

FACULTY OF MEDICINE
UNIVERSITY HOSPITALS OF COIMBRA

**UNIVERSITY CLINIC
CENTER OF
CARDIOTHORACIC SURGERY**



**ANNUAL REPORT
2007**

At the end of another year of activities, it is time to sum-up. New highs were reached this year in the total number of surgeries, in the number cardiac surgeries and in the number of pulmonary surgeries. It is quite evident that the progress of interventional cardiology, which undoubtedly took away a good part of a pathology typically referred to surgery, coronary disease, was balanced by the appearance of pathologies related to the increased longevity, especially aortic stenosis and other degenerative valvular pathologies. This means, however, that we are operating on older patients and with more severe pathologies. In the case of coronary surgery, which has had only a slight decrease in last few years, the patients appear now with more complex anatomy, since the more favourable cases are treated in the cath lab.

Yet, the mortality rate has consolidated in the low figures reached some few years ago, together with a lower rate of morbidity which was translated by a decrease in the mean time of hospital admission. Simultaneously, this increase in the number of surgeries has been accompanied, as far as we know, by an increase in the activity of other surgical groups in the country, reason why it is difficult to foresee in which direction the future will move, since the Portuguese cardiac surgery is close to fully satisfy the real needs of the population.

With regards to pulmonary surgery, it appears evident that there is an increased demand, also motivated by the appearance of new pathologies, especially those of an infectious origin. We emphasise, in this year's activity, a significant increase in the number of video-assisted surgeries, which corresponds to a real effort of the Department and of its professionals to accompany the evolution of new technologies.

During this year, there 27 cardiac transplantations were performed, therefore maintaining the mean of previous years, but this figure only did not reach record values because of a very significant decrease, we hope circumstantial, of the number of donors in the last trimester, when it was only possible to perform two of these procedures. We already have patients in the 5th year of the post-operative follow-up and register a survival of 85%, figure that compares very favourably with those referred by international centres with large experience. We emphasise that only 7 of the 115 patients transplanted in the first 4 years of the program were not discharged home, which corresponds to an operative mortality of 6.1%.

During this period, there has been an increase in the scientific activity, translated both by the number publications and by the number of presentations in congresses and other national and international meetings, as detailed in the last pages of this report.

The Department also maintains an important teaching activity, with direct involvement in the teaching of the disciplines of Anatomy (1st year) and Surgical Pathology II (5th year) of the Faculty of Medicine, and in support to the Superior Schools of Nursing and of Technologies of Health of Coimbra. The Department is frequented daily by students of these three Institutions. We have also registered the visit of several foreign surgeons, namely Dr Seraf Kucuker, from Istanbul, Turkey, who has visited us for one month.

One of our residents, Dr Paulo Calvinho has successfully concluded his training in this specialty and has assumed a position as a surgeon in the Department.

During the last Congress, the Director of the Department was elected President of the Portuguese Society of Cardiology, which he will assume in April 2009.

The year 2007 almost completes 20 years of activity of the Department, which will be celebrated next March. During this period, more than 26,000 patients were operated on, an activity which is unique in this country, with results which are known nationally and internationally. However, the effort which is adjacent to this activity has not, in our opinion, been duly recognised by the authorities that govern us, including those of our own Hospital. For more than two years now, the Department has been deprived of the relatively limited administrative and financial autonomy which it had before. When we hoped for a progressive increase of this autonomy, having in mind the results achieved both in assistencial and financial terms, this has been withdrawn by administrations which, obviously, do not recognise this value. This situation has led to some disbelief among members of the Department who have noticed an increasing distance between what the authorities, both local and national, promise and their actions. This attitude threatens to compromise the execution of projects for the future, for example, pulmonary transplantation, for which the Department has been repeatedly challenged and for which it felt had capacity to respond to the needs of the country, as it had done previously for cardiac transplantation. We await, with some anxiety, the responses for some questions which are being raised at this particular time.

Coimbra, 31st December, 2007

PROF. DOUTOR MANUEL J ANTUNES

Director of the Department

STAFF

SURGERY

<i>Director/Professor</i>	Manuel J Antunes	
<i>Chefes de Serviço</i>	J Ferrão de Oliveira	Luís Eugénio
	João Bernardo	
<i>Assistente Graduado</i>	Pedro Antunes	
<i>Assistentes</i>	Rodolfo Lucero	David Prieto
	Andres Contreras	Paulo Calvinho
<i>Internos</i>	Paulo Afonso	Gonçalo Coutinho
	Rita Pancas	Armando Abreu (até Novembro)
	Cláudia Basto	Vyacheslav Bihun
<i>Fellow Internacional</i>	Sérgio Veiga (até Julho)	Sozinho Estefane (Desde Junho)

ANESTESY

<i>Assistente Graduado</i>	Manuel Carreira	Manuel Cuervo
<i>Assistentes</i>	Lorena Rivas (até Março)	Celeste Vaz (até Abril)

CARDIOLOGY

<i>Assistente</i>	Maria João Maldonado	Marta Biernat (até Setembro)
	Catarina Neves (desde Julho)	

PERFUSION

António Ribeiro	Gabriel Ferreira
Pedro Pires	Patrícia Paiva
Bruno Claro	Ângelo Casaleiro
Bruno Silva (desde Outubro)	

NURSING

Noémia Tavares (Enf ^a Chefe)	Cesaltina Custódio (BO)
Emília Sola (Enf ^a Chefe)	Graça Caldeira (Pulmonar)
	Anabela Perdigão (Intermédia)

SECRETARIATE

Ana Gonçalves	Fernanda Zacarias
Inês Freire	Susana Rougier
Adriana Raimundo	

SURGICAL ACTIVITY

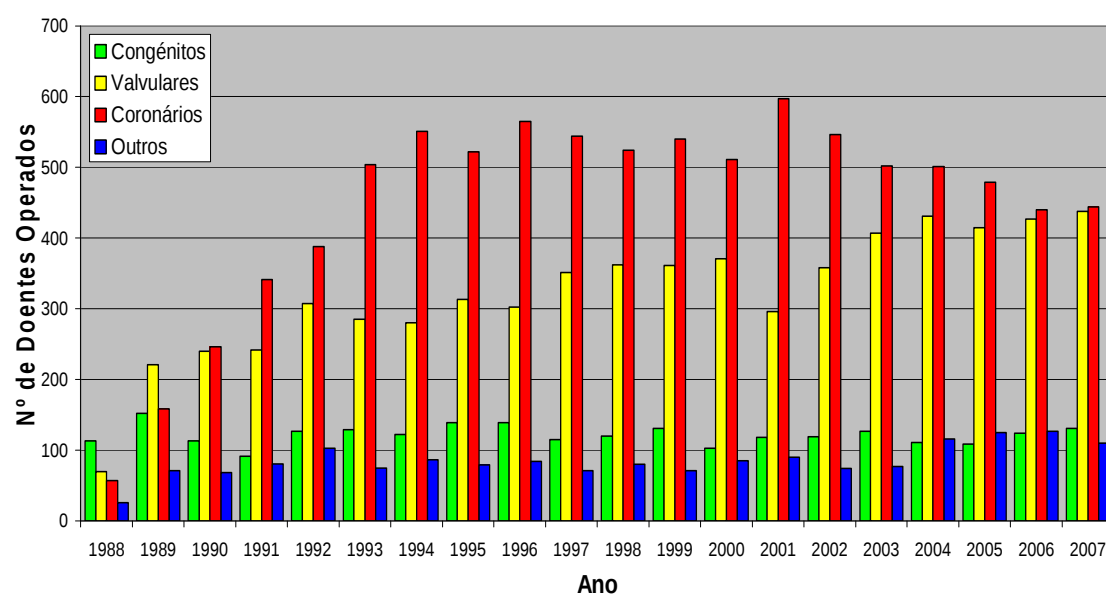
RESUME - I

	N	Mortality	
		n	%
THORACIC SURGERY			
Major	406	1	0,2
Minor	126		
Total	532	1	0,2
CARDIAC SURGERY			
CEC	1093	7	0,6
Without CEC	58		
Total	1151	7	0,6
TOTAL	1683	8	0,4

RESUME – II

	N	Mortality	
		n	%
CARDIAC SURGERY			
AQUIRED			
CEC	983	6	0,6
Without CEC	36		
Total	1019	6	0,5
Congenital			
CEC	110	1	1,0
Without CEC	22		
Total	132	1	0,7
TOTAL	1151	7	0,6

Cirurgia Cardíaca 1988 - 2007



CIRURGIA CARDÍACA *

	N	Mortalidade	
		n	%
A. ADQUIRIDOS			
I- Com CEC			
Válvula mitral	168	1	0,5
Substituição	29	1	
+ plastia / substituição tricúspide	19		
Plastia	92		
+ plastia tricúspide	26		
Revisão de prótese	2		
Válvula aórtica	236	1	0,4
Substituição	221	1	
+ plastia tricúspide	3		
Subst. por homoenxerto	6		
Plastia	3		
Leak / trombose da válvula Ao	3		
Válvula aórtica + mitral	32		
Substituição dupla	11		
Substituição aórtica + plastia mitral	16		
+ plastia tricúspide	1		
Substituição mitral + plastia aórtica + tricúspide	1		
Plastia dupla mitro-aórtica + plastia tricúspide	3		
Válvula tricúspide - Substituição / Plastia	2		
Aneurismas/Dissecções da aorta	52	2	3,0
Operação de Bentall	3		
Subst. aorta ascendente	12		
+ substituição / plastia válvula aórtica	30	1	
+ dupla plastia aórtica /mitral	1		
+ bypass coronário	3	1	
+ bypass coronário + plastia mitral + CIA	1		
Subst. crossa da aorta	2		
Doença coronária (Bypass)**	370		
Uma mamária	306		
Duas mamárias	64		
Doença coronária + associada	77		
Aneurismectomia VE	2		
+ prótese mitral	1		
Plastia mitral	11		
+ plastia tricúspide	3		
Subst. Aórtica	57		
+ plastia mitral	3		
Transplantação cardíaca	27	2	7,0
Outras	19		
Ruptura do ventrículo esquerdo	1		
Mixoma / Hemangioendotelioma AE	7		
Embolectomia pulmonar	2		
CIV pós-enfarte	2		
Assistência ventricular	7		
SUB-TOTAL	983	6	0,6

* Inclui 21 doentes operados no I.C. - Maputo – Moçambique

** Inclui 19 cirurgias s/ CEC

N Mortalidade

		n	%
II- Sem CEC	36	-	-
Pericardiectomia	2		
Revisão de hemostase	29		
Refixação do esterno	2		
Sutura VD	1		
Cirurgia abdominal (ressecção intestinal)	1		
Cesariana	1		
TOTAL	1019		0,5

B. CONGÉNITOS

I- Com CEC	110	1	1,0
Comunicação interauricular (OS)	36		
+ plastia mitral	3		
+ plastia tricúspide	6		
+ estenose pulmonar	1		
Comunicação interventricular	18		
+ CIA	1		
+ estenose pulmonar	1		
Insuf. valvular pulmonar (homoenxerto)	2		
+ estenose aórtica	2		
Estenose aórtica – Comissurotomia / plastia	3		
Operação de Ross	3		
Membrana sub-aórtica	4		
Tetralogia de Fallot	7		
Canal A-V parcial	7		
Canal A-V completo	2		
TGV – Switch arterial	4		
Atrésia da tricúspide (anast. bicavo–pulmonar)	1		
Retorno venoso pulmonar anômalo parcial	1		
Ventrículo direito único com atrésia pulmonar	1	1	
Doença de Ebstein + CIA	1		
Operação de Glenn (reop.)	1		
Norwood -1º estadio	1		
Truncus	1		
Janela aorto-pulmonar	1		
Cardiomiopatia hipertrófica + est. pulmonar	1		
Assistência ventricular esq ^a	1		
II- Sem CEC	22	-	-
Canal arterial	9		
Coartação da aorta	6		
Hipoplasia do arco aórtico	1		
Shunt Blalock-Taussig	3		
Anel vascular	1		
Banding AP	1		
Pace-maker epicárdico	1		
TOTAL	132	1	0,7

CIRURGIA TORÁCICA / PULMONAR*

	N	Mortalidade	
		n	%
A. GRANDE CIRURGIA	365	1	0,2
Pneumectomia	8	1	
Bilobectomy	3		
Lobectomy	45		
Segmentectomy / cunha / enucleação	56		
Fístula bronco-pleural	1		
Pneumoplastia / exérese de bolha gigante	2		
Exérese de quisto broncogénico / pericárdico	6		
Exérese de metástases pulmonares	43		
Excisão de quisto hidático	1		
Pneumotórax espontâneo (abrasão pleural)	36		
Descorticação pulmonar	27		
Toracostomia	3		
Hemotórax / limpeza cirúrgica / revisão hemostase	4		
Toracotomia exploradora / diagnóstica - biópsia	50		
Tumor da parede torácica	6		
Tumor parede torac/reconstrução c/ placa Marlex	6		
Correcção de pectus carinatum / excavatum	15		
Exérese de tumor mediastínico	8		
Timectomia alargada	14		
Eventração / hérnia diafragmática	7		
Janela pleuro-pericárdica	8		
Refixação do esterno / fístulas esternocutâneas	3		
Osteossíntese da parede costal	2		
Ferida penetrante do tórax	1		
Mediastinite	3		
Esofagectomia + Linfadenectomia mediastínica	3		
Fístula pleuro-cutânea	1		
Acesso a tumor da coluna	1		
Hérnia pulmonar	1		
Tumor inflamatório do manúbrio	1		
Cirurgia por videotoroscopia (VATS)	41	-	-
Biópsia pulmonar/pleural	27		
Exérese de nódulo pleural	6		
Descorticação pulmonar	5		
Simpaticectomia dorsal	3		
B. PEQUENA CIRURGIA / DIAGNÓSTICO	126	-	-
Mediastinoscopia	64		
Mediastinotomia anterior	14		
Toracoscopia diagnóstica / talcagem	12		
Remoção de placa de osteossíntese	7		
Traqueostomia	2		
Biópsia de adenopatia	4		
Limpeza cirúrgica de feridas operatórias	5		
Implantes torácicos / Cateteres L.D.	12		
Implantes / Substituição CDI	6		
TOTAL	532	1	0,2

Publicações

1. Management of tricuspid valve regurgitation. Review
Manuel J Antunes, John B Barlow
Heart 2007;93:271-6
2. Off-pump aortic valve replacement with catheter-mounted valved stents. Is the future already here?- Editorial
Manuel J Antunes
Eur J Cardiothorac Surg 2007;31:1-3
3. Less invasive treatment of heart valve disease. Review
Manuel J Antunes
European Cardiovascular Disease 2007
4. Guidelines on the management of valvular heart disease: The Task Force on the Management of Valvular Heart Disease of the European Society of Cardiology.
Vahanian A, Baumgartner H, Bax J, Butchart E, Dion R, Filippatos G, Flachskampf F, Hall R, Jung B, Kasprzak J, Nataf P, Tornos P, Torracca L, Wenink A, Puri SG, Blanc JJ, Budaj A, Camm J, Dean V, Deckers J, Dickstein K, Lekakis J, McGregor K, Metra M, Morais J, Osterspey A, Tamargo J, Zamorano JL, Zamorano JL, Angelini A, Manuel J Antunes, Fernandez MA, Gohlke-Baerwolf C, Habib G, McMurray J, Otto C, Pierard L, Pomar JL, Prendergast B, Rosenhek R, Uva MS, Tamargo J.
Eur Heart J 2007;28:230-68
5. Allograft aortic root replacement in complex prosthetic endocarditis
Sérgio Lopes, Paulo Calvino, Ferrão de Oliveira, Manuel J Antunes
Eur J Cardio-thorac Surg 2007;32:126-30
6. Choosing real-time predictors for ventricular arrhythmias detection
Ribeiro B, Marques A, Henriques J, Manuel J Antunes
International Journal of Pattern Recognition and Artificial Intelligence 2007;21:1-15
7. Acute Mitral Regurgitation due to Ruptured e PTFE Neo-chordae
Gonçalo F Coutinho, Lina Carvalho, Manuel J Antunes
J Heart Valve Dis 2007;16:278-81
8. Images in cardio-thoracic surgery: When the sky falls on one's head
Manuel J Antunes, Luís Eugénio, J Ferrão de Oliveira
Eur J Cardio-thorac Surg 2007;31:1135
9. Mixoma na câmara de saída do ventrículo direito por mixoma ventricular direito
Maria Isabel Sá, Armando Abreu, Sofia Cabral, A Hipólito Reis, Severo Torres, Ferrão de Oliveira, Manuel J Antunes
Rev Port Cardiol 2007;26:447-9
10. Origem ectópica da artéria coronária direita – a propósito de um caso clínico
Susana Costa, António Sá e Melo, Dina Rodrigues, António Marinho da Silva, Luís A Providência, Manuel J Antunes
Rev Port Cardiol 2007;28:577-84
11. Mortality risk prediction in coronary surgery: a locally developed model outperforms external risk models
Pedro E Antunes, Luís Eugénio, J Ferrão de Oliveira, Manuel J Antunes
Interactive Cardiovascular and Thoracic Surgery 2007; 6:437-41
12. Aneurisma da aurícula direita
Paulo V Afonso, Manuel J Antunes
Rev Port Cardiol 2007;26:1049-52
13. Angiossarcoma cardíaco primário. Ressecção alargada da parede da aurícula direita
Paulo V Afonso, Manuel J Antunes
Rev Port Cardiol 2007;26:1189-94
14. Diagnostic value of surgical lung biopsy: Comparison with clinical and radiological diagnosis
Gonçalo Coutinho, Rita Pancas, Eunice Magalhães, João Bernardo, Luís Eugénio, Manuel J Antunes
Interactive Cardiovascular and Thoracic Surgery 2007;6(supl 3):S274
15. Cardiac allograft systolic function – is the aetiology (ischaemic or idiopathic) a determinant of functional capacity in the heart transplant patient?
Marta Biernat, Emília Sola, Luís Oliveira, David Prieto, Fátima Franco, Luís Providência, Manuel J Antunes
Interactive Cardiovascular and Thoracic Surgery 2007;6(supl 3):S279

16. Surgery for infective endocarditis
J Ferrão de Oliveira, Manuel J Antunes
Textbook of Valvular Heart Disease (in press)
17. Current surgical management of mitral regurgitation.
Paulo Calvino, Manuel Antunes
Expert Review of Cardiovascular Therapy (in press)
18. Diagnostic value of surgical lung biopsy: Comparison with clinical and radiological diagnosis
Gonçalo Coutinho, Rita Pancas, E Magalhães, João Bernardo, Luís Eugénio, Manuel J Antunes
Eur J Cardio-thorac Surg (in press)
19. Antithrombotic therapy after bioprosthetic aortic valve replacement: ACTION Registry survey results
Andrea Colli, Jean-Philippe Verhoye, Robin Heijmen, Justus Thomas Strauch, Jonathan Hyde, Domenico Pagano, Manuel J Antunes, et al, on behalf of ACTION Registry Investigators
Eur J Cardio-thorac Surg (in press)

Apresentados em Congressos e Outras Reuniões Científicas

1. Ao alcance das nossas mãos.
Graça Caldeira
Encontro Nacional de Enfermagem em Cardiologia. Maia, Janeiro 2007
2. Optimização da perfusão.
Pedro Pires
13º Congresso Português de Cardiopneumologia. Vimeiro, Março 2007
3. Sofrimento do doente submetido a cirurgia das coronárias.
Lucinda Paula
Encontro de Enfermagem de Cirurgia Cardiorácica. Santa Maria da Feira, Março 2007
4. Qualidade de vida no doente submetido a cirurgia valvular.
António José Ferreira
Encontro de Enfermagem de Cirurgia Cardiorácica. Santa Maria da Feira, Março 2007
5. Indications and surgery of mitral valve disease. I -Technique of Replacement, Choice of prosthesis.
Manuel J Antunes
European School of Cardiothoracic Surgery, Bergamo, Itália, Março 2007
Por Convite
6. Mitral valve disease - technique of repair
Manuel J Antunes
European School of Cardiothoracic Surgery, Bergamo, Itália, Março 2007
Por Convite
7. Aortic and mitral valve endocarditis
Manuel J Antunes
European School of Cardiothoracic Surgery, Bergamo, Itália, Março 2007
Por Convite
8. Três anos de transplantação cardíaca.
Manuel J Antunes, Fátima Franco, Emília Sola, Marta Biernat, Luís Oliveira, Pedro E Antunes, J Ferrão de Oliveira, Luís A Providência
XXVII Congresso Português de Cardiologia. Vilamoura, Abril 2007
9. Cardiac allograft systolic function – is the aetiology (ischaemic or idiopathic) a determinant of functional capacity in the heart transplant patient?
Marta Biernat, Emília Sola, Luís Oliveira, David Prieto, Fátima Franco, Luís A Providência, Manuel J Antunes
XXVII Congresso Português de Cardiologia. Vilamoura, Abril 2007
10. Qualidade da veia safena interna em cirurgia coronária: estudo randomizado.
Gonçalo Coutinho, Pedro E Antunes, J Ferrão de Oliveira, Rodolfo Lucero, David Prieto, Manuel J Antunes
XXVII Congresso Português de Cardiologia. Vilamoura, Abril 2007

11. Mortalidade e morbilidade hospitalar nas reoperações não coronárias em doentes com Enxertos coronários.
Paulo Calvino, J Ferrão de Oliveira, Pedro E Antunes, Rodolfo Lucero, Manuel J Antunes
XXVII Congresso Português de Cardiologia. Vilamoura, Abril 2007
12. Novas alternativas cirúrgicas e de intervenção. O “Velho do Restelo”.
Manuel J Antunes
XXVII Congresso Português de Cardiologia. Vilamoura, Abril 2007
13. Ao alcance das nossas mãos – a massagem no alívio da dor.
Anabela Perdigão
Fórum 07 “O cidadão e a Enfermagem”. Coimbra, Maio 2007
14. Multimodal treatment of osteosarcoma lung metastases.
Manuel J Antunes
15th Annual Meeting of the European Society of Thoracic Surgeons. Leuven, Bélgica, Junho 2007
Por Convite
15. The challenges in valvular heart surgery.
Manuel J Antunes
Spring Congress of the Polish Cardiac Society, Kraków, Junho 2007
Por Convite
16. Surgery for ischemic mitral regurgitation.
Manuel J Antunes
Spring Congress of the Polish Cardiac Society, Kraków, Junho 2007
Por Convite
17. Transplante cardíaco em Portugal. Dispositivos de assistência ventricular.
Manuel J Antunes
XXVII Congresso Norte Nordeste de Cardiologia. XXIX Congresso da Sociedade de Cirurgia Cardiovascular Norte/Nordeste, João Pessoa, Brasil, Junho 2007
Por Convite
18. Novas estratégias e paradigmas na cirurgia valvar.
Manuel J Antunes
XXVII Congresso Norte Nordeste de Cardiologia. XXIX Congresso da Sociedade de Cirurgia Cardiovascular Norte/Nordeste, João Pessoa, Brasil, Junho 2007
Por Convite
19. Cirurgia de coronária sob fibrilhação ventricular.
Manuel J Antunes
XXVII Congresso Norte Nordeste de Cardiologia. XXIX Congresso da Sociedade de Cirurgia Cardiovascular Norte/Nordeste, João Pessoa, Brasil, Junho 2007
Por Convite
20. Valvulopatias aspectos clínicos e cirúrgicos. Estratégia cirúrgica nas endocardites.
Manuel J Antunes
XXVII Congresso Norte Nordeste de Cardiologia. XXIX Congresso da Sociedade de Cirurgia Cardiovascular Norte/Nordeste, João Pessoa, Brasil, Junho 2007
Por Convite
21. Intervenções não farmacológicas na ICC. Tratamento cirúrgico.
Manuel J Antunes
XXVII Congresso Norte Nordeste de Cardiologia. XXIX Congresso da Sociedade de Cirurgia Cardiovascular Norte/Nordeste, João Pessoa, Brasil, Junho 2007
Por Convite
22. Stents e cirurgia na terapêutica da doença coronária: competição ou complementaridade?
Manuel J Antunes
XIII Jornadas de Cardiologia do Minho. Braga, Junho 2007
Por Convite
23. Third heart sound detection using wavelet transform–simplicity filter, EMBC -2007.
Kumar D, Carvalho P, Henriques J O, Manuel J Antunes, Schmidt R, Habetha J
29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Lyon, France, Agosto 2007
24. ECG compression through segment matching and progressive error encoding, EMBC-2007.
Brito M, Henriques J O, Carvalho P, Ribeiro B, Manuel J Antunes
29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Lyon, France, Agosto 2007

25. Diagnostic value of surgical lung biopsy: Comparison with clinical and radiological diagnosis.
Gonçalo Coutinho, Rita Pancas, Eunice Magalhães, João Bernardo, Luís Eugénio, Manuel Antunes
21st Annual Meeting of the European Association for Cardio-thoracic Surgery. Geneva, Setembro 2007
26. Cardiac allograft systolic function – is the aetiology (ischaemic or idiopathic) a determinant of functional capacity in the heart transplant patient?
Marta Biernat, Emília Sola, Luís Oliveira, David Prieto, Fátima Franco, Luís Providência, Manuel J Antunes
21st Annual Meeting of the European Association for Cardio-thoracic Surgery. Geneva, Setembro 2007
27. Current surgical management.
Manuel J Antunes
ESC Congress 2007. Viena, Setembro 2007
28. Mortality risk prediction in coronary surgery: a locally developed model outperforms external risk models.
Pedro E Antunes, Luís Eugénio, J Ferrão de Oliveira, Manuel J Antunes
ESC Congress 2007. Viena, Setembro 2007
29. Premature ventricular beat detection by using spectral clustering methods. Proc. of the computers in cardiology.
Ribeiro B, Marques A C, Henriques J O, Manuel J Antunes
Conference on Computers in Cardiology. Durham, USA, Setembro 2007
30. Near real time noise detection during heart sound acquisition.
Kumar D, Carvalho P, Henriques J O, Manuel J Antunes
15th European Signal Processing Conference (EUSIPCO-2007). Poznan, Poland, Setembro 2007
31. An ECG compression approach based on a segment dictionary and Bezier approximations.
Brito M, Henriques J O, Carvalho P, Ribeiro B, Manuel J Antunes
15th European Signal Processing Conference (EUSIPCO-2007), Poznan, Poland, Setembro 2007
32. Transplante pulmonar. O desejável e como obtê-lo.
Manuel J Antunes
III Jornadas de actualização em doença vascular pulmonar. Da prevenção ao transplante pulmonar. Viana do Castelo, Outubro 2007
Por Convite
33. Hospital mortality and morbidity in non-coronary reoperations in patients with patent coronary grafts.
Paulo Calvino, J Ferrão Oliveira, Pedro E Antunes, Manuel J Antunes
7th International Congress on Coronary Artery Disease from prevention to intervention. Veneza, Itália, Outubro 2007
34. Qualidade e gestão.
Manuel J Antunes
Fórum da saúde. Funchal, Novembro 2007
Por Convite
35. Mechanical prosthesis are better.
Manuel J Antunes
The transfer of knowledge and technical skills to the young cardio-thoracic surgeons. Bergamo, Italia, Novembro 2007
Por Convite
36. Cirurgia cardíaca na doença coronária.
António Ribeiro
XV Jornadas de Cardiologia dos Hospitais Distritais do Centro. Monfortinho, Novembro 2007
37. Infecções oportunistas no transplante cardíaco – caso clínico.
David Prieto
Reunião Nacional da Sociedade Portuguesa de Transplantação. Viseu, Novembro 2007
Por Convite
38. Tetralogia de Fallot - Intervenções de enfermagem.
Emília Sola
3º Curso de Cardiologia Pediátrica. Coimbra, Novembro 2007
Por Convite

39. Tetralogia de Fallot - Cirurgia.

Manuel Antunes

3º Curso de Cardiologia Pediátrica. Coimbra, Novembro 2007

Por Convite

40. Resección de la pared torácica en patología tumoral.

Rita Pancas, Gonçalo Coutinho, João Bernardo, Luís Eugénio, Manuel J Antunes

XXXIV Reunión Anual Sogapar. XXV Reunión Galaico Duriense. Vigo, Novembro 2007

41. Conventional AVR is here to stay.

Manuel J Antunes

Latest techniques in cardiac surgery. Leipzig, Germany, Dezembro 2007

Por Convite