

Thoracic and Cardiovascular Surgery

1. Staffs and Students (April, 2009)

Professor	Hirokuni ARAI	
Associate Professor		
Junior Associate Professor		
Assistant Professor	Katsuo KOJIMA, Naoyuki FUJIWARA, Naoto MIYAGI,	Tomoya YOSHIZAKI Satoru MAKITA, Tomohiro USHIYAMA
Hospital Staff	2	
Graduate Student	1	
Research Student	0	

2. Purpose of education

Thoracic and Cardiovascular Surgery is a branch of medical science which deals the surgical treatment of the disease of lung, mediastinum, heart and aorta. Main objective of Thoracic and Cardiovascular Surgery in the graduate course is to provide students opportunity to study surgical anatomy, pathophysiology, pharmacology, and advanced treatment. Students are also taught basic research for the surgical treatment.

3. Research Subjects

- 1) Developing new device in OPCAB surgery and evaluation in clinical use
- 2) Developing new technique/surgery for ischemic heart disease
- 3) Developing technique of beating mitral valve surgery
- 4) Research for artificial heart and heart and/or lung transplantation
- 5) Developing technique of lung resection with preserving lung function
- 6) Diagnose and treatment with video-assisted surgery

4. Clinical Services

Surgical treatment of the disease of lung, mediastinum, heart and aorta, especially for lung cancer, ischemic and valvular heart disease, and aortic disease are performed. Especially for elderly patients, we offer minimum invasive surgery. We also offer the forefront science and technology to our treatment and surgery.

5. Publications in English

1. Hirokuni Arai 「What is the Optimal Surgical Therapeutic Target in Functional Ischemic Mitral Regurgitation : Annulus, Chord, Ventricle, or Papillary Muscle ?」 *Annals of Thoracic and Cardiovascular Surgery* Vol.15, No.3, June 2009
2. Takeshi Someya, Mariko Kobayashi, Satoshi Waguri, Tomohiro Ushiyama, Eiki Nagaoka, Wataru Hijikata, Tadahiko Shinshi, Hirokuni Arai, Setsuo Takatani: Development of a Disposable Maglev Centrifugal Blood Pump Intended for One-Month Support in Bridge-to-Bridge Applications: In Vitro and Initial In Vivo Evaluation *Artificial Organs* 33(9): 704-713

International Presentation

1. Hirokuni Arai, Naoto Miyagi, Tomohiko Ushiyama, Fusahiko Itoh, Takeshi Someya, Eiki Nagaoka, Kiyotoshi Oishi, Naoki Kurashima : On-pump beating Mitral Valve Plasty without aortic cross clamp. The International Society for Minimally Invasive Cardiothoracic Surgery 09, San Francisco, California, USA, 2009, June 4
2. Naoto Miyagi, Kiyotoshi Oishi, Eiki Nagaoka, Tomohiro Ushiyama, Takeshi Someya, Fusahiko Ito, Hirokuni Arai: The Multi-Suction Heart Positioner TENTACLES Equipped with Epicardiac Sensors for Prediction of Ischemic Change and Hemodynamic Instability During OPCAB. The International Society for Minimally Invasive Cardiothoracic Surgery 09, San Francisco, California, USA, 2009, June 3-6
3. Naoto Miyagi, Shin Takabayashi, Hiroo Takayama, Kan Nawata: Setting up the Japanese Association of Young Cardiac Surgeons. The International Society for Minimally Invasive Cardiothoracic Surgery 09, San Francisco, California, USA, 2009, June 3-6
4. Kan Nawata, Naoto Miyagi, Hiroo Takayama, Shin Takabayashi: Current Status of Young Cardiac Surgeons in

- Japan. The International Society for Minimally Invasive Cardiothoracic Surgery 09, San Francisco, California, USA, 2009, June 3-6
5. Naoyuki Fujiwara, Katsuo Kojima, Hirokuni Arai, Jiro Kumagai, Yutaka Hata: Localization of Carboxypeptidase M in BHP-induced rat lung adenocarcinomas. 13th World Conference on Lung Cancer, San Francisco, California, USA, 2009, July 31-August 4
 6. Eiki Nagaoka, Takeshi Someya, Wataru Hijikata, Tomohiro Ushiyama, Tadahiko Shinshi, Hirokuni Arai, and Setsuo Takatani: Development of a Disposable Mag-Lev Centrifugal Blood Pump(MedTech Dispo)Intended for Bridge-to-Bridge Applications-In Vitro and Initial In Vivo Evaluations. 17th Congress of the International Society for Rotary Blood Pumps, Singapore, 2009, October 1-3
 7. H. Arai, K. Oishi, E. Nagaoka, T. Ushiyama, N. Miyagi, T. Yoshizaki, N. Kurashima : ON-PUMP BEATING MITRAL VALVE PLASTY WITHOUT AORTIC CROSS CLAMP 23rd EACTS Annual Meeting Vienna, Austria, 2009, October 19
 8. Hironori Ishibashi, MD, PhD, Shin-ichiro Ohta, MD, PhD, Masahide Hirose, MD, PhD, Noriko Tanio, MD, Nobuaki Nakajima, MD USE OF 8Fr. ASPIRATION CATHETER FOR DELAYED HEMOTHORAX - IS TRADITIONAL RIGID CHEST TUBE ESSENTIAL FOR DELAYED HEMOTHORAX? 6th International Meeting on General Thoracic Surgery, Barcelona, Spain ,2009, November 25th-27th
 9. Naoto Miyagi, Kiyotoshi Oishi, Eiki Nagaoka, Tomohiro Ushiyama, Takeshi Someya, Fusahiko Ito, Hirokuni Arai: The Multi-Suction Heart Positioner TENTACLES Equipped with Epicardiac Sensors for Prediction of Ischemic Change and Hemodynamic Instability During OPCAB. The 2nd International Video-associated thoracoscope surgical technique seminar & workshop, Shanghai, China, 2009, December 19-20