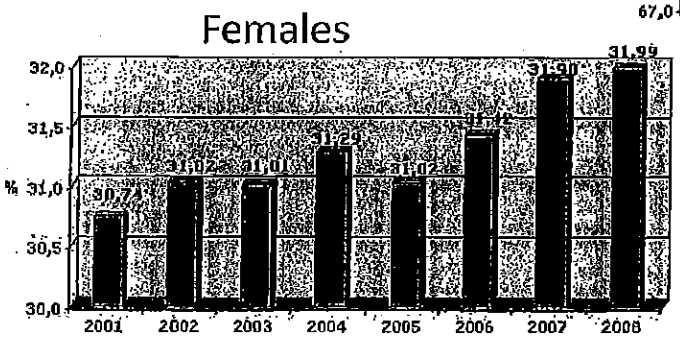


Belgian Association for Cardio-Thoracic Surgery (BACTS)

01/05/2010

Cardiac operations - % by gender – evolution



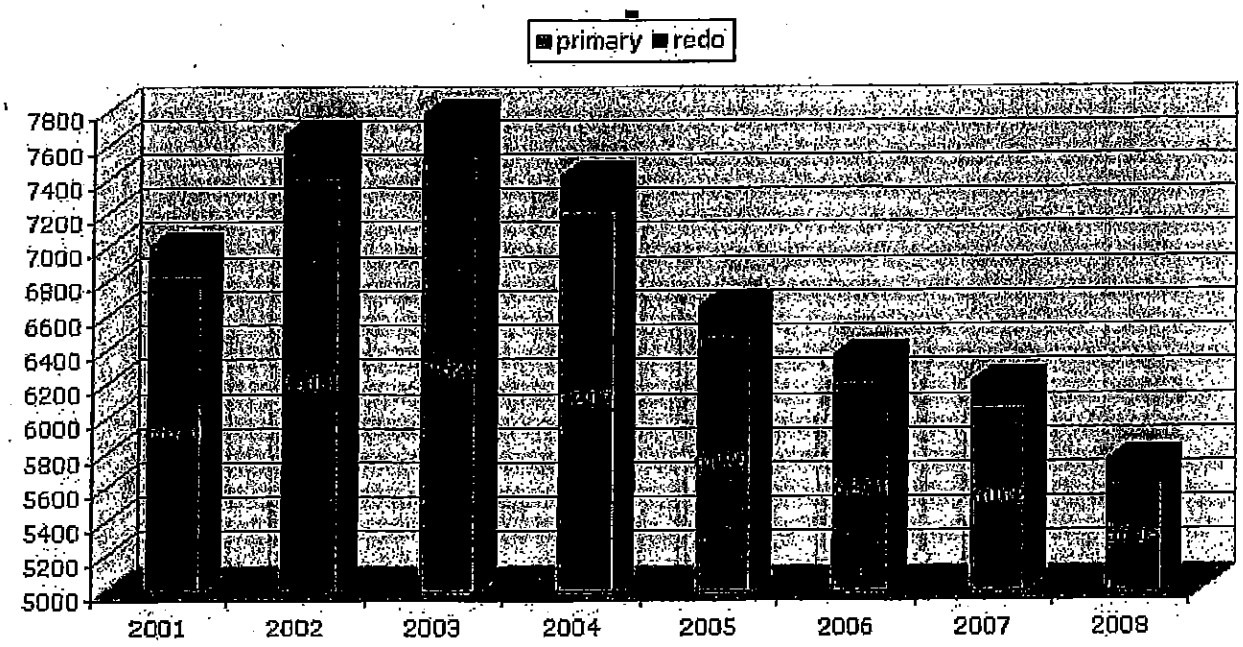


Belgian Association for Cardio-Thoracic Surgery (BACTS)

01/05/2010

Evolution of number of isolated CABG ± redo

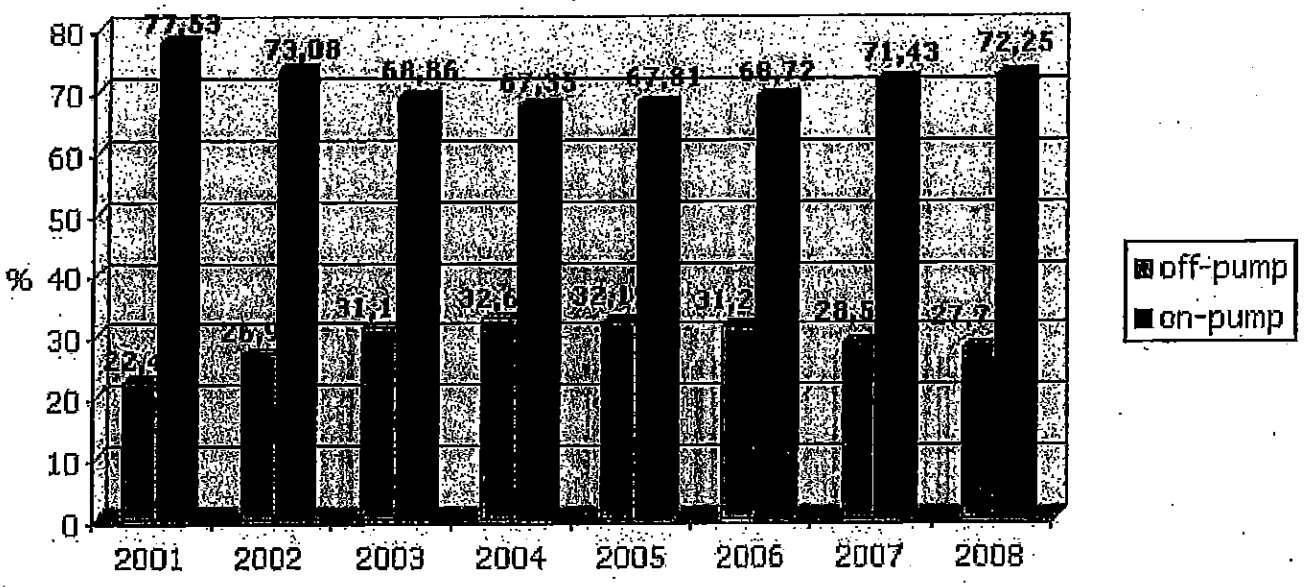
Reduction: 25.2 % (ref. 2003)
Redo procedures: 2.56 %



Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

01/05/2010

Isolated CABG- Evolution Off-pump/On-pump %

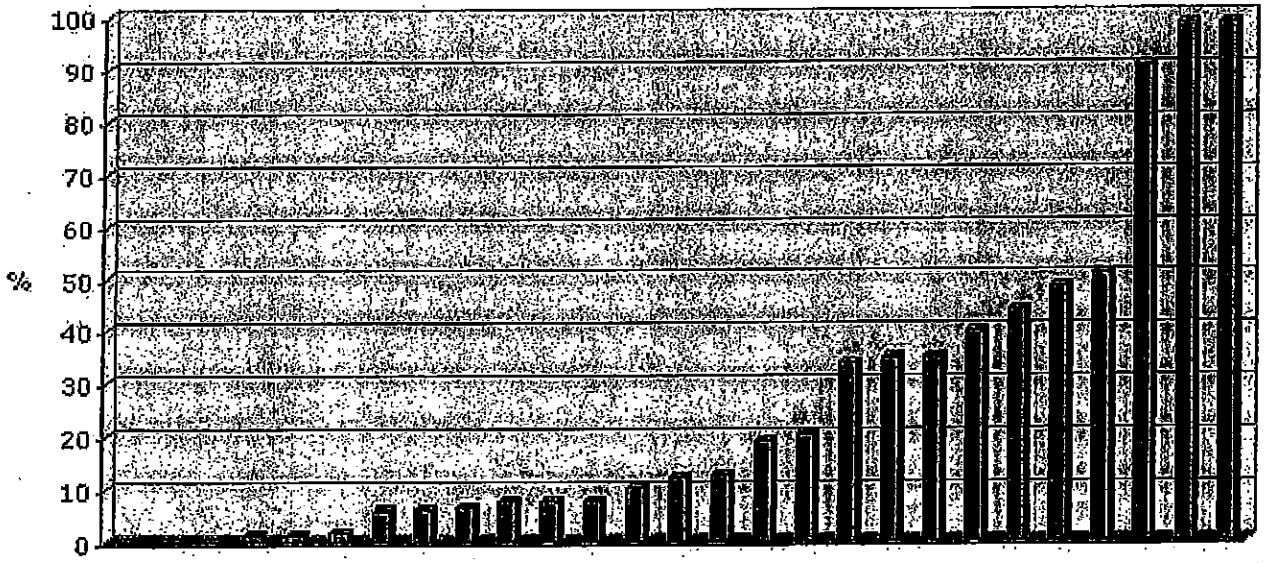


Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

01/05/2010

OPCAB - % of isolated CABG – by centre

OPCAB n = 1598
3 centres = 0 % Median = 12.10 % Mean = 25,72 %



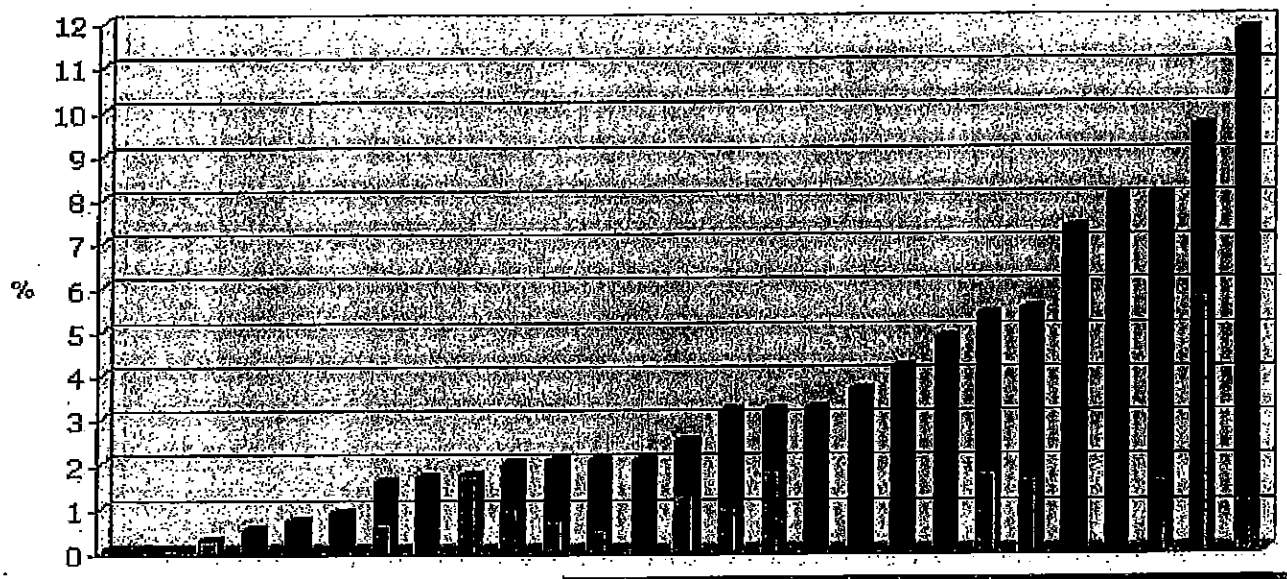
01/05/2010

Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

Isolated CABG - % venous only grafting – by centre

n= 170 patients out of 5759 isolated CABG (2.95 %)
n = 0 (2 centres)
median = 2,88 % by centre
mean = 2,47 % by centre
n= 129 primary CABG
n= 38 repeat CABG

redo primary operation

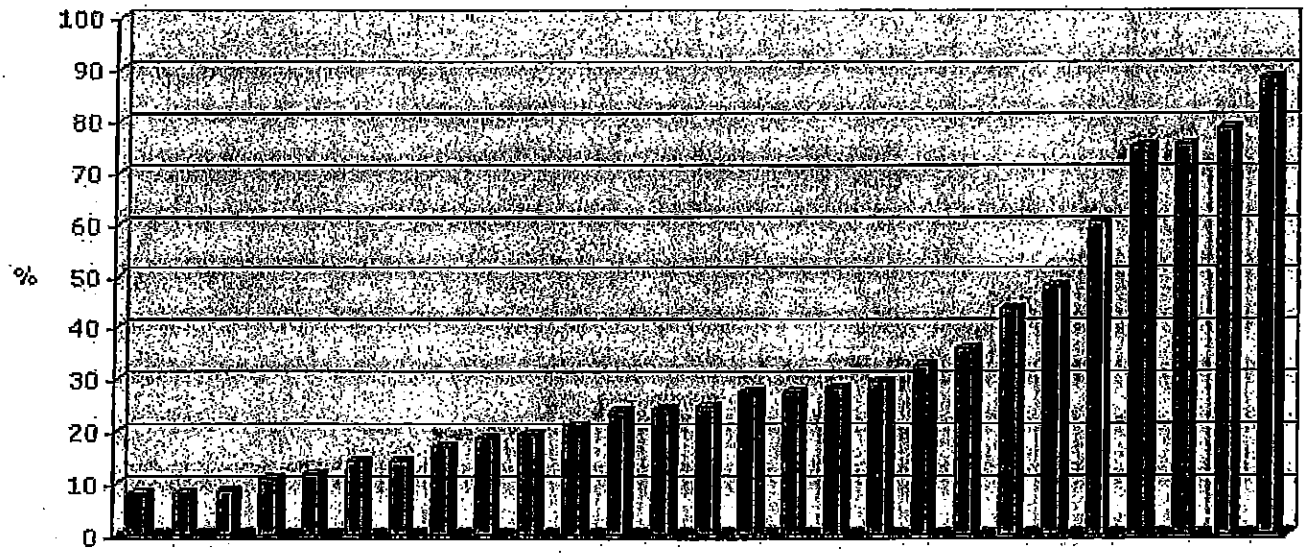


01/05/2010

Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

Isolated CABG - % total arterial grafting (no venous grafting) - by centre

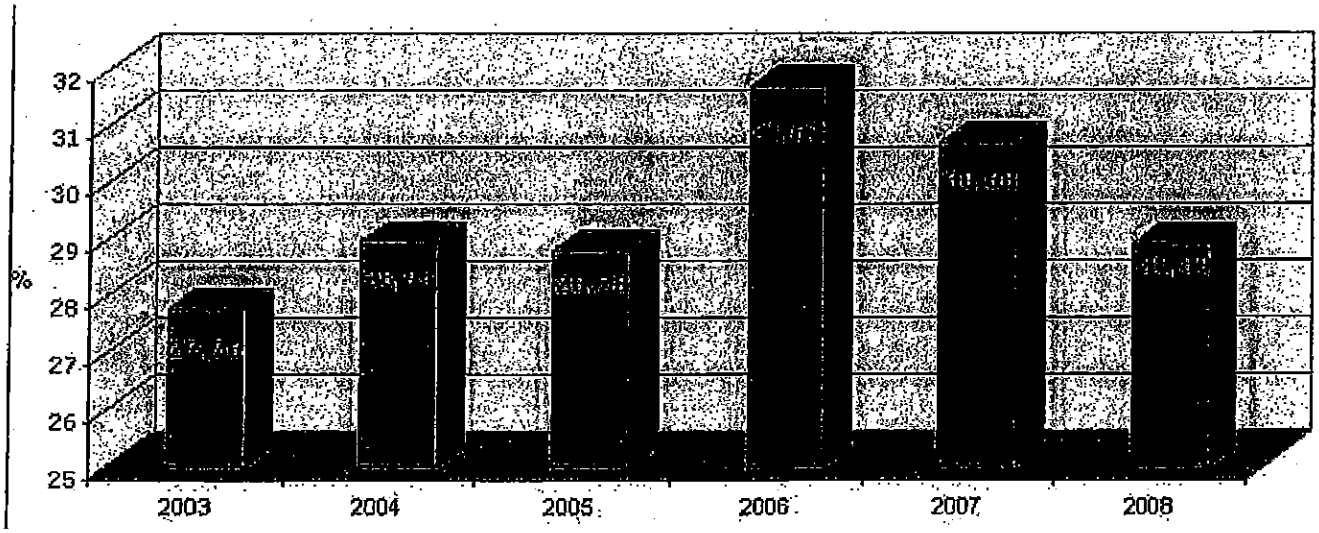
n= 1664 patients out of 5759 isolated CABG (28.89%)
median = 24.75.86 % by centre
mean = 24.52 % by centre



01/05/2010

Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

Evolution of total arterial grafting in isolated CABG

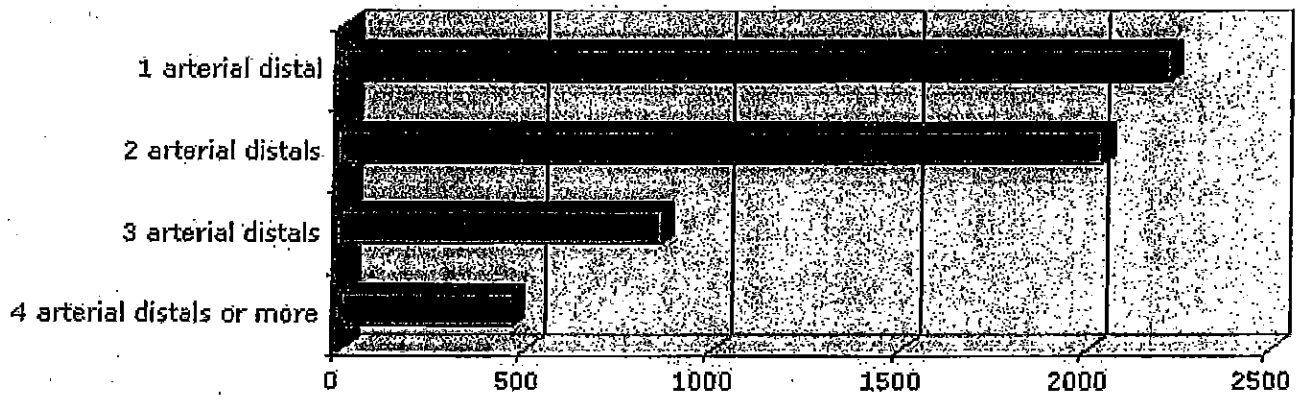


01/05/2010

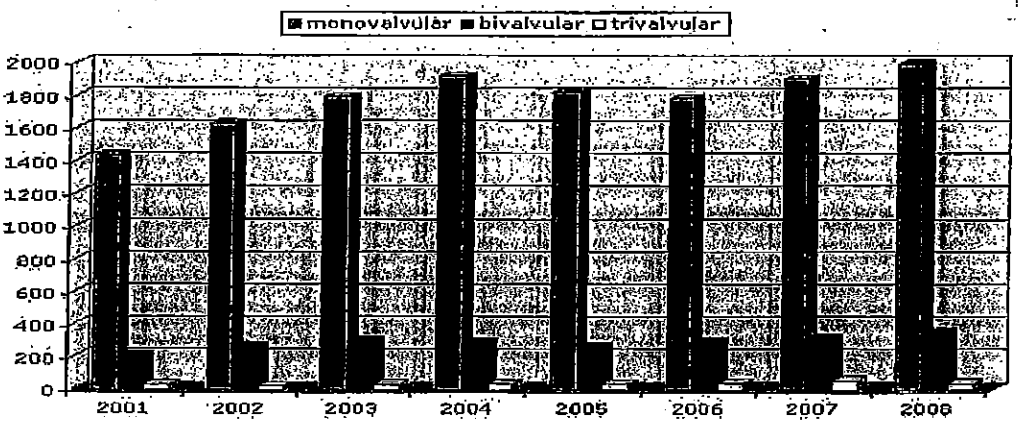
Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

Number of arterial distal anastomoses in isolated CABG

5759 isolated CABG
10735 art. distal anastomosis
mean 1.86 / patient
radial artery 129 patients
CPT problems

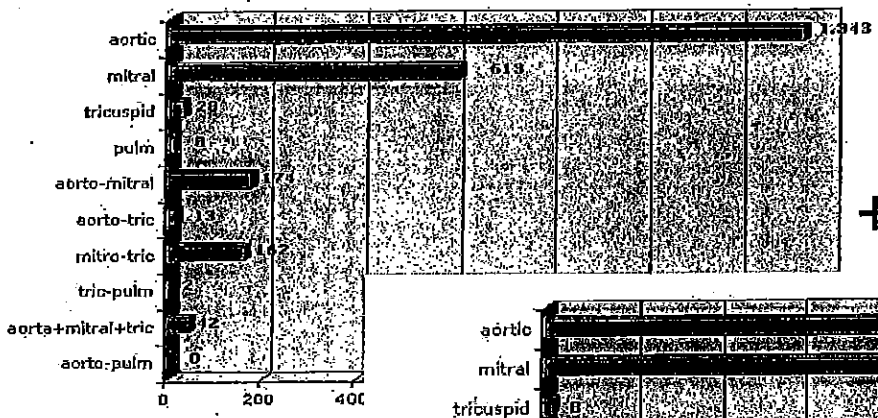


Evolution (years) – Type of operation (valve only)

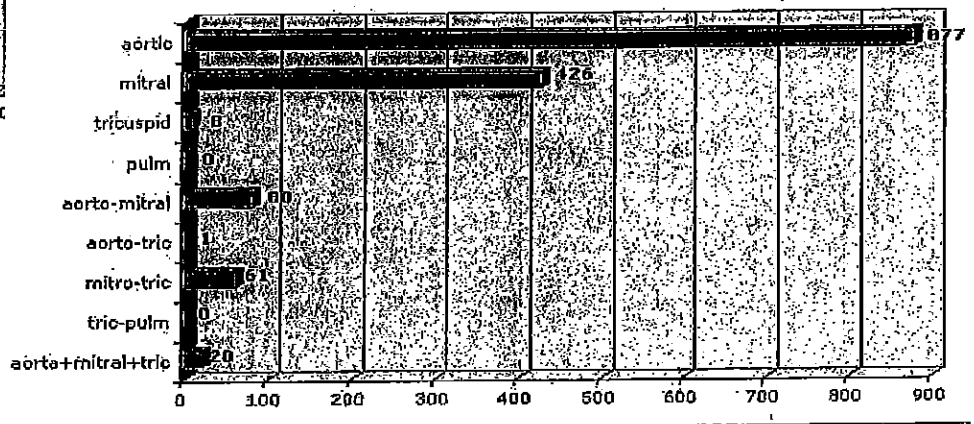


	2001	2002	2003	2004	2005	2006	2007	2008
	1673	1914	2120	2244	2127	2118	2273	2385
Monovalvular	1431	1628	1789	1918	1825	1782	1900	1992
Bivalvular	212	264	299	291	266	298	318	351
Trivalvular	30	22	32	35	36	38	55	42

Valve operations - Only (2385)



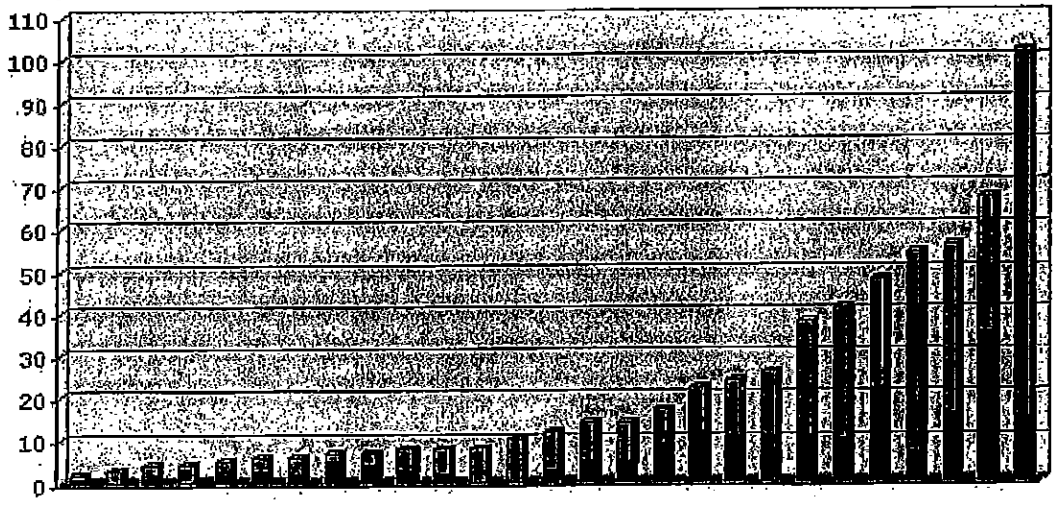
+ CABG (1473)



01/05/2010

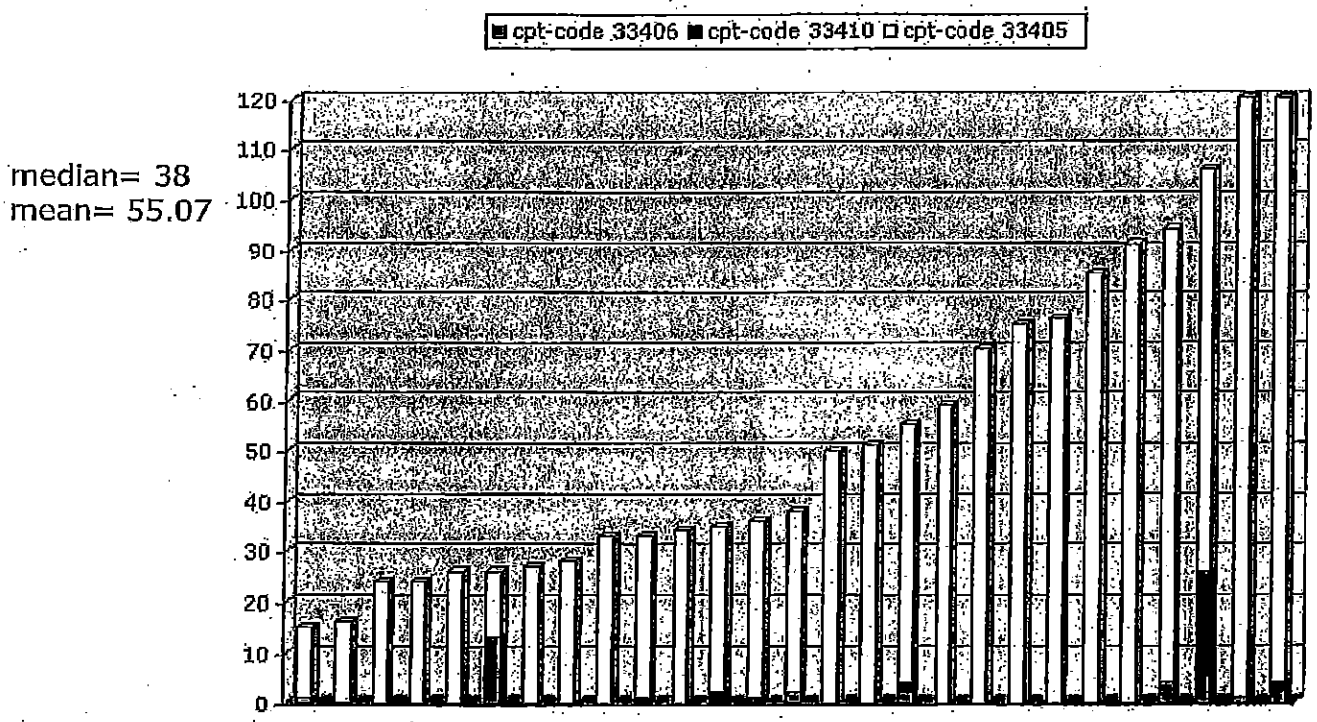
Number Isolated Mitral Valve operations - by centre (n= 613)

Cpt-codes :
33425 = Valvuloplasty without ring MITR
33426 = Valvuloplasty with prosthetic ring MITR
33427 = Valvuloplasty-radical reconstruction MITR w/wo ring
33430 = MVR
Isolated valve = no other procedure
median= 12
mean= 22.70



01/05/2010

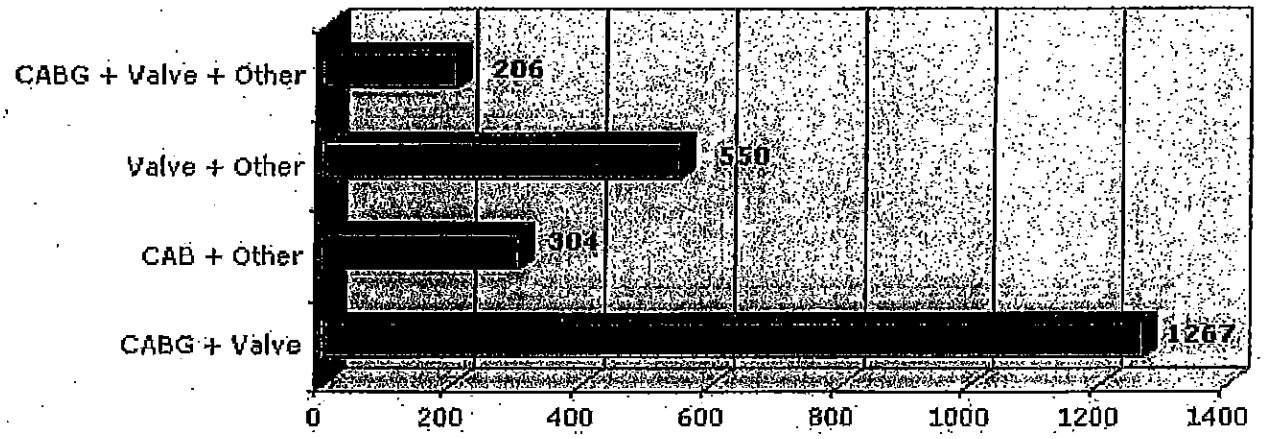
Number Isolated Aortic Valve replacements - by centre (n= 1300)



01/05/2010

Belgische Vereniging voor Cardio-thoracale Heelkunde (BVCH)
Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

COMBINED PROCEDURES



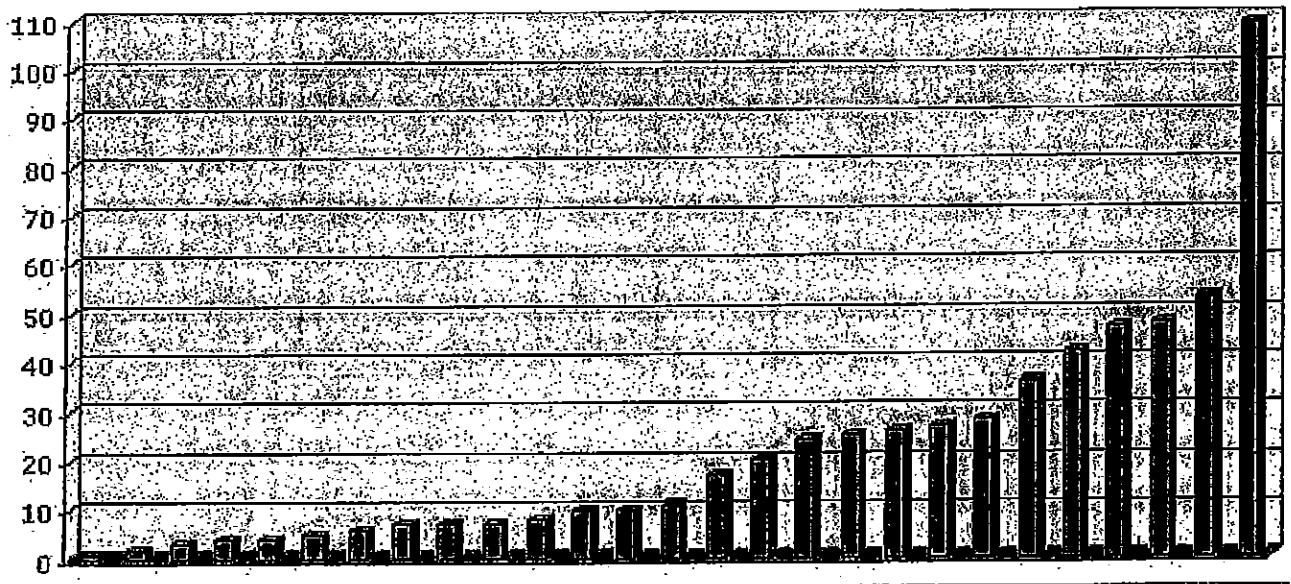
01/05/2010

Belgische Vereniging voor Cardio-thoracale Heelkunde (BVCH)
Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

Mitral valve + CABG ± other = by centre (n= 587)

median= 11

mean= 21.74



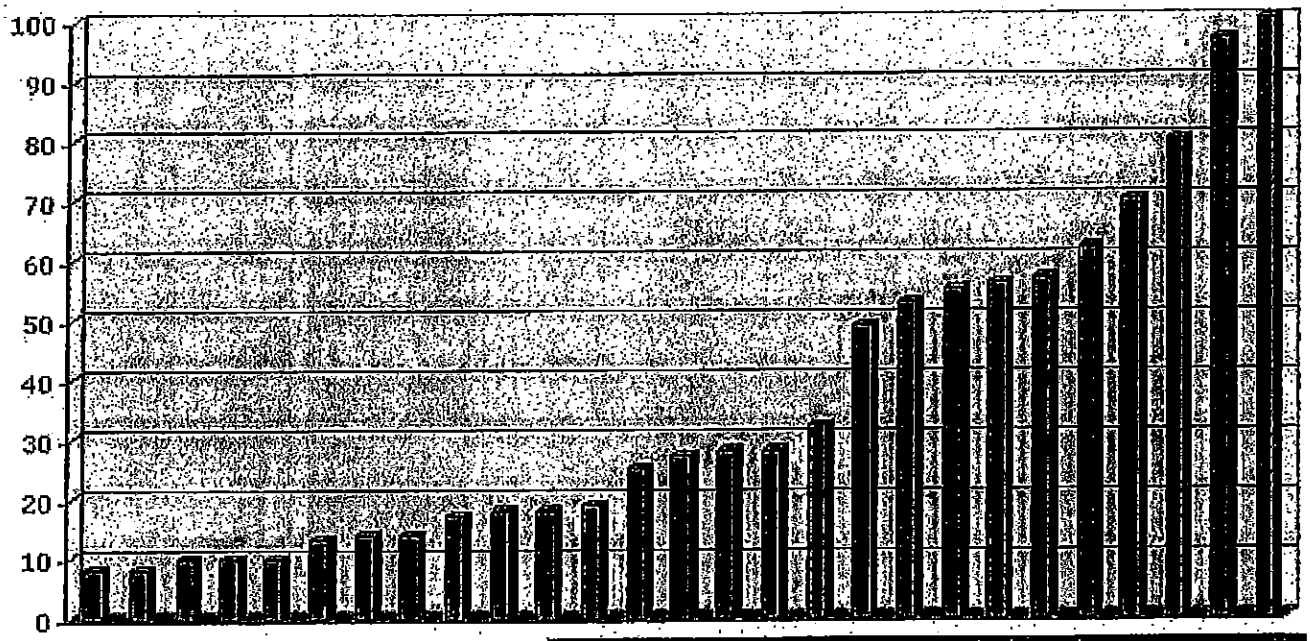
01/05/2010

Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

Aortic valve + CABG ± other – by centre (n= 978)

median= 27

mean= 36.22



01/05/2010

Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

Congenital procedures

European Congenital Database

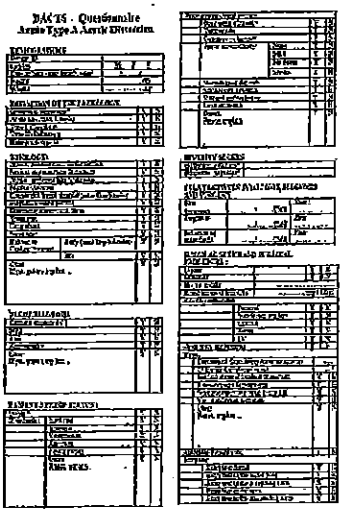
	2001	2002	2003	2004	2005	2006	2007	2008
0-1	433	503	464	505	520	558	573	601
2-15	238	279	270	283	253	254	264	276

Project on Acute Aortic dissection type A

College of cardiac Surgery

Inclusipn criteria
- Acute
- Type A dissection
- June 1, 2008-May 31.2009
- Arriving alive in OR

Exclusion criteria
- Chronic dissection
- Type B
- Not operated



Project: Acute aortic dissection

1/6/2008-31/5/2009 inclusion period

69 patients		
16 centers		Follow up 1y
Demografic data:		
Mean age	62 y	± 12 y
M/F	68/32	
Euroscore	10.69	log 25.75
Mortality		19.2%

Aortic pathology

Type 1 dissection	85%
Type 2 dissection	6%
Retrograde dissection	7%
Intramural heamtoma	9%
Medianecrosis	68%
Bicuspid aortic valve	6%
Marfan patient	1.5%
Iatrogenic	7.25%

01/05/2010

Vereniging voor Cardio-thoracale Heelkunde (VVCH)
Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

Clinical presentation

Hemodynamically stable	60%
Intubated	22%
Resuscitation	13%
Pericardial effusion	55%
Tamponade	29%
Cardiac ischemia	14%
Aortic regurgitation	23%
Severe	16%
Neurological dysfunction	16%
Spinal cord ischemia	1.5%
Malperfusion	
Visceral	14%
Limb	13%

Euroscore

Patient Factors	Change sheet below to change language
Age	67yr
Sex	[ ] Female
Chronic pulmonary disease	[ ] Yes
Extracardiac arteriopathy	[ ] Yes
Neurological dysfunction	[ ] Yes
Previous cardiac surgery	[ ] Yes
Serum creatinine >200 µmol/ L	[ ] Yes
Active endocarditis	[ ] Yes
Critical preoperative state	[ ] Yes
Cardiac Factors	
Unstable angina	[x] Yes
LV dysfunction moderate or LVEF 30-50%	[ ] Moderate O
Lv dysfunction poor or LVEF<30	[x] Poor
Recent myocardial infarct	[ ] Yes
Pulmonary hypertension	[ ] Yes
Operation Factors	
Emergency	[ ] Yes
Other than isolated CABG	[ ] Yes
Surgery on thoracic aorta	[ ] Yes
Postinfarct septal rupture	[ ] Yes

Additive EuroSCORE	7
Logistic EuroSCORE (mortality %) =	7,39%

For the latest information on EuroSCORE visit http://www.euroscore.org

To download the latest version of this calculator visit

Euroscore – calculated on isolated CABG (n= 14 centres)

		[illegible]		[illegible]		
Isolated cabg	euro score complete	MEAN	STDDEV	MEAN	STDDEV	MEDIAN
295	2	3,50	0,71	2,44	0,33	2,44
169	7	7,00	2,77	9,36	7,17	6,28
247	11	6,27	2,45	7,71	5,3	6,14
62	58	5,53	3,76	8,5	13,38	4,5
85	83	4,71	3,13	5,8	6,98	3,59
124	110	4,88	3,37	6,45	7,37	3,5
116	115	6,13	4,6	11,97	17,09	4,39
143	127	4,86	3,75	7,37	12,52	3,11
149	145	3,96	3,52	5,53	11,6	2,52
155	154	5,65	3,11	7,62	7,96	4,96
232	194	4,88	3,68	7,04	10,63	3,28
390	377	4,39	2,47	4,67	4,95	3,44
412	392	5,44	3,11	7,21	8,71	4,23
486	470	4,38	2,84	4,93	6,15	3,12
3065	*2245*	*72*	*43*	*97*	*10*	*56*

Belgische Vereniging voor Cardio-thoracale Heelkunde (BVCTH)
Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

The Patient					
4	date of birth	day/month/year	M		
5	gender	M/F	M		
6	weight	kg	M		
7	height	cm	M		
8	chronic lung disease	Y/N	M		
9	diabetes	no, diet only, oral therapy only, insulin	M		
10	extracardiac arteriopathy	Y/N	M		
11	neurological dysfunction	Y/N	M		
12	serum albumin	grams/litre	No		
13	muscular skeletal dysfunction	Y/N	M		
14	on dialysis	Y/N	M		
15	last serum creatinine	not available or micromol/litre or milligram/declitre	M		
16	number of previous major heart operations	number	M		
17	active endocarditis	Y/N	M		
18	critical pre-operative state during current hospital admission	Y/N	M	pre-operative ventricular tachycardia / ventricular fibrillation or aborted sudden death pre-operative cardiac massage pre-operative ventilation before anaesthetic room pre-operative inotropes pre-operative IABP pre-operative acute renal failure (anuria or oliguria <10 ml/hr)	
19	last serum BNP or NT-proBNP if available	picogram	[illegible]	[illegible]	

01/05/2010

Belgische Vereniging voor Cardio-thoracale Heelkunde (BVCTH)
Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

				The Heart			
20	angina class (Canadian Cardiovascular Society)	0, 1, 2, 3 or 4	M				0 – No angina 1 – Angina with strenuous exercise 2 – Angina with moderate exertion 3 – Angina with mild exertion 4 – Angina at rest.
21	NYHA class	I, II, III or IV	M				NYHA (New York Heart Association) classification I – No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation or dyspnea II – Slight limitation of physical activity. Comfortable at rest, but ordinary physical activity results in fatigue, palpitation, or dyspnea. III – Marked limitation of physical activity. Comfortable at rest, but less than ordinary activity causes fatigue, palpitation, or dyspnea. IV – Unable to carry out any physical activity without fatigue, palpitation, or dyspnea. Symptoms of cardiac insufficiency at rest. If any physical activity is undertaken, symptoms are increased.
22	function or	good, moderate, poor	M				
	ejection fraction	%					
23	has the patient suffered a myocardial infarction during the 90 days prior to the operation?	Y/N	M	hours (1-72)	enter a value for hours, days or weeks		

			The Operation		
24	last systolic pulmonary artery pressure prior to operation if available	mm Hg	No		

			The Operation		
25	date of operation	dd/mm/yyyy	M		
26	urgency of operation	elective, urgent, emergency or salvage	M		
27	was a CABG performed	Y/N		number of distal anastomosis	
28	were any valve procedures performed	Y/N	M	aortic valve repair or replacement	
				mitral valve repair or replacement	
				tricuspid valve repair or replacement	
				pulmonary valve repair or replacement	
29	were any thoracic aortic procedures performed	Y/N	M	ascending aortic replacement	
				root replacement with coronary reimplantation	
				partial aortic arch replacement	
				total aortic arch replacement	
				descending aortic replacement	
				thoracoabdominal aortic replacement	
				other thoracic aortic procedure (fill free text)	
30	were any other heart procedures performed	Y/N	M	ventricular septal defect repair	
				atrial septal defect repair	
				intraventricular septum repair (congenital)	
				intraventricular septum repair (ischaemic)	
				left ventricular aneurysm resection or plication	
				other procedure on the heart (fill free text)	
31	total bypass time	minutes	M		
32	total deep hypothermic circulatory arrest time	minutes	No		
33	total aortic cross-clamp time	minutes	M		
34	total selective cerebral perfusion time	minutes			

Belgische Vereniging voor Cardio-thoracale Heelkunde (BVCTH)
Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

35	date of discharge from hospital where operation took place or	date	M	status on discharge - alive	destination on discharge home or another acute hospital or rehabilitation or convalescence institution
				status on discharge - dead	
	alive in hospital at 90 days	tick box			

[redacted]

The Heart

angina class (Canadian Cardiovascular Society)	0, 1, 2, 3 or 4	M		
NYHA class	I, II, III or IV	M		
function or	good, moderate, poor	M		
ejection fraction	%			
has the patient suffered a myocardial infarction during the 90 days prior to the operation?	Y/N	M	hours (1-72)	enter a value for hours, days or weeks
			days (3-30)	
			weeks (4-13)	
			highest serum troponin level for this infarction (micrograms/litre)	
			troponin I or troponin T	

Belgische Vereniging voor Cardio-thoracale Heelkunde (BVCT)
Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

Conclusions

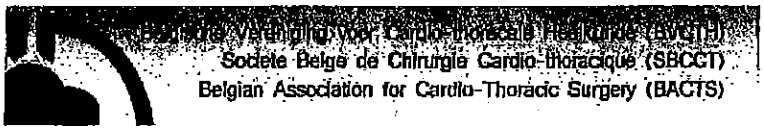
Need for a change

CPT codes

error coding
changing codes
procedure coding
reimbursement

New Euroscore 2010

01/05/2010

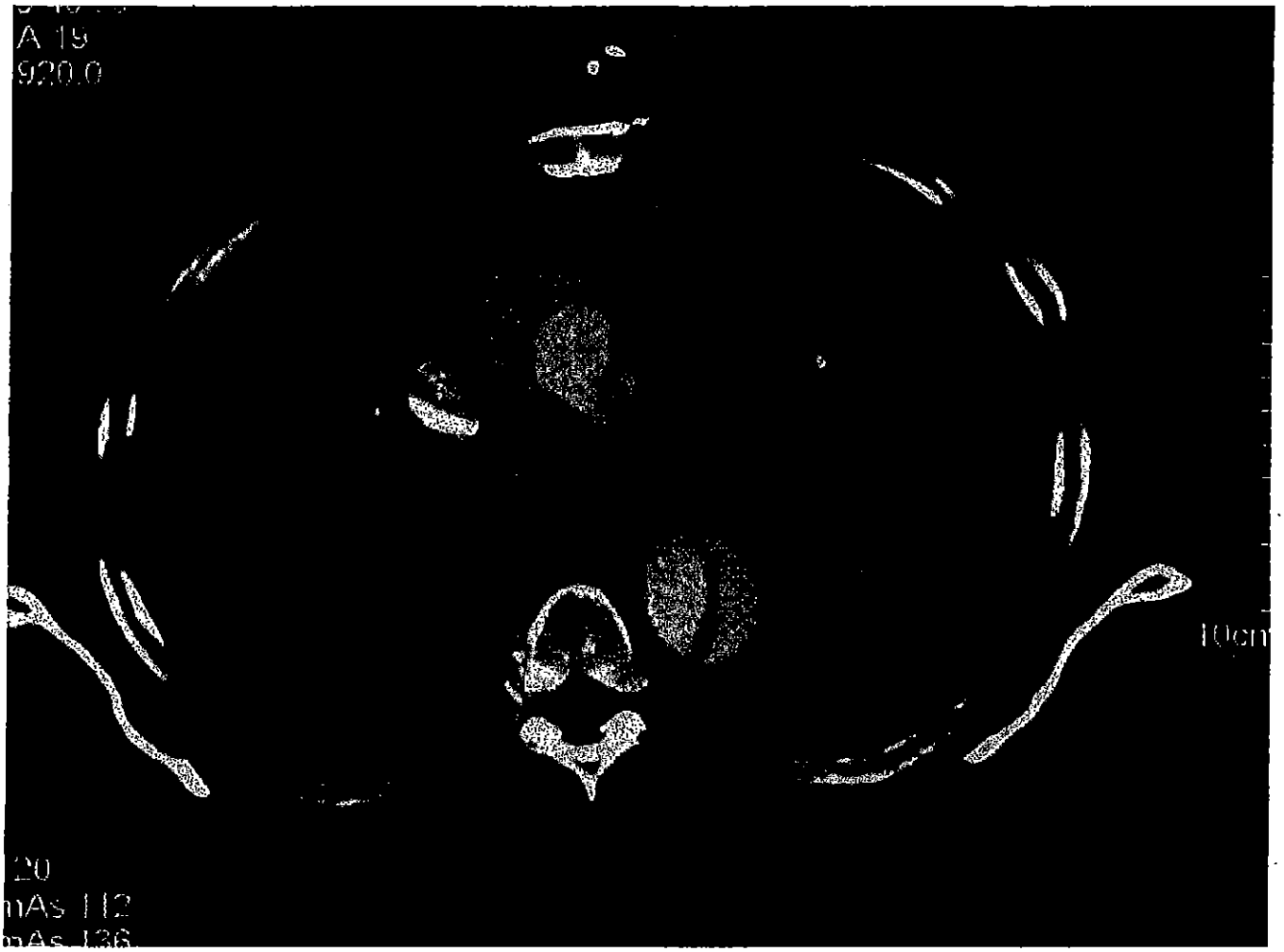


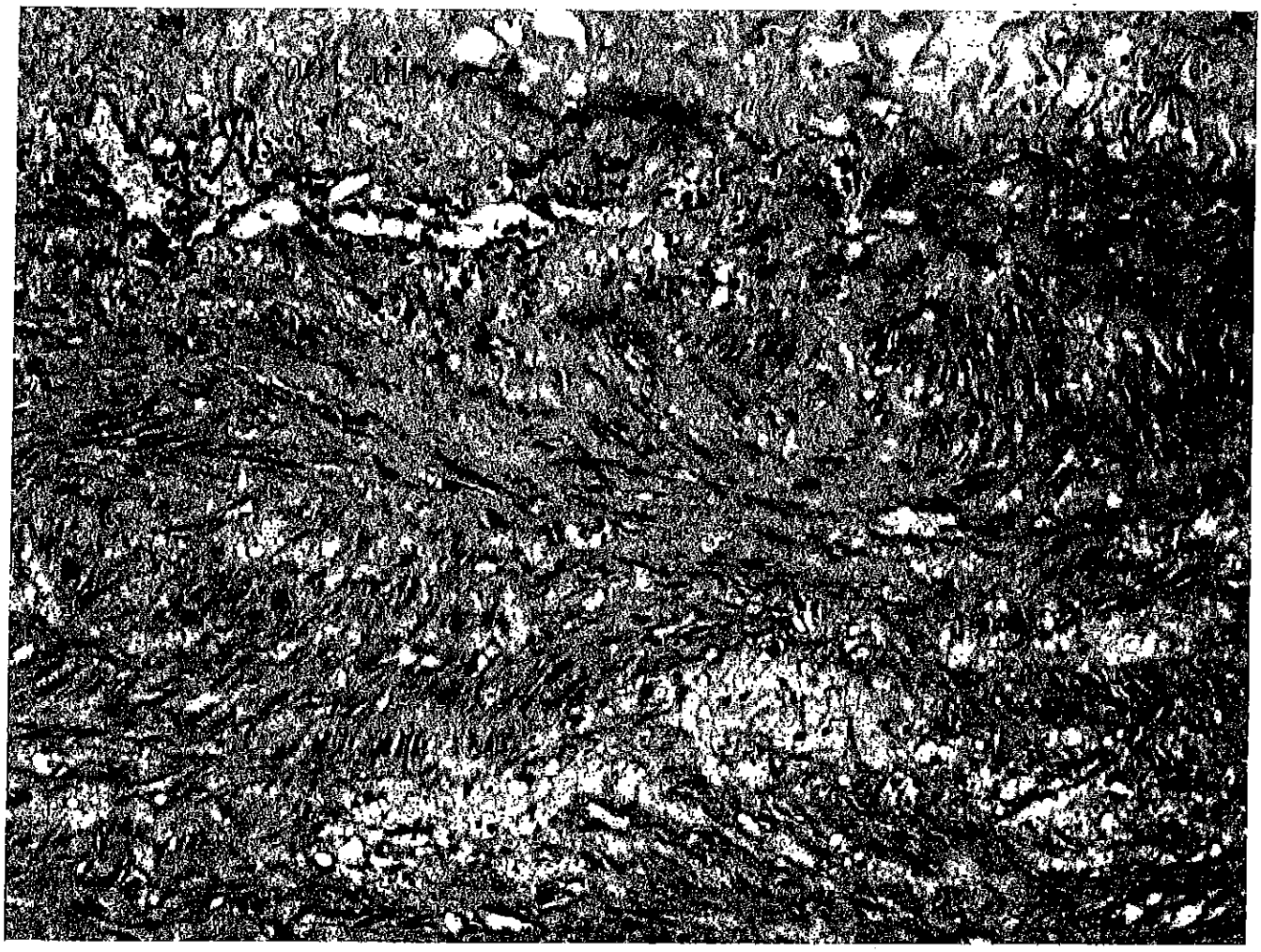
Acute type A Aortic dissection report

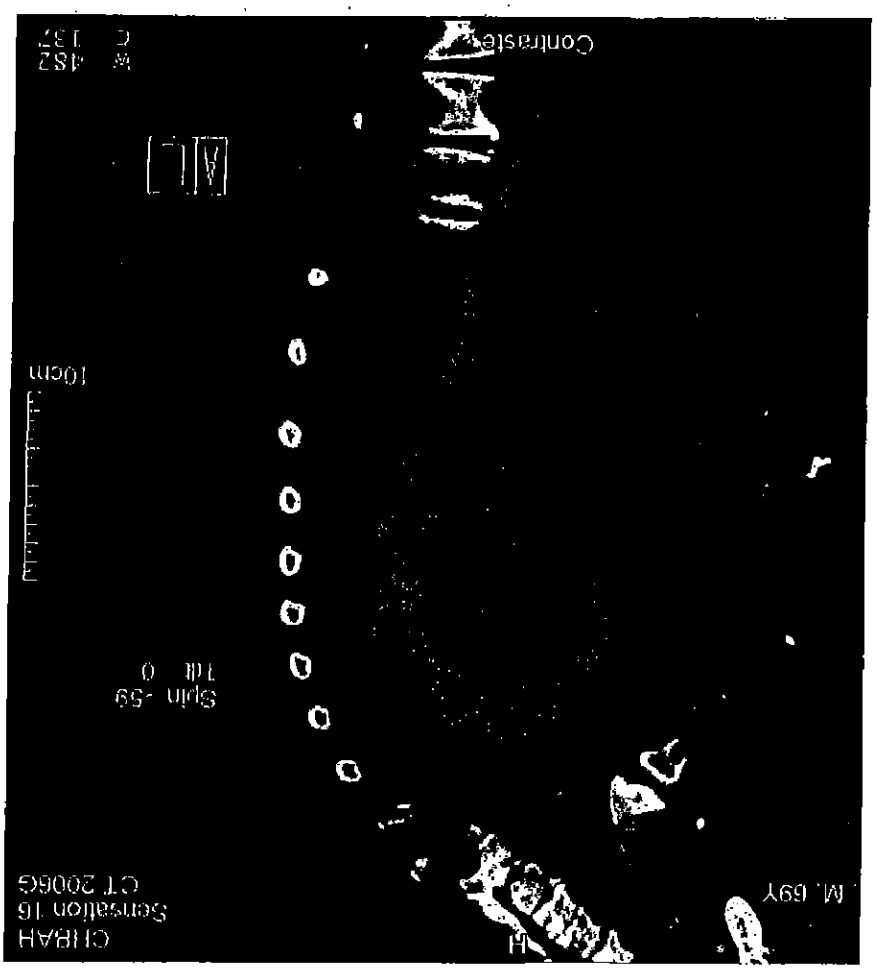
Data base committee of the BACTS

Marc A Radermecker, E de Worm, C Stefanidis and B Stockman

Oostende may 12, 2011






M. 69Y
H
CIBAH
Sensation 16
CT 2006G
Spin -59
Tilt 0
10cm
Contrast
W 482
C 137

Purpose of the study

- To obtain prospective data on patients operated for AAOD in Belgium over 1 y.
- To obtain information on the pathology
- Management
- Surgical treatment
- outcome

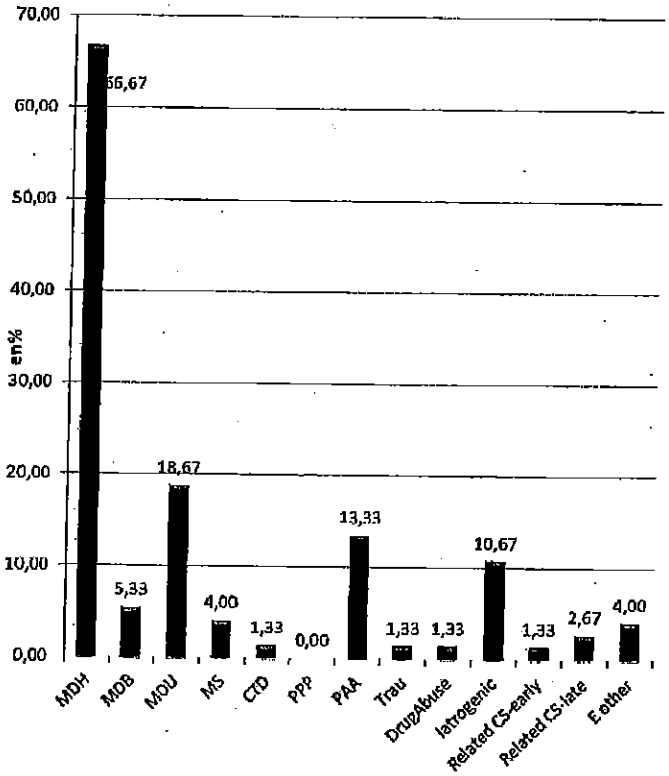
Methodology

- A AOD treated within 1 week of symptoms
- All belgian cardiac centers
- Prospective study between may 31, 2008 and June 1, 2009
- Data reported via a questionnaire
- Data anonymised (data base Manager)
- Statistics by the Dpt of Biostatistics of the Ulg
- Report elaborated within the database

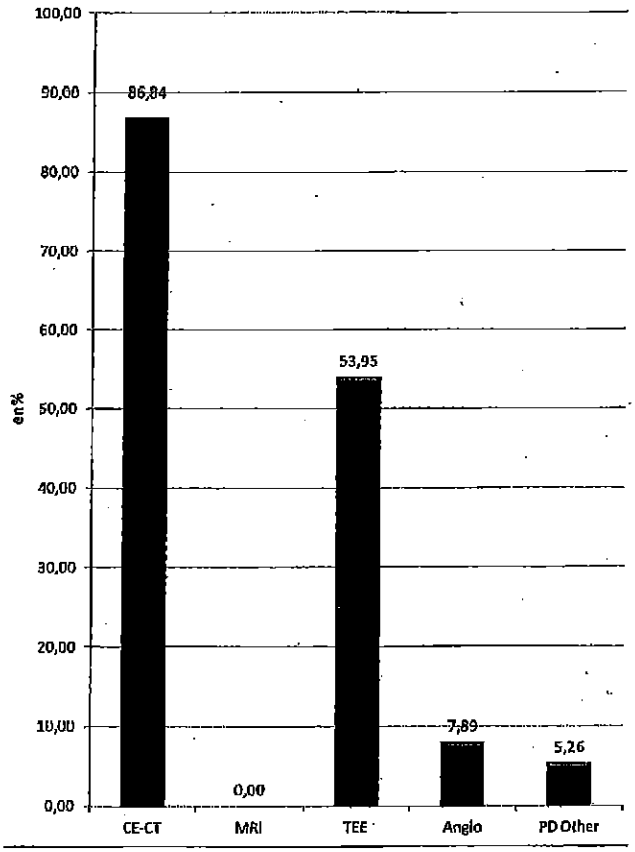
Data

- 84 cases reported via the questionnaire
- 75 eligible cases
- Demographics
- Pathology
- Diagnostic
- Clinical status
- Estimation of the surgical risk (Euroscore)
- Surgery
- Postoperative complications
- Survival at discharge
- 1 year survival

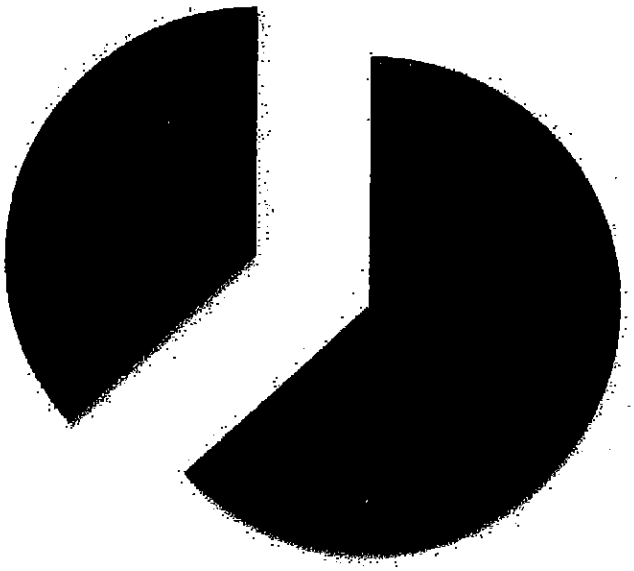
Etiology



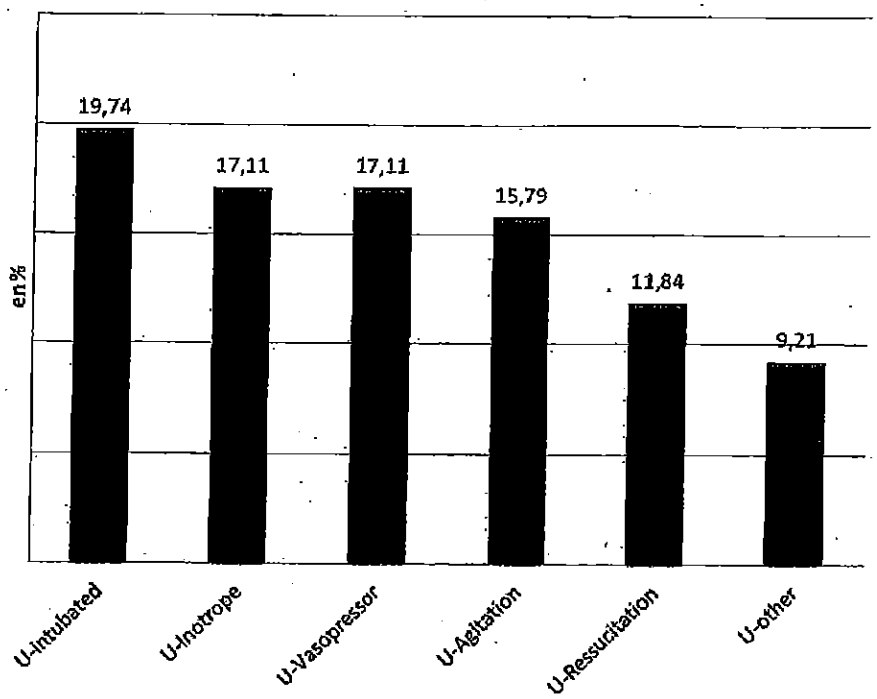
Preop diagnosis



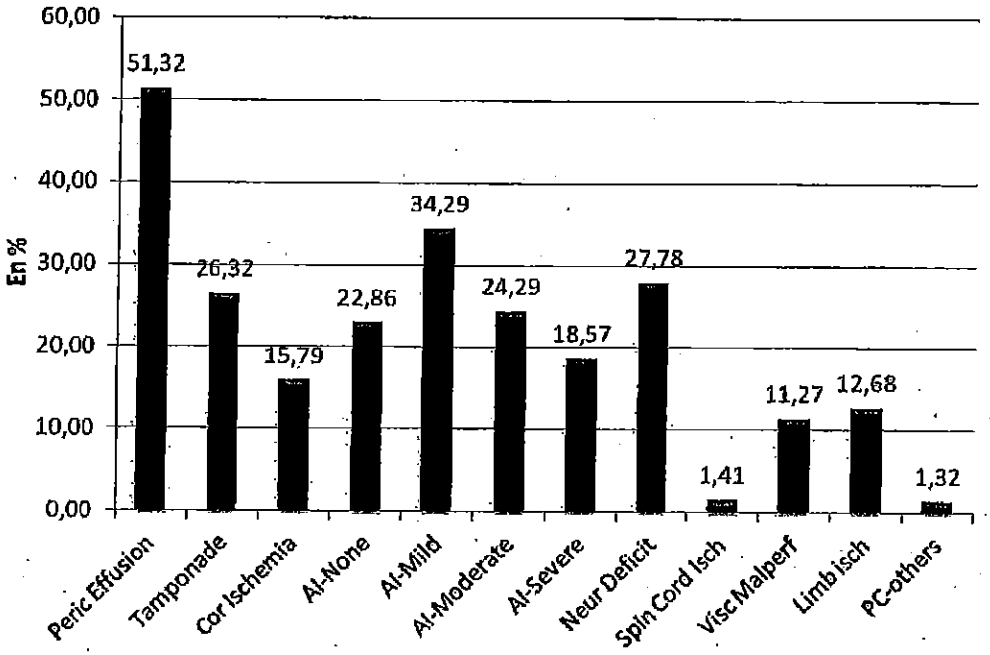
Preop status



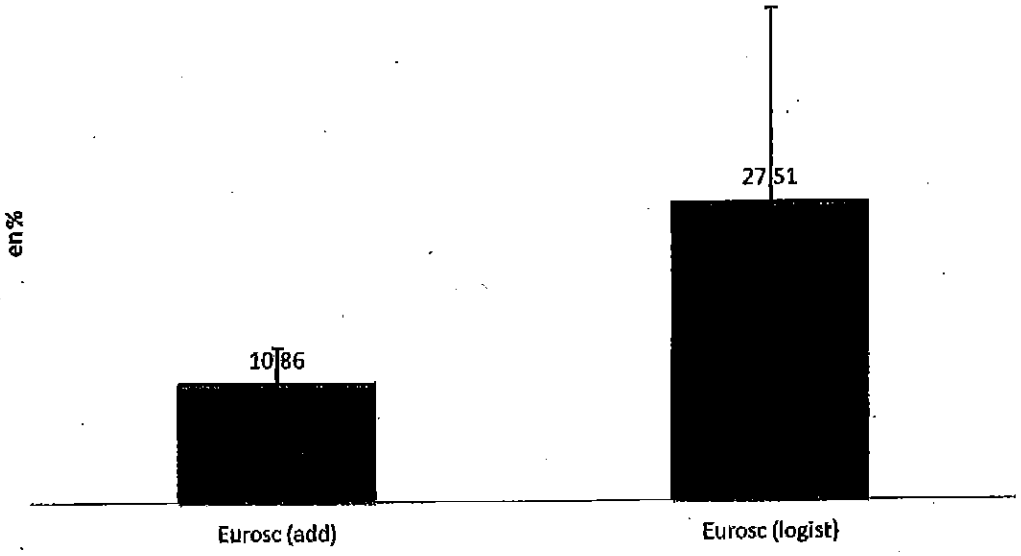
Unstable definition



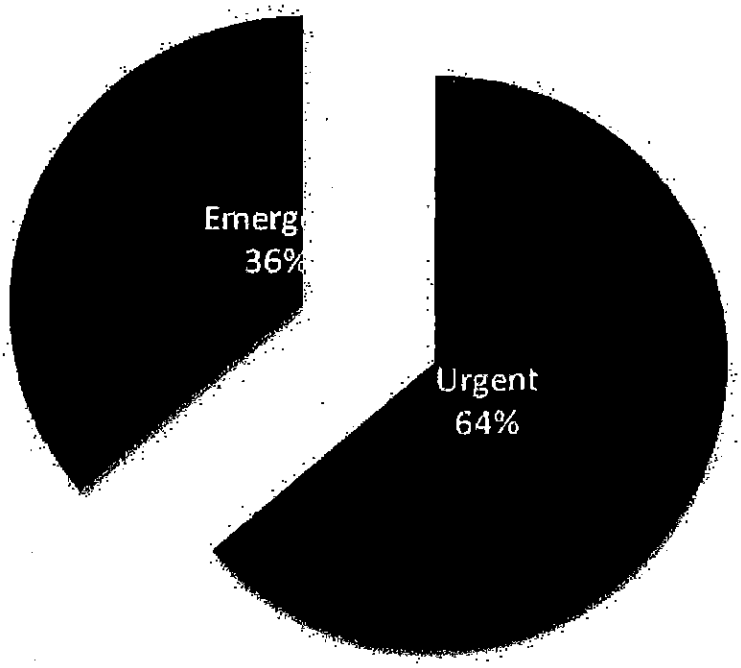
Complications



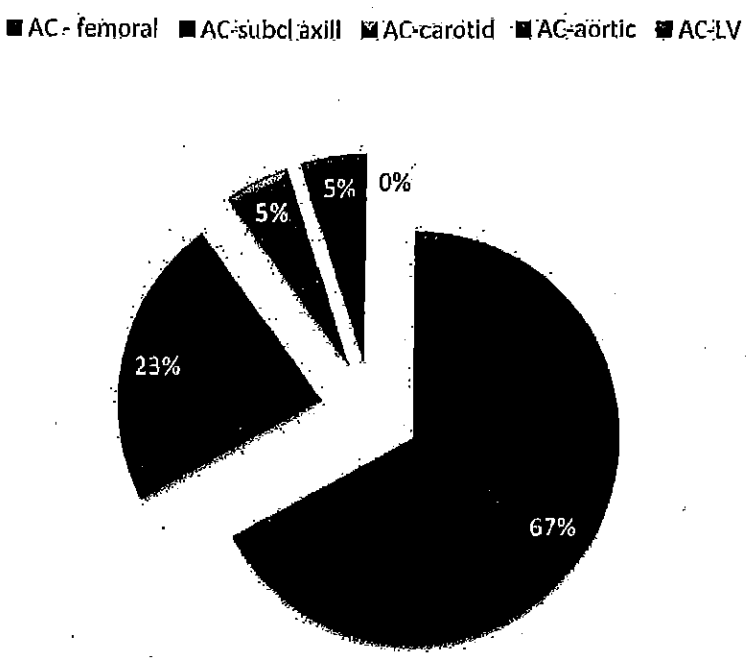
Severity scores



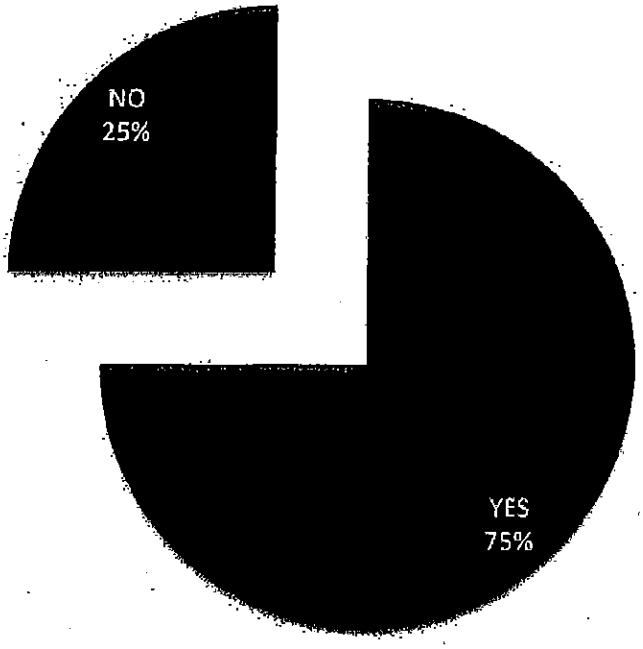
Surgery



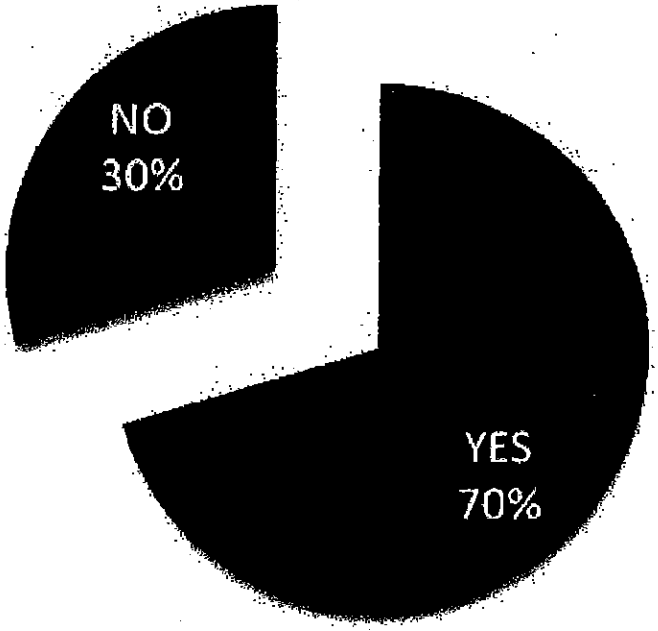
Arterial cannulation



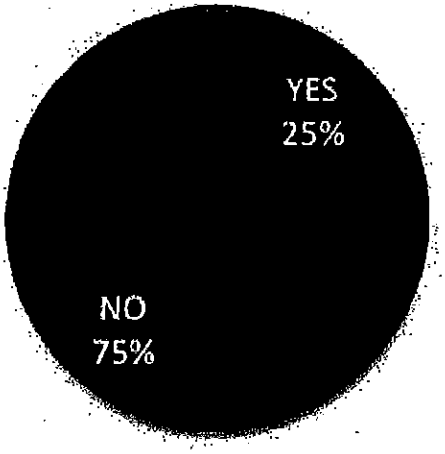
Open distal anastomosis



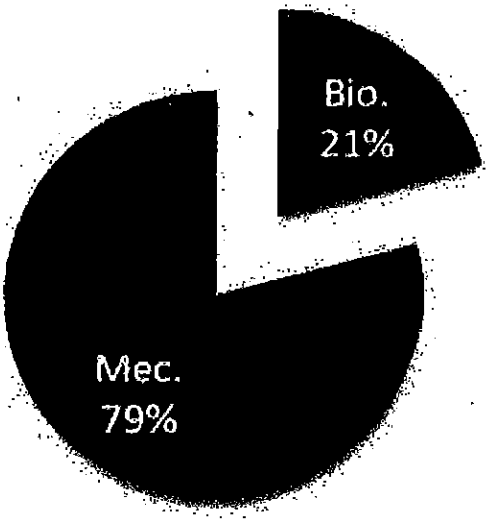
Anterograde reperfusion



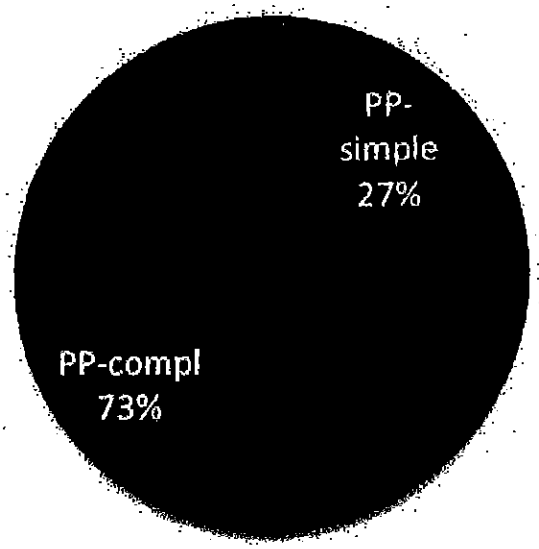
Replacement Ao valve



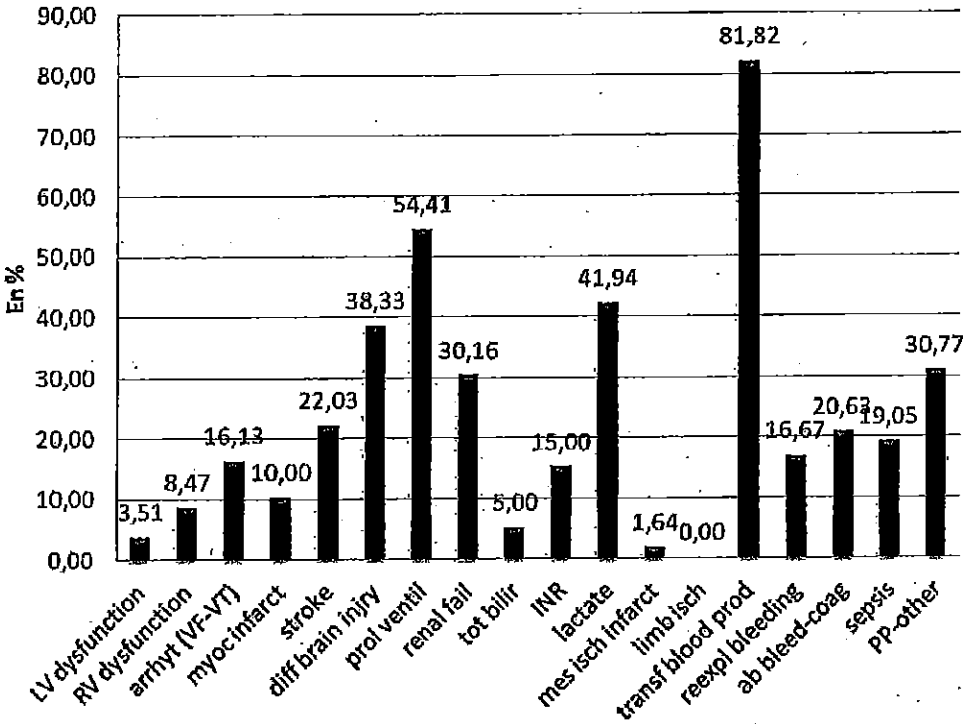
Valve type



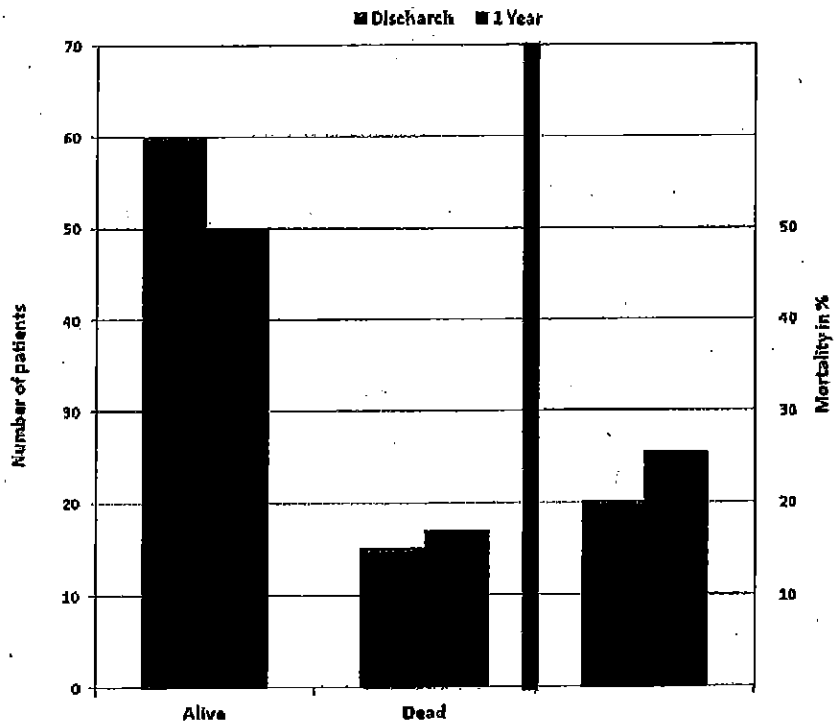
Post-operative period



Post-operative period



Follow-up



Conclusion 1

- 75 cases
- ±85 % participation rate
- High risk patients
- High (expected) complications rate
- Overall mortality results within the range of recently reported data from the litterature

  IRAD registry (JTCS 2010) + 21 % < 70 Y

  31 % > 70 Y

Conclusions

- Capability of our professional society to collect data in an anonymised form
- Capability to clearly identify a pathology
- Capability to proceed to outcome assessment in relation with patients' risk
- Willingness and capability to proceed to "quality control"

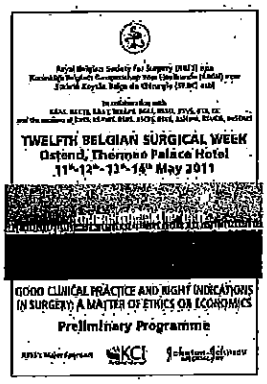
Société Belge de Chirurgie Cardio-thoracique (SBCCT)
Belgian Association for Cardio-Thoracic Surgery (BACTS)

Report of the database committee "Improving the quality of care through better data registration".

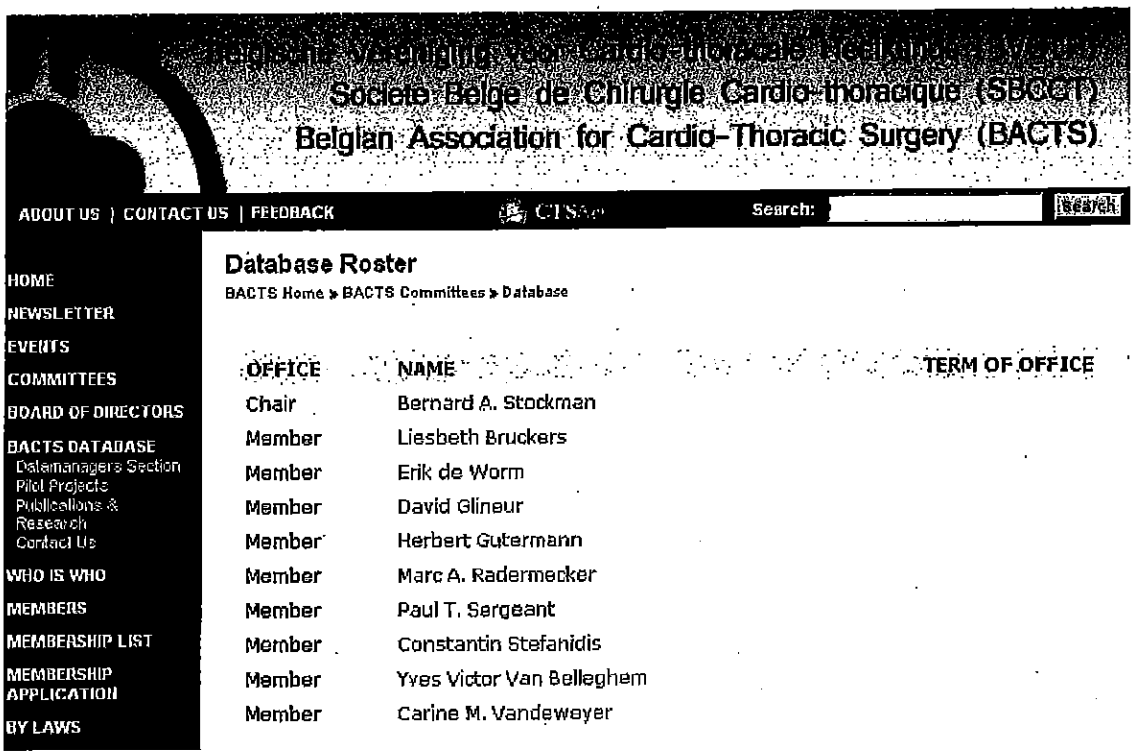
May 12th, 2011

BACTS Database Committee

Belgian Surgical Week, Oostende



BACTS



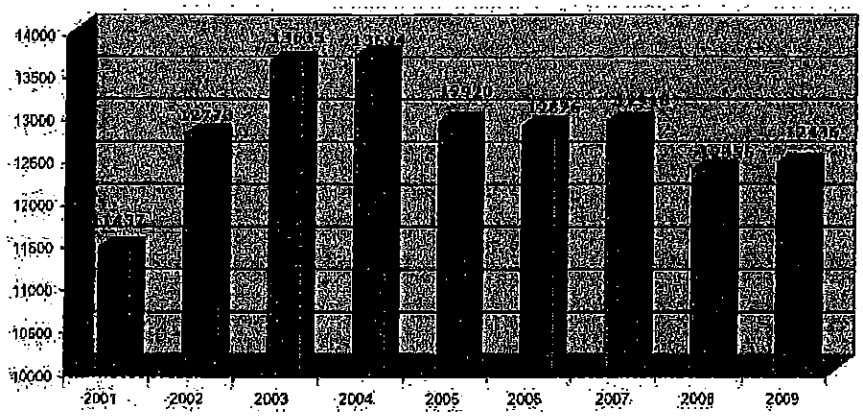
Database Roster

BACTS Home » BACTS Committees » Database

OFFICE	NAME	TERM OF OFFICE
Chair	Bernard A. Stockman	
Member	Liesbeth Bruckers	
Member	Erik de Worm	
Member	David Glineur	
Member	Herbert Gutermann	
Member	Marc A. Radermecker	
Member	Paul T. Sergeant	
Member	Constantin Stefanidis	
Member	Yves Victor Van Belleghem	
Member	Carine M. Vandeweyer	

BACTS

Overview activity 2001-2009

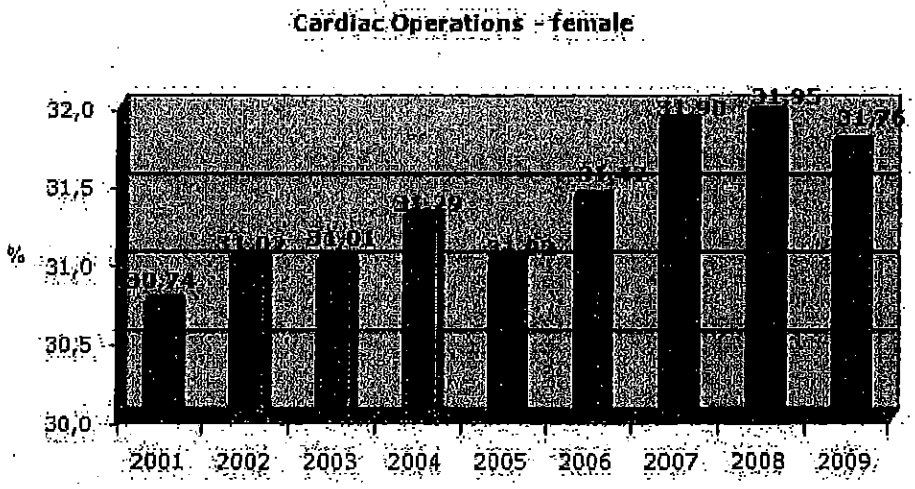


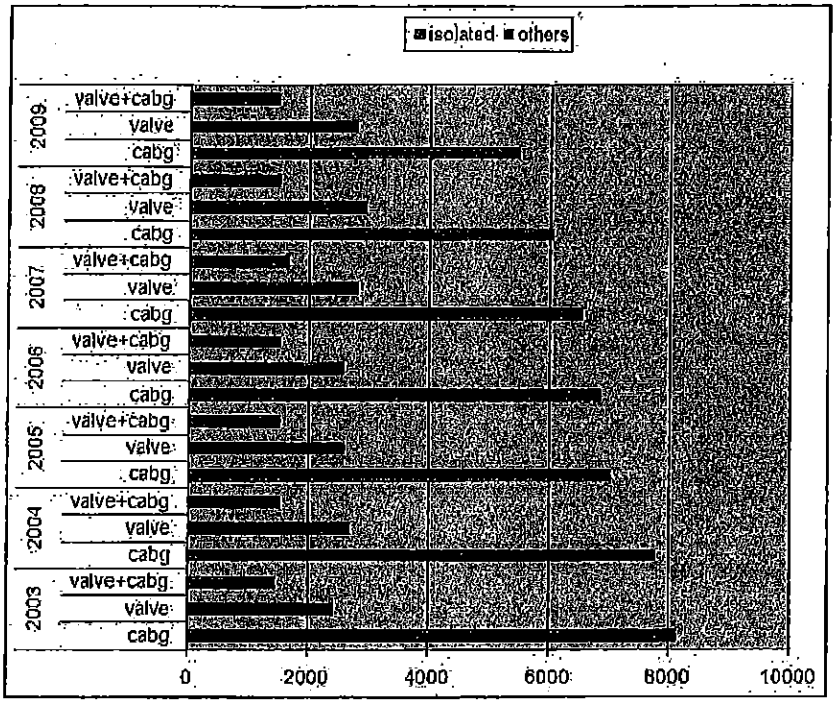
Number of cardiac operations

28 centres

2008: 1 centre missing

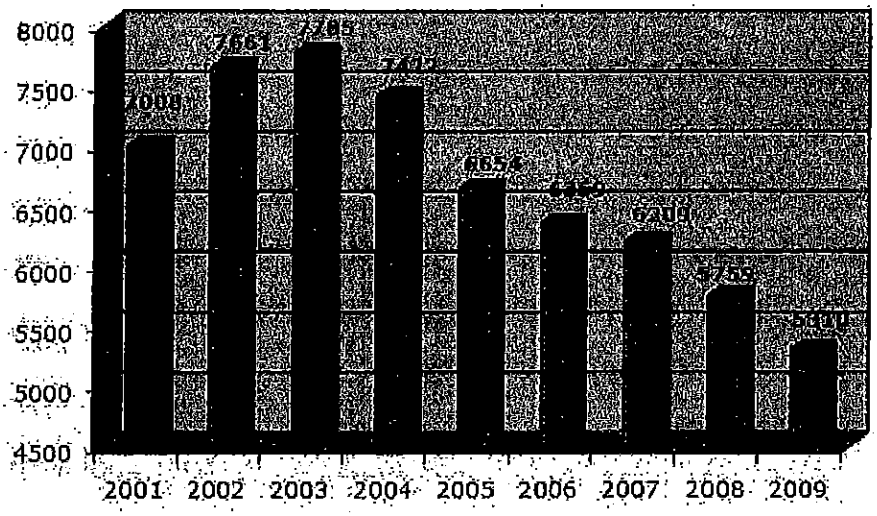
Overview activity 2001-2009





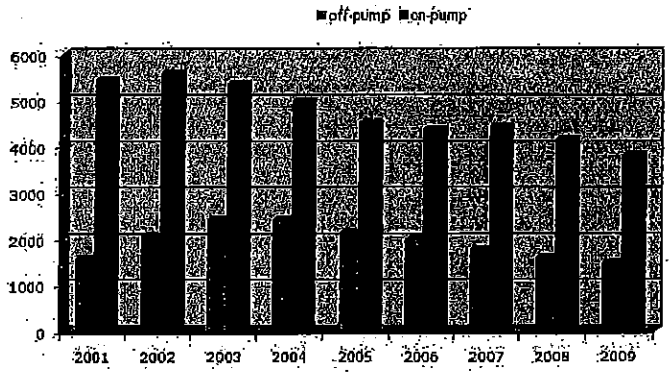
	2001	2002	2003	2004	2005	2006	2007	2008	2009
Isolated CABG	7012	7582	7795	7432	6665	6369	6209	5760	5196
CABG + other	257	309	301	312	330	358	341	304	276
valve only	1673	1914	2120	2244	2127	2118	2273	2388	2249
Valve + other	209	300	273	403	427	441	514	550	509
valve + CABG	859	1068	1299	1341	1322	1325	1417	1267	1285
valve + CABG + other	66	120	137	153	174	177	217	206	180
thoracic aorta	**304**	**368**	439	**468**	**445**	**593**	**542**	**544**	**544**

Overview activity 2001-2009

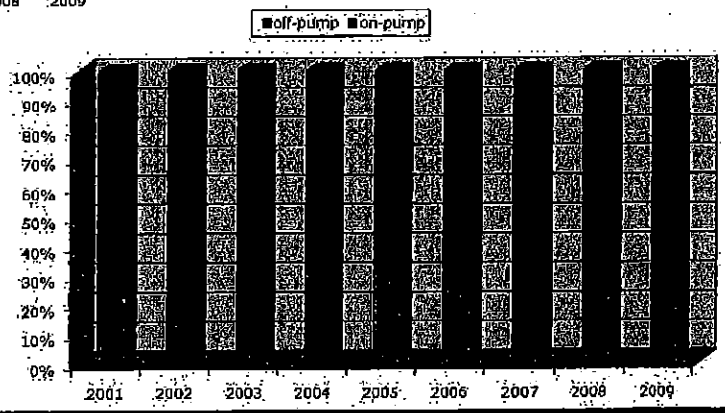


Isolated CABG

Overview activity 2001-2009



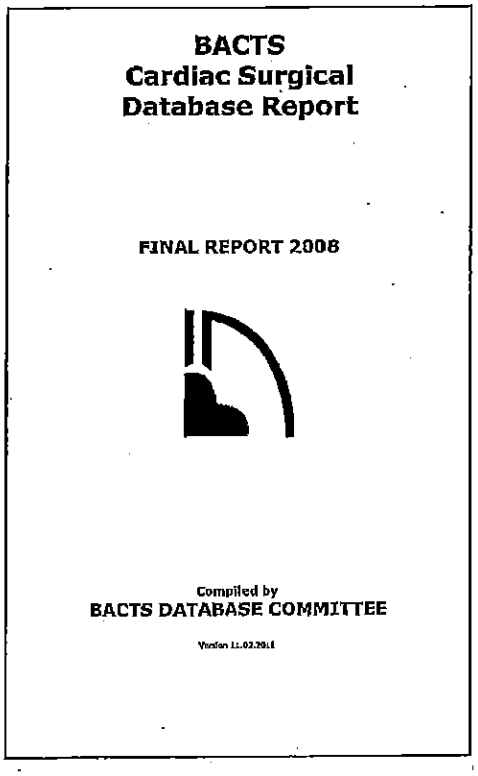
CABG: on-pump / opcab



BACTS

2008 report

www.bacts.org


BACTS
Cardiac Surgical
Database Report

FINAL REPORT 2008

Compiled by
BACTS DATABASE COMMITTEE

Version 11.02.2011

BACTS

MEMORY OF UNDERSTANDING

The purpose of the Database Committee is

- To create, maintain and analyse a registry of the cardio-thoracic surgical activity in Belgium.
- To create therapeutic or epidemiological studies involving the cardio-thoracic therapy, with the intention to improve the quality of care
- The database will never serve to rank centres or surgeons, will never participate in malpractice investigation or conformity checking with legal requirements of centres and surgeons.

MEMORY OF UNDERSTANDING

Confidentiality

- All members of the committee, including the data manager and the data analyst are under the medical secret. The database is protected by secret entry-codes. In addition the names of the centres and the RIZIV/INAMI numbers are recoded into secret codes. The password and codes are kept in a sealed envelope with the chairman of the database committee. No database committee chairman or member has access to the actual identification of the centre or the surgeon. The Law on the Medical Secret: data cannot and should not be transferred to any third party, e.g. council of BACTS, Health authorities, industry. There are two exceptions: (1) there is a database-specific law ordering the transfer of these data; (2) all parties or centres give their written permission for each specific output

MEMORY OF UNDERSTANDING

Confidentiality

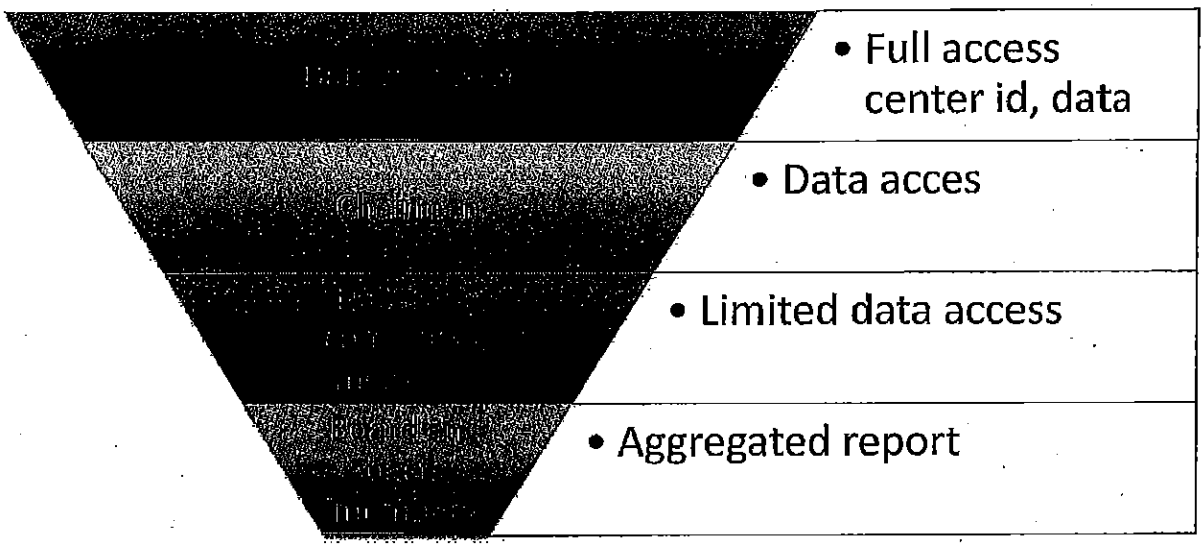
- No centre- or surgeon-specific information can be given to any third part outside the database committee without the written permission of the chairmNo centre-, nor surgeon- identified informationan of the centre or the individual surgeon. can be looked into by the members of the database committee.

MEMORY OF UNDERSTANDING

The access to the data

- The access to the data has three levels. The first two levels concern the Database Committee members.
  - The first level is unrestricted. This access is given to the chairman of the database committee, the data-analyst and the data manager.
  - The second level is restricted to a "need to know level", defined by the committee and this access is given to all the members of the committee.
  - The third level is restricted to the centre's own data. This access is given to the Chairman of the center. This access is unrestricted in time but limited to the data of the center.

Data access



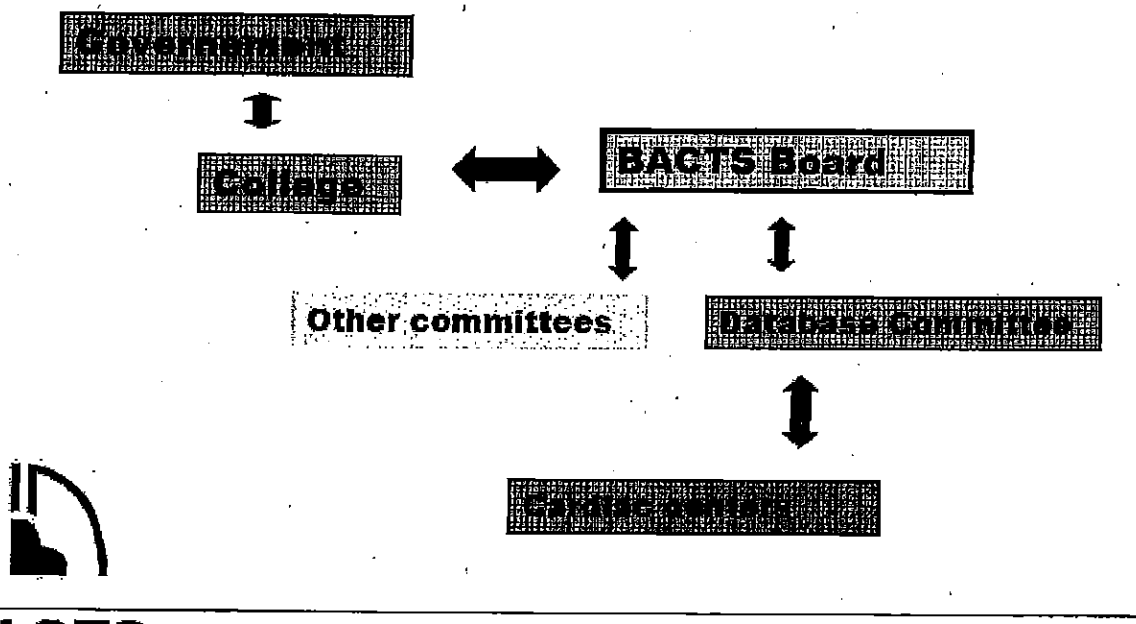
Memory of understanding

Confidentiality

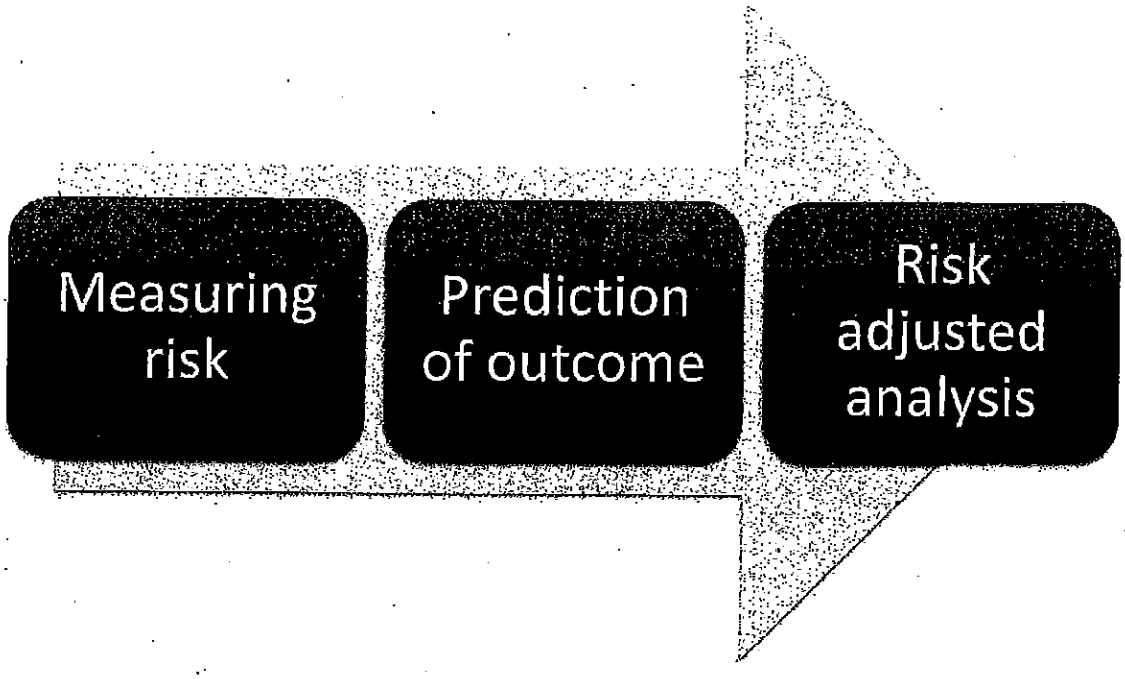
Patient anonymity is guaranteed

Center/surgeon anonymity is guaranteed

In practice: BACTS - College - DBC



Quality control



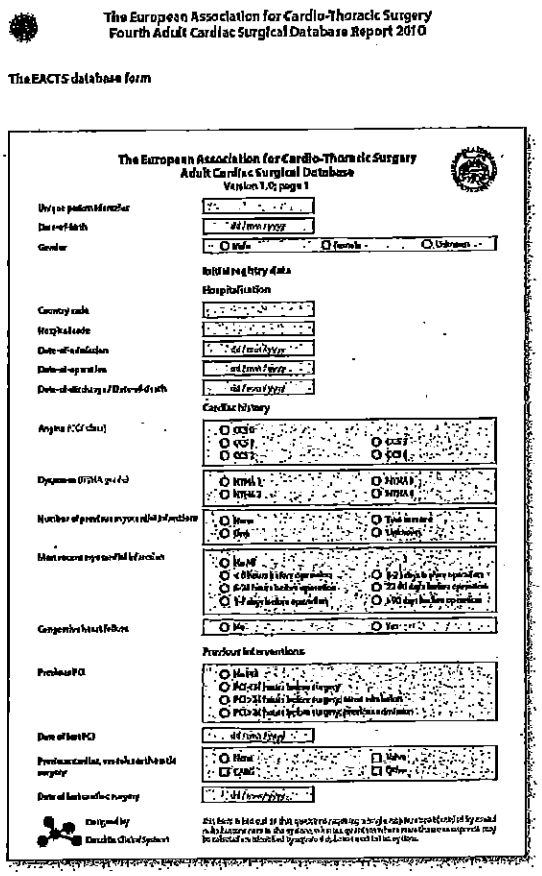
Risk-adjustment algorithm

- Risk factors
- Weighting of factors
- Validation of risk model
  - EuroSCORE
  - STS-score

EACTS

Adult Cardiac Surgery Database Version 1.0

- Hospitalization
- Cardiac History
- Previous Interventions
- Pre-operative risk factors
- Pre-operative hemodynamics and catheterization
- Pre-operative status and support
- Operation – procedural factors
- Perfusion and myocardial protection
- Post-operative complications
- Discharge details


The European Association for Cardio-Thoracic Surgery
Fourth Adult Cardiac Surgical Database Report 2010

The EACTS database form

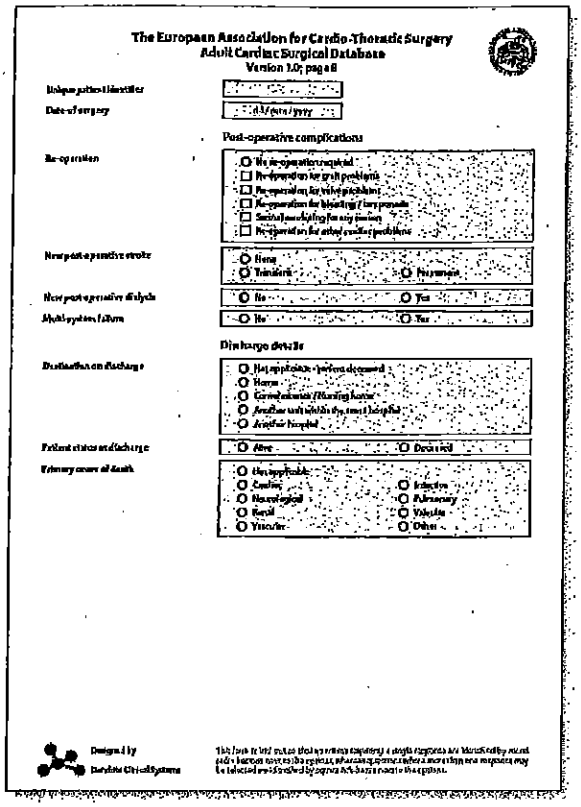
The European Association for Cardio-Thoracic Surgery
Adult Cardiac Surgical Database
Version 1.0; page 1

Unique patient identifier
Date of birth
Gender
Initial registry data
Hospitalization
Country code
Hospital code
Date of admission
Date of operation
Date of discharge / Date of death
Cardiac history
Angina (CCS class)
Dyspnoea (NYHA grade)
Number of previous myocardial infarctions
Most recent myocardial infarction
Congestive heart failure
Previous interventions
Previous PCI
Date of last PCI
Previous cardiac, non-coronary arterial surgery
Date of last cardiac surgery
Completed by
EuroSCORE Clinical System

EACTS

Adult Cardiac Surgery Database
Version 1.0

- 86 fields
- Postoperative complications
  - Re-operation
  - New post-operative stroke
  - New post-operative dialysis
  - Multi-system failure
- Discharge details
  - Date of discharge/death
  - Destination on discharge
  - Patient status at discharge
  - Primary cause of death


The European Association for Cardio-Thoracic Surgery
Adult Cardiac Surgical Database
Version 1.0; page 8

Unique patient identifier

Date of surgery

Post-operative complications

Re-operation

New post-operative stroke

New post-operative dialysis

Multi-system failure

Discharge details

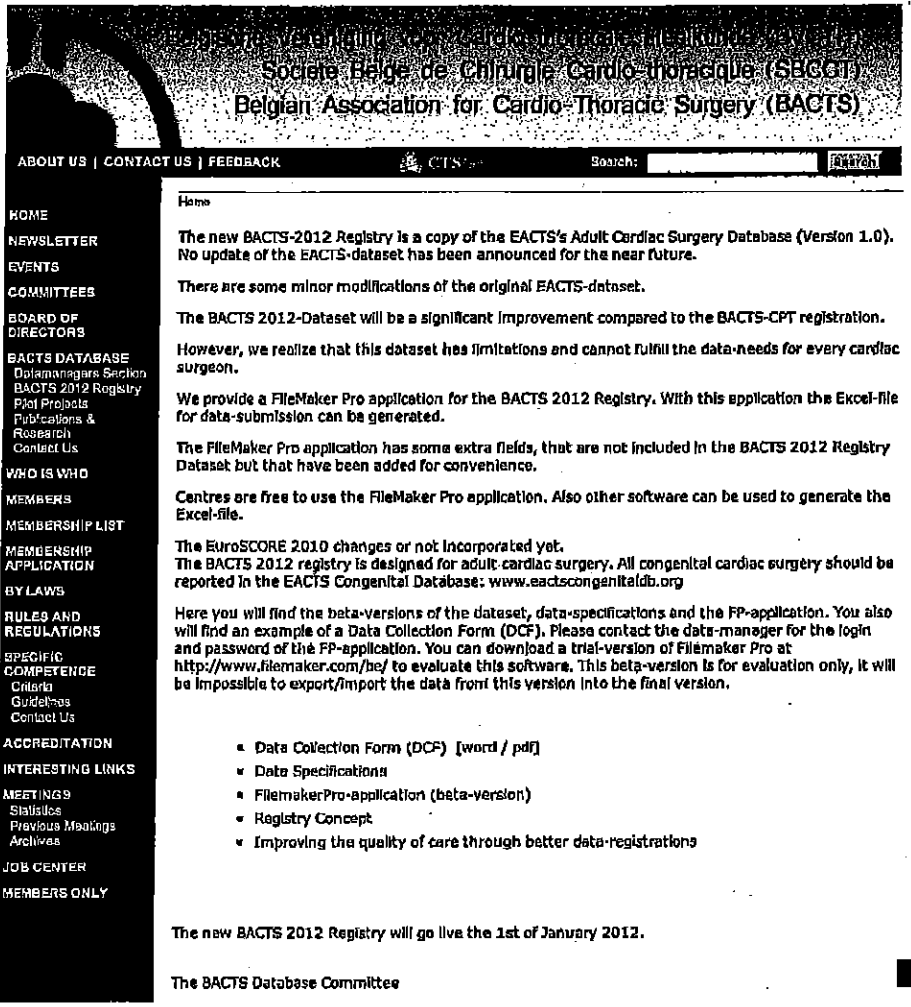
Destination on discharge

Patient status at discharge

Primary cause of death

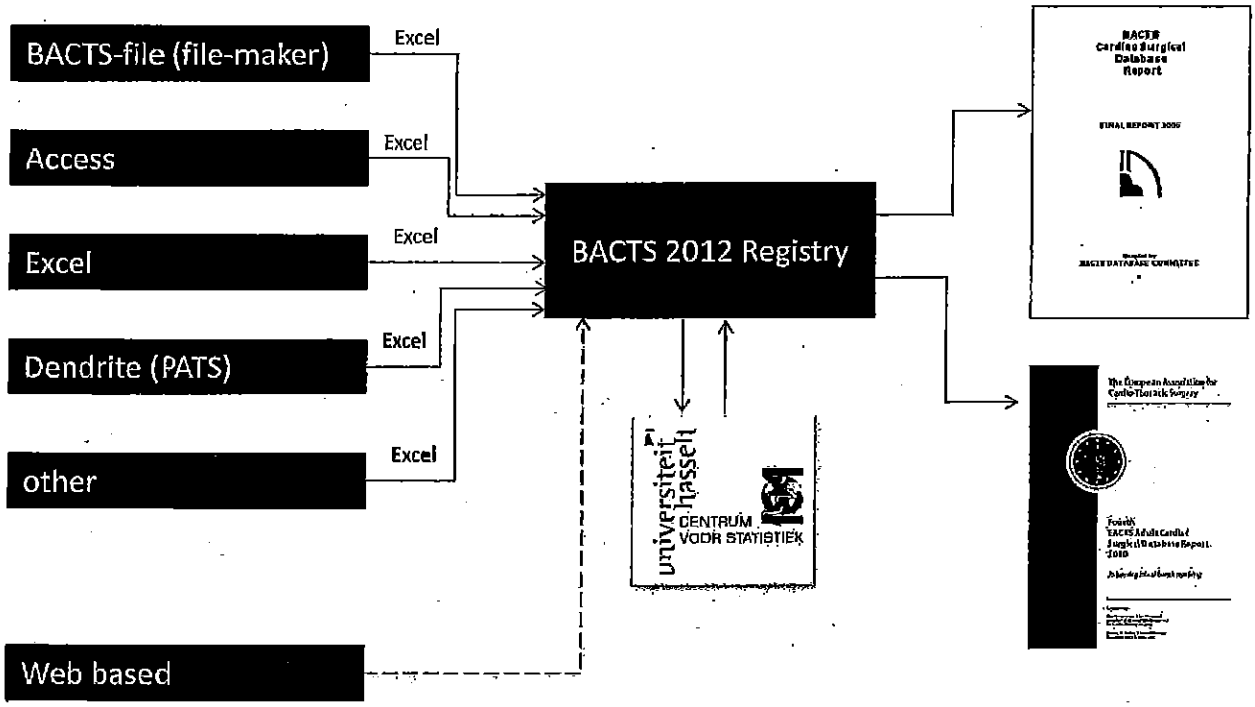
BACTS 2012 Registry

- Based on EACTS version 1.0
  - No update announced
  - limitations
- Euroscore 2010 modifications not incorporated yet
- Software: datafile in Filemaker Pro



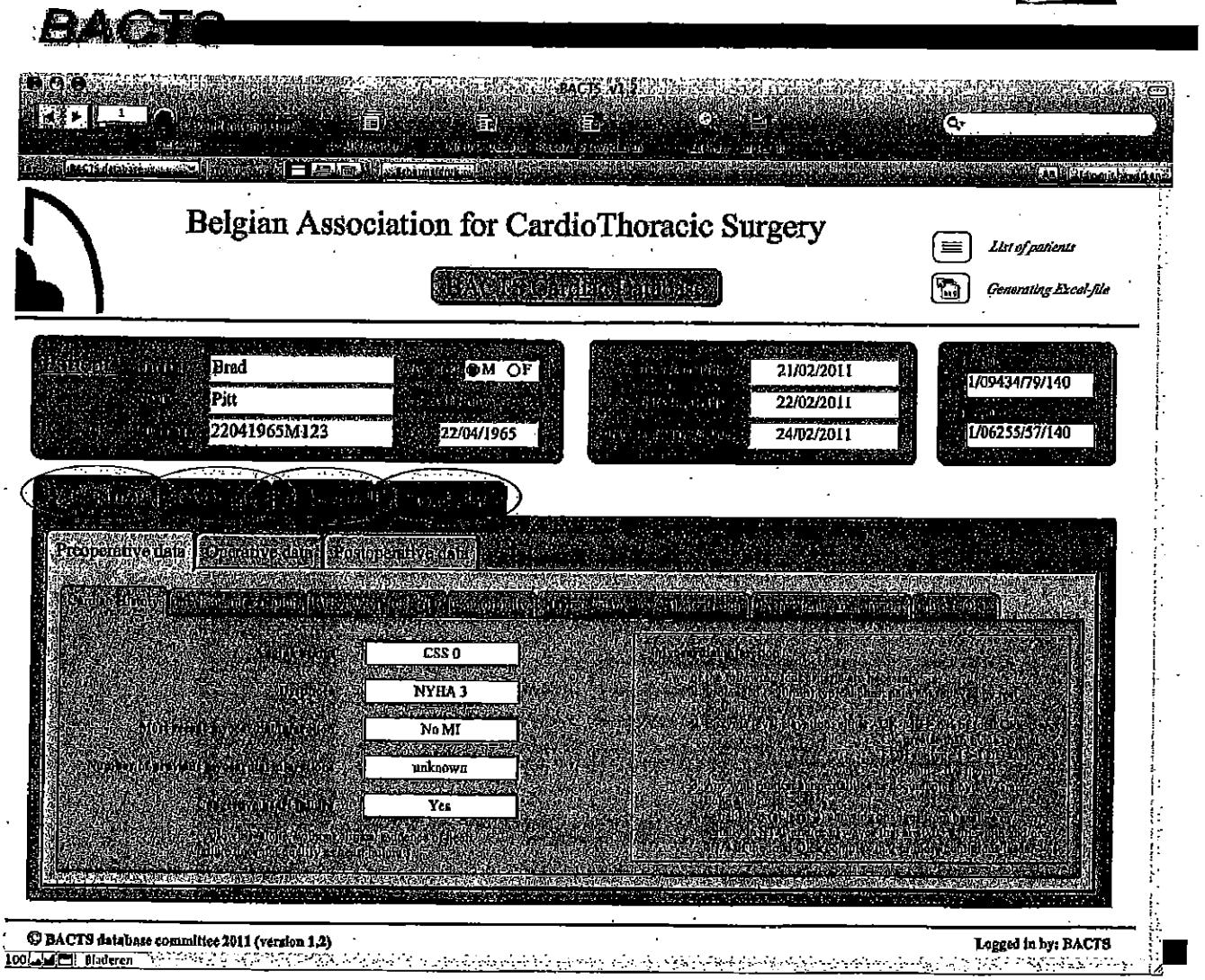
BACTS 2012 Registry concept

proces of data merging and analysing



BACTS 2012 Registry software

- Filemaker Pro 11
  - Empty database
  - Export function to Excel
  - Expandable with TAVI, Afib, …
- Stand alone version
- Hospital network
  - Filemaker server and Filemaker Pro licenses
- External IT company support



Belgian Association for CardioThoracic Surgery

BACTS Cardiac Database

List of patients

Generating Excel-file

Brad
Pitt
22041965M123
M F
22/04/1965

21/02/2011
22/02/2011
24/02/2011

1/09434/79/140
1/06255/57/140

Preoperative data | Operative data | Postoperative data

46
M
19,59

Logged in by: BACTS

BACTS

Belgian Association for CardioThoracic Surgery

BACTS Cardiac Database

List of patients

Generating Excel-file

Brad
Pitt
22041965M123
M F
22/04/1965

21/02/2011
22/02/2011
24/02/2011

1/09434/79/140
1/06255/57/140

Preoperative data | Operative data | Postoperative data

Re-operation for bleeding/tamponade

None

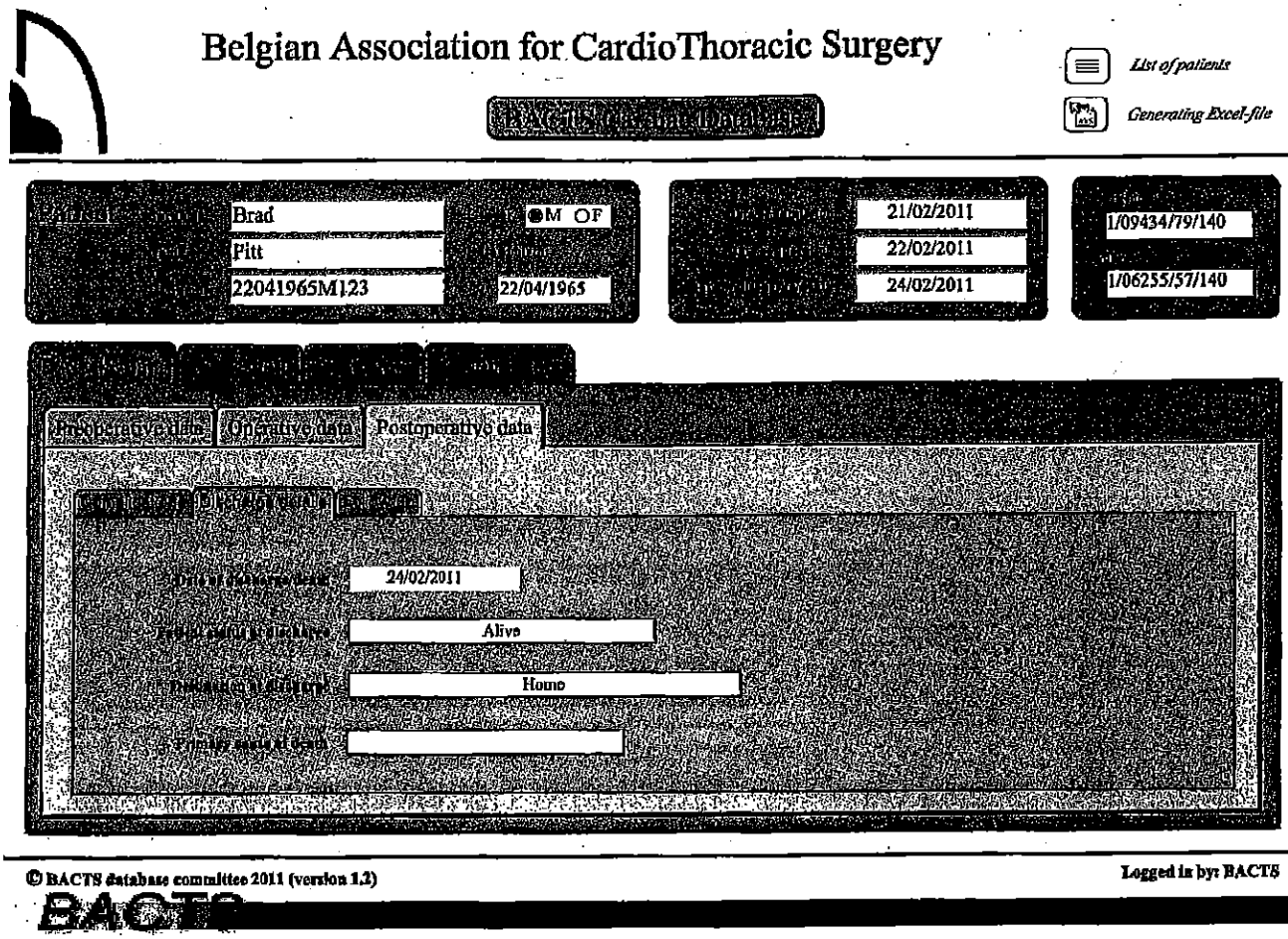
No

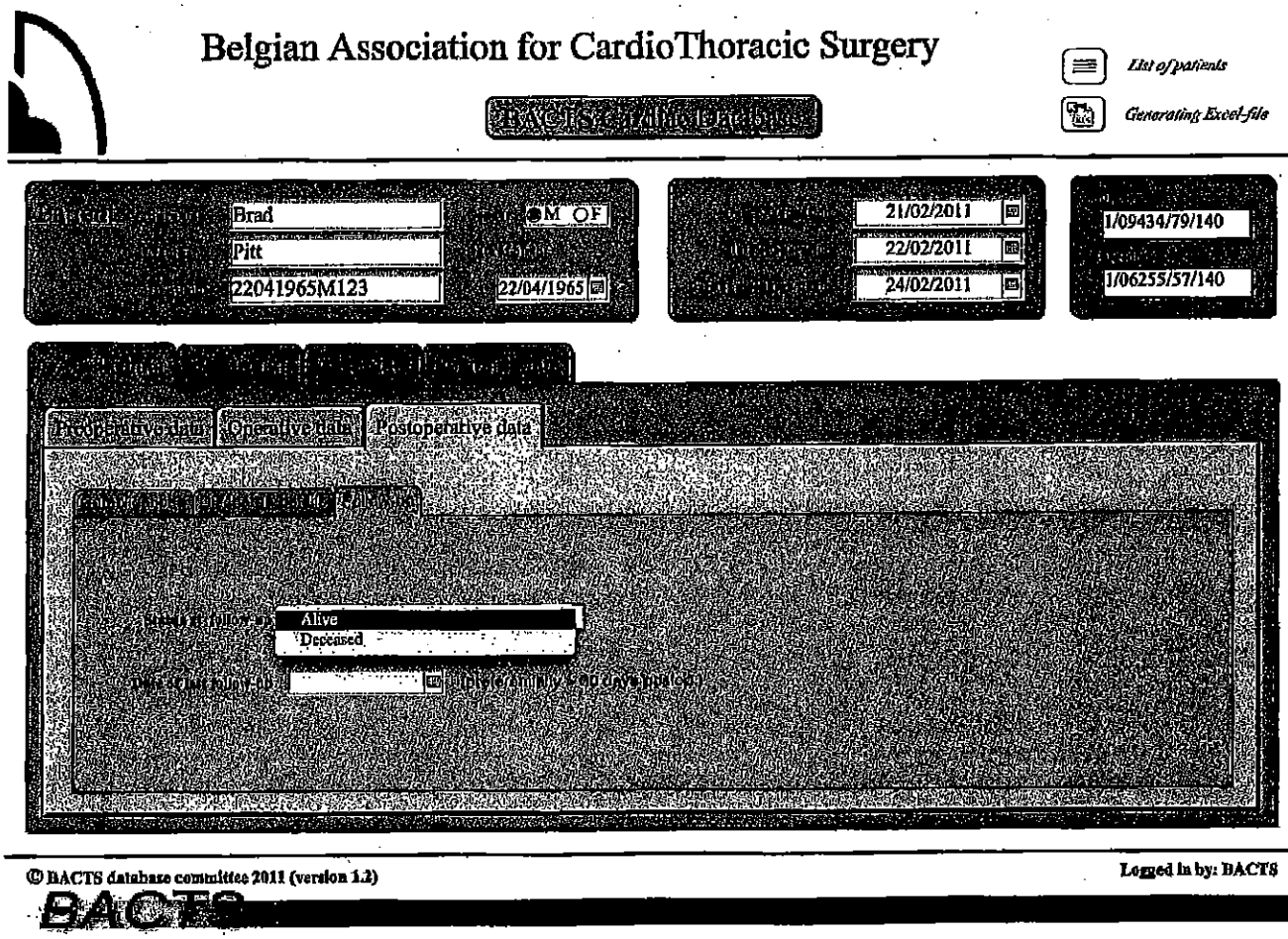
No

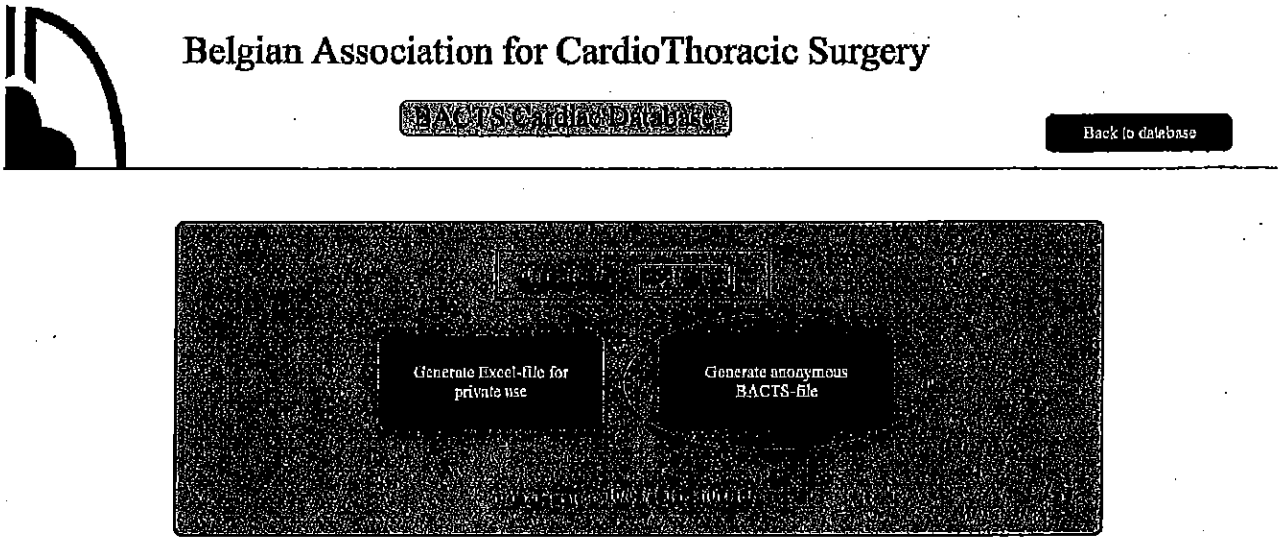
© BACTS database committee 2011 (version 1.2)

Logged in by: BACTS

BACTS


Belgian Association for CardioThoracic Surgery
List of patients
Generating Excel-file
Brad
Pitt
22041965M123
M F
22/04/1965
21/02/2011
22/02/2011
24/02/2011
1/09434/79/140
1/06255/57/140
Preoperative data
Operative data
Postoperative data
24/02/2011
Alive
Home
© BACTS database committee 2011 (version 1.2)
Logged in by: BACTS
BACTS


Belgian Association for CardioThoracic Surgery
List of patients
Generating Excel-file
Brad
Pitt
22041965M123
M F
22/04/1965
21/02/2011
22/02/2011
24/02/2011
1/09434/79/140
1/06255/57/140
Preoperative data
Operative data
Postoperative data
Alive
Deceased
© BACTS database committee 2011 (version 1.2)
Logged in by: BACTS
BACTS



BACTS

BACTS 2012 Registry Timeframe

- 15th BACTS Congress: announcement
- February 24: Extensive presentation
  - Final Version: Data fields, definitions, format
  - Beta version of FP11-file
- Spring 2011: Start implementation of registry in all centers
- Mid 2011: final version FP-11 file
- January 1, 2012: BACTS 2012 Registry goes live
- CPT registration stops

BACTS

BACTS 2012 Registry

- Risk-adjusted outcomes analysis
- Improvement of quality of care

BACTS

The European Association for Cardio-Thoracic Surgery

Fourth EACTS Adult Cardiac Surgical Database Report 2010

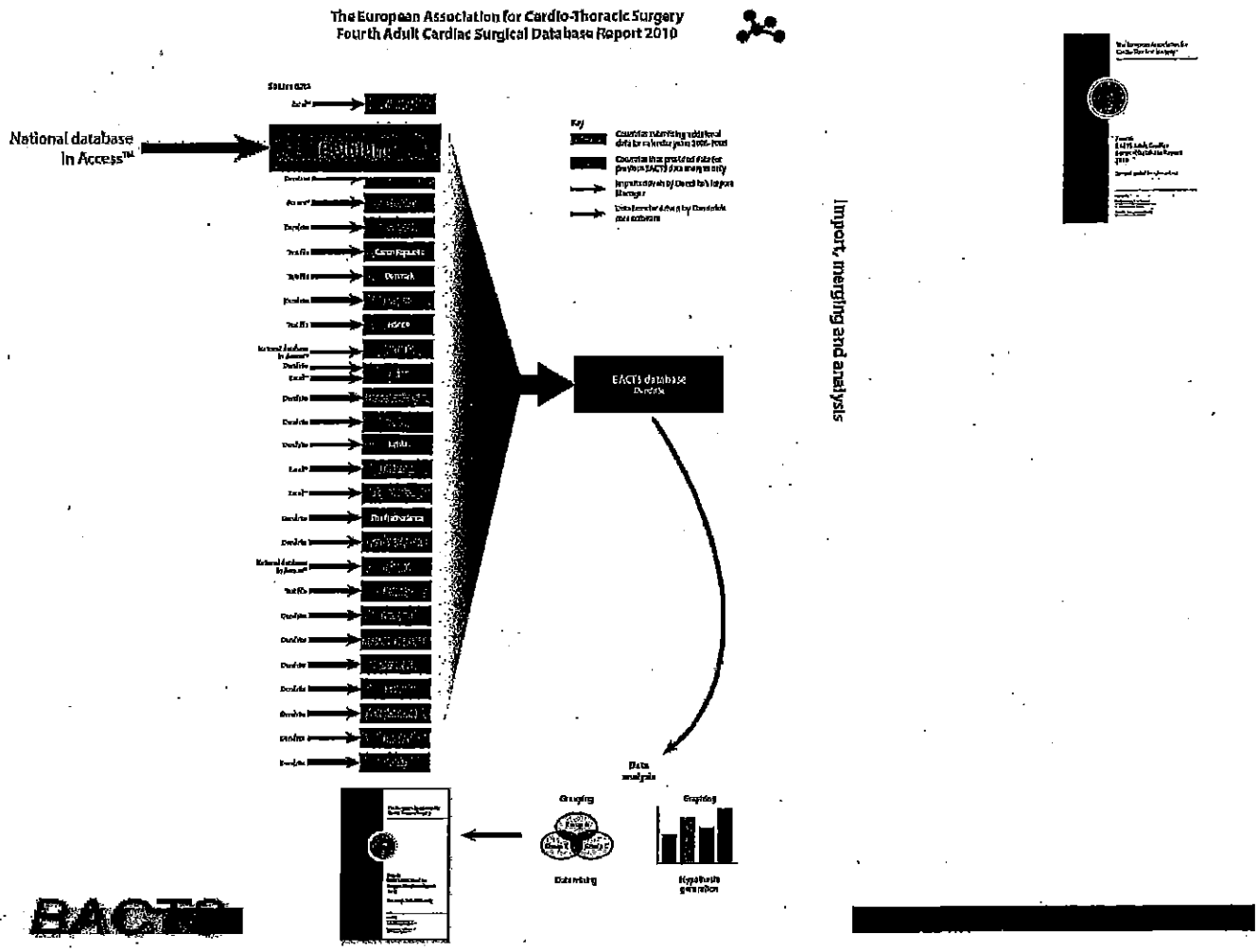
Towards global benchmarking

Compiled by

Ben Bridgewater & Jan Gummert
on behalf of the European Association for Cardio-Thoracic Surgery

Peter K.H. Walton & Robin Kinsman
Dendrite Clinical Systems Ltd

BACTS



Consumer Comprehension of Surgeon Performance Data for Coronary Bypass Procedures

Karen Donelan, ScD, Robert S. Rogers, BA, Andy Eisenhauer, MD, Elizabeth Mort, MD, MPH, and Arvind K. Agnihotri, MD

Mongan Institute for Health Policy, Massachusetts General Hospital, Boston; Division of Cardiology, Brigham and Women's Hospital, Boston; Department of Surgery, Division of Cardiac Surgery, Massachusetts General Hospital Heart Center, Boston; Harvard Medical School, Boston; and Department of Quality and Safety, Massachusetts General Hospital, Boston, Massachusetts

Background. Public and private organizations have called for increased transparency in reporting of outcomes data for hospitals and surgeons, including risk-adjusted coronary artery bypass graft surgery (CABG) mortality data. Limited information is available about how the public actually interprets these data.

Methods. Four different graphical and tabular displays of CABG outcomes for surgeons, three of which were modeled on current state public r
337 adults. Each display containe
thetical surgeons. For each form
asked to choose which surgeon th
least likely to choose based on t
they were asked questions about

Results. Accurate identification
mance varied by display format,
one display and a low of 16% o
identified the surgeon with the
across all four displays. Responde
college education were significant
tify the surgeon with the lowest risk-adjusted mortality, compared with respondents having no college education (21% to 72% vs. 9% to 59%; $p < 0.01$). In one display, the surgeon with the lowest risk-adjusted mortality was effectively penalized for taking on higher-risk patients; respondents tended to select the surgeon with the lowest-risk population but the highest risk-adjusted mortality. Overall, 82% of respondents said that access to these

Conclusions. **Comprehension by the public of risk-adjusted CABG outcomes is limited and varies by display format. Poorly constructed displays may have led to misinterpretation, with potential unintended adverse consequences such as risk aversion. Further work is needed to design displays that maximize accurate interpretation by the public and more clearly define the risk and benefit of public reporting of surgeon performance.**

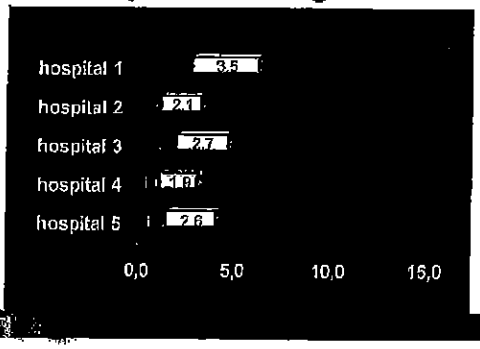
30 day - Risk adjusted mortality for isolated CABG

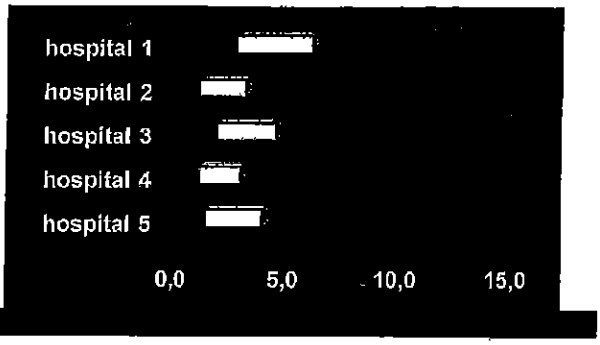
DHR

Tabel 2 30 dages dødelighed efter isoleret CABG 2004-2005 justeret for Euroscore

Center	Antal indgreb i analysen	Dødelighed uden justering (%)	Dødelighed justeret (%)	95% sikkerheds-grænser
Rigshospitalet	1252	3.0	3.5	(2,6-4,4)
Gentofte	915	1.7	2.1	(1,0-3,2)
Odense	768	3.3	2.7	(1,8-3,7)
Skejby	835	2.3	1.9	(1,0-2,9)
Aalborg	556	2.7	2.6	(1,3-3,8)
Total	4326	2.6		

*P-værdi for afvigelse fra landsgennemsnittet. Samlet test for forskel mellem centre: P= 0,21





BACTS

Society for Cardiothoracic Surgery in Great Britain & Ireland

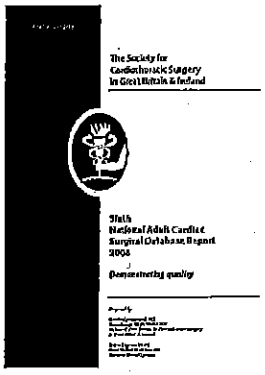
The Society for Cardiothoracic Surgery in Great Britain & Ireland
Sixth National Adult Cardiac Surgical Database Report

Table 4a. **All cardiac surgery.** Results of cardiac surgery displayed on the Healthcare Commission website; 3 years of data to the end of March 2007. Compared to the complex re-calibrated logistic *EuroSCORE* with 99% CIs

	Counts	Deaths	Actual mortality	Predicted mortality	Upper CI	Lower CI
Aberdeen Royal Infirmary	1,665	69	4.1%	4.3%	5.9%	2.9%
Bart's & the London	4,927	168	3.4%	4.1%	5.0%	3.3%
Blackpool Victoria Hospital	2,938	82	2.8%	3.2%	4.2%	0.4%
Bristol Royal Infirmary	4,328	119	2.7%	3.2%	4.1%	2.4%
Castle Hill Hospital, Hull	2,809	110	3.9%	3.2%	4.3%	2.3%
Derriford Hospital, Plymouth	2,705	87	3.2%	3.3%	4.3%	2.3%
Edinburgh Royal Infirmary	2,713	113	4.2%	3.7%	4.8%	2.6%
Freeman Hospital, Newcastle	3,029	112	3.7%	4.1%	5.2%	3.1%

BACTS

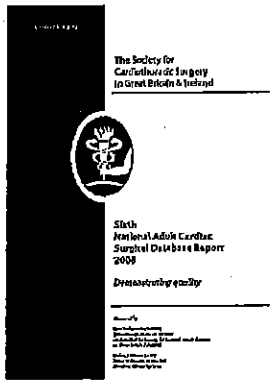
Public reporting



- Unsolved methodological problems
- Unintended consequences

- Pitfalls

Public reporting



- Pitfalls
  - Ranking of centers/surgeons
  - Gaming: patient selection
  - Up-scoring
  - Limitations of scoring-systems: no adequate correction for procedural/patient complexity
  - Focus on risk, not on quality of procedure

Does reporting of coronary artery bypass grafting from administrative databases accurately reflect actual clinical outcomes?

Michael J. Mack, MD, Morley Herbert, PhD, Syma Prince, RN, Todd M. Dewey, MD, Mitchell J. Magee, MD, and James R. Edgerton, MD

Objectives: Quality assessment of coronary artery bypass grafting has traditionally been performed with data from clinical databases. Administrative databases that rely primarily on information collected for billing purposes increasingly have been used as tools for public reporting of outcomes quality. The correlation of administrative data with clinical data for clinical quality assessment has not been confirmed.

Conclusions: Substantial variability of reported outcomes is seen in administrative data sets compared with an audited clinical database in the end points of the number of procedures performed and mortality. This variability makes it challenging for the nonclinician unfamiliar with outcomes analysis to make an informed decision.

BACTS

Administrative databases

- Build for financial purposes
- Non-clinician extracts data from medical records
- Codes
  - DRG: allocation to highest paying DRG
  - ICD-9
  - MKG/RCM
  - MFG/RFM
  - RIZIV/INAMI
- Code order

BACTS

Administrative databases

- Limitations
  - Procedural groups
  - Date of surgery / discharge
  - Risk factors / Complications
  - Risk stratification
  - Outcomes
- Not accurate for
  - Auditing the quality of care
  - Risk adjusted outcome analysis

KCE report

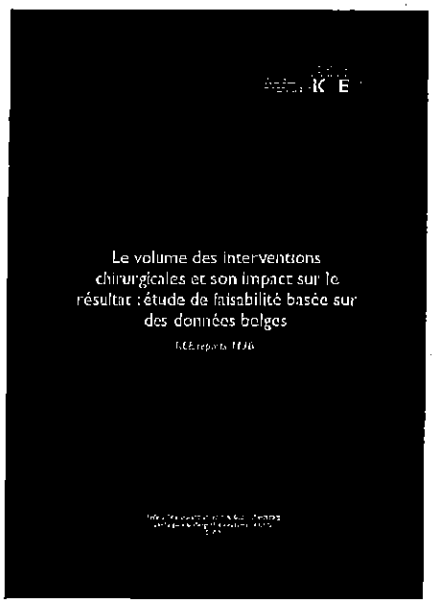
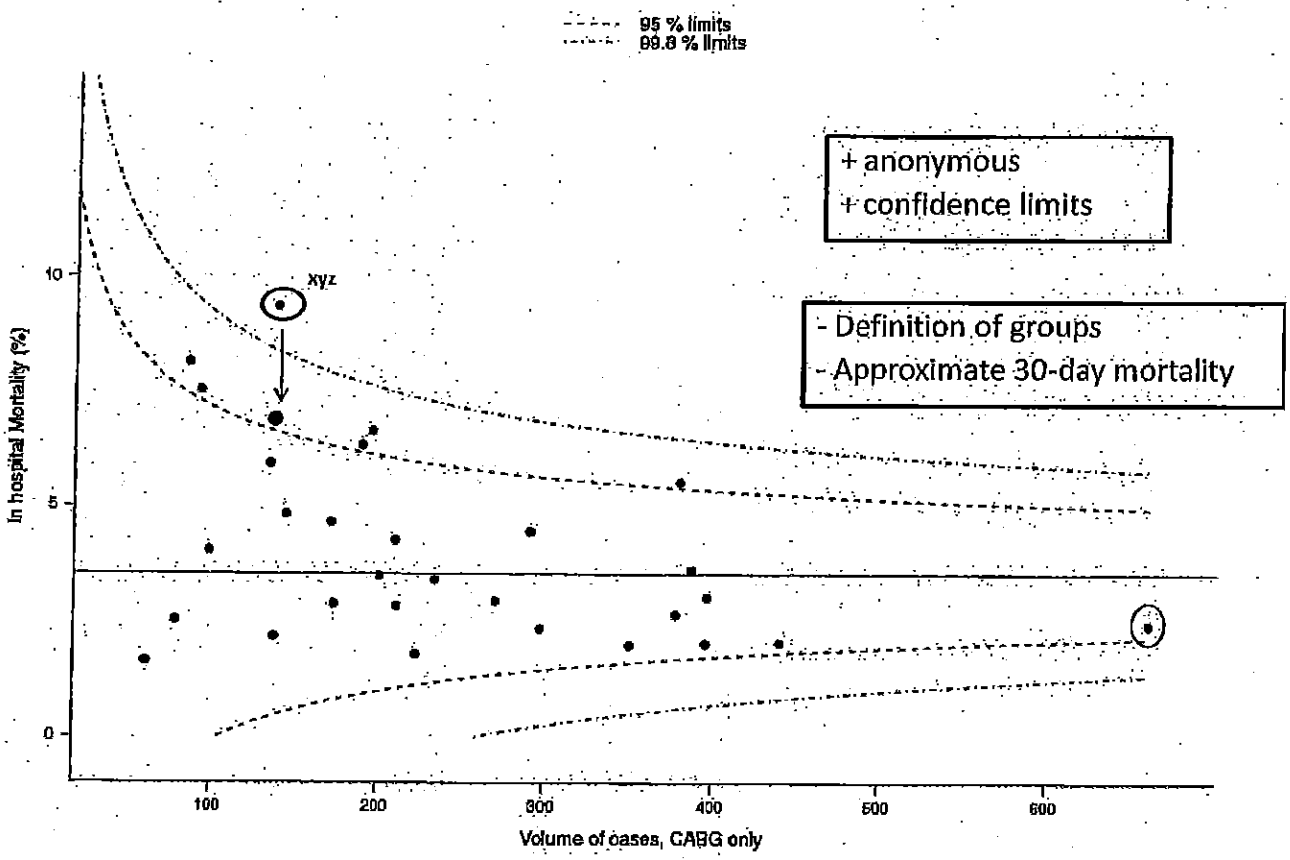


Figure 6.11: Funnel plot of the in-hospital mortality by center after isolated CABG



Quality control

- Complex process:
  - Correction variability of pathology
  - Correction variability of clinical condition,
  - Correction variability of procedural complexity
- Outlier identification
  - Secondary process is mandatory
  - Quality of the data
  - Identification of unusual variability in subset of patients.

Procedure of outlier confirmation

- Presumed outlier
  - Internal check of registry
  - Invitation of centre by database manager (Carine)
  - Two steps
    - Review of the quality of the data
    - review of cases with negative outcome: unusual variability/risk records are excluded in the analysis
- Confirmed outlier
  - Remedial processes: not the task of the database committee
  - Confidentiality by database committee

Procedure of outlier confirmation

- Adaptation of MOU
  - Procedure has to be discribed
  - Invitation: voluntary participation in data check, centre ask involvement of the database committee
  - Presumed outlier – confirmed outlier
- Proposal of new MOU
  - To be discussed in the board
  - To be approved during the general assembly

Conclusion

- The ultimate goal of the database committee is quality improvement
- The BACTS 2012 registry could lead to a better quality of care
- The aggregated report will be available in the public domain
  - Available for everybody.
  - Only the aggregated report will be visible.
  - The data are anonymous
  - The database committee guarantees the confidentiality as described in the memory of understanding.