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# OUTCOMES 2013

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# 2013

阜外心血管病医院外科年度报告

# OUTCOMES

- 连续4年位居  
“中国医院最佳专科声誉排行榜”  
心外科第一!
- Ranked #1 in **Heart Surgery**  
on China Best Hospital



BEIJING, P. R. CHINA



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Welcome to this 2013 edition of the annual Outcomes book of the surgery department of Fu Wai Hospital. As the initiator in China, we have released our performance report annually for a number of years. In doing so, our work is reviewed, monitored, and thus improved continuously.

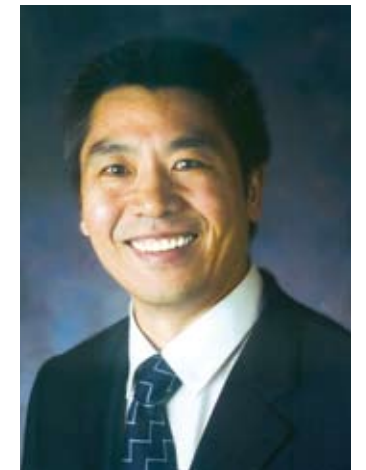
China has experienced a remarkable epidemiological transition shifting from the infectious disease to the non-communicable diseases' dominating in the past decades. And the cardiovascular diseases have become the leading cause of the death and disability among the middle-aged and elderly both in urban and rural areas. We are being faced with a raging wave of spread of chronic diseases with the predicted large increase of morbidity and mortality from cardiovascular diseases. Only by making health care more predictive, preventive, personalized and participatory, can we minimize the impact of disease, promote and protect health and wellness. As the Clinical Medicine Department of National Center for Cardiovascular Disease (NCCD), we have to meet this new challenge by carrying out more research on this task and strive for more breakthroughs in this field.

'Quality and Creativity' are the philosophy of our team. We will always keep to it and work hard in clinical treatment, medical education and technique innovation related to cardiovascular diseases.

最新版的《阜外医院外科年度报告2013》与大家见面了；它对我们外科团队在过去一年中的努力作了系统的回顾。作为中国首个对大众公布治疗结果的医疗单位，我们已连续多年公开发布年度业绩报告，并以此作为督促自己不断提升医疗服务质量的手段。

在过去的十年间，中国正经历着从传统的感染性疾病到非传染性慢性病的疾病流行模式转变。心血管疾病已成为中国城乡中、老年人首位致死和致残性疾病。心血管疾病日益成为我们必须面对的危机公众安全的流行性疾病。只有采取注重疾病的预防、预测、个体化治疗和公众共同参与的策略，才能应对这一严峻的挑战，保障公众的健康。阜外医院作为国家心血管病中心的临床医学部，也就意味着每一位阜外医院的成员都必须去面对这一新的任务和挑战，并争取在新的征程中创造更好的业绩。

我们阜外团队将秉承永远追求“品质与创新”的理念，在心血管疾病的临床治疗、医学教育和技术创新方面作不懈的努力。



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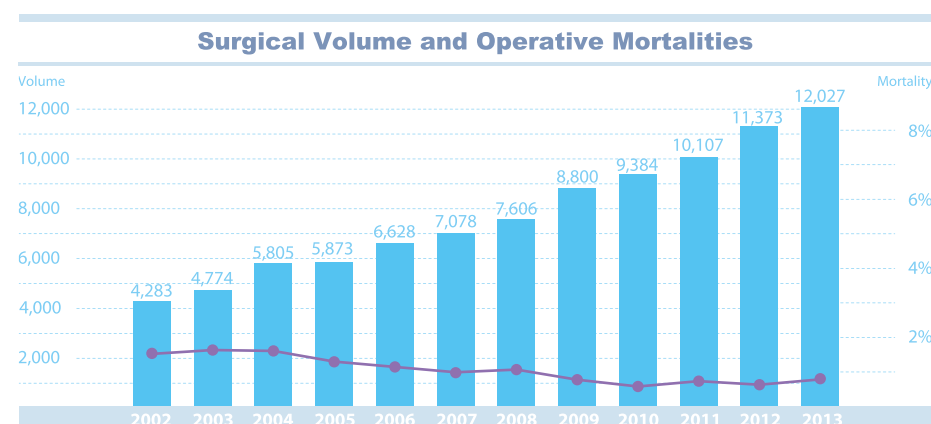
# 概述

## Overview

### 年手术量及手术死亡率

In 2013 the surgical volume in Cardiovascular Surgery Department reached 12,027 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.

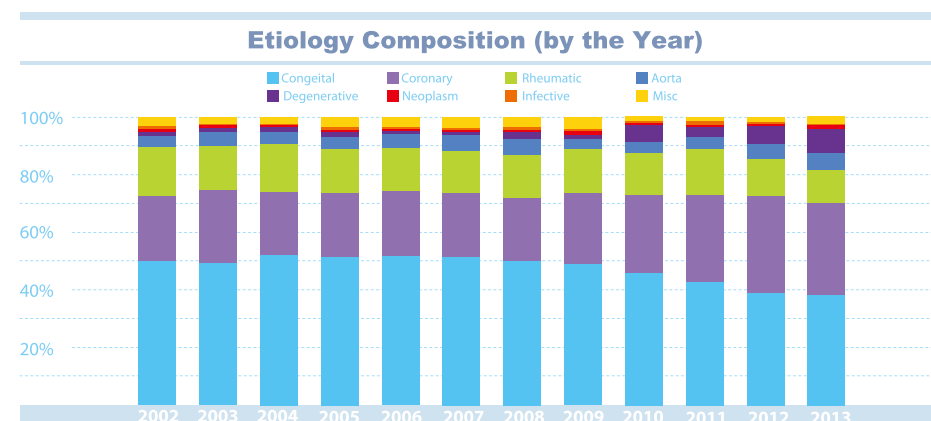
阜外医院心血管外科2013年的手术量达到12027例（不含分院及协作点的手术量），居世界前茅。在手术量逐年增长的同时，一直保持了较低的手术死亡率。



### 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 2002 to 2013 in our department. While Congenital Heart Disease always ranked the first, Coronary Heart Disease increased obviously.

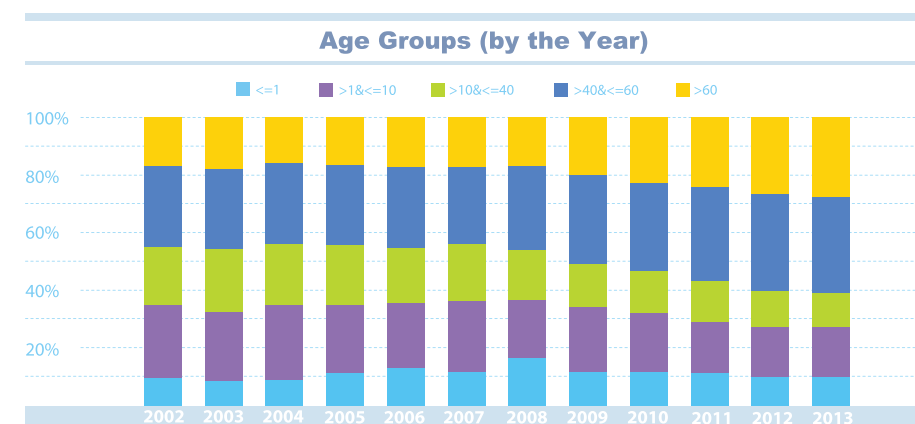
阜外医院心血管外科是全国收治心血管病种类最齐全的中心。这张手术患者病因学分类逐年变化图基本反映出中国大陆的心脏病外科治疗谱。尽管先天性心脏病仍占据最大份额，但近年来冠心病比率上升明显。



### 收治病人的年龄分布

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

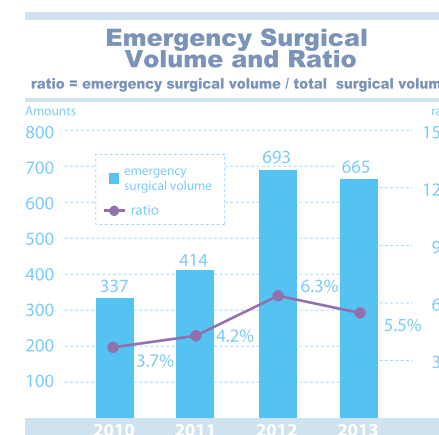
阜外医院心血管外科近年来收治的高龄患者持续增长，这是导致手术风险增高的危险因素。



### 急诊手术

In recent 4 years, the amounts and ratio of emergency cardiovascular operation increased obviously in our department, which means our team has to cope with an ever expanding workload.

近4年来，急诊手术绝对数量和所占比率均呈上升趋势；这导致工作量的明显增加。



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

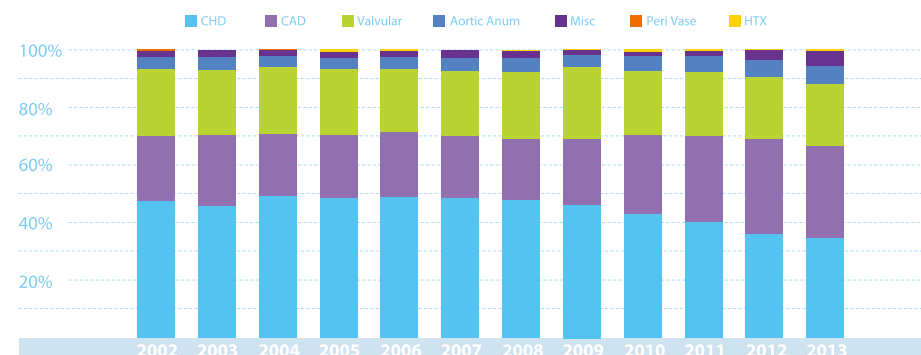
病人来自全国**31**个省市自治区，以及香港、澳门地区。还有蒙古、朝鲜、韩国、日本和美国的患者前来就诊。

## 术种分类

Congenital heart correction, valve operation and CABG accounted for more than 85% of total cardiac surgical volume. However, the ratio of surgical correction for congenital heart disease was decreasing rapidly in recent 4 years.

先心矫治、冠状动脉旁路移植术及瓣膜处理这三类手术占据总手术量的85%以上。但先心病外科手术所占比率近4年明显下降。

Composition of Cardiovascular Surgical Procedures (by the Year)

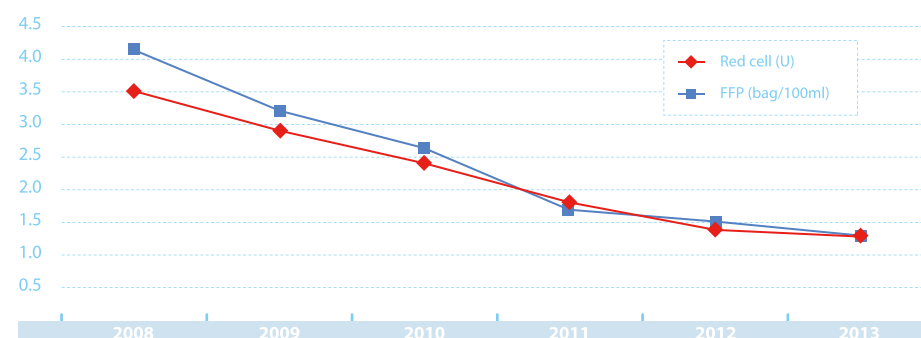


## 红细胞及血浆用量

Compared to the surgical volume growth, the average consumption of Red Cell and FFP per case noticeably decreased in the recent years, which reflected our improvement on quality of health care and service.

在手术量持续增长的同时，每例手术平均消耗的红细胞和血浆量却在明显减少，这明确反映了医疗质量的提高。

Average Consumption of Red Cell and FFP for Per Case Operation

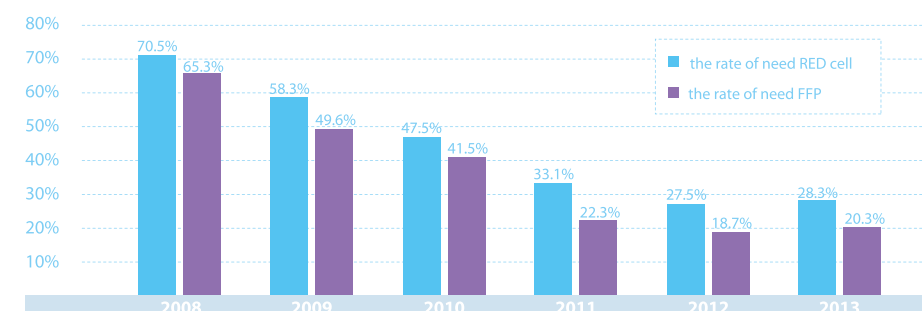


## 成人患者无血手术比率

The concept of ‘Bloodless Surgery’ becomes more and more popular among the Fu Wai Surgical team. ‘Patient Blood Management’ program has been carried out by every member of the team. The rate of cardiac surgery with no consumption of Red Cell and FFP in adult patients increased obviously.

“无血外科”的理念已经深入阜外外科团队的每一个成员，治疗过程中自觉开展“病人血液管理”。在成人心脏手术中，无血手术（手术过程中不使用红细胞和血浆）的比率明显上升。

The Rate of Patients Needed Consumption of Red Cell and FFP in Adults During Surgery

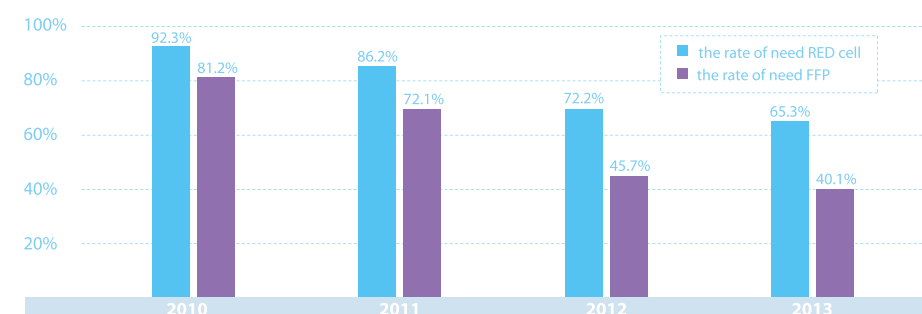


## 小儿患者无血手术比率

It is more difficult to achieve ‘Bloodless Surgery’ in pediatric patients receiving cardiac operation. However, the Fu Wai Surgical team is making progresses steadily in this field in recent years.

在小儿心脏患者中实现“无血外科”手术，难度更大。但近几年来阜外医院仍取得了较明显的进步。

The Rate of Patients Needed Consumption of Red Cell and FFP in Pediatrics During Surgery





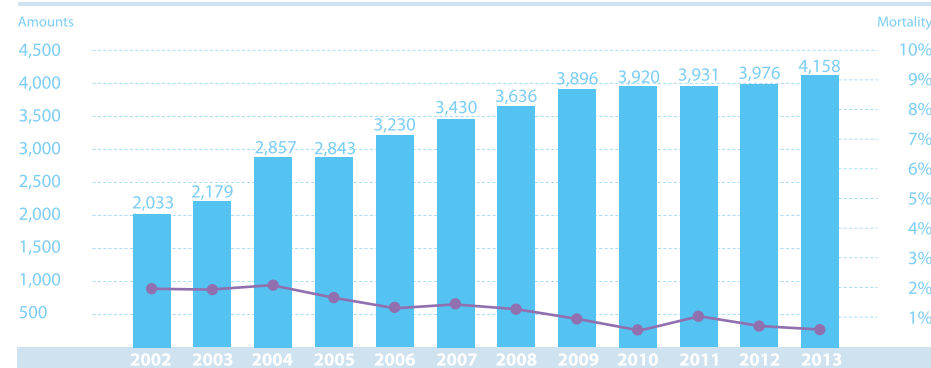
# 先天性心脏病 Congenital Disease

## 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。

**Congenital Heart Disease Surgery - Amounts and Mortalities**

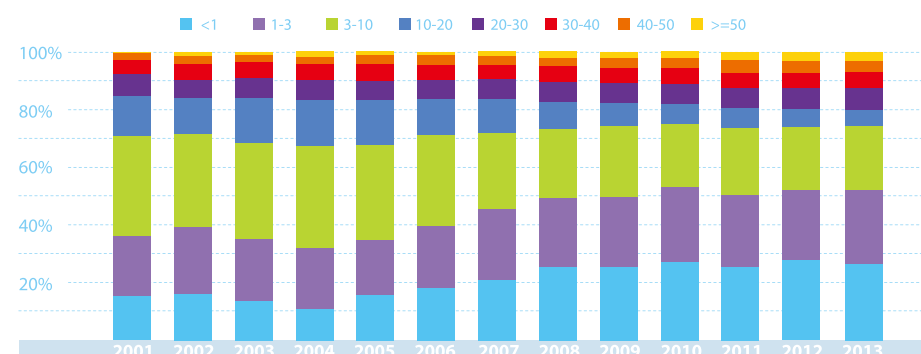


## 先天性心脏病手术患者的年龄分布

Adult congenital heart defect correction still accounted for a big proportion of the total congenital heart procedures, which was 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。

**Congenital Patients Age Groups (by the Year)**

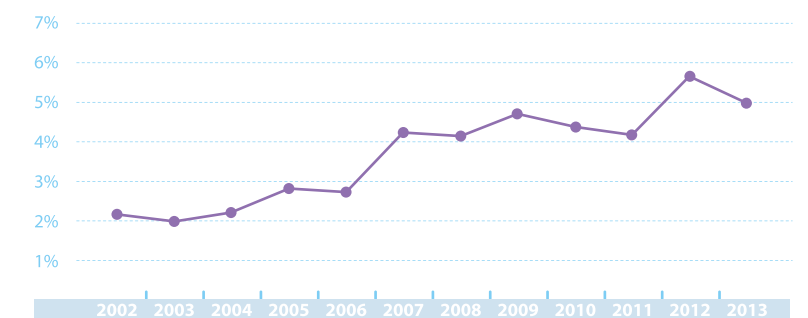


## 体重小于5公斤的先心手术患者比率

Light body-weight is a risk factor that can seriously affect surgical outcome; and the number of pediatric patients with light body-weight 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。

**Percentage of Patients BW<= 5 Kg in Congenital**

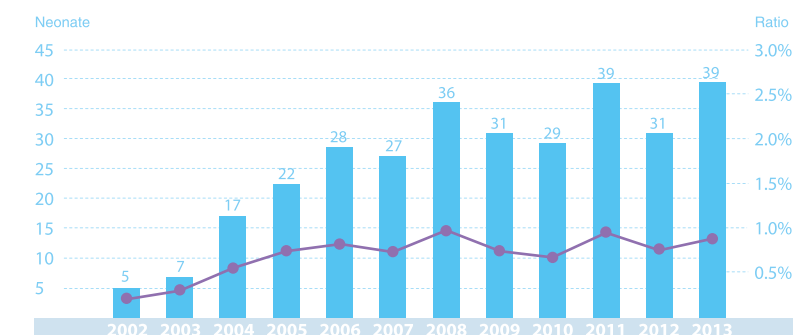


## 新生儿先心手术量

It is a big challenge to perform correction surgery for neonatal patients (<= 28d) with complicated congenital heart disease. Fu Wai Surgical team continues to progress in this area in recent years.

新生儿复杂先天性心脏病矫治术无疑是极富挑战性的工作，阜外医院外科团队在这方面取得了很大的进步。

**Neonatal Surgical Volume and Ratio (age <= 28d)**  
ratio = neonatal surgical volume / total congenital heart surgery

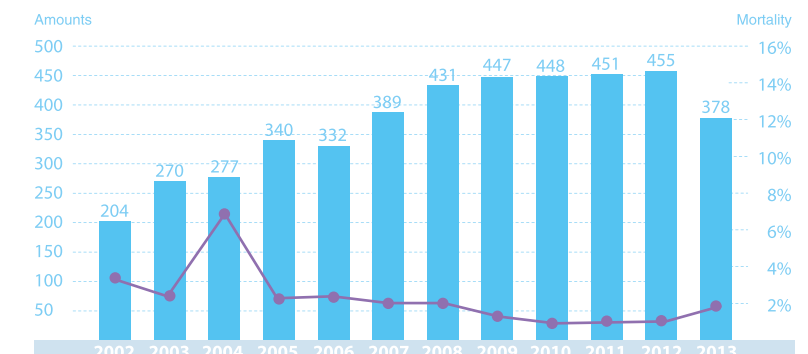


## 法洛四联症

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。

**Tetralogy of Fallot - Amounts and Mortalities**

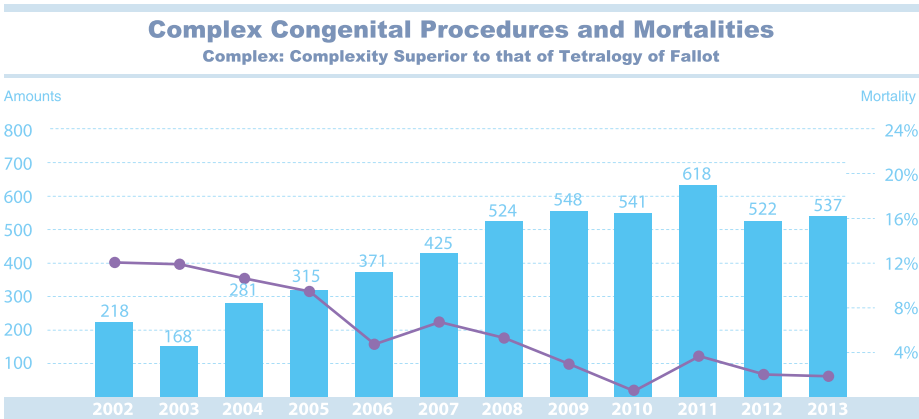




## 复杂先心病矫治

In recent 5 years, the surgical volume of patients with complex congenital heart disease (complexity superior to that of Tetralogy of Fallot) has maintained more than 500 cases per year in Fu Wai Hospital. Simultaneously, the result of surgical correction for these patients improved greatly.

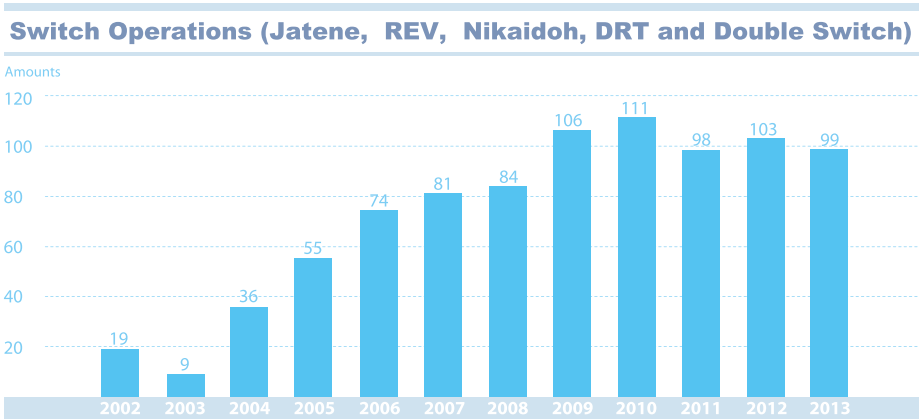
近年来阜外医院收治的复杂先心病患者（心脏畸形改变复杂程度超过法洛四联症）数量一直在每年500例以上，手术效果明显提高。



## 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.

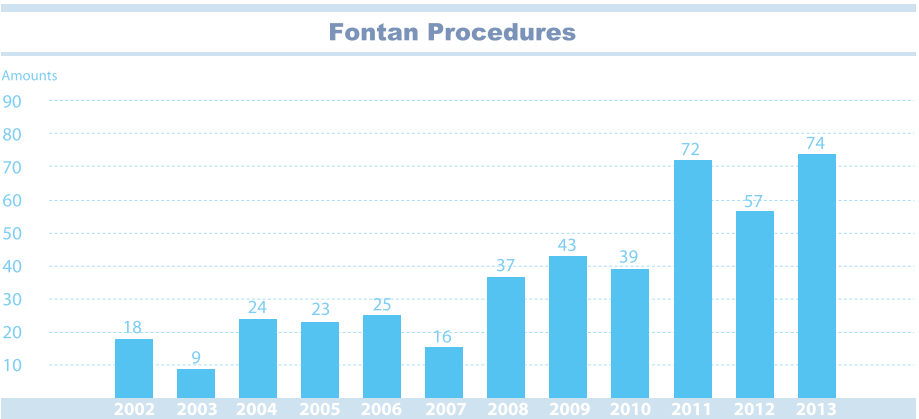
阜外医院已将高难度的Jatene手术常规运用于完全性大动脉转位的治疗；并成功采用改良Nikaidoh手术、改良REV术式及“根部双调转”（DRT）术式治疗完全大动脉转位合并肺动脉狭窄、室间隔缺损的复杂病例。双调转术也被成熟运用于矫正型大动脉转位患者的解剖矫治。



## Fontan类手术

In Fu Wai Hospital, the palliative operation has been regularly used for some kinds of congenital heart disease. Fontan procedures increased obviously with satisfactory outcomes.

先心病姑息手术治疗在阜外医院常规开展，其中Fontan类手术近年来增加明显。

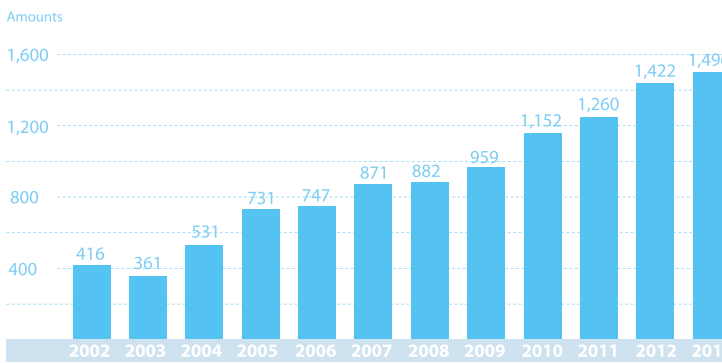


## 先心病介入治疗总量

In 2013, 4,158 patients with congenital heart disease got surgical correction by our surgical team, and another 1,496 patients got interventional therapy for successful congenital heart disease correction by our prominent interventionalists. (This part is not included in surgical volume of Surgical Department of Fu Wai Hospital)

2013年，除外科手术治疗的4158例先心病患者，阜外医院的介入专家们还采用介入技术治疗了1496例先心病患者（每年的先心病介入治疗量均不计入外科手术手术治疗总量）。

### Interventional Therapy for Congenital Heart Disease

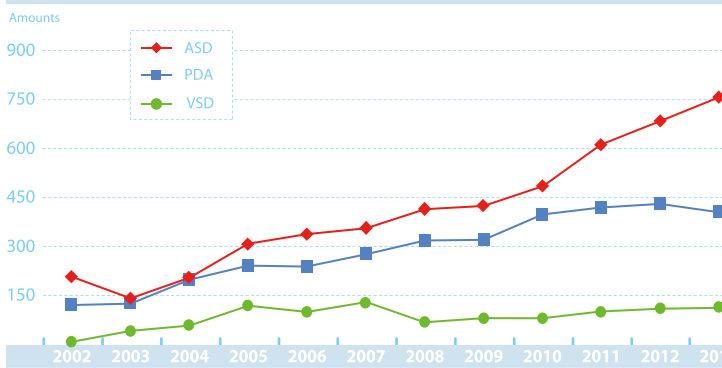


## 简单先心病的介入治疗

Atrial septal defect, patent ductus arteriosus and ventricular septal defect occupied the major share of the interventional therapy for congenital heart disease. And the amounts increased obviously in recent years. (This part is not included in surgical volume of Surgical Department of Fu Wai Hospital)

在介入治疗的先心病种类中，房间隔缺损、动脉导管未闭和室间隔缺损占主要地位。简单先心病的介入治疗量明显上升。（每年的先心病介入治疗量均不计入外科手术手术治疗总量）。

### Interventional Therapy for ASD PDA and VSD





# 冠状动脉粥样硬化性心脏病

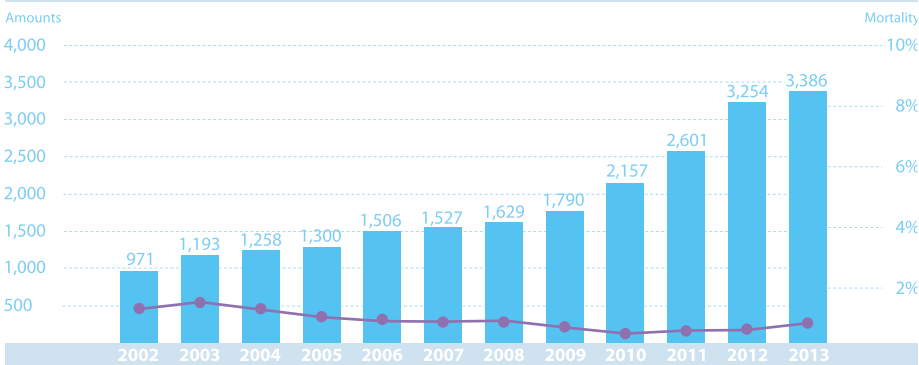
## Coronary Disease

### 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 2013, 4,001 patients received CABG operation in Fu Wai Hospital. In contrast to the rising surgical volume, the mortality of isolated CABG has remained stable eight 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，治疗效果也已达国际先进水平。2013年为4001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3386例。单纯冠状动脉旁路移植术的死亡率已连续9年低于1%。

Isolated CABG - Amounts and Mortalities



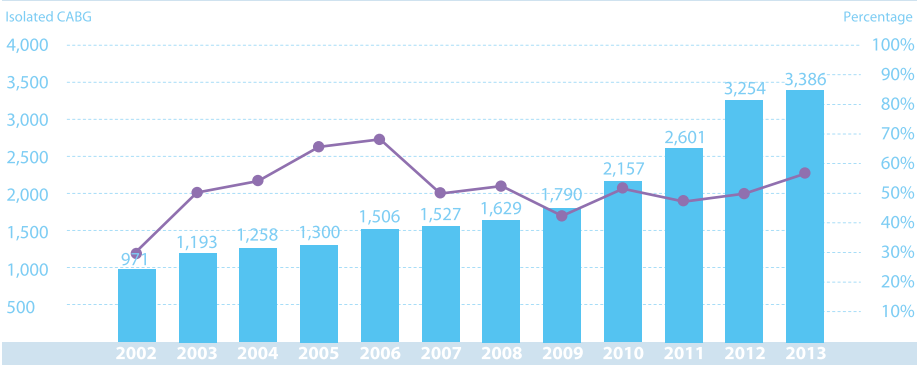
### 心脏跳动下的冠状动脉旁路移植术 (Off-pump CABG)

In main-land China, beating heart bypass surgery (Off-pump CABG) through sternotomy was first performed at Fu Wai Hospital in 1996. Our department has broad surgical experience in off-pump CABG with low hospital mortality. A single-center research on Off-pump CABG was conducted at Fu Wai Hospital with 9 years' duration, and the results were published in 'Circulation' (2010;121(16):1800).

阜外医院心血管外科于1996年在中国大陆最早开展胸骨正中切口心脏跳动下的非体外循环辅助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。2010年更是在权威杂志《循环》（'Circulation' 2010 ;121(16):1800）上发表了阜外医院对非体外循环辅助的冠状动脉旁路移植术长达9年的单中心研究结果，提出了病人的入选原则。



Percentage of Off-Pump CABG in Isolated CABG

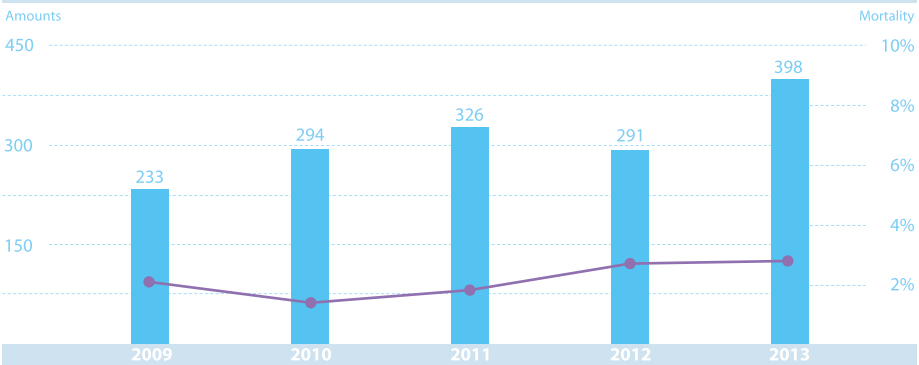


### 冠状动脉旁路移植同期实施心脏瓣膜手术

The combination of valve replacement or repair with coronary revascularization generally increases operative mortality. However, every year, many patients in such severe condition got successful treatment in Fu Wai Hospital.

冠状动脉旁路移植同期实施心脏瓣膜手术无疑加大手术难度，增加死亡风险。但阜外外科团队每年要治疗许多这样的重症患者，并取得了良好的治疗效果。

CABG Combined with Valvular Procedures



# 瓣膜性心脏病 Valve Disease



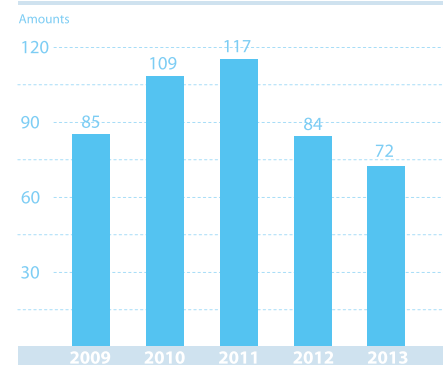
## 室壁瘤切除

Left ventricular aneurysm is a serious complication of acute myocardial infarction that can lead to congestive heart failure (CHF), ventricular arrhythmia and, rarely, thromboembolic events. Surgical treatment is indicated in established cases of CHF, angina pectoris, malignant ventricular arrhythmia, or recurrent embolization from Left ventricle in Fu Wai Hospital.

左室室壁瘤形成是急性心梗后的严重并发症，可导致患者发作心衰、顽固室性心律失常、甚至栓塞。针对这些高危患者，阜外医院的医生们会为他们进行积极有效的外科治疗。

左室室壁瘤形成是急性心梗后的严重并发症，可导致患者发作心衰、顽固室性心律失常、甚至栓塞。针对这些高危患者，阜外医院的医生们会为他们进行积极有效的外科治疗。

Left Ventricular Aneurysm Repair

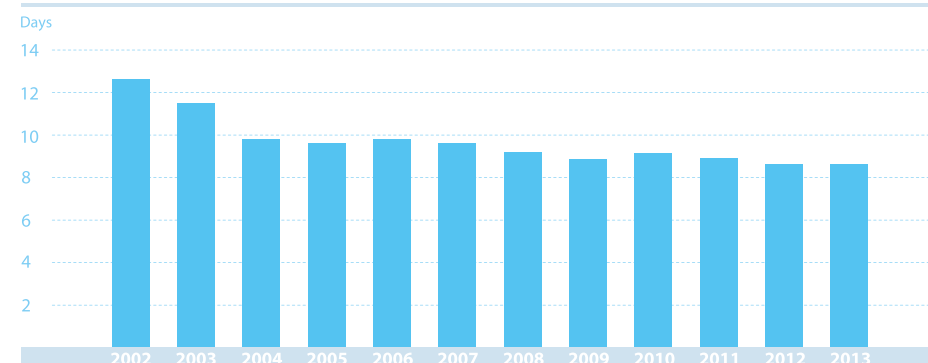


## 冠状动脉旁路移植术后住院时间

The department of cardiovascular surgery achieved a reduction in post-operative stay, based on the accumulation of surgical experiences and improvement of nursing qualities.

术后住院时间的缩短反映出医疗与护理质量的进步。

Average Post-Op Hospital Stay for CABG Patients

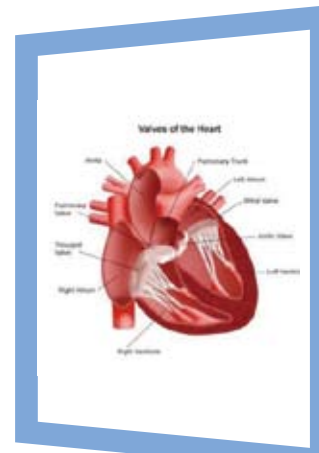
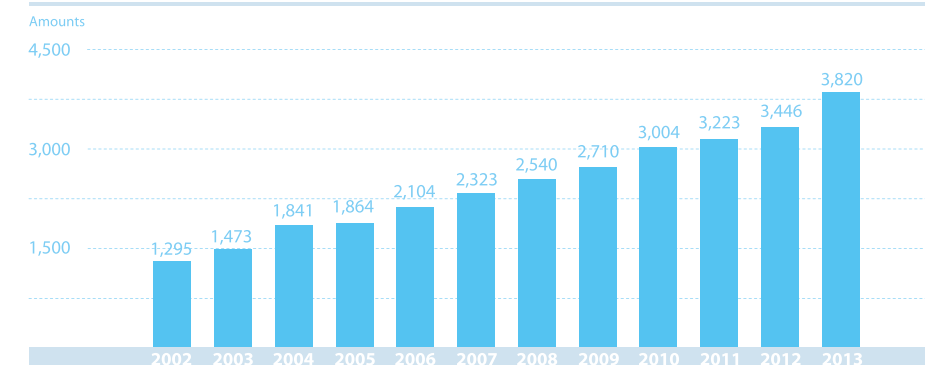


## 心脏瓣膜手术量

Fu Wai Hospital performed the largest number of valve procedures in China. In 2013, 3,820 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，2013年完成心脏瓣膜手术3820例。

Operations Involving Valvular Procedures

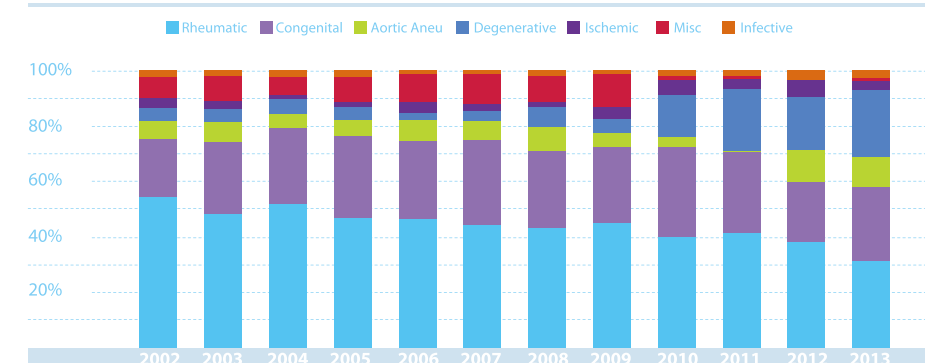


## 心脏瓣膜手术患者病因构成的逐年变化图

From 2002 to 2013, 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2002年至2013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。

Etiology Distribution of All Valvular Procedures (by the year)



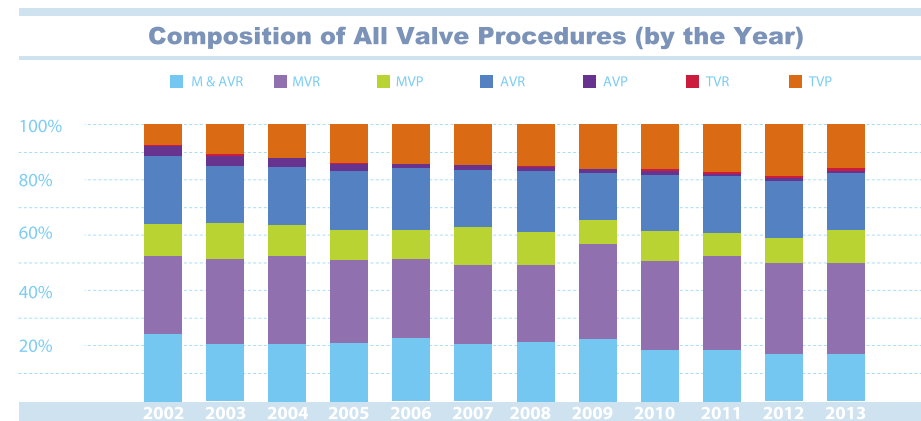


# 晚期心脏病 Advanced state of heart disease

## 心脏瓣膜手术种类构成的逐年变化图

From 2002 to 2013, the proportion of mitral valve replacement always occupied a major share of the total valve procedures.

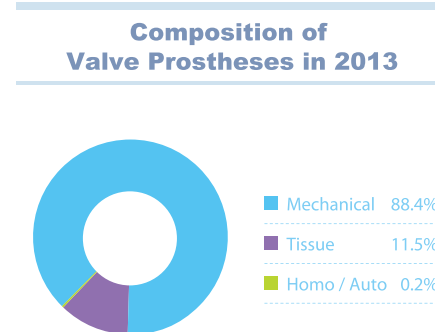
从2002年至2013年，二尖瓣置换术一直占据首位。



## 人工瓣膜的种类

In 2013, mechanical valve replacement accounted for 88% in total valve replacement.

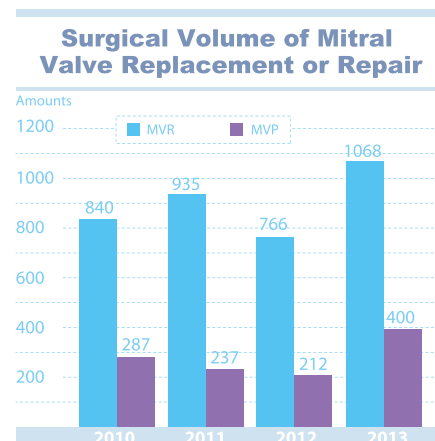
瓣膜置换手术中，人工机械瓣的使用占据着主要地位。



## 二尖瓣病变手术处理种类

In treatment of patients with mitral valve disease, mitral valve repair technique was performed in 20%-27% of them by Fu Wai Surgical team.

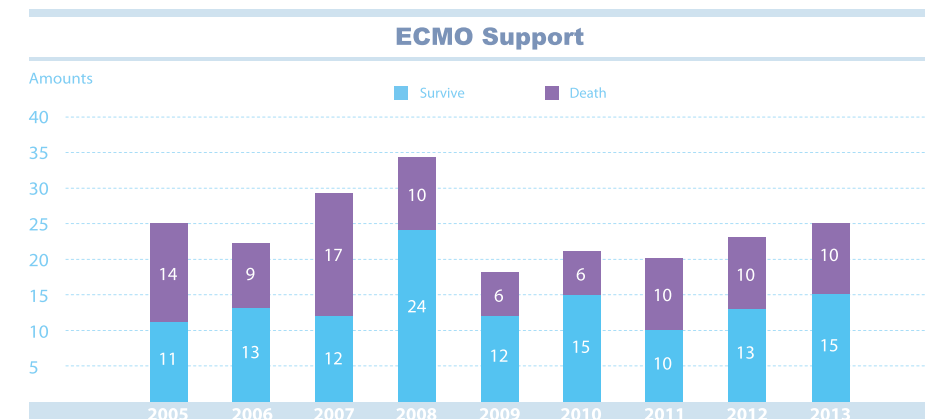
在处理二尖瓣病变时，阜外外科团队为20% - 27%的患者实施了二尖瓣瓣膜修复术。



## ECMO辅助治疗量

At Fu Wai Hospital, ECMO has been regularly used for patients with acute cardiogenic shock, and got excellent results.

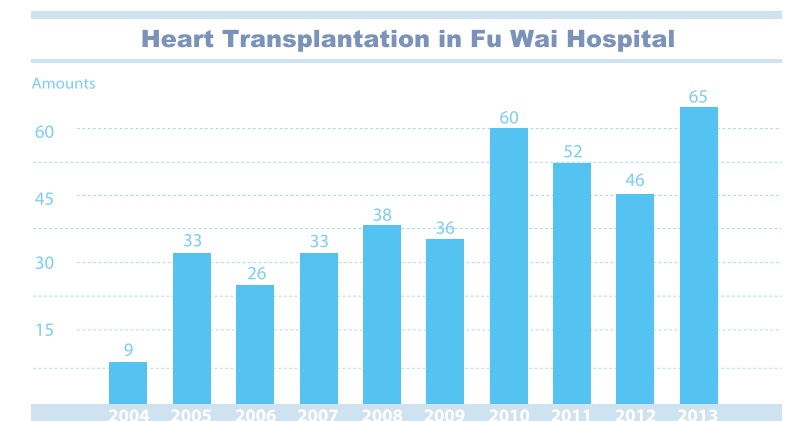
在阜外医院，ECMO辅助治疗已经成为救治急性心源性休克患者的常规手段，并取得良好疗效。



## 心脏移植量

Since June 2004, 397 cases of Heart Transplantation have been performed at Fu Wai Hospital, among which 65 were done in 2013.

自2004年6月开始，在院内完成心脏移植397例。其中2013年实施心脏移植65例。

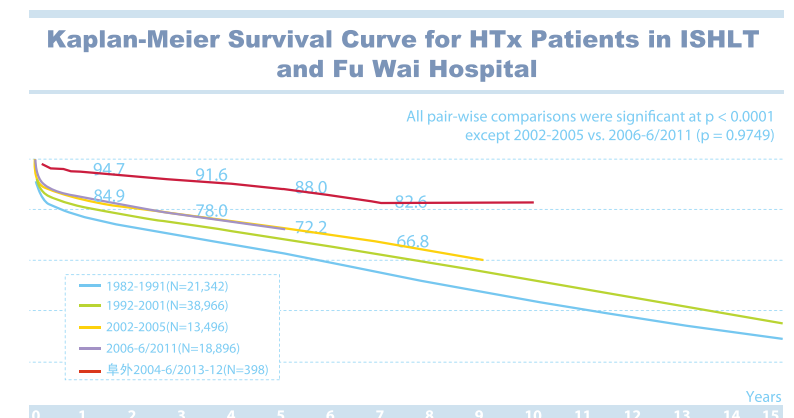


## 心脏移植生存率图

The one-year survival rate was 94.7%, and the five-year survival rate reached 88%, obviously higher than that of ISHLT.



阜外医院移植后患者1年生存率为94.7%，3年生存率91.6%，5年生存率88%；明显高于国际心肺移植协会（ISHLT）统计的同期生存率。



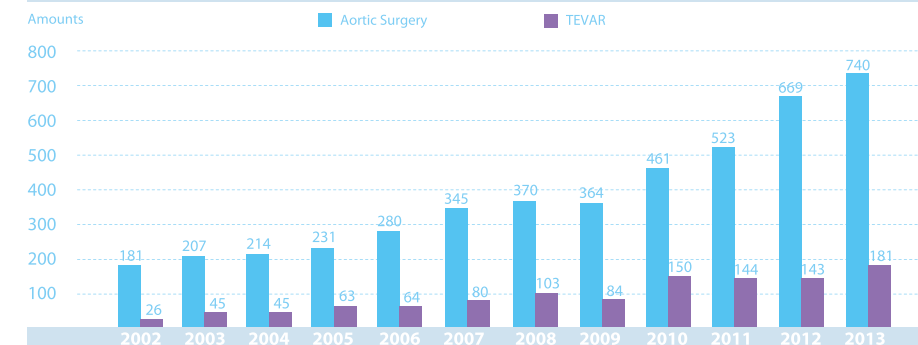
# 主动脉外科 Aortic Surgery

## 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 2013, the surgical volume of aortic surgery was 740 cases, and endovascular repairs were successfully performed for 181 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。2013年完成主动脉病变治疗740例，实施腔内覆膜支架血管修复术181例。

Volume of Aortic Surgery  
Frozen elephant trunk procedure not calculated in TEVAR

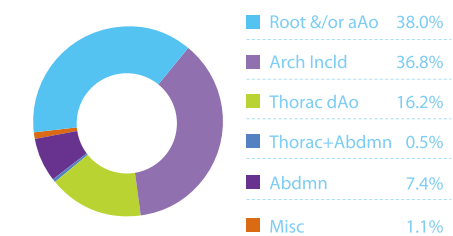


## 主动脉外科手术 治疗部位构成图

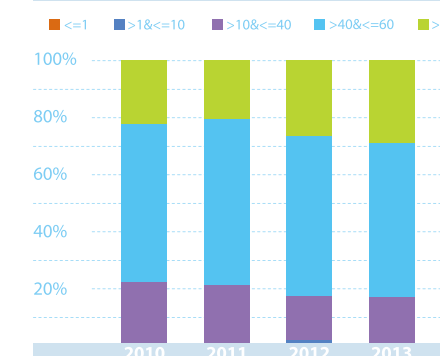
The figure demonstrated the composition of aortic surgery in 2013 in Fu Wai Hospital. The treatment for aortic root, ascending aorta and aortic arch occupied the major position.

这张图显示了阜外医院2013年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。

Composition of  
Aortic Surgery in 2013



Age Groups in Aortic Patients

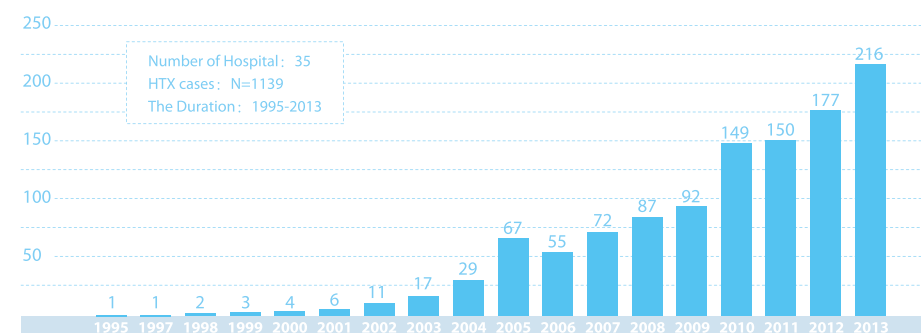


## 全国心脏移植数量图

65 cases heart transplantation in a year made Fu Wai Hospital become the largest heart transplantation center of China, and becomes one of the top 5 heart transplantation centers of the world.

阜外医院已经成为中国最大的心脏移植中心。而2013年65例心脏移植的数量也使得阜外医院进入全球五大心脏移植中心之列。

Heart Transplantation in China

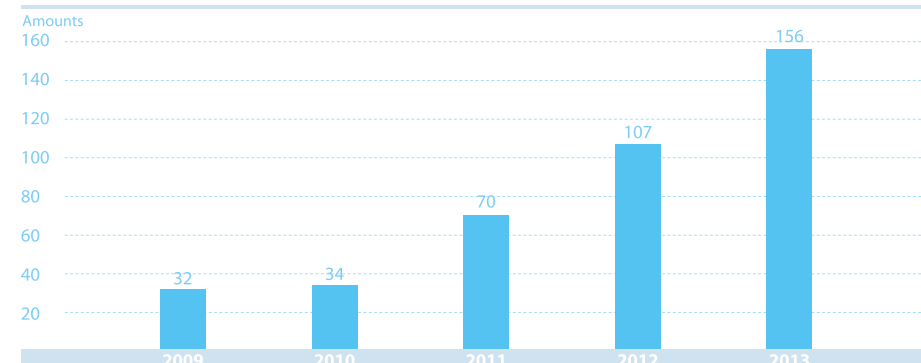


## 肥厚梗阻心肌病外科治疗

The technique for surgical treatment of Hypertrophic Cardiomyopathy has evolved from the classic Morrow procedure, to a more extensive left ventricular septal myectomy. At Fu Wai Hospital, this kind of modified Morrow procedure has been successfully performed for our patients with satisfactory result.

针对肥厚梗阻心肌病治疗的外科技术已从经典的Morrow手术演进到左心室室间隔梗阻肌肉的改良扩大切除术。阜外医院成功运用这种改良扩大的梗阻心肌切除术救治了许多患者。

Hypertrophic Cardiomyopathy Myectomy





# 微创心脏外科

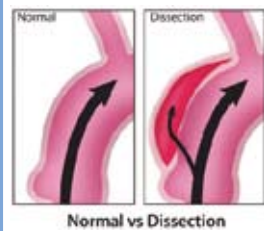
## Minimally invasive cardiac surgery



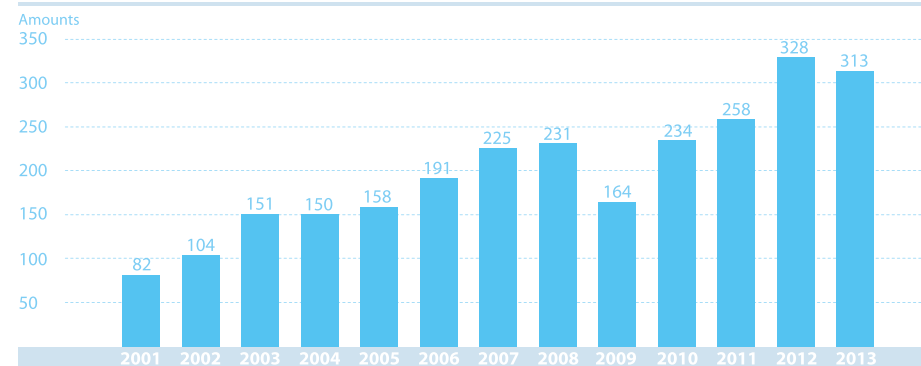
### 主动脉夹层治疗量

An aortic dissection is a life-threatening, sudden onset catastrophe of the aorta. In mainland China, aortic dissection victims are frequently seen in men of middle and young age with hypertension. Emergency surgery to repair the dissected aorta was frequently performed by Fu Wai Surgical team to save patients' life.

在中国大陆，常见中青年主动脉夹层患者。主动脉夹层往往起病急骤，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 (by the Year)

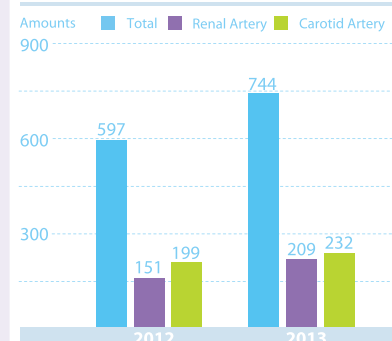


### 外周血管病介入治疗

Every year, the prominent interventionalists of Fu Wai Hospital performed successful interventional treatment for patients with peripheral vascular disease, such as internal carotid artery stenosis or renal artery stenosis. (This part is always not included in surgical volume of Surgical Department of Fu Wai Hospital)

阜外医院的介入专家们每年都会采用介入技术治疗许多外周血管病患者，如颈动脉狭窄或肾动脉狭窄。（每年的外周血管病介入治疗量均不计入外科手术治疗总量）。

Interventional Therapy for Peripheral Vascular Disease

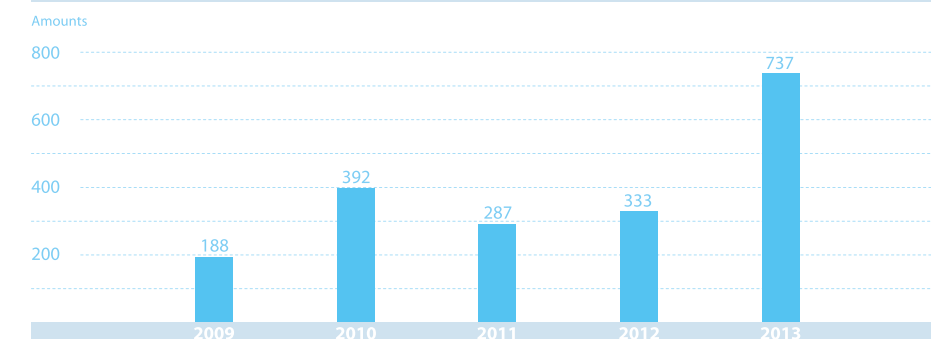


### 小切口心脏手术量

Fu Wai Surgical Team is always working hard in the field of minimal access cardiac surgery. Minimal invasive techniques, such as limited sternotomy, right subaxillary minithoracotomy or parasternal approach for cardiac surgery, are all used for our patients in Fu Wai Hospital.

阜外外科团队一直在运用部分胸骨切口、右侧腋下小切口、胸骨旁切口等微创技术手段为患者实施心脏手术，为患者减少手术创伤。

Minimal Access Cardiac Surgery  
(including right subaxillary minithoracotomy, limited sternotomy for open heart surgery, ect)

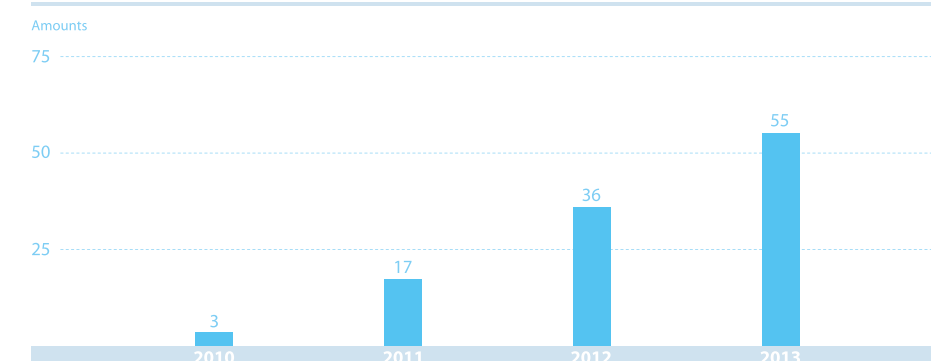


### 全胸腔镜心脏手术量

For appropriate patients, totally thoracoscopic cardiac operation will be performed by Fu Wai Surgical Team. The operation trauma is further reduced.

选择合适的病例实施全胸腔镜下的心脏手术，对减轻患者的手术创伤也是有利的帮助。阜外外科团队在这一领域也在不断取得进展。

Totally Thoracoscopic Cardiac Operation



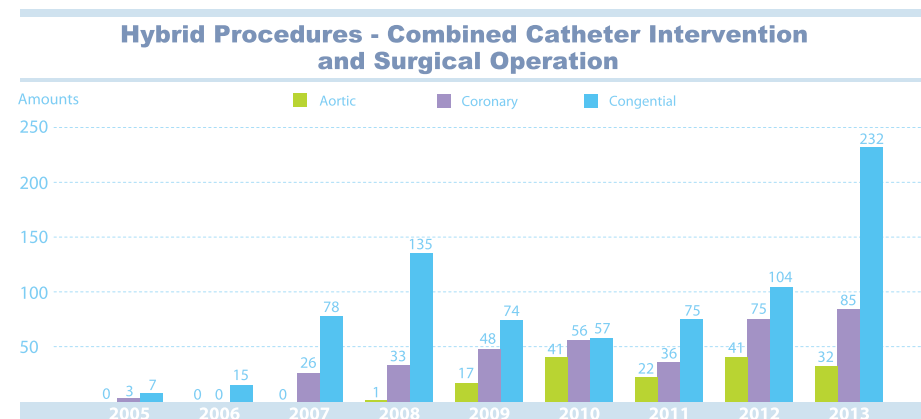
# 技术协作 Technical Collaboration Program



## 杂交手术量

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.

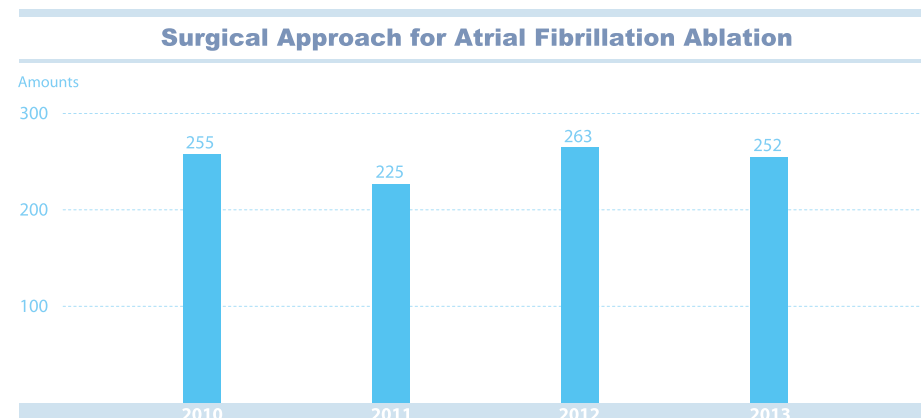
运用杂交技术治疗心血管疾病，是近年来新出现的治疗概念。杂交技术同时结合了介入和外科治疗的优势，为患者提供简便有效的治疗。阜外医院外科在这一新兴领域内进行了开拓性的工作。



## 外科手术治疗房颤

In recent years, Fu Wai Surgical team used radio frequency ablation to treat atrial fibrillation through surgical approach and achieved satisfactory result.

运用外科手段，对房颤病人实施射频消融治疗。阜外外科团队取得良好疗效。

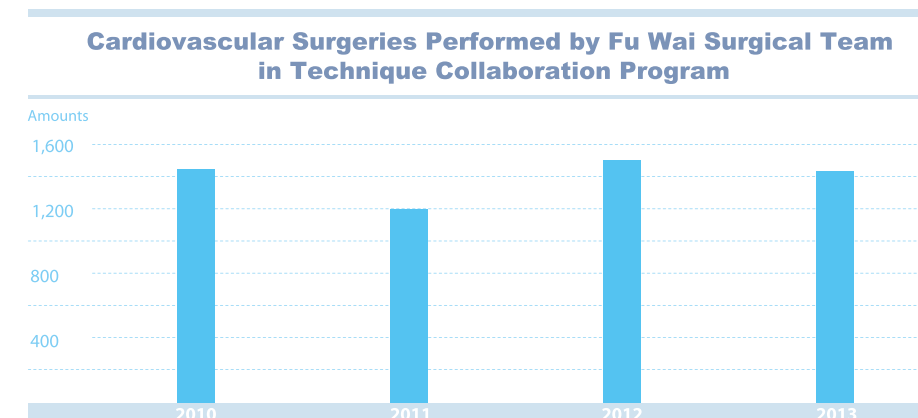


Fu Wai Hospital has carried out technique collaboration with many hospitals all over the country. With the technique support of Fu Wai Surgical Team, their surgical treatment results for cardiovascular diseases improved rapidly. Because of the technique collaboration program, many patients can get outstanding surgical care close to their home. In 2013, 30 hospitals took part in this program. 1,415 cases of cardiovascular surgery were successfully performed in these hospitals with the support of Fu Wai Surgical Team. And totally 7,409 cases cardiovascular operation were performed in these hospital in the past year.

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。2013年，阜外医院与全国各地的30家医院建立了技术协作；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1415例。而这些医院在2013年总共完成了7409例心脏手术。



## 技术协作中心手术量





## China Heart Congress 2013 中国心脏大会2013

The China Heart Congress 2013 (CHC2013) was held successfully at the China National Convention Center (CNCC), Beijing, August 8-11, 2013. It was jointly organized by Chinese Medical Association (CMA) and National Center for Cardiovascular Diseases, China (NCCD), and co-sponsored by all Chinese societies in the field of cardiovascular medicine. The new theme of CHC 2013 is 'Integration · Quality · Innovation'.

With strong supports from the Chinese government, the most knowledgeable national and international experts and colleagues, as well as the industrial partners, the CHC has become the most comprehensive academic events and the most educational teaching course in the field of cardiovascular medicine in Asia Pacific region. The CHC 2013 offered one plenary session, 10 cardiovascular hot topic summits, 44 forums, and 1,200 didactic presentations, 1,339 abstracts, and 25 satellite symposia. About 7,000 people attended this conference.

In order to better communicate and introduce the latest developments on cardiovascular surgery, distinguished surgeons were invited to present their groundbreaking works and debated the hottest topics and controversies on day to day clinic practice on branch forums of Cardiac Surgery, especially for the advancement in minimally invasive surgery, mitral valve repair and treatment for complicated congenital heart disease. Plenary discussions were also performed for aortic aneurysm and aortic dissection.

2013年8月8-11日，“中国心脏病大会2013”（CHC 2013）在北京国家会议中心成功召开，本届大会由国家心血管病中心和中华医学会联合主办。大会的主题是“整合·品质·创新”。

在众多专家和医界同仁的大力支持和积极参与，以及政府和企业的资助下，“中国心脏病大会”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。本次大会内容丰富，包括1场全体大会、10场心血管热点峰会、44个分论坛、1200个专题发言、1339篇论文摘要和25场卫星会。7000余名专家学者参加了会议。

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、复杂先天性心脏病的治疗，以及主动脉瘤及主动脉夹层治疗的新技术、新理念等热点问题上进行了深入的探讨。



## The Sixth Complex Congenital Heart Disease Forum & Surgical Training Program on Congenital Compounded Heart Abnormality

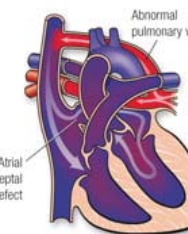
### 第六届复杂先心病研讨班及心脏复合畸形研讨会

The Sixth Complex Congenital Heart Disease Forum and Surgical Training Program on Congenital Compounded Heart Abnormality were successfully held in Fu Wai Hospital on March 27-30, 2013. More than 300 surgeons and anesthetists from all over the country took part in the conference. In addition, several live shows of surgical treatment for challenging cases with congenital compounded heart abnormality were presented during the conference.

The thesis of the meeting focused on surgical treatment strategy for patients with complete atrioventricular septal defect (TECD) or total anomalous pulmonary venous drainage (TAPVC), who simultaneously compounded with other congenital heart abnormality, such as TECD compounded with tetralogy of Fallot or Supracardiac type TAPVC compounded with single ventricle. Cardiac surgeon will encounter great challenge in their practices when they treat such kind of diseases. Plenary discussions were performed during the conference.

2013年3月27-30日，“第六届复杂先心病研讨班及心脏复合畸形研讨会”在阜外医院成功举办。来自全国各地的300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。

本期研讨会重点讨论完全房室间隔缺损和完全肺静脉异位引流这两类复杂心脏病变再复合其他心脏畸形时的外科治疗。诸如完全房室间隔缺损合并法洛四联症的矫治、心上型完全性肺静脉异位引流合并单心室的治疗策略等，治疗这类复杂畸形患者是心脏外科医生在实际工作面临的极大挑战。通过研讨会这个平台，来自全国各地的同道们很好地交流了这方面的治疗经验和体会。



## The 15<sup>th</sup> Symposium on Cardiovascular Anesthesia & Perioperative Management

### 第十五届全国心血管麻醉及围术期处理研讨会

During July 6-8, 2013, the Fifteenth Symposium on Cardiovascular Anesthesia & Perioperative Management was successfully held in Fu Wai Hospital. Almost 1,000 anesthetists from more than 100 medical centers all over the country took part in the conference. On the theme of 'Cherish the life with kind remedy and heart', 20 speeches and several challenging case discussions and live show were offered by the organizer of the conference.

Distinguished specialists, such as Pro.Xiong Li-ze (the Director of Xijing Hospital), presented their thorough considerations about cardiovascular anesthesia and perioperative management for pediatric patients with complex congenital heart disease, and patients with aortic dissection or aneurysm. Plenary discussions were also performed on blood conservation techniques and anesthesia on heart transplantation. Participants debated the hottest topics and controversies on day to day clinic practice and got the chance to exchange their experience in this challenging field.

2013年7月6-8日,“第15届心血管麻醉及围术期处理研讨会”在阜外医院报告厅成功举办。来自全国各地100余家医院的近千名麻醉医师参加了本次会议。围绕“医者仁心,共筑生命之堤”这一主题,与会专家进行了20余场讲座及3场病例研讨活动。

会议的主要内容包括心血管手术围术期的麻醉管理、小儿先心病的外科治疗与麻醉处理、大血管手术的麻醉处理、血液保护、心脏移植的麻醉处理等内容。第四军医大学附属西京医院院长熊利泽教授作了题为“我国主要慢性病的概况及对麻醉的影响”的重要讲座,丰富了本会的内涵,拓展了与会者的视野。组织方还进行了手术现场直播,现场解答广大参会者在临床工作中遇到的问题,场面极为热烈。



## Asia-Pacific ELSO 2013 (APELSO 2013)

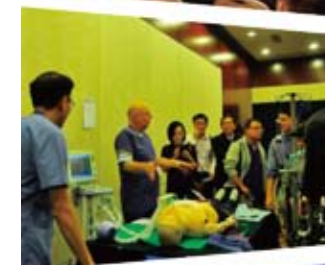
### 首届亚太ECMO学术大会

Authorized by Asia-Pacific Chapter of Extracorporeal Life Support Organization (APELSO), and sponsored by Chinese Society of Extra-Corporeal Circulation (CSECC), the specialists on extracorporeal circulation of Fu Wai Hospital successfully organized the Asia-Pacific ELSO 2013 (APELSO 2013) in Beijing International Conference Center (BICC) during October 11-13, 2013. More than 780 specialists from 16 countries, which included Australia, New Zealand, Singapore, Japan, Korea, America, British, Sweden, Germany, Belgium and Pakistan, took part in the conference.

30 speeches about the clinic application and basic research of ECMO were presented on the conference. The pioneer in this field, also with the reputation of "the father of ECMO", Dr. Robert Bartlett from the University of Michigan personally attended the meeting and offered special lecture. The chairman of APELSO, Dr. Graeme MacLaren (the ICU Director of National University Hospital of Singapore) and Pro.Long Chun (the Chairman of the meeting from Fu Wai Hospital) made excellent presentations on application of ECMO in Asia-Pacific area. The American simulation model training group lead by Dr. Mark Ogino was invited to provide 'ECMO Simulation Courses' at the meeting site. During the training session, the meeting site atmosphere became very enthusiastic.

2013年10月11-13日,由亚太体外生命支持组织(APELSO)授权,中国生物医学工程学会体外循环分会(CSECC)主办,以阜外医院体外循环科为大会组委会主体的首届亚太ECMO学术大会(Asia-Pacific ELSO 2013)在北京国际会议中心(BICC)成功召开。来自澳大利亚、新西兰、新加坡、日本、韩国、美国、英国、瑞典、德国、比利时和巴基斯坦等16个国家的130余位外宾和650多位国内ECMO同行参加了本次会议。

大会全英文交流,全程中文同声传译。来自美国密歇根大学医学中心、有“ECMO之父”美誉的ECMO治疗开拓者Dr. Robert Bartlett不仅作了精彩的学术报告而且对本次大会的组织和召开给予了极高的评价。现任APELSO主席、新加坡国立大学医院ICU主任Dr. Graeme MacLaren就亚太地区ECMO现状和发展进行了详细剖析。本次大会的组委会主席、阜外医院的龙村教授就我国ECMO治疗现状和团队建设作了深入全面的介绍和分析。30余位国际代表分别发言,就ECMO治疗与研究进展进行了深入探讨。大会还邀请了美国Dr. Mark Ogino领导的ECMO模拟培训团队做会议现场的“ECMO Simulation Courses”培训,受到参会代表的热烈欢迎和好评。





## The Fu Wai Conference on Aortic Surgery 2013 第五届阜外主动脉病变治疗研讨会

On December 6-8, 2013, more than 450 surgeons and anesthetists from more than 100 medical centers took part in 'The Fu Wai Conference on Aortic Surgery 2013' in Beijing.

Distinguished specialists presented their thorough considerations about the strategy selection for treatment of type A aortic dissection, Chinese registry research for type A aortic dissection, 'hybrid approach' for repairing of complicated type A aortic dissection, the development of TEVAR technique in treatment for aortic disease, reasons analysis for type A aortic dissection occurred after TEVAR treatment or aortic rupture after TEVAR treatment for type B aortic dissection, treatment for complicated abdominal aneurysm, the technique for thoracic-abdominal aorta replacement and the application of bypass graft from ascending aorta to bilateral common iliac artery.

2013年12月6~8日,“第五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450多位外科专家、麻醉医师参加了会议。

与会专家就主动脉A型夹层治疗策略、国人主动脉A型夹层注册登记研究、复合技术在主动脉A型夹层高危患者治疗中的应用、主动脉疾病的腔内治疗进展、TEVAR术后再发A型夹层以及Stanford B型主动脉夹层TEVAR术后主动脉破裂的原因、复杂腹主动脉瘤的治疗策略、全胸腹主动脉替换术、升主动脉至双髂动脉旁路手术等重要问题进行了深入而广泛的交流和探讨。



## Conference Speeches presented by Fu Wai Surgical Team in 2013 2013年阜外外科团队在国际专业学术会议上的发言

### • 6<sup>th</sup> World Congress of Pediatric Cardiology and Cardiac Surgery

February 17-22, 2013 in Cape Town / South Africa

**Dr. Hu Sheng-shou**

"Aortic translocation: the double root variant of the Nikaidoh procedure"

### • 9<sup>th</sup> International Congress of Update in Cardiology and Cardiovascular Surgery

March 21-24, 2013 in Antalya / Turkey

**Dr. Luo Xin-jin**

"Modified Sakakibara classification system for ruptured sinus of Valsalva aneurysm"

### • 15<sup>th</sup> World congress of anaesthesiologists (WCA)

March 25-30, 2013 in Buenos Aires / Argentina

**Dr. Yao Yun-tai**

"Anesthesia resident training in China"

### • ASCVTS 2013

April 4-7, 2013 in Kobe/ Japan

**Dr. Long Chun**

"Education situation of CPB in China"

**Dr. Wang Qiang**

"Systemic-main pulmonary artery shunt and right ventricle to pulmonary artery connection: which can benefit pulmonary atresia with diminutive pulmonary arteries and major aortopulmonary collateral arteries"

### • 10<sup>th</sup> meeting of Asian Society of Cardiovascular Anesthesiologists (ASCA)

April 4-7, 2013 in Singapore

**Dr. Wang Wei-peng**

"Anesthetic Management and early outcomes of Hybrid Procedure"

### • 9<sup>th</sup> International Conference on Pediatric Mechanical Circulatory Support Systems & Pediatric Cardiopulmonary Perfusion

May 8-11, 2013 in Hershey, P.A. / USA.

**Dr. Guan Yu-long**

"The dynamic observation of plasma concentration of antimicrobial agents during balanced ultrafiltration in vitro"

*In 2013, more than 15 specialists of Fu Wai Surgical Team were invited to make speeches at high-level international conferences with great academic influence.*

*2013年阜外医院外科团队中有15名专家受邀在国际高水平的学术会议上进行专题发言。*

# 科研创新 New Research

## 在研项目 Ongoing Projects

### • 国家重大科技专项

Supported by Important National Science & Technology Specific Projects

#### 中国心脑血管重大疾病临床资源库的建立

The research on the establishment of clinical resource library about serious cardio-cerebral vascular disease of the Chinese people

### • 十二五国家科技支撑计划项目

Supported by Key Projects in the National Science & Technology Pillar Program during the Twelfth Five-Year Plan Period

#### 重症缺血性心脏病外科治疗关键技术应用研究

Clinical application research on the Key Technology for the severe ischemic heart disease treatment

### • “973”计划

Supported by State 973 programs

#### 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

### • 13<sup>th</sup> European Association of Cardiothoracic Anaesthesiologists (EACTA)

June 6-8, 2013 in Barcelona/ Spain

#### Dr. Wang Wei-peng

"Anesthetic management and Renal Function changes in Hybrid revascularization procedure "

### • European Society of Cardiology Congress 2013 (ESC 2013)

August 31 – September 4, 2013 in Amsterdam / Netherlands

#### Dr. Li Shou-jun

"The palliative Pulmonary Banding may provide better outcomes than anatomical correction of congenitally corrected transposition of the great arteries with involuted morphologic left ventricle"

### • 27<sup>th</sup> EACTS Annunal Meeting

October 7-10, 2013 in Vienna / Austria

#### Dr. Li Shou-jun

"Outcomes of the rehabilitative procedure for patients with pulmonary atresia ventricular septal defect and hypoplastic pulmonary arteries beyond the infant period"

### • CVT Critical Care 2013 Conference

October 10-12, 2013 in Washington D.C. / USA

#### Dr. Du Yu

"Continous renal replacement therapy and mild hypothermia for acute severe heart failure after cardiovascular surgery"

### • 23<sup>th</sup> ATCSA

October 10-13, 2013 in Singapore

#### Dr. Sun Xiao-gang

"One-stage repair of extensive aortic aneurysm: mid-term results with total or subtotal aortic replacement"

#### Dr. Li Dian-yuan

"Risk factors associated with mortality in the surgical treatment of 563 patients with the simple total anomalous pulmonary venous connection"

#### Dr. Gao Wei

"Bloodless surgical treatment of congenital heart disease"

### • 10<sup>th</sup> International Congress on Coronary Artery Disease

October 13-16, 2013 in Florence / Italy

#### Dr. Hu Sheng-shou

"Early and midterm outcomes of one-stop hybrid coronary revascularization for the treatment of multivessel coronary artery disease"

In 2013, Fu Wai Surgical team won **13** new bids for scientific research projects, ranging from the national to provincial and ministerial level. We are now undertaking a total of **87** research projects of various kinds.

目前阜外医院外科团队承担着**87**个在研科学项目，2013年又新增**13**项国家和省部级研究项目。

• “863”项目

Supported by State 863 projects

干细胞移植治疗心力衰竭的临床前评价和临床研究

Preclinical study and clinic evaluation for stem cell treatment in heart failure

心脏移植标准化技术及免疫调控研究

The research on standardized technology and immunoregulation policy for heart transplantation

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

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 rat on microRNA regulation mechanism for transition process of postnatal proliferative ability of cardiomyocytes

胚胎干细胞治疗新生大鼠脑白质损伤的研究

The study on embryonic stem cell treatment for cerebral white-matter injury in neonate rat

脐带间充质干细胞对未成熟肺小血管发育影响及其机制的实验研究

The experiment investigation on the effect and mechanisms of the development of immature pulmonary small vessel when treated by Umbilical Mesenchymal Stem Cell

mTOR信号传导通路在房颤心房重构中的作用及机制研究

The study on the effect and mechanisms of mTOR signal transduction pathway in Atrial remodeling (AR ) during the Atrial fibrillation ( Af )

七氟烷后处理与心肌β肾上腺素能信号转导通路的交互作用

The study on the interaction effect between the post-conditioning of Sevoflurane and myocardial beta-adrenergic signaling pathways

乙醛脱氢酶2基因多态性对紫绀型先心病外科心肌保护影响的实验研究

The experiment research on the cardioprotection role of the polymorphism of aldehyde dehydrogenase-2 genotype in patients with cyanosis congenital heart disease

雪旺细胞通过逆转神经重构降低移植后心脏心律失常易感性研究

The research on Schwann cell about degrading the arrhythmia-susceptibility of post-transplanted heart by reversing neurologic remodeling



miR-194调控SUMO蛋白表达：深低温停循环诱导内源性脑保护作用的新机制

The expression of SUMO regulated by miR-194: a new endogenous brain protective mechanism during the deep hypothermia circulatory arrest

血管平滑肌细胞表型异常对主动脉瘤形成的作用

The study on the effect of phenotypic abnormality of vascular smooth muscle cell during the aortic aneurysm formation

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.

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

持续血滤嵌入式肺动脉-左房无泵肺辅助治疗体外循环术后急性肺损伤的实验研究

Experiment study on treatment for acute lung injury caused by Cardiopulmonary Bypass with pumpless interventional lung assist system inserted into pulmonary artery-left atrial and embedded with continuous hemofiltration

七氟烷缺血处理对心肌缺血再灌注损伤保护的策略优化和机理研究

The study on attenuating myocardial ischemia-reperfusion injury after ischemic post-conditioning by Sevourane



• 北京市自然科学基金

Supported by Beijing Natural Science Foundation Program

脱细胞支架复合骨髓间充质干细胞体外构建组织工程带瓣血管的研究

The research on in-vitro reconstruction of tissue engineering graft with valve by Cell-free scaffolds seeded with Bone Mesenchymal Stem Cells

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

• 北京市科技计划

Supported by Science & Technology Research Project of Beijing

体外循环杂交全弓置换术与深低温停循环全弓置换术后脑并发症的前瞻性随机对照研究

Comparative analysis on ‘hybrid approach’ supported with cardiopulmonary bypass and regular method with deep hypothermia circulatory arrest: a Prospective Randomized Controlled Study on risk for cerebral complications after total aortic arch replacement

改良扩大Morrow手术治疗肥厚梗阻性心肌病手术疗效的临床研究

Clinic research on the therapeutic effect of modified Morrow procedure in hypertrophic obstructive cardiomyopathy (HOCM) treatment

ECMO治疗重度心力衰竭的临床应用研究

The study on clinical application of treatment on severe heart failure by ECMO

• 首都医学发展基金资助项目

Supported by Research Foundation of Capital Medical Development

北京地区新生儿及小婴儿先天性心脏病救治网络的建设

A study on establishing net work system for medical care service in Beijing for the neonate and the infant with congenital heart disease

再血管化自体心房肌组织移植治疗缺血性心肌病临床研究

The clinic research on treatment of ischemic cardiomyopathy by transplantation of revascularized autologous atrial tissue patch.

采取规范化的综合措施提高主动脉瓣成形手术疗效的临床研究

The clinic study on improving operation outcome of aortic valve plasty by promoting standardized multimodality therapy

• 首都卫生发展科研专项

Supported by Special Research Project of Capital Hygiene Development

采取规范化的综合措施提高肥厚梗阻性心肌病手术疗效的临床研究

The clinic study on improving operation outcome of hypertrophic obstructive cardiomyopathy by promoting standardized multimodality therapy

• 北京市科技新星计划

Supported by Nova cultivation program on Science & Technology Research in Beijing

干细胞迁移在大网膜包裹术改善心肌梗死后心脏神经重塑的机制研究

The research on the influence of stem cell migration mechanism in improving cardiac and neurologic remodeling after myocardial infarction during the Pedicled Omentum Wrapped procedure

• 高校博士点科研基金

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

miR-130a在先天性心脏病相关肺动脉高压肺血管重塑中的作用及机制研究

The research on effect and mechanism of miR-130a in pulmonary vessel remodeling during the pulmonary hypertension related to congenital heart disease

干细胞迁移机制在大网膜包裹术改善心肌梗死后心律失常的实验研究

Experiment study on the influence of stem cell migration mechanism in decreasing arrhythmias after myocardial infarction during the Pedicled Omentum Wrapped procedure

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

血液粘弹性监测体外膜肺氧合支持期间血液学早期动态变化的初步研究

The preliminary research on hematological dynamic change in the early stage during extracorporeal membrane oxygenation support by blood visco elasticity monitoring

2013年新增项目  
New Research Projects in 2013

• “973”计划

Supported by State 973 programs

雌激素受体及雌激素相关受体与心肌缺血再灌注损伤

The function of estrogen and estrogen-related receptors during myocardial ischemia-reperfusion injury

• 国家自然科学基金资助项目

Supported by National Nature Science Foundation of China

新型体外可调节肺动脉环缩装置对需肺血流约束治疗相关疾病血流动力学影响的实验研究

Experimental study of novel in vitro adjustable pulmonary artery banding device affecting the hemodynamics of related diseases requiring pulmonary blood flow constraints treatment

miR-200c调控UBC9表达诱导深低温停循环下脑缺血耐受的机制研究

The study on the mechanism of the regulation of miR-200c on expression of UBC9 induction cerebral ischemic tolerance under deep hypothermic circulatory arrest

乙醛脱氢酶3A1对紫绀先天性心脏病矫治术后肺缺血再灌注损伤的影响及作用机制

The research on effect and mechanism of Aldehyde dehydrogenase 3A1 in lung ischemia -reperfusion injury after surgical correction of cyanotic congenital heart disease

iPSC诱导分化及植入脱细胞基质构建生物人工肺脏研究

The research on construction of bio-artificial lung by iPSC induction of differentiation and acellular matrix implantation

• 北京市科技计划

Supported by Science & Technology Research Project of Beijing

医用一氧化氮自动给药系统的临床前研究

The preclinical research on automatically medical nitric oxide delivery system

喉罩用于气道狭窄患儿心脏手术的临床研究

Clinical research on laryngeal mask application for children with airway stenosis during cardiac surgery

婴幼儿先心病免输血体外循环术的临床应用研究

Clinical study on the application of free blood transfusion technique in infants with congenital heart disease during cardiopulmonary bypass surgery

继发性三尖瓣关闭不全的规范化治疗策略及其临床应用

The study on the strategies and clinical application of standardized treatment in acquired tricuspid valve regurgitation

升主动脉——主肺动脉分流“非UF策略”治疗合并粗大体肺侧枝的难治性肺动脉闭锁的临床研究

Clinical research on the ascending aorta to main pulmonary artery shunt of "non-UF strategy" treatment in refractory pulmonary atresia combined major aorta pulmonary collateral arteries

• 高校博士点科研基金

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

七氟烷缺血处理的心肌保护作用与钙稳态的关系

The research on the relationship between the myocardial protective effects of Sevoflurane ischemia treatment and calcium homeostasis

β肾上腺素受体阻断剂对七氟烷缺血后处理心肌保护作用的影响

The study on the impact of β-adrenergic receptor blockers on myocardial protection after Sevoflurane treatment of ischemia

肺动脉内血氧饱和度变化对肺动脉高压的影响机制研究

The study on the mechanism in the pulmonary hypertension affected by the change of oxygen saturation within the pulmonary artery

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More than **135** articles were published in peer-reviewed journal in 2013, including **45** articles published in English.

2013年阜外医院外科系统发表专业论著**130**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。

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最佳心外科专科评选简介
Brief on 'The Best Heart Surgery of China'

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Shou-jun Li, MD, Administrative vice-Director, Center of Cardiac Surgery for Children.
Deputy Director: Jun Yan, MD, Xiangdong Shen, MD, Xu Wang, MD.
小儿心脏中心 常务副主任：李守军 副主任：闫军、沈向东、王旭

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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 Keming Yang, MD, Deputy Head, Ward 16
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Xu Wang, MD, Division Head, ICU for Children
Juxian Yang, MD, Deputy Head, ICU for Children
小儿ICU 主任：王旭， 副主任：杨菊先

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十病区 主任：常谦

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Yanbo Zhang, MD, Division Head, ICU in the second in-patient department
二部ICU 主任：张燕博

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北楼ICU 主任：刘平

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Since 1991, 'U.S. News & World Report' began to survey approximately 5,000 hospitals all over America, and made national ranking of the best hospital of USA every year. The most famous hospitals such as John Hopkins Hospital or Mayo Clinic were all on that list.

Hospital Management Institute of Fudan University, drawing upon 'U.S. News & World Report', began to make national ranking by specialty in Chinese hospitals since 2010. Each year, they published the result on the list of 'The Best Hospitals of China'. Till now, it lasted for 4 years.

On November 23rd, 2013, the results of "The Best Hospitals of China in 2012" were published. For the 2012 ranking, Hospital Management Institute of Fudan University surveyed 1,579 outstanding experts from 30 different specialties.

Fu Wai Hospital has topped 'The Best Cardiology & Heart Surgery of China' for four consecutive years.

1991年，《美国新闻与世界报道》杂志开始评选美国最佳医院和最佳专科，每年更新一次。约翰·霍普金斯医院、梅奥诊所等美国“名院”等均榜上有名。

2010年8月，复旦大学医院管理研究所借鉴美国的评选方法，开始了《中国最佳医院综合排行榜》和《中国最佳专科声誉排行榜》的评选活动。每年推出上一年度的排行榜评比结果，至2013年已连续发布4个年度。

2013年11月23日，复旦大学医院管理研究所公布了2012年度的评选结果。这次评选由全国30个临床专业的1579名著名专家学者共同参与评审。

阜外医院连续4年蝉联“心血管病第一”。而阜外医院外科也连续4年蝉联“心外科第一”。显示出专家和公众对我们提供的医疗服务的高度认可。

用心守护健康