OUTCOMES

阜外心血管病医院
外科年度报告2011

Department of Cardiovascular Surgery
Cardiovascular Institute & Fu Wai Hospital
Chinese Academy of Medical Sciences &
Peking Union Medical College
National Center for
Cardiovascular Diseases

2011

BEIJING, P. R. CHINA

2011 OUTCOMES

ADDRESS: 167 BEILISHI ROAD,
XICHENG DISTRICT, BEIJING, P.R.CHINA
POST CODE: 100037
医院网站：WWW.FUWAI.COM
医院地址：北京西城区北礼士路167号
邮编:100037
TEL: 86-10 88398866 68314466
FAX: 86-10 68313012

Table of

Contents

Ranked #1 in Heart Surgery on China Best Hospital

连续2年位居“中国医院最佳专科声誉排行榜”心血管外科第一！

Shengshou Hu, MD, FACC
President of Fu Wai Hospital
Director of Cardiovascular Institute

胡盛寿 教授
阜外心血管病医院院长
心血管病研究所所长

The year of 2011 was truly remarkable to each one on Fu Wai Surgical team in that for the first time in Beijing headquarters only, the surgical volume totaled over 10,000. With our commission and devotion, we have served better medical solution to more patients. As the annual report released to public in the 5th successive year, ´OUTCOMES 2011´ systematically summarized the key achievements made in the past year by Fu Wai Surgical team.

While the cardiovascular disease becomes more and more like a first killer of Chinese population, new technologies and therapeutic strategies are also emerging. As an effort to popularize new technology and new knowledge, we choose to release OUTCOMES 2011, hoping to share some useful information with and provide a reference to our relevant peers and patients.

Innovation and Quality — a life pursuit of Fu Wai Hospital

2011年，注定是阜外医院外科团队难忘的一年。这一年，外科团队在院内完成的手术量首次超过了10000例。这意味着通过我们整个团队的努力和奉献，我们提供了更好的服务，救治了更多的患者。《阜外医院外科年度报告2011》作为连续第五年公开发布的年度业绩报告，系统回顾了过去一年的工作，展示了阜外医院外科团队这一里程碑式的成绩。

心血管疾病目前已经成为中国人的“第一杀手”，而心血管治疗领域内新技术和新治疗手段层出不穷。希望我们在报告中提供的信息，能供同行和病友们作一些有益的参考。同时，这份年度报告也反映了阜外医院心血管外科在开展新技术，传播新知识方面所作的努力。

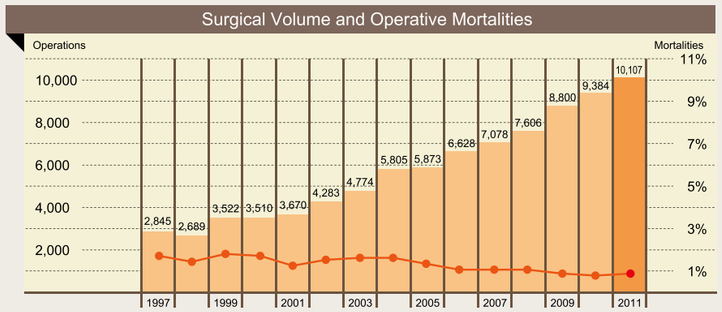
“创新与品质”，是我们阜外团队永恒的追求！

概述 Overview

年手术量及手术死亡率

In 2011 the surgical volume in Cardiovascular Surgery Department reached 10,107 in Beijing headquarters. This is a new milestone for Fu Wai Hospital, which positioned us one of the top cardiovascular surgical centers world-wide. Operative mortality has been controlled at a low level for many years as opposed to the rising surgical volume mentioned.

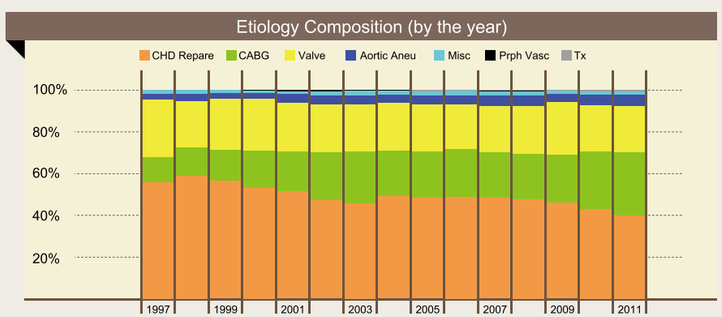
阜外医院心血管外科2011年的手术量达到10107例（不含分院及协作点的手术量），居世界前茅。在手术量逐年增长的同时，一直保持了较低的手术死亡率。



病种分类

Fu Wai Hospital accumulated the biggest number of experiences in treating a vast variety of cardiac diseases surgically in China. The figure demonstrated the etiological distribution of cardiac surgery from 1997 to 2011 in our department. Congenital Heart Disease always ranked the first, while Coronary Heart Disease increased obviously.

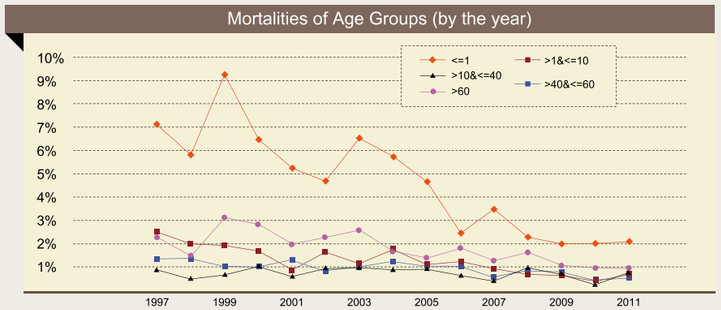
阜外医院心血管外科是全国收治心血管疾病种类最齐全的中心。这张手术患者病因学分类逐年变化图基本反映出中国大陆的心脏病外科治疗谱。



年龄分组死亡率

Our department treated an increasing number of infant and elderly patients in recent years. Advanced or junior age is known as risk factors that can seriously affect cardiac surgical outcome.

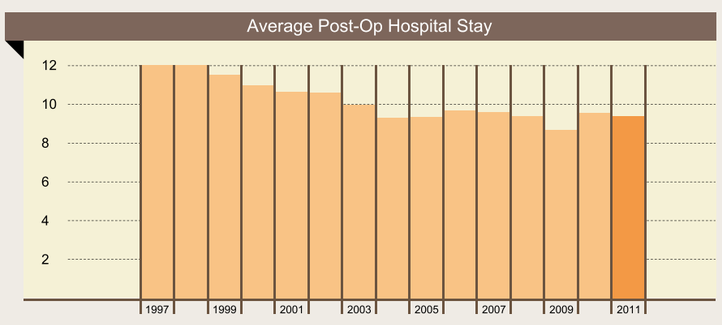
阜外医院心血管外科近年来收治的患者呈现出低龄和高龄患者持续增长，而中间年龄段患者逐渐减少的趋势，这是导致手术死亡率增高的危险因素。



术后住院时间

Thanks to improved surgical treatment and nursing, the department of cardiovascular surgery has achieved a general reduction in post-operative stay.

术后住院时间的缩短反映出医疗与护理质量的进步。



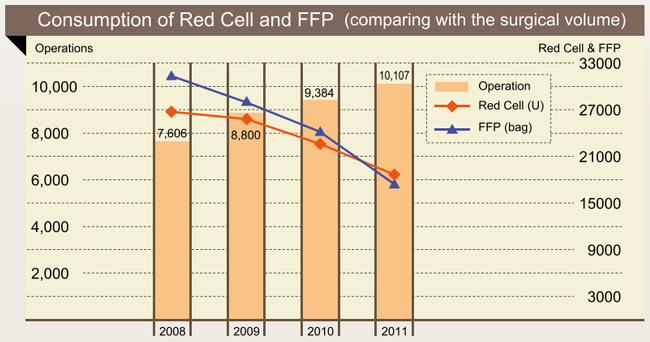
Patients coming to Fu Wai Hospital for their cardiovascular surgery were from 31 provinces in main-land China, Hong Kong, Macao and 4 foreign countries, Mongolia, America, North and South Korea.

病人来自全国31个省市自治区，以及香港、澳门地区。还有蒙古、朝鲜、韩国、和美国的患者前来就诊。

红细胞及血浆用量

In spite of the surgical volume growth, the consumption of Red Cell and FFP noticeably decreased in the recent years, due to the advances made in health care and service we provided.

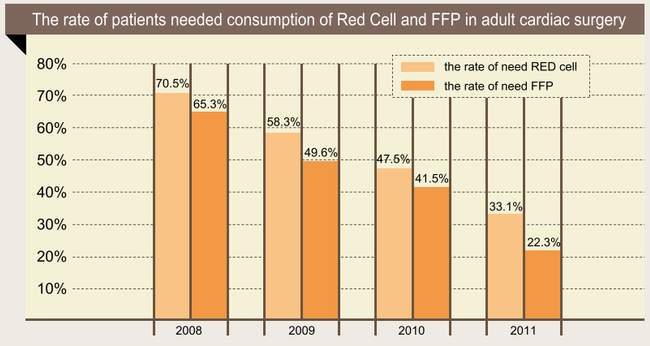
在手术量持续增长的同时，使用红细胞和血浆的总量却在明显减少，这明确反映了医疗质量的提高。



成人手术用血量

The concept of ´Bloodless Surgery´ becomes more and more popular among the Fu Wai Surgical team. ´Patient Blood Management´ program has been consciously carried out by every member of the team. Consumption rate of Red Cell and FFP decreased obviously in adult patients.

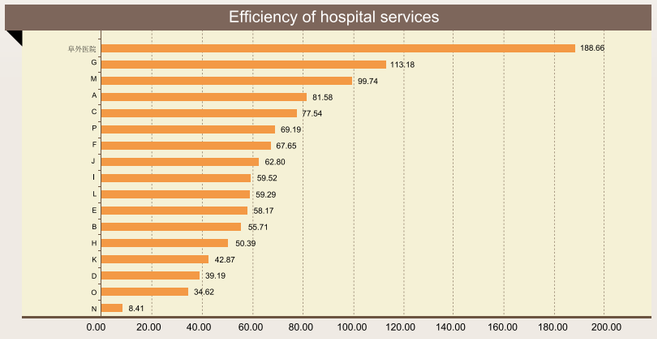
“无血外科”的理念已经深入阜外外科团队的每一个成员，在治疗过程中自觉开展“病人血液管理”。成人心脏手术需要用血和血浆的比率明显下降。



医院服务效率

Varied service efficiency indicates a difference among different hospitals concerning patients´ medical fee and hospital stay. In the ´Evaluation Report on Medical Safety and Quality´ for 17 triple A grade hospitals in Beijing in 2011, Fu Wai Hospital won the first place for ´efficiency of hospital services´.

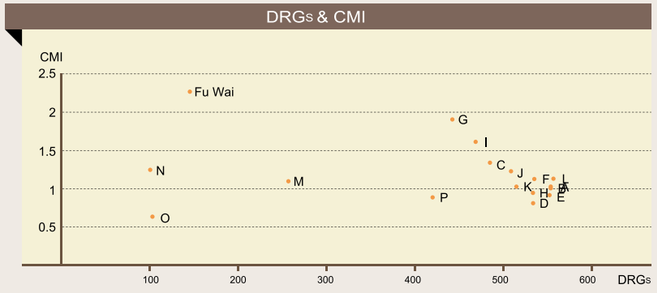
“医院服务效率”是评判患同类疾病患者在不同医院接受治疗时，医疗费用和住院时间的差异。在2011年公布的北京地区十七家三级甲等医院“质量与安全评价报告”中，阜外医院“医院服务效率”评分最高（186.66分）。



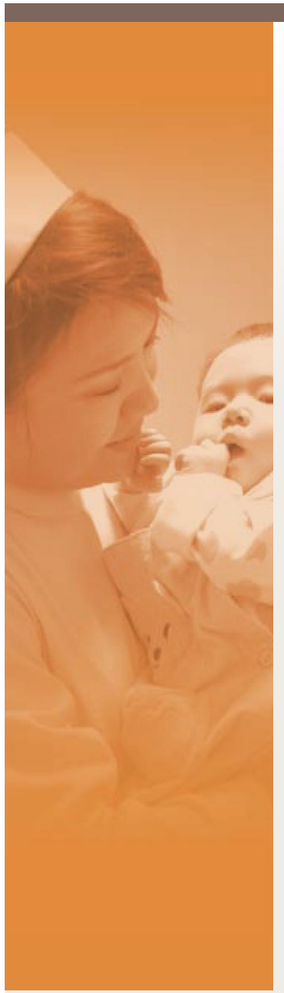
治疗疾病范围和技术难度

Case mix index (CMI) is the average diagnosis-related group weight for all of a hospital's medicare volume. In the ´Evaluation Report on Medical Safety and Quality´ for 17 triple A grade hospitals in Beijing, the CMI of Fu Wai Hospital scored 2.318, the highest of all.

病例组合指数（Case Mix Index，CMI）和诊断相关分类（Diagnosis Related Groups，DRGs）是反映医院医治病例的总体技术难度和治疗疾病范围的指标。CMI分值越高，所治病例的技术难度越大。在2011年公布的北京地区十七家三级甲等医院“质量与安全评价报告”中，阜外医院CMI值最高（2.318分）。



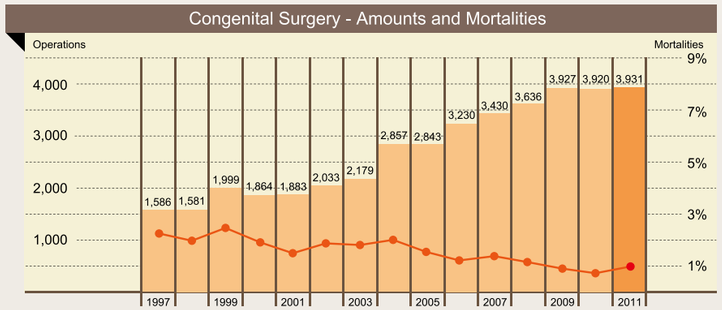
先天性心脏病
Congenital Disease



先天性心脏病手术量及死亡率

Congenital heart defect is the most common anomaly of the neonates in main-land China. There are 150,000 to 180,000 newborns with congenital heart defects every year in the nation. Congenital heart defect correction remains the largest number of cardiac procedures at Fu Wai Hospital.

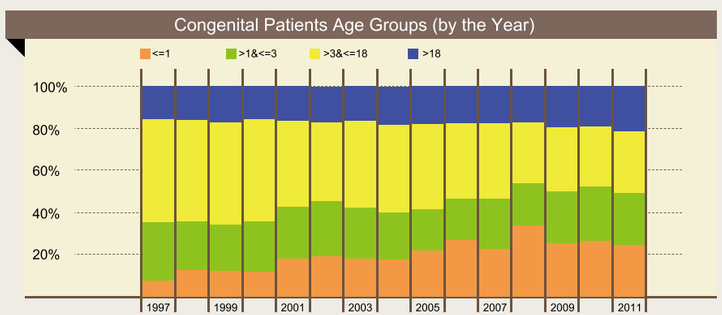
先天性心脏病是中国大陆新生儿最常见的先天性缺陷，全国每年约出生15-18万先天性心脏病患儿。先天性心脏病矫治术的数量一直居阜外医院心血管外科各类手术的首位。



先天性心脏病手术患者的年龄分布

Adult congenital heart defect correction still accounted for a big proportion of the total congenital heart procedures, which was rather Chinese-specific compared with western countries.

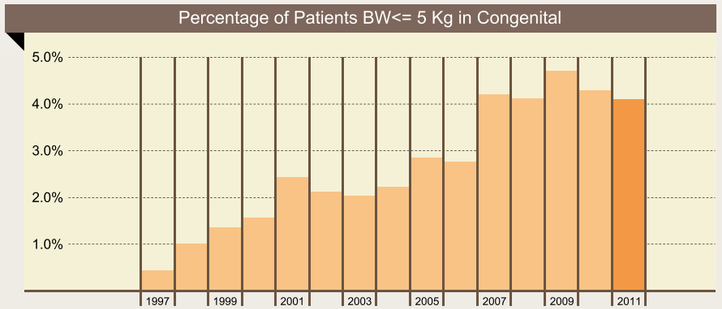
成人先天性心脏病矫治仍占据着治疗中较大的比率，这是颇具中国特色的。



体重小于5公斤的先心手术患者比率

Light-weight is a risk factor that can seriously affect the surgical outcome; however, the number of light-weight pediatric patients tends to increase obviously in the future.

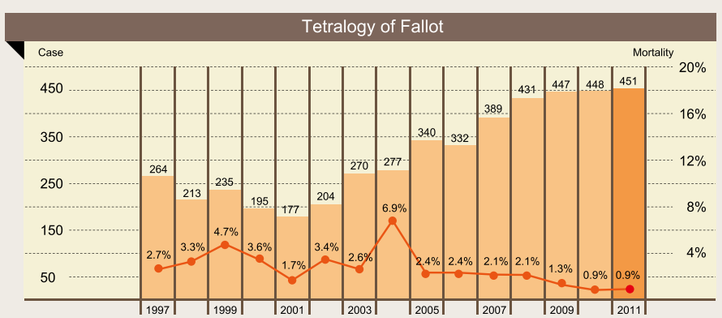
低体重是影响手术的一个危险因素，但这部分患儿的明显增加是将来的趋势.

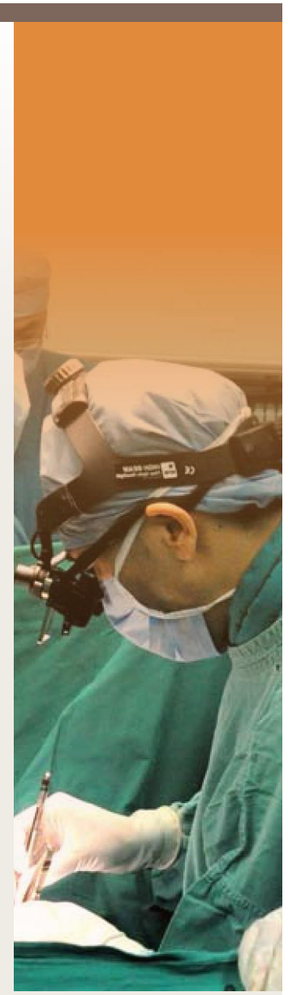


法洛四联症

In main-land China, Tetralogy of Fallot lies on the front of cyanotic congenital heart diseases. The department of cardiovascular surgery of Fu Wai Hospital has broad experiences on surgical correction of Tetralogy of Fallot, with excellent outcome in the world.

法洛四联症是中国大陆居紫绀类先天性心脏病首位的疾病。阜外医院心血管外科在根治法洛四联症方面积累了丰富的经验，并取得了居国际先进水平的治疗结果。





冠状动脉粥样硬化性心脏病
Coronary Disease

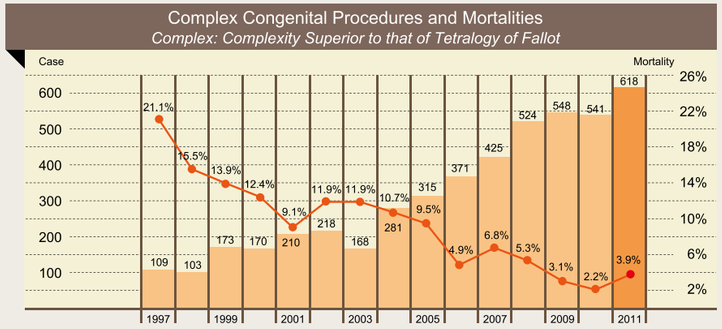
It is a constant challenge to cardiac surgeons to perform anatomic correction for later presented patients with TGA/IVS (transposition of the great arteries with intact ventricular septum) and isolated cTGA (corrected transposition of the great arteries) patients with morphologic left ventricular degeneration. It is more so in mainland china due to limited medical service. Morphologic left ventricle training procedure is regularly performed for these patients in Fu Wai Hospital. Then, Jatene or Double Switch procedure is usually practiced for anatomic correction. Our team has accumulated broad experiences on treatment for these patients.

延迟就诊的室间隔完整完全性大动脉转位以及解剖左室功能退化的单纯性矫正性大动脉转位患者的治疗一直是挑战先心病医师的难题。中国大陆由于就医条件的限制，先心病医师更常遇到此类患者。阜外医院在这类患者的左心室训练治疗方面积累了丰富经验，最终为许多患者完成了解剖根治术。

复杂先心病矫治

In Fu Wai Hospital, the volume of patients with complex congenital heart disease (complexity exceeding that of Tetralogy of Fallot) has increased obviously in recent years. Simultaneously, the result of surgical correction for these patients improved greatly.

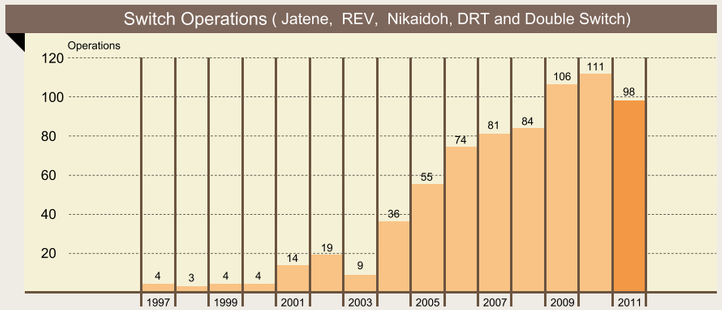
近年来阜外医院收治的复杂先心病患者（心脏畸形改变复杂程度超过法洛四联症）数量明显增加，手术效果也明显改善。



动脉调转类手术

Jatene procedure has been regularly performed for patients with Transposition of the Great Arteries in Fu Wai hospital. In addition, modified Nikaidoh procedure, modified REV procedure with the preservation of native pulmonary valve and ´Double Root Translocation´ (DRT) procedure were perfectly performed for treatment of complete TGA with ventricular septal defect and pulmonary stenosis. For corrected TGA, Double Switch procedure was successfully accomplished for patients´ anatomical correction.

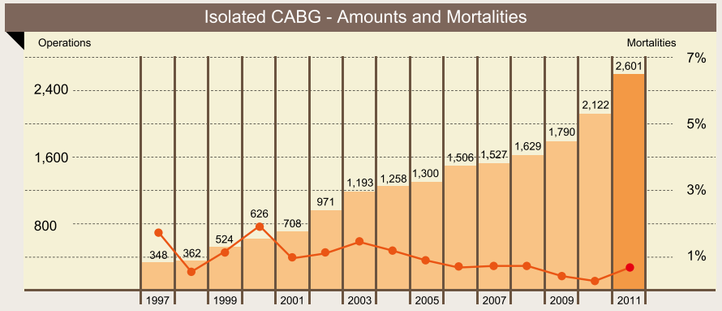
阜外医院已将高难度的Jatene手术常规运用于完全性大动脉转位的治疗；并成功采用改良nikaidoh手术、改良REV术式及“根部双调转”（DRT）术式治疗完全大动脉转位合并肺动脉狭窄、室间隔缺损的复杂病例。双调转术也被成熟运用于矫正型大动脉转位患者的解剖矫治。

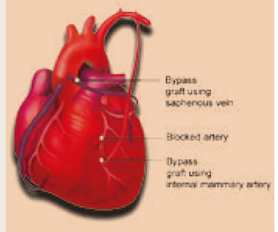


冠状动脉旁路移植术手术量及死亡率

In 1974, Fu Wai Hospital performed the first case of CABG in main-land China. The surgical volume of CABG increased rapidly with the climbing morbidity of coronary heart disease. In 2011, 3,194 patients received CABG operation in Fu Wai Hospital. In contrast to the rising surgical volume, the mortality of isolated CABG has remained stable seven years in succession lower than 1%.

1974年阜外医院心血管外科实施了中国大陆首例冠状动脉旁路移植术（冠脉搭桥术）。伴随着冠心病在中国大陆发病率的节节攀升，阜外医院冠状动脉移植术的数量也在迅猛增长，治疗效果也已达到国际先进水平。2011年为3194例患者实施了冠状动脉旁路移植术，其中单纯冠状动脉旁路移植术2601例。单纯冠状动脉旁路移植术的死亡率已连续7年低于1%。

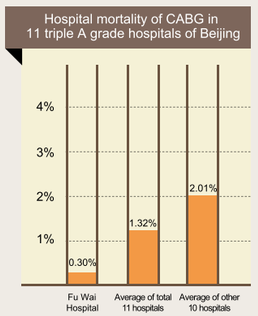


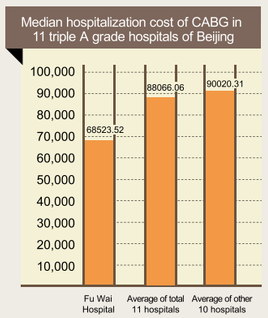


CABG示意图

北京市11家三级甲等医院 冠状动脉旁路移植术死亡率和费用

Hospital mortality and hospitalization cost of CABG in 11 triple A grade hospitals of Beijing





With the hospital mortality of 0.3% and the median hospitalization cost of RMB 68523.52 Yuan for CABG operation, Fu Wai Hospital represented the lowest mortality and the lowest cost among the 11 triple A grade hospitals where

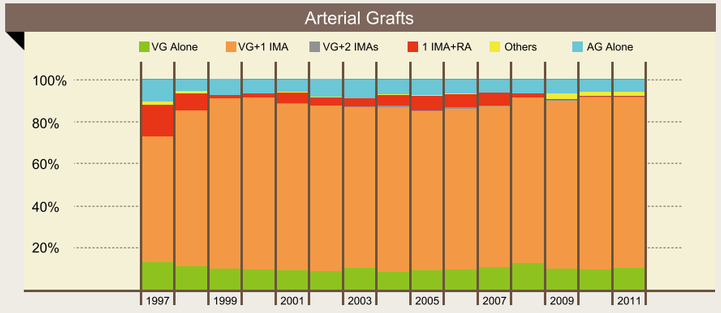
the CABG operations were performed in Beijing. – The results came from the ´Evaluation Report on Medical Safety and Quality´ for 17 triple A grade hospitals of Beijing.

在2011年公布的北京地区十七家三级甲等医院“质量与安全评价报告”中，阜外医院冠状动脉旁路移植术（ICD 9-CM-3 36.1）死亡率为0.3%，住院费用中位数为68523.52元，两项都是北京市 11家开展该项手术治疗医院中最低者。

动脉旁路血管的运用

Arterial grafts, especially internal thoracic artery (ITA) grafts, are known for their excellent long-term patency and therefore are the conduits of choice for coronary revascularization. Extensive experience with arterial grafts used as conduits in CABG procedures benefits patients and can ensure better outcomes.

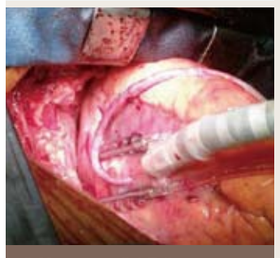
动脉旁路血管有利于保持桥血管远期通畅率，尤其是内乳动脉，效果更为明显。阜外医院心血管外科一直注重采用动脉旁路血管进行血运重建，以确保患者能获得良好的治疗效果。



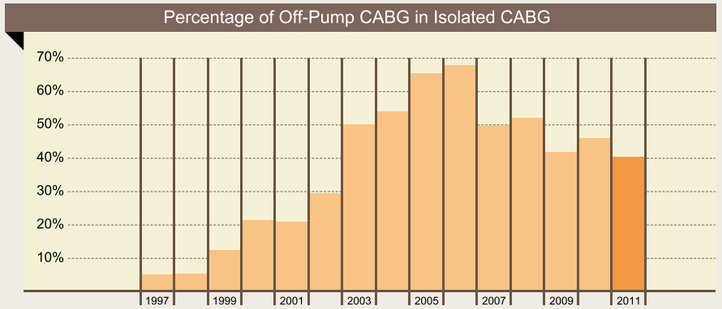
心脏跳动下的冠状动脉旁路移植术 (Off-pump CABG)

In main-land China, beating heart bypass surgery (Off-pump CABG) was firstly performed at Fu Wai Hospital in 1996. Our department has broad surgical experience in off-pump CABG with low hospital mortality.

阜外医院心血管外科于1996年在中国大陆最早开展心脏跳动下的冠状动脉旁路移植术，在这一领域内积累了丰富的临床试验。



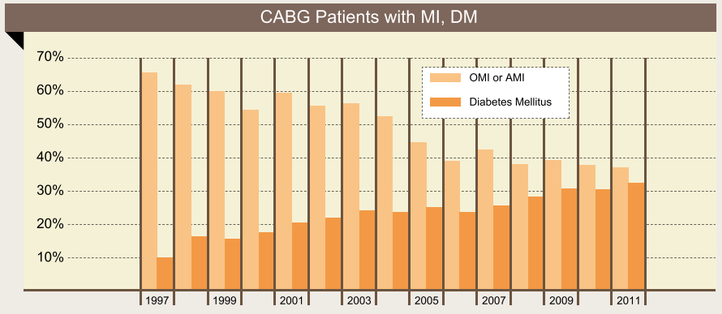
Off-pump CABG



冠状动脉旁路移植术患者合并心梗及糖尿病情况

From 1997 to 2011, in the rate of acute and old myocardial infarction in CABG patients, there was a progressive decrease; nevertheless, the rate of diabetes mellitus had increased dramatically.

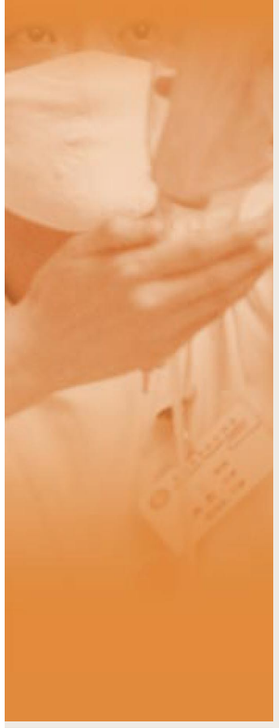
在阜外医院接受冠状动脉旁路移植术的患者中，合并陈旧心梗或急性心梗的比率在逐年减少，但合并糖尿病的比率则明显上升。



2011 ACCF/AHA Guideline for Coronary Artery Bypass Graft Surgery was published in J Am Coll Cardiol on November 7, 2011. The results of 2 clinic research about CABG in Fu Wai Hospital were adapted as evidence base by the American College of Cardiology Foundation/ American Heart Association Task Force on Practice Guidelines. It is the first time for the cardiovascular surgeons of mainland-china that their clinic research result was quoted as evidence in ACCF/AHA Guideline.

2011年11月7日，美国心脏学会基金会(ACCF)和美国心脏学会(AHA)临床指南特别工作组推出了2011新版冠状动脉旁路移植术指南。这版指南引用了阜外医院关于CABG手术的两个临床研究结果作为循证治疗的依据。这是中国大陆心血管外科专业首次有临床研究成果被国际最高级别指南手册引用。

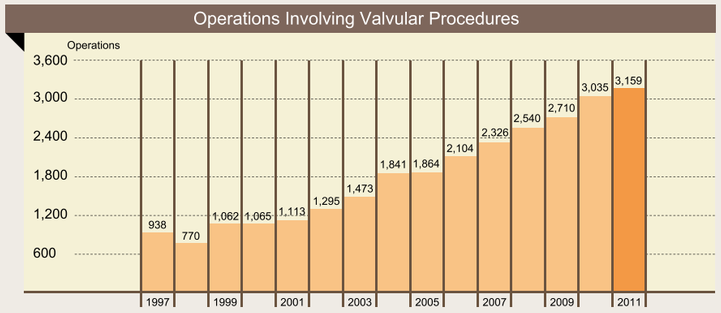
瓣膜性心脏病
Valve Disease



心脏瓣膜手术量

Fu Wai Hospital performed the largest number of valve procedures in China. In 2011, 3,159 patients received valvular operation in Fu Wai Hospital.

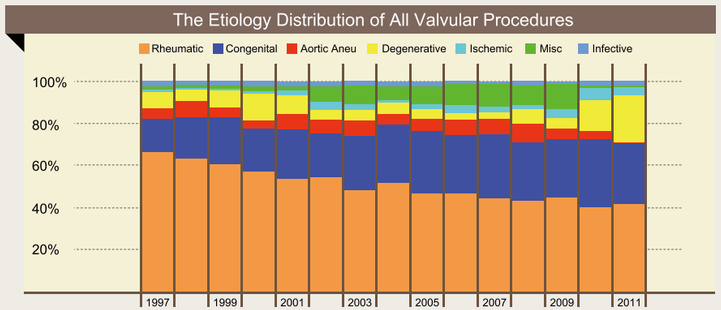
阜外医院心血管外科是中国最大的瓣膜手术中心，2011年完成心脏瓣膜手术3159例。



心脏瓣膜手术患者病种构成的逐年变化图

From 1997 to 2011, rheumatic valve disease occupied a major share of valve diseases at Fu Wai Hospital, while the ratio of such disease declined year by year.

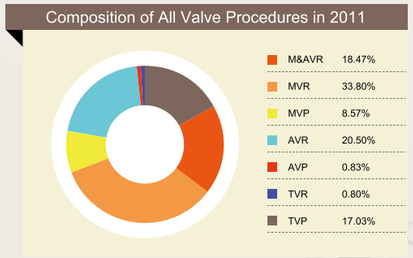
从1997年至2011年，阜外医院心血管外科收治的心脏瓣膜患者均以风湿性心脏瓣膜病变居首，但所占比重却在逐渐下降。



心脏瓣膜手术分类

Valve replacement was still the major type of valve procedure.

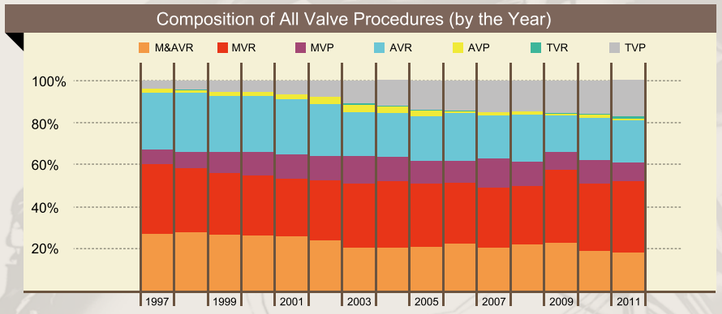
心脏瓣膜置换术仍是主要的手术治疗类型。



心脏瓣膜手术种类构成的逐年变化图

From 1997 to 2011, the proportion of mitral valve replacement always occupied a major share of the total valve procedures.

从1997年至20011年，二尖瓣置换术一直占据首位。

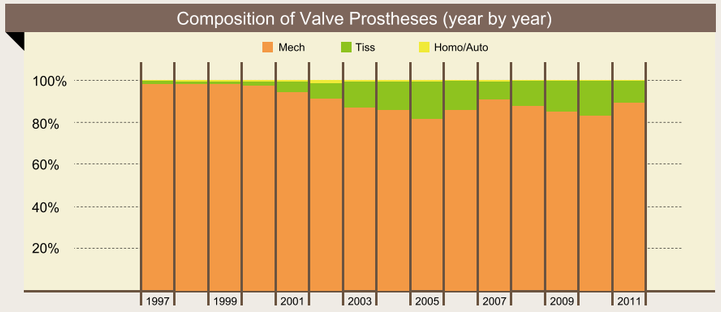


主动脉外科
Aortic Surgery

人工瓣膜的种类

In Fu Wai Hospital, mechanical valve replacement has long played a major role in total valve replacement.

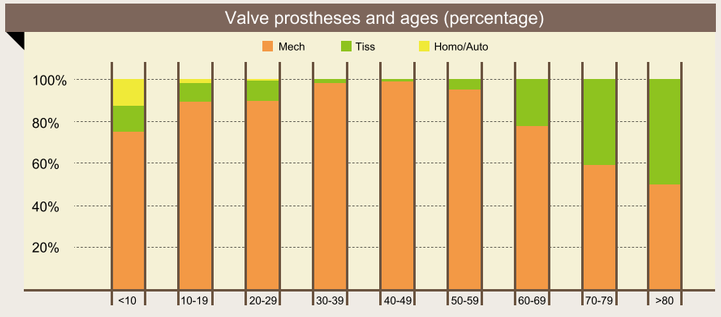
瓣膜置换手术中，人工机械瓣的使用一直占据着主要地位。



不同年龄患者所用人工瓣膜种类

In spite of the major role mechanical valve played, younger patients tended to select Auto/Homo valves, while elder patients prefered tissue valves more.

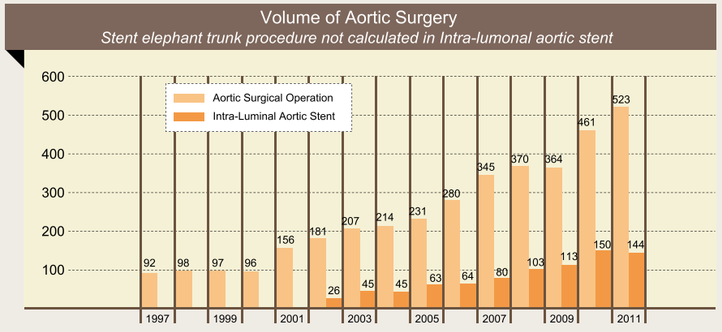
低龄患者采用ROSS手术或同种瓣比率较大，高龄患者使用生物瓣比率较高。



主动脉外科手术量

The department of cardiovascular surgery of Fu Wai Hospital has been taken as the No.1 choice for patients with aortic aneurysms and dissection in China. In 2011, the surgical volume of aortic surgery was 523 cases, and endovascular repair were successfully performed for 144 patients.

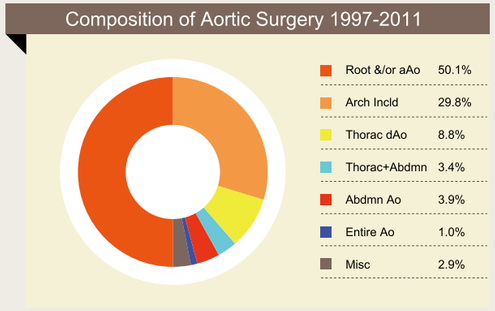
阜外医院心血管外科在主动脉瘤和主动脉夹层这一治疗领域内居国内领先。2011年完成主动脉病变治疗523例，实施腔内覆膜支架血管修复术144例。

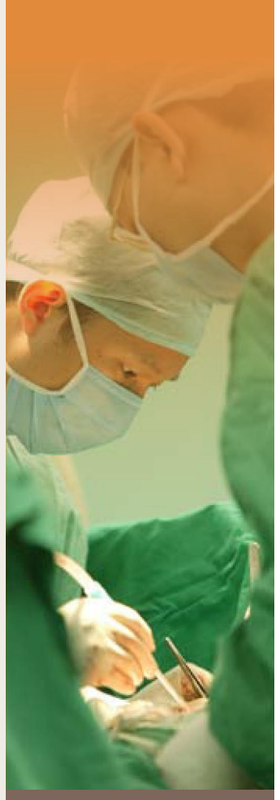


主动脉外科手术治疗部位构成图

The figure demonstrated the composition of aortic surgery from 1997 to 2011 in Fu Wai Hospital. The treatment for aortic root, ascending aorta and aortic arch occupied the major position.

这张图显示了阜外医院1997-2011年间主动脉外科手术治疗部位的构成情况。主动脉根部、升主动脉及主动脉弓病变的处理占主要份额。





杂交手术
Hybrid Approach to Heart Disease

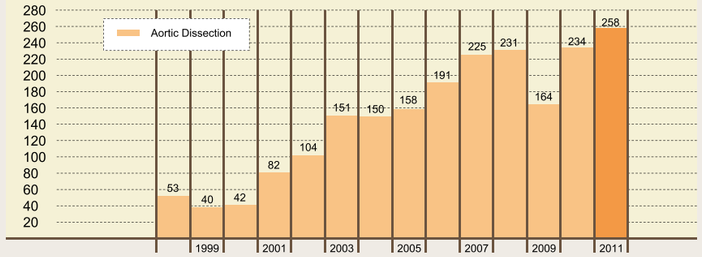
主动脉夹层

主动脉夹层瘤治疗量

An aortic dissection is a life-threatening, sudden onset catastrophe of the aorta. In mainland China, aortic dissection frequently victimized young and middle-aged males with hypertension. Emergency surgery was frequently performed by Fu Wai Surgical team to save these patients´ life.

在中国大陆，常见中青年主动脉夹层瘤患者。主动脉夹层瘤往往起病急骤，病情凶险。阜外医院外科团队每年都要为许多这样的患者实施紧急手术治疗，以挽救他们的生命。

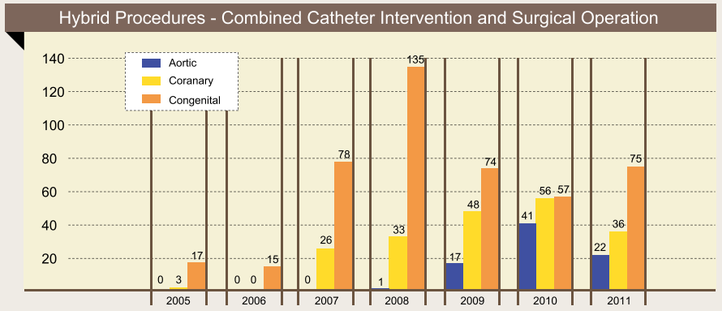
Surgical volume of aortic dissection in Fu Wai Hospital (year by year)



Hybrid Procedure - Combining Catheter Intervention and Surgical Operation- is a new concept in treatment of cardiovascular diseases. Fu Wai Hospital has made pioneer achievement in this area.

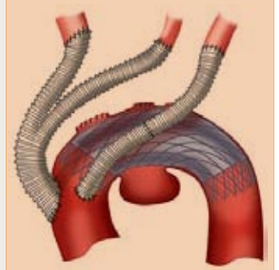
运用杂交技术治疗心血管疾病，是近年来新出现的治疗概念。杂交技术同时结合了介入和外科治疗的优势，为患者提供简便有效的治疗。阜外医院外科在这一新兴领域内进行了开拓性的工作。

Hybrid Procedures - Combined Catheter Intervention and Surgical Operation



With the introduction of drug-eluting stents, hybrid revascularization with a MIDCAB (minimally invasive direct coronary artery bypass) to the LAD (left anterior descending) artery and the stenting of all other vessels have become a valid alternative to conventional CABG for treating multivessel coronary heart disease. Hybrid procedure can also be used for the management of neonates with pulmonary atresia with intact ventricular septum and of Fallot´ s tetralogy with major aorto-pulmonary collateral arteries. For patients who suffered from atrial septum defect complicated by partial anomalous pulmonary venous connection or ventricular septum defect combined with coarctation of aorta, hybrid approach can make the one-stage correction for their defects simpler and safer. In addition, for type A or B aortic dissection, and aortic pseudoaneurysm with aortic arch involved, ´One-stop hybrid approach´, such as carotid arterial-bypass-supported endovascular aneurysm repair of the aortic arch lesion, has shown promising results as a less invasive alternative to conventional open-surgery.

运用“一站式”杂交手术治疗的疾病有：冠心病多支血管病变；新生儿室间隔完整的肺动脉闭锁或重度肺动脉瓣狭窄；法乐氏四联症合并粗大的体肺侧支血管；房间隔缺损合并部分肺静脉异位引流；以及室间隔缺损合并主动脉缩窄的一期矫治等。另外，对于A型主动脉夹层、B型主动脉夹层以及主动脉假性动脉瘤累及到主动脉弓部的复杂病变，阜外医院通过采用“一站式”杂交手术治疗，有效降低了手术损伤，为不能耐受传统手术的高危病人提供了新的治疗选择。



主动脉弓部杂交手术示意图

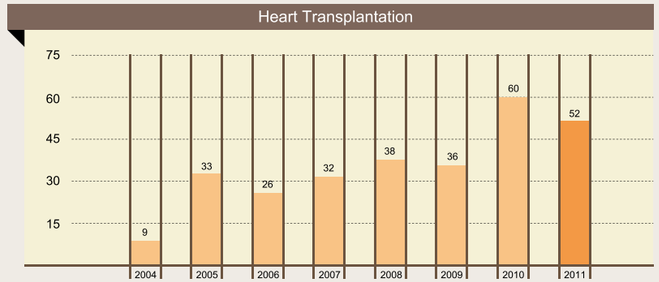
心脏移植
Heart transplantation

Fig.2. The distal heart's right atrium is sewn onto the superior and inferior vena cava.

心脏移植数量

Since June 2004, 286 cases of Heart Transplantation have been performed at Fu Wai Hospital, among which 52 were done in 2011.

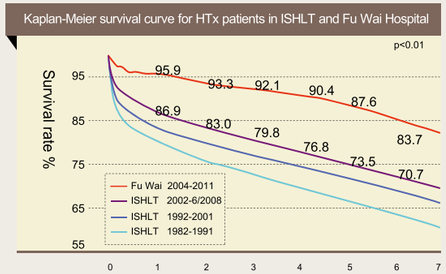
自2004年6月开始，在院内完成心脏移植286例。其中2011年实施心脏移植52例。



心脏移植生存率图

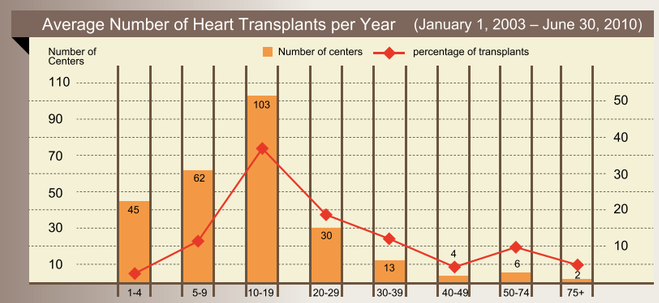
All patients got strict follow-up, with the mean follow-up time of 2.9 years. The one-year´s survival rate was 96%, and the five-year´s survival rate reached 87.6%, significantly higher than that of ISHLT.

对全部患者进行严格随访，平均随访2.9年。结果发现阜外医院移植后患者1年生存率为96%，3年生存率92%, 5年生存率87.6%；明显高于国际心肺移植协会（ISHLT）统计的同期生存率。



ISHLT statistics show that there were only 8 transplantation centers whose annual volume of heart transplantation was more than 50 cases in the world. In recent 2 years, the annual volume of heart transplantation in Fu Wai Hospital was 52 and 60 cases, respectively.

国际心肺移植协会（ISHLT）统计资料显示，全球年移植手术量超过50例的大型心脏移植中心仅有8家。阜外医院近2年来年心脏移植手术量均超过50例。

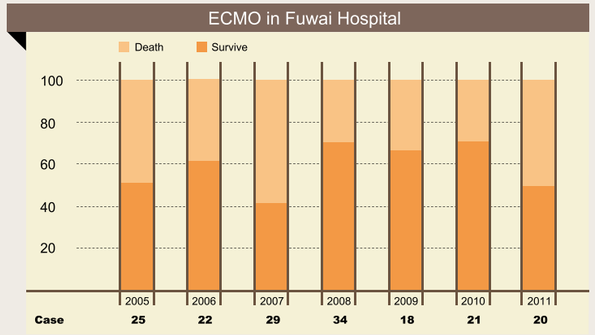


ECMO辅助
ECMO support

ECMO辅助治疗量

At Fu Wai Hospital, ECMO has been regularly used for patients with acute cardiogenic shock, and the result is rather satisfactory.

在阜外医院，ECMO辅助治疗已经成为救治急性心源性休克患者的常规手段，并取得良好疗效。

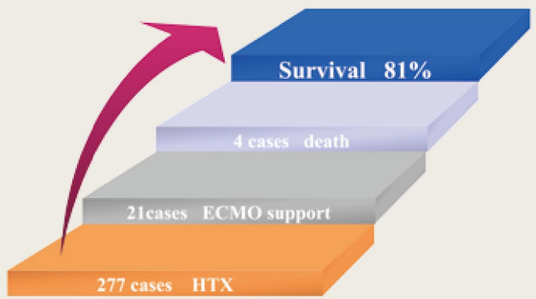


心脏移植后ECMO辅助

From 2005-2011, 277 patients received heart transplantation in Fu Wai Hospital. Among them, 21 patients got ECMO support after transplantation. The survival rate reached 81%.

2005年-2011年，阜外医院277例心脏移植患者中，有21例在移植后接受了ECMO辅助治疗。这部分辅助治疗患者的存活出院率达到81%。

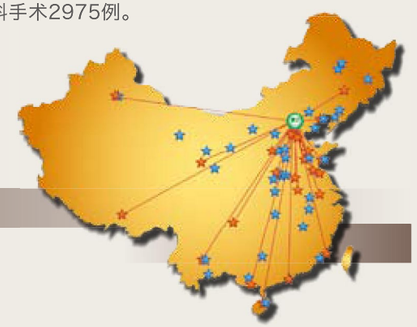
Post- transplantation ECMO support
Fu Wai Hospital 2005-2011



技术协作 Technical Collaboration Program

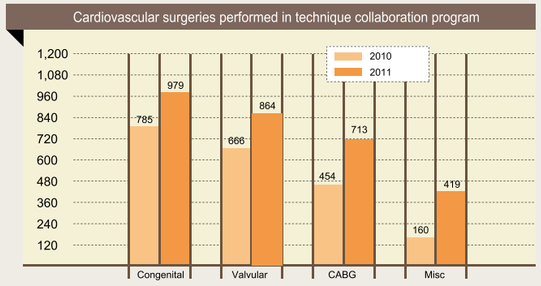
Fu Wai Hospital has carried out technique collaboration program with many hospitals all over the country. With the technique support of Fu Wai Surgical Team, their surgical treatment results for cardiovascular diseases improved rapidly. Because of the technique collaboration program, many patients can get outstanding surgical care where they are. From 2009 to 2011, 22 hospitals took part in this program. In 2011, 2975 cases of cardiovascular surgery were successfully performed in these hospitals with the support of Fu Wai Surgical Team.

阜外医院与全国多家医院开展了技术协作。阜外外科团队在协作医院开展技术支持，大力推进全国心血管外科技术进步。同时使大量患者在当地就能方便接受到阜外医院的优质医疗服务。2009至2011年间，阜外医院新增协作医院22个。2011年，阜外外科团队在各协作医院成功完成各类心血管外科手术2975例。



新增技术协作中心分布图

技术协作中心手术量



交流 Communication

China Heart Congress & IHF Beijing 2011

中国心脏大会暨北京国际心血管病论坛2011

The China Heart Congress & International Heart Forum Beijing 2011 was held successfully on August 11-14, 2011. The CHC and Forum was organized by the National Center for Cardiovascular Disease, China (NCCD), and jointly sponsored by all Chinese societies in cardiovascular field. The theme of the congress is ´Health Heart · Better Life´

With strong supports from the most knowledgeable expert and colleagues from both home and abroad, the congress has become the most comprehensive one in cardiovascular field in Asia Pacific region. About 7,000 people attended this conference, including experts from main-land china, Hong Kong, Tai Wan, and more than 140 world-class cardiovascular specialists from 16 foreign countries.

In order to better communicate and introduce the latest developments in cardiovascular surgery, distinguished surgeons were invited to present their groundbreaking works and debated the hottest topics and controversies on day to day clinic practice at branch forum of Cardiac Surgery, especially on the advancement in minimally invasive surgery, mitral valve repair and artery switch operation for complicated congenital heart disease. Plenary discussions were also held on aortic root and aortic arch lesions.

2011年8月11-14日，由国家心血管病中心主办的 “中国心脏病大会暨北京国际心血管病论坛2011”成功举办。大会的主题是“健康的心脏•更好的生活”。

在众多专家和医界同仁的大力支持和积极参与下，“中国心脏病大会暨北京国际心血管病论坛”已发展成为我国乃至亚太心血管病学界的学术盛会。内容涵盖心血管病预防、基础研究和临床等各个领域。来自16个国家的140余名心脏病学专家，以及来自包括香港、台湾地区的国内专家学者共7000余人参加了会议。

心血管外科专家们在外科分论坛上全面展示了他们在外科治疗心脏疾病方面的开创性工作，并共同讨论了目前心血管外科所面临的挑战。尤其是在微创外科进展、二尖瓣成形修复术、运用大动脉调转术治疗复杂先天性心脏病，以及主动脉根部病变及主动脉弓部病变治疗的新技术、新理念等热点问题上进行了深入的探讨。

Joint Meeting of 19th ASCVTS and 21st ATCSA

亚洲胸心血管外科学会和亚洲胸心血管外科医师协会2011联合大会

In 2011, it is the first time ever when 2 major Asia cardiothoracic surgical societies join hands to hold a joint meeting of the 19th Annual Meeting of the Asian Society for Cardiovascular and Thoracic Surgeons (ASCVTS) and the 21st Annual Congress of the Association of Thoracic and Cardiovascular Surgeons of Asia (ATCSA) in the beautiful city of Phuket, Thailand. 9 cardiovascular surgeons from Fu Wai Hospital presented 19 different speeches at the meeting, including speech on correction of complex congenital heart disease, hybrid approach to coronary disease and aortic surgery.

At this joint meeting, the founder of ATCSA, Professor Romeo D. Zamora and the Secretary-General of ATCSA, Professor Eugene Sim conferred the ´Award of Distinction´ of ATCSA to Professor Hu Sheng-shou to celebrate his outstanding contribution.

2011年5月27-29日，第19届亚洲胸心血管外科学会和第21届亚洲胸心血管外科医师协会（ASCVTS-ATCSA 2011）联合大会在泰国普吉成功召开，这是亚洲两个最大的心胸血管外科医师组织的首次联合大会。来自阜外医院的9位外科医师先后做了19次会议发言，涵盖冠心病、主动脉疾病的杂交手术治疗、复杂先心病矫治等诸多领域。

阜外医院胡盛寿教授在该会议上荣获亚洲胸心血管外科医师协会（ATCSA）“杰出贡献奖”。ATCSA创始人教授和ATCSA秘书长Eugene Sim教授亲自为胡盛寿教授颁发了奖杯。

2011 American Heart Association Scientific Sessions

2011美国心脏协会科学年会

During 12th-16th November 2011, 2011 American Heart Association Scientific Session was held in Orlando, U.S.A. At this meeting, two young surgeons from Fu Wai Hospital were invited to make presentation about their basic research on cardiovascular surgery.

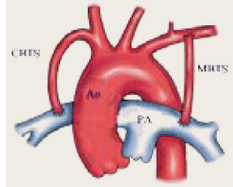
2011年11月12-16日，2011美国心脏协会科学年会于美国奥兰多召开，来自阜外医院的两位年青外科医师就心血管外科基础研究做了精彩发言。

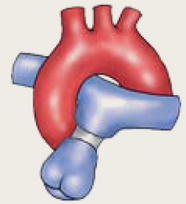
The Fourth Complex Congenital Heart Disease Forum and Surgical Training Program on Palliative Operation

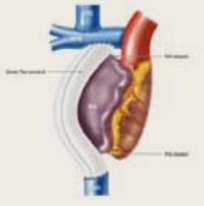
复杂先天性心脏病的外科姑息手术治疗研习班

The Fourth Complex Congenital Heart Disease Forum and Surgical Training Program on Palliative Operation was successfully held in Fu Wai Hospital on March 24-26, 2011. More than 240 surgeons and anesthetists from all over the country took part in the conference. In addition, several live shows of palliative operation for challenging cases were presented during the conference.

In total, there are 21 palliative procedures for surgical management of complex congenital heart disease. Palliative operations have several applications in patients with congenital heart disease. They are used to permit survival of critically ill neonates, to prepare the circulation for later more curative surgery, and to permit an acceptable quality of life in patients with complex malformations impossible for corrective surgery. In recent years, the palliative operations increased obviously in Fu Wai Hospital. Especially for later presented patients with TGA/IVS and isolated cTGA patients with morphologic left ventricular degeneration, the second stage anatomic correction was achieved in many of them in Fu Wai Hospital, after completing morphologic left ventricle training by means of pulmonary artery banding plus (or not) modified B-T shunt.

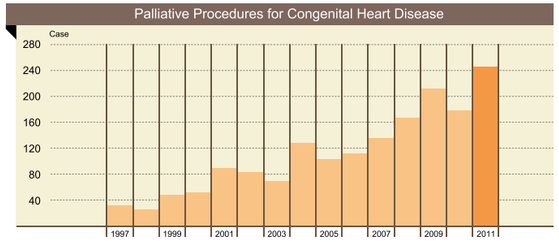


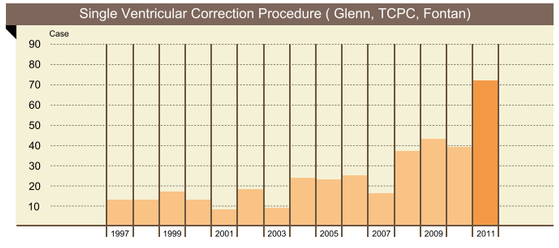




姑息类手术示意图

2011年3月24-26日，“复杂先天性心脏病外科治疗研讨会暨培训班第四期：复杂先天性心脏病的外科姑息手术治疗研习班”在阜外医院成功举办。来自全国各地的240多名医师参加了会议。沿袭以往研习班的特色，会议安排了典型病例手术演示。





复杂先心病的姑息手术种类繁多，有些姑息手术是实现患者生理矫治的最终手段，而有些姑息手术是实现患者后期解剖根治的桥梁。手术时机和治疗标准的选择是此类手术的难点。随着复杂先心病患者就诊的增加，阜外医院近年来先心病姑息手术治疗量明显上升。2011年单心室类姑息手术较2010年增加了近一倍。阜外医院尤其在延迟就诊的室间隔完整型完全性大动脉转位以及解剖左室功能退化的单纯性矫正性大动脉转位患者的左心室训练姑息治疗方面积累了

科研创新 New Research

丰富经验。通过先期的肺动脉环缩术加改良B-T分流术进行左心室训练，再在二期为患者实现解剖根治；并根据自己的经验提出了针对中国此类患儿群体的训练术的“阜外”标准与治疗流程。

The Fu Wai Conference on Aortic Surgery 2011

第三届阜外主动脉病变治疗研讨会

On December 3-4, 2011, more than 400 surgeons and anesthetists from more than 100 medical centers took part in ‘The Fu Wai Conference on Aortic Surgery 2011’. Distinguished specialists presented their thorough considerations about the treatment for type A and type B aortic dissection, ascending and aortic arch disease, thoracic-abdominal aortic aneurysm and aortic root aneurysm.

Plenary discussions were performed on aortic root lesions caused by nonspecific inflammatory diseases, ‘De-branch technique’ for repairing of type A aortic dissection, time and strategy selection for treatment of the aortic arch lesions, ‘hybrid approach’ for repairing of coarctation of aorta companied with cardiac malformation, time and risk factors for TEVAR treatment in acute type B aortic dissection, the target and effect evaluation for TEVAR treatment of chronic type B aortic dissection and surgical re-intervention for complications after TEVAR treatment, rescue surgery for rupture of abdominal aneurysm.

2011年12月3～4日，“第三届阜外主动脉病变治疗研讨会”在北京顺利举行。来自一百多家医疗中心的400多位外科专家、麻醉医师参加了会议。

与会专家就非特异性炎性病变行主动脉根部处理方法、“De branch”杂交手术治疗主动脉A型夹层、高危患者主动脉弓部病变的治疗对策、杂交技术治疗主动脉缩窄合并心脏病变、急性 B型夹层TEVAR治疗的时机与风险、TEVAR治疗慢性B型夹层的目的与效果、主动脉B型夹层TEVAR术后并发症的外科治疗、腹主动脉瘤破裂的抢救性外科治疗大血管手术中的血液保护技术以及主动脉病变治疗后并发症的再次外科干预等重要问题进行了深入而广泛的交流和探讨。

- **“973"项目**

Supported by the Major State Basic Research Development Program of China

建立基于疾病细胞模型的药物评价和筛选体系

The construction of drug evaluation and screening system based on cellular model of disease

先天性心脏病肺血管功能异常分子标志物的研究

The research on molecular markers of abnormal pulmonary vascular function in patient with congenital heart disease

先天性心脏病围手术期未成熟心肺保护研究

The research on functional protection of immature heart and lungs during peri-operational period in children with congenital heart disease

先天性心脏病心室重构和逆转的研究

The research on ventricular remodeling and ventricular geometry reversal in patient with congenital heart disease

先天性心脏病形成、发展和干预的基础研究

Basic Research on causes, development and intervention of congenital heart diseases

- **“863"项目**

Supported by State 863 projects

基于连笔直写的生命体微结构成形技术研究

The research on microstructural vascular scaffold with Micro-Tip Direct Writing Technology

- **国家自然科学基金资助项目**

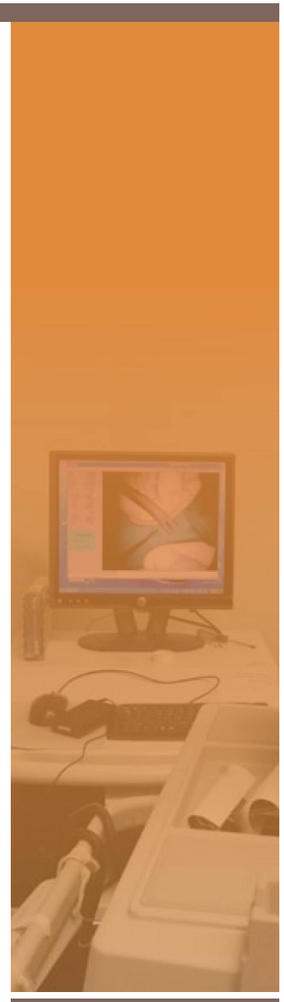
Supported by National Nature Science Foundation of China

基质金属蛋白酶-10在心肌梗死后心室重构中的生物学意义及其信号转导通路研究

The Study on biological significance and signal transduction of matrix metalloproteinase 10 (Mmp 10) on ventricular remodeling in post myocardial infarction

升主动脉瘤壁细胞外基质（ECM）生成减少及其病理机制的研究

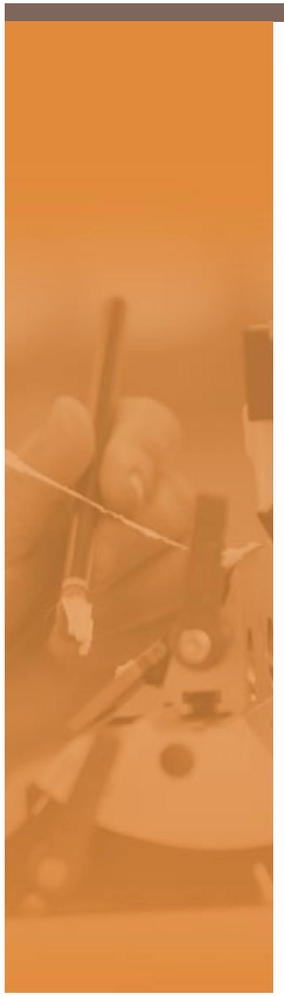
The study on the pathomechanism of reduction of extracellular matrix (ECM) production in the wall of ascending aortic aneurysm.



In 2011, Fu Wai Surgical team won 14 new items for science research projects of national or provincial-level, contributing greatly to the total of 56 researches being performed now.

目前阜外医院外科团队承担着56个在研科学项目，2011年又新增14项国家和省部级研究项目。

新知识 New Knowledge



一种新选择性脑灌注策略对深低温停循环术中未成熟脑的保护作用及机制研究

The research on the protective role and mechanism in immature brain of a new selective cerebral perfusion strategy during deep hypothermia circulatory arrest

婴幼儿体外循环中脑血流压力／流量自我调节学说理论的构建

The construction of the self-regulating theory on cerebral blood pressure/flow in infants and young children in open heart surgery with cardiopulmonary bypass (CPB)

致心律失常型右室心肌病发病的分子机制研究

The Study on molecular bases of the pathogenesis of arrhythmogenic right ventricular cardiomyopathy (ARVC)

microRNA调控大鼠出生后心肌细胞增殖能力转变过程的研究

The experiment research in postnatal rat on regulating mechanism of microRNA in cardiomyocyte proliferation ability changes

心室辅助中血流脉动量对主动脉影响的研究

The research on the effect of blood flow pulsation on aorta during ventricular assist device support

- **北京市自然科学基金**

Supported by Beijing Natural Science Foundation Program

可降解胸骨固定材料PBS/PLA生物性能研究

The study on biological properties of PBS/PLA biodegradable blend as sternal fixation apparatus

RNA干扰抑制心肌骨桥蛋白表达逆转扩张性心肌病心室重构的研究

Research on inhibition of Osteopontin(OPN) expression with RNA Interference therapy for ventricular remodeling reverse in dilated cardiomyopathy

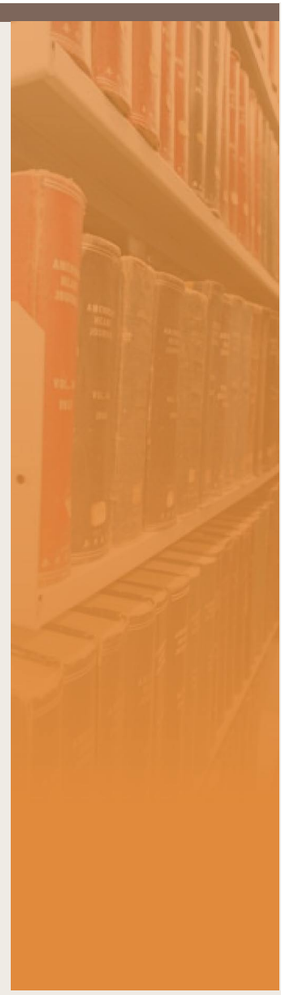
- **高校博士点科研基金**

Supported by Research Fund for the Doctoral Program of Higher Education of China

胸主动脉手术围术期脊髓缺血损伤监测及损伤机制的基础研究

Basic research on monitoring and mechanism of spinal cord ischemic injury during peri-operative period of thoracic aortic surgery

英文期刊



- Hu S, Liu S, Zheng Z, Yuan X, et al. Isolated coronary artery bypass graft combined with bone marrow mononuclear cells delivered through a graft vessel for patients with previous myocardial infarction and chronic heart failure: a single-center, randomized, double-blind, placebo-controlled clinical trial. J Am Coll Cardiol. 2011; 57(24): 2409-15.

- Wei Y, Cui C, Lainscak M, Zhang X, Li J, Huang J, Zhang H, Zheng Z, Hu S. Type-specific dysregulation of matrix metalloproteinases and their tissue inhibitors in end-stage heart failure patients: relationship between MMP-10 and LV remodelling. J Cell Mol Med. 2011; 15(4): 773-82.

- Wei Y, Li J, Huang J, Zhang X, Zhao H, Cui C, Li Y, Hu S. Elevation of IGF-2 receptor and the possible underlying implications in end-stage heart failure patients before and after heart transplantation. J Cell Mol Med. 2011 Sep 6. doi: 10.1111/j.1582-4934.2011.01414.x. [Epub ahead of print]

- Fan H, Hu S, Zheng Z, Li S, Zhang Y, Pan X, Liu Y. Do patients with complete transposition of the great arteries and severe pulmonary hypertension benefit from an arterial switch operation? Ann Thorac Surg. 2011; 91(1): 181-6.

- Wu H, Sun H, Jiang X, Ma W, Wang X, Zhang J, Hu S. Simultaneous hybrid revascularization by peripheral artery stenting and off-pump coronary artery bypass: the early results. Ann Thorac Surg. 2011; 91(3): 661-4.

- Liu J, Ji B, Long C, Yan F, Yan J, Li S. Is regional high-flow perfusion safe for cerebral function in pediatric patients during deep hyperthermia? Ann Thorac Surg. 2011; 91(5):1650-1.

- Li S, Chen W, Zhang Y, Zhang H, Hua Z, Wang D, Hu S. Hybrid therapy for pulmonary atresia with intact ventricular septum. Ann Thorac Surg. 2011; 91(5): 1467-71.

- Zhang C, Hou J, Zheng S, Zheng Z, Hu S. Vascularized atrial tissue patch cardiomyoplasty with omentopexy improves cardiac performance after myocardial infarction. Ann Thorac Surg. 2011; 92(4): 1435-42.

- Pan X, Zheng Z, Hu S, Li S, Wei Y, Zhang Y, Cheng X, Ma K. Mechanisms of pulmonary hypertension related to ventricular septal defect in congenital heart disease. Ann Thorac Surg. 2011; 92(6): 2215-20.

- Wang W, Jiang Q, Zhang H, Jin P, Yuan X, Wei Y, Hu S. Intravenous administration of bone marrow mesenchymal stromal cells is safe for the lung in a chronic myocardial

More than 92 articles were published in peer-reviewed journal in 2011, including 32 articles published in English.

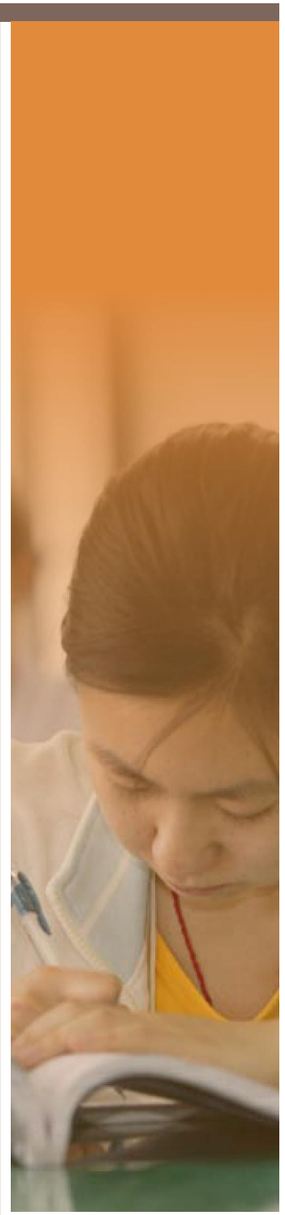
2011年阜外医院外科系统发表专业论著90余篇，在心血管外科的临床与研究领域内进行着新知识的传播与交流。

infarction model. Regen Med. 2011; 6(2): 179-90.

- Guo HW, Sun XG, Xu JP, Xiong H, Wang XQ, Su WJ, Lin Y, Hu SS. A new and simple classification for the non-coronary sinus of Valsalva aneurysm. Eur J Cardiothorac Surg. 2011; 40(5): 1047-51.
- Hua Z, Li S, Wang L, Hu S, Wang D. A new pulmonary valve cusp plasty technique markedly decreases transannular patch rate and improves midterm outcomes of tetralogy of Fallot repair. Eur J Cardiothorac Surg. 2011; 40(5): 1221-6.
- Zheng S, Zheng Z, Hou J, Hu S. Comparison between drug-eluting stents and coronary artery bypass grafting for unprotected left main coronary artery disease: a meta-analysis of two randomized trials and thirteen observational studies. Cardiology. 2011; 118(1): 22-32.
- Luo GH, Ma WG, Sun HS, Pan SW, Huang ZX, Wang HY, Zhu XD. Surgical treatment for primary mitral valve tumor: a 25-year single-center experience. Cardiology. 2011;119(2): 81-7.
- Zhao J, Yang J, Liu J, Li S, Yan J, Meng Y, Wang X, Long C. Effects of pulsatile and nonpulsatile perfusion on cerebral regional oxygen saturation and endothelin-1 in tetralogy of fallot infants. Artif Organs. 2011; 35(3): E54-8.
- Hei F, Lou S, Li J et al. Five-year results of 121 consecutive patients treated with extracorporeal membrane oxygenation at Fu Wai Hospital. Artif Organs. 2011; 35(6): 572-8.
- Yu K, Long C, Hei F, Li J, Liu J, Ji B, Gao G, Zhang H, Song Y, Wang W. Clinical evaluation of two different extracorporeal membrane oxygenation systems: a single center report. Artif Organs. 2011; 35(7): 733-7.
- Yang Z, Wu Y, Zhang H, Jin P, Wang W, Hou J, Wei Y, Hu S. Low-level laser irradiation alters cardiac cytokine expression following acute myocardial infarction: a potential mechanism for laser therapy. Photomed Laser Surg. 2011; 29(6): 391-8.
- Wang G, Bainbridge D, Martin J, Cheng D. N-acetylcysteine in cardiac surgery: do the benefits outweigh the risks? A meta-analytic reappraisal. J Cardiothorac Vasc Anesth. 2011; 25(2): 268-75.
- Duan X, Ji B, Yu K, Liu J, Hei F, Long C. Pharmacological postconditioning protects isolated rat hearts against ischemia-reperfusion injury: the role of mitochondrial permeability transition pore. ASAIO J. 2011; 57(3): 197-202.
- Chen H, Zhou J, Sun H, Tang Y, Zhang Y, Liu G, Hu S. Short-term in vivo preclinical biocompatibility evaluation of FW-II axial blood pump in a sheep model. ASAIO J. 2011 May-Jun;57(3):177-82.
- Wang S, Lv S, Guan Y, Gao G, Li J, Hei F, Long C. Cardiopulmonary bypass techniques and clinical outcomes in Beijing Fuwai Hospital: a brief clinical review. ASAIO J. 2011; 57(5): 414-20.
- Lou S, Ji B, Liu J, Yu K, Long C. Generation, detection and prevention of gaseous microemboli during cardiopulmonary bypass procedure. Int J Artif Organs. 2011; 34(11):1039-51.
- Guo HW, Pan SW, Song YH, Hu SS. Redoing a bioprosthetic tricuspid valve replacement with pacemaker wire through the ruined bioprosthetic valve orifice. Chin Med J (Engl). 2011; 124(6): 958-60.
- Zhang CX, Xu JP, Ge YP, Wei Y, Yang Y, Liu F, Shi Y. Validation of four different risk stratification models in patients undergoing heart valve surgery in a single center in China. Chin Med J (Engl). 2011; 124(15): 2254-9.
- Duan X, Ji B, Yu K, Hei F, Liu J, Long C. Acidic buffer or plus cyclosporine A post-conditioning protects isolated rat hearts against ischemia-reperfusion injury. Perfusion. 2011; 26(3): 245-52.
- Duan X, Ji B, Liu G, Li Q, Liu J, Yu K, Tang Y, Long C. Evaluation of shunting flow differences in varied conditions in a simulated adult CPB model during normothermia. Perfusion. 2011; 26(3): 207-13.
- Lou S, Bian L, Long C, Wang Z, Ma J, Zhou B. Does 6% hydroxyethyl starch 130/0.4 impact differently on blood glucose than 4% gelatine in patients receiving open heart surgery? Perfusion. 2011 Oct 17. [Epub ahead of print]
- Liu L, Wang W, Wang X, Tian C, Meng YH, Chang Q. Reimplantation versus remodeling: a meta-analysis. J Card Surg. 2011; 26(1): 82-7.
- Luo GH, Ma WG, Huang LJ, Yan J, Zhu XD. Surgical and transcatheter closure of right pulmonary artery to left atrial fistula. J Card Surg. 2011; 26(2): 130-4.
- Zhang J, Ma WG, Pan SW. Surgical management of double-orifice tricuspid valve. J Card Surg. 2011; 26(4): 425-8.
- Guo HW, Pan SW, Song YH, Hu SS. Repair of a ventricular septal defect in a patient with left lung agenesis. J Card Surg. 2011; 26(5): 519-20.
- Guo HW, Xiong H, Xu JP, Wang XQ, Hu SS. Surgical Correction for Sinus of Valsalva Aneurysm with Right Ventricular Outflow Tract Stenosis. J Card Surg. 2011 Dec 5. doi: 10.1111/j.1540-8191.2011.01348.x. [Epub ahead of print]

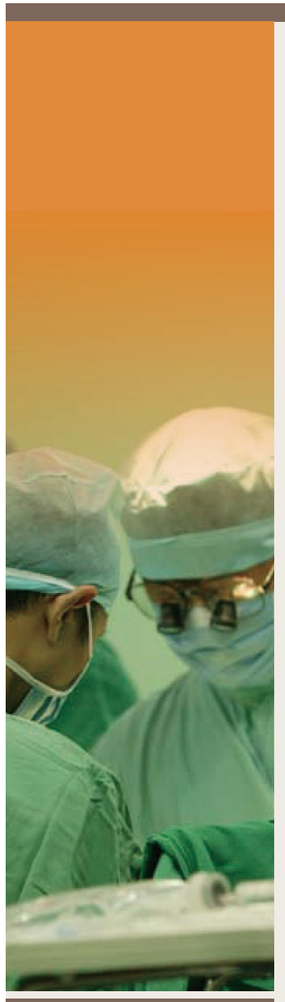
中文期刊

- 潘湘斌 胡盛寿 李守军 郑哲 张雅娟 高歌 林野 王扬　大动脉转位患者动脉调转术后死亡的危险因素分析　中华心血管病杂志　2011；39（4）：315-319
- 孙海宁 胡盛寿 郑哲 侯剑锋　吸烟和戒烟对冠状动脉旁路移植术后远期结果的影响　中华心血管病杂志 2011；39（9）：825-829
- 蒙延海 田川 柳磊 王亮 刘文芝 常谦　升主动脉瘤中结缔组织生长因子的表达与瘤壁病理性重塑的实验研究　中华外科杂志 2011；49（3）：261-265
- 王古岩 石佳 杨静 王海玲 史春霞 林霖 王剑辉 王越夫 于钦军 李立环　氨甲环酸对非体外循环冠状动脉旁路移植术病人的血液保护作用 中华麻醉学杂志 2011；31（1）：7-9
- 穆东亮 敖虎山　非体外循环冠状动脉旁路移植术患者术中血糖波动水平与短期预后的关系　中华麻醉学杂志 2011；31（2）：141-143
- 陈东 吕国义 李立环　健康志愿者6%羟乙基淀130/0.4的容量动力学　中华麻醉学杂志　2011；31（4）：469-471
- 王古岩 王东 史静 张昱 石佳 方仲蓉 陈芳 李立环　氨甲环酸对非体外循环冠状动脉旁路移植术病人炎性反应的影响 中华麻醉学杂志 2011；31（7）：781-783
- 史艺 闫军 张晶 王强 李巅远 花中东　一岁以内复杂先心病双向格林手术结果分析 中华小儿外科杂志　2011；32（2）：86-88
- 姜睿 闫军 李守军 胡盛寿 罗国华 王强 史艺　婴幼儿心脏术后上腔静脉梗阻综合征的治疗　中华小儿外科杂志 2011；32（4）：272-274
- 李景文 龙村 楼松 黑飞龙 于坤 王仕刚 胡盛寿 许建屏 常谦 刘平 张海涛 孙寒松 王巍　心脏外科手术后体外膜肺治疗50例　中华胸心血管外科杂志　2011；27（2）：102-104，83
- 陈海波 胡盛寿 周建业 孙寒松 唐跃 张岩 柳光茂 朱晓东　FW-Ⅱ型轴流泵短期辅助抗体内血栓形成性能评价　中华胸心血管外科杂志　2011；27（4）：224-227
- 孙立忠 朱俊明 刘志刚 田良鑫　非体外循环下全主动脉弓替换术治疗主动脉弓降部动脉瘤的早、中期结果　中华胸心血管外科杂志　2011；27（6）：339-341
- 魏以桢 常谦 于存涛 孙晓刚 钱向阳 贺东 冯钧 吴永波 蒙延海　一期“杂交”手术主动脉弓替换及早期随访结果 中华胸心血管外科杂志　2011；27（6）：342-348
- 张振亮 周建业 胡盛寿 刘立群 孙平平 杨子鹤 李君　光氧化处理脱细胞牛心包构建组织工程心肌补片的实验研究 中华胸心血管外科杂志　2011；27（8）：485-488
- 孙寒松，王现强，马维国，张旌，胡晓鹏，郑哲，马琼　连续1052例冠心病手术无死亡的临床经验　中华胸心血管外科杂志　2011；27（10）
- 范祥明 刘迎龙 闫军 沈向东 李守军 凌锋　肺动脉发育不良型法洛四联症根治术前姑息手术和介入技术的应用　中华胸心血管外科杂志　2011；27（10）
- 赵明霞　中国体外循环8年动态分析　中华胸心血管外科杂志　2011；27（10）
- 薛庆华 王伟鹏 于钦军 刘明政 陈雷 程卫平　镁和钙在低剂量芬太尼麻醉中对心脏瓣膜置换术患者心房颤动转复的影响　中华心律失常学杂志 2011；15（4）：296-299
- 孙海宁 胡盛寿 郑哲 侯剑锋　吸烟及戒烟对冠状动脉旁路移植术后早期结果的影响 中国循环杂志　2011；26（2）：89-92
- 崔彬 许建屏 王巍 吕锋 王水云 熊辉　肥厚型梗阻性心肌病围术期心律失常特点及治疗策略 中国循环杂志　2011；26（2）：129-132
- 史强 魏英杰 张秀芳 崔传珏 李君 刘晓艳 白媛媛　大鼠心肌梗死后心肌中转化生长因子β诱导基因-22蛋白表达的变化规律及白细胞介素-6对其表达的诱导作用　中国循环杂志 2011；26（3）：227-230
- 凌雁 郭少先 沈向东 闫军 李守军　法乐四联症矫治术后右心室流出道瘤的临床分析　中国循环杂志　2011；26（4）：298-301
- 敖虎山 王武 范永斌 苏建林 贾爱　镁预处理对不稳定性高血压患者心脏术中血压的影响 中国循环杂志　2011；26（5）：374-377
- 冯正义 龙村 刘晋萍 赵举 袁媛 楼松 李守军 阎军 王旭　体外膜肺氧合在小儿心脏术后急性心肺功能衰竭中的应用　中国急救医学　2011；31（5）：390-394
- 崔传珏 魏英杰　信号转导及转录激活因子3与心肌重塑的研究进展　中国病理生理杂志 2011；27（4）：808-812
- 于坤 黑飞龙 李景文 高国栋 刘晋萍 张海涛 刘平 王旭 许建屏 龙村　两种体外膜式氧合支持系统的临床应用研究　中国胸心血管外科临床杂志 2011；18（1）：16-21
- 孙宏涛 常谦 于存涛 魏以桢 冯钧 徐晋　肺动脉夹层的诊断与治疗　中国胸心血管外科临床杂志 2011；18（1）：45-48
- 段欣 吉冰洋 刘刚 李青峰 唐跃 于坤 龙村　成人体外循环模型中评价不同情况下侧路分流量　中国胸心血管外科临床杂志　2011；18（1）：49-53
- 魏以桢 常谦 于存涛 孙晓刚 钱向阳 贺东 冯钧 吴永波 蒙延海　一期杂交手术治疗累及主动脉弓远端的降主动脉病变　中国胸心血管外科临床杂志 2011；18（2）：99-103



- 凌雁 郭少先 沈向东 闫军 李守军　法洛四联症合并肺动脉瓣缺如患者手术矫治的近中期结果　中国胸心血管外科临床杂志　2011；18（2）：114-116
- 张春晓 许建屏 葛翼鹏 魏宇 史艺　不同心脏手术风险预测评分系统对中国冠状动脉旁路移植术后患者早期死亡的预测　中国胸心血管外科临床杂志　2011；18（3）194-198
- 李浩杰 宋云虎 胡盛寿 孙寒松 许建屏 王巍 王水云 凤玮 段福建 叶赞凯　实时三维超声评价左室室壁瘤外科治疗后左心室局部收缩功能的改变　中国胸心血管外科临床杂志　2011；18（3）：209-213
- 孙宏涛 于存涛 常谦 冯钧 贺东 钱向阳 徐晋　非体外循环下成人复杂型主动脉缩窄的解剖矫治　中国胸心血管外科临床杂志　2011；18（3）：214-217
- 楼松 丁凡 龙村 刘晋萍 冯正义 赵举　影响婴儿心脏手术后近期预后的危险因素分析　中国胸心血管外科临床杂志 2011；18（3）：222-226
- 魏以桢 常谦　B型不典型主动脉夹层的腔内修复术治疗及中期随访结果 心脏杂志 2011；23（2）：247-249
- 李胜利 曾敏 王旭 李守军 闫军　小儿心脏术后高频振荡通气应用的改进及临床效果　新医学　2011；42（8）：501-503
- 蒙延海 田川 柳磊 王亮 刘文芝 常谦　退行性变升主动脉瘤中骨桥蛋白的表达与细胞型转化　中国分子心脏病学杂志　2011；11（1）：5-9
- 罗国华 王水云 许建屏 沈向东 王强 李守军　十字交叉心的形态学与外科治疗　中国分子心脏病学杂志 2011；11（3）：136-138
- 姚允泰 李立环　冠状动脉旁路移植手术患者行远隔缺血预处理的Meta分析　中国分子心脏病学杂志 2011；11（4）：209-314
- 方仲蓉 赵晓琴 王古岩 王伟鹏　右美托咪定对冠状动脉旁路移植术患者麻醉诱导期BIS和血流动力学的影响 中国微创外科杂志　2011；11（2）：113-118
- 凌峰 刘迎龙　刘爱军 王栋 朱耀斌 王强　低钾低分子右旋糖酐液对急性肺损伤幼猪模型炎症因子的影响 中华实用诊断与治疗杂志　2011；25（3）：216-218
- 史艺 许建屏　王强 朱耀斌 柳枫 郭宏伟 唐棣　再次瓣膜置换217例临床分析　中华实用诊断与治疗杂志 2011；25（4）：324-325
- 张燕搏 王飞燕 王强 王旭 李守军 闫军 程军　儿童心脏外科重症监护病房医院感染临床研究　中华实用诊断与治疗杂志　2011；25（5）：429-432
- 魏波 刘迎龙　婴幼儿体外循环前后血浆脑红蛋白变化实验研究　中华实用诊断与治疗杂志 2011；25（6）：533-534
- 张燕搏　组织工程血管材料体外细胞毒性评价实验研究　中华实用诊断与治疗杂志　2011；25（6）：539-542
- 张燕搏 王旭　聚氨酯不同低温等离子体改性及生物相容性评价　中华实用诊断与治疗杂志 2011；25（10）：944-946
- 张燕搏　动态反应器构建组织工程化血管的初步实验研究　中华实用诊断与治疗杂志 2011；25（11）：1047-1049
- 赵举 黑飞龙 李斌飞 段大为 侯晓彤 李欣 詹庆元 龙村　中国体外生命支持临床汇总报告　中国体外循环杂志　2011；9（1）：1-5
- 胡金晓 龙村 黑飞龙 李景文 于坤　体外膜肺氧合支持肢体并发症10例分析　中国体外循环杂志　2011；9（1）：6-8
- 张燕搏 王飞燕 龙村 王旭 李守军 刘晋萍 闫军 程军　先天性心脏病体外循环术后呼吸机相关性肺炎的研究　中国体外循环杂志　2011；9（1）：20-24，39
- 孙亮 龙村 黑飞龙 吴蓓 秦春妮　缺血再灌注处理对乳鼠心肌细胞钠电流的影响　中国体外循环杂志　2011；9（1）：28-31
- 于坤 常谦 李景文 黑飞龙 吉冰洋 高国栋 龙村　主动脉Ⅱ型弓部杂交手术治疗升主动脉及弓降部病变　中国体外循环杂志　2011；9（2）：65-67
- 吉冰洋　联合应用脑血流多普勒和近红外光谱测定技术检测深低温停循环选择性脑灌注中大脑功能的意义　中国体外循环杂志 2011；9（2）：71-74
- 段欣 吉冰洋 于坤 黑飞龙 刘晋萍 龙村　酸性液后处理对离体大鼠心肌缺血再灌注损伤保护作用的研究　中国体外循环杂志　2011；9（2）：97-101
- 王古岩 王越夫 昌克勤 杨静 张磊 杨大烜 史春霞　二尖瓣置换术中同期行房颤射频消融术的麻醉和围术期管理　中国体外循环杂志　2011；9（3）：142-144
- 赵举 杨九光 刘晋萍 李守军 闫军 孟颖 王旭 龙村　搏动体外循环增加小儿脑氧供及改善组织微循环的临床研究　中国体外循环杂志　2011；9（3）：145-148
- 胡强 高国栋 刘凯 温复兴 龙村 刘进　不同浓度乳化异氟烷对离体大隐静脉舒张功能影响的研究　中国体外循环杂志 2011；9（3）：178-181
- 胡强 马剑 姜福清 杨九光 龙村　七氟烷用于体外循环对手术室环境污染的研究　实用临床医药杂志　2011；15（11）：11-14
- 孙平平 胡川 周建业 吴任东 沈雅 胡盛寿　基于连笔直写的微结构血管支架体外测评北京生物医学工程　2011；30（2）：111-116
- 姜睿 闫军 李守军 罗国华 王强 郭岩 吕小东　法洛四联症根治术178例临床分析 临床心血管病杂志　2011；27（9）：702-704

专家简介
Specialists



■ *Xiaodong Zhu, MD*
Academician of China National Engineering Rearch Institute
Chief Consultant of Department of Cardiovasular Surgery of Fu Wai Hospital
朱晓东
中国工程院院士
阜外心血管病医院心血管外科首席专家

■ *Shengshou Hu, MD, FACC*
President of Fu Wai Hospital
Director of National Center for Cardiovascular Disease of China
胡盛寿教授
阜外心血管病医院院长
心血管病研究所所长

Wei Wang, MD, Director, Cardiovascular Surgery Committee.
Deputy Director:
Chao Dong, MD, Xinjin Luo, MD, Yongbo Wu, MD, Zhe Zheng, MD. Tang Yue, MD

外科管委会　主　任：王　巍
副主任：董　超、罗新锦、吴永波、郑　哲、唐　跃

Lihuan Li, MD, Director, Department of Anesthesia.
Deputy Director:
Lei Chen, MD, Minzheng Liu, MD, Weipeng Wang, MD, Fuxia Yan, MD.

麻醉科　**主　任：李立环**
副主任：陈　雷、刘明政、王伟鹏、晏馥霞

Cun Long, MD, Director, Department of Perfusion.
Deputy Director: Feilong Hei, MD, Jinping Liu, MD.

体外循环科　主　任：龙　村
副主任：黑飞龙、刘晋萍

Jianping Xu, MD, Director, Center of Cardiac Surgery for Adult.
Deputy Director: Yunhu Song, MD, Hansong Sun, MD, Wei Wang, MD.

成人心脏中心　主　任：许建屏
副主任：宋云虎、孙寒松、王　巍

Hansong Sun, MD, Division Head, Ward 8
Shiwei Pan, MD, Deputy Head, Ward 8

八病区　主　任：孙寒松，　副主任：潘世伟

Yunhu Song, MD, Division Head, Ward 9
Liqing Wang, MD, Deputy Head, Ward 9

九病区　主　任：宋云虎，　副主任：王立清

Hui Xiong, MD, Division Head, Ward 13

十三病区　主　任：熊　辉

Shuiyun Wang, MD, Division Head, Ward 17
Wei Feng, MD, Deputy Head, Ward 17

十七病区　主　任：王水云　副主任：凤玮

Wei Wang, MD, Division Head, Ward 26A

二十六A病区　主　任：王　巍

Feng Liu, MD, Deputy Head, Ward 26B

二十六B病区　副主任：柳　枫

Jianping Xu, MD, Division Head, Ward 27A

二十七A病区　主　任：许建屏

Feng Lv, MD, Division Head, Ward 27B

二十七B病区　主　任：吕　锋

Shou-jun Li, MD, Administrative vice-Director, Center of Cardiac Surgery for Children.

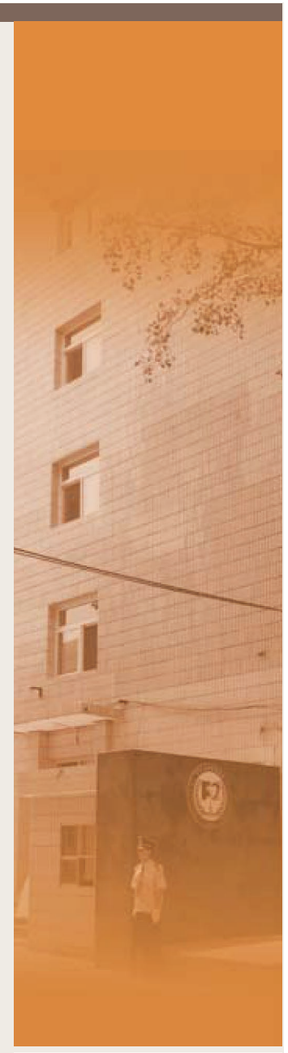
小儿心脏中心　常务副主任：　李守军
副主任：王　旭、闫　军

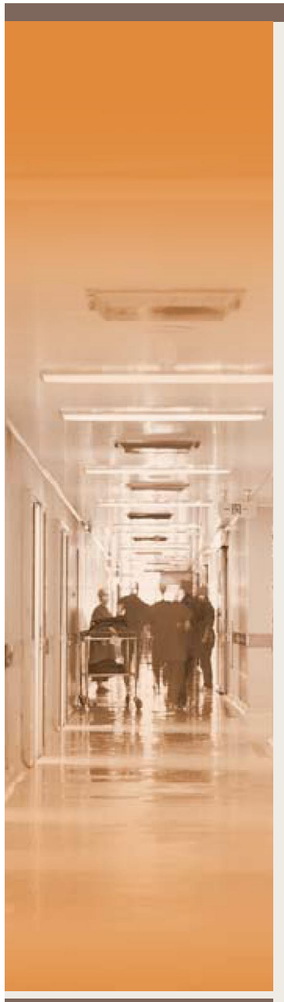
Jun Yan, MD, Division Head, Ward 2
Qiang Wang, MD, Deputy Head, Ward 2

二病区　主　任：闫　军，　副主任：王　强

Shoujun Li, MD, Division Head, Ward 6
Zhongdong Hua, MD, Deputy Head, Ward 6

六病区　主　任：李守军，　副主任：花中东





Xiangdong Shen, MD, Division Head, Ward 16
Shaoxian Guo, MD, Deputy Head, Ward 16

十六病区　　主　任：沈向东，　副主任：郭少先

Lujia Gong, MD, Division Head, Ward 28

二十八病区　　主　任：宫路佳

Qian Chang, MD, Administrative vice-Director, Center of Aortic Surgery.

血管外科中心　　常务副主任：常　谦

Qian Chang, MD, Division Head, Ward 10
Cuntao Yu, MD, Deputy Head, Ward 10

十病区　　主　任：常　谦，　副主任：于存涛

Haitao Zhang, MD, Division Head, ICU for Adult
Ping Liu, MD, Deputy Head, ICU for Adult

成人ICU　　主　任：张海涛，　副主任：刘　平

Xu Wang, MD, Division Head, ICU for Children

小儿ICU　　主　任：王　旭

Juxian Yang, MD, Division Head, ICU in the second in-patient department

二部ICU　　主　任：杨菊先

Yue Tang, MD, Director, Department of Laboratorial Surgery.

实验外科　　主　任：唐　跃

国家心血管病中心简介
Brief on NCCD,China

National Center for Cardiovascular Disease (NCCD), directly under the supervision of Ministry of Public Health of China, was officially established in August, 2010 in Beijing.

NCCD includes the Clinical Medicine Department and Prevention Research Department. The former relies on Fu Wai Hospital, which located at 167 Beilishi Road, Xicheng District. The new building of the Clinical Medicine Department is expected to be finished in 2013.

2010年8月，直属卫生部的 “国家心血管病中心”（NCCD, China）在北京正式成立。NCCD由临床医疗部和防治研究部两部分组成。

阜外医院（NCCD临床医疗部）位于北京西城区北礼士路大街167号。NCCD临床医疗部的新大楼将于2013年竣工。

The Prevention Research Department of NCCD, located at Mentougou District, consists of Prevention Center, Translation-medicine Center and Cardiovascular Information Center, is expected to be finished in the end of this year.

防治研究部将建于北京门头沟区。由心血管病防治中心、心血管病转化医学研究中心和心血管病信息中心组成。防治研究部大楼将于2012年底竣工。

By carrying out a large-scale epidemiological study and exercising intervention on risk factors, NCCD aims to effectively restrain, control and finally decrease the rapidly climbing morbidity and mortality of cardiovascular diseases in China.

国家心血病中心将致力于组织动员全国心血管病专家队伍，进行了大规模的流行病学调查，开展人群心血管病危险因素干预；从而对我国目前正在快速上升的心血管病发病率和死亡率进行有效的遏制，并最终使之下降。

阜外医院网站：www.fuwai.com
阜外医院地址：北京西城区北礼士路167号　邮编100037
Tel: 86-10 88398866 68314466　　Fax: 86-10 68313012
Address: 167 Beilishi Road, Xicheng District, Beijing, P.R.China
Post Code: 100037