

# Contents

## Lecture 1 Recent Advances in Imaging Aortic Diseases

<b>Advances in Imaging Aortic Disease</b> .....	3
Geoffrey D. Rubin	
<b>Advanced Understanding and Consensus on IMH / PAU</b> .....	5
David M. Williams	
<b>Recent Advances in Imaging Aortic Diseases</b> .....	7
Marek P. Ehrlich and Christian Loewe	
<b>Noninvasive Diagnosis of the Artery of Adamkiewicz</b> .....	15
Kunihiro Yoshioka, Ryoichi Tanaka, and Shigeru Ehara	

## Lecture 2 Novel Technologies in Diagnosis and Treatment for Aortic Diseases

<b>Gene Analysis of Marfan Syndrome</b> .....	23
Naomichi Matsumoto	
<b>Evolving Medical Therapy for Abdominal Aortic Aneurysms</b> .....	29
Rajdeep Deb, Hosaam H. Nasr, Ranjeet Brar, and Matthew M. Thompson	
<b>Regression of Abdominal Aortic Aneurysms through Pharmacologic Therapy</b> .....	43
Koichi Yoshimura, Hiroki Aoki, Yasuhiro Ikeda, Akira Furutani, Kimikazu Hamano, and Masunori Matsuzaki	
<b>Gene Therapy for Treating Abdominal Aortic Aneurysm using Chimeric Decoy Oligodeoxynucleotides Against NFκB and ets in a Rabbit Model</b> .....	51
Takashi Miyake	

<b>Simulation Study of Aortic Valve Function Using the Fluid-structure Interaction Finite Element Method.....</b>	53
Seiryu Sugiura, Susumu Katayama, Nobuyuki Umetani, and Toshiaki Hisada	
 <b>Symposium 1 State of Arts: Stent Graft for Thoracic Aorta</b>	
<b>Long Term Results of Aortic Arch Repair Using Stent Grafting Technique .....</b>	63
Masaaki Kato, Kazuo Shimamura, Toru Kuratani, Hiroshi Takano, and Nobukazu Ohkubo	
<b>Endovascular Repair of Thoracic Aortic Aneurysms.....</b>	65
Katsuhiko Oka	
<b>Current Endograft Therapy of Type B Aortic Dissection .....</b>	67
Sidney L. Kahn and Michael D. Dake	
<b>Endovascular Treatment of Chronic Type B Aortic Dissection .....</b>	79
Rossella Fattori	
<b>Long-term Evolution of Type B Dissection and Endovascular Therapy Indications.....</b>	81
Arturo Evangelista, Rio Aguilar, Teresa González-Alujas, Patricia Mahia, and José Rodríguez-Palomares	
 <b>Symposium 2 Brain Protection in Aortic Arch Surgery</b>	
<b>Spinal Cord Perfusion and Protection During Surgical and Endovascular Treatment of Descending Thoracic and Thoracoabdominal Aortic Aneurysms.....</b>	95
Eva B. Griep and Randall B. Griep	
<b>Brain Protection in Aortic Arch Surgery.....</b>	103
Eva B. Griep and Randall B. Griep	
<b>Tools and Tricks in Monitoring the Brain During Arch Surgery .....</b>	111
Marc Schepens	
<b>Brain Protection in Aortic Surgery—Antegrade Selective Cerebral Perfusion.....</b>	113
Teruhisa Kazui	
<b>Intermittent Pressure Augmented Retrograde Cerebral Perfusion.....</b>	121
Shinichi Takamoto, Kan Nawata, Tetsuro Morota, Kazuo Kitahori, and Mitsuhiro Kawata	

**Modified Arch First Technique for Total Arch Replacement using Hypothermic Circulatory Arrest and Retrograde Cerebral Perfusion** ..... 123  
 Yuichi Ueda

**Symposium 3 State of Arts: Treatment for Thoracoabdominal and Abdominal Aorta**

**Endovascular Repair for Thoracoabdominal Aortic Aneurysms** ..... 133  
 Toru Kuratani, Yukitoshi Shirakawa, Kazuo Shimamura, Mugiho Takeuchi, Goro Matsumiya, and Yoshiki Sawa

**Multicenter Clinical trial of Zenith AAA Endovascular Graft for Abdominal Aortic Aneurysm in Japan** ..... 135  
 Kimihiko Kichikawa, Shoji Sakaguchi, Wataru Higashiura, and Hideo Uchida

**Panel Discussion 1 Advanced Understanding and Consensus on IMH/PAU**

**Advanced Understanding and Consensus on IMH/PAU** ..... 139  
 Sachio Kuribayashi

**Recent Advances in Imaging Aortic Diseases** ..... 141  
 David M. Williams

**Intramural Hematoma and Penetrating Ulcer: VIII International Symposium on Advances in Understanding Aortic Diseases Tokyo, 2007** ..... 143  
 Thoralf M. Sundt, III

**Therapeutic Strategy of Acute Aortic Intramural Hematoma** ..... 155  
 Shuichiro Kaji

**Panel Discussion 2 What’s New in Aortic Root Reimplantation?**

**What’s New in Aortic Root Reimplantation?: The Valsalva Graft Design in its Anatomical Reconstruction of the Aortic Root** ..... 165  
 Ruggero De Paulis, Raffaele Scaffa, Daniele Maselli, Alessandro Bellisario, and Andrea Salica

**Expanding Indications for Valve Sparing Procedures in Aortic Root Replacement** ..... 173  
 Yutaka Okita, Masamichi Matsumori, Kenji Okada, Yoshihisa Morimoto, Mitsuru Asano, Hiroshi Munakata, Naoto Morimoto, Hiroaki Takahashi, and Akiko Tanaka

## Poster Session 1 Aortic Dissection, Marfan Syndrome

<b>Sivelestat Sodium is Effective to Prevent Acute Lung Injury in Acute Aortic Dissection .....</b>	187
Yasushige Shingu, Norihiko Shiya, Suguru Kubota, Yuji Naito, Kinya Matsui, Satoru Wakasa, Hiroshi Sugiki, Tsuyoshi Tachibana, Tomoji Yamakawa, Toshifumi Murashita, and Yoshiro Matsui	
<b>Long-Term Results of Emergency Prosthetic Vascular Graft Replacement for Acute Stanford A Aortic Dissection .....</b>	189
Sunao Watanabe, Kohei Abe, Manabu Yamazaki, Kazufumi Ohmori, and Hitoshi Koyanagi	
<b>Perioperative Risk Factors for Hospital Mortality in Patients with Acute Type A Aortic Dissection .....</b>	195
Masashi Tanaka, Naoyuki Kimura, Hideo Adachi, Atsushi Yamaguchi, and Takashi Ino	
<b>Influence of Patent False Lumen on Secondary Dilatation of the Distal Aorta Following Surgery for Acute Type A Aortic Dissection.....</b>	197
Naoyuki Kimura, Masashi Tanaka, Hideo Adachi, Atsushi Yamaguchi, and Takashi Ino	
<b>Penetrating Atherosclerotic Ulcer Causing Cardiac Tamponade – A Case Suggesting the Etiology of Intramural Hematoma .....</b>	199
Nobuhiko Mukohara, Masato Yoshida, Satoshi Tobe, and Takashi Azami	
<b>Outcome of Patients with Acute Aortic Intramural Hematoma in the Extremely Early Stage .....</b>	201
Hideyasu Kohshoh, Hideaki Yoshino, Hisashi Shimizu, Yasuhiro Ieizumi, Tatsuo Kikuchi, Takumi Inami, Wataru Nagai, Kenji Shida, Kenichi Sudo, and Yoshihiro Yamaguchi	
<b>Borderline Mesenteric Ischemia Caused by Acute Aortic Dissection: Borderline Mesenteric Ischemia in Aortic Dissection.....</b>	203
Kazumasa Orihashi, Taijiro Sueda, Kenji Okada, and Katsuhiko Imai	
<b>Validity of Using Ghent Criteria for Japanese Population Suspected of Marfan Syndrome.....</b>	207
Koichi Akutsu, Hiroko Morisaki, Takayuki Morisaki, Hitoshi Ogino, Masashi Higashi, Shingo Sakamoto, Tsuyoshi Yoshimuta, Kazuya Okajima, Hiroshi Nonogi, and Satoshi Takeshita	

**Three Cases of Total Aortic Replacement for Marfan Syndrome** ..... 209  
 Eiichiro Inagaki, Sohei Hamanaka, Hisao Masaki, Masao Nakata,  
 Atsushi Tabuchi, Yasuhiro Yunoki, Katsuhiko Shimizu, Yuji Hirami,  
 Hitoshi Minami, Hiroshi Kubo, Takuro Yukawa, and Kazuo Tanemoto

**Aortic Operations in 150 Patients with Marfan Syndrome:  
 Tokyo Experience**..... 211  
 Takashi Azuma, Shigeyuki Aomi, Masayuki Miyagishima,  
 Hideyuki Tomioka, Satoshi Saito, Kenji Yamazaki, Akihiko Kawai,  
 and Hiromi Kurosawa

**Poster Session 2 Extensive Surgery, Root, Arch and  
 Theroacoabdomonal Aorta**

**Surgery for Extensive Thoracic Aortic Aneurysm**..... 215  
 Hiroshi Munakata, Kenji Okada, Akiko Tanaka, Masamichi Matsumori,  
 Mitsuru Asano, Yoshihisa Morimoto, and Yutaka Okita

**Surgical Strategy in Aortic Lesion for Marfan Syndrome**..... 221  
 Akiko Tanaka, Kenji Okada, Hiroshi Munakata,  
 Masamichi Matsumori, and Yutaka Okita

**One-stage Repair of Total Descending Aorta  
 for Extended Pathologies**..... 225  
 Tetsuro Morota, Shinichi Takamoto, Tetsufumi Yamamoto,  
 Kan Nawata, and Mitsuhiro Kawata

**Surgical Results of Descending Thoracic and Thoracoabdominal  
 Aortic Aneurysm Repair Using deep Hypothermic  
 Circulatory Arrest**..... 231  
 Kazuhiro Naito, Masashi Tanaka, Hideo Adachi,  
 Atsushi Yamaguchi, and Takashi Ino

**Simultaneous Surgery for Thoracic Aortic Aneurysm with  
 Coronary Artery Disease**..... 233  
 Akihito Matsushita, Tatsuhiko Komiya, Nobushige Tamura,  
 Genichi Sakaguchi, Taira Kobayashi, Tomokuni Furukawa,  
 Gengo Sunagawa, and Takashi Murashita

**Svensson’s (Modif ed Bentall) Technique using a  
 Long Interposed Graft for Left Coronary Artery Reconstruction**..... 239  
 Atsushi Nakahira, Yasuyuki Sasaki, Hidekazu Hirai,  
 Masanori Sakaguchi, Manabu Motoki, Shinsuke Kotani,  
 Koji Hattori, Toshihiko Shibata, and Shigefumi Suehiro

<b>Protective Effect on Preserved Aortic Valve Cusps of Reconstructed Pseudosinuses in the Aortic Root Reimplantation Technique .....</b>	241
Kan Nawata, Shinichi Takamoto, Kansei Uno, Aya Ebihara, Tetsuro Morota, Minoru Ono, and Noboru Motomura	
<b>Modified Arch First Technique Using a Trifurcated Graft.....</b>	247
Seiichiro Wariishi, Hideaki Nishimori, Takashi Fukutomi, Kentaro Hirohashi, and Shiro Sasaguri	
<b>Atypical Arch Replacement: Reconstruction of Four Arch Vessels and Usefulness of Arch First Method with Combined Cerebral Perfusion.....</b>	249
Takayuki Uchida, Hiromi Ando, Toru Yasutsune, Toshiro Iwai, Fumio Fukumura, and Jiro Tanaka	
<b>Distal Aortic Perfusion and Cerebrospinal Fluid Drainage for Thoracoabdominal Aortic Repair .....</b>	255
Shinichi Suzuki, Kiyotaka Imoto, Keiji Uchida, Kensuke Kobayashi, Kouichiro Date, Motohiko Gouda, Toshiki Hatsune, Makoto Okiyama, Takayuki Kosuge, Yutaka Toyoda, and Munetaka Masuda	
<b>Selective Reconstruction of Preoperatively Identified Adamkiewicz Artery During Descending and Thoracoabdominal Aortic Aneurysm Repair; What we have Learned .....</b>	263
Satoshi Saito, Shigeyuki Aomi, Hideyuki Tomioka, Masayuki Miyagishima, and Hiromi Kurosawa	
<b>Poster Session 3 Miscellaneous</b>	
<b>Three-stage Monitoring for Prevention of Cerebral Malperfusion During Cardiovascular Surgery .....</b>	267
Kazumasa Orihashi, Taijiro Sueda, Kenji Okada, and Katsuhiko Imai	
<b>Induction of Phosphorylated BAD in Motor Neurons After Transient Spinal Cord Ischemia in Rabbits .....</b>	271
Masahiro Sakurai, Koji Abe, Yasuto Itoyama, and Koichi Tabayashi	
<b>Modifying Anastomotic Site in Thoracic Aortic Surgery by Using Biodegradable Felt Strips With or Without Basic Fibroblast Growth Factor .....</b>	277
Hidenori Fujiwara, Yoshikatsu Saiki, Katsuhiko Oda, Satoshi Kawatsu, Ichiro Yoshioka, Naoya Sakamoto, Toshiro Ohashi, Masaaki Sato, Yasuhiko Tabata, and Koichi Tabayashi	

<b>Late Outcome of Extra-anatomic Bypass for Infected Abdominal Aortic Aneurysm</b> .....	279
Atsushi Tabuchi, Hisao Masaki, Yasuhiro Yunoki, Takuro Yukawa, Hiroshi Kubo, Eiichiro Inagaki, Sohei Hamanaka, and Kazuo Tanemoto	
<b>The Efficacy of a Bionic Baroreflex System in an Abdominal Aortic Aneurysm Surgery</b> .....	281
Hideaki Nishimori, Takashi Fukutomi, Seiichiro Wariishi, Masaki Yamamoto, and Shiro Sasaguri	
<b>A Case of Two Inflammatory Aortic Aneurysms Showing Spontaneous Improvement of the First Aneurysm During Development of the Second One</b> .....	283
Yuiichi Tamori, Koichi Akutsu, Tsuyoshi Yoshimuta, Shingo Sakamoto, Toshiya Okajima, Masahiro Higashi, Hitoshi Ogino, Hiroshi Nonogi, and Satoshi Takeshita	
<b>Tubercular Pseudoaneurysms of Aorta and its Branches</b> .....	285
Shiv Kumar Choudhary, Sachin Talwar, Balram Airan, Srikrishna Reddy, and Sanjeev Sharma	
<b>Strategy for Treating Aneurysms in the Distal: Arch Aorta-open Surgery and Endovascular Repair with Single-branched Inoue Stent-graft</b> .....	287
Hideyuki Shimizu, Naritaka Kimura, Misato Kobayashi, Nobuko Tano, Yasuko Miyaki, Tatsuo Takahashi, Kentaro Yamabe, Subaru Hashimoto, Yukio Kuribayashi, Kanji Inoue, and Ryohei Yozu	
<b>Redo Left Thoracotomy for Surgical Repair on the Descending Thoracic and Thoracoabdominal Aorta</b> .....	291
Kenji Minatoya, Hitoshi Ogino, Hitoshi Matsuda, Hiroaki Sasaki, Hiroshi Tanaka, and Soichiro Kitamura	