Annual Meeting

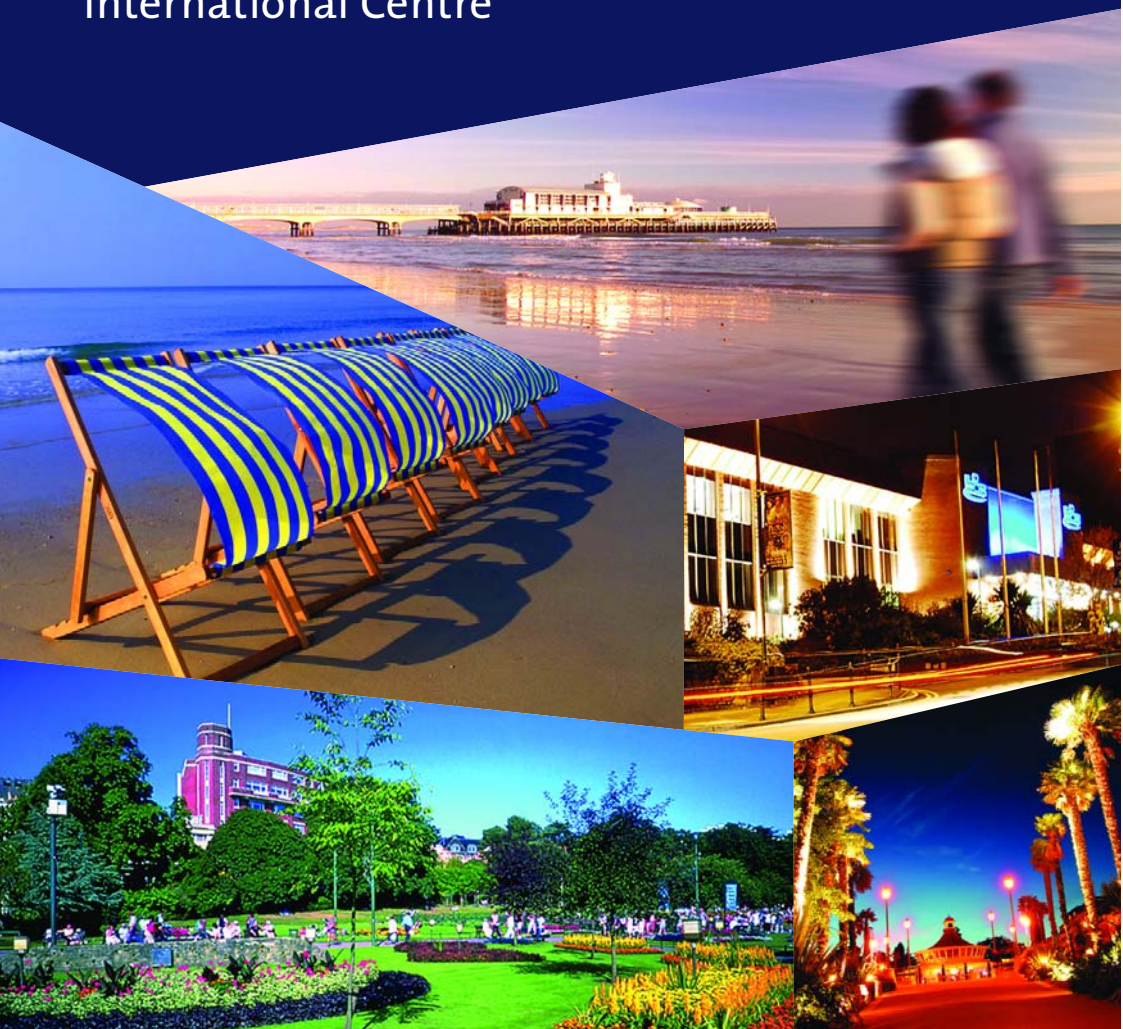
Society for Cardiothoracic Surgery in Great Britain and Ireland

22nd to 24th March 2009

Society for Cardiothoracic Surgery in Great Britain and Ireland

Bournemouth

International Centre



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The Society for Cardiothoracic Surgery in Great Britain and Ireland

2009 ANNUAL MEETING

Bournemouth International Centre

22-24th March 2009

President

Mr Leslie Hamilton (2008-2010)

Honoured Guests

David H Adams, MD
Professor and Chairman
Department of Cardiothoracic Surgery,
Mount Sinai Medical Center, New York, USA

Alessandro Brunelli, MD
Division of Thoracic Surgery
Umberto I Regional Hospital, Ancona, Italy

Alain F Carpentier, MD
Professor of Cardiac Surgery
Hopital Europeen Georges Pompidou, Paris, France

Ms Maura Buchanan
President
Royal College of Nursing, London, UK

Tom R DeMeester, MD
USC School of Medicine, Southern California, USA

Friedrich Wilhelm Mohr, MD, PhD
Professor & Medical Director of the Heart Center
University of Leipzig, Germany

Major General Garry Robison
Commandant General
Royal Marines

The Society for Cardiothoracic Surgery in Great Britain and Ireland Annual Meeting 2010 will be held at the Arena and Convention Centre, Liverpool
7th – 9th March 2010

Programme sponsors

Please look after this programme.

Replacement programmes will cost £19, which is payable at the registration desk

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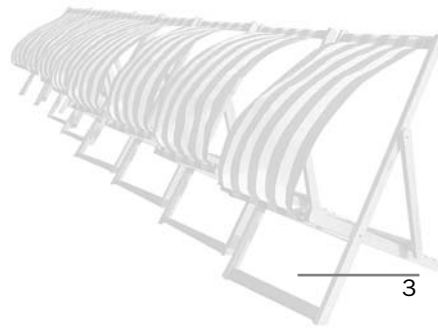


VENUE MAPS Bournemouth International Centre

Ground Floor

Avon Room

Ticket Sales

Bars & Cafe

Main Foyer

President's Suite

Purbeck Hall

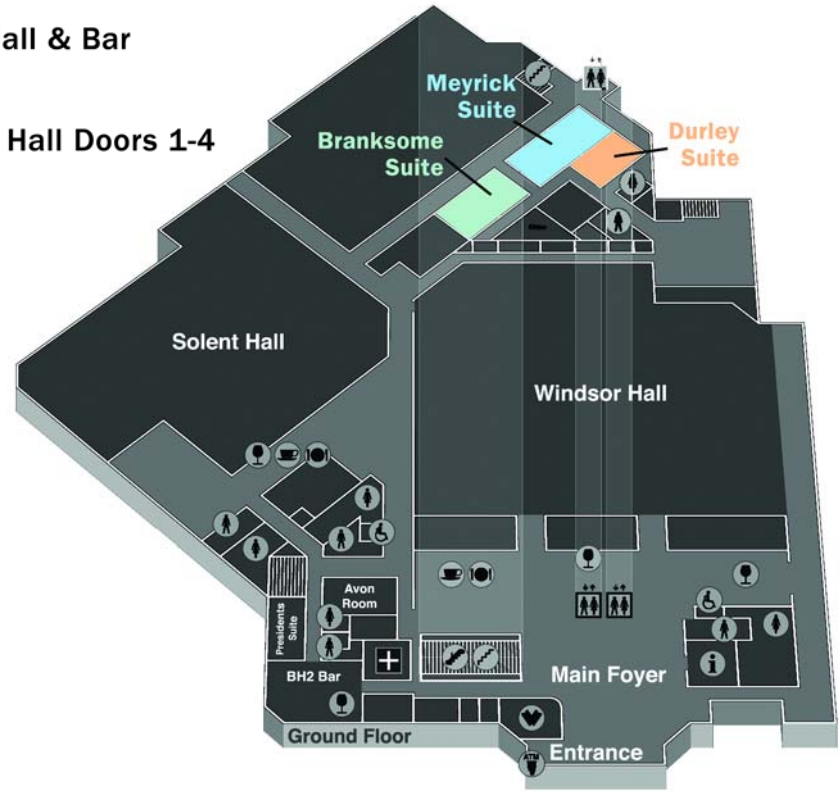
Seminar Suites

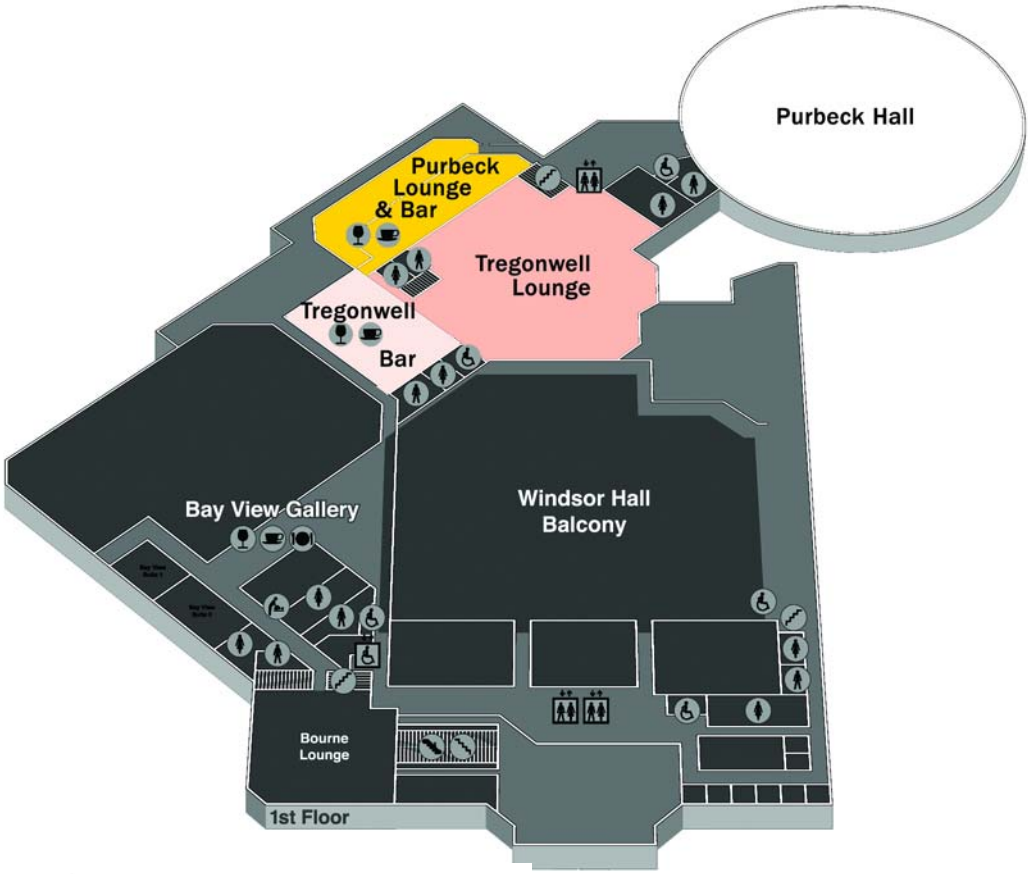
BH2 Bar

Solent Hall & Bar

Toilets

Windsor Hall Doors 1-4





1st Floor

Bay View Gallery Suites 1 & 2

Bourne Lounge

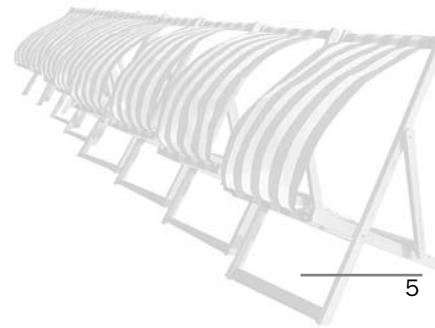
Purbeck Lounge & Bar

Toilets

Tregonwell Hall & Bar

Windsor Hall Balcony

Windsor Hall Doors 5-8



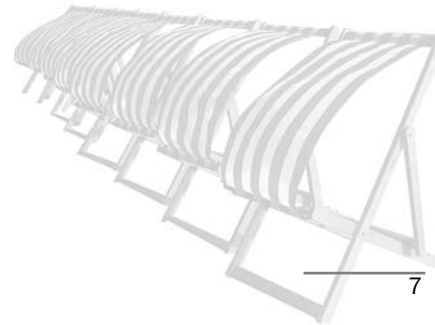
OUTLINE PROGRAMME

SUNDAY 22th March

12:30 - 13:30	Purbeck Bar	**Trainees & Surgical Care Practitioners Lunch**
13:30 - 16:00	Purbeck Lounge	**Cardiothoracic Surgical Trainees Meeting**
13:30 - 16:45	Branksome Suite	**Association of Surgical Care Practitioners, AGM**
16:00 - 16:45	Purbeck Lounge	**The Hunterian Lecture: Reversal of Heart Failure**
16:45 - 17:00	Tregonwell	TEA
17:00 - 18:00	Tregonwell	**The Pulse Lectures**
18:00 - 19:30	Tregonwell	**Annual Business Meeting**
18:00 - 19:30	Branksome Suite	**ACSA Workshop**
19:30 - 20:30	Seminar Suites Tregonwell	**Civic Welcome Reception**

MONDAY 23th March

07:15 - 08:30	Branksome Suite	**Covidien Breakfast Symposium**
08:00 - 08:50	Meyrick Suite	**Scientific Oral Presentations**
08:50 - 10:00	Tregonwell	**Oral Presentations with Nurses Forum and ACSA** **"What Next in the Development of Total Artificial Hearts?" Professor Alan Carpentier**
08:45 - 12:30	Meyrick Suite	**Database Managers: 4th Annual Meeting**
10:00 - 10:45	Purbeck Hall	Coffee and Refreshments
10:45 - 11:45	Branksome Suite	**Cardiac Oral Presentations**
10:45 - 11:40	Purbeck Lounge	**The Cardiothoracic Forum**
10:45 - 11:45	Tregonwell	**Mitral Valve Oral Presentations**
11:45 - 12:30	Tregonwell	**Heart Research UK Lecture**
12:30 - 13:30	Purbeck Hall	LUNCH
13:30 - 15:00	Tregonwell	**UK Cardiac & Thoracic Activity**
13:30 - 15:00	Tregonwell Bar	**The Society of Clinical Perfusion Scientists Workshop**
15:00 - 15:45	Purbeck Hall	TEA
15:45 - 16:55	Meyrick Suite	**Thoracic Surgery Presentations**
15:45 - 17:00	Purbeck Lounge	**The Cardiothoracic Forum**
15:45 - 16:55	Tregonwell	**Aortic Valve Oral Presentations**
15:45 - 18:30	Purbeck Bar	**The Society of Clinical Perfusion Scientists Workshop**
17:00 - 18:30	Meyrick Suite	**Thoracic Surgery Oral Presentations** **Thoracic Surgery Forum**
17:00 - 18:30	Tregonwell	**St Jude Symposium**
18:30 - 20:30	Purbeck Lounge	**Nycomed Symposium**



TUESDAY 24th March

07:15 - 08:45	Branksome Suite	**ATS Medical Symposium**
08:00 - 08:50	Meyrick Suite	**Endocarditis: Presentations & Discussion**
08:45 - 10:00	Purbeck Bar	**The Society of Clinical Perfusion Scientists Committee Meeting**
08:45 - 10:00	Tregonwell	**Thoracic Surgery Oral Presentations**
09:00 - 10:00	Meyrick Suite	**Cardiac Revascularisation: Oral Presentations**
09:00 - 10:00	Purbeck Lounge	**The Cardiothoracic Forum**
09:00 - 10:00	Durley Suite	**Congenital Oral Presentations**
10:00 - 10:45	Purbeck Hall	COFFEE
10:45 - 11:45	Tregonwell	**Thoracic & Oesophageal Surgery Oral Presentations**
10:45 - 11:45	Branksome Suite	**The Aorta: Oral Presentations**
10:45 - 12:30	Meyrick Suite	**Cardiac Surgical Workshop**
10:45 - 12:30	Purbeck Lounge	**The Cardiothoracic Forum**
10:45 - 12:30	Durley Suite	**Congenital Cardiac Surgical Meeting**
10:45 - 12:30	Purbeck Bar	**Society of Clinical Perfusion Scientists Workshop**
11:45 - 12:30	Tregonwell	**Thoracic Surgical Lecture**
11:50 - 12:30	Branksome Suite	**Cardiac Oral Presentations**
12:30 - 13:30	Purbeck Hall	LUNCH
13:30 - 15:00	Meyrick Suite	**Thoracic Papers**
13:30 - 15:00	Durley	**Congenital Cardiac Surgery**
13:30 - 15:00	Tregonwell	**NCEPOD Symposium**
15:00 - 15:45	Purbeck Hall	TEA
15:45 - 16:55	Meyrick Suite	**Cardiothoracic Transplantation Oral Presentations**
15.45 - 17:00	Purbeck Lounge	**The Cardiothoracic Forum**
15:45 - 17:00	Tregonwell	**Thoracic Surgery: 'How To Do It' Presentations**
15:45 - 16:55	Branksome Suite	**Carotid & Aortic Endovascular Stenting - When and Where?**
17:00 - 18:00	Tregonwell	**President's Address**
19:30 - 24:00	Royal Bath Hotel	**Annual Dinner (Black Tie) Seaside Theme Life Achievement Award, Prizes & Scholarship Awards**

Wednesday 25th March

09:00 - 12:30	Royal Bath Hotel	**Executive and Board of Representatives Meeting**

Society for
Cardiothoracic Surgery
in Great Britain and Ireland

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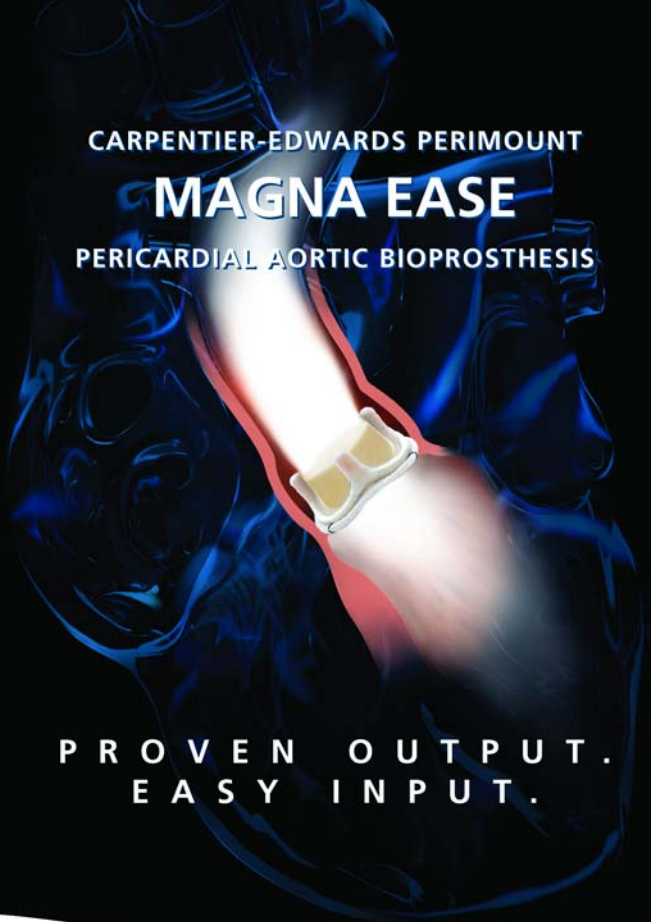
Society for Cardiothoracic Surgery in Great Britain and Ireland

22nd to 24th March 2009

Bournemouth
International Centre

MEETING PROGRAMME



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Meeting Programme

Sunday 22th March 2008

12:30 - 13:30 **LUNCH: Cardiothoracic Surgical Trainees and Cardiothoracic**
Purbeck Bar **Surgical Care Practitioners**

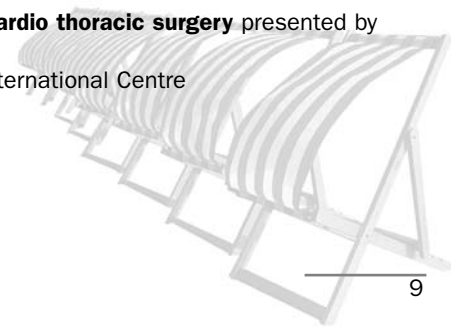
Sunday, 22 March, 2009

13:30 - 16:00 **Cardiothoracic Surgical Trainees Meeting**
Purbeck Lounge Chairman: Mr Sunil Bhudia
Panel Members: Mr Tim Graham, Mr Steven Hunter, Mr Robert Jeffrey, Mr Pala Rajesh, Mr Sion Barnard & Mr Steven Livesey

13:30 - 14:45 **Closed forum** - ONLY TRAINEES, potential trainees & research fellows
Question and Answer Session
14:45 - 16:00 Presentations (open to all attendees)
14.45 - 14.55 Mr Tim Graham - Workforce and SAC matters
14.55 - 15.05 Mr Robert Jeffrey - Examination matters
15.05 - 15.15 Mr Steven Livesey – Recertification
15.15 - 15.25 Mr Steven Hunter - National selection
15.25 - 15.35 Mr Sion Barnard - Early years - CT1 and CT2

Sunday, 22 March, 2009

13:30 - 16:45 **ACSA - Association of Surgical Care Practitioners,**
Branksome Suite **Annual General Meeting**
Chairman: Mr Tony Jessop
Sponsored by Covidien
13:30 - 13:40 **Welcome:** Mr Leslie Hamilton, President
13:40 - 14:00 Essack Abraham - **Assisting with Pulmonary Thromboendarterectomies**
14:00 - 14:20 Toby Rankin - **Endoscopic vein harvesting**
14:20 - 14:40 Steve Bryant - **Training data on Sternotomies and Internal Mammary Artery Harvesting**
14:40 - 15:00 Norma Barron - **University Course for SCPs**
15:00 - 15:20 Joel Dunning **CAL's Course**
15:20 - 16:45 **AGM**
18:00 - 19:30 **Sealants and Haemostats in Cardio thoracic surgery** presented by Baxter
19:30 - 20:30 **Civic Welcome Reception** in International Centre
20:30 till late **ACSA Annual Dinner**



Sunday, 22 March, 2009

16:00 - 16:45 **The Hunterian Lecture: Reversal of Heart Failure.**
Tregonwell Mr Patrick Tansley
Chairman: Mr Leslie Hamilton

Sunday, 22 March, 2009

16:45 - 17:00 TEA & COFFEE
Purbeck bar

Sunday, 22 March, 2009

17:00 - 18:00 **The Pulse Lectures**
Tregonwell Chairmen: Mr Christopher Blauth & Mr Ian Wilson
Evidence for Conduit usage in CABG – Profesoor David Taggart
The Melbourne Experience – Mr Phillip Hayward
Evidence for Techniques in Conduit Harvesting – Mr Malcolm Dalrymple-Hay

Sunday, 22 March, 2009

18:00 - 19:30 **Annual Business Meeting**
Tregonwell Chairmen: Mr Leslie Hamilton, Mr Graham Cooper & 6 Elected Trustees

Sunday, 22 March, 2009

18:00 - 19:30 **ACSA: Workshop**
Branksome Suite Chairman: Mr Tony Jessop

Sunday, 22 March, 2009

19:30 - 20:30 **Civic Welcome Reception**
Tregonwell Hall Chairman: Mr Leslie Hamilton
Seminar Suites Mayor Stephen Chappell

Monday, 23 March, 2009

07:00 - 08:30 **Covidien Breakfast Symposium**
Purbeck Lounge

Monday, 23 March, 2009

08:00 - 08:50 **Scientific Oral Presentations**
Meyrick Suite Chairmen: Dr David Chambers & Mr Gavin Murphy

1 **Ischaemia-reperfusion Induced Gene Expression in Rodent Lungs**
C Ng[1] S Wan[1] C W.C. Hui[1] I Wan[1] A Ho[1] K Lau[1] A W Darzi[2] M Underwood[1]
1The Chinese University of Hong Kong, Hong Kong, Hong Kong;
2Imperial College School of Medicine, London, United Kingdom

2 **Aortotomy & Cannulation Direction: Importance to Reduce Suture Stresses on Native Aortic Tissue**
M Poullis[1] S White[2]

1 Liverpool Heart and Lung Hospital, Liverpool, United Kingdom; 2 Jacobs Engineering, Woking, United Kingdom

3 **Reduced Negative Surface Charge & Glycocalyx on Arterial Endothelium in Diabetes**

N Drury[1] N Howell[1] H Ashrafian[2] M Nassimizadeh[3] J Digby[2] A Wierzbicki[4] A Gonzalez[3] * D Pagano[1] M Frenneaux[3] G Born5
1 University Hospital Birmingham, Birmingham, United Kingdom; 2 University of Oxford, Oxford, United Kingdom; 3 University of Birmingham, Birmingham, United Kingdom; 4 St Thomas Hospital, London, United Kingdom; 5 William Harvey Research Institute, London, United Kingdom

4 **Surgeon Specific Data ? The Data Quality Challenge?**

U Dandekar; * N Howell; * R Bonser; * T Graham; J Mascaro; * S Rooney; * I Wilson; V Barnett; * D Pagano
University Hospital Birmingham NHS Trust, Birmingham, United Kingdom

5 **Adipokines Secreted by Epicardial Adipose Tissue in Patients undergoing Cardiac Surgery**

K Karastergiou[1] N Ogston[2] J Carlos Kaski[1] V Mohamed-Ali[2] * M Jahangiri[1]
1 St Georges University of London, London, United Kingdom; 2 University College London, London, United Kingdom

Monday, 23 March, 2009

08:50 - 10:00 **Oral Presentations with Nurses Forum and ACSA**

Tregonwell Chairmen: Mr Leslie Hamilton, Ms Tara Bartley & Mr Tony Jessop

6 **Choice of Conduit for The Right Coronary System: An 8-year Analysis From the Radial Artery Patency & Clinical Outcomes Trial**

P Hayward[1] I Hadinata[2] D Hare[1] S Moten[1] A Rosalion[1] S Seevanayagam[1] B Buxton[3] G Matalanis[1]
1 Austin Hospital, Melbourne, Australia; 2The University of Melbourne, Melbourne, Australia; 3Victorian Heart Centre, Melbourne, Australia

7 **Enhanced Left Ventricular Mass Regression following Aortic Valve Replacement is Associated with Improved Long-term Survival: A 15-year Study**

A Ali; A Patel; Y Abu-Omar; Z Ali; S Bleiziffer; D Freed; A Shiekh; T Athanasiou; J Pepper
Royal Brompton Hospital, London, United Kingdom

8 **Blood Conservation with a Normovolaemic Circuit for Coronary Artery Bypass Grafts**

S Bazerbashi; R Richards; R Nensey; G Webb; M Bennett; C Lloyd
South West Cardiothoracic Centre Derriford Hospital, Plymouth, United Kingdom

9 **Social Deprivation Reduced the Prognostic Benefits of Cardiac Surgery: An Analysis of 44,902 Patients from 5 Hospitals over 10 Years**

N Howell[1] B Bridgewater[2] B Fabri[3] J Au[4] D Keenan[5] B Keogh[6] D Pagano[1]
1 University Hospital Birmingham NHS FT, Birmingham, United Kingdom; 2 South Manchester University Hospital FT, Manchester, United Kingdom; 3 Liverpool Heart and Chest Hospitals, Liverpool, United Kingdom; 4 Blackpool Victoria Hospital, Blackpool, United Kingdom; 5 Manchester Royal Infirmary, Manchester, United Kingdom; 6 Department of Health, London, United Kingdom

10 **Risks & Benefits of Aprotinin use in First Time CABG**

B Nguyen[1] K Chan[1] E Jaaly[1] R George[1] P Punjabi[1]
1 Imperial College Healthcare NHS Trust Hammersmith Hospital, London, United Kingdom; 2Imperial College, London, United Kingdom

"What Next in the Development of Total Artificial Hearts?"
Professor Alan Carpentier

Monday, 23 March, 2009

08:45 - 10:00
Meyrick Suite Database Managers: 4th Annual Meeting
Discussion Forum (Database Managers only)
Chairmen: Ms Tracey Smailes & Mr Philip Kimberley

Monday, 23 March, 2009

10:00 - 10:45
Purbeck Hall TEA & COFFEE

Monday, 23 March, 2009

10:45 - 12:30 **Database Managers: 4th Annual Meeting**
Meyrick Suite Chairmen: Ms Tracey Smailes, Mr Ben Bridgewater, Dr David Cunningham

CCAD
Chairmen: Tracey Smailes & Ben Bridgewater

Time:	*Title*	*Speaker*
08:45 – 10:00	**Discussion Forum** **Open forum for informal discussion**	Chairmen: Tracey Smailes & Phillip Kimberley
10:00 - 10:45	Tea/ Coffee	
10:45 - 11:00	**Welcome and Introduction**	Tracey Smailes & Ben Bridgewater
11:00 - 11:15	**Update from the Data Committee**	James Roxburgh
11:15 - 11:35	**SCTS Lotus Notes – How to make the best of it**	David Cunningham & Nadeem Farzi
11:35 - 11:55	**Annual Data & Health Check**	Phillp Kimberley
11:55 - 12:15	**The DBM perspective – An example of practice from a unit's perspective**	Sheila Jamieson
12:15 - 12:30	**Database Managers Forum Update**	Tracey Smailes
12:30 - 13:30	**Lunch**	

Monday, 23 March, 2009

10:45 - 11:45 **Cardiac Oral Presentations**
Branksome Suite Moderators: Prof Marjan Jahingiri & Mr Alan Kirk

11 **Predicting Minimum Haematocrit on Bypass**
M Poullis; K Palmer; I Johnson
Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

12 **Importance of Routine Measurement of Brain Natriuretic Peptide for Risk Stratification in Coronary Artery Bypass Surgery**
S Attaran; R Sherwood; J Desai; P Mhandu; L John; A El-Gamel
Kings College Hospital, London, United Kingdom

13 **Pre-operative Neutrophil Response as a Predictive Marker of Clinical outcome following Open Heart Surgery & the Impact of Leukocyte Filtration**
A Soo[1] B Maher[2] W Watson[2] A Wood[1]
1 Prof Eoin O Malley National Centre for Cardiothoracic Surgery Mater Misericordiae University Hospital, Dublin, Ireland; 2 UCD School of Medicine and Medical Sciences Conway Institute, Dublin, Ireland

14 **Oxygen Extraction & Not Haematocrit is a Predictor of the Individual Response to Red Blood Cell Transfusion during Cardiopulmonary Bypass**
R Rajnish; M Thomas; G Angelini; G Murphy
Bristol Heart Institute, Bristol, United Kingdom

15 **Comparison of Minimal Versus Conventional Extracorporeal Circulation on Neurocognitive Function after Coronary Artery Bypass Grafting: A Prospective Randomized Pilot Study**
H Argiriadou; K Anastasiadis; G Karapanagiotidis; P Antonitsis; C Foroulis; K Rammos; C Papakonstantinou
AHEPA University Hospital, Thessaloniki, Greece

16 **Polarised Cardioplegia Concept: How Far from Clinical Application?**
A Chambers[1] H Fallouh[2] J Kentish[2] D Chambers[1]
1 St Thomas Hospital, London, United Kingdom; 2 Kings College London, London, United Kingdom

Monday, 23 March, 2009

Purbeck Lounge **The Cardiothoracic Forum**

10:45 - 10:50 **Opening Remarks**
Tara Bartley, Nursing Representative, SCTS

10:50 - 11:00 **Key Note Speaker Opening Remarks**
Maura Buchanan, President of the RCN

11:00 – 11:40 **The LVAD Experience, A Multidisciplinary Journey. The Patient & the Team from the QE Birmingham.**
Lisa Ketteridge & the Queen Elizabeth Hospital, Birmingham.
Chairmen: Mr Leslie Hamilton & Mr David Waters

11:45 – 12:30 **Heart Research UK Lecture, Joint Session**

Monday, 23 March, 2009

10:45 - 11:45 **Mitral Valve Oral Presentations**
Tregonwell Chairmen: Mr Chris Munsch & Mr Chris Young

17 **Minimally Invasive Video-assisted Mitral Valve Surgery: A Twelve-year Two-center Experience in 1178 Patients**
P Modi[1] E Rodriguez[1] W Hargrove[2] A Hassan[1] W Szeto[2] W Chitwood Jr[1]
1 East Carolina Heart Institute, Greenville, NC, United States; 2 Penn Presbyterian Medical Center, Philadelphia, PA, United States

18 **Right Ventricular Dysfunction in Rheumatic Valvular Heart Disease: Indices, Incidence & Prognosis.**
S Pande; S K Agarwal; S Kumar; V Agarwal
Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India

19 **Are We Repairing Enough Mitral Valves?**
M Jenkins; J Roxburgh; C Blauth
Guys and St Thomas NHS Trust, London, United Kingdom

20 **Tricuspid Valve Repair: Tips & Pitfalls**
J Chikwe; J Castillo; A Anyanwu; D Adams
Mount Sinai Medical Center, New York, United States

21 **Atrial Fibrillation Cryo-ablation with Mitral Valve Surgery in Patients with Continuous Atrial Fibrillation**
S Bhudia; E Beran; R Patel
University Hospital Coventry and Warwickshire, Coventry, United Kingdom

22 **Port Access Mitral Valve Repair. The Middlesbrough Experience**
A Bose; K Khan; S Hunter
The James Cook University Hospital, Middlesbrough, United Kingdom

Monday, 23 March, 2009

11:45 - 12:30 **Guest Lecture: Dr David Adams: A Lesion Specific Approach to Mitral Valve Reconstruction**
Tregonwell Chairmen: Mr Leslie Hamilton & Mr Francis Wells
Heart Research UK Lecture

Monday, 23 March, 2009

12:30 - 13:30 LUNCH
Purbeck Hall

Monday, 23 March, 2009

13:30 - 15:00 **UK Cardiac & Thoracic Activity**
Tregonwell Chairmen: Mr Leslie Hamilton, Mr Ben Bridgewater & Mr Graham Cooper
Guest Speaker: Sir Bruce Keogh

13:30 - 13:35 **Introduction** – Mr Ben Bridgewater
13:35 - 13:45 **Thoracic Data Collection: Past & Future** – Mr Jim McGuigan

13:45 - 14:10 **Cardiac Surgery Activity: Trends of activity -** Mr Ben Bridgewater
14:10 - 14:20 **Cardiac & Thoracic Transplantation activity trends, quality assessment and responses,** – Mr John Dark
14:20 - 14:30 **Any Data in Congenital Surgery? Future Rationalisation** – Mr Leslie Hamilton
14:30 - 14:45 **Quality Indicators in the NHS –** Sir Bruce Keogh
14:45 - 15:00 **Discussion**

Monday, 23 March, 2009

13:30 - 15:00 **The Society of Clinical Perfusion Scientists, Great Britain & Ireland: Workshop**
Tregonwell Bar
Chairman: Mr Robin Jones
SOPGBI

Monday, 23 March, 2009

15:00 - 15:45 TEA & COFFEE
Purbeck Hall

Monday, 23 March, 2009

15:45 - 16:55 **Thoracic Surgery Presentations**
Meyrick Suite
Chairman: Mr Bill Walker & Mr John Edwards

23 **VATS Lobectomy for Early Lung Cancer: The Southampton Experience.**
K Amer; A Khan; H Vohra
Southampton General Hospital, Southampton, United Kingdom

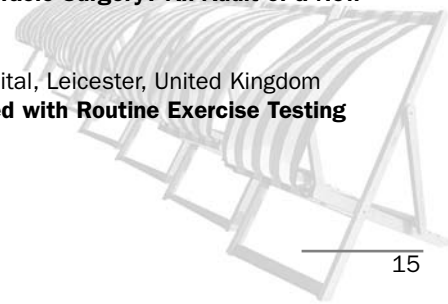
24 **Learning to Perform VATS Lobectomy: Assisting during a Consultant's Learning Curve Shortens a Trainee's Learning Curve**
A Khan; K Amer
Southampton University Hospital NHS Trust, Southampton, United Kingdom

25 **Impact of Positive Pleural Lavage Cytology on Survival in Patients Undergoing Resection for NSCLC: An International Multicentre Study**
E Lim; R Clough; P Goldstraw on behalf of the Investigators
The Royal Brompton Hospital, London, United Kingdom

26 **The Test Performance of Pre-operative Neutrophil to Lymphocyte Ratio to Predict Adverse Survival after Resection of Stage I NSCLC**
K Sarraf; P Redman; A Nicholson; P Goldstraw; E Lim
Royal Brompton Hospital, London, United Kingdom

27 **Should Operative Mortality after Lobectomy for Lung Cancer be the only Measure for Quality in Thoracic Surgery? An Audit of a New Consultant's Practice**
A Martin-Ucar
Thoracic Surgery Glenfield Hospital, Leicester, United Kingdom

28 **Do Current Guidelines Combined with Routine Exercise Testing**



enable Prediction of Post-operative Mortality for Lung Cancer Resection?

J McGuinness[1] A Hughes[1] K Bennett[2] H Parissis[1] V Young[1]
1 Department of Cardiothoracic Surgery St James Hospital, Dublin, Ireland; 2 Department of Therapeutics Trinity College, Dublin, Ireland

Monday, 23 March, 2009

15:45 - 16:00 **The Cardiothoracic Forum**

Purbeck Lounge Chairmen: Mr Pala Rajesh & Mr Anthony Hogan

Cancer Staging, The BTS Guidelines & the Impact on Surgical Decision Making

Mr Eric Lim,

16:00 - 16:15

29 **Postoperative Pulmonary Complications following Thoracic Surgery: Comparison of Three Scoring Systems.**

P Agostini[1] H Cieslik[1] B Naidu[1] S Rathinam[1] E Bishay[1] M Kalkat[1] S Singh[2]
1 Birmingham Heartlands Hospital, Birmingham, United Kingdom; 2 Coventry University, Coventry, United Kingdom

16:15 - 16:30

30 **When Should Salvage Intensive Care be Considered after Elective Thoracotomy?**

P K Mishra; K Bakri; B Balduyck; A Nakas; A Martin-Ucar; D Waller
Glenfield Hospital, Leicester, United Kingdom

16:30 – 16:45

31 **Reduction in Intensive Care Admissions following Thoracic Surgery after Introduction of Non Invasive Ventillation in a Regional Unit**

P Agostini; H Cieslik; S Rathinam; R Steyn; F Collins; B Naidu
Birmingham Heartlands Hospital, Birmingham, United Kingdom

16:45 - 1700

32 **Usefulness of Chest Radiography Post Chest Drain Removal in Cardiac Patients**

M Eddama; I Ilyas; A Vuylsteke
Department of anaesthesia and intensive care, Papworth Hospital, UK

Monday, 23 March, 2009

15:45 - 16:55 **Aortic Valve Oral Presentations**

Tregonwell Chairmen: Mr Vinnie Bapat & Mr Tom Spyt

33 **Outcome following Aortic Valve Replacement in Octogenarians: A Single UK Centre Experience**

T Velissaris[1] N Nikolaidis[1] D Pousios[1] M Haw[1] C Barlow[1] G Tsang[1] S Livesey[1] S Ohri[1]
1 Wessex Cardiothoracic Centre Southampton University Hospitals, Southampton, United Kingdom

34 **Comparison of Long-term Outcomes following Aortic Valve**

Replacement with Homografts & Porcine Stentless Valves: Results of a 15 Year Study
A Ali; A Patel; Y Abu-Omar; Z Ali; S Bleiziffer; D Freed; A Sheikh; T Athanasiou; J Pepper
Royal Brompton Hospital, London, United Kingdom

35 **Patient Prosthesis Mismatch in Patients with Aortic Stenosis undergoing Isolated Aortic Valve Replacement does Not Affect Survival**
N Howell; B Keogh; R Bonser; T Graham; J Mascaro; S Rooney; I Wilson; D Pagano
University Hospital Birmingham NHS FT, Birmingham, United Kingdom

36 **Preoperative Systolic Strain Rate Predicts Postoperative Left Ventricular Systolic Function in Patients with Chronic Aortic Regurgitation.**
A Marciniak; G Sutherland; M Marciniak; A Kourliouros; B Bijnens; M Jahangiri
St Georges Hospital, London, United Kingdom

37 **Experience with a Decellularized Porcine Heart Valve for Right Ventricular Outflow Tract Reconstruction.**
P Maria Dohmen; S Holinski; S Dushe; H Grubitzsch; W Konertz
Dept of Cardiovascular Surgery, Berlin, Germany

38 **What is The Economic Burden of Disease for Patients with Aortic Stenosis (AS) Unable to Undergo Aortic Valve Replacement (AVR)?**
C Morgan[2] O Wendler[1] K Banz[3] C Cohen[4]
1 Kings College Hospital, London, United Kingdom; 2 CRC, Cardiff, United Kingdom; 3 Outcomes Research International, Basel, Switzerland; 4 Edwards Lifesciences, Newbury, United Kingdom

39 **Transcatheter Aortic Valve Implantation: A Multidisciplinary Approach from Two Centres**
V Bapat[1] A El-Gamel[2] C Young[1] P MacCarthy[2] K Wilson[1] D Rafal[2] M Monaghan[2] J Hancock[1] M Thomas[1] O Wendler[2]
1 Guys and St Thomas Hospital NHS Foundation Trust, London, United Kingdom; 2 Kings College Hospital NHS Foundation Trust, London, UK

Monday, 23 March, 2009

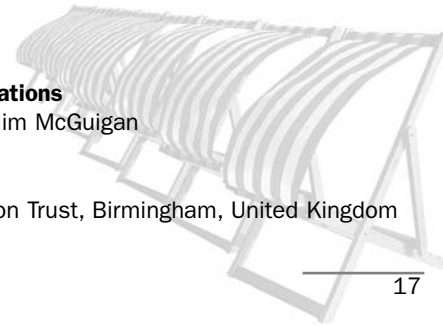
15:45 - 18:30 **The Society of Clinical Perfusion Scientists, Great Britain and Ireland: Workshop**
Purbeck Bar
Chairman: Mr Robin Jones
SOPGBI

Monday, 23 March, 2009

17:00 - 18:30 **Thoracic Surgery: Oral Presentations**
Meyrick Suite
Chairmen: Mr John Duffy & Mr Jim McGuigan

40 **Dealing with a Dr Foster Alert**
B Naidu; P Rajesh; R Steyn
Heart of England NHS Foundation Trust, Birmingham, United Kingdom

17:00 - 18:30 **Thoracic Surgery Symposium**



Have you ever made a mistake? Richard Berrisford
Risk Stratification, Eric Lim
Auditing Quality of Care in Thoracic Surgery: A European Perspective, Alessandro Brunelli
Moderators: Mr Jim McGuigan and Mr John Duffy

Monday, 23 March, 2009

17:00 - 18:30 **St Jude Symposium:**
Tregonwell **Transcatheter Aortic Valve Implantation (TAVI)**
Chairmen: Mr Ahmed El Gamel, Mr Neil Moat & Mr Uday Trivedi

Clinical Experience and Outcomes in TAVI – Prof Frederich Mohr
How to define potential patients who may benefit from TAVI – Mr Ben Bridgewater
How to Select Patients - The Multidisciplinary Approach – Mr Neil Moat
How to Define Succes – Dr Martyn Thomas

Monday, 23 March, 2009

18:30 - 20:30 **Nycomed Symposium**
Purbeck Lounge Nycomed

Tuesday, 24 March, 2009

07:15 - 08:45 **ATS Medical Symposium**
Branksome Suite **The ATS 3F Revolution**
Guest Speaker: Dr James Cox , Emeritus Evarts A. Graham Professor of Surgery , Division of Cardiothoracic Surgery Washington University School of Medicine St.Louis, Missouri USA
Chairmen: Mr Ravi Pillai & Dr Jin

Tuesday, 24 March, 2009

08:00 - 08:50 **Endocarditis: Oral Presentations & Discussion**
Meyrick Suite Chairmen: Mr Alan Bryan & Mr Adrian Marchbank

41 Outcomes of Surgery for Isolated Active Mitral Valve Endocarditis
A Sheikh; A Elhenawy; M Maganti; S Armstrong; T David; C Feindel
Toronto General Hospital, Toronto, Canada

42 **Tricuspid Valve Surgery for Infective Endocarditis: Multicentre Results**
S Farid; H Bilal; A Momin; A Khan; M Purohit; G Musleh; N Odom; D Keenan; R Hasan; B Prendergast
Manchester Royal Infirmary, Manchester, United Kingdom

43 **Dental Organisms as a Cause of Infective Endocarditis Requiring Surgery**
A Kumar; J Klein; M Jenkins; J Roxburgh; C Blauth
Guys and St Thomas NHS Trust, London, United Kingdom
Forty minute discussion with guest microbiologist and guest dentis

Tuesday, 24 March, 2009

08:45 - 10:00 **Society of Clinical Perfusion Scientists, Great Britain & Ireland: Committee Meeting**
Purbeck Bar
Chairman: Mr Robin Jones
SOPGBI

Tuesday, 24 March, 2009

09:00 - 10:00 **Cardiac Revascularisation: Oral Presentations**
Meyrick Suite
Chairmen: Mr Andrew Murday & Mr Andrew Ritchie

44 **Preliminary Group Results from the Arterial Revascularisation Trial (ART)**
The ART Investigators[1] D Taggart[2]
1 Royal Brompton Hospital, london, United Kingdom; 2 John Radcliffe Hospital, Oxford, United Kingdom

45 **Does Prior Percutaneous Intervention Influence Mortality after Coronary Artery Bypass Graft Surgery**
E Akowuah[1] C Hon-Yap[1] B Yan[3] D Dihn[2] C Reid[2] P Skillington[1] J Tatoulis[1]
1 The Royal Melbourne Hospital, Melbourne, Australia; 2 Department of Epidemiology and Preventive Medicine Monash University, Melbourne, Australia; 3 Department of Medicine and Therapeutics Chinese University of Hong Kong, Hong Kong, Hong Kong

46 **Long Term Outcome after Isolated CABG for High Risk EuroSCORE Patients. A Decades Review.**
R Bilal; R Hasan; I Koukis; R Rathore; Z Makahleh; * K McLaughlin; B Prendergast; N Odom; D Keenan; G Musleh
Manchester Royal Infirmary, Manchester, United Kingdom

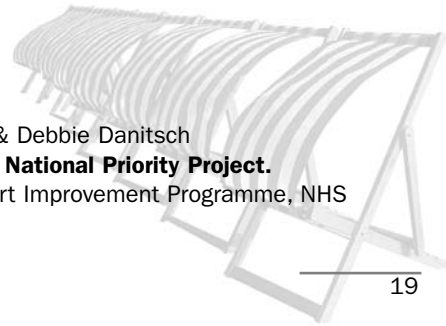
47 **Peri-operative Stroke in Coronary Surgery - Impact of Cardiopulmonary Bypass versus Aortic Manipulation.**
P Sastry; R Warwick; M Field; M Kuduvalli; A Oo
Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

48 **One-year Outcome of Percutaneous Coronary Intervention versus Coronary Artery Surgery in Three Vessel And/or Left Main Stem Disease**
A Kourliouros[1] E Biryukova[1] F Williams[1] O Valencia[1] J Kaski[1] M Bland[2] M Jahangiri[1]
1 St Georges University of London, London, United Kingdom;
2 University of York, York, United Kingdom

Tuesday, 24 March, 2009

09:00 - 10:00 **The Cardiothoracic Forum**
Purbeck Lounge

09:00 – 09:15 Chairmen: Mr James Roxburgh & Debbie Danitsch
The 18 Weeks Whole Pathway: National Priority Project.
Wendy Gray, Intern Director, Heart Improvement Programme, NHS Improvement



09:30 - 09:45

49 **Clinical Audit on the Use of Temporary Epicardial Pacing Wires in Coronary Artery Bypass Surgery**
M Tavakkoli-Hosseini; A Kourliouros; V Sookhoo; O Valencia; M Jahangiri
St Georges Hospital, London, United Kingdom

09:15 - 09:30

50 **How the Aging Population Affects Indirect Costs & Resource Utilisation in Cardiac Surgery: A Single Centre Experience.**
D Ngaage; G Britchford; A Cale
Castle Hill Hospital, Cottingham, United Kingdom

09:45 - 10:00

51 **Enhanced Follow-up Of Heart Valve Surgery Patients In a Specialist Nurse-led Clinic**
J Cadet; A Morris; A Anscombe; J Pepper
The Royal Brompton Hospital, London, United Kingdom

Tuesday, 24 March, 2009

09:00 - 10:00 **Congenital Oral Presentations**
Durley Suite Chairmen: Mr Tim Jones & Mr Nihal Weerasena

52 **Long-term Follow-up after Primary Complete Repair of Truncus Arteriosus with Homograft: A Thirty Four-year Experience.**
H Vohra; A Chia; V Janusauskas; A Roubelakis; N Nicolaidis; G Veldtman; J Gnanapragasam; T Salmon; J Monro; M Haw
Wessex Cardiothoracic Centre Southampton University Hospitals NHS Trust, Southampton, United Kingdom

53 **Abnormal Right Ventricular Wall Mechanics And Cardio-hormonal Adaptive Response Following Tetralogy Of Fallot's Repair**
E Peng[1] R Spooner[2] S Lilley[1] P Galloway[1] K MacArthur[1] J Pollock[1] N Yonan[3] M Danton[1]
1 Royal Hospital for Sick Children, Glasgow, United Kingdom; 2Gartnavel General Hospital, Glasgow, United Kingdom; 3Wythenshawe Hospital, Manchester, United Kingdom

54 **Results of Aorto-pulmonary Window Repair: A 15 Years Experience**
M Abbasi; N Givtaj; M Yousefnia; S Salehi; R Baghaee
Shahid Rajaee Heart Center, Tehran, Iran

55 Mid-term Evaluation of Prosthetic Valves in the Pulmonary Position
H Vohra; G Baliulis; V Janusauskas; G Veldtman; K Roman; J Vettukattil; J Gnanapragasam; T Salmon; M Haw
Wessex Cardiothoracic Centre Southampton University Hospitals NHS Trust, Southampton, United Kingdom

56 **Unifocalising Major Aortopulmonary Arteries in Pulmonary Atresia with Ventricular Septal Defect Results in Favourable Long-term Outcomes: Experience with 236 Patients**
B Davies[1] S Mussa[1] P Davies[2] J Stickley[1] J G Wright[1] J de Giovanni[1] O Stümper[1] T Jones[1] D Barron[1] W Brawn[1]

1 Birmingham Childrens Hospital, Birmingham, United Kingdom; 2 Institute of Child Health University of Birmingham, Birmingham, United Kingdom

57 **Effect Of Cardiopulmonary Bypass on Platelet Activation Markers such as Transforming Growth Factors Beta1 And Beta2 in Pediatric Cardiac Patients.**

A Sharma; J M Chen
Weill Cornell Medical College, New York, United States

Tuesday, 24 March, 2009

08:45 - 10:00 **Thoracic Surgery Oral Presentations**

Tregonwell Chairmen: Mr Dhruva Prakash & Mr Sasha Stamenkovic

58 **Positron Emission Tomography And Nodal Staging In Non-small Cell Lung Cancer? The Birmingham Experience**

S Michael Woolley[1] T Ogunremi[2] I Nagra[2] S Meade[2] E Bishay[1] R Steyn[1] F Collins[1] I Woolhouse[2] P Rajesh[1]
1 Birmingham Heartlands Hospital, Birmingham, United Kingdom; 2 University Hospital Birmingham, Birmingham, United Kingdom

59 **Endobronchial Ultrasound & Transbronchial Needle Aspiration Biopsy for Mediastinal Staging in Patients with Lung Cancer: Systematic Review & Meta-analysis**

K Adams[1] P Shah[1] L Edmonds[2] E Lim[1]
1 The Royal Brompton Hospital, London, United Kingdom; 2 Papworth Hospital, Cambridge, United Kingdom

60 **Clinical Application of Direct Bronchial Ultrasound to Visualize & Determine Endobronchial Tumour Margins for Surgical Resection**

K Sarraf; E Belcher; S Price; E Lim
Royal Brompton Hospital, London, United Kingdom

61 **Endobronchial Cryotherapy in the Management of Metastasis to the Bronchial Tree**

D Eaton; I Hunt; J Beeson; O Maiwand; V Anikin
Harefield Hospital, London, United Kingdom

62 **N2 Disease in Lung Cancer: Reasonable Surgical Outcomes with Low Volume Disease**

S Soon; D West; W Walker
Royal Infirmary of Edinburgh, Edinburgh, United Kingdom

63 **Unsuspected N2 Disease in Non-Small Cell Lung Cancer. Prognostic Factors Affecting Survival. A 10-year Retrospective Single Centre Study**

M Al-Alao[1] V Young[1] E Mc Govern[1] K O'Byrne[1]
1 St James Hospital, Dublin, Ireland; 2 Institute of Molecular Medicine Trinity College Dublin, Dublin, Ireland

64 **Aspirin post Non Small Cell Lung Cancer Resections: Effect on Long Term Survival**

M Poullis; J McShane; R Page; M Shackcloth; N Mediratta; M Carr; R Williams; A Soorae
Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

Tuesday, 24 March, 2009

10:00 - 10:45 TEA & COFFEE
Purbeck Hall

Tuesday, 24 March, 2009

10:45 - 12:30 **Cardiac Surgical Workshop**
Meyrick Suite Chairmen: Dr David Adams & Mr Ian Wilson
Has the Classsification of Mitral Valve set the standard for the Aortic & Tricuspid Valves?
Mitral Valve – Professor Alain Carpentier
Tricuspid Valve – Mr Francis Wells
Aortic Valve – Professor Mark Redmond

Tuesday, 24 March, 2009

Purbeck Lounge **The Cardiothoracic Forum**
Chairmen: Mr Jonathan Hyde & Ms Katy Gofton
Sponsored by Ethicon

10:45 – 11:15 **Modernising Nursing Careers & the Impact on Post Graduate Career Pathways**
Dr David Foster, Deputy Chief Nursing Officer, The Department of Health.

11:15 – 11:45 **The Strategic Impact of Changing the Workforce**
Ms Christina Pond, Executive Director of Standards & Qualification, Skills for Health.

11:45 – 12:05
65 **A Workforce for the Future: Exploring New Ways of Working**
T Bartley; C Badger; I Fenwick; C Retmanski
University Hospital Coventry and Warwickshire, Coventry, United Kingdom

12:05 - 12:30 **Discussion**

Tuesday, 24 March, 2009

10:45 - 12:30 **Congenital Cardiac Surgical Meeting**
Durley Suite Chairmen: Mr Andrew Parry & Mr Victor Tsang

66 **Primary Bi-ventricular Repair of Atrio-ventricular Septal Defects: An Analysis of Re-operation & Focus on Technical Aspects**
A Chia; H Vohra; J Vettukattil; G Veldtman; J Gnanapragasam; K Roman; T Salmon; M Haw
Wessex Cardiothoracic Centre Southampton University Hospitals NHS Trust, Southampton, United Kingdom

Morphology of AtrioVentricular Septal Defects,
Dr Andrew Cook, Raine Institute.

Debate - The Hybrid Procedure: Should All Hypoplasts be treated this way?
For: David Barron
Against: David Anderson

Tuesday, 24 March, 2009

10:45 - 11:45 **Thoracic & Oesophageal Surgery: Oral Presentations**
Tregonwell Chairmen: Mr Edward Black & Mr Rajesh Shah

67 **10 Year Survival for Routine lung Cancer Resection by a Minimal Invasive Anterior Approach: Comparison to Open Standard Thoracotomy**
A Suliman; S Rehman; S Roberts; A Chukwuemeka; T Athanasiou; R de L Stanbridge
St Marys Hospital Imperial Academic Health Science Centre, London, United Kingdom

68 **Mid Term Results from a Randomised Trial of Lung Volume Reduction Surgery**
E Lim[1] I Sousa[2] P Goldstraw[1] P Diggle[2]
1 The Royal Brompton Hospital, London, United Kingdom;
2 Department of Health and Medicine, Lancaster, United Kingdom

69 **Routine Thromboprophylaxis with Low Molecular Weight Heparin in Patients with Lung Cancer Undergoing Surgery may be Unnecessary & even Ineffective**
S Attaran; P Somov; A Wael
London Chest Hospital, London, United Kingdom

70 **The 24 Hour Golden Rule: Does it still apply to Rupture of the Oesophagus in the Modern Era?**
H Elsayed; S Hussein; M Shackcloth
Liverpool Heart and Chest hospital, Liverpool, United Kingdom

71 **Oesophagogastrectomies in the Elderly Population: Is it Really Safe? A 7- Year Experience in a Tertiary Centre**
H Elsayed; M Shackcloth; N Howes; M Hartley; R Page
Liverpool Heart and Chest hospital, Liverpool, United Kingdom

72 **Is Oesophageal Cancer Resection Appropriate Over the Age of 80?**
R Chaparala; L Nickson; L Beggs; M Asif; E Black; D Beggs; J Duffy
Department of Thoracic Surgery Nottingham City Hospital, Nottignham, United Kingdom

Tuesday, 24 March, 2009

10:45 - 12:30 **Society of Clinical Perfusion Scientists, Great Britain & Ireland: Workshop**
Purbeck Bar Chairman: Mr Robin Jones
SOPGBI

Tuesday, 24 March, 2009

10:45 - 11:45 **The Aorta: Oral Presentations**
Branksome Suite Chairmen: Mr Stephen Griffin & Mr Malcolm Underwood

73 **Contemporary Outcomes For Separate Supra-aortic Branch Implantation in Aortic Arch Surgery**
D Quinn; S Liu; T Barker; M Loubani; V Barnett; J Mascaro; R Bonser
University Hospital Birmingham NHS foundation trust, Birmingham, United Kingdom

74 **Is There a Significant Advantage of Subclavian Artery Perfusion for Type-A Dissection? - Long-term Results**
U Schurr[1] O Reuthebuch[1] B Seiffert[2] A Häussler[1] D Berdajs[1] M Lachat[1] M Genoni[1]
1 Clinic for Cardiovascular Surgery University Hospital of Zurich, Zurich, Switzerland; 2 Institute for Biostatistics University of Zurich, Zurich, Switzerland

75 **Aortic Root Replacement Using a Biovalsalva Prosthesis in Comparison to a Handsewn Composite Bioprosthesis**
N Moorjani; A Modi; K Mattam; C Barlow; G Tsang; M Haw; S Livesey; S Ohri
Wessex Cardiothoarcic Centre, Southampton General Hospital, Southampton, United Kingdom

76 **Type A Aortic Dissection with Open Distal Anastomosis has Similar Outcome as the Closed Technique: Results of 100 Patients**
H Vohra; A Modi; T Velissaris; A Chia; G Eltaj; M Haw; C Barlow; S Ohri; S Livesey; G Tsang
Wessex Cardiothoracic Centre Southampton University Hospitals NHS Trust, Southampton, United Kingdom

77 **The Impact of Endovascular Aortic Repair of Conditions Affecting the Descending Thoracic Aorta on Clinical Outcomes, Reintervention & Hospitalisation Costs**
A Wong; P Narayan; E Akowuah; A Bryan; P Wilde; G Murphy
Bristol Heart Institute, Bristol, United Kingdom

Tuesday, 24 March, 2009

11:50 - 12:30 **Cardiac Oral Presentations**
Branksome Suite Chairmen: Mr Paul Ridley & Mr Ulrich Von Oppell

78 **Early Diabetes Worsens Outcomes in Coronary but Not Valve Surgery P Sastry; M Poullis; B Fabri**
Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

79 **Do Women Really Benefit from Off-pump Coronary Artery Bypass Grafting? Analysis of a Single Surgeon Experience over 14 Years**
J Ganesh; S Mylvaganam; W Dimitri
University Hospitals Coventry and Warwickshire NHS Trust, Coventry, United Kingdom

80 **Is There a Degree of Right Ventricular Dysfunction that is Irreversible after Pulmonary Thromboendarterectomy?**
C McGregor; M McGoon; R Frantz; B Edwards; S Kushwaha; J Breen
Mayo Clinic, Rochester, United States

81 **Prophylactic Treatment of Atrial Fibrillation Post Coronary Artery Bypass Grafting: A Randomised Controlled Trial of Sotalol And Magnesium versus Placebo**
T Theologou; M Bashir; M Field; S Ghotkar; M Kuduvalli; A Oo; B Fabri
The Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

82 **Social Deprivation, Nosocomial Infection & Coronary Artery Bypass Grafting**
S Kumar[1] K Bhavanathi[2] J Howlett[1] * S Prasad[1] * P Mankad[1] K Bhattacharya[1]
1 Department of Cardiothoracic Surgery Royal Infirmary of Edinburgh, Edinburgh, United Kingdom; 2 Department of Microbiology Royal Infirmary of Edinburgh, Edinburgh, United Kingdom

Tuesday, 24 March, 2009

11:45 - 12:30 **Thoracic Surgical Lecture:**
Tregonwell Dr Tom DeMeester - **The History of En Bloc Oesophagectomy**
Chairman: Mr Jim McGuigan

Tuesday, 24 March, 2009

12:30 - 13:30 LUNCH
Purbeck Hall

Tuesday, 24 March, 2009

13:30 - 15:00 **Thoracic Papers**
Meyrick Suite Chairmen: Mr Richard Page & Mr David Waller

83 **Hyperselection for Extrapleural Pneumonectomy: Current Staging Methods are Inadequate**
D West; S Soon; F Carnochan; W Walker
Edinburgh Royal Infirmary, Edinburgh, United Kingdom

84 **Case Controlled Comparison of Radical Open Lung-preserving Surgery with Palliative Surgery for Malignant Mesothelioma**
Y Shahin; J Wellham; R Jappie; K Pointon; A Majewski; E Black
Nottingham City Hospital, Nottingham, United Kingdom

85 **Pleural Effusion in the Presence of Trapped Lung. Five Year Experience of a Single Thoracic Department.**
C Efthymiou; T Irfan; K Papagiannopoulos
St James Hospital Leeds Teaching Hospital NHS Trust, Leeds, United Kingdom

86 **Fast Track VATS Bullectomy & Pleurectomy for Pneumothorax: Initial Experience & Description of Technique**
A Meduoye[1] S Datta[1] M Malik[2] E Black[1]
1 Department of Thoracic Surgery Nottingham City Hospital, Nottingham, United Kingdom; 2 Department of Anaesthesia Nottingham City Hospital, Nottingham, United Kingdom

87 **Pulmonary Metastasectomy after Resection of Colorectal Hepatic Metastases - Is it Justified?**
K Rammohan; P Yiannoullou; H Kaukuntla; P Krysiak; R Shah; M Jones
Wythenshawe Hospital, Manchester, United Kingdom

88 **Is Every Metastasis a Metastasis?**
J Nandi; P Rajesh
Heartlands Hospital, Birmingham, United Kingdom

89 **Method of Pleurodesis is Less Important than Surgical Access on Recurrence Rates after Pneumothorax Surgery**
A Bille[1] A Barker[2] E Maratos[2] L Edmonds[2] * E Lim[1]
1 The Royal Brompton Hospital, London, United Kingdom; 2 Papworth Hospital, Cambridge, United Kingdom

90 **The Benefits of Integrating a Respiratory Medical Emergency Admission Unit on the Pathway of Non-elective Thoracic Surgical Patients**
M Aslam; A Nakas; A Martin-Ucar; D Waller
Department of Thoracic Surgery Glenfield Hospital, Leicester, United Kingdom

91 **Thoracic Epidural & Paravertebral Catheter Analgesia after Lung Resection: Is one Superior to Another?**
H Elsayed; N Scawn
Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

Tuesday, 24 March, 2009

13:30 - 15:00 **Congenital Cardiac Surgery**
Durley Chairman: Mr Marcus Haw & Mr Nelson Alphonso
Valve technologies; decellularised tissue and the UK consensus valve project.
Mr Paul Burns, Vascutek UK
Atrial fibrillation; understanding the science to achieve better ends?
Dr Nicolas Doll, Stuttgart

Tuesday, 24 March, 2009

13:30 - 15:00 **NCEPOD Synposium:**
Tregonwell **Heart of the Matter - what is the best way forward?**
Chairmen: Miss Marisa Mason & Mr Steven Livesey
13:30 – 13:40 **Introduction & reminder about NECPOD Study**
13;40 – 14:00 **Muti-disciplinary Case Planning – Dr Russell Smith**
14:00 – 14:10 **Consent – Mr David Richens**
14:10 – 14:25 **M&M Meetings – Mr Dominic Pagano**
14:25 – 14:40 **Management of Urgent Cases – Mr Steven Livesey**
14:40 – 15:00 **Closing Remarks & Discussion**

Tuesday, 24 March, 2009

15:00 - 15:45 TEA & COFFEE
Purbeck Hall

Tuesday, 24 March, 2009

15:45 - 16:55 **Cardiothoracic Transplantation: Oral Presentations**
Meyrick Suite Chairmen: Mr John Dark, & Mr Nizar Yonan

92 **Lung Transplantation from Non-heart Beating Donors without Pre-treatment**

T Butt; S Clark; L Holt; J Wardle; P Corris; J Dark
Newcastle upon tyne hospitals NHS trust, newcastle upon tyne, United Kingdom

93 **The Resuscitated Deceased Donor Heart is Functionally Superior to the Brainstem Dead Donor Heart**

A Ali[2] G Fajardo[1] G Budas[1] Z Ali[1] S Tsuda[1] S Tsui[2] R Robbins[1] M Fischbein[1] S Large[2] E Ashley[1]
1 Stanford University Medical Center, Palo Alto, United States;
2 Papworth Hospital, Cambridge, United Kingdom

94 **Assessing Peri-transplant Injury in Heart Transplantation: A Novel Immuno-histlogical Scoring System Utilising C9 Immuno-histochemistry**

V Dronavalli; E Clarke; R Bonser; M Mukadam; S Beer; I Wilson; J Mascaro; R Thompson; J Townend; D Neil
University Hospital Birmingham NHS Foundation Trust Queen Elizabeth Hospital, Birmingham, United Kingdom

95 **Heart Transplantation for Systemic Ventricular Failure following Atrial Switch Operation for Transposition of Great Arteries**

A Pawale; M Chaudhary; G Parry; N Wrightson; L Hamilton; M Griselli; J Dark; A Hasan
Freeman Hospital, Newcastle upon Tyne, United Kingdom

96 **Airway Complications following Lung Transplantation**

J Thekkudan; C Rogers; N Banner; R Bonser
On behalf of the UK Cardiothoracic Transplant Audit Steering Group, Royal College of Surgeons of England, London, United Kingdom

97 **Bridge to Heart Transplantation with Mid to Long-term VAD Mechanical Support**

A Loforte; A Montalto; F Ranocchi; G Casali; G Luzi; F Sbaraglia; V Polizzi; G Distefano; P Monica; F Musumeci
Department of Cardiac Surgery and Heart Transplantation S Camillo Hospital, Rome, Italy

98 **The Effect of Tri-iodothyronine on Myocardial Gene Expression in the Brain Stem Dead Cardiac Donor.**

A Ranasinghe[2] S James[2] R Venkateswaran[1] C McCabe[2] J Mascaro[1] I Wilson[1] J Franklyn[2] R Bonser[1]
1 University Hospital Birmingham NHS Foundation Trust, Birmingham, United Kingdom; 2 University of Birmingham, Birmingham, United Kingdom

Tuesday, 24 March, 2009

15:45 – 17:00 **The Cardiothoracic Forum**
Purbeck Lounge Chairmen: Mr Michael Lewis & Mr Steven Bryant
The National Patient Safety Project & Impact on Practice.
Dr Ann Keogh, Director for Patient Safety, Heartlands Hospital, Birmingham.

16:00 -16:15
99 **Endoscopic Vein Harvesting - Training Surcial Care Practitioners: A UK Centre Experience**
K Gofton; C Segria
James Cook University Hospital, Middlesbrough, United Kingdom

16:15 - 16:30
100 **Reflections on the Surgical Care Practitioner Programme at the University of Teesside**
N Barran; K Gofton; C Segria
University of Teesside, Middlesbrough, United Kingdom

16.30 - 16.45
101 **Hybrid Theatres: Nicety or Necessity?**
A Marshall; M Field; M Kuduvalli; A Oo; A Rashid
The Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

16:45 – 17:00
102 **Snapshot of a New Cardiothoracic Centre: The Challenges!**
S Hodson
Critical Care, Colne Ward, Essex Cardiothoracic Centre, United Kingdom

17:00 **Closing Remarks**, Tara Bartley, Nursing Representative, SCTS

Tuesday, 24 March, 2009

15:45 - 17:00 **Thoracic Surgery: Case Presentations - How To Do It.**
Tregonwell Chairmen: Mr Alastair Graham & Mr Mark Jones

103 **Metal-free Modified Ravitch Repair of Pectus Deformities has Good Early Outcomes**
B Naidu; T Makarawo; R steyn
Heart of England NHS Foundation Trust, Birmingham, United Kingdom

104 **French Window Thoracotomy: A Phase 2 Case-control Study of Lung Resection via a Novel Non-rib Spreading Thoracotomy**
P Vaughan[1] S Waqar[1] N Morgan-Hughes[2] J Edwards[1]
1 Northern General Hospital, Sheffield, United Kingdom; 2Department of Anaesthetics Northern General Hospital, Sheffield, United Kingdom

105 **Non-operative External Compressive Bracing in the Management of Pectus Carinatum**
N Moorjani; D Pousios; R Wheeler; K Amer; C Barlow
Wessex Cardiothoracic Centre, Southampton General Hospital, Southampton, United Kingdom

106 **Routine Systematic Mediastinal Nodal Dissection during VATS**

Lobectomy for Early Lung Cancer.
K Amer; A Khan
Wessex Cardiothoracic Centre, Southampton General Hospital, Southampton, United Kingdom

107 **Surgical Stablisation Of Posterolateral Flail Chest: Normalisation of Lung Function**
K Salhiyyah; C Tilkerides; M Davies; A Hamer; S Royston; J Rao; J Edwards
Northern General Hospital, Sheffield, United Kingdom

108 **Thoracoscopic verus Open Thymectomy for Early Stage Thymoma**
H Abunasra; S Begum; A Nakas; A Martiin-Ucar; D Waller
Glenfield Hospital, Leicester, United Kingdom

109 **Evaluation of Thoraquik® in Drainage of Pneumothorax & Pleural Effusion**
S Rathinam[1] P Wall[2] A Bleetman[1] R Steyn[1]
1 Birmingham Heartlands Hospital, Birmingham, United Kingdom;
2 Medical Devices Innnovations Ltd, Haldane, United Kingdom

Tuesday, 24 March, 2009

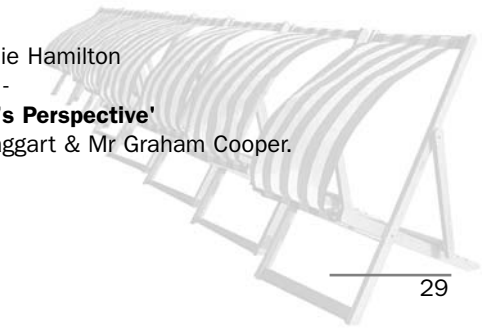
15:45 - 16:55 **Carotid & Aortic Endovascular Stenting - When and Where?**
Branksome Suite Chairmen: Mr Norman Briffa & Mr Ian Wilson

110 **Is Preoperative Screening with Carotid Doppler Essential in All Patients undergoing Coronary Artery Bypass Grafting?**
Z Makhija; H Khan; S Chaubey; J Desai; A El-Gamel; L John; O Wendler; R Deshpande
Kings College Hospital, London, United Kingdom
Trevor Cleveland, Interventional Radiologist, Northern General Sheffield. Evidence for endovascular carotid stenting pre- peri- and post cardiac surgery

111 **Is there Merit in Combining Abdominal Aortic Endovascular Aneurysm Repair (EVAR) & Coronary Artery Bypass Surgery?**
M Field; M Kuduvalli; A Oo; A Rashid
The Liverpool Heart and Chest Hospital, Liverpool, United Kingdom
Trevor Cleveland, Interventional Radiologist, Northern General Sheffield. Evidence for endovascular aortic stenting pre- peri- and post cardiac surgery

Tuesday, 24 March, 2009

17:00 - 18:00
Tregonwell **President's Address:** Mr Leslie Hamilton
Major General Garry Robison -
'Excellence: A Royal Marine's Perspective'
Chairmen: Professor David Taggart & Mr Graham Cooper.



Tuesday, 24 March, 2009

19:30 - 23:30 **Annual Dinner (Black Tie)**
Royal Bath Hotel Lifetime Achievement Award: Sir Terence English & the Awarding of Society Prizes and Scholarships.

Wednesday, 25 March, 2009

09:00 - 12:30 **Executive and Board of Representatives Meeting**
Royal Bath Hotel Chairmen: Mr Leslie Hamilton & Mr Graham Cooper

Society for
Cardiothoracic Surgery
in Great Britain and Ireland

Annual Meeting

Society for Cardiothoracic Surgery in Great Britain and Ireland

22nd to 24th March 2009

Bournemouth
International Centre

FORUM & DATABASE PROGRAMME

FORUM PROGRAMME

Monday 23rd March

08:45 - 10:00 **Multidisciplinary Shared Session with papers from science, nursing and surgical care practitioners**
Chairmen: Leslie Hamilton, Tara Bartley & Tony Jessop

10:00 - 10:45 TEA & COFFEE

10:45 - 10:50 **Opening Remarks:** Tara Bartley

10:50 - 11:00 **Key Note Speaker Opening Remarks**
Maura Buchanan
President of the RCN

11:00 - 11:40 **The LVAD Experience a Multidisciplinary Journey. The patient & the Team from QE Birmingham.**
Lisa Ketteridge & QE Hospital, Birmingham
Chairmen: Mr Leslie Hamilton, President & David Waters, Charge Nurse, John Radcliffe Hospital, Oxford

11:45 - 12:30 **Heart Research Presentation, Joint Session**
Moderators:

12:30 - 13:30 Lunch

13:30 - 15:00 **UK Activity Joint Session**

15:00 - 15:45 TEA & COFFEE

15:45 - 16:00 **Cancer Staging, the BTS guidelines and the impact on surgical decision making**
Eric Lim
Consultant Thoracic Surgeon, Royal Brompton Hospital & Senior Lecturer, National Heart Institute, Imperial College

16:00 - 16:15 **Paper 1 - (Abstract 29):**
Postoperative Pulmonary Complications following Thoracic Surgery: Comparison of Three Scoring Systems
P Agostini. Birmingham Heartlands Hospital, Birmingham

16:15 - 16:30 **Paper 2 (Abstract 30):**
When Should Salvage Intensive Care be Considered after Elective Thoracotomy?
P K Mishra. Glenfields Hospital, Leicester

16:30 - 16:45 **Paper 3 - (Abstract 31):**
Reduction in Intensive Care Admissions following Thoracic Surgery after The Introduction of Non Invasive Ventilation in a Regional Unit
P Agostini. Birmingham Heartlands Hospital, Birmingham

16:45 - 17:00 **Paper 4 – (Abstract 32):**
Usefulness of Chest Radiography Post Drain Removal In Cardiac Patients (Abstract 32)
M Eddama, Papworth Hospital, Cambridgeshire

17:00-18:30 **St Jude Lecture, Joint Session**

Tuesday 24th March

09:00 - 09:15 **The 18 Weeks Whole Pathway: National Priority Project**
Wendy Gray, Intern Director, Heart Improvement Programme, NHS Improvement

09:15 - 09:30 **Paper 5 – (Abstract 49):**
How the Aging Population Affects Indirect Costs & Resource Utilisation in Cardiac Surgery: A Single Centre Experience
D L Ngaage, Castle Hill Hospital, Hull

09:30 - 09:45 **Paper 6 – (Abstract 50):**
Clinical Audit on the Use of Temporary Epicardial Pacing Wires in Coronary Artery Bypass Surgery
M Tavakkoli-Hosseini , St Georges Hospital, London

09:45-10:00 **Paper 7 – (Abstract 51):**
Enhanced follow-up of Heart Valve Surgery Patients in a Specialist Nurse Led Clinic
J Cadet, The Royal Brompton Hospital, London.

10:00 - 10:45 TEA & COFFEE

10:45 - 11:15 **MNC and the impact on postgraduate career pathways**
Dr David Foster
Deputy Chief Nursing Officer, The Department of Health

11:15 - 11:45 **The Strategic Impact of Changing the Workforce**
Christina Pond
Executive Director of Standards & Qualification, Skills for Health

11:45 - 12:00 **Paper 8 – (Abstract 65):**
A Workforce for the Future; Exploring New Ways of Working
C Badger, University Hospitals Coventry & Warwickshire, Coventry

12:00 - 12:15 **Paper 9:**
The challenges of using rapid redesign methodology to improve cardiac surgical care.
M Scott, St Bartholomew's Hospital, London

12:15 - 12:30 **Discussion**
Moderators: Mr Jonathan Hyde, Consultant Cardiac Surgeon, Brighton Hospital & Miss Katy Gofton, Surgical Care Practitioner, South Tees Hospital, Middlesbrough

12:30 - 13:30 LUNCH

13:30 - 15:00 **NCEPOD, Joint Session**

15:00 - 15:45 TEA & COFFEE

15:45 - 16:05 **The National Patient Safety Project & Impact on Practice**
Dr Ann Keogh
Director for Patient Safety, Heartlands Hospital, Birmingham
Forum Papers
Moderators: Mr Michael Lewis, Consultant Cardiac Surgeon, Brighton & Mr Steve Bryant, Surgical Care Practitioner, Papworth, Cambridge

16:05 - 16:15 **Paper 10 – (Abstract 99):**
Endoscopic Vein Harvesting - Training Surcial Care Practitoner: A UK Experience
K Gofton, James Cook University Hospital, Middlesbrough

16:15 - 16:30 **Paper 11 – (Abstract 100):**
Reflections on the Surgical Care Practitioner Programme at the University of Teeside
N Barran, University Of South Tees, Middlesbrough

16:30 - 16:45 **Paper 12 - (Absract 101):**
Hybrid Theatres: Nicety Or Necessity?
A Marshall, The Liverpool Heart & Chest Hospital, Liverpool

16:45 - 17.00 **Paper 13:**
A Snapshot Of A New Cardiothoracic Centre: The Challenges
S Hodson, The Essex Cardiothoracic Centre, Basildon

17:00 **Closing Remarks:** Tara Bartley, SCTS Nurse Representative

17:00 - 18:00 **The Presidential Address**
Leslie Hamilton, Presdient, SCTS
2009 Annual Dinner, The De Vere Royal Bath Hotel, Bournemouth

Poster presentations will be displayed in the registration area.

DATABASE MANAGERS' DAY

Meyrick Suite

Chairmen: Tracey Smailes & Ben Bridgewater

Time:	*Title*	*Speaker*
08:45 – 10:00	**Discussion Forum Open forum for informal discussion**	Chairmen: Tracey Smailes & Phillip Kimberley
10:00 - 10:45	Tea/ Coffee	
10:45 - 11:00	**Welcome, introduction to session and Managing the Data Process**	Ben Bridgewater
11:00 - 11:15	**Update from the Data Committee**	James Roxburgh
11:15 - 11:35	**SCTS Lotus Notes – How to make the best of it**	David Cunningham
11:35 - 11:55	**Annual Data & Health Check**	Phillp Kimberley
11:55 - 12:15	**The DBM perspective – An example of practice from a unit's perspective**	Sheila Jamieson
12:15 - 12:30	**Database Managers Forum Update**	Tracey Smailes
12:30 - 13:30	Lunch	
	UK ACTIVITY:	
13.30 - 13.35	**Introduction from Ben Bridgewater**	Ben Bridgewater
13.35 - 13.45	**Thoracic data collection – past and future**	Jim McGuigan
13.45 - 14.10	**Cardiac Surgical Activity – trends of activity**	Ben Bridgewater
14.10 - 14.20	**UK cardiac and thoracic transplantation** – **Activity trends, quality assessment and responses**	John Dark
14.20 - 14.30	**Any data in congenital surgery? - Future rationalisation**	Leslie Hamilton
14.30 - 14.45	**Quality Indicators in the NHS**	Bruce Keogh
14.45 - 15.00	**Discussion**	

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ABSTRACTS

The Society would like to thank the following Session sponsors:

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ABSTRACTS

Monday 23 March

Abstracts 1-5
08:00 - 08:50 Meyrick Suite **Scientific Oral Presentations**

Abstracts 6-10
08:50 - 10:00 Tregonwell **Oral Presentations with Nurses Forum & ACSA**

Abstracts 11-16
10:45 - 11:45 Branksome Suite **Cardiac Oral Presentations**

Abstracts 17-22
10:45 - 11:45 Tregonwell **Mitral Valve Oral Presentations**

Abstracts 23-28
15:45 - 16:55 Meyrick Suite **Thoracic Surgery Presentations**

Abstracts 29-32
15:45 - 16:00 Purbeck Lounge **The Cardiothoracic Forum**

Abstracts 33-39
15:45 - 16:55 Tregonwell **Aortic Valve Oral Presentations**

Abstract 40
17:00 - 18:30 Meyrick Suite **Thoracic Surgery: Oral Presentations**

Tuesday 24 March

Abstracts 41-43
08:00 - 08:50 Meyrick Suite **Endocarditis: Oral Presentations & Discussion**

Abstracts 44-48
09:00 - 10:00 Meyrick Suite **Cardiac Revascularisation: Oral Presentations**

Abstracts 49-51
09:00 - 10:00 Purbeck Lounge **The Cardiothoracic Forum**

Abstracts 52-57
09:00 - 10:00 Durley Suite **Congenital Oral Presentations**

Abstracts 58-64
08:45 - 10:00 Tregonwell **Thoracic Surgery Oral Presentations**

Abstracts 66-72
10:45 - 12:30 Durley Suite **Congenital Cardiac Surgical Meeting**

Abstracts 73-77
10:45 - 11:45 Branksome Suite **The Aorta: Oral Presentations**

Abstracts 78-82
11:50 - 12:30 Branksome Suite **Cardiac Oral Presentations**

Abstracts 83-91
13:30 - 15:00 Meyrick Suite **Thoracic Papers**

Abstracts 92-98
15:45 - 16:55 Meyrick Suite **Cardiothoracic Transplantation: Oral Presentations**

Abstracts 99-102
15:45 - 17:00 Purbeck Lounge **The Cardiothoracic Forum**

Abstracts 103-109
15:45 - 17:00 Tregonwell **Thoracic Surgery: Case Presentations - How To Do It**

Abstracts 110-111
15:45 - 16:55 Branksome Suite **Carotid & Aortic Endovascular Stenting - When & Where?**

1. Ischaemia-reperfusion Induced Gene Expression in Rodent Lungs

Authors: C Ng[1]: S Wan[1] C Hui[1] Wan[1] A Ho[1] K Lau[1] A Darzi[2] M Underwood[1]

1 The Chinese University of Hong Kong, Hong Kong, Hong Kong; 2 Imperial College School of Medicine, London, United Kingdom

Objectives: Pulmonary dysfunction following lung ischaemia reperfusion (IR) is a well known phenomenon which may contribute to post cardiac surgical morbidity. The process is associated with pulmonary inflammatory response and cellular apoptosis. Early molecular mechanisms leading to such lung injury remain largely unknown. We examined the changes in pulmonary gene expression levels using oligonucleotide microarrays in an experimental model of rodent lung IR injury.

Methods: Sprague-Dawley rodent lungs (n=5 in each group) were anaesthetized and underwent controlled ventilation, with varying durations of warm ischaemia (60 and 90 mins) followed by short reperfusion period. The right middle lobe of the lung was then harvested. Gene expression changes in the lungs were analyzed by rodent DNA microarray chips, and RT-PCR performed to validate changes in gene expression.

Results: Significant expression changes were detected in over 80 genes following controlled lung ventilation, and more than 50 were upregulated more than 2-fold. Lung IR caused expression changes in over 50 additional genes, including many novel genes not previously associated with lung IR. Up-regulated genes that were identified included those associated with apoptosis, inflammation, adhesion molecules and cell cycle control.

Conclusions: Large number of significantly up and down regulated genes relating to cell metabolism, transcription, inflammation, and apoptosis were found following controlled ventilation and early lung IR, consistent with previous studies. Furthermore, novel genes related to lung injury were identified. These genetic signatures may provide new insights into the early molecular mechanisms of lung injury following IR and help refine therapeutic strategies to lessen pulmonary dysfunction following cardiac surgery.

2. Aortotomy & Cannulation Direction: Importance to Reduce Suture Stresses on Native Aortic Tissue

Authors: M Poullis[1] S White[2]

1 Liverpool Heart and Lung Hospital, Liverpool, United Kingdom; 2 Jacobs Engineering, Woking, United Kingdom

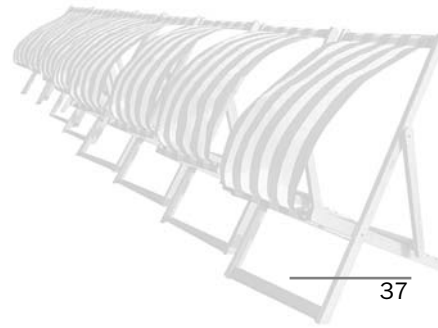
Objectives: To determine whether a horizontal or vertical aortotomy

Results: in the smallest stresses exerted on the native aortic wall tissue by the sutures on closure, following aortic valve replacement. In addition using the same model to determine the optimum direction for cannulation of the aorta, which will result in the smallest forces on the native aortic tissue for closure of the cannulation site.

Methods: The horizontal stress (Pr/2t), longitudinal stresses (Pr/t) were calculated utilising the aortic pressure P, radius (r) and aortic wall thickness (t). A thin walled pressure vessel model was used as r/t >5 (standard engineering assumption). These stresses were then utilised to calculate the stress created by each suture (3-0 Prolene 0.2 mm diameter, 4-0 Prolene 0.15 mm diameter) assuming they were placed d mm apart for aortotomy closure. The same model was utilised to analyse the direction of cannulation.

Results: A horizontal aortotomy results in a 50 % reduction in the force and stress induced by sutures in closing the aortotomy compared to a vertical incision. Aortic cannulation should be achieved with a circumferential incision, as the tissue force to close the aortic cannulation site will be reduced by 50 %.

Conclusions: A horizontal aortotomy results in less force and stress being exerted by the surgical sutures on the native aortic tissue. This has implications in old patients with poor aortic tissue quality undergoing aortic valve replacement. The direction of cannulation incision has implications for all patients undergoing cardiopulmonary bypass.



3. Reduced Negative Surface Charge & Glycocalyx on Arterial Endothelium in Diabetes

Authors: N Drury[1] N Howell[1] H Ashrafian[2] M Nassimizadeh[3] J Digby[2] A Wierzbicki[4] A Gonzalez[3] D Pagano[1] M Frenneaux[3] G Born[5]

1 University Hospital Birmingham, Birmingham, United Kingdom; 2 University of Oxford, Oxford, United Kingdom; 3 University of Birmingham, Birmingham, United Kingdom; 4 St Thomas Hospital, London, United Kingdom; 5 William Harvey Research Institute, London, United Kingdom

Objectives: The endothelial glycocalyx is a sialic acid-rich, negatively charged layer that influences transendothelial fluxes. In streptozotocin-diabetic rats, negative charge density on the endothelial surface is decreased. In addition, reducing the negative surface charge with neuraminidase accelerates the uptake of low-density lipoproteins into the arterial wall. Since these observations suggest an explanation for the accelerated atherosclerosis in diabetes, we compared the density of endothelial negative surface charge and plasma sialic acid in diabetic patients and controls.

Methods: Segments of distal left internal mammary artery were obtained from patients with type 2 diabetes mellitus and non-diabetics undergoing coronary artery bypass graft surgery. Negative charge density was assessed by the binding of cationised ferritin particles to the endothelium on electron microscopy and quantified by digital pixel count. Total plasma sialic acid levels were determined by ELISA.

Results: Tissue and plasma were obtained from 12 diabetics and 9 controls. In diabetics, the cationised ferritin-binding density was diminished by 52% compared to controls (100%±2.8 v 48%±2.5, $p<0.001$). The glycocalyx also appeared consistently thinner in diabetics. Total plasma sialic acid was 35% higher in diabetics than in controls (1.530±11 mmol/l v 1.131±14 mmol/l, $p<0.05$).

Conclusions: Type 2 diabetes mellitus is associated with a highly significant diminution of endothelial negative surface charge and an increase in plasma sialic acid; this may be explained by increased shedding of the glycocalyx. If, as in diabetic rats, decreased endothelial negative surface charge accelerates the flux of atherogenic low-density lipoproteins into the arterial wall, this may account for the accelerated atherosclerosis in diabetes.

4. Surgeon Specific Data: The Data Quality Challenge

Authors: U Dandekar; N Howell; R Bonser; T Graham; J Mascaro; S Rooney; I Wilson; V Barnett; D Pagano

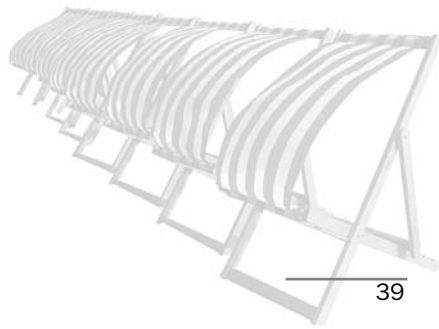
University Hospital Birmingham NHS Trust, Birmingham, United Kingdom

Objectives: Surgeon specific data is released into the public domain in a risk stratified form based upon calculation of the logistic EuroSCORE from locally collected data. In addition, this data is frequently used to audit clinical practice and for clinical research. However the quality of such information depends on the rigour with which data are collected and entered. In the USA it is an FDA requirement that clinical databases undergo data validation to "Assure Data Quality and Validity for Regulatory Decision Making," defining high-quality data as "strong enough to support Conclusions: and interpretations equivalent to those derived from error-free data". Currently there are no such guidelines in the UK. Due to the complexity of data entered into our surgical database we have initiated a process of data validation.

Methods: Prospectively collected data on 1468 consecutive patients who underwent conventional cardiac procedure from 1.8.05 - 1.8.07 was analysed. 818 patients underwent isolated coronary artery bypass grafting (CABG) and 650 had other cardiac operations. 340 (23.2%) patients were selected for validation based upon patients undergoing isolated CABG with EuroSCORE of ≥6, undergoing CABG and miscellaneous other procedures and all mortalities during this period. Case notes were collected and EuroSCORE variables validated.

Results: 68 out of 340 cases (20%) required amendment, 22 of these cases required amendment of more than one variable. Validation changed the mean logistic EuroSCORE from 12.69 to 10.98.

Conclusions: To ensure data integrity we need to establish a definition of data quality, with protocols linked to data management, clean-up, standards, monitoring and audit.



5. Adipokines Secreted by Epicardial Adipose Tissue in Patients undergoing Cardiac Surgery

Authors: K Karastergiou[1] N Ogston[2] J Kaski[1] V Mohamed-Ali[2] M Jahangiri[1]

1 St Georges University of London, London, United Kingdom; 2 University College London, London, United Kingdom

Objectives: To investigate whether obesity and/or CAD are associated with alterations in pro- and anti-inflammatory products of epicardial adipose tissue (adipokines), given that they may affect progression of coronary artery disease.

Methods: Fasting blood samples and epicardial and subcutaneous fat samples were collected from Caucasian, non-diabetic patients undergoing CABG (CAD group, n=29) or valve replacement (control group, n=17). Both groups were subdivided in lean and obese subgroups. Adipokine levels were determined in serum and supernatant of adipose tissue organ cultures (0.1 g/ml of media for 24h at 37 _/ 5% CO_2) by 2-site ELISAs.

Results: Epicardial adiponectin release was suppressed in the presence of both obesity and CAD. Thus, lean/control patients had significantly higher epicardial adiponectin [median (IQR) 111.5 (55.7-165.2) ng/g/h] compared to obese/control [40.2 (30.0-55.2) ng/g/h, p = 0.01], lean/CAD [66.0 (40.8-105.6) ng/g/h, p = 0.06] and obese/CAD patients [42.8 (30.1-73.2) ng/g/h, p = 0.002].

In a multivariate model with sex, age, CAD status and BMI as independent variables, BMI was the only independently significant predictor of epicardial adiponectin (p = 0.01). No additive effect of obesity and CAD was noted.

Epicardial adiponectin also correlated with HDL-cholesterol (r = 0.36, p = 0.03) and triglycerides (r = -0.356, p = 0.03). Subcutaneous and systemic adiponectin followed similar trends. Epicardial leptin and interleukin-6 were unrelated to obesity and CAD.

Conclusions: Release of adiponectin, an anti-inflammatory mediator, by epicardial fat is closely related to obesity and CAD. The consequences of this to the neighbouring myocardium and coronary arteries deserve further investigation.

6. Choice of Conduit for the Right Coronary System: An 8-year Analysis from The Radial Artery Patency & Clinical Outcomes Trial

Authors: P Hayward[1] I Hadinata[2] D Hare[1] S Moten[1] A Rosalion[1] S Seevanayagam[1] B Buxton[3] G Matalanis[1]

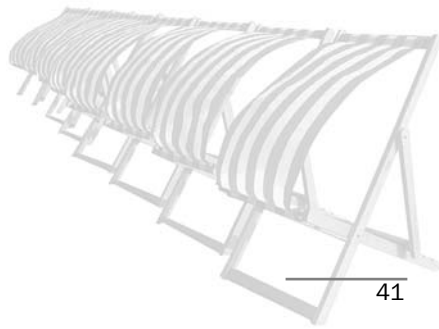
1 Austin Hospital, Melbourne, Australia; 2 The University of Melbourne, Melbourne, Australia; 3 Victorian Heart Centre, Melbourne, Australia

Objectives: Previous reports have supported use of bilateral internal thoracic arteries to revascularise the left coronary circulation. If this becomes standardised practice, the optimal conduit for the right coronary system, whose runoff is commonly smaller, remains to be established. We sought to compare the performances of the radial artery and saphenous vein when grafted to the right coronary territory during an 8-year period after primary coronary artery bypass surgery.

Methods: The Radial Artery Patency and Clinical Outcomes (RAPCO) study is a randomised controlled trial comparing radial artery, saphenous vein and free right internal thoracic artery. Of 621 patients enrolled, 420 patients received a radial artery or saphenous vein graft to the right coronary artery or its branches. The prospectively compiled database was used to establish patencies and clinical events among these patients.

Results: Absolute graft patencies to date of saphenous vein and radial artery were 81.0%(n=200, 95%CI 75.0%-85.9%) and 85.92%(n= 61, 75.7%-92.3%) at mean 5.2 and 5.7 years. Kaplan Meier estimates show no significant difference in angiographic outcomes (log rank p=0.24). Cardiac events in the right coronary territory occurred in 3.50%(1.57%-7.18%) versus 1.41%(<0.01%-8.29%) in saphenous vein and radial artery groups respectively (p= 0.44), and overall mortality was 12.31%(9.18%-16.30%) versus 6.72%(3.26%-12.89%) at mean 9.0 and 8.8 years respectively (p=0.23)

Conclusions: The radial artery patency is at least comparable to the saphenous vein when grafted to the right coronary artery or its branches. The paucity of clinical events in both grafts is notable. Either conduit may support internal thoracic arteries grafted to the left coronary system.



7. Enhanced Left Ventricular Mass Regression following Aortic Valve Replacement is Associated with Improved Long-term Survival: A 15-year Study

Authors: A Ali; A Patel; Y Abu-Omar; Z Ali; S Bleiziffer; D Freed; A Shiekh; T Athanasiou; J Pepper

Royal Brompton Hospital, London, United Kingdom

Objectives: Aortic valve replacement (AVR) is followed by regression of LVH. More complete resolution of LVH is suggested to be associated with superior clinical outcomes, however its impact on long-term survival following AVR has not been investigated.

Methods: Demographic, operative and clinical data were obtained retrospectively through casenote review. Transthoracic echocardiography was used to measure left ventricular mass (LVM) pre-operatively and at annual follow-up visits. Patients were grouped according to their reduction in LVM at late follow-up: Group A < 25 grams, Group B 25-150 grams and Group C > 150 grams.

Results: 211 patients underwent AVR between 1991 and 2001. Pre-operative LVM was 295±118 g in group A (n=63), 346±97 g in group B (n=75) and 539±175 g in group C (n=73), $p<0.001$. Mean time to last echocardiogram was 6.4±3.3 years. LVM at late follow-up was 351±160 g in group A, 265±95 g in group B and 270±90 g in group C, $p<0.001$. Transvalvular gradients at follow-up were significantly lower in group C (A: 21±21 mm Hg, B: 20±15 mm Hg, C: 14±11 mm Hg), p=0.008. 10 year actuarial survival was significantly greater in patients with enhanced LVM regression when compared with the log-rank test (A: 49%±7, B: 66%±6, C: 71%±6), p=0.03. LVM reduction > 150 grams was an independent predictor of long-term survival on multivariate analysis (p=0.03).

Conclusions: Enhanced LVM regression at late follow-up in patients who have undergone AVR is associated with improved long-term survival. Strategies to optimize post-operative LVM regression should be considered in view of potential prognostic benefit.

8. Blood Conservation with a Normovolaemic Circuit for Coronary Artery Bypass Grafts

Authors: S Bazerbashi; R Richards; R Nensey; G Webb; M Bennett; C Lloyd

South West Cardiothoracic Centre Derriford Hospital, Plymouth, United Kingdom

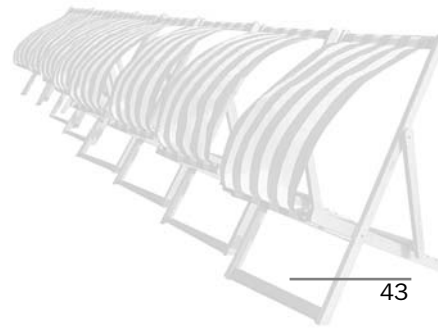
Objectives: We aimed to investigate the effect of haematocrit conservation using a Minimal Extracorporeal Cardiopulmonary bypass Circuit (MECC) with normovolaemic technique, on blood transfusion following coronary artery bypass grafts.

Methods: We retrospectively compared 164 patients undergoing surgery using conventional cardiopulmonary bypass (CPB) - 83 patients or MECC - 81 patients. All patients in both groups had 3 bypass grafts performed under a single surgeon. Normovolaemia was achieved in the MECC group using retrograde autologous priming (RAP). Postoperative transfusion trigger was haemoglobin

Results: Both groups were comparable in logistic EuroSCORE, cross-clamp and bypass times. Aprotinin usage was significantly greater in the CPB than MECC group (51 vs 17 $p<0.05$) due to the drug being withdrawn from clinical use. Haemoglobin levels were comparable preoperatively (13.8 vs 13.7g/dl). There was significantly greater volume of circuit prime in the CPB group (1588±376 vs 395±151 mls). During bypass haematocrit levels were better preserved in the MECC group (32.4% vs 26.4%). Haemoglobin levels were significantly higher in the MECC group in intensive care (see table) despite increased pericardial drainage in the MECC group. These differences were not significant at 12 and 24Hrs. Significantly less patients were transfused in the MECC group (30.1% vs 43.2%). Postoperative renal function showed no difference between groups. There were no deaths in the MECC group and 1 in the CPB group (NS).

Conclusions: The MECC system using RAP can produce a near normovolaemic state during cardiopulmonary bypass, resulting in a higher haematocrit during bypass and subsequent reduction in the postoperative blood transfusion requirements.

	Bypass Hb (g/dl)	ITU Hb (g/dl)	12 Hr Hb (g/dl)	24Hr Hb (g/dl)	Drainage (ml)
MECC	10.8	10.9	9.9	9.9	1121
CPB	8.8	9.2	9.8	9.9	726
p-value	$p<0.05$	$p<0.05$	NS	NS	$p<0.05$



9. Social Deprivation Reduced the Prognostic Benefits of Cardiac Surgery: An Analysis of 44,902 Patients from 5 Hospitals over 10 Years

Authors: N Howell[1] B Bridgewater[2] B Fabri[3] J Au[4] D Keenan[5] B Keogh[6] D Pagano[1]

1 University Hospital Birmingham NHS FT, Birmingham, United Kingdom; 2 South Manchester University Hospital FT, Manchester, United Kingdom; 3 Liverpool Heart and Chest Hospitals, Liverpool, United Kingdom; 4Blackpool Victoria Hospital, Blackpool, United Kingdom; 5Manchester Royal Infirmary, Manchester, United Kingdom; 6Department of Health, London, United Kingdom

Objectives: Cardiac surgery offers a number of operations known to carry prognostic benefit. The aim of this study was to assess the effects of social deprivation on survival following cardiac surgery and to understand the influence of potentially modifiable risk factors in these patients.

Methods: We reviewed prospectively collected data on 44902 patients undergoing adult cardiac surgery between 1997 and 2007 in Birmingham and North West England. Social deprivation was calculated using the census based 2001 Carstairs scores. All cause in-hospital mortality was obtained from the Office of National Statistics, UK. Prognostic models were developed to examine the additional effect of social deprivation on these endpoints.

Results: In-hospital mortality was 3.25% and mid-term follow up (median 1887; range 1180-2725 days) mortality was 12.4%. Multivariable analysis identified social deprivation as an independent predictor of mid-term mortality (HR 1.024; 95%CI 1.015-1.033; p<0.0001). Smoking (p<0.0001), body mass index (p<0.0001) and diabetes (p<0.0001) were associated with social deprivation. Smoking at the time of surgery (HR1.294 95%CI 1.91-1.41 p<0.0001), and diabetes (HR 1.305 95%CI 1.217-1.399 p<0.0001) and extremes of BMI (p<0.0001) were independent predictors of mid-term mortality. Adjustment for smoking, BMI and diabetes reduced but did not eliminate the effects of social deprivation on mid-term mortality (HR 1.017 95%CI 1.007-10.026; p=0.0004).

Conclusions: Smoking, extremes of BMI and diabetes, which are potentially modifiable risk factors associated with social deprivation are responsible for a significant reduction in survival following surgery, but even after adjusting for these variables social deprivation remains a significant independent predictor of increased mortality risk.

10. Risks & Benefits of Aprotinin Use in First Time CABG

Authors: B Nguyen[1] K Chan[1] E Jaaly[1] R George[1] P Punjabi[1]

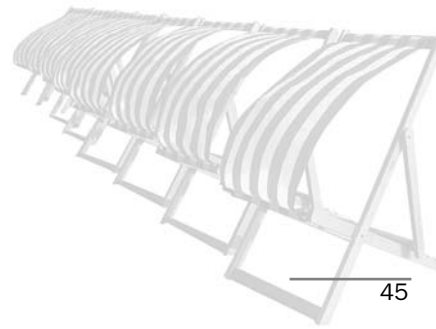
1 Imperial College Healthcare NHS Trust Hammersmith Hospital, London, United Kingdom; 2 Imperial College, London, United Kingdom

Objectives: Aprotinin is commonly used in cardiac surgery in patients at higher risk of bleeding complications. However, there have been recent concerns about its safety. We analysed our experience with the use of aprotinin in patients undergoing first time isolated CABG to determine its risk-benefit profile.

Methods: Data analysis, including univariate and multivariate analysis, was performed on all patients who underwent first time isolated CABG at our institution between January 2000 and December 2007.

Results: There were 3461 patients, mean age 65 years, 30-day mortality 2.8%, and mean Euroscore 3.67. Aprotinin was used in 875 patients (25%). In multivariate analysis, the use of high dose aprotinin was associated with a significantly increased risk of 30-day mortality (OR 2.02, CI 1.17-3.49), while low dose aprotinin was associated with a slight increase in mortality which did not reach statistical significance (OR 1.37, CI 0.46-3.95). Other significant risk factors for mortality were poor LV function (OR 4.68, CI 2.41-9.10, and emergency surgery (OR 3.35, CI 1.42-7.87). High dose aprotinin was also associated with significantly reduced blood transfusion (regression coefficient -0.45, CI -0.75 to -0.15), and a greater impairment in renal function postoperatively: mean GFR change -8.11 ± 15.26 ml/min ($p<0.0005$).

Conclusions: The use of high dose aprotinin resulted in significantly reduced blood transfusion requirements in patients undergoing first time isolated CABG but was associated with a significantly increased risk of 30-day mortality and renal impairment.



11. Predicting Minimum Haematocrit on Bypass

Authors: M Poullis; K Palmer; I Johnson

Liverpool heart and Chest Hospital, Liverpool, United Kingdom

Objectives: To develop a handheld program for the PALM and PocketPC to predict which patients would develop a low haematocrit during cardiopulmonary bypass (CPB), secondary to their size and pre op haemoglobin. Low haematocrit on bypass is associated with increased mortality post cardiac surgery.

Methods: A program written in Excel to be platform independent. Variables included in the mathematical model include pre op weight (to allow blood volume calculation), haemoglobin, CPB prime volume, and volume added by anaesthetist (default 500mL but adjustable).

Results: Assuming constant red cell mass, the lowest haematocrit on bypass can be calculated. The maximum allowable blood loss prior to bypass can be calculated that would result in a haematocrit of 18, 21 or 24 % depending on your patient directed target. The minimum haematocrit depends on patient weight in addition to pre operative haemoglobin level. A 40 kg patient with a pre op haemoglobin of 12 g/dl will have a predicted lowest haematocrit of 21%, not allowing any surgical blood loss, however a 45 kg with the same haemoglobin will have a predicted lowest haematocrit of 22%, and could loose up to 350 mL before the haematocrit dropped to 21%.

Conclusions: More accurate pre operative assessment of small, borderline anaemic patients may allow higher haematocrits on bypass to be achieved without unnecessary blood transfusion. Patient directed management via this prediction tool may result in the patient being done off pump if for isolated CABG, or a mini circuit being used, or indeed cancelled for further investigation or treatment.

12. Importance of Routine Measurement of Brain Natriuretic Peptide for Risk Stratification in Coronary Artery Bypass Surgery

Authors: S Attaran; R Sherwood; J Desai; P Mhandu; L John; A El-Gamel

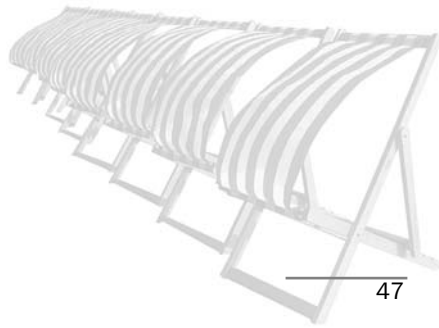
Kings College Hospital, London, United Kingdom

Objectives: Brain Natriuretic Peptide (BNP) is a cardiac neurohormone secreted in response to myocardial stress. BNP causes natriuresis as well as vasodilatation. A significant correlation between high BNP levels and worse short-term and long-term outcomes of post-myocardial infarction has previously been reported. This study analyses the correlation of BNP levels with the outcome of coronary artery bypass graft.

Methods: Over a period of 18 months, 100 patients undergoing first time coronary artery bypass graft were enrolled in our study. BNP was measured prior to the operation. Comparative descriptive tests and a Spearman rank test were used to analyse the correlation between the blood BNP level and preoperative characteristics, as well as postoperative complications. A p value less than 0.05 was considered statistically significant.

Results: Preoperative renal impairment, peripheral vascular disease and low ejection fraction were associated with higher BNP concentration. Moreover, EuroSCORE showed a statistically significant correlation with preoperative BNP concentration ($p<0.001$). A higher BNP level predicted inotropic requirement, renal impairment, longer ventilation time, and longer ICU and hospital stay ($p<0.05$), but high BNP did not predict development of atrial fibrillation or stroke.

Conclusions: Measuring BNP is a simple and inexpensive procedure that can provide valuable information on the likelihood of a good outcome of coronary artery bypass graft, and it should be routinely measured along with the other preoperative tests.



13. Pre-operative Neutrophil Response as a Predictive Marker of Clinical Outcome following Open Heart Surgery & the Impact of Leukocyte Filtration

Authors: A Soo[1] B Maher[2] W Watson[2] A Wood[1]

1 Prof Eoin O Malley National Centre for Cardiothoracic Surgery Mater Misericordiae University Hospital, Dublin, Ireland; 2 UCD School of Medicine and Medical Sciences Conway Institute, Dublin, Ireland

Objectives: Open heart surgery is associated with massive systemic inflammatory response. Neutrophils, are the main mediator of this response. We hypothesised that the degree of neutrophil activation and inflammatory response to open heart surgery varies individually and correlates with clinical outcome. The aim of this study was to determine if individual clinical outcome can be predicted pre-operatively through assessment of in-vitro stimulated neutrophil response. Following that, the effects of neutrophil depletion through leukocyte filters are examined.

Methods: Neutrophil response was assessed pre-operatively (n=40) through change in neutrophil adhesion molecule (CD11b, CD62L and PSGL-1) expression before and after in-vitro stimulation with PMA (1ng/ml), LPS (1μg/ml) and fMLP (1ng/ml). Stimulated neutrophil response was then correlated with postoperative clinical outcome. Patients are then randomised to leukocyte filtration (LD) (n=20) and control group (n=20) and the effect of leukocyte filtration on neutrophil response and clinical outcome studied.

Results: Individual variation of in-vitro stimulated neutrophil response was demonstrated. Significant correlation were shown between neutrophil response with maximum serum creatinine change, CKMB-fraction, adrenaline requirement, noradrenaline requirement, duration of adrenaline required and time to extubation. White cell count and percentage neutrophils is lower in the LD group (p=0.05). CD11b expression (p=0.005) and PSGL-1 expression (p=0.043) across leukocyte filters are increased. However, no significant difference was detected in clinical outcome between LD and control group.

Conclusions: Pre-operative neutrophil response to in-vitro stimuli can predict clinical outcome of open heart surgery. However, leukocyte filtration did not offer significant benefit in clinical outcome in our study.

14. Oxygen Extraction & Not Haematocrit is a Predictor of the Individual Response to Red Blood Cell Transfusion during Cardiopulmonary Bypass

Authors: R Rajnish; M Thomas; G Angelini; G Murphy

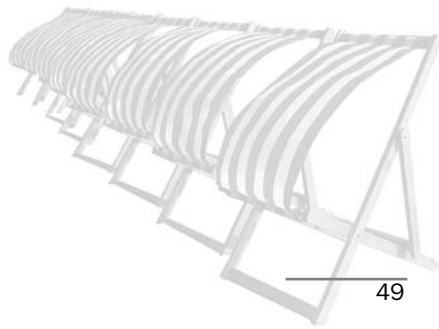
Bristol Heart Institute, Bristol, United Kingdom

Objectives: The primary aim of red blood cell (RBC) transfusion is to reverse or prevent tissue ischaemia attributed to inadequate oxygen delivery in the presence of anaemia. The aim of this study was to determine the effects of a transfusion protocol based on a predefined haematocrit threshold on oxygen utilisation during cardiopulmonary bypass (CPB)

Methods: Data on 338 consecutive patients undergoing CPB was collected prospectively between May and October 2007. The transfusion threshold during CPB was a haematocrit of 21. The relationships between RBC transfusion and oxygen supply and utilisation were analysed.

Results: Transfused patients (68/338) had significantly lower haematocrit values (MANOVA $p<0.0001$) and calculated oxygen delivery (MANOVA $p=0.001$) compared to non transfused patients (270/338) during surgery. Transfused patients had higher oxygen extraction ratios (OER) (MANOVA $p=0.002$), lower mixed venous oxygen saturations (MVO2) (MANOVA $p=0.001$) and higher serum lactate levels (MANOVA $p=0.001$) after adjustment for potential confounders. Paired analysis of pre and post transfusion values demonstrated that RBC transfusion was associated with a paradoxical increase in OER (mean difference 3.0% (95% confidence intervals 0.9-5.2), $p=0.001$) and a reduction in MVO2 (-3.6% (-1.5- -5.7), $p=0.008$). A different response was noted in patients where oxygen extraction values were high however. RBC transfusion in patients with OER> 22% or MVO2< 78% was associated with a reduction in OER and an increase in MVO2.

Conclusions: RBC transfusion in response to a predefined haematocrit threshold at best fails to prevent tissue hypoxia during CPB. Measures of tissue oxygen extraction many be more sensitive indicators of the need for transfusion.



15. Comparison of Minimal versus Conventional Extracorporeal Circulation on Neurocognitive Function after Coronary Artery Bypass Grafting: A Prospective Randomized Pilot Study

Authors: H Argiriadou; K Anastasiadis; G Karapanagiotidis; P Antonitsis; C Foroulis; K Rammos; C Papakonstantinou

AHEPA University Hospital, Thessaloniki, Greece

Objectives: Neurocognitive impairment can be a debilitating complication after coronary artery bypass graft (CABG) surgery. The aim of this pilot study is to compare the effect of minimal (MECC) versus conventional extracorporeal circulation (CECC) on cerebral oxygenation and neurocognitive function after elective CABG procedures.

Methods: Forty patients who underwent elective CABG were prospectively randomized on either minimal (20 patients) or conventional (20 patients) cardiopulmonary bypass (CPB). Cerebral regional oxygen saturation (rSO2) was continuously monitored with near-infrared spectroscopy. Neurocognitive assessment was performed before surgery and postoperatively during hospitalization with 'Stroop colour word' tests and 'Digit span Forward and Backward' tests.

Results: Patient characteristics, distribution of EuroSCORE risk and baseline rSO2 were similar in both groups. Severity of coronary artery disease, extent of revascularization and CPB times were also comparable in both groups. There was no mortality and no difference in overall morbidity. Patients operated on MECC demonstrated significantly lower rate of cerebral desaturation during the CPB period compared to those operated on CECC (7-11% vs. 16-23%, $p<0.05$). A significantly lower decline in cognitive function was observed in patients operated on MECC as opposed to CECC as assessed by 'Stroop 1,2,3' tests (15% vs. 56%, $p<0.05$), 'Digit span Forward' test (12.5% vs. 25%, $p<0.05$) and 'Digit span Backward' test (25% vs. 20%, $p<0.05$).

Conclusions: MECC is a promising perfusion technology, which preserves cerebral tissue oxygenation and attenuates neurocognitive impairment after myocardial revascularization procedures.

16. Polarised Cardioplegia Concept: How Far from Clinical Application?

Authors: A Chambers[1] H Fallouh[2] J Kentish[2] D Chambers[1]

1 St Thomas Hospital, London, United Kingdom; 2 Kings College London, London, United Kingdom

Objectives: Hyperkalaemia, the current gold standard cardioplegia, induces depolarised arrest but has detrimental effects such as Na^+ and Ca^{+2} influx and maintained energy utilisation. A polarising cardioplegia, lidocaine (Na^+ channel blocker) and adenosine [LAC] gave superior protection over St Thomas' Hospital Cardioplegia [STC]. However, the narrow safety margin and the slow liver clearance of lidocaine may explain its maintained experimental status. In contrast, esmolol (an ultra-short-acting-ß-blocker) blocks the Na+ channels at high concentrations and has been used safely at high doses in cardiac surgery, due to its short half life and rapid breakdown by red cells. A combination of esmolol and adenosine [EAC] may offer a clinically safe and effective polarised arresting cardioplegia

Methods: Patch clamp studies in isolated rat ventricular myocytes were performed to establish the dose-response relationship of esmolol's effect on Na+ channels' function.

Langendorff-perfused rat hearts were used to compare STC, LAC and EAC. Function was studied by the measurement of left ventricular developed pressure normalised to baseline (LVDP).

ANOVA and post-hoc (Bonferonni) tests were used for statistical analysis (n=6/group).

Results: Esmolol inhibited the Na^+ channels at IC50 of 0.15±0.01mM.

Dose-response relationship studies showed that the use of esmolol at 0.6mM and adenosine at 0.25mM was the optimal combination for (EAC).

Extended (4hours) ischaemia with multiple infusions (every 30minutes) showed statistically significant improvement in LVDP for EAC over STC with comparative LVDP recovery for EAC and LAC (Table).

Conclusions: Esmolol and adenosine may form the basis of a clinically relevant polarised cardioplegic solution with improved cardioprotection over St. Thomas' Hospital cardioplegia.

LVDP% (Mean±SEM)

Recovery time	10 min	20 min	30 min	40 min	50 min	60 min
STC	50±13	57±7	56±6	54±5	54±6	52±6
EAC	64±4	68±3	73±3*	71±4*	71±4*	69±3*
LAC	75±4	69±3	66±3	63±3	62±3	59±3
*(p<0.05)		*(vs.STC)	*(vs.STC)	*(vs.STC)	*(vs.STC)	

17. Minimally Invasive Video-assisted Mitral Valve Surgery: A Twelve-year Two-center Experience in 1178 Patients

Authors: P Modi[1] E Rodriguez[1] W Hargrove[2] A Hassan[1] W Szeto[2] W Chitwood Jr[1]

1 East Carolina Heart Institute, Greenville, NC, United States; 2 Penn Presbyterian Medical Center, Philadelphia, PA, United States

Objectives: To review a two-institution experience with minimally invasive mitral valve surgery (MIMVS) over a 12-year period.

Methods: We prospectively collected data on all patients undergoing MIMVS through a right minithoracotomy between May 1996 and May 2008.

Results: A total of 1178 patients were included with 941 (79.9%) undergoing repair (MVP) and 237 (20.1%) undergoing replacement (MVR). The mean age was 61.1±13.9 years, mean ejection fraction was 52.8±12.1% and 221 patients (18.8%) were reoperations. Operative mortalities for MVP and MVR were 2.1% and 4.6%, respectively. Repair techniques included annuloplasty (98.2%), leaflet resection (40.7%), sliding plasty (21.0%), chordal transfer (9.0%) and neochordae placement (7.4%), with no or trivial residual MR in over 97% of patients. In MVR patients, a bioprosthesis was placed in 101 patients (42.6%) and a mechanical valve in 136 (57.4%). Concomitant procedures included atrial fibrillation (AF) ablation (22.5%), tricuspid valve surgery (5.4%) and atrial septal defect closure (9.4%). Nineteen patients (1.6%) experienced intra-operative conversion to sternotomy. Twenty-two patients (1.9%) underwent a reoperation at a mean of 732±1014 days. Independent predictors of in-hospital mortality included: NYHA III/IV (odds ratio (OR) 3.62), diabetes (OR 2.81), bypass time >180 minutes (OR 2.63), preoperative AF (OR 2.53) and age >70 years (OR 2.29). Prior cardiac surgery was not a significant predictor of mortality.

Conclusions: Video-assisted mitral valve surgery is safe with high rates of repair, low morbidity and excellent outcomes. Reoperation after previous median sternotomy is not an independent predictor of mortality. Operative risk is increased if surgery is delayed until the onset of atrial fibrillation.

18. Right Ventricular Dysfunction in Rheumatic Valvular Heart Disease: Indices, Incidence & Prognosis

Authors: S Pande; S Agarwal; S Kumar; V Agarwal

Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India

Objectives: Less is known about the relations between different indices of right ventricular dysfunction (RV), their effect on outcome and prognostication based on pro BNP estimation.

Methods: 70 Patients of mitral stenosis underwent mitral valve replacement between April 2007 and April 2008 were included in the study. They were segregated by right ventricular systolic pressure (RVSP), into <40 mm Hg (group I n=16) and >40 mm Hg (group II n=54).

Results: Echocardiographic parameters are discussed in table1. RV dysfunction parameters of Tricuspid Annular Plane Excursion (TAPSE), Myocardial Performance Index (MPI), RV descent and Tricuspid valve annular shortening (TVshortening) were altered in both the groups, TAPSE (mm) [I, 1.3 (0.68-1.97), II, 1.23 (0.34-2.7], RV descent (mm) [I, 0.85 (0.10-1.95), II, 0.91 (0.04-2.29)], MPI [I, 1.96(1.17-6.17), II, 2.05(0.72-6.04)], TV shortening (%) [I, 17% (4-34), II, 16.5% (2-36)], and there was no significant change in these indices in postoperative period. A strong correlation was noticed between TAPSE and MPI (r=0.712, p=0.003) and RVSP and mitral valve area (r=-0.349, p=0.005). Regression analysis for outcome revealed TV shortening as the only significant factor (p=0.03) in this cohort of patients with positive prediction for complication of 42% and no complication by 78%. ROC of TV shortening and adverse outcome has area under curve of 0.739 (p=0.003). TV shortening of >11% was observed with better outcome (p=0.01).

Conclusions: RV dysfunction was observed in all the cases of rheumatic valvular heart disease irrespective of RVSP. TV shortening of >11% was associated with better outcome in this group of patients.

Echocardiographic Parameters

	Group I	n=16		Group II	n=54	
Parameter	Preoperative	Postoperative	p value	preoprative	postoperative	p value
TRjet area/RAA	0.24(0.07-0.63)	0.13(0-0.37)	1.0	0.22(0-0.61)	0.18(0-0.42	0.9
TAPSE mm.	1.3(0.68-1.97)	0.91(0.12-1.53)	1.0	1.23(0.34-2.7)	0.98(0.05-2.32)	0.1
RV descent mm.	0.85(0.10-1.95)	0.82(0.33-2.20)	0.8	0.91(0.04-2.29)	0.75(0.15-2.70)	0.9
TV shortening %	17(4-34)	19.5(8-22)	0.8	16.5(2-36)	13(2-33)	0.3
MPI	1.96(1.17-6.17)	1.74(0.92-2.31)	1.0	2.05(0.72-6.04)	1.66(0.88-3.23)	0.5
LVES mm	37(26-60)	35(20-62)	0.6	31(16-45)	32(22-50)	0.1
LVEDD mm	54(43-73)	48(41-69)	0.06	47.5(28-69)	46(39-60)	0.3
LVEF %	55(40-71)	55(25-67)	0.2	60(40-76)	55(20-60)	0.005
RVSP mmHg	32.5(22-39)	32.5(30-59)	1.0	60(40-115)	38(26-76)	0.0001
LA mm	52(31-97)	45(29-66)	0.06	53(37-120)	42(20-80)	0.001
Pro BNP fmol.	69(11-610)	24(7-260)	0.002	65(9-640)	21(6-120)	0.0001
MVA mm2	0.95(0.60-2.0)			0.80(0.4-2.10)		
Hospital Stay days	9(6-20)			9(5-20)		

19. Are We Repairing Enough Mitral Valves?

Authors: M Jenkins; J Roxburgh; C Blauth

Guys and St Thomas NHS Trust, London, United Kingdom

Objectives: Mitral valve repair is now the procedure of choice for mitral regurgitation, but the optimum repair rate remains undefined. We sought to identify determinants of repair in a single institution.

Methods: Contemporary Tomcat adult cardiac surgery database records were reviewed for the 8 calendar years 2000 to 2007 to identify patients who had surgical correction of mitral regurgitation, together with operative findings, procedure details, and hospital mortality.

Results: Of 1089 patients who had mitral valve surgery during the period of study, 805 (73%) had pure regurgitation. The overall repair rate for these was 55% (439/805). The repair group had a mean additive EuroSCORE of 6.2 and a hospital mortality of 3.2%, the corresponding figures for the replacement group were 8.0 and 7.7%.

The distribution of valve pathologies and the repair rates for each are shown in the Table below.

Individual surgeon repair rates for degenerative pathology showed considerable variability between the 9 surgeons. The two surgeons who between them performed 66% of the operations had repair rates of 93% and 71%. The other surgeons had repair rates between 0% and 63%.

Over the 8 year period the Unit repair rate for degenerative pathology remained fairly constant as did individual surgeon repair rates, except for one surgeon whose rate increased progressively from 0% to 57%.

Conclusions: High mitral repair rates are possible if surgeons are willing to achieve them.

Table

	Distribution of Valve Pathologies (%)	Repair Rate (%)
Degenerative	63	67
Infective	12	24
Ischaemic	11	62
Rheumatic	8.0	7.8
Other	7.0	30

20. Tricuspid Valve Repair: Tips & Pitfalls

Authors: J Chikwe; J Castillo; A Anyanwu; D Adams

Mount Sinai Medical Center, New York, United States

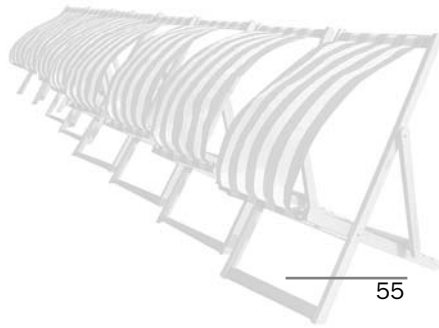
Objectives: Surgical repair of secondary tricuspid valve regurgitation remains controversial in the setting of concomitant mitral valve disease, and challenging in the context of isolated tricuspid re-operations or primary prolapse. The aim of this video is to provide an overview of a range of lesions, and potential techniques applicable to secondary tricuspid regurgitation, primary prolapse and re-operation for isolated tricuspid regurgitation.

Methods: Techniques to optimize tricuspid valve exposure in both primary and re-operative cases and indications for beating heart tricuspid repair are discussed. Our systematic approach to intra-operative tricuspid valve assessment, ring sizing and selection are shown.

Specific cases will demonstrate annular reduction for posterior annular dilatation vs. annular remodelling in cases with more advanced annular and/or ventricular dilatation. Other techniques useful in the setting of primary prolapse including chordal transfer, Gore-Tex neo-chordoplasty and commissural edge-to-edge repair will be shown.

Results: Last year we performed over 150 successful tricuspid valve repairs for secondary tricuspid regurgitation using the strategies outlined in this video. Isolated re-operative tricuspid valve surgery and tricuspid leaflet prolapse were less common scenarios.

Conclusions: Tricuspid regurgitation may be dealt with effectively using the demonstrated techniques, which offer a reproducible and reliable surgical approach to tricuspid regurgitation in a variety of settings.



21. Atrial Fibrillation Cryo-ablation with Mitral Valve Surgery in Patients with Continuous Atrial Fibrillation

Authors: S Bhudia; E Beran; R Patel

University Hospital Coventry and Warwickshire, Coventry, United Kingdom

Objectives: To 1) demonstrate efficacy of modified Cox-maze procedure in patients with continuous atrial fibrillation (AF), and 2) report 72-hour electrocardiogram monitoring results.

Methods: From 01/02 to 08/06, 128 (54% male, mean age 68.5±10.9 years) patients with AF underwent mitral valve surgery and modified Cox-Maze procedure (5 standard left atrial lesions and right isthmus lesion) using cryo-ablation. Indications included continuous AF (>1 year) in 82 (64%), continuous AF (<1 year) in 21 (16%) and intermittent AF in 25 (20%) patients. Thirty (37%) patients with continuous AF (>1 year) underwent 72-hour electrocardiogram monitoring at least 6 months following surgery. All the other patients were seen at least once at 6-8 weeks postoperatively and rhythm status documented.

Results: Hospital mortality was 6% (8/128). Further 6% (8/125) died in the follow-up period. At follow-up, sinus rhythm was documented as follows: preoperative continuous AF (>1 year) 70/82 (85%), continuous AF (<1 year) 19/21 (90%), and intermittent AF 23/25 (92%). Twenty one (70%) patients who underwent 72-hour electrocardiogram monitoring were in continuous sinus rhythm.

Conclusions: Modified Cox-Maze procedure using cryo-ablation can be performed routinely on patients with AF undergoing mitral valve surgery. This technique has been shown to have excellent results in patients with long-standing AF.

22. Port Access Mitral Valve Repair. The Middlesbrough Experience

Authors: A Bose; K Khan; S Hunter

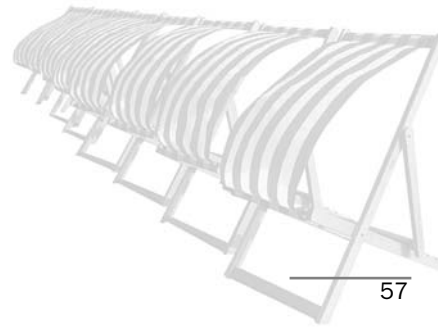
The James Cook University Hospital, Middlesbrough, United Kingdom

Objectives: To report data from the Middlesbrough Port Access mitral valve repair programme.

Methods: Data was collected prospectively on 98 patients undergoing port access mitral valve repair between 2003 and 2008 performed by a single surgeon. A small right thoracotomy, cardiopulmonary bypass with bi-caval venous cannulation, femoral arterial return and aortic occlusion with endo-clamp were used. Transoesophageal echocardiography was used to guide the cannulae, endo-clamp and assess mitral valve.

Results: Dataset was complete. Mitral valve repair n=98. Median age was 63 years (27-86). 8 patients had undergone previous cardiac surgery. The mean EuroSCORE was 4.5 (±3). Mean CPB and Aortic occlusion times were 155(±36) and 107(±27) min respectively. There were 8 conversions to sternotomy. Median time to extubation was 6.6 hrs (2-3072). 2 patients required re-opening. Complications recorded were aortic dissection in 2, abdominal bleeding in 2, CVA in 3 and acute renal failure in 2 patients. There were six deaths in total, five being in the first two years of the programme. Median ITU and hospital stay were 1(0-128) and 6.5 (1-128) days respectively for the whole group (1 and 12 days for patients >70 yrs of age). Repeat surgery was required in 2%.

Conclusions: Port Access surgery is technically demanding and requires a multidisciplinary team approach. With experience and better patient selection the results have improved with excellent outcomes. The procedure confers a quick recovery, a short ITU and hospital stay with excellent durability of valve repair.



23. VATS Lobectomy for Early Lung Cancer: The Southampton Experience

Authors: K Amer; A Khan; H Vohra

Southampton General Hospital, Southampton, United Kingdom

Objectives: Despite proven safety and long term results of VATS lobectomy the technique is not widely adopted in the UK. We set out to establish a VATS lobectomy programme against financial and time constraints to meet cancer waiting times.

Methods: Patients were suitable for VATS lobectomy by individual hilar structures dissection without rib spreading if on CT the lung lesion was T1-2, N0-1 and the CT/PET showed absence of N2 or M1 lesions. Systematic mediastinal nodal dissection was added in the last 26 cases.

Results: Between April 2005 and November 2008, 100 patients were considered for VATS lobectomy. 39 were males and 61 females. Mean age was 66.2 ±12.6 (range 42.8-85.5). On initial assessment 3 were unsuitable, 87 proceeded to VATS resection (83 lobectomies, 2 bilobectomies and 2 segmentectomies). There were 13 convertions to open thoracotomy. The median operative time was 3:23 ± 00:59 (h:mm). The median length of hospital stay was 4.0±4.0 (range 1-20 days). There was one in-hospital and 2 out of hospital <30 days deaths (3%). Complications included: air leak >7 days (7), ITU admission (6), bronchopleural fistula (2) and bleeding requiring exploration (2). The median follow-up was 12.25 months (range 0.06-42 months). The actuarial survival of all stages of primary lung cancer at 1, 2 and 3 years was 90.2±3.5%, 84.1±5.3% and 70.1±13.5%, respectively.

Conclusions: Despite a high rate of postoperative events VATS lobectomy is safe and should be considered first choice for early lung cancer. Addition of systematic nodal dissection allows accurate staging and appropriate referral for adjuvant chemotherapy.

24. Learning To Perform Vats Lobectomy: Assisting During A Consultant's Learning Curve Shortens A Trainee's Learning Curve

Authors: A Khan; K Amer

Southampton University Hospital NHS Trust, Southampton, United Kingdom

Objectives: We set to compare the learning curves of a consultant and that of his registrar for VATS lobectomies by comparing operative time and outcome.

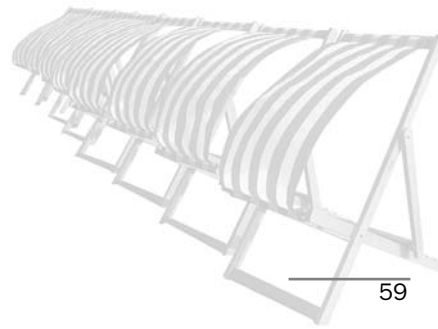
Methods: Operative time as a surrogate measure of learning curve was compared between a consultant surgeon freshly starting a VATS lobectomy programme, and that of his SpR who regularly assisted him since the start of the programme. Three cohorts of patients were compared. Group1: the first 20 consecutive patients performed by the consultant, SpR assisting. Group2: the last 20 consecutive patients performed by consultant after attaining a reasonable confidence level (60 cases). Group3: the last 20 patients of the series, consecutive cohort performed by the SpR, consultant assisting/independent. Patient selection criteria were not changed throughout the series, eliminating any bias in patient selection for training.

Results: The learning curve of the registrar was matched to the consultant's current curve in terms of operative time and way below the consultant's initial learning curve. There was no difference in outcome between the three groups. Group1 had a conversion rate of six, Group2: two, Group 3: one. There was one death >30days in group 1, one in group 2 and none in group 3.

Conclusions: Assisting in VATS lobectomy significantly reduces the learning curve of a trainee as it improves hand-eye coordination and avoids pitfalls and time wasting manoeuvres.

Learning Curve for VATS Lobectomy

	Group 1	Group 2	Group 3
Surgical events	13	10	13
Conversions	6	2	1
Hospital stay			
Median	5.0±5.1	3.0±1.8	3.5±
Range	2 - 20	1-8	1-9



25. Impact of Positive Pleural Lavage Cytology on Survival in Patients Undergoing Resection for NSCLC: An International Multicentre Study

Authors: E Lim; R Clough; P Goldstraw on behalf of the Investigators

The Royal Brompton Hospital, London, United Kingdom

Objectives: Pleural lavage cytology (PLC) is the instillation of saline into the chest during surgery for NSCLC. The aims of this study were to collate multi-institutional individual patient data to determine independence as a prognostic marker and characterise impact of positive results on stage adjusted survival.

Methods: We identified 31 publications from 22 centres/ research groups that performed pleural lavage cytology during surgery for NSCLC and invited submission of individual patient data. Actuarial survival was calculated using Kaplan Meier **Methods:** and comparisons were performed using the log-rank test. Cox proportional hazards regression was utilised to ascertain the covariates associated with survival.

Results: By 1 January 2008, submissions were received internationally from 11 centres with individual data from 8763 patients. In total, 511 (5.8%) patients had a positive pleural lavage cytology result, and this was shown to be an independent predictor of adverse survival associated with a hazard ratio of 1.465 (1.290 - 1.665; $p<0.001$). On statistical modelling, the best adjustment for patients with a positive PLC result was a single increase in the T category assigned to the case, up to a maximum of T4. Correction for differences in survival were obtained in stage IB ($P=0.315$) and IIB ($P=0.453$), with a degree of correction in stage IIIA ($p=0.07$).

Conclusions: Pleural lavage cytology should be considered in all patients with NSCLC suitable for resection. A positive result is an independent predictor of adverse survival and the impact on survival suggests that it may be appropriate to upstage patients by one T category.

26. The Test Performance of Pre-operative Neutrophil to Lymphocyte Ratio to Predict Adverse Survival After Resection Of Stage I Nsclc

Authors: K Sarraf; P Redman; A Nicholson; P Goldstraw; E Lim

Royal Brompton Hospital, London, United Kingdom

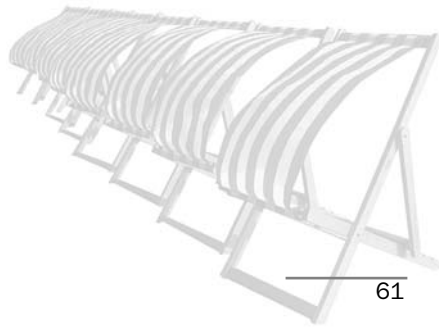
Objectives: We have previously published that increasing neutrophil to lymphocyte ratio (NLR) on pre-operative blood tests has been associated with worse survival after resection of primary NSCLC, and hypothesised that it would be a good test to help identify patients with early stage disease who may benefit from post-operative chemotherapy.

Methods: We performed a retrospective review of patients undergoing complete resection for stage I NSCLC in our institution between 1999 and 2005. Data acquisition was via patient medical records, bloods results recorded on admission prior to surgery, and follow-up by NHS database searches and hospital records.

Results: During the study period 223 patients underwent pulmonary resection classified with pT1-2, N0 M0 NSCLC. 83 patients formed part of the derivation cohort and of the 140 who formed the validation cohort, the majority were male 72 (51%) with a mean age of 65(10) years. The median follow up time of 3.2 (IQR 1.7 to 5.1) years.

The overall ROC area under the curve for pre-operative NLR to discriminate patients with early mortality was modest at 0.66. Using a pre-specified cut off point estimated from the derivation cohort, the sensitivity was 36% (21 to 54%) and specificity was 81% (72 to 88%) to detect early mortality.

Conclusions: Using a cut of value of 3.8 in preoperative NLR, a negative test does not reliably exclude patients with early mortality; however, a positive test has good specificity to detect patients at risk of early mortality and may help refine selection criteria for post-operative chemotherapy.



27. Should Operative Mortality after Lobectomy for Lung Cancer be the Only Measure for Quality in Thoracic Surgery? An Audit of a New Consultant's Practice

Authors: A Martin-Ucar

Thoracic Surgery Glenfield Hospital, Leicester, United Kingdom

Objectives: Deciding outcomes to assess quality of care by Thoracic Surgeons is a hot topic. Hospital mortality after lobectomy for cancer has been suggested as the marking procedure to revalidate Thoracic Surgeons.

As new Consultant providing support to a large MDT with high resection rates, I audited my practice since appointment to determine the possible implications of that decision.

Methods: During the initial 9 months of Consultant practice since appointment 73 patients [39 male and 34 female, median age 70 (range 47 to 86) years] underwent surgery for primary lung cancer. 12 patients were octogenarians.

Median ppoFEV1 was 50 (range 19 to 109) %, with 22 patients (30%) having a ppoFEV1 of less than 40%.

Operations performed were: 36 lobectomies, 11 sleeve resections, 10 anatomical segmentectomies, 7 pneumonectomies, 4 completion pneumonectomies, 3 resections with en-bloc chest wall excision, and a single wedge resection. One patient underwent exploratory thoracotomy. A lobe-specific systematic mediastinal lymphadenectomy was performed in all procedures but the wedge resection

Results: There were 2 (2.7%) postoperative deaths (in-hospital or 30-days). One patient died of an intraoperative cardiac event and the second suffered repeated postoperative pneumonias. Both patients had a ppoFEV1 of less than 40%.

However, both patients had undergone a lobectomy, thus giving a mortality rate after lobectomy of 5.5%.

Conclusions: Reporting only postoperative death after lobectomy for lung cancer may give an unfair reflection of a surgical practice. All the operations for lung cancer should be taken into account. An indication of resection rates should also be part of the revalidation process.

28. Do Current Guidelines Combined with Routine Exercise Testing enable Prediction of Post-operative Mortality for Lung Cancer Resection?

Authors: J McGuinness[1] A Hughes[1] K Bennett[2] H Parissis[1] V Young[1]

1 Department of Cardiothoracic Surgery St James Hospital, Dublin, Ireland; 2 Department of Therapeutics Trinity College, Dublin, Ireland

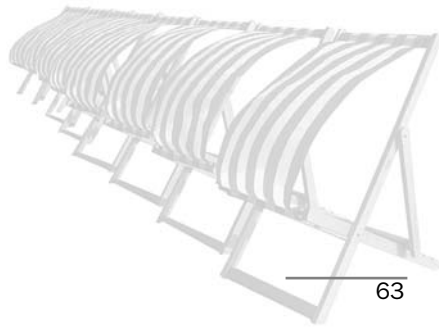
Objectives: As surgery offers the only potential for cure in non-small cell lung cancer, every effort should be made to offer surgery to patients with early stage disease. Current British Thoracic Society(BTS) Guidelines are designed to minimise "peri-operative" and "long-term" mortality with lung resection but may be over cautious.

Methods: We examined prospectively the outcome in patients operated on outside the BTS guidelines. In addition all patients had quantitative exercise testing performed to assess risk

116 lobectomy (17 sleeve lobectomy) and 24 pneumonectomy consecutive patients from a single surgeon who had their pulmonary function tests performed in a single lab were examined for peri-operative mortality and 3 year mortality.

Results: If the BTS guidelines had been strictly applied, 6% of the lobectomy and 54% of pneumonectomy patients would have been refused curative surgery (20% overall). The 3 year survival for patients deemed inoperable by the guidelines was 71% for Lobectomy and 70% for pneumonectomy (including peri-operative mortalities of 14 and 15% respectively). Assessment of other prognostic indicators including post-op FEV_1<40% (p=0.1) or DLCO<40% (p=0.5), or VO2max <15ml/kg/min (p=0.6) failed to show any correlation with outcome.

Conclusions: The current BTS guidelines may be excessively cautious and good cure rates with acceptable peri-operative mortality can be achieved in patients falling outside these guidelines. Surprisingly, detailed quantitative exercise testing perfomed routinely does not appear to aid in decision making.



29. Postoperative Pulmonary Complications following Thoracic Surgery: Comparison of Three Scoring Systems

Authors: P Agostini[1] H Cieslik[1] B Naidu[1] S Rathinam[1] E Bishay[1] M Kalkat[1] S Singh[2]

1 Birmingham Heartlands Hospital, Birmingham, United Kingdom; 2 Coventry University, Coventry, United Kingdom

Objectives: Scoring systems are used to aid recognition of Postoperative pulmonary complications (PPC) amenable to physiotherapy, however the current scoring systems rely on radiological findings are not specific to thoracic surgery. We compared a new system, the Melbourne Group Scale [MGS]1 to identify PPCs after thoracic surgery and compared it with two established scoring systems.

Methods: A prospective observational study was performed on thoracotomy/ lung resection patients in a regional thoracic centre (October 2007 and April 2008). PPC scoring was performed on a daily basis using the Brooks-Brunn Score [BBS]2 the Gosselink Score [GS]3 and the MGS (Table 1), and results compared.

Results: 129 consequent patients were observed, mean (SD) age 60.9(15.37) years, 75 male (58%), % Predicted FEV1 82.96% (20.0). Surgical procedures included pneumonectomy :15 (11.6%), lobectomy: 64(49.6%), segmentectomy: 5 (3.9%) , wedge resection: 38(29.5%), exploratory thoracotomy: 4(3.1%) and sleeve resections: 3(2.3%).

PPC rate with the MGS was 13.2% (n=17), the GS 6.2% (n=8), and with the BBS 39.5% (n=51). The clinically observed incidence of PPC was 12.4%, these patients requiring antibiotic therapy or bronchoscopy.

Conclusions: MGS best recognises PPC and may be an appropriate tool to identify patients developing a PPC. GS and BBS have a limited role in thoracic surgical practice.

Three Scores to indentify PPC

Melbourne Group Scale	Gosselink	Brooks Brunn
CXR atelectasis/ infiltration	Chest X ray Score	Temp >38
WCC>11 or preoperative antibiotics	0-NAD	New cough / sputum
Temp>38	1- minor unilateral infiltration	Abnormal breath sounds compared to baseline
+ve signs on sputum microbiology	2- minor bilateral infiltration	CXR atelectasis / infiltration
Production of purulent (yellow/green) sputum differing from preoperative	3- major unilateral infiltration	Physician documentation of Atelectasis/ infiltration
SpO2 < 90% on room air	4- major bilateral infiltration	
Diagnosis of pneumonia/chest infection by medics	Temp>38	
Readmission to or prolonged stay	WCC>12 or positive microbiology	
on the ITU/HDU (over 36 hours)		
PPC = >4 positive categories	PPC = Chest X-ray Score of 3+ and positive in all other categories	PPC = 2 categories positive on two consecutive days

30. When should Salvage Intensive Care be considered after Elective Thoracotomy?

Authors: P Mishra; K Bakri; B Balduyck; A Nakas; A Martin-Ucar; D Waller

Glenfield Hospital, Leicester, United Kingdom

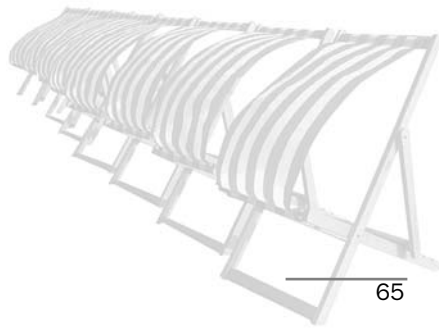
Objectives: Elective thoracotomy is increasingly required in higher risk patients. When all these patients should receive intensive care (ICU) in the event of postoperative morbidity remains to be determined.

Methods: We have reviewed all patients who were transferred for salvage ICU after routine postoperative care in a high dependency unit following elective thoracotomy. Multivariate analysis was performed to identify factors associated with in-hospital mortality and subsequent 180 day mortality. Factors assessed included: age, gender, lung function, histology, need for mechanical ventilation, renal replacement, inotropic support, redo thoracotomy, nutritional support and MRSA infection.

Results: The data from 52 consecutive patients with mean age 67(29-84) years was analyzed. Lobectomy was performed in 41%, pneumonectomy in 11.4% and sublobar resections in 9.6%; other procedures included decortication. In 71% of cases malignant disease was resected. The main indication for ICU admission was respiratory failure in 42%. Other indications included support after reoperation (37%), sepsis (19%) and renal failure (4%). In-hospital mortality was 32.6%; 180 day mortality was 44.2%.

In hospital mortality was associated with the need for renal replacement therapy ($p=0.035$) and inotropic support ($p=0.001$). Mortality at 180 days was only associated with the prior need for inotropic support in ICU ($p=0.001$).

Conclusions: The need for 'salvage' intensive care after elective thoracotomy is associated with high mortality. The decision to transfer a patient for this treatment should be carefully considered in those developing renal failure and increasing inotropic requirement.



31. Reduction in Intensive Care Admissions following Thoracic Surgery after introduction of Non Invasive Ventillation in a Regional Unit

Authors: P Agostini; H Cieslik; S Rathinam; R Steyn; F Collins; B Naidu

Birmingham Heartlands Hospital, Birmingham, United Kingdom

Objectives: Although NIV (non invasive ventilation) is an established treatment for type II respiratory failure, there is little evidence for its role following major surgery. The aim of this study was to demonstrate its efficacy postoperatively.

Methods: A 7 month prospective audit of patients in respiratory failure in a regional thoracic surgery unit was performed. Following this NIV was made available to patients and a 7 month re-audit was performed to establish the impact of NIV on ITU admissions.

Results: In the first audit period 10 patients met BTS criteria for NIV. Six of these patients were managed with continuous positive airway pressure, but 3 progressed to ITU. The remaining 4 patients continued with conservative management, with 1 admitted to ITU. These ITU admissions represented 8.5% of total thoracic surgery ITU admissions in this period.

In the re-audit 7 patients met criteria, with 1 progressing to ITU, this represented 4 % of total thoracic surgery ITU admissions.

Conclusions: A reduction of ITU admission of 50%, in these patients, was demonstrated. The mean ITU length of stay was 6.6 days, with a cost saving of £16632 (£1400 per ITU day). Therefore despite the small numbers of post-operative patients using the service the benefits are worthwhile.

32. Usefulness of Chest Radiography Post Chest Drain Removal in Cardiac Patients

Authors: M Eddama; I Ilyas; A Vuylsteke

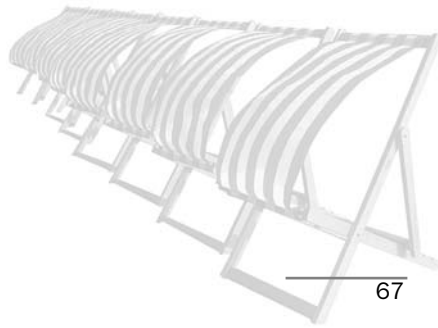
Department of Anaesthesia and Intensive Care, Papworth Hospital, UK

Methods: After IRB approval, we prospectively reviewed all chest radiographs (CR) taken after removal of chest drains in patients who underwent coronary artery bypass grafting (CABG), MAZE and valve surgery (VS) over a period of two months (March-May 2008). All subsequent CRs and medical interventions in relation to pnuemothorax (PTX) were then followed up.

Results: Ten out of 222 patients (4.5%) had a postoperative PTX on the CXR taken after removal of chest drains. All 10 patients were asymptomatic. Clinical review of the CR led 4 of these having a chest drain inserted and 6 left without. Two of those 6 developed symptoms of PTX the second day and required the insertion of a chest drain.

Discussion: We have shown that CR in the immediate period following chest drain removal in cardiac patient reveals a PTX in approximately 4.5% of cases. This is similar to what has been reported previously In our group, chest drains are only inserted in 1.8% on the basis of the CR and this without evidence of a clinical benefit, but with the knowledge that this might have a negative impact on the length of their hospital stay. Moreover, out of the patients diagnosed with a PTX seen after chest drain removal, 33% require a chest drain later but this accounts for less than 1% of all the patients.

In conclusion, we would like to propose that omitting a CR after drain removal in asymptomatic cardiac surgical patient is safe.



33. Outcome following Aortic Valve Replacement in Octogenarians: A Single UK Centre Experience

Authors: T Velissaris[1] N Nikolaidis[1] D Pousios[1] M Haw[1] C Barlow[1] G Tsang[1] S Livesey[1] S Ohri[1]

Wessex Cardiothoracic Centre Southampton Univresity Hospitals, Southampton, United Kingdom

Objectives: The ageing of the population and the continuously improving standards of cardiac surgery have resulted in an increasing number of elderly patients undergoing cardiac operations. The purpose of this study was to review our experience in patients over the age of 80 undergoing primary aortic valve replacement (AVR) with or without CABG.

Methods: Between 2000 and 2008, 345 patients (226 male) ≥80yr underwent primary AVR in our unit. The notes of these patients were retrospectively reviewed and follow-up information was obtained from their general practitioners. They had a mean age of 82.9±2.3 years, a mean EuroSCORE of 9.1±1.7 and a median logistic EuroSCORE of 13.4 (IQR 9.4, 19.1). Isolated AVR was performed in 161 patients (45.5%) and 184 (51.6%) patients underwent combined AVR and CABG.

Results: Hospital mortality occurred in 17 patients (4.9%), which was significantly lower than the mortality predicted by EuroSCORE (9.1%, $p<0.01$) or logistic EuroSCORE (16.2%, $p<0.01$). Hospital mortality was comparable between patients undergoing isolated AVR and those undergoing additional CABG (4.3 vs. 5.4% respectively, $p=0.64$). Predictive factors of hospital mortality were poor ventricular function and urgent or emergency surgery. Actuarial survival at 1 and 5 years was 89.7±1.7% and 76.9±3.0% respectively. Predictive factors of late mortality were preoperative ventricular function and long intensive care stay.

Conclusions: Aortic valve replacement can be undertaken safely in octogenarians and the current risk is significantly lower than what is predicted with conventional risk-scoring systems. Advanced age per se is not an important factor when assessing a patient's suitability for surgical vs percutaneous AVR.

34. Comparison of Long-term Outcomes following Aortic Valve Replacement with Homografts & Porcine Stentless Valves: Results of a 15 Year Study

Authors: A Ali; A Patel; Y Abu-Omar; Z Ali; S Bleiziffer; D Freed; A Sheikh; T Athanasiou; J Pepper

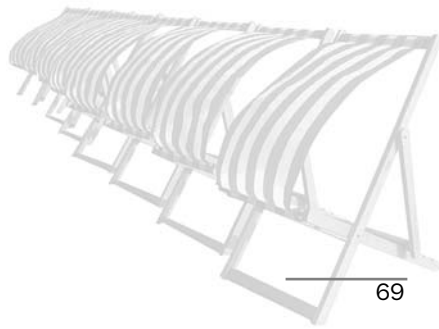
Royal Brompton Hospital, London, United Kingdom

Objectives: The porcine stentless valve was designed to emulate the haemodynamic performance of the homograft. Early outcomes using either surgical option have been similar. However, long-term outcomes remain to be compared. In this study we evaluated long-term clinical outcomes following AVR.

Methods: Demographic, operative, and clinical data were obtained retrospectively through casenote review. Actuarial survival and freedom from re-operation were determined using the Kaplan-Meier product limit method and compared using the log rank test. Cox proportional hazards regression was used to identify independent predictors of re-operation and late survival.

Results: Between 1991 and 2001, 217 patients received a homograft and 198 recieved a Toronto stentless porcine valve (TSPV). Mean time to follow-up was 6.3±4.1 years. Patients receiving a homograft were significantly younger (67±20 vs. 61±7 yrs), $p<0.001$. Freedom from re-operation was not significantly different at 10 years (TSPV 80%±4 vs. homograft 85%±4), $p=0.61$. The TSPV was associated with significantly worse long-term survival than the homograft (TSPV 40%±4 vs. homograft 55%±4), $p=0.02$. However, after adjustment for other variables (using a multivariate model), TSPV use was not an independent predictor of impaired late survival ($p=0.44$). Independent predictors of late mortality were redo operation ($p=0.009$), concomitant CABG ($p<0.001$), age>70yr ($p<0.001$), poor LV function ($p=0.01$) and emergency operation ($p=0.02$). Previous redo operation ($p=0.003$) and age<70 ($p<0.001$) were independent predictors for re-operation

Conclusions: The porcine stentless valve is associated with similar clinical outcomes to the homograft over the long-term. In the face of limited homograft availability, stentless valves are an excellent alternative with comparable clinical performance and long-term durability.



35. Patient Prosthesis Mismatch in Patients with Aortic Stenosis undergoing Isolated Aortic Valve Replacement does Not Affect Survival

Authors: N Howell; B Keogh; R Bonser; T Graham; J Mascaro; S Rooney; I Wilson; D Pagano

University Hospital Birmingham NHS FT, Birmingham, United Kingdom

Objectives: There is data suggesting that PPM adversely effects late survival following aortic valve replacement (AVR). Interpretation of these data is complicated by the heterogeneous nature of the patients studied. The aim of this study was to examine the incidence and implications of PPM in patients undergoing isolated AVR for aortic stenosis.

Methods: Prospectively collected data on patients undergoing isolated aortic valve replacement for aortic stenosis at our institution 1.1.97-31.12.07 were analysed. Survival data was obtained from the Central Cardiac Audit Database. The projected effective valve orifice area from in-vitro data was indexed to body surface area (EOAi). PPM was defined as moderate for EOAi ≤0.85cm2/m2 and severe if ≤0.6cm2/m2. Patients with EOAi >0.6cm2/m2 were considered the Reference group. Multivariate analysis with EuroSCORE as a patient level co-variate was used to asses the impact of PPM on postoperative survival.

Results: 801 patients were identified. 48(6.0%) patients had severe PPM, 462(57.8%) had moderate PPM and 291(36.4%) had no PPM. Mismatch was associated with increasing age and female gender thus resulting in an increase in the EuroSCORE (Reference group 4.9±2.6, Moderate PPM 5.8±2.4 and Severe PPM 6.1±2.1 ($p<0.001$). Despite higher operative risk profile there was no significant increase in hospital mortality with PPM. The 5 year survival estimates were similar in all groups. Multivariate analysis did not identify PPM as an independent risk for reduced in-hospital or late survival.

Conclusions: Moderate PPM is common in patients undergoing AVR for aortic stenosis but severe mismatch is rare. Patients with PPM have similar early and late survival following surgery.

36. Preoperative Systolic Strain Rate Predicts Postoperative Left Ventricular Systolic Function in Patients with Chronic Aortic Regurgitation

Authors: A Marciniak; G Sutherland; M Marciniak; A Kourliouros; B Bijnens; M Jahangiri

St Georges Hospital, London, United Kingdom

Objectives: Postoperative left ventricular systolic function is an important prognostic factor in patients undergoing aortic valve replacement. Pre-operative myocardial deformation may be impaired without reduction in conventional indices like ejection fraction (EF)

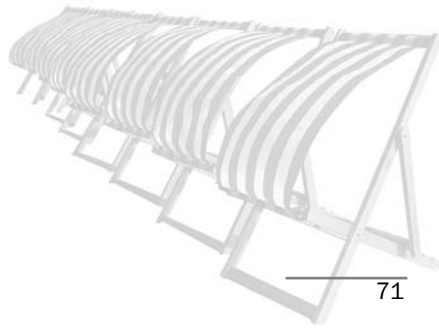
Strain rate (SR) imaging is sensitive in detecting regional systolic abnormalities and might allow the diagnosis of subclinical changes in LV function before surgery.

We aimed to investigate the value of preoperative regional myocardial peak systolic SR as a predictor of postoperative LV systolic function.

Methods: We studied 32 patients (age 52±12) with severe chronic AR who underwent aortic valve replacement. A standard echo examination, extended with tissue Doppler, was performed immediately before and 3, 6 and 12 months after surgery. To assess LV longitudinal deformation, SR data were acquired from the mid lateral (LW) and anterior (Ant) walls.

Results: Patients were divided into 2 groups based on post-operative EF: Group 1 with EF>50% and Group 2 with EF<50%. Group 1 had a significantly ($p<0.005$) higher preoperative SR (LW: -1.8± 0.38s^{-1} Ant: -1.8±0.4s-1) compared to Group 2 (LW:-1.0± 0.29s^{-1} Ant: -0.95± 0.4s-1. SR/EDV index showed also significant changes ($p<0.001$) at baseline between the groups. For detecting subclinical changes in deformation of the LW, a cut of value of the SR/EDV ≤0.006 had 89% sensitivity and 93% specificity; for the Ant wall, SR/EDV ≤0.005 had 88% sensitivity and 92% specificity;

Conclusions: A significant reduction in preoperative SR in patients with apparently preserved function (preoperative EF>50%) predicts post-operative LV dysfunction. SR imaging detects subclinical changes in LV function before they can be detected by global standard parameters and might thus be used to optimize the timing of surgery.



37. Experience with a Decellularized Porcine Heart Valve for Right Ventricular Outflow Tract Reconstruction

Authors: P Dohmen; S Holinski; S Dushe; H Grubitzsch; W Konertz

Dept of Cardiovascular Surgery, Berlin, Germany

Objectives: The Ross operation is still limited by availability and poor performance of devices for the pulmonary valve replacement. Tissue engineering of valves conduits could offer a solution to this problem.

Methods: After extensive in vitro and preclinical in vivo testing, the Matrix-P decellularized xenograft was implanted in 224 patients during Ross operation. Patient's age ranged from 6 to 76 years. Thirty-five percent received additional procedures, most often coronary artery bypass surgery, mitral valve surgery or ascending aorta replacement. Eighteen patients suffered from acute or subacute native or prosthetic valve endocarditis and eight patients had one or more previous cardiac operations.

Results: Follow up was 100% completed. Five patients (2.3%) died early after surgery. Five late deaths occurred, due to aortic valve endocarditis, pulmonary embolism from deep vein thrombosis, pancreatitis, cancer and sudden death. Reoperation for early distal anastomosic narrowing of the pulmonary artery was necessary in seven patients. In the last 124 patients, the use of a distal anastomosis patch has eliminated this problem. Haemodynamic performance of the neoaortic valve as well as of the pulmonary valve device are excellent. Mean pressure gradient across the aortic valve is 5.81±7 mmHg, while across the pulmonary graft is 3.51±1 mmHg, without any rise up to 4 years.

Conclusions: The Matrix-P tissue engineered heart valve makes the Ross operation available to a wide range of patients.

38. What is the Economic Burden of Disease for Patients with Aortic Stenosis unable to Undergo Aortic Valve Replacement?

Authors: C Morgan[2] O Wendler[1] K Banz[3] C Cohen[4]

1 Kings College Hospital, London, United Kingdom; 2 CRC, Cardiff, United Kingdom; 3 Outcomes Research International, Basel, Switzerland; 4Edwards Lifesciences, Newbury, United Kingdom

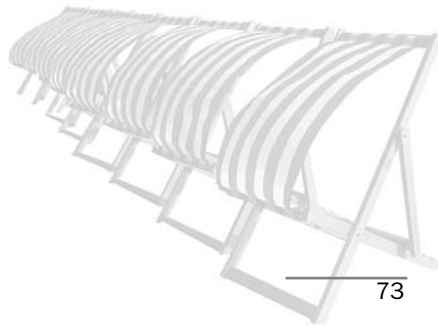
Objectives: To quantify the hospitalisation cost of patients with aortoc stenosis (AS) and high surgical risks, defined as logistic EuroSCORE above 20%.

Methods: We conducted a retrospective analysis of patients with AS in the SLIM database covering Cardiff and the Glamorgan Vale during 1995-2005. SLIM contains details of mortality, hospital length of stay and rehospitalisation data until death. The cohort was identified using ICD-10 and OPCS-4 codes. The logistic EuroSCORE was constructed from demographic and clinical variables.

The average lifetime cost of readmissions per patient was derived from NHS reference costs.

Results: We found 1,075 patients with AS of which 162 were at high surgical risk and did not undergo aortiv valve replacement (AVR) (15%). Index hospitalisation mortality was 23% and cumulative mortality was 46%, 58% and 64% at 1, 2 and 3 years respectively. Average lifetime hospitalisation cost was £9,235 with £5,867 (63%) cardiac related.

Conclusions: With a high mortality and unable to receive an AVR, the average hospitalisation cost of this population, excluding nursing home and emergency costs is equivalent to the tariff paid by the NHS for an open heart surgery (2008 tariff: £9,860). Thus, transcatheter aortic valve implantation might not only be an efficacious, but also a cost-effective treatment for these patients.



39. Transcatheter Aortic Valve Implantation: A Multidisciplinary Approach from Two Centres

Authors: V Bapat[1] A El-Gamel[2] C Young[1] P MacCarthy[2] K Wilson[1] D Rafal[2] M Monaghan[2] J Hancock[1] M Thomas[1] O Wendler[2]

1 Guys and St Thomas Hospital NHS Foundation Trust, London, United Kingdom; 2 Kings College Hospital NHS Foundation Trust, London, United Kingdom

Objectives: Aortic valve replacement is the only effective treatment of aortic stenosis (AS). Transcatheter Aortic Valve Implantation (TAVI) is an innovative approach to reduce mortality in high risk surgical patients.

Methods: A total of 73 patients (mean age 84±6.5y, female 51%) underwent TAVI with the Edwards Lifesciences Sapien bioprosthesis using a transapical (TA) (n=4[2] 58%) or transfemoral (TF) approach. The TA approach was used in patients with peripheral vessel disease, poor vascular access, or porcelain aorta. All were high risk patients for conventional surgery as evidenced by logistic EuroSCORE (21.4±3.5), STS score (7.9±0.6) or the presence of a porcelain aorta (n=14). The mean ejection fraction was 49±7%, with a mean aortic valve orifice area of 0.57±0.2cm2 and peak gradients of 84±36mmHg across the valve.

Results: All procedures were performed in the catheter laboratory under general anaesthesia (n=72) or thoracic epidural anaesthesia (n=1). Bioprosthetic sizes were 23mm (n=32) or 26mm (n=41). Procedural success was achieved in 98% (one patient required conversion from TF to TA). One patient had aortic regurgitation ≥Grade II. Two patients required emergency cardiopulmonary bypass. Post procedural mean and peak gradients were 5mmHg and 10mmHg respectively and 96% of patients showed AR ≤ I at discharge. Vascular complications requiring immediate intervention were encountered in 8.2% (n=6). Postoperative complications were stroke (2.6%), persistent AV-block (2.6%), and renal failure (11%). The overall 30 day mortality was 11% (n=8).

Conclusions: TAVI is a feasible and reproducible approach in the treatment of AS in high risk surgical patients with excellent short-term results.

40. Dealing with a Dr Foster Alert

Authors: B Naidu; P Rajesh; R Steyn

Heart of England NHS Foundation Trust, Birmingham, United Kingdom

Objectives: Alerts based on Hospital Standardised Mortality Ratio (HSMR) cause negative publicity and low moral in clinical teams. We describe a process to positively deal with a Dr Foster alert.

Methods: An alert triggered by higher than expected mortality in a large tertiary thoracic unit was confirmed to be a special cause event and investigated accordingly. For the forty deaths, individual case analysis highlighting coding issues, characterizing the case and identifying areas of concern was systematically performed along with an independent internal review. Concern in areas of care either with the clinical team or Trust were classified into contributing to or causing a death. The clinical governance team assisted in identifying common and special causation.

Results: Major coding discrepancies (20 %), and surgical palliation of terminal cancer (22.5%) issues were noted (table 1). Four of 7 who died in other institutions, were transfers for assessment of palliation of terminal cancer but deemed unsuitable. In 20 % of cases there were no areas of concern. Hospital acquired infection (HAI) directly contributed to 7 deaths. This trust-wide issue had been addressed by major improvement in infection control. In the remaining 8 cases, there were no preventable deaths. Analysis of denominator number of cases is still to be performed.

Conclusions: Coding discrepancy (20%) has negative impact on HSMR. We identified two important factors contributing to the alert. Common causation relating to palliative treatment provision (37.5%) and special causation of HAI cluster (20%). Surgical performance was not an issue and moral was enhanced.

Flow chart of case based analysis

40 patients »»»» 7 died elsewhere

▼

33 patients »»»» 9 terminal cancer palliation

▼ 8 no concern

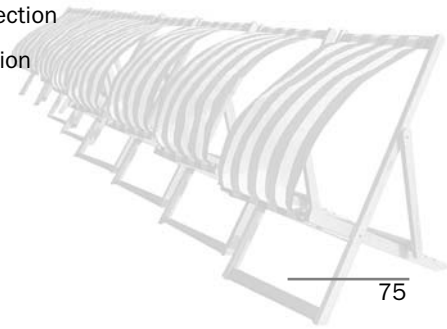
▼

16 patients »»»» 7 hospital acquired infection

▼ 1 Radiofrequency ablation

▼

8 patients



41. Outcomes of Surgery for Isolated Active Mitral Valve Endocarditis.

Authors: A Sheikh; A Elhenawy; M Maganti; S Armstrong; T David; C Feindel

Toronto General Hospital, Toronto, Canada

Objectives: No studies actually document long term outcomes of surgery for active endocarditis confined to the mitral valve. Studies in the literature have been pre-occupied with outcomes of mitral valve repair for infective endocarditis.

Methods: 104 patients underwent surgery for active infective endocarditis confined to the mitral valve over 27 year period (50±18yr, 52% female). The infected valve was native in 81 patients, previously repaired 6, and prosthetic 17. Staphylococcus aureus was most commonly isolated (32%). Twenty-eight patients (27%) had annular abscesses. Surgery consisted of valve repair (n=17) or replacement (n=87). For extensive annular abscess, radical resection, annular patch reconstruction were performed (n=23) in addition to valve replacement. Mean follow-up was 5.6±4.4yr (range 0-20yr) and was complete.

Results: There were 9 (8.7%) in-hospital deaths and 28 (27%) late deaths. Overall survival at 5, 7 and 10 years was 73±5%, 68±5%, and 58±6%. At 7 years freedom from recurrent endocarditis was 89±4% and freedom from re-operation 94±3%. Event-free survival at 7 and 10 years was 60±6% and 46±7% and was significantly higher in native endocarditis vs non-native (ie prosthetic or previously repaired valve; 7 years: 63± 7 % vs 50±12%, $p<0.005$). Preoperative shock, Staphylococcus aureus infection, and bioprosthesis insertion were independent predictors of death from all causes. The bioprosthesis group were older (57±20years vs 44±15 mechanical, 46±12 repair, $p=0.003$).

Conclusions: We have documented the long term outcomes of surgery for isolated active mitral valve endocarditis for the first time. Event-free survival is worse in those who have non-native mitral valve endocarditis.

42. Tricuspid Valve Surgery for Infective Endocarditis: Multicentre Results

Authors: S Farid; H Bilal; A Momin; A Khan; M Purohit; G Musleh; N Odom; D Keenan; R Hasan; B Prendergast

Manchester Royal Infirmary, Manchester, United Kingdom

Objectives: Tricuspid valve endocarditis (TVE) incidence is approximately 10% of endocarditis cases. It is encountered mostly in IV drug abusers. In this study we reviewed our patients who presented primarily with TVE.

Methods: The data was collected from four centres(North-West England) between August 1997 to September 2008. A retrospective study using prospectively collected data. 34 patients underwent Tricuspid Valve(TV) surgery following infective endocarditis.

Results: The causes of TVE included, intravenous drug abuse(n = 20, 58.8%), immunosuppression(n=1, 2.9%), & infected permanent pacing wires(n=2, 5.9%). Preoperatively 17.6 %(n=6) patients also had a history of hepatitis C and n=3(8.8%) were on dialysis.

Male: Female = 67.6%: 32.4%. Mean age was 41.8 years.

Major determinant for surgery was TVE with complications (TV incompetence, vegetations, sepsis, heart failure). Preoperatively one patient(2.9%) had septic emboli (lungs) and three(8.8%) had empyema.

Procedures: TV replacement in 22 patients (mechanical 8.8%, biological 55.8%) & reconstruction in 12(35.2%).

Associated procedures: pulmonary valve repair 2.9%; AVR 5.9%; MVR 11.8%; ASD closure 8.8%; CABG 5.8%; pulmonary embolectomy 2.9%.

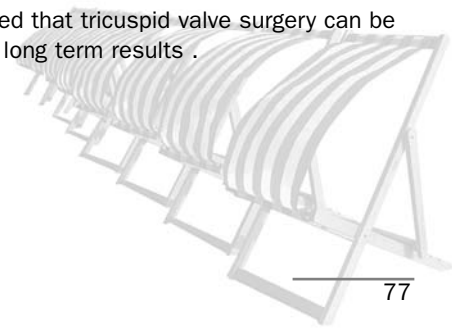
There were no perioperative or in hospital deaths.

The mean hospital stay was 41.96 days, mean ITU stay was 2.88 days & duration of ventilation was 6.82 hours.

Postoperative complications included: Reopening for bleeding (n=6, 17.6%), septicaemia(n=2, 5.9%), heart block (n=3, 8.8%), complete heart block (n=2, 5.9%) & ARDS (n=1, 2.9%).

Long term mortality was only one (8.3%) in patients with repair and four (18.2%) died in the replacement group.

Conclusions: The results of our study demonstrated that tricuspid valve surgery can be carried out safely with low mortality and excellent long term results .



43. Dental Organisms as a Cause of Infective Endocarditis Requiring Surgery

Authors: A Kumar; J Klein; M Jenkins; J Roxburgh; C Blauth

Guy's and St Thomas' NHS Trust, London, United Kingdom

Objectives: To examine possible primary sources of sepsis in patients having valve surgery for active infective endocarditis (IE), and to determine the proportion of patients with a probable dental source.

Methods: Patients undergoing surgery for active IE in one hospital during the 8 calendar years 2000-2007 were identified from the Tomcat adult cardiac surgery database. Diagnostic data were also obtained from a separate prospective clinical microbiology database of all hospital admissions diagnosed with IE.

Results: 231 patients had 270 operations for active IE. Annual IE operations increased from 27 in 2000 to 37 in 2008. Native valves affected were aortic 69(42%), mitral 51(31%), tricuspid 7(4.3%), pulmonary 1(0.6%), aortic and mitral 28(17%) and others combined 8(4.9%). Sixty-seven (29%) patients had reoperations, of which 31(12%) were on a prosthetic valve, and 8(3%) were on a second native valve. Fifteen(6.5%) patients had 3 or more operations. Overall hospital mortality was 28(12%) patients.

A causative organism was identified in 175(76%) of patients. Of these Streptococci accounted for 70(40%) cases, Staphylococci 65(37%), Enterococci 30(17%) and others 10(5.7%). Hospital mortality rates for different groups of organisms were: Staphylococci 19%, Enterococci 13%, Streptococci 8.6%, others 0%, and Unknown 11%.

A primary source of sepsis was identified in 54% of cases. A dental source was presumed when endocarditis was caused by oral commensal bacteria. The distribution of sources of sepsis and associated mortalities are shown in the Table.

Conclusions: Where the infecting organism can be identified, 24% of patients needing surgery for infective endocarditis have a probable primary dental source of infection.

Table

	Distribution of Sources of Sepsis (%)	Hospital Mortality (%)
Oral/Dental	18	7.1
IVDU	7.4	5.9
Other Specific Site	28	12
Not Identified	46	15

44. Preliminary Group Results from the Arterial Revascularisation Trial (ART)

Authors: The ART Investigators[1] D Taggart[2]

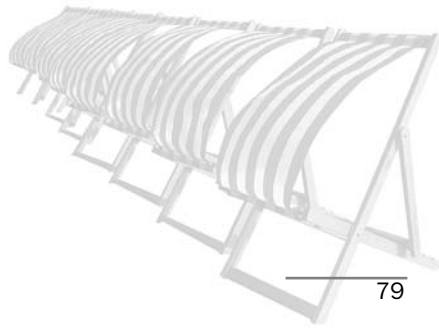
1 Royal Brompton Hospital, london, United Kingdom; 2 John Radcliffe Hospital, Oxford, United Kingdom

Objectives: The Arterial Revascularisation Trial (ART) is a randomised trial of bilateral internal mammary artery (BIMA) grafts versus single internal mammary artery (SIMA) grafts on mortality and morbidity following coronary artery bypass surgery (CABG).

Methods: 28 centres in Australia, Austria, Brazil, India, Italy, Poland and the UK randomised 3102 CABG patients to SIMA or BIMA grafting with supplementary grafts (saphenous vein or radial artery). CABG could be performed as an on-pump or off-pump procedure. The primary outcome is survival at 10 years and secondary end-points include clinical events, quality of life and cost effectiveness. The effect of age, LV function, diabetes and off-pump surgery are pre-specified subgroups.

Results: Group data are available so far on 3101 patients. Mean age was 65 years (range 37-88) with 86% males. 41% of the CABG procedures were performed off pump. Thirty-day mortality was 1.2% (n=38 patients). Thirty-three patients (1.1%) have had sternal wound reconstruction. There were 91 bleeds requiring surgical reintervention (2.9%); 64 strokes (2.1%); 70 myocardial infarctions (2.3%); 158 (5.1%) required renal support therapy and 70 patients further revascularisation (2.3%).

Conclusions: ART is the one of the largest randomised trials ever conducted in cardiac surgery and the preliminary results demonstrate excellent early outcomes in contemporary CABG similar to that observed in the SYNTAX trial. Further analyses will indicate whether SIMA or BIMA strategies have particular advantages in specific sub-groups.



45. Does Prior Percutaneous Intervention influence Mortality after Coronary Artery Bypass Graft Surgery

Authors: E Akowuah[1] C Hon-Yap[1] B Yan[3] D Dihn[2] C Reid[2] P Skillington[1] J Tatoulis[1]

1 The Royal Melbourne Hospital, Melbourne, Australia; 2 Department of Epidemiology and Preventive Medicine Monash University, Melbourne, Australia; 3 Department of Medicine and Therapeutics Chinese University of Hong Kong, Hong Kong, Hong Kong

Objectives: Patients who have initial coronary revascularisation with percutaneous interventions (PCI) may present later for CABG. We sought to determine the effect of prior PCI on mortality after CABG.

Methods: All isolated CABG procedures within the Australasian Society of Cardiac and Thoracic Surgeons Database from June 2001 till May 2008 were included. Patients undergoing PCI and CABG during the same admission were excluded. Multivariate logistic regression and propensity analysis were used to compare the risk-adjusted impact of prior PCI on 30-day mortality. Mid-term survival to 6 years was obtained from the National Death Index. Cox-proportional hazards model was used to determine the effect of prior PCI on mid-term survival.

Results: There were 13,184 patients, 11,727 with no prior PCI and 1,457 with prior PCI. Patients with no prior PCI had a higher EuroSCORE (4.4 ± 3.3 vs 3.6 ± 3.0 p= <0.001). However there was no difference in unadjusted 30-day mortality (1.5% for no prior PCI and 1.6% for prior PCI, p=0.7). Multivariate logistic regression identified females, peripheral vascular disease, unstable angina, heart failure, renal failure, advanced age, poor LV function, urgent or emergency operative status, but not prior PCI (OR 1.26, 95%CI 0.77-2.08, p=0.35), as predictors of 30-day mortality. After propensity score adjustment prior PCI did not emerge as a predictor of 30-day mortality (OR 1.22, 95%CI 0.76-2.0, p= 0.41). At 6 years there was no difference in survival between the groups (HR= 0.94 CI 0.75- 1.183, p=0.6)

Conclusions: Prior PCI is not associated with increased early or mid-term mortality after CABG.

46. Long Term Outcome after Isolated CABG for High Risk EuroSCORE Patients. A Decade's Review

Authors: R Bilal; R Hasan; I Koukis; R Rathore; Z Makahleh; K McLaughlin; B Prendergast; N Odom; D Keenan; G Musleh

Manchester Royal Infirmary, Manchester, United Kingdom

Objectives: Evaluate early mid & long term survival after high risk CABG, identifying factors affecting long term survival.

Methods: Reviewed 7,341 isolated CABG, Mar 1997 - Mar 2007. Operative risks calculated by logistic EuroSCORE (LES). Subset of 654 "High Risk" patients defined with LES > 7. Further subgrouped. "Group I, II and III"; LES 7-9 n=516; 10-12 n=9[1] and > 12 n=46 respectively. National Cardiac Surgery Registry Database studied for long term survival.

Observed mortality compared with expected by Spearman's Correlation (SC). Long term survival evaluated by Cox proportional hazard & risk-adjusted Kaplan-Meier curves.

Results: Mean follow-up 102.8 ± 15.9 months. Hospital deaths: observed n=52, 7.9%; predicted 78.5, 12.1%. Long term survival: 1, 5, 10 years 93.2%, 87.6% & 74.3%. Mean survival: 123 ± 19.4 months. There was statistically significant difference between the expected and observed mortality, (Spearmans' Correlation, 1.67, p=0.001). Multivariate logistic regression showed high risk group had more emergency operations, higher CCS, 3-vessel disease, congestive heart failure, COPD, re-do surgeries, chronic renal failure, previous percutaneous coronary interventions & low ejection fraction.

Sub Group Analysis

Expected early mortality was significantly higher than observed in two subgroups.

Early observed vs expected mortality: Group I, 5.3% vs 8.4%; Group II, 7.9% vs.11.2%; Group III, 21.2% vs. 16.8%.

Long Term Survival 1, 5, 10 Years: Group I, 94.2%, 89.9% & 78.3%; Group II 91.6%, 83.2%, and 74.2%; Group III 76.3%, 64.5% & 46.3 %.

Mean survival with Chronic Renal Failure: 87 months (HR 1.24, 95% CIs 1.06-1.44, P=0.001). Survival with Ejection Fraction <35%, 93.7%, 81.2% and 60.6% respectively (HR 1.36, 95% CIs 1.11-1.53, p=0.003). Re-do surgery survival: better than the cohort, survival, 95.3%, 89.1% & 76.2% (HR 128, 95% CIs 1.23-1.41, p=0.04).

Conclusions: High Risk patients had lower than predicted mortality but logistic EuroSCORE under estimated mortality in Group III. Survival at one year exceeded 90% for most patients and even in the highest risk group exceeded 75%. EuroSCORE can predict mid and long term mortality. Further evaluation is required to utilize EuroSCORE as a comparative tool for patients managed by PCI.

47. Peri-operative Stroke in Coronary Surgery - Impact of Cardiopulmonary Bypass versus Aortic Manipulation

Authors: P Sastry; R Warwick; M Field; M Kuduvalli; A Oo

Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

Objectives: Studies have indicated that both aortic manipulation and jets of blood flow from cardiopulmonary bypass (CPB) are sources of atheromatous emboli and may cause peri-operative stroke. This study aims to examine their relative influences.

Methods: The institutional database was used to prospectively record data regarding isolated coronary bypass cases between 1999 and 2007. Stroke incidence was retrospectively reviewed. Patients were stratified according to CPB use and level of aortic manipulation: Group 1 - CPB, with aortic cross-clamp and multiple applications of a side-biting clamp; Group 2 - CPB, single application of a side-biting clamp; Group 3 - OPCAB, side-biting clamp applied once; Group 4 - OPCAB with aortic no-touch technique.

Results: 9123 cases were identified and stroke incidence is shown in Table 1. Stroke rate in the OPCAB groups was lower than in CABG groups (0.54% vs 2.41%, OR =4.53, RR=4.45, CI 95% p<0.0001). Comparing OPCAB groups 3 and 4, manipulation of the aorta with the side-clamp did not significantly impact stroke incidence: 0.38% in Group 3 vs 0.7% in Group 4, p=0.26. Comparing CABG groups 1 and 2, stroke incidence was similar despite multiple vs single applications of the side-biting clamp. Comparing Groups 2 and 3, use of CPB increased stroke incidence from 0.38% to 2.78% - OR 8.8%, RR 8.6%, CI 95%, p<0.001. In hospital mortality and ITU stay were unaffected across the groups.

Conclusions: Examination of operative techniques in this study suggests that CPB is a greater risk factor for stroke than aortic manipulation.

Stroke incidence

	Group 1	Group 2	p (Group 2 vs Group 1)	Group 3	p (Group 3 vs Group 1)	Group 4	p (Group 4 vs Group 1)
CPB	Yes	Yes		No		No	
Aortosaphenous anastomoses	With cross clamp and multiple side clamp	With cross clamp and single side clamp	Single side clamp		None		
n=	4245	1188		1840		1850	
Stroke incidence	92 (2.17%)	39 (2.78%)	0.032	7 (0.38%)	<0.001	13 (0.70%)	<0.001
In-hospital mortality	93 (2.19%)	33 (2.78%)	0.23	26 (1.41%)	0.04	38 (2.05%	0.74

48. One-year Outcome of Percutaneous Coronary Intervention versus Coronary Artery Surgery in Three Vessel and/ or Left Main Stem Disease

Authors: A Kourliouros[1] E Biryukova[1] F Williams[1] O Valencia[1] J Kaski[1] M Bland[2] M Jahangiri[1]

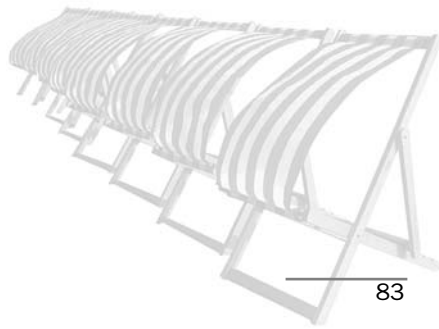
1 St George's University of London, London, United Kingdom; 2 University of York, York, United Kingdom

Objectives: To compare outcomes including death, myocardial infarction, stroke, recurrent angina and need for reintervention in patients with multivessel disease undergoing percutaneous intervention (PCI) or coronary artery surgery (CABG).

Methods: A retrospective and ongoing analysis of consecutive patients with three vessel disease ± left main stem undergoing PCI or CABG was carried out. The incidence of major cardiovascular, cerebrovascular events, hospital admission and reintervention were analysed at six and 12 months.

Results: 646 patients underwent PCI (n=313) or CABG (n=333) between September 2005 and December 2006. At six months, data were available for 88% of PCI and 96% of CABG patients. Death, myocardial infarction, or stroke were less frequent in CABG than in PCI (OR = 0.40, 95% CI=0.21 to 0.85, p=0.01). Death, myocardial infarction, stroke, reintervention and recurrent angina were also less frequent in CABG than in PCI (OR = 0.16, CI = 0.10 to 0.26, p<0.001). The effect remained significant after all adjustments for baseline variables. Similar results were found at 12 months.

Conclusions: CABG is associated with improved major adverse cardiovascular and cerebrovascular events in patients with three vessel ± left main stem disease compared with PCI at 6 and 12 months. In the era of exponential growth of stents in patients with three vessel disease, outcome will improve if patients are discussed in multidisciplinary meetings where the best treatment option can be chosen.



49. Clinical Audit on the Use of Temporary Epicardial Pacing Wires in Coronary Artery Bypass Surgery

Authors: M Tavakkoli-Hosseini; A Kourliouros; V Sookhoo; O Valencia; M Jahangiri

St George's Hospital, London, United Kingdom

Objectives: While recent studies suggest that routine placement of temporary epicardial pacing wires may be unnecessary in coronary artery bypass surgery (CABG), intraoperative conditions including conduction defects and certain cardiac rhythm abnormalities necessitate their implantation. We set out to examine the frequency and indications for pacing wire placement and evaluate against the need for postoperative pacing.

Methods: 100 consecutive patients undergoing first time CABG were prospectively studied. Procedural characteristics with specific interest in cardiac rhythm variations and use of antiarrhythmic, inotropic or chronotropic agents were analysed. Indication for pacing wire placement was confirmed with the operating surgeon. Timing, indication, duration, and mode of pacing were also evaluated.

Results: 77 patients received pacing wires (77%). Pacing wires were placed routinely in 53% of patients, whereas 43% had them inserted due to sinus bradycardia, even though no intraoperative pharmacological correction was attempted. Only 3 patients received pacing wires for other reasons (ventricular ectopics, episode of ventricular fibrillation and paroxysmal atrial fibrillation). Pacing was performed in 61% of patients and initiated mainly in the operating theatre (62%). Sinus bradycardia was the predominant indication for pacing ($p<0.001$). The need for postoperative pacing in patients who received routine pacing wires was lower, albeit not significantly, compared to those with indicated pacing wire insertion (43% vs. 69%, $p=0.09$).

Conclusions: The frequency of pacing wire implantation after CABG in our unit is comparable to published data; however, the significantly increased number of patients receiving pacing wires and undergoing pacing for a relative indication such as sinus bradycardia requires further investigation.

50. How the Aging Population affects Indirect Costs & Resource Utilisation in Cardiac Surgery: A Single Centre Experience

Authors: D Ngaage; G Britchford; A Cale

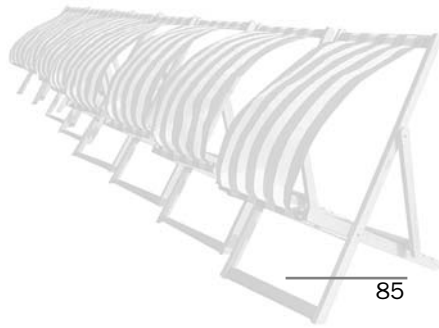
Castle Hill Hospital, Cottingham, United Kingdom

Objectives: The number of elderly patients undergoing cardiac surgery is steadily increasing. This patient demographic change has implications for cost of care and resource utilisation which is pertinent in meeting NHS directives relating to cardiac surgery.

Methods: We reviewed prospectively collected data for patients who underwent CABG and/or heart valve operation from March 1998 through January 2007 in order to highlight differences in indirect cost and resource utilisation between two age groups (young, <70yrs and elderly, ≥70 yrs).

Results: Compared to young patients (n=4127), the elderly (n=2664) had higher prevalence of left ventricular dysfunction, co-morbidities, non-elective surgery and, combined coronary and valve operation. Operative mortality and morbidity were greater for the elderly. The elderly exceeded young patients by 32% for postoperative medications (inotropes, anti-arrhythmics, antibiotics), 20% for transfusions, 5% for further interventions (reopening, sternal re-wiring, gastrointestinal) and 2% for device implantation (IABP, VAD, Swan Ganz, permanent pacemaker). Elderly patients experienced delays in progression through care by a ratio of 1.3:1 for ICU stay longer than 24 hours, 2.5:1 for ICU readmission, 2:1 for hospitalisation longer than 12 days, and 2.4:1 for discharge to supervised convalescence. The elderly had a significantly elevated cummulative excess risk of 88% for incurring extra cost and resource utilization, with associated imponderables.

Conclusions: A growing elderly population undergoing cardiac surgery attracts significant excess resource utilization compared to young patients. Prospective studies are needed to determine direct costs and the clinical implications. Changes in structure and “modus operandi” of cardiac surgery units may be necessary to meet cardiac surgery targets.



51. Enhanced Follow-up of Heart Valve Surgery Patients in a Specialist Nurse-led Clinic

Authors: J Cadet; A Morris; A Anscombe; J Pepper

The Royal Brompton Hospital, London, United Kingdom

Objectives: A patient who undergoes a heart valve substitute can expect a significant improvement in quality of life. However life threatening complications or degeneration of the valve can occur and as a consequence life long follow up is advocated.

Nurse-led follow-up of patients following heart valve surgery has not been previously described. We describe the setting up of our clinic for long-term follow-up and report our experience.

Methods: The nurse-led heart valve clinic was set-up in September 2004, it is held weekly by two specialist nurses.

Using a dedicated patient database we monitor clinical outcomes.

We assess patient satisfaction within the clinic (using simple questionaires) and analyse the role of the nurse within the heart valve clinic.

Results: Since the clinic started; 341 patients have been reviewed. Assessment is maintained on a 6-24 monthly basis.

The specialist nurses' carry out routine clinical assessments, review investigations and monitor results , as well as medications. Giving advice regarding endocarditis prevention and early warning signs of valve dysfunction.

A proportion of patients have had surgery or other interventions for complications or symptom management. This is as a consequential result of follow up within the clinic by specialist nurses'.

Patient satisfaction with the clinic was excellant (90%) or good (10%).

There were no untoward clinical incidents or adverse events associated with the clinic.

Conclusions: Patients following heart valve surgery benefit greatly from long-term follow-up within a specialist centre. We have demonstrated that given adaquate support and facilities, nurses can safely review and monitor these patients enhancing their care.

52. Long-term Follow-up after Primary Complete Repair of Truncus Arteriosus with Homograft: A Thirty Four-year Experience

Authors: H Vohra; A Chia; V Janusauskas; A Roubelakis; N Nicolaidis; G Veldtman; J Gnanapragasam; T Salmon; J Monro; M Haw

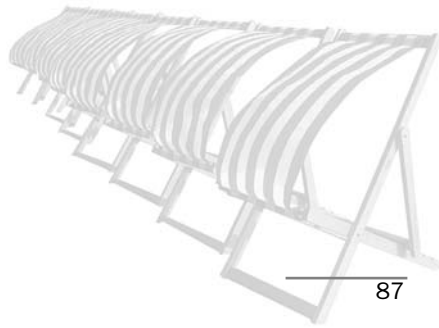
Wessex Cardiothoracic Centre, Southampton University Hospitals NHS Trust, Southampton, United Kingdom

Objectives: To determine the long-term performance of homograft and truncal valve after complete repair of truncus arteriosus communis (TAC).

Methods: From July 1974 to June 2008, 32 patients (median age 14 days; range 5 days-2.5 years) underwent primary homograft repair of TAC. Twenty four (75%) were neonates. The homograft used in RVOT was aortic in 24 patients and pulmonary in 8 patients (median diameter 16mm; range 8-24mm). The median follow-up was 24.5 years (range 5.6-43.5 years).

Results: There were 3 hospital deaths and 1 late death. The actuarial survival at 30 years was 83.1±6.6%. Of the 28 survivors, 25 re-operations were performed in 19 patients (76%). The median time to homograft re-operation was 12.1 years (range 1.0-26.1 years). Overall freedom from homograft re-operation after 10, 20 and 30 years was 68.4±8.7%, 37.4±9.5% and 26.7±9.3%, respectively. Twelve patients retained the original homografts at a median follow-up of 16.4 years (range 0-30.2 years). Six underwent a truncal valve replacement (TVR) with mechanical prosthesis at a median of 10.5 years (range3.4-22 years). Freedom from TVR at 10 and 30 years was 93.1±4.7% and 81.8±8.9%, respectively. In the 22 alive patients who did not undergo TVR, the peak truncal valve gradient was 8.9±8.3 mmHg at a median follow-up of 24.5 years (range=5.6-32.9 years). At last follow-up, 27 patients (96.4%) had good left ventricular function and 24 patients (85.7%) were NYHA I.

Conclusions: After complete primary repair of TAC, homografts can be expected to last over 12 years before requiring re-replacement. Truncal valve haemodynamics are good in the long-term.



53. Abnormal Right Ventricular Wall Mechanics & Cardio-hormonal Adaptive Response following Tetralogy of Fallot's Repair

Authors: E Peng[1] R Spooner[2] S Lilley[1] P Galloway[1] K MacArthur[1] J Pollock[1] N Yonan[3] M Danton[1]

1 Royal Hospital for Sick Children, Glasgow, United Kingdom; 2 Gartnavel General Hospital, Glasgow, United Kingdom; 3 Wythenshawe Hospital, Manchester, United Kingdom

Objectives: B-type natriuretic peptide(BNP) is a known cardioprotective hormone to compensate for ventricular dysfunction in response to myocardial wall stretch. We hypothesise that abnormal RV wall mechanics in Tetralogy of Fallot(TOF) leads to cardio-hormonal maladaptive response early after repair.

Methods: 19 TOF patients were prospectively studied (mean age 27.4+33.2 months). BNP was measured pre-operatively, post-op day 0,1, and 1 week (POD 0, 1, 1w). Tissue Doppler echocardiography was recorded at induction and POD1 to assess RV wall mechanics: (i) annular velocities (tricuspid-septal-mitral) (ii) segmental dyssynchrony (at the base-mid-apical segments of septum-RV-LV free walls). Post-operative outcome measures included cardiac index, mixed venous oxygen saturation, lactate, ventilation and ITU time.

Results: The BNP (median, interquartile range) on pre-operative, POD 0,1 and 1w were 25 (14-37), 116 (54-186), 712 (453-1069), and 892 (405-1607)($p<0.001$). Post-operatively, ventricular function was depressed on the RV (Tr-Sm 9.13 ± 2.78 vs 3.73±1.26cms^{-1}, $p<0.001$) and septum (IVS-Sm 4.98 ± 1.14 vs 3.46 ± 1.33cms^{-1}, $p<0.001$) but LV remained preserved. The biventricular free wall motion was normal pre-operatively but became dyssynchronous in the RV (19 patients,100%) and septum (14,74%), whilst the LV remained spared. The BNP (POD1) correlated with the inverse of the magnitude of RV-septal dyssynchrony ($r=0.6,p=0.01$) but not with annular velocities. Patients with a greater RV wall thickness had a lower BNP (POD1) ($r=0.6,p=0.01$); but no relationship with age, cyanosis, pulmonary regurgitation severity, RVEDAI or outcome measures.

Conclusions: A high level of BNP was expressed in the presence of RV-septal dysfunction early following Fallot's repair. BNP didn't influence outcome but its relationship with dyssynchrony may represent a maladaptive cardio-hormonal response due to abnormal RV wall mechanics.

54. Results Aorto-pulmonary Window Repair: A 15 Years Experience

Authors: M Abbasi; N Givtaj; M Yousefnia; S Salehi; R Baghaee

Shahid Rajaee Heart Center, Tehran, Iran

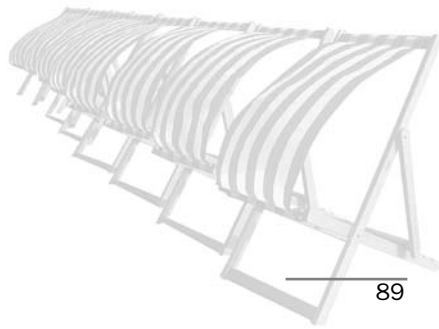
Objectives: Aorto-pulmonary window accounts for about 0.15% of cardiac anomalies.

Methods: We reviewed our cases from 1992 to 2007.We evaluated 30 patients. The approach for AP Window repair was ligation(2), division and suturing (1), trans-window in 19 trans-aortic in 9 and trans-pulmonary in 2.

Results: Among patients male to female ratio was 2:1. Mean age was 28± 9 months, weight 8.6±4.6kg. Morphology was type I (87%), type II (10%), type III (3%). Preoperative EF was 0.66 ± 0.07 which increased to 0.75 ± 0.07 post-operatively. 19 (63%) of patients had associated cardiac anomalies most frequently aortic stenosis (23%) followed by interrupted aortic arch. In-hospital mortality was 10%. Mean ICU stay was 4.4 days. Mean post-operative hospital stay was 10.7 days. Early complications were bleeding (2), pneumonia (one), CVA (one).Mean follow-up was 49 months, and there was no re-operation or late death. There were 4 cases of residual AP window. 2 in banding group(100%), one in transaortic patch repair (11%) and one in trans-window patch repair (5%).

Conclusions: Using multivariate analysis Age, sex and weight had no clear impact on post operative course. The mortality was no different among patients with or without associated anomaly (3%). There was no difference among various **Methods:** of repair in respect of morbidity, ICU stay; ventilator support and post operative EF.

Trans-aortic repair of APW is the procedure of choice for all APWs, except in the case of large defects where trans-window repair may be done. Simple ligation without CPB should be avoided due to the possibility of residual APW.



55. Mid-term Evaluation of Prosthetic Valves in the Pulmonary Position

Authors: H Vohra; G Baliulis; V Janusauskas; G Veldtman; K Roman; J Vettukattil; J Gnanapragasam; T Salmon; M Haw

Wessex Cardiothoracic Centre, Southampton University Hospitals NHS Trust, Southampton, United Kingdom

Objectives: To examine the mid-term clinical outcome of pulmonary valve replacement (PVR) with prosthetic valves.

Methods: We reviewed 24 consecutive patients who underwent PVR with prosthetic valves between September 1999 and October 2008. The median age was 21.5 years (range 6-70 years; 4 children). The primary diagnosis was Tetralogy of Fallot in 12 patients (50%). Valve pathology was regurgitation in 17 patients (70.8%). Cardiac surgery had been previously performed in 23 patients (95.8%). PVR was performed with bioprosthetic valves in 18 patients and mechanical valves in 6 patients (median size 25mm; range 21-32 mm). The median follow-up was 36 months (range 1.2-108) and the cumulative follow-up was 74.7 patient-years.

Results: There were no early valve-related deaths. Hospital mortality was 4.1% (n=1) and no patient required early re-replacement of prosthesis. Two patients required permanent pacemaker insertion. During follow-up, there was no late death, re-operation for structural valve degeneration or valve thrombosis. Only 1 patient required repeat operation for endocarditis at 37 months follow-up. The actuarial survival at 5 years was 95.6±4.2%. Overall freedom from re-operation after PVR at 5 years was 90±9.5%. Twenty one patients (91.3%) were NYHA class I as compared to 13 patients (54.1%) pre-operatively ($p<0.05$) at last follow-up. In the 22 alive patients who did not undergo repeat PVR, there was no regurgitation and the peak PV gradient was 20.8±11.9 mmHg. Twenty one patients (91.3%) had good right ventricular function compared to 18 patients (75%) pre-operatively.

Conclusions: PVR with prosthetic valves can be performed with good mid-term survival, functional status and haemodynamics.

56. Unifocalising Major Aortopulmonary Arteries in Pulmonary Atresia with Ventricular Septal Defect Results in Favourable Long-term Outcomes: Experience with 236 Patients

Authors: B Davies[1] S Mussa[1] P Davies[2] J Stickley[1] J Wright[1] J de Giovanni[1] O Stümper[1] T Jones[1] D Barron[1] W Brawn[1]

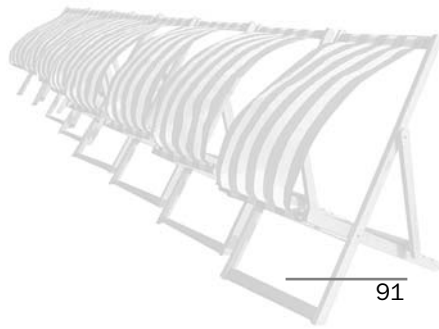
1 Birmingham Childrens Hospital, Birmingham, United Kingdom; 2 Institute of Child Health University of Birmingham, Birmingham, United Kingdom

Objectives: Pulmonary atresia with ventricular septal defect and major aortopulmonary collaterals (MAPCAs) is a complex lesion with a poor natural history. We evaluated the outcomes of unifocalisation in these patients.

Methods: From 1989 to 2008, 236 patients entered a pathway aiming for complete repair by unifocalising major aortopulmonary arteries to an RV-PA conduit with VSD closure. Where ventricular septation was not possible, definitive repair was considered to include pulmonary artery reconstruction and a limiting RV-PA conduit or systemic shunt. Native pulmonary artery morphology was classified into confluent intrapericardial (n=154), confluent intrapulmonary (n=54) and non-confluent intrapulmonary (n=28).

Results: Follow-up was 94% complete. 30-day and late mortality after definitive surgery in all 236 patients was 6% (n=13) and 6% (n=14), respectively. Overall survival was 89% at 5 years following definitive repair. 203 patients (85%) had definitive repair at a median age of 2.0 years. There was no significant difference in survival following complete repair between patients from the three morphological pulmonary artery groups (p=0.18). 132 (56%) patients had complete repair with VSD closure, as a single or staged procedure in 111 and 21 patients, respectively. Proven long-term RV continuity with unifocalised vessels was associated with a survival benefit compared to where unifocalisation was not possible. During follow-up 190 patients required 196 catheter and 60 surgical re-interventions.

Conclusions: Excellent long-term survival can be achieved with patients with pulmonary atresia, ventricular septal defect and major aortopulmonary collateral arteries using a strategy of unifocalisation, intrapericardial pulmonary artery reconstruction and RV-PA conduit even where native intrapericardial pulmonary arteries are absent.



57. Effect of Cardiopulmonary Bypass on Platelet Activation Markers such as Transforming Growth Factors β1 & β2 in Paediatric Cardiac Patients

Authors: A Sharma; J Chen

Weill Cornell Medical College, New York, United States

Objectives: Upon activation, platelets store and release large amounts of the transforming growth factor (TGF β). We aimed to determine the effect of cardiopulmonary bypass (CPB) on platelet activation and consequently on TGF β1 and TGF β2 levels.

Methods: After IRB approval ten patients (newborn to 6 years) undergoing open heart surgery involving CPB were included in the study. The blood samples were collected from the intra arterial catheter in CTAD tubes after induction of anesthesia and at the end of CPB. The quantitative determination of TGF β1 and TGF β2 levels was performed by Enzyme-Linked Immuno Sorbent Assay. Data are expressed as the mean ± standard error of the mean (SEM), comparisons performed using paired t-tests.

Results: Pre CPB TGF B1 1623-6999 pg/ml.

Post CPB TGF B1 1912-41686 pg/ml. (p=0.017).

Pre CPB TGF B2 210.3-300.7 pg/ml.

Post CPB TGF B2 174.2-337.2 pg/ml. (p=0.15). There was no statistically significant correlation between TGF β levels and duration of CPB.

Conclusions: In our study there was a statistically significant increase in levels of TGF β1 after CPB in paediatric patients. Notably the one patient having a reoperation had a dramatic ten fold increase in TGF β1. Levels of TGF β2 decreased without statistical significance. Even though TGF β superfamily has highly similar isoforms TGF β1 and TGF β2, it is possible that they have separate distinctive functions, or different timeline of activation as demonstrated by differential response to CPB in our study. Further study is required to determine if TGF β levels can be correlated with clinical outcome.

58. Positron Emission Tomography & Nodal Staging in Non-small Cell Lung Cancer: The Birmingham Experience

Authors: S Woolley[1] T Ogunremi[2] I Nagra[2] S Meade[2] E Bishay[1] R Steyn[1] F Collins[1] I Woolhouse[2] P Rajesh[1]

1 Birmingham Heartlands Hospital, Birmingham, United Kingdom; 2 University Hospital Birmingham, Birmingham, United Kingdom

Objectives: NICE guidelines regarding positron emission tomography (PET) in nodal staging of non-small cell lung cancer (NSCLC) recommend invasive staging is not indicated if the mediastinum is PET negative. This study aims to compare the results of PET-CT performed locally with the results of pathological lymph node staging.

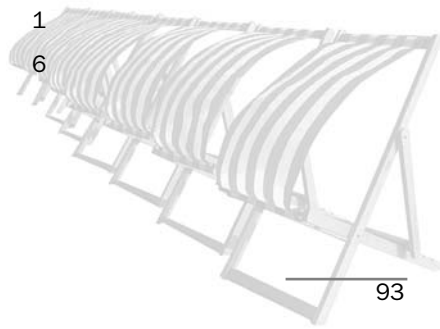
Methods: Radiological and pathological data were collected on all suspected lung cancer patients who underwent PET-CT between 1 April 2006 & 31 March 2007. Patients with histology other than NSCLC were excluded. PET-CT images were reviewed by a PET trained radiologist if PET-CT nodal stage differed from the pathological stage.

Results: 63 patients were identified. 17 patients with histology other than NSCLC were excluded, 6 further patients were excluded due to insufficient nodal sampling. The results of nodal staging by PET-CT and pathological stage for the remaining 40 patients are shown in table 1. All 5 patients staged N0 by PET-CT but N1 on pathology were found to have central tumours. Review of the scan for the patient staged N1 by PET-CT but N2 by histology revealed N2 disease retrospectively. Specificity and sensitivity for N2 disease were 85.7% and 93.9% respectively.

Conclusions: There was good agreement between PET-CT and pathological nodal stage. Only 1 of 32 patients with a negative mediastinum on PET-CT had histological N2 disease and retrospective review of the scan revealed N2 disease. 5 patients were upstaged from N0 on PET-CT to N1 on histology, this did not affect subsequent clinical management. However, this does highlight the difficulty in distinguishing central lung cancers from malignant hilar lymphadenopathy on PET-CT.

Table 1

		Pathology	Nodal	Staging
N0	N1	N2		
PET/CT	N0	21	5	0
Nodal	N1	0	5	1
Staging	N2	2	0	6



59. Endobronchial Ultrasound & Transbronchial Needle Aspiration Biopsy for Mediastinal Staging in Patients with Lung Cancer: Systematic Review & Meta-analysis

Authors: K Adams[1] P Shah[1] L Edmonds[2] E Lim[1]

1 The Royal Brompton Hospital, London, United Kingdom; 2 Papworth Hospital, Cambridge, United Kingdom

Objectives: Endobronchial ultrasound with transbronchial needle aspiration is becoming widely used for mediastinal lymph node staging in patients with known or suspected lung cancer. Whist a substantial number of case series have evaluated test performance of this investigation, the small sample sizes limited the ability to accurately evaluate the precision of endobronchial ultrasound transbronchial needle aspiration as a staging modality.

To perform a systematic review of published studies evaluating endobronchial ultrasound transbronchial needle aspiration for mediastinal lymph node staging to ascertain the pooled sensitivity and specificity of this investigation.

Methods: A literature search was constructed and performed by a professional medical librarian to identify the literature from 1960 to February 2008. Pooled specificity and sensitivity was estimated from the extracted data with an exact binomial rendition of the bivariate mixed-effects regression model.

Results: Of 365 publications, we identified 24 where endobronchial ultrasound transbronchial needle aspiration was specifically focused on mediastinal node staging. Of this, only 10 had data suitable for extraction and analysis. The overall test performance was excellent with an area under the summary receiver operating characteristics curve of 0.99 (95% CI 0.96 - 1.00), similarly this technique has excellent pooled specificity of 1.00 (95% CI 0.92-1.00) and good pooled sensitivity of 0.88 (95% CI 0.79 - 0.94).

Conclusions: Endobronchial ultrasound transbronchial needle aspiration has excellent overall test performance and specificity for mediastinal lymph node staging in patients with lung cancer, with results that compare favourably to published results of CT and PET.

60. Clinical Application of Direct Bronchial Ultrasound to Visualize & Determine Endobronchial Tumour Margins for Surgical Resection

Authors: K Sarraf; E Belcher; S Price; E Lim

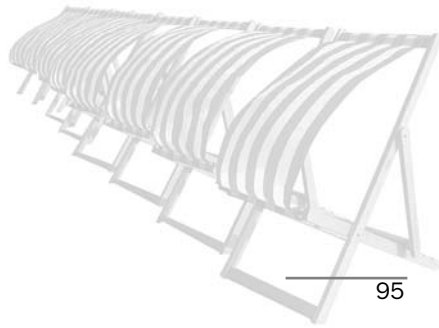
Royal Brompton Hospital, London, United Kingdom

Objectives: Typical carcinoid tumours are rare low grade tumours that are often well circumscribed and rarely metastasise. There is a slight preponderance of growth within the central airways leading to symptoms and signs of airways obstruction. Our institution has considerable experience with airways resection and reconstruction. We describe the first experience of direct bronchial (epi-bronchial) ultrasound to visualize and determine the endobronchial tumour margins for surgical resection.

Methods: An ultrasound probe in a sterile sheath was applied over a vascular pedunculated tumour in the right main bronchus directly onto the membranous portion. The tumour was visualized due to the water content; there was total loss of signal (air-tumour interface) at the tumour edge. A sterile marker was used to outline the margins of the air-tumour interface.

Results: The right main (palpated) margin was 0.5cm proximal to the (ultrasound) margin -the latter corresponded exactly to the tumour edge. The upper lobe (ultrasound) margin was 1cm distal to the (palpated) margin, and resection was exactly at tumour edge. A tension free anastomosis was adequately achieved. Traditionally, surgical technique involves palpation of the tumour with an incision to inspect the endobronchial lumen determining the position of the pedicle, thus estimating the amount of airway to resect. This may be unreliable with imprecision causing reconstruction difficulties and tension within the anastomosis; predisposing to procedure failure.

Conclusions: This is the first epi-bronchial ultrasound image and utilisation of the air-tumour interface to accurately demarcate endobronchial tumours for surgical resection and reconstruction.



61. Endobronchial Cryotherapy in the Management of Metastasis to the Bronchial Tree

Authors: D Eaton; I Hunt; J Beeson; O Maiwand; V Anikin

Harefield Hospital, London, United Kingdom

Objectives: Cryotherapy is an established technique in the treatment of endobronchial tumours, however there has been no detailed analysis of this technique in the management of endobronchial metastasis. We analysed outcomes in terms of objective and subjective symptom improvement as well as survival.

Methods: We used the prospectively created database of patients from 1995-2008 who underwent endobronchial cryotherapy for metastatic tumours at Harefield hospital.

Results: Of the 26 patients with metastatic endobronchial cancer, 8 were colorectal, 7 renal, 4 oesophageal, 3 ovarian and endometrial, 2 melanoma, 1 parotid and 1 thyroid in origin. The age range was 22 to 80 years and 17 patients were male.

The number of cryotherapy applications per procedure ranged from 1 to 4 (mean 2), the number of cryotherapy treatments ranged from 1 to 7 (mean 4).

10 patients had stridor and 7 haemoptysis at presentation. Cryotherapy completely resolved stridor for the duration of treatment and provided temporary alleviation of haemoptysis in all cases. In 5 patients there was a significant improvement in FEV_ and in 1 patient a deterioration on follow-up.

There were no peri-operative or in-patient deaths.

Overall survival ranged from 10 days to 4 years 8 months (median 35 weeks).

Conclusions: Rapid and effective palliation can be safely achieved with cryotherapy for endobronchial metastatic tumours.

62. N2 Disease in Lung Cancer: Reasonable Surgical Outcomes with Low Volume Disease

Authors: S Soon; D West; W Walker

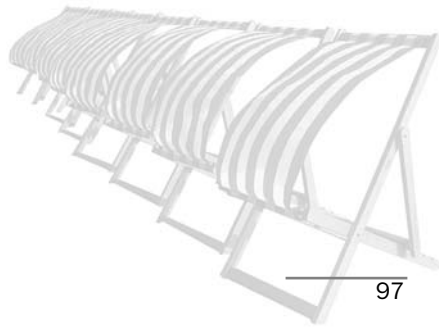
Royal Infirmary of Edinburgh, Edinburgh, United Kingdom

Objectives: Lung cancer patients with N2 disease are currently not considered for surgical resection. The outcome following surgery when N2 status is discovered post resection may not, however, be as pessimistic. We have therefore reviewed our experience with curative resection in order to assess the results in those patients found to have incidental N2 disease in the era prior to PET scanning, endoscopic ultrasound techniques and immunostaining.

Methods: Routine staging involved CT scan and mediastinoscopy with conventional light microscopy without immuno-staining. Patients who had incidental N2 disease following lung cancer resection were identified from a unit database. Survival was determined from hospital records, the general practitioner and cancer registry data. Kaplan-Meier survival analysis was used and inter-group differences were tested using log rank comparison.

Results: 144 patients operated on between 1992 and 2006 (mean age 62.4, 8.87yrs) were found to have N2 disease post resection. There were 82 (56.9%) males. 30 day mortality was 3.5% (5/144). 89 (61.8%) patients underwent pneumonectomy. Disease free survival at 5 years was 21.5%. Patients with N2 disease who underwent pneumonectomy had a 5 year survival of 19.4% vs. 23.2% (p=0.17) for those undergoing lobectomy. T stage (p=0.44) and histological subtypes (p=0.17) did not appear to influence survival.

Conclusions: Surgical resection appears to benefit a subgroup of patients with N2 disease not identified by conventional staging. The use of enhanced diagnostic techniques to exclude patients with low volume mediastinal nodal disease may deny them worthwhile survival associated with resection.



63. Unsuspected N2 Disease in Non-small Cell Lung Cancer. Prognostic Factors Affecting Survival. A 10-year Retrospective Single Centre Study

Authors: M Al-Alao[1] M Young[1] M Mc Govern[1] P O'Byrne[1]

1 St James Hospital, Dublin, Ireland; 2 Institute of Molecular Medicine Trinity College Dublin, Dublin, Ireland

Objectives: To analyze survival in patients with unsuspected N2 disease non-small cell lung cancer (on post-operative pathology but not pre-operative staging) and to identify factors associated with prognosis.

Methods: This is a retrospective study from prospectively collected data. The study included all patients who underwent lung resection between January 1998 and December 2007 for non-small cell lung cancer (n=650).

Results: 94/650 (14%) Patients were identified as N2 positive post-surgical resection. The median survival was 18 months (95%CI 10.8 - 25.2). The 2 and 5 year survival were 29% and 14%, respectively. There were 59 males (62.8%) and 35 females (37.2%) with median survival 16.7 months (95%CI9.3 - 23.2) and 21.2 months (95%CI 9.9 - 40.7), respectively. The extent of mediastinal involvement by tumor (eg. mediastinal fat, chest wall, hilum, etc.) had no effect on outcome (p=0.144). Type of surgical resection (lobectomy versus pnumonectomy) (p=0.033), number of lymph nodes involved (p=0.016), the number of N2 stations involved (single versus multiple)(p=0.03), tumor size (p=0.001), smoking status (p=0.017), post-operative staging (p=0.006) and use of adjuvant chemotherapy post-operatively (p=0.003) were all significant on univariate analysis. Small size tumor (p=0.001), post-operative staging (p=0.028) and single N2 station (p=0.017) were all factors associated with better prognosis on multivariate Cox regression model.

Conclusions: Positive N2 disease diagnosed post-operatively in non-small cell lung cancer has poor prognosis. Extensive mediastinal involvement has no impact on survival. Smaller size tumor, single N2 station involvement and less advanced disease were all independent predictors of survival.

64. Aspirin post Non Small Cell Lung Cancer Resections: Effect On Long Term Survival

Authors: M Poullis; J McShane; R Page; M Shackcloth; N Mediratta; M Carr; R Williams; A Soorae

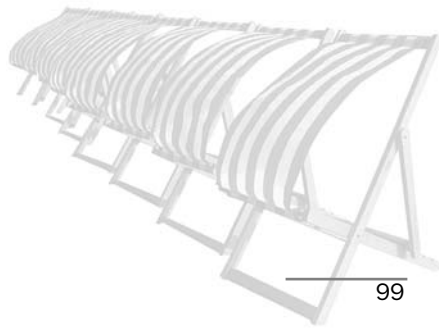
Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

Objectives: Survival after resections for non small cell lung cancer is still poor. Recurrent lung cancer remains common. Due to the common risk factor of smoking, cardiovascular deaths occur in the absence of recurrent lung cancer in up to 15 % of patients. Aspirin has been proven to reduce cardiovascular mortality as a secondary prophylactic agent, but not as a primary agent. Aspirin being a COX-2 inhibitor, has been shown to reduce the chance of metastasis in adenocarcinoma but not squamous carcinoma. We sought to investigate the effect of long term aspirin therapy on 5 year survival post potentially curative surgery

Methods: We analysed a prospective thoracic surgical database, from time period 2003 to date. Patients who were on aspirin pre operatively, n=327 (previous history of strokes, angina, myocardial infarction or peripheral vascular disease), were compared to non users, n=1078. Patient outcome was assessed utilising the national strategic tracking service that operates in the United Kingdom.

Results: 100% follow up was achieved. At 5 years regular users of aspirin had > 5% increased survival, which was significant, $p<0.05$, despite having a higher cardiovascular risk profile. Mode of death data was not available.

Conclusions: Adjuvant aspirin post resection for potentially curative non small cell lung cancer significantly increases survival. The mechanism of increased survival needs further investigation.



65. A Workforce for the Future; Exploring New Ways of Working

Authors: T Bartley; C Badger; I Fenwick; C Retmanski

University Hospital Coventry and Warwickshire, Coventry, United Kingdom

The concerns associated with the impact of the European Working Time Directive (EWTD) and Modernising Medical Careers (MMC) have raised questions about the provision for service delivery with the NHS.

A survey to analyse the strategic impact of cardiothoracic services as characterised by current and potential changes in service delivery aimed to report implications for the future of cardiothoracic surgical provision; and to reveal the range of solutions, which will help inform the specialty in its entirety about how the service may be delivered in the future.

Conclusions: suggest an expansion in the number of nursing practitioners who hold a qualification for non-medical prescribing, health assessment and patient examination. There should be development of competency-based service delivery, though while it was recognised that protocol-driven care has increased practitioner autonomy and can expedite decision-making there are occasions when judgment must step outside the confines of protocols. The solution was that Practitioners must have the knowledge, experience and decision making skills to deliver expert care.

Barriers identified were associated with funding, conflict, developing new roles and education to enable practitioners to work throughout the patient pathway including non-medical prescribing. The Trust role in providing vicarious liability, overcoming manpower issues would also need to be clearly defined.

In essence the framework led to the creation of a collaborative model in one trust. The paper explores issues characterised by the survey and presents a comparative perspective in creating a seamless patient pathway.

66. Primary Bi-ventricular Repair of Atrio-ventricular Septal Defects: An Analysis of Re-operation & Focus on Technical Aspects

Authors: A Chia; H Vohra; J Vettukattil; G Veldtman; J Gnanapragasam; K Roman; T Salmon; M Haw

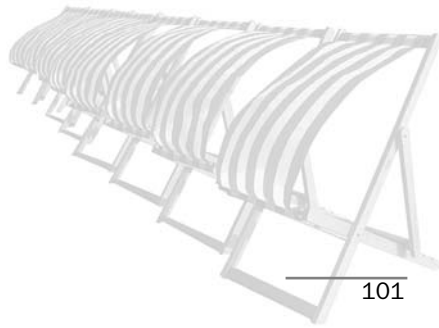
Wessex Cardiothoracic Centre Southampton University Hospitals NHS Trust, Southampton, United Kingdom

Objectives: To analyse the factors affecting re-operation after primary bi-ventricular atrio-ventricular septal defect (AVSD) repair with focus on technical aspects.

Methods: Between April 1997 and April 2007, 93 consecutive patients underwent surgery for bi-ventricular correction of AVSD (median age: 5.8 months (range 9 days-68.9 years) and median weight of 5.8 kg (range 2.6-81.0 kg). Fifty-three patients had complete AVSD, 6 patients an intermediate type, 29 patients partial AVSD, 4 patients with associated Tetralogy of Fallot and 1 with double outlet right ventricle. Nine patients were right ventricle dominant.

Results: There was no in-hospital mortality. There were 2 late deaths (2.2%). Actuarial survival at 10 years was 97.6%. Forty-five re-operations were performed in 25 patients (26.9%), of which 18 were for repair of significant left atrioventricular valve regurgitation (LAVVR) and 8 were mitral valve replacements. Seven patients (7.5%) required insertion of a permanent pacemaker. The overall 5-year and 10-year freedom from re-operation following AVSD repair was 73.6±4.8% and 62.5±8.4%, respectively. In the multivariate analysis, presence of associated cardiac defects (p=0.016) and post-operative pulmonary hypertension (p=0.038) were independent predictors of re-operation. At last follow-up, 76 patients (87.4 %) were in NYHA class I and 68 patients (78.2 %) were on no heart failure medications. Echocardiographic examination showed absent to mild LAVVR in 76.5%, moderate in 19.8 % and severe in 3.7 % of patients.

Conclusions: Associated cardiac defects and post-operative pulmonary hypertension increase the risk of re-operation after AVSD repair. In small left ventricles, biventricular repair can be accomplished with low mortality.



67. 10 Year Survival for Routine lung Cancer Resection by a Minimal Invasive Anterior Approach: Comparison to Open Standard Thoracotomy

Authors: A Suliman; S Rehman; S Roberts; A Chukwuemeka; T Athanasiou; R Stanbridge

St Mary's Hospital Imperial Academic Health Science Centre, London, United Kingdom

Objectives: Does minimally invasive approach (MI) for routine lung cancer resection offer similar 10 year survival to standard thoracotomy(ST)?

We attempt to compare the two techniques, for which there are no long-term studies.

Methods: All patients undergoing lung resection with curative intent for primary lung cancer between July 1998 and October 2008 primarily by a single surgical team were included. Surgical access was obtained through a mini 5-6 cm anterior thoracotomy with video assistance and direct visualisation. Follow up was through a prospective lung cancer registry, PAS and NHS records.

Univariate and Cox proportional hazards regression were used to identify independent predictors of late survival and the Kaplan-Meier product for actuarial survival.

Results: 207 MI patients (81%) included 11 pneumonectomies and 3 sleeve resections. 50 ST patients (19%) included 5 pneumonectomies and 1 sleeve. All 257 had full lymph node resections.

In-hospital mortality was 1.6%; conversion to open 1.9%.

Univariate analysis suggested N2 disease (p=0.02) and cancer stage (p=0.03) were significant potential predictors of survival.

Multivariate analysis showed stage III to be the significant independent predictor with hazard ratio 3.16(1.36-7.36), There was no significant effect on survival for sex, histology, T3/4 status or incision type - 1.047(0.62-1.75).

Kaplan-Meier showed survival differed significantly for stage I cancers, 73 4 months compared to stage III 517 months with log rank chi-square of 5.1 and p=0.024.

Conclusions: 10 year survival for non-selected routine lung cancer resection relates to staging and not to minimal access approach, which can be applied to 80% of resectable primary lung cancers.

68. Mid Term Results from a Randomised Trial of Lung Volume Reduction Surgery

Authors: E Lim[1] I Sousa[2] P Goldstraw[1] P Diggle[2]

1 The Royal Brompton Hospital, London, United Kingdom; 2 Department of Health and Medicine, Lancaster, United Kingdom

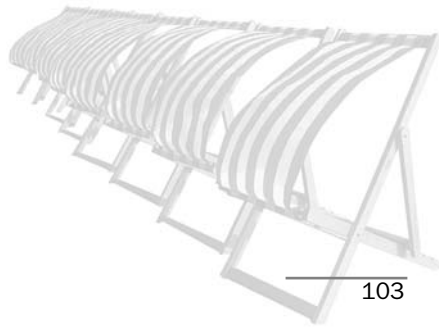
Objectives: results from this US study has been previously published, and we report on the mid term lung function, physiologic and quality of life outcomes.

Methods: Longitudinal measurements of lung function were evaluated in 1218 patients in the cohort at 6, 12, 24, 36, 48 and 60 months. Data were interrogated using longitudinal data analysis techniques to estimate the differences in the survivors of the 608 surgical and 610 medical participants on age, sex and height adjusted (percentage predicted) values for lung volumes, maximum workload, shortness of breath and quality of life scores.

Results: In patients randomised to LVRS, there was an immediate improvement in FEV1 compared to medical therapy with an estimated decline to baseline occurring 4 years after randomisation. Whilst the RV/TLC ratio declined and was sustained, other mechanical effects including residual volume and forced vital capacity declined to baseline.

In patients randomised to LVRS exercise performance measured as maximum workload increased and returned to baseline by 4 years, but the physiological effect of improving arterial oxygenation, shortness of breath and quality of well being scores improved and appeared sustained.

Conclusions: The mechanical effects of LVRS on lung function and exercise workload improved but showed evidence of returning to baseline with time, however, the physiological improvement in oxygenation, dyspnoea score and quality of life measures appeared sustained within the follow up interval of the trial.



69. Routine Thromboprophylaxis with Low Molecular Weight Heparin in Patients with Lung Cancer Undergoing Surgery may be Unnecessary & even Ineffective

Authors: S Attaran; P Somov; A Wael

London Chest Hospital, London, United Kingdom

Objectives: Cancer patients are thought to be at increased risk of thromboembolic events; aetiology is multifactorial. The NICE guidelines recommend routine thromboprophylaxis with low molecular weight heparin (LMWH) in patients with malignant disease undergoing thoracic surgery. The timing and dosage is controversial. In this study we have assessed the coagulation status of patients undergoing thoracic surgery with thromboelastography (TEG), allowing global assessment of haemostatic function, and to determine whether this is altered by LMWH.

Methods: 20 patients with primary lung cancer (LC) and 20 with benign lung disease (BL) were studied prospectively. Within each group, patients were randomised to receive subcutaneous Clexane 40mg once or twice daily during the postoperative period. Their coagulation status was monitored with TEG preoperatively, and daily for four consecutive postoperative days.

Results: Preoperative TEG parameters (r time, k time, alpha angle, MA & MA60) were within the normal range in both LC and BL groups. These parameters remained normal with no significant difference ($p > 0.5$) on each postoperative day, except for the r time that was prolonged in some patients receiving Clexane 40mg twice a day.

Conclusions: This study demonstrates that the majority of patients with lung cancer do not show hypercoagulable states, either before or after surgery. We also show that Clexane 40mg once or twice a day for thromboprophylaxis may not be fully effective. We advocate screening for patients demonstrating hypercoagulable states and ensuring adequate thromboprophylaxis in this group of patients, with careful monitoring.

70. The 24 Hour Golden Rule: Does it Still Apply to Rupture Oesophagus in the Modern Era?

Authors: H Elsayed; S Hussein; M Shackcloth

Liverpool Heart and Chest hospital, Liverpool, United Kingdom

Objectives: Rupture oesophagus is a surgical emergency with significant morbidity and mortality. We present our experience in managing these patients in a tertiary care.

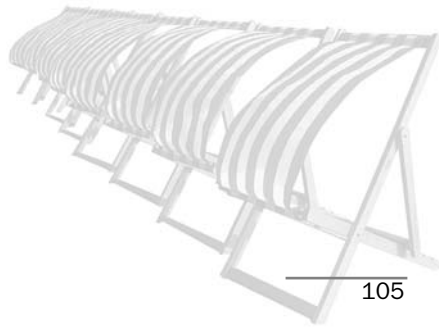
Methods: We conducted a retrospective clinical review of patients who were admitted following rupture oesophagus over a period of five years (2002-2007).

Results: We had 24 admissions following isolated rupture oesophagus to our critical care unit. Out of which 71% were males, 29% females. The median age was 64 years (range 22-82).

Primary surgical repair was done in 74.4 %, a 2-stage repair in 8% and conservative management in 16.6%. Postoperatively, 71% were electively ventilated and nearly half of them (47%) were extubated within first 24 hrs. Mean ITU length of stay was 12 days (range 1- 45) and mean hospital stay was 35 days (range 11-86). Overall in-hospital mortality was 16.6%.

In 75% of the non-survivors, there was a delay in diagnosis (> 24 hrs) ($p<0.01$) along with shock needing inotropes on initial admission and they also required preoperative mechanical ventilation.

Conclusions: Our review confirms the early diagnosis and management (Golden 24 hours) is crucial for successful outcome in patients with rupture oesophagus. More education is needed in the primary and secondary care sector for early detection.



71. Oesophagogastrectomies in the Elderly Population, is it Really Safe? A 7 Year Experience in a Tertiary Centre

Authors: H Elsayed; M Shackcloth; N Howes; M Hartley; R Page

Liverpool Heart and Chest hospital, Liverpool, United Kingdom

Objectives: The aim of this study was to evaluate the effects of advanced age on the surgical outcome and hospital survival of patients undergoing oesophagectomy for oesophageal cancer at a single high-volume center.

Methods: We retrospectively reviewed the hospital survival of 326 patients in our centre that underwent partial/subtotal oesophagogastrectomies (OGs) for resectable oesophageal cancer at the oesophago-gastric junction in a period from May 2001 to April 2008. We divided the patients into two groups. Group A (n=218) consisted of patients younger than 70 years of age, while group B (n=108) consisted of patients 70 years of age or older.

Results: Using multivariate analysis, the two groups were comparable regarding preoperative body mass index, renal dysfunction, pulmonary function tests and cardiac morbidity.

Poor PFTs with an FEV1

Cardiac morbidity (ischemic heart disease/heart failure) was present in 34 patients (15.5%) in group A and 21 patients (19.4%) in-group B.

In-hospital mortality was 11 out of 218 (5%), while in-hospital mortality for elderly patients was 13 out of 108 (12%). This difference was statistically significant ($p<0.05$).

Our analysis has shown that risk factors of mortality after OGs included old age (OR= 2.7) and preoperative cardiac morbidity (OR= 2.5).

Conclusions: Increasing age is a significant risk factor for mortality after oesophageal resection operations. This mortality is particularly high if associated with a preoperative cardiac morbidity. That group of patients should be carefully evaluated with risk stratification, preferably in MDT meetings.

72. Is Oesophageal Cancer Resection Appropriate over the Age of 80?

Authors: R Chaparala; L Nickson; L Beggs; M Asif; E Black; D Beggs; J Duffy

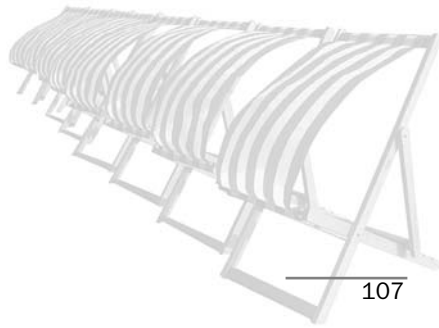
Department of Thoracic Surgery, Nottingham City Hospital, Nottignham, United Kingdom

Objectives: Optimal treatment for oesophageal cancer in patients over the age of 80 has been a contentious issue due to the influence of co-morbidities on long term survival. We aim to present the outcomes of surgery in a large series, from our department.

Methods: Retrospective analysis of 950 patients who underwent surgery for oesophageal cancer between 1992 and 2007 was undertaken. Those who had pre-operative chemotherapy were excluded (n= 147). The study population was divided into three based on age: Group 1 = < 70 years (n= 291), Group 2 = 70 to 79 years (n= 455) and Group 3 = > 80 years (n=57). We compared tumour stage, preoperative co-morbidities, operative mortality, post-operative complications, hospital stay and long term survival between the groups.

Results: Post-operatively, Group 3 (35%) had higher cardiovascular and respiratory complications (p=0.003). Furthermore post-operative mortality was 17.54% in Group 3, 6.1% in Group 2 and 3.9% in group 1. Also median hospital stay was less in Group 1 (11 days) than in Group 2 (13) and Group 3 (14) (p>0.05). Stage 3 was the most common TNM stage amongst those operated. The median survival was 19.6months in Group 1(1vs 2 p=0.063) 19.01 months in Group 2 (2 vs 3 p=0.108) and14.11 months in Group 3 (1 vs 3 p=0.11)

Conclusions: In patients over the age of 80, those who survive the operation have a good chance of long term survival as younger patients. We need to explore the factors for peri-operative death in these patients, so that patient selection can be improved



73. Contemporary Outcomes for Separate Supra-aortic Branch Implantation in Aortic Arch Surgery

Authors: D Quinn; S Liu; T Barker; M Loubani; V Barnett; J Mascaro; R Bonser

University Hospital Birmingham NHS foundation Trust, Birmingham, United Kingdom

Objectives: There is debate as to whether en-bloc or separate supra-aortic branch implantation is the preferable technique in aortic arch replacement. We describe our experience with the separate technique using a multi-limbed graft (Gelweave Vascutek Plexus).

Methods: A retrospective data collection and descriptive analysis was performed on a consecutive patient series undergoing arch replacement with a multi-limbed graft. Results are quoted as median (25-75% IQR) or mean (95% CI)

Results: Between 01/01/2005 and 23/10/2008 62 patients received a multi-limbed arch graft (total arch 55 hemi-arch 7). Mean age was 66(62-70) years, M:F 2.9:1. Annulo-aortic ectasia was present in 33(53.2%), degenerative atherosclerosis in 21(33.9%), inflammatory disease in 4(6.5%) and arch transection in 1(1.6%). Six patients presented with acute dissections. Two(3.2%) had previous endovascular descending aortic stenting, 6(9.7%) had previous aortic valve surgery and 1 had previous translocation of supra-aortic vessels. The median maximum aortic diameter was 65(61-68) mm. Procedures were performed utilising deep hypothermia. The median cross-clamp, bypass, cerebral arrest, corporeal arrest and selective antegrade perfusion times were 167(157-177), 261(242-280), 3(0-6), 58(55-61) and 55(52-58) minutes.

There were 6(9.6%) deaths, 5(8%) in elective/urgent patients, 5 (8%) stroke, 4(6.2%) in elective/urgent patients, 1(1.16%) transient paraparesis and 4(6.2%) laryngeal nerve palsies. Twelve patients(19%) underwent re-exploration for bleeding. The median ITU and post operative length of stay were 7(4-10) and 15(9-12) days respectively. There were 3 non-arch related late deaths and 1-year Kaplan-Meier survival was 88%.

Conclusions: In this consecutive series, the separate implant technique was associated with satisfactory outcomes. It is particularly useful to avoid anastomoses at diseased vessel ostia.

74. Is there a Significant Advantage of Subclavian Artery Perfusion for Type-A Dissection? Long-term results

Authors: U Schurr[1] O Reuthebuch[1] B Seiffert[2] A Häussler[1] D Berdajs[1] M Lachat[1] M Genoni[1]

1 Clinic for Cardiovascular Surgery University Hospital of Zurich, Zurich, Switzerland; 2 Institute for Biostatistics University of Zurich, Zurich, Switzerland

Objectives: Right subclavian artery perfusion is considered to be advantageous over femoral arterial cannulation for the surgical repair of type A dissection. A significant reduction of perioperative mortality and neurological complications has been shown in the short-term, however, long-term data regarding this approach is limited.

This study presents our long-term results using subclavian and femoral arterial cannulation for typ-A dissection, with special regard to disease-free and late survival.

Methods: Between January 1992 and December 2005, 290 consecutive patients (mean age 61years ±13y, 74% male) underwent surgery for acute type-A dissection. Subclavian cannulation (SC) was performed in 114 versus femoral cannulation (FC) in 176 patients. Clinical characteristics were similar in both groups. Follow-up is 89.5% complete with a median of 42 months (range: 3-83 months) in the SC-group and 69 months in the FC-group (range: 2-143 months). Long-term outcomes were evaluated for prevalence of clinical complications, persistence of neurological deficits, mortality, and reoperations for the dissection.

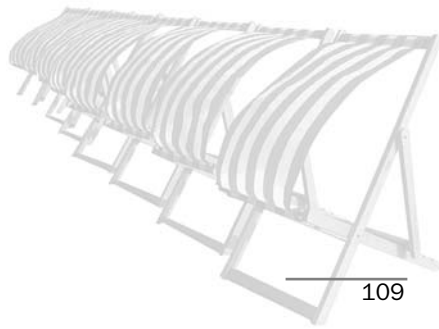
Results: Patients undergoing SC demonstrated significantly improved neurological outcomes (p=0.008) compared to patients following femoral cannulation.

Disease-free survival was significantly better in the subclavian group (p=0.044), as well as the late survival (p=0.022).

SC: 5y- survival 83±4% / 5y- disease-free survival: 74±5%

FC: 5y- survival 71.5±3.5% / 5y- disease-free survival: 61±4%

Conclusions: Right subclavian artery perfusion provides an excellent approach to repair acute type-A dissection. Beside a significantly reduced mortality rate and improved neurological outcome, a significantly higher disease-free survival rate and a reduced late mortality rate is observed in the long-term follow-up.



75. Aortic Root Replacement Using a Biovalsalva Prosthesis in Comparison to a Handsewn Composite Bioprosthesis

Authors: N Moorjani; A Modi; K Mattam; C Barlow; G Tsang; M Haw; S Livesey; S Ohri

Wessex Cardiothoracic Centre, Southampton University Hospitals NHS Trust, Southampton, United Kingdom

Objectives: The Biovalsalva aortic root prosthesis incorporates a stentless biological aortic valve suspended within a triple-layered vascular conduit with preformed sinuses of Valsalva. This study compared implantation of the Biovalsalva prosthesis with a 'handsewn' composite bioprosthetic graft (CE Perimount bovine bioprosthesis anastamosed to a straight Dacron tube graft).

Methods: 26 consecutive patients between May 2005 and June 2008 underwent elective or urgent aortic root replacement (modified Bentall procedure with coronary button re-implantation) using a Biovalsalva (n=13) or a 'handsewn' bioprosthesis (n=13) for aortic root dilatation. Data is presented as mean ± standard error of mean and compared using unpaired Student t-tests.

Results: There was no significant difference in the pre-operative variables between the two study groups with the mean age of the population 68.4±2.4 years. There was no peri-operative or 30-day mortality. Three patients in each group underwent concomitant aortic hemi-arch replacement. Patients who underwent Biovalsalva implantation had a tendency towards a reduced need for blood transfusion (1.31±0.35 vs. 2.15±0.52 units, p=0.09) but similar mediastinal blood loss (410±62 vs. 436±32 ml, p=ns), cardiopulmonary bypass time (154±5 vs. 170±22 mins, p=ns) and aortic cross-clamp time (121±5 vs. 120±11 mins, p=ns) compared to those with a 'handsewn' bioprosthesis. Postoperative echocardiography demonstrated excellent haemodynamic function of the Biovalsalva prosthesis (mean size 24.5±0.5 mm valved conduit) with peak pressure gradients of 20.0±1.7 mmHg and no or trivial valvular regurgitation.

Conclusions: The Biovalsalva prosthesis can be implanted with excellent haemodynamic and haemostatic properties. It should be considered as an alternative for patients requiring a bioprosthetic aortic root replacement.

76. Type A Aortic Dissection with Open Distal Anastomosis has Similar Outcome as the Closed Technique: Results of 100 Patients

Authors: H Vohra; A Modi; T Velissaris; A Chia; G Eltaj; M Haw; C Barlow; S Ohri; S Livesey; G Tsang

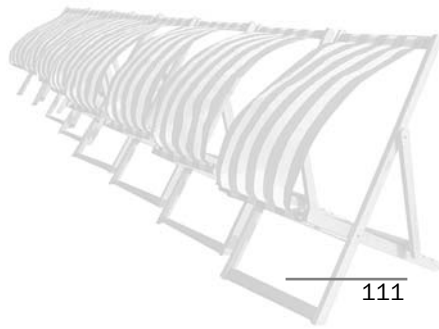
Wessex Cardiothoracic Centre, Southampton University Hospitals NHS Trust, Southampton, United Kingdom

Objectives: To compare short and long-term outcomes after open versus closed distal anastomosis for acute type A aortic dissection.

Methods: We reviewed 100 consecutive patients who underwent acute type A aortic dissection repair between January 2000 and June 2008 (64 men; mean age 63±12.2 years). Patients were divided into: Group I- open anastomosis (circulatory arrest; n=59); Group II- closed anastomosis (no circulatory arrest; n=41). Groups were well-matched for 20 peri-operative variables. Aortic valve resuspension/replacement was performed in 77 patients, aortic root replacement (ARR) in 29 patients and aortic arch procedures in 31 patients. The median follow-up was 2.8 years (0-8.6 years).

Results: The 30-day mortality was 15.2% (n=9) in group I and 9.8% (n=4) in group II (p=0.3). Post-operatively, there was no difference between the two groups with respect to stroke (p=0.4), sepsis (p=0.7), renal failure (p=0.6), multi-organ failure (p=1) and re-operation (p=0.9). Twenty three variables were analysed to determine the predictors of death and stroke. None of the variables significantly affected death on multivariate analysis. The only independent predictor of stroke was ARR (p=0.05; odds ratio 5.3) with step-wise logistic regression. Overall actuarial survival at 1, 3, 5 and 8 years for the group I and group II was 77.8±5.4% vs 90.2±4.6% (p=0.15), 75.8±5.7% vs 86.6±5.7% (p=0.2), 75.8±5.7% vs 86.6±5.7% (p=0.2) and 38.5±17.6% vs 55.8±4.8% (p=0.5), respectively.

Conclusions: There is no significant difference in the short- and long-term outcomes between the open and closed distal anastomosis for acute type A aortic dissection. The need for ARR is an independent predictor of post-operative stroke.



77. The Impact of Endovascular Aortic Repair of Conditions Affecting the Descending Thoracic Aorta on Clinical Outcomes, Reintervention & Hospitalisation Costs

Authors: A Wong; P Narayan; E Akowuah; A Bryan; P Wilde; G Murphy

Bristol Heart Institute, Bristol, United Kingdom

Objectives: Endovascular treatment is increasingly used used to treat complicated aortic pathology. We compared short and long-term outcomes and costs of surgical and EVAR management of diseases affecting the descending thoracic aorta.

Methods: Clinical characteristics, outcomes and hospitalisation costs of 72 consecutive patients undergoing intervention for conditions affecting the descending thoracic aorta were reviewed retrospectively. Hospitalisation costs were calculated from NHS reference costs for staff time, consumables, transfusion and length of stay.

Results: EVAR represented 0% (0/8) of thoracic aortic cases in the years 1996-98 and 95% (19/20) of cases in 2006-7. Aetiology, demographics, comorbidity and emergent status were similar between the groups except for a higher frequency of acute type B dissection (13/36 versus 5/36, p=0.028) in the EVAR group. EVAR was associated with significant reductions in morbidity (reoperation for bleeding 0% versus 12%, sepsis 20% versus 44%, or major pulmonary complications 8% versus 22%, all $p<0.05$) and ITU stay (mean difference -4.8 days (95% CI -8.2 to -1.3). EVAR was associated with significantly increased procedural and transfusion costs (mean difference £6732 (95% CI £4768-£8695). This was chiefly attributable to the cost of endovascular stents. There was no significant difference in overall hospitalisation costs. EVAR was associated with significantly lower freedom from death or reoperation (log rank p=0.048).

Conclusions: EVAR is associated with reduced morbidity and length of stay and has widened the indications for intervention in patients with complex aortic disease. EVAR is associated with higher procedural costs attributable to the use of multiple stents as well as higher re-intervation rates.

78. Early Diabetes Worsens Outcomes in Coronary but Not Valve Surgery

Authors: P Sastry; M Poullis; B Fabri

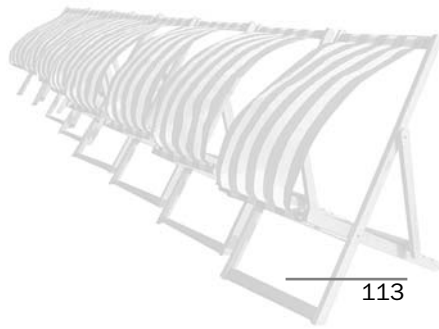
Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

Objectives: To assess whether diabetes with no markers of renovascular disease impacts differently in isolated valve versus coronary surgery.

Methods: Data was collected prospectively regarding the diabetic status of cardiac surgical patients. Patients undergoing isolated elective AVR, MVR or CABG from 1999-2007, without pre-operative renal impairment or extracardiac arteriopathy were included. In-hospital outcomes (sternal wound infection (SWI), chest infection, renal failure, death) and mid-term mortality were retrospectively compared in the diabetic and non-diabetic populations. Two-tailed parametric tests with a p-value <0.05 were used to determine statistical significance.

Results: 6124 non diabetic patients were compared with 1359 diabetic patients. Diabetes did not increase early mortality in any group (AVR p=0.38, MVR p=0.65, CABG p=0.29). Diabetes did not affect in-hospital morbidity following AVR or MVR, but incidence of SWI and renal failure following CABG was increased in the diabetic population ($p<0.0001$, $p<0.0001$ respectively). Mid-term mortality (mean follow-up 4.14 years +/- 3.77 years) was unaffected in AVR (p=0.38) or MVR (p=0.15), but increased in diabetics undergoing CABG (p=0.01).

Conclusions: Diabetes without renovascular sequelae only increases early morbidity and mid-term mortality in elective coronary surgery. Diabetics with coronary arteriopathy may represent a distinct population with a more advanced metabolic syndrome than their counterparts with valvulopathy.



79. Do Women Really Benefit from Off-pump Coronary Artery Bypass Grafting? Analysis of a Single Surgeon Experience Over 14 Years

Authors: J Ganesh; S Mylvaganam; W Dimitri

University Hospitals Coventry and Warwickshire NHS Trust, Coventry, United Kingdom

Objectives: It has been well documented that outcomes following on-pump CABG are inferior in women compared to men. Off-pump CABG(OPCAB) may produce better outcomes in women compared to conventional CABG. Retrospective analysis of a single surgeon experience over 14 years, to identify difference in outcomes, if any, in women following OPCAB is presented.

Methods: All consecutive OPCAB's between 10/94 and 03/08 were included. Pre and post op variables were compared between men and women using standard statistical tests. Outcomes were available for the primary in-hospital stay.

Results: Of the 1076 OPCAB's, 222(20.6%) were females. Women were older ($p=0.0001$), had lower BSA($p=0.0001$) but similar BMI to men($p=0.8$), were more symptomatic(more CCS 3 angina, $p=0.001$ and more NYHA III and IV, $p<0.0001$). More women were hypertensive ($p=0.001$), hypothyroid($p<0.0001$) and had a positive family history of IHD($p<0.0001$). The median logistic EuroSCORE for the group was 1.94(IQR, 1.22 to 3.47), higher in women 2.55(IQR, 1.81 to 4.16) vs. men 1.7(IQR, 1.01 to 3.25), $p=0.0001$. There was no statistical difference in mortality rates among men and women(observed death rate, 1.6% and 1.8% respectively, $p=0.9$). Between 2006 and 2008, women had significantly higher logistic EuroSCORE(median 2.51, IQR 1.39 to 5.84) compared to men(median 2.03, IQR 1.33 to 3.34), $p=0.03$. There were no statistically different mortality rates among men and women in this era(1.7% vs 0%, $p=0.6$).

Conclusions: It can be inferred that women do better following OPCAB as there is no difference in outcomes between men and women as compared to the poorer outcomes in women following CABG.

80. Is There a Degree of Right Ventricular Dysfunction that is Irreversible after Pulmonary Thromboendarterectomy?

Authors: C McGregor; M McGoon; R Frantz; B Edwards; S Kushwaha; J Breen

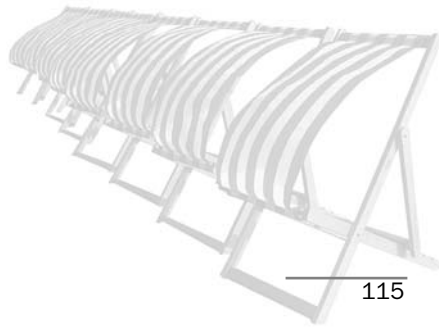
Mayo Clinic, Rochester, United States

Objectives: Chronic pressure overload from thromboembolic pulmonary hypertension leads to a reduction in right ventricular ejection fraction (RVEF), right ventricular dilatation and progressive right heart failure. Pulmonary thromboendarterectomy (PTE) has the potential to reverse these changes. It is unknown if such reversibility is dependent on the level of preoperative RVEF.

Methods: Seventy-six of the last 85 consecutive patients undergoing PTE had measurement of RVEF pre and postoperatively using electron beam computerized tomography or magnetic resonance imaging. There were 43 males and 42 females, with a mean age 54 years (range 18 to 86 yrs). Patients were divided into five groups of preoperative RVEF (Group 1, RVEF 10-19%, n=4; Group 2, 20-29%, n=18; Group 3, 30-39%, n=25; Group 4, 40-49%, n=17; Group 5, >50%, n=12).

Results: Operative mortality (n=3) was 3.5%. Mean pre and postoperative RVEFs were as follows: Group 1, 15.5±4.0 and 28.0±12.3, p=NS; Group 2, 24.7±3.1 and 45.6±12.5, p=<0.00[1] Group 3, 34.6±3.4 and 45.8±10.1, p=<0.00[1] Group 4, 44.9±2.8 and 56.6±8.2, p=<0.05; Group 5, 54.7±3.9 and 50.3±9.6, p=NS, respectively. The number of patients that showed no (reduction or <3%) improvement in each group was as follows: Group 1, n=[2] Group 2, n=0; Group 3, n=5; Group 4, n=4, and Group 5, n=9.

Conclusions: All groups of patients with preoperative right ventricular dysfunction, no matter the level, showed improvements in RVEF postoperatively. Preoperative right ventricular function as a single variable should not be a contraindication to PTE.



81. Prophylactic Treatment of Atrial Fibrillation post Coronary Artery Bypass Grafting: A Randomised Controlled Trial of Sotalol & Magnesium versus Placebo

Authors: T Theologou; M Bashir; M Field; S Ghotkar; M Kuduvalli; A Oo; B Fabri

The Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

Objectives: Atrial fibrillation is a cause of significant morbidity following coronary artery bypass graft (CABG) surgery. Prophylactic Sotalol and Magnesium (Mg^{2+}) have been shown to independently reduce the incidence of atrial fibrillation. The objective of this study was to assess the efficacy of combination therapy with Sotalol and Mg^{2+} on the incidence of atrial fibrillation following CABG.

Methods: We designed a randomized, controlled, double blind trial. Following registration, patients were randomly assigned to one of two groups. Group A recieved a combination of intravenous Magnesium and oral Sotalol (Magnesium 4.0 g daily for 5 days starting from the day of the operation as well as Sotalol 80 mg twice daily for 5 days starting from the morning of the first postoperative day, followed by 40 mg twice daily for a further six weeks). Group B received intravenous and oral placebo. The end point of the trial was the onset of atrial fibrillation or at the end of six weeks following routine review. All patients were monitored with daily ECG and measurement of their K+ and Mg^{2+} during their hospital stay.

Results: One hundred and fifty eight patients were recruited. Of these, 100 patients completed the trial (Group A, 48; Group B, 52). The incidence of AF in Group A was 20.83%, while that in Group B was 55.76% ($p<0.001$). Mean hospital length of stay was 7.8 days in Group A and 7 days in Group B. In-hospital mortality was not significantly different between the two groups.

Conclusions: A combination of oral Sotalol & intravenous Mg^{2+} significantly reduces the incidence of atrial fibrillation after coronary artery bypass grafting.

82. Social Deprivation, Nosocomial Infection & Coronary Artery Bypass Grafting

Authors: S Kumar[1] K Bhavanathi[2] J Howlett[1] S Prasad[1] P Mankad[1] K Bhattacharya[1]

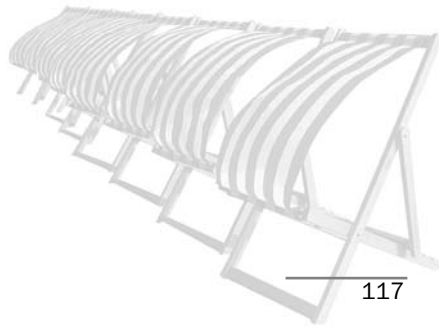
1 Department of Cardiothoracic Surgery Royal Infirmary of Edinburgh, Edinburgh, United Kingdom; 2 Department of Microbiology Royal Infirmary of Edinburgh, Edinburgh, United Kingdom

Objectives: Nosocomial infections blight the success of all surgical procedures and increase the burden on finite health resources. The aim of this study was to assess whether social deprivation influenced nosocomial infection rates following coronary artery bypass grafting (CABG).

Methods: Demographic and perioperative data was collected prospectively on all patients undergoing first time CABG over 5 years and analysed retrospectively. Deprivation was measured using the Carstairs Score and the Scottish Indices of Multiple Deprivation (SIMD). Patients with proven nosocomial infections were identified from the microbiology database.

Results: 432 of 2535 studied patients (17%) acquired 17 microbiologically identified infective organisms from 9 different sites. Patients who acquired a nosocomial infection had a significantly higher mortality rate: 3.7% vs. 1.3% ($p<0.01$). The deprivation scores between patients with and without nosocomial infections were: Carstairs; -0.58 vs. -1.13, ($p<0.01$), SIMD; 17.13 vs. 15.55, ($p<0.01$). Patients with diabetes ($p<0.01$), respiratory disease ($p<0.01$) or transfused of blood ($p<0.01$) were more likely to develop a nosocomial infection.

Conclusions: Social deprivation has a clear impact on nosocomial infections following CABG. Patients from a deprived post code sector who acquire a nosocomial infection have a significantly higher mortality rate than those who do not. This study identifies an at risk group. Further work is necessary to incorporate social deprivation in the risk stratification scores prior to CABG.



83. Hyperselection for Extrapleural Pneumonectomy: Current Staging Methods: are Inadequate

Authors: D West; S Soon; F Carnochan; W Walker

Edinburgh Royal Infirmary, Edinburgh, United Kingdom

Objectives: Previous series of extrapleural pneumonectomy (EPP) for malignant pleural mesothelioma (MPM) have shown subgroups with improved survival. We adopted a rigorous selection strategy ("hyperselection") to select only these patients for EPP. Here we evaluate the success of our strategy.

Methods: Between 2004-2008, we considered patients for EPP with biopsy-proven epitheloid MPM, T<3 and N<2 stage, age <70yr. Staging included universal CT chest/abdomen, MRI chest, mediastinoscopy and differential perfusion scanning. Pre-operative clinical staging was correlated with final pathological stage.

Results: 105 patients were diagnosed with MPM, of whom 21 (20%) were invasively staged for EPP, and 17 (16%) were selected for EPP.

Median survival for correctly staged (n=7) vs. understaged (n=10) patients was 26.2 vs. 11.2 months: the corresponding hazard ratio for death was 0.435 (0.139, 1.321), log rank p=0.12. P values in table 1 were derived from the z test for observed vs. expected proportions

Conclusions: It was not possible to consistently limit surgery to early-stage epithelioid patients. 58.8% were upstaged or retyped after resection, despite operating on only 16% of all MPM patients. Pathological N2 and T3 rates were significantly higher than pre-operative prediction. This limits the application of EPP, because survival in advanced disease is known to be poor. There is a trend to improved survival amongst correctly staged patients. Improved pre-operative staging might therefore improve results.

Accuracy of Pre-Operative Assessment

Pre-Operative Inclusion Criteria	% Accuracy rates (95% confidence intervals): pathological against clinical stage/subtype
Absence of T3 disease	64.7 % (41.3, 82.7), p<0.01
Absence of N2 disease	64.7 % (41.3, 82.7), p<0.01
Epithelioid histology	88.2% (65.6, 96.7), p<0.01
Overall accuracy of pre-operative staging	41.2% (21.6, 64.0), p<0.01

84. Case Controlled Comparison of Radical Open Lung-preserving Surgery with Palliative Surgery for Malignant Mesothelioma

Authors: Y Shahin; J Wellham; R Jappie; K Pointon; A Majewski; E Black

Nottingham City Hospital, Nottingham, United Kingdom

Objectives: To determine whether there is a survival benefit from open lung preserving surgery (radical decortication) for malignant mesothelioma when compared with the non radical approach.

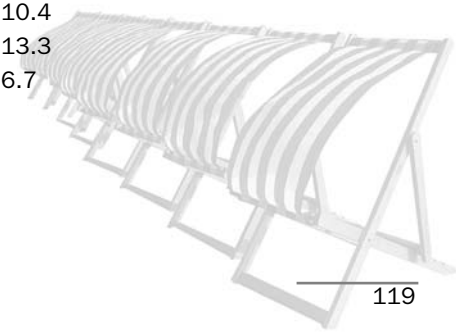
Methods: We compared outcomes between 13 patients with malignant mesothelioma who underwent radical decortication (group RD, n=13) with 13 case-matched patients who had palliative surgery (group NRD, n=13) over a period of 2 years from June 2006. Patients were matched for age, laterality, sex, histology and stage. We compared peri-operative and post-operative courses and long-term survival.

Results: Histology was 1/3 biphasic 2/3 epithelioid in both groups. There was no significant difference in the proportions receiving adjuvant chemotherapy (53.8%) but more patients in the RD group received adjuvant radiotherapy (46.2% vs 15.2%, p<0.001). The median survival for the epithelioid cell type in the RD group was also higher (13.2 months vs 6.0 months, p=0.02).

Conclusions: Radical open lung sparing surgery may confer a survival advantage to patients with malignant mesothelioma who are fit to undergo radical decortication. Trials of radical surgery versus no surgery should include lung-sparing operations

Characteristics of the two groups

	Group RD	Group NRD
Mean Age	61.5 years	63.3 years
M:F	12:1	12:1
IMIG Stage I	2 (15%)	3 (23%)
IMIG Stage II	1 (8%)	1 (8%)
IMIG Stage III	9 (69%)	6 (46%)
IMIG Stage IV	1 (8%)	3 (23%)
Mean BMI	26.8	25.7
Mean FEV1% Pre-op	71%	60%
Mean Pre-op Platelet count	424.1	441.7
Mean Pre-op WCC	8.1	10.4
Mean Pre-op Hb	12.7	13.3
Median Survival(months)	13.6	6.7



85. Pleural Effusion in the Presence of Trapped Lung. Five Year Experience of a Single Thoracic Department

Authors: C Efthymiou; T Irfan; K Papagiannopoulos

St James Hospital Leeds Teaching Hospital NHS Trust, Leeds, United Kingdom

Objectives: Management of malignant pleural effusions in the presence of 'trapped' lung is extremely challenging. Treatment offered must consider the poor prognosis of the condition and the time taken to recover from the procedure is a principal determinant.Our unit chose to manage this condition by implantation of the 'pleurX' catheter device. We describe our five year experience using this device.

Methods: Between 2002 and 2007 116 patients were studied. All patients underwent 'pleurX' insertion by a single operator. The sole inclusion criterion of the study was the insertion of a 'pleurX' catheter.

Health Related Quality of Life was investigated by telephone questionnaire of 116 patients. 48 questionnaires were completed.

Results: Of 48 cases analysed patient satisfaction was assessed by investigation of patient mobility, symptomatic improvement and ease of catheter management. A significant improvement in all three quality of life indices was recorded following catheter insertion. Ease of mobility was recorded as "moderately satisfied" and "very satisfied" in 50% and 15% of patients respectively. Symptomatic improvement was found to have been significantly increased with 42% and 6% of patients responding to "moderately satisfied" and "very satisfied" respectively. Ease of management was recorded as "slightly satisfied" and "moderately satisfied" in 50% and 33% of patients respectively demonstrating a high satisfaction index in patients with chronic progressively debilitating malignancies.

Conclusions: This study confirms the benefits of indwelling 'pleurX' catheters providing symptomatic improvement of malignant pleural effusions. This drainage system is safe, cost effective, efficient and a valuable resource in improving quality of life for palliative patients

86. Fast Track VATS Bullectomy & Pleurectomy for Pneumothorax: Initial Experience & Description of Technique

Authors: A Meduoye[1] S Datta[1] M Malik[2] E Black[1]

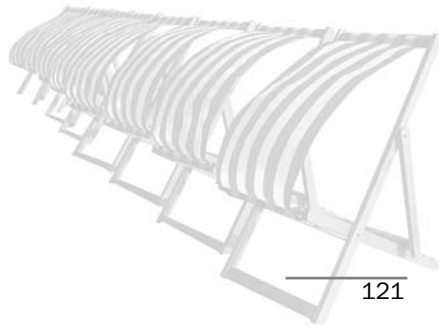
1 Department of Thoracic Surgery Nottingham City Hospital, Nottingham, United Kingdom; 2 Department of Anaesthesia Nottingham City Hospital, Nottingham, United Kingdom

Objectives: Video assisted thoracoscopic (VATS) pleurectomy ± bullectomy is an established surgical procedure for pneumothorax. Early ambulation and discharge home should be a reasonable goal. We wished to explore the feasibility of fast-track discharge and day case surgery.

Methods: Between June 2007 and May 2008, 17 patients underwent VATS bullectomy ± pleurectomy with immediate connection to an ambulatory drainage system following surgery. Analgesia comprised temporary paravertebral with early conversion to oral opiate ± paracetamol. There were 14 males (82%) average age 23 (17 - 32), and three females (18%) average age 35 (22 - 46). 9 patients (53%) underwent elective surgery. All patients had previously suffered at least one pneumothorax. Length of stay was compared with a control group of patients conventionally treated.

Results: In 13 patients (76%) early discharge was achieved 1 (1 - 2) day post-op, whilst connected to an ambulatory drainage system. In 4 patients early discharge was not achieved. Three patients required extended in-patient admissions due to post-operative complications. In the 13 patients discharged promptly, time to drain removal (in clinic) was 7 days (2-11). Two patients required readmission.

Conclusions: We have shown early discharge with ongoing ambulatory drainage following VATS pleurectomy ± bullectomy is feasible with paravertebral blockade in theatre and rapid conversion to oral analgesia. Patients tolerate intercostal drains at home. Limiting factors such as postoperative nausea and pain control can usually be sufficiently treated. Shorter stays will have a beneficial financial result.



87. Pulmonary Metastasectomy after Resection of Colorectal Hepatic Metastases - Is it Justified?

Authors: K Rammohan; P Yiannoullou; H Kaukuntla; P Krysiak; R Shah; M Jones

Wythenshawe Hospital, Manchester, United Kingdom

Objectives: The place for pulmonary metastasectomy in colorectal carcinoma continues to be debated. Around 5 -10% of patients with colorectal carcinoma develop both liver and lung metastases. Long term survival has been reported with an aggressive surgical approach in this patient population. We reviewed our institutional practice in this group to determine the efficacy of surgical resection of both hepatic and lung metastases.

Methods: We retrospectively analyzed data on 91 patients who underwent pulmonary metastasectomy for colorectal carcinoma between January 2000 and October 2008. 44 of these patients had had a previous hepatic resection for colonic secondaries (Group 1) and 47 had isolated lung metastases (Group 2). The groups were compared for demographics, perioperative characteristics and survival data.

Results: There was no significant difference in the mean age of the two groups (64.2 years (SD 6.86) vs 61.6 years (SD 12.5)) (p=0.21) . The number of target lesions resected ranged from 1 to 4 and approaches included a small number of bilateral thoracotomies. There were no perioperative deaths. For the group with previous hepatectomies, the mean survival was 57.5 months (SE 4.65). The isolated lung secondaries group had a mean survival of 81.1months (SE 8.85). The difference in survival was not significant (p=0.79)

Conclusions: Previous hepatic metastasectomy should not preclude an aggressive surgical approach to pulmonary secondaries in patients with colorectal cancer. The mean survival of both these groups in our study exceeds the survival quoted in the literature of patients with untreated metastatic colorectal disease (Less than 10 months).

88. Is Every Metastasis a Metastasis?

Authors: J Nandi; P Rajesh

Heartlands Hospital, Birmingham, United Kingdom

Objectives: We aimed to analyse the incidence of non-metastatic disease in patients referred for pulmonary metastasectomy.

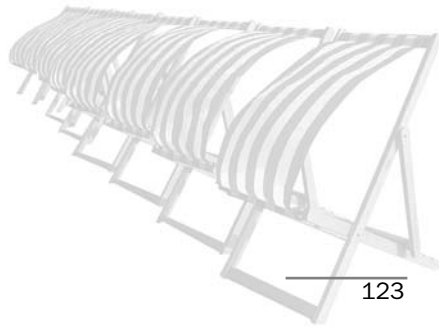
Methods: A retrospective review of all metastasectomies referred to our firm between 2003 and 2008 was performed.

Results: 84 patients underwent a total of 114 metastasectomies to surgically remove 149 nodules. More than one procedure was performed in 29% patients. Half of the 26% patients with bilateral nodules underwent a second procedure for contra-lateral lesions. On histology, 11% of patients had primary lung cancer and 14% had benign lesions.

51% of patients presented with solitary lesions on imaging. Primary lung malignancy was seen in 21% of this subgroup. Although 14% of patients with solitary lesions were benign at first surgery, half of these patients returned for further surgery for new lesions that were metastases.

88% of patients presenting with two or more nodules had pulmonary metastases. 16% of the nodules removed were benign comprising fibrosis, calcification or scarring and may potentially represent benign transformation in some cases following chemotherapy for the primary.

Conclusions: In our series, every metastasis was not a metastasis. Non-metastatic lesions comprised 25% of patients referred and were more often solitary. Two or more nodules on imaging were more commonly associated with metastatic disease.



89. Method of Pleurodesis is Less Important than Surgical Access on Recurrence Rates after Pneumothorax Surgery

Authors: A Bille[1] A Barker[2] E Maratos[2] L Edmonds[2] E Lim[1]

1 The Royal Brompton Hospital, London, United Kingdom; 2 Papworth Hospital, Cambridge, United Kingdom

Objectives: Surgery for recurrent spontaneous pneumothoraces is one of the most commonly performed procedures in thoracic surgery, but few studies have evaluated the efficacy of the surgical treatment options. We aimed to evaluate the influence of the type of pleurodesis on recurrence whilst adjusting for surgical access by systematic review and meta-regression of randomised and non-randomised trials.

Methods: A systematic literature search undertaken for studies on pneumothorax surgery in MEDLINE, EMBASE, Cochrane Library, Internet trial registers and conference abstracts identified 29 studies (4 randomised and 25 non-randomised) eligible for inclusion. Meta-regression was performed adjusting for access to screen for evidence of a difference in recurrence rates.

Results: Access remained the principal determinant of recurrence rates after surgery. The relative risk of recurrence was 4.731 (2.699 to 8.29[1] $p < 0.001$) using VATS compared to open access. After adjusting for access, the relative risk of recurrence of pleural abrasion compared to pleurectomy was observed to be higher at 2.851 (95% CI 0.478 to 17.021), but this was not statistically ($p=0.220$).

Conclusions: Surgical access remains the most important factor that influences outcome after surgery for recurrent pneumothoraces. Although the relative risk of recurrence was higher with pleural abrasion compared to pleurectomy, it was not statistically significant. More studies need to be conducted to address this question.

90. The Benefits of Integrating a Respiratory Medical Emergency Admission Unit on the Pathway of Non-elective Thoracic Surgical Patients

Authors: M Aslam; A Nakas; A Martin-Ucar; D Waller

Department of Thoracic Surgery Glenfield Hospital, Leicester, United Kingdom

Objectives: A Respiratory Clinical Decisions Unit (CDU) was established in 2004. Originally used for medical admissions, we obtained access for in-hospital thoracic surgical transfers instead of adding them to a waiting list for a surgical bed.

We have reviewed the effect of this change in admission policy in two ways:

1.Retrospective audit on the efficiency of treatment for non-elective spontaneous pneumothorax.

2.Prospective audit of all inpatient thoracic surgical transfers (63 patients over 6 months)

Methods: Since introducing the policy 40 patients were referred with spontaneous pneumothorax (Group A), and outcomes were compared with the last 40 patients who were admitted directly to the surgical wards prior to CDU (Group B).

Outcomes: referral-to-transfer time, transfer-to-surgery time and the length of inpatient stay.

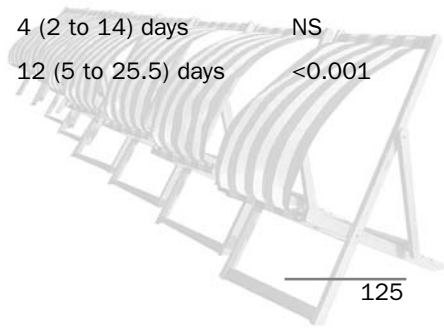
Results: The total inpatient stay was significantly reduced for Group A (12 vs. 15 days, $p < 0.001$) (see Table)

In the prospective audit, referral-to-admission time was only 17 (1.5- 119) hours. For the 50 patients who underwent operation, the admission-to-surgery time was 45 (2 -292) hours. For all patients, the length of inpatient stay was 4 (0-22) days.

Conclusions: Allowing surgical access to a traditionally medical admission unit significantly improves the efficiency of non-elective thoracic surgery and also results in fast processing of patients who would otherwise occupy medical beds.

Results:

Median (range)	Group B	Group A	p value
Referral to transfer time	78 (3 to 148) hours	18 (1.5 to 120) hours	< 0.001
Transfer to operation	42 (8 to 230) hours	46 (2 to 238) hours	NS
Operation to discharge time	4.5 (3 to 17) days	4 (2 to 14) days	NS
Admission in referring hospital to discharge time	15 (5 to 29) days	12 (5 to 25.5) days	<0.001



91. Thoracic Epidural & Paravertebral Catheter Analgesia after Lung Resection: Is one Superior to Another?

Authors: H Elsayed; N Scawn

Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

Objectives: Treatment of acute post-thoracotomy pain for lung resections is particularly important to keep the patient comfortable and to minimize pulmonary complications. We aimed to compare paravertebral catheter analgesia as a method of providing equivalent and more safe analgesia in comparison to the more traditional epidural catheter.

Methods: We retrospectively reviewed 1884 patient who had a lung resection from May 2000 till April 2008 and were offered either an epidural or paravertebral catheter for postoperative pain managment. Preoperative risk factors, extent of resection and postoperative outcome were all analysed. Logistic Regression was used to develop a propensity matched score.

Results: The epidural group consisted of 1754 (93%) patients with a median age of 67 while the paravertebral group had 130 patients (7%) with a median age 63.5yr. A lobectomy was preformed in 65% of the patients in the paravertberal group and 68.5% in the epidural group. Preoperative factors and extent of resection were matched. Post-analysis matching showed no difference in the incidence of postoperative respiratory complications (p=0.24), ITU stay (p=0.51), ITU re-admission (p=0.66) or in-hospital mortality (p=0.67). There was however a significant reduction in the hospital length of stay in favour of the paravertebral group (6 vs 7 days p=0.008)

Conclusions: Paravertebral blocks have proved to be as effective as thoracic epidural analgesia for reducing risk of postoperative complications associated with lung resections. We have additionally found that they are associated with improved length of stay and would be more ideal for fast tracking patients after thoracic surgery.

92. Lung Transplantation from Non-heart Beating Donors without Pre-treatment

Authors: T Butt; S Clark; L Holt; J Wardle; P Corris; J Dark

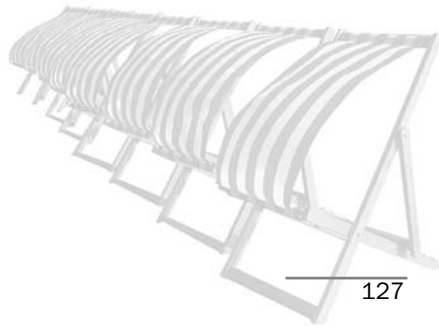
Newcastle upon Tyne Hospitals NHS trust, Newcastle upon Tyne, United Kingdom

Objectives: To increase the numbers of lung transplants, and possibly reduce effects of brain stem death, we commenced transplants from non-heart-beating donors (NHBD) in 2002.

Methods: Data was collected prospectively. No donor pre-treatment was permitted. After asystole, lungs were simply inflated and assessed at sternotomy. Thrombus, if present, was removed from PA, followed by antegrade and retrograde pulmoplegia. Implantation and postoperative management was as our standard protocol.

Results: Since Dec 2002, we have done 15 lung transplants -7 male and 8 female recipients with mean age of 40 years (range 10-64.4 years) from NHBDs (4 single and 11 double lungs). The 10 male and 5 female donors with mean age 29.6 years (range 15-47yrs) died after planned withdrawal of treatment. Mean warm ischaemic time with inflated lungs was 19.4 min (range 2-95 min); with mean total warm ischemic time of 31.86 min (range 10-114 min). Mean ischaemic time (warm + cold) was 356.3min (range 297-453 min). We had 3 deaths within 30 days; 1 on day 8th with primary graft failure and 2 others with bronchial dehiscence and humoral rejection. 2 relatively late deaths were on 47th POD with colonic perforation, and at 6 months with non compliance. 10 other surviving patients have excellent quality of life and lung function. 7 of these transplants, currently the 2nd largest series in the world, were done in 2008.

Conclusions: Lung transplant from NHBD has satisfactory outcomes and now effectively increases our donor pool by 15%.



93. The Resuscitated Deceased Donor Heart is Functionally Superior to The Brainstem Dead Donor Heart

Authors: A Ali[2] G Fajardo[1] G Budas[1] Z Ali[1] S Tsuda[1] S Tsui[2] R Robbins[1] M Fischbein[1] S Large[2] E Ashley[1]

1 Stanford University Medical Center, Palo Alto, United States; 2 Papworth Hospital, Cambridge, United Kingdom

Objectives: Hearts from deceased donors are not currently used for transplantation due to concerns that cardiac arrest will lead to irreversible myocardial injury. Using rodent models we sought to compare cardiac function in the resuscitated deceased donor (DD) heart to that of the brainstem dead (BD) heart.

Methods: Sprague Dawley rats were subjected to hypoxic cardiac arrest (DD, n=10) followed by 15 minutes of warm ischaemia or brainstem death via subdural balloon inflation(BD, n = 10). Cardiac resuscitation in the DD group was achieved using extracorporeal membrane oxygenation. Load independent LV contractility was assessed via the end-systolic pressure volume relationship (ESPVR). LV myocytes isolated from each group were stimulated for analysis of sarcomeric contractility.

Results: Both groups demonstrated a significant decline in contractility (ESPVR) compared to baseline (DD pre 0.81±0.23 vs. post 0.53±0.1, $p<0.0^1$ BD pre 0.77±0.22 vs. post 0.32±0.16, $p<0.001$). The resuscitated DD heart demonstrated superior contractility to the BD heart. Sarcomere shortening was decreased in BD myocytes (7.4%±0.4) compared to DD (10.6%±0.6) and control myocytes (10.6%±0.5), $p<0.01$. Isoproterenol stimulation increased contractility in all myocyte groups, however sarcomere shortening was lower after isoproterenol in BD myocytes (12.3% ± 0.9) compared to DD (16.3%±0.7) and control (16.8%±0.4), $p<0.05$.

Conclusions: Contractility of the DD heart was superior to the BD heart, which is currently used for transplantation. The DD heart maintains viability and recovers satisfactory function following reperfusion. In the face of an ongoing shortage of organs the human deceased donor heart should be evaluated for use in clinical cardiac transplantation.

94. Assessing Peri-transplant Injury in Heart Transplantation: A Novel Immuno-histlogical Scoring System Utilising C9 Immuno-histochemistry

Authors: V Dronavalli; E Clarke; R Bonser; M Mukadam; S Beer; I Wilson; J Mascaro; R Thompson; J Townend; D Neil

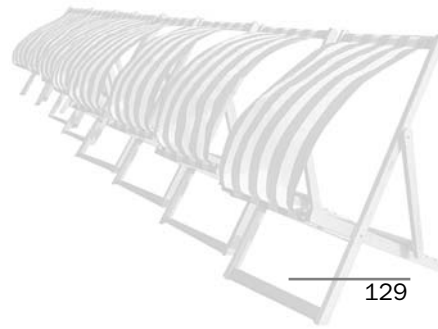
University Hospital Birmingham NHS Foundation Trust Queen Elizabeth Hospital, Birmingham, United Kingdom

Objectives: Complement fragment C9 has been shown to be a simple and sensitive method for the detection of early myocardial necrosis. Using C9 immuno-histochemistry, we designed a scoring system identifying the extent of myocyte necrosis and the relation to donor heart ischemic time, in the first post-HTx right ventricular endomyocardial biopsy.

Methods: Formalin-fixed, paraffin embedded first post-HTx biopsies of 135 recipients were stained with immunoperoxidase labelled anti-C9 antibodies. Information on ischaemic time, hospital stay, renal support requirement and post-transplant rejection was accrued from records. A semi quantitative grading of the degree of C9 staining, scored 0-4 was performed by 2 independent observers with intra- and inter-observer variability of 0.845 and 0.947 respectively.

Results: 132 recipients were alive at 30 days and 130 at 3 months. C9 staining distribution across the grades was: Grade 0-19(14%), grade1-52(39%), grade 2-46(34%), grade3-14(10%) and grade 4-3(2%). The median total ischaemic times (TIT) for each grading were 161,170, 180, 216 and 254 minutes respectively. Both cold (overall mean 124±49min) and TIT (175±62min) correlated with the C9 grade; p= 0.03 and p=0.002 respectively. The C9 grade correlated with hospital length of stay (p=0.043) and TIT with intensive care unit stay p=0.023. TIT was also related to the requirement for post-operative renal support and the number of rejection episodes in the first 3 months post-HTx.

Conclusions: C9 grading of the first post-HTx biopsy quantifies non-immunogenic myocardial injury and correlates with ischaemia and hospital stay. C9 grading may be a valuable tool in assessing myocardial protection strategies to ameliorate ischaemia reperfusion injury.



95. Heart Transplantation for Systemic Ventricular Failure following Atrial Switch Operation for Transposition of Great Arteries

Authors: A Pawale; M Chaudhary; G Parry; N Wrightson; L Hamilton; M Griselli; J Dark; A Hasan

Freeman Hospital, Newcastle upon Tyne, United Kingdom

Objectives: Systemic ventricular failure is a well documented long term consequence of atrial switch procedures (ASP). Heart transplantation remains the only available treatment.We tried to evaluate outcome of heart transplantation for systemic ventricular failure late after atrial switch procedure.

Methods: Retrospective analysis of patients undergoing orthotopic heart transplantation following previous atrial switch procedure. During the period 1985-2008 we performed orthotopic heart transplants in 824 patients. 13 patients had a primary diagnosis of Transposition of the Great Arteries (TGA) of whom 8 had prior Mustard and 5 had prior Senning procedures.

Results: In these 13 patients there were 3 deaths within the first 30 days after transplant (donor organ failure, stroke, and acute rejection), 2 deaths later in the first year (acute rejection, lymphoma) and one further death at nearly seven years post-transplant (graft coronary artery disease). Actuarial survival (compared with other adult recipients) was 76.0% (86.8%) at 30 days, 56.5% (80.7%) at one year and 56.5% (71.8%) at 5 years.

Conclusions: While heart transplantation for failed atrial switch carries a relatively high early post-operative mortality, mid to long term results are good.However, technical challenges remain and there is still room for improvement.

96. Airway Complications following Lung Transplantation

Authors: J Thekkudan; C Rogers; N Banner; R Bonser

On behalf of the UK Cardiothoracic Transplant Audit Steering Group, Royal College of Surgeons of England, London, United Kingdom

Objectives: Airways stenosis and anastomotic dehiscence are important complications of lung transplant (LTx).

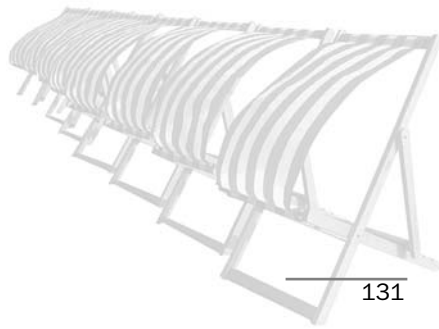
Methods: We investigated the incidence of airway complications (AC), and outcome, among 243 LTx recipients in the UK between 04/05 to 03/07.

Results: Incidence of AC was 17% and varied according to the type of LTx (bilateral sequential (BSLT) 20%, single (SLT) 11%, Heart-Lung (HLT) 8%). In BSLT, AC involved the left in 8%, right in 19% and both in 73%. 6 of the 8 SLT with AC were right lungs. AC involved the anastomosis in 47%, was distal to anastomosis in 38% and both in 15%.

The median time to diagnosis was 58 days (IQR 34-103). Management of AC varied: dilatation in 35%, stenting in 15%, cryotherapy in 15%, surgery in 9% and other in 26%. AC recurred in 71% after a median of 21 days (IQR: 15-63) from initial treatment.

Patients who developed AC were at increased risk of subsequent mortality (hazard ratio 3.4, 95%CI 1.97-6.0, $p<0.01$).

Conclusions: The incidence of AC varied according to the type of LTx. It was highest in the BSLT group and in the majority of cases occurred in both sides. The incidence was lower in SLT but was more common in right sided LTx. Only 1 HLT experienced AC. Despite active treatment survival was significantly reduced in patients with AC, which remains an important complication of LTx.



97. Bridge to Heart Transplantation with Mid to Long-term VAD Mechanical Support

Authors: A Loforte; A Montalto; F Ranocchi; G Casali; G Luzi; F Sbaraglia; V Polizzi; G Distefano; P Monica; F Musumeci

Department of Cardiac Surgery and Heart Transplantation S Camillo Hospital, Rome, Italy

Objectives: Lack of response to medical treatment and shortage of organs for cardiac transplantation (Htx) are limitations for an effective treatment of patients(pts) with end-stage heart failure. Currently, in unstable pts, Ventricular Assist Devices(VAD)offer a successful bridge to Htx.We report our experience with mid to long-term pulsatile and continuous flow VADs.

Methods: Between March 2002 and October 2008, 33 transplantable adult pts were supported on mid to long-term VAD at our institution. LVAD support(Group A)was established in 23 pts(17 HeartMate II LVAS:14 men, age 50±9.6yr(range31-64);6 HeartMate I XVE LVAS: 5men, age 52.5±9.1yr(range 38-61). BVAD support(Group B)was established in 10 pts(9 Thoratec paracorporeal:7 men, age 46.5±11.9yr(range 23-63) and 1 Thoratec implantable:man,42 yr). Indication at implantation were: ischaemic cardiomyopathy (CMP)in 17 pts, idiopathic CMP in 14, restrictive CMP in 1 and post-myocarditis CMP in 1.

Results: Mean support time was 220±210.5 days in Group A(range:1-665 days)and 85±72.6 days in Group B(range:8-235 days). Early(30-days)mortality was 30.3%(10 pts), 5 pts were in Group A and 5 pts in Group B, with sepsis and multiple organ failure as main causes of death. Bleeding requiring re-operation occurred in 9(27.2%)pts(6 Group A, 3 Group B)and cerebral haemorrhage in 3 (9%) pts(1 Group A,2 Group B).There were 2 drive line infection(Group A) and 1 device failure(HeartMate I LVAS). Nineteen pts(57.5%) were transplanted(14 Group A,5 Group B)and 4 pts(12.1%) are at home on the waiting list for transplantation. At follow-up survival rate after Htx is 63.1%(8 pts Group A,4 pts Group B).

Conclusions: According to our experience, long-term VAD support still proves to be successfull as bridge to Htx. End-stage heart failure pts benefited well from either pulsatile and non-pulsatile VADs. Good mid to long-term results can be achieved by means of modern technology.

98. The Effect of Tri-iodothyronine on Myocardial Gene Expression in the Brain Stem Dead Cardiac Donor

Authors: A Ranasinghe[2] S James[2] R Venkateswaran[1] C McCabe[2] J Mascaro[1] I Wilson[1] J Franklyn[2] R Bonser[1]

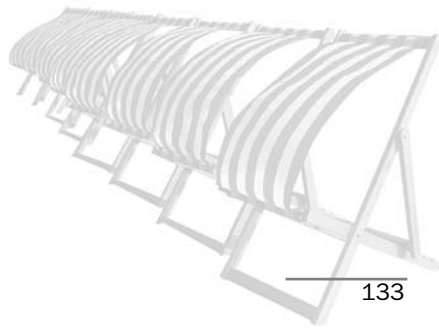
1 University Hospital Birmingham NHS Foundation Trust, Birmingham, United Kingdom; 2 University of Birmingham, Birmingham, United Kingdom

Objectives: We investigated the effects of T3 supplementation in brain stem dead cardiac donors on expression of mRNAs encoding functionally important T3 responsive genes in the cardiomyocyte.

Methods: Within a prospective study of hormonal manipulation and haemodynamic optimisation, left ventricular biopsies were obtained from 30 donors. Sixteen received T3 therapy (0.8µg/kg bolus and infusion 0.113µg/kg/h for 7.6±1.3 hours) and 14 placebo. Biopsies were obtained immediately prior to explant, snap frozen, stored at -80°C and mRNA extracted and reverse transcribed. Taqman real time PCR was performed to investigate expression of known T3 responsive genes.

Results: Serum fT3 levels (mean[95% CI] pmol/l) after 4 hours of T3 treatment, increased to 14.52 [12.84-16.21] versus placebo; 2.77 [2.13-3.41] ($p < 0.001$). No difference was observed in the expression of mRNAs encoding for sodium calcium exchanger, sarcoplasmic reticulum Calcium ATPase and phospholamban or beta-adrenergic receptors. However, expression of the thyroid hormone responsive voltage gated potassium channel (Kv1.5) was significantly increased 2.0-fold ($p = 0.015$). Following optimisation, 5/16 T3 hearts versus 7/14 placebo hearts ($p=1.0$) were usable for transplant on haemodynamic criteria. Usable hearts had lower expression of mRNAs encoding ANP and BNP (ANP 0.24-fold, $p = 0.018$; BNP 0.39-fold, $p = 0.044$). T3 therapy did not lead to a significant improvement in haemodynamic function over that attained with haemodynamic optimisation.

Conclusions: The period of T3 administration in this study increases fT3 but does not increase the expression of mRNAs encoding known T3 responsive contractility-related genes. Donor heart usability is associated with lower expression of mRNAs encoding ANP and BNP.



99. Endoscopic Vein Harvesting - Training Surcial Care Practitioners: A UK Centre Experience

Authors: K Gofton; C Segria

James Cook University Hospital, Middlesbrough, United Kingdom

Objectives: Endoscopic Vein Harvesting (EVH) is becoming more prevalent, used in approximately 85% of saphenectomies in the USA. We present our introduction of EVH, how we overcame difficulties, and we report our favourable experience with the technique.

Methods:

1. A Consultant Surgeon who was experienced at EVH visited our department and performed 4 procedures

2. A two day visit to Derriford Hospital by the SCP's and a scrub nurse in order to learn about the equipment and observe the technique.

3. Prior to commencing the technique it was ensured that:

a. All patients were appropriately consented.

b. Permission was obtained from the Trust Clinical Effectiveness Committee

c. Full support was received from Consultant Surgeons, Anaesthetists and Theatre Team.

4. An experienced SCP from the USA attended for the first two weeks and supervised the first 10 cases.

5. When we commenced this on our own two people scrubbed to perform the technique

6. One month later we had a further 3 days supervision by an SCP from the USA to help with troubleshooting

Results: We have successfully performed 50 cases, 2 of which were converted to open vein harvest

Conclusions: We report a favourable learning experience

100. Reflections On The Surgical Care Practitioner Programme at the University of Teesside

Authors: N Barran; K Gofton; C Segria

University of Teesside, Middlesbrough, United Kingdom

Objectives: To reflect on the challenges of delivering the BSc (Hons) Surgical Care Practitioner (SCP) programme at the University of Teesside.

Methods: The role of the SCP is becoming more recognised and accepted within the surgical team.

The programme was approved in 2004 with the support from local surgical consultants, academia and the local Strategic Health Authority.

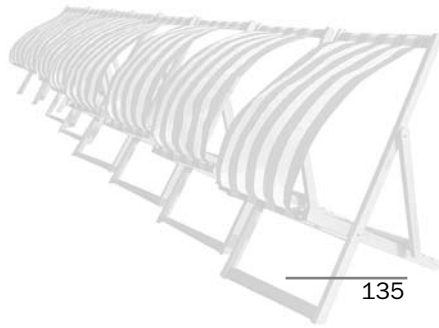
The programme was later adapted in 2006 to accommodate the Department of Health SCP Curriculum Framework Document.

The programme gained accreditation from the Royal College Surgeons (England) in 2006.

Results: There were many challenges faced during the delivery of such a new and unique programme. These varied from the consultant mentors, students and the organisations involved. Challenges have also evolved with different perspectives over the 4 year period.

9 students have successfully completed the programme and there are currently 17 students on three different pathways.

Conclusions: The proven benefits of the SCP role supported by a stuctured programme far exceed any initial concerns and challenges. The benefits have been particularly in the management and organisation of patient care within the surgical team.



101. Hybrid Theatres: Nicety or Necessity?

Authors: A Marshall; M Field; M Kuduvalli; A Oo; A Rashid

The Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

Objectives: Recent years has witnessed the convergence of cardiovascular surgery and interventional radiology in the treatment of thoracic and thoracoabdominal aortic aneurysms. As such, hybrid theatres have emerged allowing combined endovascular aneurysm repair (EVAR) and open surgical intervention for a range of morbidities. This paper discusses whether hybrid theatres are a nicety or necessity in the treatment of these complex pathologies.

Methods: As part of the development of a regional thoracic aortic aneurysm service a purpose built hybid theatre allowing combined percutaneous intervention under screening and open surgery was constructed and opened in April 2007. A number of combined interventions have been performed on thoraco-abdominal aneurysms including CABG, EVAR and TEVAR. Referral patterns vary and all patients are discussed at a Multi Disciplinary Team Meeting involving Radiologists, Vascular Surgeons and Cardiac Surgeons.

Results: In the short period since coming on-line a range of hybrid interventions have been performed. These include EVAR + CABG, TEVAR, TEVAR + carotid bypass, TEVAR + fem-fem cross over. In addition, the theatre is used for a routine cardiac practice including isolated open thoracic aortic aneurysm surgery. A number of hybrid epicardial/endocardial biventricular pacing procedures are also performed routinely, including percutaneous aortic valve replacements.

Conclusions: Hybrid theatres are neither a nicety or a necessity but a praticality. They have several percieved advantages including: a) surgeon centred regulation; b) bespoke C-arm screening with on-line 3D reconstructions, c) theatre table suitable for on and off-pump positioning, d) dedicated anaesthetic and perfusion capabilities, e) adequacy of space, and f) locality within surgical complex.

102. Snapshot of a new Cardiothoracic Centre: The challenges!

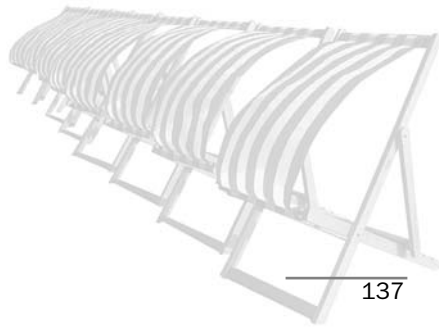
Authors: S Hodson

Critical Care, Colne Ward, Essex Cardiothoracic Centre, United Kingdom

As a number of cardiothoracic centres (CTC) have opened/expanded within the UK because of the NHS strategy to equalise care, the Essex CTC (ECTC) in Basildon may be included in this, opening in July 2007. To develop a new CTC offers many challenging situations, I would like to share some of the issues dealt with and how the Intensive care unit (ICU) has overcome these.

The issues that the ECTC ICU have faced are not entirely new as other CTC will have had these challenges. It's about sharing ideas and resources to offer our patients the best possible experience and care. Implementing change in any respect can pose a challenge. This was faced when amalgamating nurses and trying to standardise practise. Developing, implementing and adjusting protocol has brought forth that challenge as well as including the use of CALS and Glycemic Control. As the unit attempts to expand to maximum capacity recruiting experienced nurses poses another challenge.

As a unit we have had to face many obstacles which we are still overcoming as it's an evolving process. It's about implementing and accepting change. I just wanted to share a snapshot look at some of the issues ECTC faced as we continue to expand which might help other centre with similar issues.



103. Metal-free Modified Ravitch Repair of Pectus Deformities has Good Early Outcomes

Authors: B Naidu; T Makarawo; R Steyn

Heart of England NHS Foundation Trust, Birmingham, United Kingdom

Objectives: Ravitch and Nuss procedures, use a bar, which can lead to rare but serious complications. An additional procedure is required to remove the bar. We present the early results of a novel technique which uses the patients own chest wall muscles to stabilise the repair.

Methods: Twenty nine consecutive patients with pectus deformity underwent modified Ravitch repair without any prosthesis by a single surgeon from 1999 to 2008. The median age of the group was 18 (range 14 to 40). Median follow up was 40 months (CI 3 to 98). Seventeen patients had an excavatum defect and 12 a carinatum. Surgery was performed through a transverse incision raising pectoralis and rectus muscle flaps. Following excision of costal cartilages, 23 patients had a transverse sternal osteotomy. The sternum released to a neutral position was stabilised to the overlying muscle raphe closure. Patient satisfaction was assessed with the Single Step Questionnaire (SSQ).

Results: Median length of stay was 6 days (4 to 9). One patient returned to theatre for bleeding, 1 had a superficial wound infection and 3 patients developed seroma. No patient has had a recurrence to date. There was a significant improvement (Wilcoxon signed rank; $p < 0.001$) in self-esteem and a high level of overall satisfaction (median 62 -CI 44 to 78) on par with published data for the Nuss procedure.

Conclusions: The 'Mercedes' muscle stabilisation modification of the Ravitch procedure yields excellent results with low morbidity and high patient satisfaction without the inherent disadvantages of a metal bar.

104. French Window Thoracotomy: A Phase 2 Case-control Study of Lung Resection via a Novel Non-rib Spreading Thoracotomy

Authors: P Vaughan[1] S Waqar[1] N Morgan-Hughes[2] J Edwards[1]

1 Northern General Hospital, Sheffield, United Kingdom; 2 Department of Anaesthetics Northern General Hospital, Sheffield, United Kingdom

Objectives: Post-thoracotomy pain is described by up to 40% of patients at two years following posterolateral thoracotomy (PLT). French-Window thoracotomy (FWT) has been proposed to reduce acute and chronic post-thoracotomy pain, eliminating trauma to intercostal nerves and costal ligaments. We present our initial experience and early results of lung resection via this technique of novel non-rib-spreading thoracotomy.

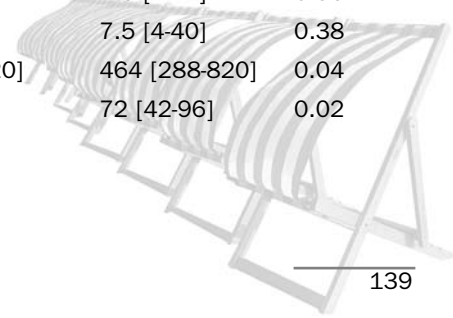
Methods: From August 2007, all patients undergoing FWT (n=16) were compared with age, sex and laterality of operation matched controls undergoing standard posterolateral thoracotomy(PLT) during the same time period (n=16). All patients underwent lobar or sub-lobar resections, for primary NSCLC or metastasectomy. Demographic and perioperative data and postoperative analgesic requirements were collected prospectively.

Results: There were no significant differences in demographic and perioperative data, although a trend was evident towards a longer operating time with PLT. Post operative stay and air leak duration were also similar. No difference was found in pain scores at 24, 48 and 72 hours, although the volume of epidural used to achieve these scores and total duration of epidural were significantly less for FWT. There were no differences in postoperative complications. Only 1 patient in the FWT group described significant pain at discharge.

Conclusions: FWT is appropriate for wedge and anatomical lung resections. The postoperative analgesic requirements are less than for PLT. Further study will examine the later outcome.

Results: expressed as Median [Range]

	French Window	Posterolateral	p value
Age (years)	70 [18-81]	68 [34-79]	0.84
Gender (%male)	56	50	0.24
FEV1 (%pred)	94 [39-119]	84 [34-134]	0.28
Operating time (mins)	120 [60-190]	140 [90-180]	0.06
Air leak duration (days)	4 [0-22]	4.5 [2-11]	0.96
Postoperative stay (days)	6 [3-26]	7.5 [4-40]	0.38
Epidural volume at 72 hours (ml)	328 [123-720]	464 [288-820]	0.04
Epidural duration (hours)	48 [14-94]	72 [42-96]	0.02



105. Non-operative External Compressive Bracing in the Management of Pectus Carinatum

Authors: N Moorjani; D Pousios; R Wheeler; K Amer; C Barlow

Wessex Cardiothoaracic Centre, Southampton General Hospital, Southampton, United Kingdom

Objectives: This study sought to examine the effectiveness of non-operative compressive bracing in the management of pectus carinatum.

Methods: Fourteen consecutive patients with pectus carinatum (not severe enough to justify surgery or where the patient wished not to have surgery) were treated with a custom-made external compressive brace, worn for 23 hours a day. The severity of the pectus was measured prior to fitting the brace, and every 6 months, using a previously described subjective pectus scoring system (0-5 with 5 representing the best appearance). Objective measurement of the pectus carinatum was obtained by measuring the distance of the protrusion. Serial lung function tests were also performed. The prospectively collected data is presented as mean ± standard error of mean and compared using paired Student t-tests.

Results: After a short period, 1 patient refused to wear the brace and subsequently underwent corrective surgery. In patients that reached over 6 months with the brace (mean 12-month follow-up), there was a significant improvement in the deformity, both subjectively using the pectus scoring system (3.88±0.31 vs. 1.25±0.25, p=0.003) and objectively with decreased protrusion (2.8±0.55cm vs. 5.00±0.54cm, p=0.0001). Lung function tests showed a tendency to improved FEV_1 (4.62±0.30L vs. 4.01±0.37L, p=0.07) and FVC (5.36±0.29L vs. 4.59±0.28L, p=0.08). In one patient, the brace was re-shaped at 6 months due to chest wall discomfort.

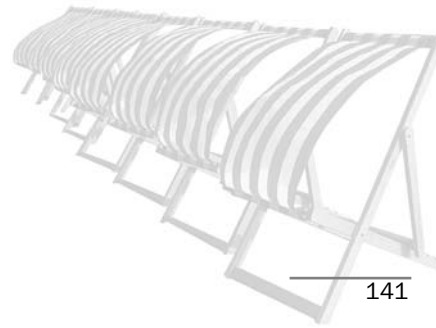
Conclusions: Initial results of this study demonstrate that external compressive bracing is an effective treatment in motivated patients with pectus carinatum. Longer-term follow-up is required to assess whether correction of the deformity is maintained following removal of the brace.

106. Routine Systematic Mediastinal Nodal Dissection during VATS Lobectomy for Early Lung Cancer

Authors: K Amer; A Khan

Wessex Cardiothoarcic Centre, Southampton General Hospital, Southampton, United Kingdom

Objectives: Systematic nodal dissection is increasingly becoming an integral part of VATS lobectomy for early lung cancer. This video gives narrated details demonstrating our routine of en-block mediastinal nodal dissection, which is a modification of the original Naruke technique. The azygous vein is always preserved. The relevant anatomical details of the thoracic cavity are outlined and labelled on the right and left pleural cavities. The tricks of planning ahead the dissection of each station and the caveats of possible damage to nearby structures are emphasised. We demonstrate how to consistently get to the subcarinal and pre-carinal nodes from the left side and how to avoid nerve and thoracic duct injury. A must have for any thoracic surgeon.



107. Surgical Stablisation of Posterolateral Flail Chest: Normalisation of Lung Function

Authors: K Salhiyyah; C Tilkerides; M Davies; A Hamer; S Royston; J Rao; J Edwards

Northern General Hospital, Sheffield, United Kingdom

Objectives: Stabilisation of anterolateral flail chest has been shown to preserve lung function, reduce complications and critical care and hospital stay. The role of surgery for posterolateral flail chest is unclear, with little published data. We have reviewed our initial experience of surgery for this new indication.

Methods: Patients with posterolateral flail chest were assessed and consented for surgical reduction and fixation with titanium reconstruction plates and/or ribbon, secured with titanium cancellous screws. Perioperative course was reviewed. Spirometry was performed preoperatively (if possible) and at 3 months postoperatively.

Results: Data presented as median (range). Seven patients; 3 male, 4 female, median age 74(53-76) underwent surgery over an 18 months period. Indications for surgery were increasing deformity (4 patients), respiratory failure (3), persistent flail (1), thoracotomy for ruptured diaphragm (1). Time from injury to surgery was 5 (1-12) days; operating time (including associated injuries) 4 (1.9- 5.25) hours; postoperative ventilation time 3 (0-230) hours; ITU stay 2 (0-10) days and hospital stay 18 (7- 50) days. Postoperative complications were cellulitis (1 patient), deep wound infection (1), elective tracheostomy (1), sputum retention (1).

Only one patient (operated 12 days post injury), could perform pre-operative spirometry FEV1: 1.17L (34%), FVC: 1.99L (46%). Assessing all patients at 3 months postoperatively FEV1 was 97% (64-109%); FVC 99% (97-121%). Three months postoperatively, the three patients in preoperative employment had returned to work.

Conclusions: Surgical stabilisation of posterolateral flail chest has satisfactory outcome and restores pre-injury status and lung function: selected patients should be assessed for this procedure.

108. Thoracoscopic verus Open Thymectomy for Early Stage Thymoma

Authors: H Abunasra; S Begum; A Nakas; A Martiin-Ucar; D Waller

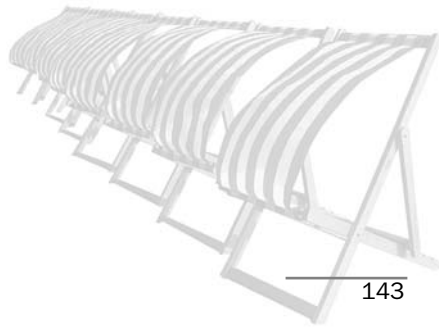
Glenfield Hospital, Leicester, United Kingdom

Objectives: Our increasing experience with VAT thymectomy for myasthenia gravis has encouraged us to extend this treatment to early stage thymomas and challenge conventional teaching.

Methods: We have compared the first 14 consecutive patients (9M; 5F); median age 65.5 (range 40 to 81) years who underwent VAT thymoma excision (Group V) with 14 matched patients (8M; 6F), median age 69 (range 36-81) years) who underwent open thymoma excision.(Group O). VATS excision was performed via three 3cm incisions using electrocautery to remove all mediastinal tissue. Perioperative, histological and long-term oncological data were recorded. Follow-up was complete for all patients.

Results: All patients had non-invasive tumours on preoperative CT staging; 4 patients in Group O and 3 patients in Group V had concomitant myasthenia gravis. There was no significant difference in tumour size (7.3 cm in Group V vs 9.4cm in Group O, $p > 0.15$); Masaoka stage (58% stage II, 29% stage I, 13% stage III in each group) or adjuvant radiotherapy. There was no significant difference in operating time (115 min Group V vs120 min Group O) or duration of tube drainage ($p=0.3$) but there was significantly less volume of drainage in Group V: 150 ml vs 593 ml, $p<0.01$. Hospital stay was sigificantly shorter in group V (3.5 vs 6 days, $p=0.01$). There was no in-hospital mortality in either group. There was no difference in 5 year disease-free or overall survival.

Conclusions: The use of videoassisted thoracoscopic resection for early stage thymoma is both feasible and safe.



109. Evaluation of Thoraquik® in Drainage of Pneumothorax & Pleural Effusion

Authors: S Rathinam[1] P Wall[2] A Bleetman[1] R Steyn[1]

1 Birmingham Heartlands Hospital, Birmingham, United Kingdom; 2 Medical Devices Innnovations Ltd, Haldane, United Kingdom

Objectives: Aspiration for pneumothorax and pleural effusions is performed using kits needing assembly and are not fit for purpose. ThoraQuik® I, has an unique design with 8F needle and 11.5G cannula incorporating an aspiration port and one-way disc valve controlled by a three way tap, designed to be fit for purpose. We evaluated the safety, efficacy, operator handling and acceptability of the ThoraQuik® I in the treatment of pneumothorax and pleural effusion.

Methods: A prospective, observational clinical trial with MHRA and ethical approval was conducted on patients with pneumothorax (including tension pneumothorax) and pleural effusion after informed consent. Ease of device introduction, penetration and ease of use were evaluated with clinical and radiological improvement as endpoints. Operators evaluated the clarity of instructions, ease of handling and procedure satisfaction.

Results: 20 patients were recruited between May 2007 and May 2008. Mean age was 59 years (24-81 years) with 65% males. There were 10 pneumothorax (1 tension pneumothorax) and 10 pleural effusions. One patient withdrew due to anxiety. One patient had no fluid on trial aspiration. Of the eighteen patients who completed the study there was symptomatic and radiological resolution in all except one patient who did not improve with a chest drain and suction. 10 patients (56%) had partial resolution, 8 patients (44%) had complete resolution. No major complications were encountered. The device evaluation results are summarised in table 1.

Conclusions: ThoraQuik® I is safe and easy to drain pneumothorax and pleural effusions. This study has validated several key aspects vital to the continued development of the ThoraQuik® I.

Device Assessment by Users

	Excellent	Good	Adequate	Poor
Ease of device assembly	17	1		
Syringe priming	17	1		
Ease of penetration	15	2		1
Two handed use	14	2	1	1
Device performance	16	2		

110. Is Preoperative Screening with Carotid Doppler Essential in All Patients Undergoing Coronary Artery Bypass Grafting?

Authors: Z Makhija; H Khan; S Chaubey; J Desai; A El-Gamel; L John; O Wendler; R Deshpande

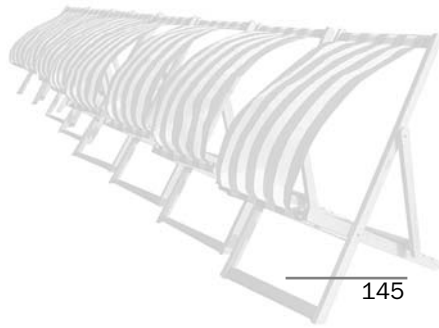
Kings College Hospital, London, United Kingdom

Objectives: The reported incidence of stroke post-CABG is 2.1%-5.2%. This study was designed to evaluate the risk factors for stroke and application of carotid Doppler in patients.

Methods: Data was prospectively collected on 991 patients who underwent CABG in our institution from September 2005 to May 2008. Routine preoperative carotid Doppler was performed on 642 patients (group I). These were propensity matched for preoperative risk factors with 349 patients who did not have Doppler (group II).

Results: There was no significant difference in the history of neurological events between the two groups. The Perioperative mortality rates in the two groups were comparable (group I: 2.6%, n=9 and group II: 1.2%, n=8) (p value: 0.464). Late mortality in group I (0%) was significantly lower (group II :0.6%, n=2) (p value 0.045) although freedom from a neurological cause of death was statistically similar. Doppler identified significant stenosis (>70%) in 6.2 %(n=40) patients of which right was the predominant side (3.7%, n=32) (p =0.0001). The incidence of stroke in group I was 2.3 %(n=8) (group II: 2.4 %, n=16) (p= 0.516). Age>60 years, female gender, hypercholesterolemia, diabetes mellitus, extra cardiac arteriopathy were identified as independent predictors for significant carotid artery stenosis.

Conclusions: Pertinent risk factors should be considered in using carotid Doppler for assessing significant carotid artery stenosis. Revised preoperative screening criteria are essential to ensure cost effectiveness and lower the incidence of stroke.



111. Is there Merit in Combining Abdominal Aortic Endovascular Aneurysm Repair (EVAR) & Coronary Artery Bypass Surgery?

Authors: M Field; M Kuduvalli; A Oo; A Rashid

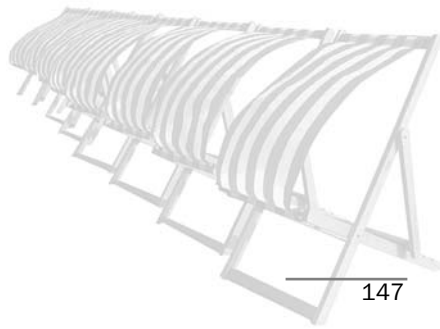
The Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

Objectives: Coronary artery disease and aneurysmal dilatation of the abdominal aorta often co-exist and occasionally both require surgical correction. We report our initial experience with simultaneous endovascular repair of abdominal aortic aneurysm (EVAR) and coronary artery bypass (CABG).

Methods: As part of the development of a regional thoracic aortic aneurysm service a purpose built hybid theatre allowing combined percutaneous intervention under screening and open surgery was constructed and opened in April 2007. A number of combined interventions have been performed on thoraco-abdominal aneurysms including CABG and EVAR. All patients are discussed at a Multi-Disciplinary Team Meeting involving Radiologists, Vascular Surgeons and Cardiac Surgeons. Our approach has been to perform EVAR followed by CABG, either on or off-pump, under a single general anaesthetic.

Results: Between April 2007 and November 2008, seven men aged 61- 76 years, underwent simultaneous EVAR and CABG (three off-pump, four on-pump). Each patient had independent indications for surgical correction of their coronary artery disease and large aortic aneurysms (5.5-10 cm). One patient with disabling left leg intermittent claudication also underwent graft replacement of an occluded left common femoral artery and left external iliac angioplasty. One patient with extensive occlusive iliofemoral disease required insertion of a covered external iliac stent following accidental dissection by guidewire insertion. Surgery was uncomplicated in other cases.

Conclusions: Simultaneous EVAR and CABG by a skilled multi-disciplinary team appears feasible. Potenital advantages include less morbidity, higher patient satisfaction and more efficient use of resources. We discuss the practical issues and lessons learnt from our initial experience.



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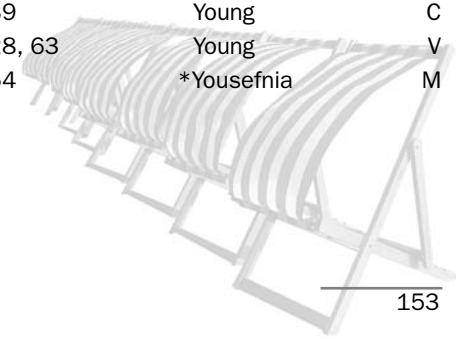
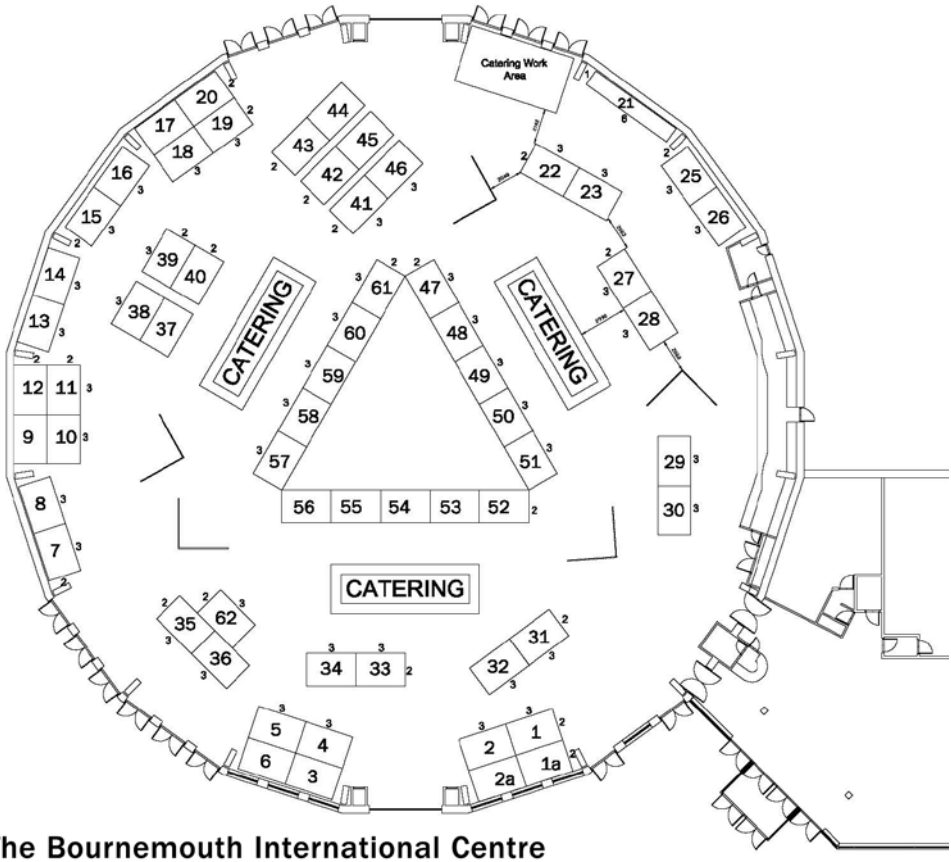


Exhibition Floor Plan



The Bournemouth International Centre
Purbeck Hall

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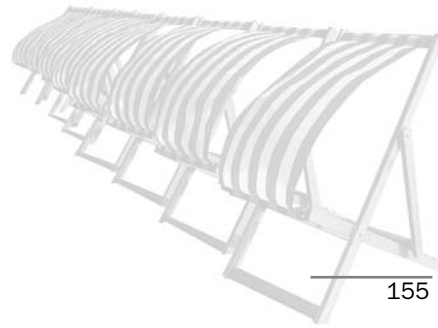


Exhibitor Catalogue

ATRIUM MEDICAL UNITED KINGDOM — Stand 52

Peter House, Oxford Street
Manchester M1 5AN
Tel: +44 (0)161 209 3675
Fax: +44 (0)161 209 3676
Email: atriumuk@atriummed.com
Website: www.atriummed.com
24h/7 days Technical Assistance: 0808 234 7872
Email: atriumuk@atriummed.com
General Website: www.atriummed.com
Education website: www.atriumU.com

Atrium offers the best Chest Drainage Nursing Education Resources accessible on-line at www.atriumU.com. There you will find continuous education programs, instructions for use, posters, handbooks, videos, competency manual, interactive trainings and much more!

Along with our 24h/7 days Technical Assistance Phone 0808 234 7872 in the UK, we are truly dedicated to bring you the best products, services and trainings on thoracic drainage.

Our team is available to present you our latest innovations on Mobile Chest Drainage solutions for rapid patient ambulation with the compact, wearable and waterless Express™ Mini 500 system and the Pneumostat™ chest drain valve.

Visit us for more information! We look forward seeing you soon!

ATS — Stands 57, 58

U.S. Headquarters Contact Information:
ATS Medical, Inc.
3905 Annapolis Lane, Suite 105
Minneapolis MN 55447 USA
Tel: + 1/763-553-7736
Fax: + 1/763-553-1492
Email: atriumuk@atriummed.com
Website: www.atsmedical.com
Local Contact: Fiona K. Fraser
Country Manager, ATS Medical
Tel: 07740 371698

ATS Medical, Inc. manufactures and markets products and services focused on cardiac surgery. The ATS Open Pivot® Heart Valves, which utilize a unique pivot design resulting in exceptional performance and low risk profile, have been implanted in patients worldwide for more than 11 years. The ATS Open Pivot AP360™ valve offers the same clinical benefits of the open pivot design with a flanged cuff of double-velour polyester for exceptional flexibility, needle penetration and conformability. At this meeting we will feature

the ATS 3f® Aortic Bioprosthesis which is a revolutionary next generation stentless pericardial aortic tissue valve that is unlike any other valve. The ATS Simulus® annuloplasty rings and bands complete the ATS portfolio of heart valve products. Continuing ATS Medical's focus on serving the cardiac surgery community are the ATS CryoMaze™ products for the cryoablation of cardiac arrhythmias. The ATS Medical web site is http://www.atsmedical.com.

BAXTER HEALTHCARE LTD — Stand 22

BioSc4formation Tel No: 01635 206 345

Baxter Healthcare's mission is to apply our expertise in medical devices, pharmaceuticals and biotechnology to make a meaningful difference in patients' lives.

Baxter BioSurgery's mission is to improve surgical practice by the development and use of novel biomaterials for hard and soft tissue repair.

Baxter BioSurgery are showing a number of products at this meeting – aimed at helping the surgeon to achieve haemostasis, support and seal tissue.

BRISTOL HEART INSTITUTE — Stand 45

Clinical Trials and Evaluation Unit
Bristol Heart Institute.
University of Bristol
Level 7 Bristol Royal Infirmary
Bristol
BS2 8HW
Tel: +44 (0)117 342 2507 / 342 3143
Email: bristol-cteu@bristol.ac.uk

The Clinical Trials and Evaluation Unit (CTEU) is a UKCRN-registered Clinical Trials Unit. It is part of the Bristol Heart Institute, an international centre of excellence carrying out interdisciplinary cardiovascular research. The CTEU focuses on clinical studies to evaluate the effects of treatments and risk factors in patients having cardiac surgery, and methodological research to improve the way in which evaluations are conducted. Studies to quantify the effects of treatment and risk factors include both randomised controlled trials (RCTs) and observational studies. RCTs are used to evaluate the effects of new treatments compared to existing ones, when patients can be allocated randomly to alternative treatments. Observational studies are used to identify and investigate risk factors for complications and poor long-term outcome after treatment, and to inform the design of future RCTs.

The CTEU is made up of over 20 dedicated staff with relevant backgrounds in epidemiology, medical statistics, trial management and IT. We are currently recruiting UK cardiac centres for two large multi-centre NIHR portfolio RCTs in cardiac surgery; the 'TITRe 2' trial (reducing blood transfusion after cardiac surgery) and the 'CRISP' trial (on- vs off-pump coronary artery bypass surgery in high risk patients).

CALMED LTD — Stand 37,38

Unit 1, Phoenix Crescent
Strathclyde Business Park
Bellshill
Scotland ML4 3NJ
Tel: +44 (0)1698 845 511
Fax: +44 (0)1698 845 457
Email: info@calmed.co.uk
Website: www.calmed.co.uk
Contact: Gordon R Wright, Managing Director

CalMed have now been established for 15 years. We manufacture custom procedure trays at our facility in Scotland. We are able to do this for all surgical disciplines to hospitals throughout the UK.

We also distribute a range of cutting-edge technology products for Cardiovascular Surgery.

CALMEDICAL — Stand 55

Kirkfield House
Lanark
ML11 9UH
Tel: 0800 954 9212
Email: info@calmedical.co.uk
Website: www.calmedical.co.uk

Calmedical is a distribution company offering new technologies to Cardiothoracic Surgeons and Respiratory Physicians in the UK. To introduce these techniques and products we are very focused on training and support as well as offering the highest possible quality and flexibility to service evolving surgical practice.

We are based in Lanark in Scotland and are the UK distributors for Estech Inc (Minimal Access Cardiac and Thoracic Surgery, AF Ablation and OBCAB), Emphasys Medical Inc (Zephyr Endobronchial Valve) and Pluormed (LeGoo Internal Vessel Occluding Gel)

We look forward to seeing you on our stand at the SCTS Meeting.

CALS — Stand 36

Tel: 07801 548 122
Email: joeldunning@doctors.org.uk
Website: www.csu-als.com

Having completed 18 courses including 9 in-house courses, we now teach the official 2009 EACTS guidelines for the resuscitation of patients after cardiac surgery.

This highly innovative 3-day course teaches all aspects of the treatment of critically-ill patients post-cardiothoracic surgery. The course features lectures and a manual but the emphasis is on practical training. A mock-up ICU with manikins and theatre equipment is

used for cardiac-arrest training, and for the critically-ill surgical patient, manikins with laptop-simulated monitors and one-to-one training is used. We also feature hands-on IABP training, tracheostomy, airway and pacing emergencies, CXR, ECG and blood gas interpretation.

This course is intended for both doctors and nursing staff interested or likely to be involved in the care of the critically ill patient. CICU and ward nurses, surgical assistants, nurse practitioners, SHOs and junior registrars have all benefited from attendance on our previous courses.

NEW FOR 2009: We have created a full-sternotomy resuscitation manikin designed from an MRI scan of the thoracic cavity available for our own use and for sale, featuring sternal wires, sternum taking a retractor and life-sized silastic heart and lungs. Come see it on the stand!

Dates for 2009: 16th - 18th April, 30th Jul - 1st Aug, 26th - 28th Nov.

CARDIOLOGIC LTD — Stand 33, 34

Hillside House
Cowesby
Thirsk
North Yorkshire YO7 2JL
UK
Tel: +44 (0)1845 537 870
Fax: +44 (0)1845 537 872
Website: www.cardiologic.co.uk
Contact: Andrew Coane, Sales and Marketing Director:
Mobile 07870 255 758; andrewcoane@cardiologic.co.uk

Cardiologic Ltd is proud to present the latest products developed by Atricure for Atrial Fibrillation surgery. These include the Transpolar pen and new multiple application box for Pacing, Sensing, Stimulating and Ablating the atrium and around the pulmonary veins to map the ganglionic plexi and confirm PV isolation.

The latest data and updated techniques will be available for both open and closed chest approaches.

The Acorn Corecap device and the most recent published data is presented on the stand. New data shows that this is a very effective and safe answer for particular heart failure patients when there is no other option.

To continue the heart failure theme The TRISAVR device from Chase Medical is displayed. This shaping device provides the surgeon with predictable, reproducable results when confronted with a difficult ventricular restoration procedure for ventricular aneurysms.

With the growing use of biventricular pacing, the surgical implantation of LV pacing leads is on the increase. The Enpath Myopore bipolar screw-in lead and minimally invasive tool the Fastac are becoming very popular in the UK and are presented on the stand.

New for this year is the Novadaq Spy intra-operative imaging system. This system provides the Cardiac Surgeon with fabulous pictures in the theatre for real-time assessment of graft patency and allows recordable and printable images for documentation purposes.

CARDIO SOLUTIONS UK LTD — Stand 39,40

Customer Services:
Tel: +44 (0)1423 875 787
Fax: +44 (0)1423 501 112
Email: customer.services@cardiosolutions.co.uk
Website: www.cardiosolutions.co.uk

Cardio Solutions Ltd is a UK based company dedicated to the supply and sales management of Cardiothoracic equipment to the UK health market. Established in 2005, Cardio Solutions Ltd has continued to build on relationships within the medical industry to ensure the highest quality of service in the delivery of Cardiothoracic equipment, education and support to surgeons, NHS Trusts and hospitals.

Our product portfolio encompasses some of the finest innovations in medical technology including; St Jude Heart Valves, Conduits, Mitral Repair Rings and the Epicor High Intensity Focused Ultrasound (HIFU) ablation device; Medical Concepts Temporary Pacing Wires and Disposable Patient Cables; Tissuemed's Tissuepatch 3 – a barrier to pulmonary air leaks; Porter Medical Inc. Aortic Punches; FLEXIGRIP- Nitinol Sternal Closure Clips from Praesidia S.r.l and VirtuoSaph an Endovascular Vein Harvesting system from Terumo Vacutek.

Contacts:

Mark Bailham:	07725 365 552	mark.bailham@cardiosolutions.co.uk
Wayne Wright:	07725 365 550	wayne.wright@cardiosolutions.co.uk
Mark Woolley:	07725 365 551	mark.woolley@cardiosolutions.co.uk
David Stopford:	07970 241 265	david.stopford@ cardiosolutions.co.uk

CHALICE MEDICAL LTD — Stands 53, 54

Chalice Medical Ltd
Coach Crescent
Shireoaks
Worksop
Nottinghamshire, S81 8AD
Tel: +44 (0)1909 470 777
Fax: +44 (0)1909 470 888
Email: enquiries@chalicemedical.com
Website: www.chalicemedical.com

Chalice Medical Ltd was established in 1998 to import high quality medical products from suppliers in Europe and the U.S.A specifically for the Cardiac Surgery and Perfusion market within the U.K & Ireland. Since then it has also installed manufacturing facilities to support its business.

From our head office in Nottinghamshire, Chalice manufacture customised extra-corporeal tubing packs, cannula & cardiotomy reservoirs within it's state of the art cleanrooms. The sales & marketing suites, climate conditioned warehousing and distribution centre are also located here.

Our Products Range Includes:

Levitronix Ventricular Assist Device

- CentriMag® & PediVAS??short term Ventricular Assist Device

AutoTissue GmbH Heart Valves

- Matrix P+: Decellularized Xenogenic Heart Valve

Sternal Closure

- DSS - Sternal Synthesis Device
- Fumedica - Sternal Wires

Delacroix Chevalier Surgical Instruments

- Full range of retractors including Carpentier Mitral Valve, IMA, Dubost, Adult and paediatric ranges
- Instruments for minimally invasive surgery
- Needle holders, Micro-instruments, Resano forceps
- Titanium instruments

Perouse Cardiovascular Grafts

- Various sizes and models of formaldehyde free surgical grafts

Medos and Gish Oxygenators and Extracorporeal Tubing Packs

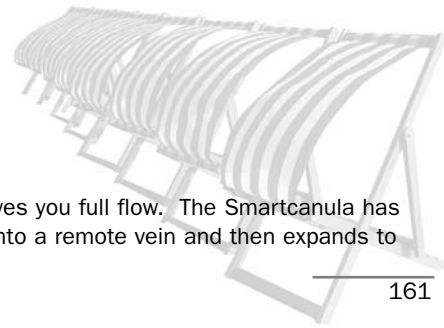
- Miniature Bypass and conventional systems
- Adult, Paediatric and Neonatal ranges
- Conventional, Coated and Long Term ECMO ranges
- Cardioplegia delivery systems

Cannulae

- Full range of cannulae from leading companies around the globe

CLS SURGICAL — Stand 29

Chris Bond, Director
CLS Surgical Ltd
Coach House, The Green
Wallsend
Tyne and Wear NE28 7PG
Tel: +44 (0)191 263 4991
Fax: +44 (0)191 295 0046
Website: www.cls-surgical.com
Contact: Chris Bond BSc BA, Director
Mobile: 07768 271 791
There's always something new...!



At last a femoral venous cannula that actually gives you full flow. The Smartcanula has been designed to collapse to 18Fr for insertion into a remote vein and then expands to

36Fr to give you unmatched flow rates. See our live demonstration of the difference between a Smartcanula and a standard cannula on our stand.

The DigiVent is the only chest drainage system that will continuously measure, display and store the values of air leaks and intra-pleural pressures for you. This gives you the necessary information and confidence to take those drain removal decisions much earlier.

Talk to us about how you can try the DigiVent for yourself.
The latest clinical experience with the MitroFast valvuloplasty system will be available.

COVIDIEN — Stand 47, 48

Covidien (UK) Commerical Ltd
154 Fareham Road, Gosport
Hampshire PO13 0AS
Tel: +44 (0)1329 224 330
Fax: +44 (0)1329 224 400

Covidien, formerly Tyco Healthcare, welcomes you to visit their exhibition stand to see the latest technology from two renowned divisions and one exciting new division; Autosuture, Syneture and Biosynthetics respectively.

Autosuture's innovative surgical staplers and stapleoscopy products are used worldwide and the Autosuture division remains focused on developing the best products, service and training for Surgeons and Healthcare Customers in the industry. Please ask us about our VATS MasterClass programmes.

The Syneture suture division not only provides a complete suture portfolio by combining USS's reputation for innovation with D&G's technology, but has technology no other company can provide. To test NuCoatTM needle technology, experiment with Next Generation SurgiproTM II and find out about the Cardiac training opportunities we provide, please visit the Syneture team.

The new Biosynthetic division recently launched the PleuraSealTM lung sealant system, intended for use as a surgical sealant during pulmonary resection as an adjunct to standard closure techniques of visceral pleural air leaks. We look forward to showing you PleuraSealTM and talking with you about your experiences and views.

CRYOLIFE EUROPA LTD — Stand 59

CryoLife Europa Ltd
Bramley House
The Guildway
Old Portsmouth Road
Guildford
Surrey GU3 1LR
Tel: +44 (0)1483 441 030
Fax: +44 (0)1483 452 860
Email: europa@cryolife.com

CryoLife Europa Ltd. is a wholly owned subsidiary of CryoLife, Inc., the leader in the processing and distribution of implantable living human tissues for use in cardiovascular, and vascular surgeries. Internationally, the Company's focus is on BioGlue® Surgical Adhesive, which is CE marked in the European Community and can be used as a sealant, adhesive and for tissue reinforcement. Clinically proven in over 450,000 procedures worldwide, BioGlue is available in fully disposable syringes in 10mL, 5mL and 2mL volumes. The Company has also begun distributing Hemostase MPH® which is CE marked as an adjunctive hemostatic device for the control of capillary, venous and arteriolar bleeding. Hemostase MPH is a safe, simple and effective hemostat available in volumes of 5g and 3g. The Company also distributes the CryoLife-O'Brien® stentless porcine heart valve.

CYBERPOD, SPONSORED BY MEDTRONIC — Stands 7, 8

If you need to have access to the internet during the meeting, please go to our Cyberpod, kindly sponsored this year by Medtronic. You will find two terminals for your complimentary use throughout the opening hours of the exhibition.

DATASCOPE — Stand 49

Datascope Medical Co Ltd
Lakeview Court
Ermine Business Park
Huntingdon
Cambs
PE29 6XR
Tel: +44 (0)1480 423 600
Fax: +44 (0)1480 423 638

During 2008 Datascope have been pleased to announce several new products:

The CS300 IAB: Giving faster time to therapy and faster response to changes in patient physiological status coupled with simple start up and automated operation.

Sensation 7Fr: The smallest IAB catheter which incorporates fibre optic technology for in vivo calibration, a Durathane balloon membrane for improved abrasion resistance and the smallest size potentially reduces vascular complications.

InterGard Woven Grafts: Including speciality grafts for aortic arch and thoracic aorta repair and replacement in a range of sizes. Features include exclusive weave design giving advanced handling suturing characteristics, strength and durability.

InterGard Silver and InterGard Silver Ultrathin: The World's FIRST antimicrobial graft, with over 100,000 implants and an unprecedented safety record and graft selection, InterGard Silver offers you the first graft intended for use in combination with Rifampicin

Through the development of innovative new products and ongoing acquisition Datascope is pleased to continue as a key provider of quality products to the field of Cardio Thoracic Surgery and a supporter of SCTS.

DENDRITE CLINICAL SYSTEMS LTD — Stand 31

59A Bell Street
Henley-on-Thames
Oxfordshire RG4 9QT
Tel: +44 (0)1491 411 288
Fax: +44 (0)1491 411 377
Email: info@e-dendrite.com
Website: www.e-dendrite.com
Head Office Contact: Dr Peter K H Walton, Managing Director

Dendrite Clinical Systems Ltd is a specialist supplier of clinical databases, analysis software and consultancy services for the international healthcare sector. New cardiac databases include: the International Atrial Fibrillation Registry, the European Valve Repair Registry and the Chain of Hope Registry.

Using web-based technology the Dendrite database now incorporates images and diagrams. Images may be single shot or moving sequences and are stored as part of the patient's record. Diagrams are edited on-line and again saved. The patient's record can be reviewed or updated from any PC on the hospital network using Internet Explorer. Please come and visit our exhibition stand to see a demo of these new registries and to also hear about our "Gateway" product, which is a fully modular bi-directional interface engine that will handle data from hospital systems and cardiac devices to ensure you have the information you need to manage the patient and understand your clinical practice.

EDWARDS LIFESCIENCES — Stands 3, 4, 5, 6

UK HEADQUARTERS:
Edwards Lifesciences Ltd
Sherwood House
78-84 London Road
Newbury
Berkshire RG14 1LA
Tel: 0870 606 2040

Fax: 0870 606 2050

IRISH OFFICE:
Edwards Lifesciences Ltd
5th Floor
Beaux Lane House
Mercer Street Lower
Dublin 2 Ireland
Office: +353 (0)1 8211012 /
+353 (0)1 8211013
Fax: +353 (0)1 8211014

For over 50 years, Edwards Lifesciences has been dedicated to supporting patients in their fight against advanced cardiovascular disease, the world's leading cause of death and disability. Through its focused research, development, discovery and commercialization efforts, the company has driven the creation of leading heart valve therapies and hemodynamic monitoring technologies, as well as vascular and cardiac surgery innovations, to help countless patients resume fuller, happier and more active lives. Unified in their mission, Edwards' employees truly embody the company's pledge to help patients each and every day.

We look forward to seeing you at our booths 3, 4, 5 & 6 at the Society for Cardiothoracic Surgery Annual Meeting.

ETHICON LIMITED — Stand 13

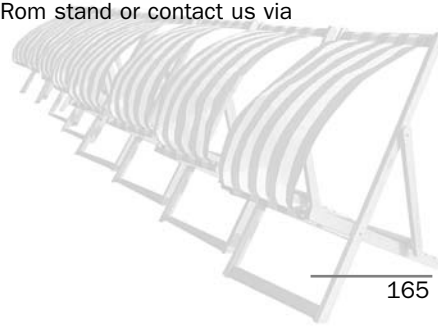
P.O. Box 1988
Simpson Parkway
Kirkton Campus
Livingston EH54 0AB
Customer Services:
Tel: 0800 0327 326
Fax: +44 (0)1344 864122
Website: www.ethiconproducts.co.uk

ETHICON, a division of JOHNSON & JOHNSON MEDICAL LIMITED, is the worldwide leader in suture products and suture technology and is one of the most recognisable and well-respected brand names in the hospital environment. The division has a long history of innovation in providing products – including sutures, topical adhesives, surgical meshes and wound drains – that improve lives by advancing the standard of care in tissue repair.

HILL-ROM — Stand 26

Following cardiac or thoracic surgery, retained airway secretions in high risk individuals can lead to the development of pulmonary complications that may delay their recovery. This group of patients has been shown to benefit from the use of The Vest® Airway Clearance System.

The Vest® System uses a technology called High Frequency Chest Wall Oscillation (HFCWO). The Vest® System has an inflatable vest connected by Air Hoses to an Air Pulse Generator. During therapy, the inflatable vest inflates and deflates rapidly, applying gentle pressure across the chest wall. This works to loosen and thin mucus and to move it toward the larger airways, where it can be cleared by coughing or suctioning. Safety studies have shown The Vest® to be safe to use with post cardiac and thoracic surgery patients and it is frequently used within 24 hours of surgery. The Vest® can be used in both the Intensive Care Unit and also on the wards where patients can initiate their own therapy under the guidance of the respiratory physiotherapist. For further information or a demonstration of the system please visit the Hill-Rom stand or contact us via www.thevest.com



KARL STORZ — Stand 60

392 Edinburgh Avenue
Slough
Berkshire SL1 4UF
Tel: +44 (0)1753 503 500
Fax: +44 (0)1753 578 124
E-mail: customerservice@karlstorz.com
Contact: Steve Anderson

Karl Storz GmbH & Co. is the world's premier surgical endoscopy company with an established and acknowledged reputation for producing the finest quality surgical endoscopes and accessories. We shall be displaying a wide range of cardio-thoracic instruments for endoscopic procedures. These include the following in the cardio-thoracic product range:-

- Multifunctional retractor for Thoracic and Heart Surgery
- Endoscopic Saphenous Vein Harvesting system
- Video-Mediastinoscope

So please visit the Karl Storz stand, No.60, and we shall be pleased to discuss all your endoscopic requirements.

KEYMED — Stand 14

Olympus KeyMed
Stock Road
Southend on Sea
Essex
SS2 5QH
Tel: +44 (0)1702 616333

MAQUET — Stand 27, 28

Maquet Ltd
14-15 Burford Way
Boldon Business Park
Sunderland
Tyne and Wear
NE35 9PZ
Tel: +44 (0)191 519 6200
Fax: +44 (0)191 519 6201
Email: info@maquet.co.uk
Website: www.maquet.co.uk

Maquet is featuring the VASOVIEW™ Endoscopic Vessel Harvesting system and equipment for clampless beating heart surgery.

Endoscopic Vessel Harvesting (EVH) is a minimal invasive procedure for obtaining healthy veins or arteries from patients undergoing coronary bypass surgery. Pioneered in the US,

the first system was launched in 1997 and so far, more than 1,000,000 procedures have been performed. Maquet is now introducing the system to Britain. Replacing the current procedure, which can involve an incision from the groin to the ankle, with a small opening of approximately 2cm, enhances patient clinical outcomes and satisfaction.

MAQUET's off-pump product line enables a completely clampless approach to the CABG procedure. By eliminating the use of an aortic cross clamp and a partial occlusion clamp, the risk of neurological consequences due to the release of microemboli is reduced.

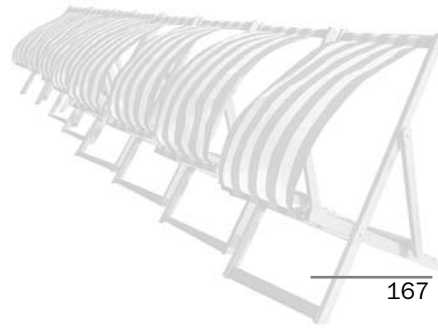
The ACROBAT™ Stabilizers and the XPOSE™ Positioning Devices are the foundation of MAQUET's beating heart product line. The ACROBAT Stabilizers use low-profile feet, FlexLink™ interlocking links to provide greater manoeuvrability and flexibility, and improved reach and access to target vessels. The XPOSE Positioners are designed to securely lift and position the heart and access target vessels, while maintaining hemodynamic stability.

MEDTRONIC LTD — Stands 9, 10, 11, 12

Cardiac Surgery Division
Sherbourne House
Croxley Business Park
Watford WD18 8WW
Tel: +44 (0)1923 212 213
Fax: +44 (0)1923 241 004
Website: www.medtronic.co.uk and www.heartvalverepair.net
Contact: Robert Young

Medtronic offer a comprehensive range of tissue valves, repair products, DLP cannulae, OPCAB products and Atrial Fibrillation pens, bi-polar clamps , generators and products specifically designed for Lone AF. We have over 60000 ablation cases safely performed worldwide. We offer the latest tissue technology in the 3rd generation stented Mosaic and the unstented Freestyle valves as well as unparalled 20 year data on our second generation Hancock II stented tissue valves. Medtronic has recently launched two new repair products and a new range of products to support Minimally Invasive surgery.

Please visit our stand where the team will be happy to show you all of the above along with some other exciting new products.



NHS HEART PROGRAMME — Stand 61

NHS Improvement
3rd Floor, St John's House
East Street
Leicester
LE1 6NB
Tel: +44 (0)116 222 5184
Email: Rhiannon.pepper@improvement.nhs.uk
Website: www.improvement.nhs.uk

The Heart Improvement Programme, now part of NHS Improvement, is delivering on a range of national priority projects and bespoke pieces of work for 2008/09 including a focus on cardiac surgery and primary angioplasty. The cardiac surgery project is working with a number of district general hospitals and tertiary centres across England to explore sustainability of cardiac pathways, incorporating a broad focus on both elective and non-elective work aimed at improving local cardiac surgery services, for example;

- utilisation of outpatients and visiting consultant satellite services
- management of surgical referrals
- pre-assessment of patients
- scheduling of patients for surgery
- reducing length of stay
- workforce redesign

The work of the primary angioplasty project is focused around implementation of the Department of Health Treatment of Heart Attack National Guidance, the final report of the National Infarct Angioplasty Project (NIAP).

NUROS — Stand 25

6 Abbey Lane Court
Evesham
Worcestershire WR11 4BY
Tel/Fax: +44 (0) 1386 429421
Webiste: www.nuros.co.uk
Email: c.services@nuros.co.uk

A real alternative…….

Nuros Ltd presents a comprehensive range of peripheral vascular products combining advanced features and specifications with proven quality and reliability.

Nuros offer a comprehensive product range including the advanced E-vita Abdominal and Endograft systems.

This attractive, mainly European product portfolio is offered with exceptional levels of customer service and competitive pricing to provide A real alternative.

We look forward to welcoming you to stand no 25.

NYCOMED — Stand 23

Nycomed UK Ltd
Three Globeside Business Park
Fieldhouse Lane
Tel: + 44 (0) 1628 646400
Fax: + 44 (0) 1628 646401
Website: www.nycomed.co.uk

Nycomed is a privately owned global pharmaceutical company dedicated to providing medicines that make a real difference to both patients and healthcare providers. To do this, we provide medicines and products for hospitals, specialists and general practitioners, as well as over-the-counter medicines in selected markets.

The company provides specialist hospital and GP products throughout the UK and Ireland. Its core disease areas are currently in the surgical, osteoporosis, gastroenterology, asthma and pain management arenas.

As well as in-house development, many new products are sourced through licensing agreements with research and bio-tech companies. Here, Nycomed provides late-stage clinical development, registration and marketing. Nycomed employs people in the majority of markets through out the world.

OPTIONS MEDICAL — Stand 44

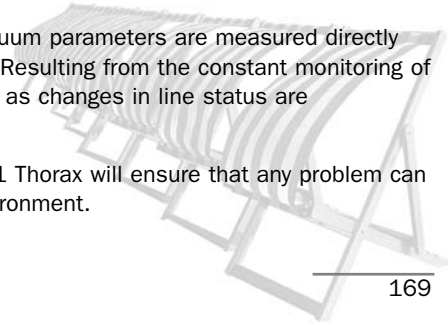
Options Medical Limited
Little Acre
27 Kiln Road
Fareham
Hampshire PO16 7UQ
Tel: 0870 242 3717
Fax: 0870 242 3718
Website: www.optionsmedical.com

Powerful, intelligent, innovative technology just got better by incorporating existing knowledge and innovative design.

With 100 years of suction system development, Options Medical (ATMOS UK) will this year be launching the next generation of thoracic drainage systems in the UK. The ATMOS E201/ S201 Thorax drainage systems are the most powerful available worldwide and incorporate previously unavailable technical innovations.

With the ATMOS tube measuring system, the vacuum parameters are measured directly with the patient, not just at the vacuum source. Resulting from the constant monitoring of the set parameters the siphon effect is excluded as changes in line status are automatically balanced.

The built-in alarm function of the ATMOS S/E 201 Thorax will ensure that any problem can be clearly noted by staff within a noisy clinic environment.



Including a 'real-time' flow measuring system', the ATMOS system can measure current flow parameters so staff and physicians are fully informed of the patients status.

The ATMOS S201 has the additional features of a visual flow history display, the ability to export data in MS Excel ® format via an SD card to a PC for patient treatment history traceability, the ability to connect to a nurse calling system and a colour graphic display.

We welcome you to our stand where both systems will be available for demonstration.

ORTHOVITA — Stand 35

Orthovita UK Ltd
72 London Road
St Albans
Hertfordshire
AL1 1NS
Tel: 0808 1012775
Fax: 0808 1012776
Email: EUorders@orthovita.com

Orthovita UK Ltd is a brand new and exciting company in the United Kingdom. Created to provide full distribution and support for a range of unique surgical biomaterials that offer advanced soft tissue healing and bone regeneration technologies. Orthovita UK currently has three key commercial product platforms: Vitagel Surgical Haemostat, Cortoss Synthetic Cortical Bone and Vitoss Bone Graft Substitute.

Vitagel is a powerful new haemostat which effectively stops bleeding and may help to drive soft tissue healing. Vitagel uniquely combines the patients own biology, at physiologic levels, using autologous platelets and fibrinogen with microfibrillar bovine collagen and bovine thrombin to achieve haemostasis. It is indicated in surgical procedures (other than in neurosurgical and opthalmic) as an adjunct to haemostasis when control of bleeding by ligature or conventional procedures is ineffective or impractical.

If you would like to meet with a representative from Orthovita to discuss our products in more detail, please visit us in the exhibition hall on stand 35.:

PIERSON SURGICAL LIMITED — Stand 56

North Bradley House
North Bradley
Trowbridge
Wiltshire BA14 0TA
Tel: +44 (0)7785 295 594
Fax: +44 (0)7092 315 510
Email: annie@piersonsurgical.com
Website www.piersonsurgical.com
Contact: Annie Pierson

Pierson Surgical Ltd is a surgical products distributor covering products for CardioVascular, Vascular and General Surgery. Our current product range for Cardiac surgery includes:

- Péters Surgical Sutures – a specialist range of sutures for Cardiac surgery, including Cardionyl ® for Mitral Valve Repair and Corolene ® which has very low memory, ideal for Coronary grafts. The range also includes options for pre-attached pledgets.
- Uniring Universal Annuloplasty System – an innovative new device from Péters Surgical: one size fits all, the ring can be customised to the desired annulus circumference.
- ATS Medical Cryoablation System - CryoMaze ™. Using cryothermy for the treatment of cardiac arrhythmias is the only surgical cardiac ablation option that can safely and effectively complete all lesions in the "gold standard" Cox-Maze III procedure with a single product and one energy source. The advantage of cryothermy over heat-based therapies is that freezing preserves tissue integrity and minimizes the risk of endocardial thrombus associated with heat-based sources.
- Rooke® Vascular Insulating Heel Float System - triple layer insulating lightweight boot which reduces the chance of heel pressure sores forming for long stay patients.
- Landanger Surgical Instruments - an extensive range of instruments for every surgical discipline.
- Tubing Clamps – high quality clamps available for Perfusionists
- Cardiothoracic Support Bandages - sternal support bandage for sternotomy which provides Permanent support of the thorax to limit post-surgical trauma and allow easier breathing

PULSE SURGICAL LTD — Stands 50, 51

32A Station Road
Chinnor
Oxon OX39 4PZ
Tel: +44 (0)1844 352220
Fax: +44 (0)1844 354322
Email: steve@pulsesurgical.co.uk
Website: www.pulsesurgical.com
Contact: Mr Steve Chaplin

Pulse continues to be one of the most focused cardiothoracic companies in the UK. As independent distributors, we can offer a unique mix of complimentary products. These

include the superb Scanlan Instrument product line, including first-class Surgical Acuity loupes, the On-X heart valve range, Medi-Stim's flow meter with vessel location option, PeriStrips for staple-line buttressing and Periguard pericardial patches. We also handle the MedXpert range of Pectus bars and associated tools for Pectus Excavatum correction, and their unique Stratos system for complex Pectus, flail chest/trauma and rib resection stabilisation. A and E's sternal wires and pacing wires have recently been added to our range, plus the ArterX ready-to-use sealant. Flothru shunts, Starion's unique vessel harvesting devices, and many unique niche products to assist you in surgery also feature in our range of complimentary products.

SORIN GROUP UK — Stands 1, 1a, 2, 2a

Sorin Group UK Ltd
1370 Montpellier court
Gloucester Business Park
Gloucester
GL3 4AH
Tel: +44 (0)1452 638 500
Fax: +44 (0)1452 638 530

Sorin Group have been at the forefront of world heart valve design and manufacture since 1977. Unique Carbofilm(tm) technology, coupled with state of the art, innovative technological advancement, allows Sorin Group to offer an unrivalled portfolio of heart valve replacement and repair products.

With the published 21 year evidence of excellent durability and performance of the Mitroflow valve and the fast growing use of the Sorin SOLO, single suture line stentless valve, there's never been a better time to consider the Sorin range in your practice.

ST JUDE MEDICAL UK LTD — Stands 41, 42, 43

Capulet House
Stratford Business & Technology Park
Banbury Road
Stratford upon Avon
CV37 7GX
Tel: +44 (0)1789 207620
Fax: +44 (0)1789 207601
Email: sshaw@sjm.com
Website: www.sjm.com
Contact: Sally Shaw

With advances in new techniques the potential profile of patients presenting for surgery is changing. These changes are reflected in the developing product portfolio from St Jude Medical's Cardiac Surgery Division.

This year's meeting will offer the opportunity to view the Epicor Cardiac Ablation System.High Intensity Focused Ultrasound is used to provide cardiac surgical ablation

safely and reproducibly, both epicardially and off - pump. Please visit our stand to see a demonstration of this system.

In addition, our established Regent™ and Epic™ families of mechanical and porcine valves will also be displayed.

We look forward to welcoming you to the St Jude Medical booth.

TEASDALE SURGICAL LTD — Stands 15, 16

Peter Teasdale
Teasdale Surgical Ltd
Unt C6 MDC Alison Centre
39 Alison Crescent
Sheffield S2 1AS
Tel: +44 (0)114 283 5811
Fax: +44 (0)114 283 5801
Mobile: 07775 602500
Email: peter@teasdalesurgical.com
Website: www.teasdalesurgical.com

Teasdale Surgical are a UK distributor for Genesse Biomedical offering Neonate, Child, Paediatric and Adult Sternal retractor systems together with the Shaw IMA retractor.

Teasdale Surgical are the UK distributors for Fehling Micro Surgical Instruments, retracting systems and minimal invasive surgical instruments.

We look forward to greeting you on our stand.

THORATEC — Stand 30

Thoratec Europe Ltd®
Burnett House
Lakeview Court
Ermine Business Park
Huntingdon
Cambs PE29 6UA
Tel: +44 (0)1480 455200
Fax: +44 (0)1480 4541

Thoratec® Corporation, the pioneer and leader in ventricular assist devices (VADs), offers a full line of advanced circulatory assist devices for the restoration of hemodynamics and an improved quality of life for the widest range of patients experiencing heart failure. Only Thoratec offers both approved implantable and paracorporeal VADs for indications including Post-Cardiotomy, Bridge-to-Transplantation and Destination Therapy. The latest addition to the product portfolio is the HeartMate II® (HMII) Left Ventricular Assist Device System, which incorporates advanced technology, precision engineering and over 30 years of clinical experience, into a pump designed to improve patient outcomes, quality of life and exceptional reliability with minimal complications.

UK MEDICAL — Stand 62

UK Medical Ltd
Albreda House
Lydgate Lane
Sheffield
S10 5FH
Tel: +44 (0)114 268 8880
Email: info@ukmedical.com
Website: www.ukmedical.com

UK Medical is delighted to attend this year's SCTS.

Our focus this year will be on the PleurX® catheter for home management of recurrent malignant pleural effusion and ascites. In particular, we will be discussing new clinical data that has led to an opening in its indications. Continued research shows strong justification for the use of PleurX in patients who would normally be considered candidates for talc slurry or thoracoscopic talc insufflation.

The Pleurx catheter has been successfully implanted in thousands of patients globally and has over 30 published clinical papers supporting its use. With UK Medical's years of practical experience and commitment to providing the highest level of training and support, PleurX is an evidence-based option that you can offer your patients with confidence.

In addition, we will be showing the Safe-T-Centesis catheter, specifically designed to reduce the risks associated with percutaneous thoracentesis and paracentesis.

We hope you enjoy the meeting and we look forward to seeing you at our stand.

VASCUTEK — Stands 17, 18, 19, 20

VASCUTEK (a TERUMO Company)
Newmains Avenue
Inchinnan
Renfrewshire PA4 9RR
Scotland, UK
Tel: +44 (0)141 812 5555
Fax: +44 (0)141 812 7170
Website: www.vascutek.com

Significant advances in valved conduit design are rare, however BioValsalva™, a radically new design of valved conduit is without doubt an exception.

BioValsalva™ is a unique porcine aortic biological valved conduit designed for the Bentall procedure. It is a pre-sewn device combining Triplex™, an innovative trilaminate graft material and the elan™ Vascutek Ltd porcine aortic stentless biological valve.

BioValsalva™ reduces procedure complexity, prevents valve-to-graft mismatch and has the potential to reduce bypass, cross-clamp and procedural times. It also enables the treatment of more vulnerable patient groups.

The proximal portion of the conduit is shaped to mimic the geometry and therefore blood flow patterns of the natural sinuses of Valsalva. This combined with the stentless valve ensures that near normal physiological blood flow is achieved.

Triplex™ comprises three layers, inner woven fabric, central elastomeric membrane and outer PTFE wrap. This combination provides superb handling, excellent suturability and rapid haemostasis.

VIVOSTAT — Stand 32

Vivostat A/S
Solvang 4
DK-3450 Alleroed
Denmark
Tel: +45 8880 8400
Fax: +45 4582 4800
Email: kat@vivostat.com
Website: www.vivostat.com

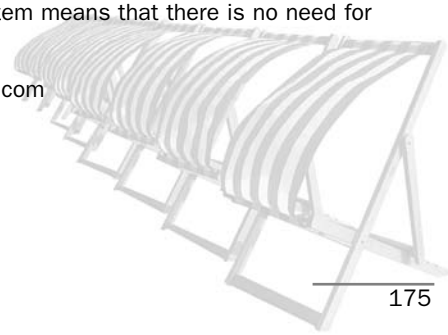
Vivostat A/S manufactures the revolutionary Vivostat® system for the preparation and application of autologous fibrin sealant or PRF® (Platelet Rich Fibrin). The system is fully automated and prepares approximately 5 ml of fibrin sealant or PRF® from 120 ml of the patient's own blood in just 23 minutes. No thrombin or bovine components are added to the blood at any time during the process.

The variety of Vivostat® application devices (e.g. the Spraypen®) is the central and most unique component of the system. All application devices are designed for the delivery of fibrin sealant or PRF® to the surgical site in a controlled and targeted manner. The Spraypen® enables the surgeon to use the system intermittently during the entire procedure without experiencing the blockage that is common in conventional systems.

The Vivostat® system is unique as it builds on a novel patented biotechnological process that enables reliable and reproducible preparation of autologous fibrin sealant and PRF® without using cryoprecipitation and without the need for a separate thrombin component.

It is designed to provide superior solution for many different settings and the straightforward and intuitive operation of the system means that there is no need for specially trained personnel.

For further information, please visit www.vivostat.com



WELCH ALLYN — Stand 46

Tiffany Moon
Welch Allyn Lighting Products
Associate Marketing Manager
Tel: 315-685-2803
Email; Tiffany.Moon@WelchAllyn.com
Website www.WALamp.com / www.Solarc.net

Welch Allyn is a leading manufacturer of precision surgical lighting and diagnostic instruments. Visit the Welch Allyn/H&H Medical booth and see for yourself how the ProXenon™ Surgical Headlight Systems is uniquely capable of meeting the needs of the most demanding applications.

The ProXenon is a lightweight, surgeon-friendly device that combines a small luminaire with large spot size (which overfills loupe fields), rapid lamp change, extended lamp life, and superior lux. The Lighting Products Division at Welch Allyn developed the ProXenon around the requirements and demands of Surgeons; the small luminaire is much less perceptible and the comfortable CoolVent™ headband has reduced weight and increased ventilation, greatly reducing user fatigue.

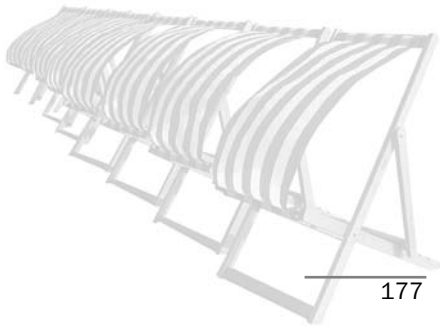
Also, Welch Allyn is launching the New ProXenon Surgical Headlight Camera. The lightweight comfort that has made the ProXenon the choice of many surgeons is maintained, yet the ProXenon Headlight Camera produces a high quality image and easy-to-use interface, whilst the industry exclusive camera controller with magnetic base makes it a breeze to use.

H&H Medical has offered Welch Allyn lighting products for a number of years and will be happy to discuss your needs. Please ask at the stand for a free trial of the ProXenon, your local representative will be in touch.

WISEPRESS ONLINE BOOKSHOP LTD — Stand 21

Wisepress Online Bookshop
The Old Lamp Works
25 High Path
Merton Abbey
London SW19 2JL
Tel: +44 (0) 20 8715 1812
Fax: +44 (0) 20 8715 1722
Email: bookshop@wisepress.com
Website: www.wisepress.com

Wisepress.com, Europe's leading conference bookseller, has a complete range of books and journals relevant to the themes of the meeting. Books can be purchased at the stand or, if you would rather not carry them, posted to you – Wisepress will deliver worldwide. In addition to attending 250 conferences per year, Wisepress has a comprehensive medical and scientific bookshop online with great offers, some up to 40% off the publisher list prices.



GENERAL INFORMATION

The 2009 Annual Meeting of the Society will be held at the Bournemouth International Centre from Sunday 22nd March to Tuesday 24th March 2009.

CONTINUING PROFESSIONAL DEVELOPMENT

Delegates will be awarded 20 credits of CPD for attendance at the whole meeting. Please note that certificates of attendance will be available for collection at registration at the end of the conference. You will need to complete a feedback form in order to collect your certificate.

The Annual Meeting of the Society for Cardiothoracic Surgery in Great Britain & Ireland is accredited by the European Accreditation Council for Continuing Medical Education (EACCME) to provide the following CME activity for medical specialists: a maximum of 20 hours of European external CME credits. Each medical specialist should claim only those hours of credit that he/she has actually spent in the educational activity. EACCME is an institution of The European Union of Medical Specialists (UEMS) www.uems.be.

ANNUAL SOCIAL EVENT

The SCTS Annual Social Event will take place on Tuesday 24th March between 19:00hrs and 23:30hrs at the De Vere Royal Bath Hotel, Bournemouth. An evening not to be missed, this year, the black-tie dinner will take the form of a Seaside themed evening and includes champagne on arrival and a three-course meal including wine. Tickets are £60 per head and can be purchased from the registration desk until18:00hrs on Monday 23rd March. Our annual event was sold out last year so we strongly advise you to book early because we anticipate that this will be as popular.

ANNUAL BUSINESS MEETING

The Annual Business Meeting will be held on Sunday 22nd March 2009 between 18:00hrs and 19:30hrs.

Please note that the Business Meetings are open to Society members *only.*

THE PULSE SURGICAL LECTURE

Professor David Taggart and Mr Malcolm Dalrymple-Hay will deliver their lecture on Sunday 22nd March 2009 at 17:00hrs.

HEART RESEARCH UK LECTURE

Dr David Adams will deliver his lecture on Monday 23rd March 2009 at 11:45hrs.

REFRESHMENTS AND LUNCH

Complementary tea and coffee will be provided during the official breaks in the exhibition hall. A buffet lunch is included in the registration fee, and will also be served in the exhibition hall.

REGISTRATION

Sunday 22nd March	16:00 - 20:00hrs
Monday 23rd March	08:30 - 18:00hrs
Tuesday 24th March	08:30 - 14:00hrs

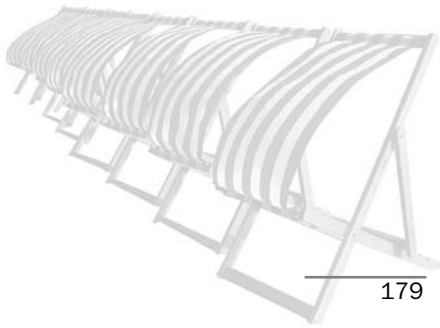
POSTERS

All posters should be mounted in their indicated space before 08:30hrs on Monday 23rd March and should be removed between 15:15hrs and 16:00hrs on Tuesday 24th March. Any posters not collected after 16:00hrs will be disposed of.

KEY TO BADGES

Badges should be worn at all times during the conference. Exhibitors will be easily identified by their yellow badges.

White – attending entire conference/forum
Red – attending Monday only
Blue – attending Tuesday only



SATELLITE MEETINGS

Sunday 22th March

11.00 – 12.30 Education Sub-Committee
Chine Suite
Chairman: Prof John Pepper

Monday 23th March

15.45 – 17.00 Data Committee
Chine Suite
Chairman: Mr Ben Bridgewater

Tuesday 24th March

13:30 - 15:00 Exhibitors' Meeting
Branksome Suite
Chairman: Mr Simon Kendall
(attending: Mr Ian Wilson, Mrs Rachel Woolf)

15:45 - 17:00 Scholarship Award Meeting
Chine Suite
Chairman: Mr Leslie Hamilton
(attending: Honorary Secretary, President-elect, Cardiothoracic Dean Chairman of the SAC)

18:30 - 19:00 Presentation Grading Meeting
Chine Suite
Chairman: Mr Simon Kendall
(attending: President, President-elect, Chairman of the Intercollegiate Board Chairman of the SAC Cardiothoracic Dean)

SPEAKER'S ROOM

All presenters are requested to review their audio-visual material in the Speaker's room at the following times:

Morning presentations – by 15:00hrs on the day before presentation

Afternoon presentations – by 09:30hrs on the day of presentation

TRADE EXHIBITION

The Annual Trade Exhibition will be held in conjunction with the Meeting and will be open from 08:30hrs Monday 23rd March to 14:00hrs on Tuesday 24th March 2009.

WELCOME RECEPTION

There will be a Welcome Reception hosted by the Mayor of Bournemouth in the Seminar Suite of Tregonwell Hall on the evening of Sunday 22nd March 2009 between 19:30 and 21:00hrs. The Welcome Reception is included in the registration fee.

SCTS 2008 Prize Winners

Ronald Edwards Medal	N Drury
John Parker Medal	R Venkateswaran
Society Thoracic Medal	E Belcher
Best CT Forum Presentation	D Quayle

The winners will be presented with their medals at the annual dinner

SCTS 2009 Awards

Ronald Edwards Medal	best scientific oral presentation
John Parker Medal	best clinical presentation
Society Thoracic Medal	best thoracic presentation
Society CT Forum Medal	best CT Forum presentation

The winners will be announced at the annual dinner

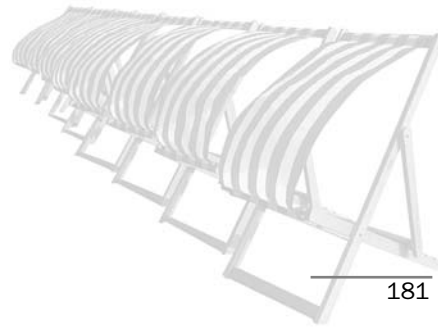
SCTS 2008 Scholarships

Society Cardiac scholarship	E Akowuah
Society Thoracic scholarship	I Hunt
The Marian & Christina Ionescu Travelling Scholarship	D O'Regan

SCTS 2009 Scholarships

Society Cardiac scholarship
Society Thoracic scholarship
The Marian & Christina Ionescu Travelling Scholarship

The winners of the 2009 scholarships will be announced at the annual dinner



COMMITTEES

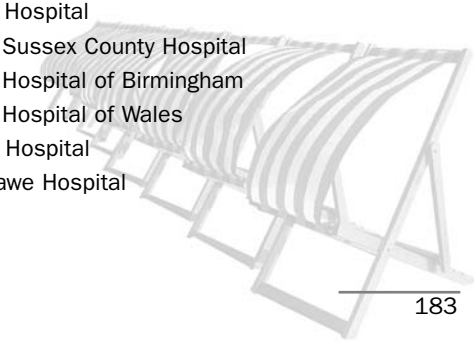
Executive Committee 2008–2009

Mr Leslie Hamilton	President	2008–2010
Prof David Taggart	President Elect	2008–2010
Mr Graham Cooper	Honorary Secretary	2008-2013
Mr Babulal Sethia	Honorary Treasurer	2004–2009
Mr Simon Kendall	Meeting Secretary	2007-2012
Mr Sunil Ohri	Communications Secretary	2005-
Mr Sunil Bhudia	Trainee Representative	2008-2011
Mrs Tara Bartley	Nursing Representative	2006-2011
Mr Tim Graham	Elected member/Chairman of the SAC	2006–2009
Mr Ben Bridgewater	Elected member	2006–2009
Mr Jim McGuigan	Elected member	2007-2010
Prof John Pepper	Elected member/Education Secretary	2007-2010
Mr John Duffy	Elected member	2008-2011
Mr Neil Moat	Elected member	2008-2011

Board of Representatives 2008–2009

Mr Tim Graham	Chairman of the SAC
Mr Robert Jeffrey	Chairman of Inter-Collegiate Board
Mr Steven Hunter	Cardiothoracic Dean
Mr Jonathan Hyde	Cardiothoracic Tutor
Mr Richard Page/ Mr Jim McGuigan	Thoracic Audit
Mr Hussein El-Shafei	Aberdeen Royal Infirmary
Mr Marco Pozzi	Alder Hey Children's Hospital
Mr Tim Jones	Birmingham Children's Hospital
Mr Richard Steyn/ Mr Pala Rajesh	Birmingham Heartlands Hospital
Mr Franco Sogliani	Blackpool Victoria Hospital
Mr Gavin Murphy	Bristol Royal Infirmary
Mr Mike Cowen	Castle Hill Hospital
Mr Aonghus O'Donnell	Cork University Hospital
Mr Clinton Lloyd	Derriford Hospital
Mr Edward Brackenbury	Edinburgh Royal Infirmary
Mr Andrew Ritchie	Essex Cardiothoracic Centre
Mr Thasee Pillay	Freeman Hospital

Mr David Waller	Glenfield Hospital
Mr Geoff Berg	Golden Jubilee National Hospital
Mr Victor Tsang	Great Ormond Street Hospital
Mr Christopher Blauth	Guy's and St Thomas' Hospital
Mr Jon Anderson/ Mr Prakash Punjabi	Hammersmith Hospital
Mr Ashgar Khaghani	Harefield Hospital
Mr Andrew Goodwin	James Cook University Hospital
Mr Chandi Ratnatunga	John Radcliffe Hospital
Mr Ahmed El Gamel	King's College Hospital
Mr David O'Regan	Leeds General Infirmary
Mr John Chalmers	Liverpool Heart & Lung Hospital
Mr Graham Venn	London Bridge Hospital
Mr Nick Odom	Manchester Heart Centre
Mr David Luke/Mr Freddie Wood	Mater Misericordiae Hospital
Mr Aprim Youhana	Morriston Hospital
Mr Adrian Levine	North Staffordshire Royal Infirmary
Mr Moninder Bhabra	New Cross Hospital
Mr David Hopkinson	Northern General Hospital
Mr David Richens	Nottingham City Hospital (Cardiac)
Mr John Duffy	Nottingham City Hospital (Thoracic)
Mr David Jenkins	Papworth Hospital
Mr Simon Jordan	Royal Brompton Hospital
Mr Richard Berrisofrd	Royal Devon & Exeter Hospital
Mr Jim McGuigan/ Mr J Mark Jones	Royal Victoria Hospital, Belfast
Mr Clifford Barlow	Southampton General Hospital
Mr Alan Wood	St Bartholomews Hospital
Mr Rbin Kanagasabay/ Mr John Smith	St George's Hospital
Ms Eilis McGovern	St James' Hospital Dublin
Mr Andrew Thorpe	St James' Hospital, Leeds
Mr Andrew Chukwuemeka	St Mary's Hospital
Mr Shyam Kolvekar	The Heart Hospital
Mr Andy Forsyth/Mr Uday Trivedi	The Royal Sussex County Hospital
Mr Domenico Pagano	University Hospital of Birmingham
Mr Dheeraj Mehta	University Hospital of Wales
Mr Ramesh Patel	Walsgrave Hospital
Mr Rajesh Shah	Wythenshawe Hospital



Committee Chairs

Mr Patrick Magee	CEA Committee	2002-continuing

Working Group Chairs

Mr Patrick Magee	Distinction Awards Committee	2002-continuing
Mr Steven Livesey	NCEPOD Study (1st time CABG mortality)	2004–2008
Mr Richard Page	Thoracic Surgical audit	2004–continuing
Mr Graham Cooper/ Mr Graham Venn	Professional Issues	2007-
Mr Graham Venn	Job Planning Guidelines	2007-
Mr Graham Venn	Clinical Guidelines	2008-
Mr Steven Livesey	Revalidation	2008-continuing

Presidential Objectives

1 Improving quality of care for patients: exploring different outcome measures

2 Developing standards for re-certification

3 Improving communication with members – strengthening the Board of Representatives

4 Database committee: establishment and development

5 Raising the professional profile of the Society

6 Patient involvement: appointment of representative to Executive committeer

Programme Committee 2009 Meeting

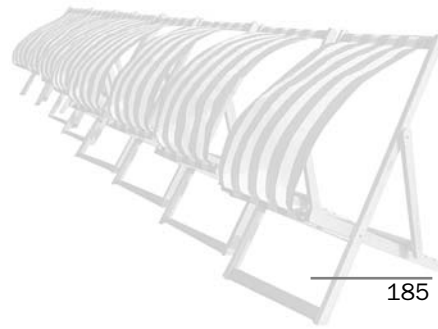
Mr Simon Kendall
Meeting Secretary

Lead Reviewers	
Mr Steve Clark	Transplantation
Mr Malcolm Dalrymple-Hay	Adult Cardiac
Mr John Duffy	Thoracic
Mr Brian Fabri	Adult Cardiac
Mr Adrian Marchbank	Experimental & Miscellaneous
Mr Andrew Parry	Congenital
Ms Tara Bartley	CT Forum

Abstract Reviewers 2009 Meeting

Adult Cardiac	Mr Brian Fabri (lead)
	Mr Malcolm Dalrymple-Hay (lead)
	Mr Clifford Barlow
	Mr Geoff Berg
	Mr Ben Bridgewater
	Mr David Jenkins
	Mr Unnikrishnan Nair
	Mr Domenico Pagano
	Mr Mark Pullan
	Mr Gus Tang
Congenital	Mr Andrew Parry (lead)
	Mr David Barron
	Mr Lars Nolke
	Mr Mark Redmond
	Mr Nihal Weeraseena
Experimental	Mr Adrian Marchbank (lead)
	Dr David Chambers
	Mr Jonathan Hyde
	Mr Clinton Lloyd
	Mr Alex Shipolini

Thoracic	Mr John Duffy (lead)
	Mr Sion Barnard
	Mr Jim McGuigan
	Mr Rajesh Shah
	Mr David Waller
Transplantation	Mr Steve Clark (lead)
	Mr John Dark
	Mr Steven Tsui
	Mr Ian Wilson
	Mr Nizar Yonan
Forum	Ms Tara Bartley (lead)
	Ms Georgina Aldous
	Mr Calum Buchanan
	Mr Tony Jessop
	Ms Linda McKee
	Ms Helen Munday



Specialist Advisory Committee in Cardiothoracic Surgery 2008–2009

(A Sub-committee of the Joint Committee for Higher Surgical Training)

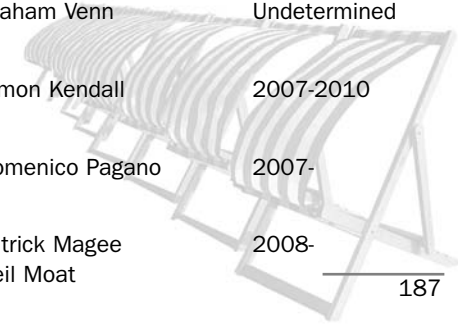
Mr Tim Graham	(Chairman) Royal College of Surgeons	2007-2010
Mr Jon Anderson	Joint Royal College Representative	2008-2013
Mr Sion Barnard	Early Years Representative	2007-2012
Mr Sunil Bhudia	Trainee Representative	2007-2010
Mr Steven Hunter	Cardiothoracic Dean	2004-2009
Mr Robert Jeffrey	Chairman of the Intercollegiate Board	2007-2012
Mr Alan Kirk	Joint Royal College Representative	2008-2013
Mr Steve Livesey	Society for Cardiothoracic Surgery	2005-2010
Mr David Barron	Society for Cardiothoracic Surgery	2007-2012
Dr Vicky Osgood	Lead Dean for Cardiothoracic Surgery	2006-2008
Professor John Pepper	Education Secretary (SCTS)	2007-2012
Mr Pala Rajesh	Lead Thoracic	
Professor John Wallwork	Academic Representative	2007-2012

Intercollegiate Board in Cardiothoracic Surgery 2008–2009

Mr Robert Jeffrey	Chairman	2007-2010
Professor John Peper	Representative of the Society for Cardiothoracic Surgery	2007-2012
Mr Tim Graham	Chairman SAC in Cardiothoracic Surgery	2007-2012
Mr Jonathan Anderson	Representative of the Royal College of Surgeons of England	2007-2012
Mr Vicent Young	Representative of the Royal College of Surgeons in Ireland	2008-2013
Mr David Richens	Representative of the Royal College of Physicians and Surgeons of Glasgow	2007-2012
Mr Pala Rajesh	Representative of the Royal College of Surgeons of Edinburgh	2007-2012
Mr Steven Hunter	Honorary Secretary and Representative of the Society for Cardiothoracic Surgery	2007-2010

Society Representatives on Other Bodies

Organisation	*Representative*	*Tenure (Inclusive)*
Senate and Federation of Surgical Specialist Associations	Leslie Hamilton	2008-2010
Council of the Royal College of Surgeons of England	Leslie Hamilton	2008-2010
Surgical Sub-Committee of the Central Consultants and Specialists Committee		2008-2010
Expert Group for Cardiac Surgery at NCEPOD	Steven Livesey James Roxburgh	Not defined
Council of the College of Clinical Perfusion Scientists of GB & Ireland	Malcolm Dalrymple-Hay Tim Jones	2006-
British Standards Authority	Chandi Ratnatunga	Not defined
Medical Devices Agency (MHRA)	Steven Hunter	Not defined
Outpatient HRG Group	Ben Bridgewater	Duration of project
Strategic Group for National Heart Valve Contracts	Steven Livesey	Not defined
Professional Standards and Peer Review Committee (British Cardiac Society)	Graham Cooper	2008-2013
Childrens' Surgical Forum	Andrew Parry	2007-
Joint Advisory Group for Upper GI Endoscopy	Jim McGuigan	2004-
RCSE Specialty Advisory Board	Graham Cooper	TBC
TEARS	Christopher Blauth	Not defined
Intercollegiate Lung Cancer Group (LUCADA data project)	Richard Berrisford (William Fountain)	2001
Tripartite Group (Dept of Health, Healthcare Commission and SCTS)	Ben Bridgewater James Roxburgh	Undetermined
Angioplasty Guidelines and Practice Sub-committee of the BCS	Graham Venn	Undetermined
Specialist Adviser to NICE's Interventional Procedures Programme	Simon Kendall	2007-2010
Academic Research Board Royal College of Surgeons of England	Domenico Pagano	2007-
UEMS	Patrick Magee Neil Moat	2008-



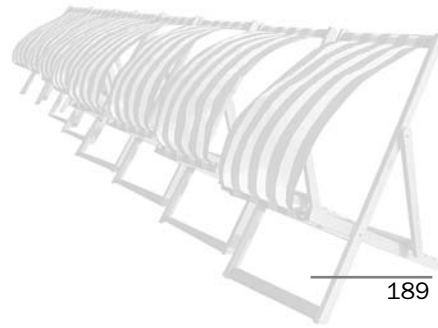
Past Presidents

List of Presidents of the Society since 1934

1934	Mr H Morrison Davies
1936	Mr J R H Roberts
1938	Mr A Tudor Edwards
1945	Mr J B Hunter
1947	Mr W M Anderson
1948	Mr R B Purse
1950	Mr A Graham Bryce
1952	Sir C Price Thomas
1954	Mr H Reid
1956	Mr B Dick
1958	Sir R Brock
1959	Mr G A Mason
1961	Sir T Holmes Sellors
1963	Mr R F J Henry
1964	Mr N R Barrett
1966	Mr V C Thompson
1968	Mr P R Allison
1969	Mr A L d'Abreu
1970	Mr A Logan
1971	Mr O S Tubbs
1972	Mr F R Edwards
1973	Mr J L Collis
1974	Mr R H R Belsey
1975	Mr R S Barclay
1976	Mr W P Cleland
1977	Mr H R S Harley
1978	Mr R Abbey-Smith
1979	Mr R P Moore
1980	Mr J R Belcher
1981	Mr M Bates
1982	Mr J M Hill
1983	Mr J F Dark
1984	Mr D N Ross
1985	Mr M Paneth
1986	Mr M V Baimbridge
1987	Sir K Ross
1988	Professor W H Bain
1989	Mr W G Williams
1991	Professor D I Hamilton
1992	Professor G H Smith
1994	Mr B Ross
1995	Mr J Bailey
1996	Professor H Matthews
1997	Professor D Wheatley
1999	Mr J Dussek
2000	Mr J Monro
2002	Mr C Hilton
2004	Mr P Magee
2006	Professor Sir B Keogh
2008	Mr L Hamilton

SCTS Annual Meeting's 11-Year History

1999	East Midlands Conference Centre	Nottingham
2000	Business Design Centre	London
2001	East Midlands Conference Centre	Nottingham
2002	Bournemouth International Centre	Bournemouth
2003	Edinburgh International Conference Centre	Edinburgh
2004	Beau Sejour Centre	Guernsey
2005	Olympia Conference Centre	London
2006	CityWest Conference Centre	Dublin
2007	Manchester International Convention Centre	Manchester
2008	Edinburgh Internatinal Conference Centre	Edinburgh
2009	Bournemouth International Centre	Bournemouth



Organised by:

Society for Cardiothoracic Surgery in Great Britain and Ireland

Simon Kendall - Meeting Secretary
Email: Simon.Kendall@stees.nhs.uk

Ian Wilson - Deputy Meeting Secretary
Email: ian.c.wilson@uhb.nhs.uk

Isabelle Ferner - Society Administrator & Conference Organiser
Email: sctsadmin@scts.org

Rachel Woolf - Accounts and Exhibition Administrator
Email: rwoolf@scts.org

Tara Bartley - Nursing Representative
Email: tara.bartley@ntlworld.com

Sunil Ohri - Communications Secretary (Programme/Flyers/Bulletin)
Email: sunil@ohri.co.uk

2010 Meeting - Liverpool

The Society for Cardiothoracic Surgery in Great Britain and Ireland Annual Meeting 2010 will be held in Liverpool at the Arena and Convention Centre 7th – 9th March.


PROUD SPONSORS OF SCTS 2009
CARDIO SOLUTIONS LTD

Annual Meeting
22-24 March 2009

Society for Cardiothoracic Surgery in Great Britain and Ireland

SUMMARY MEETING PROGRAMME

Sunday 22nd March

12:30 -13:30	Trainees & Surgical Care Practitioners Lunch
13:30-16:00	Trainees Meeting
13:30-16:45	Association of Surgical Care Practitioners, AGM
16:00-16:45	The Hunterian Lecture
16:45-17:00	Tea/ Coffee
17:00-18:00	The Pulse Lectures
18:00-19:30	Annual Business Meeting
18:00-19:30	ACSA Workshop
19:30-20:30	Civic Welcome Reception

Monday 23rd March

07:15-08:30	Covidien Breakfast Symposium
08:00 -08:50	Scientific Oral Presentations
08:50-10:00	Oral Presentations with Nurses Forum and ACSA
08:45-12:30	Database Managers: 4th Annual Meeting
10:00-10:45	Tea/ Coffee
10:45-11:45	Mitral Valve Oral Presentations
10:45-11:40	The Cardiothoracic Forum
10:45-11:45	Cardiac Oral Presentations
11:45-12:30	Heart Research UK Lecture
12:30-13:30	Lunch
13:30-15:00	UK Cardiac & Thoracic Activity
13:30-15:00	The Society of Clinical Perfusion Scientists Workshop
15:00-15:45	Tea/ Coffee
15:45 -16:55	Thoracic Surgery Presentations
15:45-17:00	The Cardiothoracic Forum
15:45-16:55	Aortic Valve Oral Presentations
15:45-18:30	The Society of Clinical Perfusion Scientists Workshop
17:00-18:30	Thoracic Surgery Oral Presentations & Thoracic Surgery Forum
17:00-18:30	St Jude Symposium
18:30-20:30	Nycomed Symposium

Tuesday 24th March

07:15-08:45	ATS Medical Symposium
08:00-08:50	Endocarditis: Presentations & Discussion
08:45 -10:00	Society of Clinical Perfusion Scientists Meeting
08:45-10:00	Thoracic Surgery Oral Presentations
09:00-10:00	Cardiac Revascularisation Presentations
09:00-10:00	The Cardiothoracic Forum
09:00-10:00	Congenital Oral Presentations
10:00-10:45	Tea/ Coffee
10:45 -11:45	Thoracic & Oesopahageal Surgery Oral Presentations
10:45 -11:45	The Aorta: Oral Presentations
10:45-12:30	Cardiac Surgical Workshop
10:45-12:30	The Cardiothoracic Forum
10:45-12:30	Congenital Cardiac Surgical Meeting
10:45-12:30	Society of Clinical Perfusion Scientists Workshop
11:45-12:30	Thoracic Surgical Lecture
11:50-12:30	Cardiac Oral Presentations
12:30-13:30	Lunch
13:30-15:00	Thoracic Papers
13:30-15:00	Congenital Cardiac Surgery
13:30-15:00	NCEPOD Symposium
15:00-15:45	Tea/ Coffee
15:45-16:55	Cardiothoracic Transplantation Oral Presentations
15.45-17:00	The Cardiothoracic Forum
15:45-17:00	Thoracic Surgery: 'How To Do It' Presentations
15:45-16:55	Carotid & Aortic Endovascular Stenting
17:00-18:00	President's Address
19:30-24:00	Annual Dinner – Royal Bath Hotel