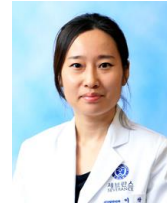


Curriculum Vitae

Name: Sak Lee, M.D.,phD.



Office address:

Division of Cardiovascular Surgery, Cardiovascular Center,
Yonsei University Health System, C.P.O. Box 8044, Seoul, Korea, 120-752
FAX 82-2-313-2992

Birthdate: May 3, 1973 **Sex:** Female

Place of Birth: Seoul, South Korea

Premedical education

March 1993 – February 1995
Premedical Course of the College of Science, Yonsei University, Seoul, Korea

Medical education

Degrees: M.D., phD.

March 1995 – February 1999
Medical Course, Yonsei University College of Medicine
September 2003 – February 2006
Graduate School of Yonsei University College of Medicine
March 2007 – August 2009
Post-graduate school of Yonsei University College of Medicine

Internship or basic hospital experience

March 1999 – February 2000

Intern, Severance Hospital, Yonsei University College of Medicine, Seoul, Korea

Residency and other graduate training

Degrees: Specialist

March, 2000 – Feb. 2004

Resident, Department of Thoracic and Cardiovascular Surgery,
Severance Hospital, Yonsei University College of Medicine

March, 2004 – Feb. 2007

Clinical and research fellow, Department of Thoracic and Cardiovascular Surgery
Yonsei University College of Medicine, Seoul, Korea

March, 2007 – Feb, 2008.

Clinical and research Instructor, Department of Thoracic and Cardiovascular
Surgery, Yonsei University College of Medicine, Seoul, Korea

March, 2008 – Feb, 2015

Assistant professor, Department of Thoracic and Cardiovascular Surgery, Yonsei
University College of Medicine, Seoul, Korea

March, 2015 – Feb, 2020

Associate professor, Department of Thoracic and Cardiovascular Surgery, Yonsei
University College of Medicine, Seoul, Korea

March 2020 – present

Professor, Department of Thoracic and Cardiovascular Surgery, Yonsei
University College of Medicine, Seoul, Korea

Sep, 2020 – present

Director, Division of Cardiovascular surgery, Severance Cardiovascular Hospital

Board, College, or other certifications

Degrees: M.D., Specialist

March, 1999 : Medical Doctor by the Ministry of Health and Social Affairs

March, 2004 : Specialist in Thoracic and Cardiovascular Surgery by the Ministry of

Health and Social Affairs of Republic of Korea

Hospital and Teaching appointments

March, 2004 – Feb. 2007

Clinical and research fellow, Department of Thoracic and Cardiovascular Surgery
Yonsei University College of Medicine, Seoul, Korea

March, 2007 – Feb, 2008.

Clinical and research Instructor, Department of Thoracic and Cardiovascular
Surgery, Yonsei University College of Medicine, Seoul, Korea

Membership in medical or learned societies and special honors

1999: Member, Korean Medical Association

2004: Member, Korean Society for Thoracic and Cardiovascular Surgery

2007: Member, Korean Society of Heart Valve Disease

2010: Member, Korean Society of Cardiology

2013: Member, Korean Society for Transplantation

Publications

- 1) Hwang JC, Kim M, Kim S, Seo H, An S, Jang EH, Han SY, Kim MJ, Kim NK, Cho SW, Lee S, Park JU. In situ diagnosis and simultaneous treatment of cardiac diseases using a single-device platform. *Sci Adv.* 2022;16:8(37):eabq0897.
- 2) Choo SJ, Shinn SH, Kim KH, Kim WS, Oh SS, Lee S. Guidelines for transcatheter aortic valve replacement in Korea: Past obstacles and future perspectives. *Korean J Thorac Cardiovasc Surg.* 2018;51(4):231-40.
- 3) Shim CY, Seo J, Kim YJ, Lee SH, De Caterina R, Lee S, Hong GR: Explore the Efficacy and Safety of Edoxaban in Patients after Heart Valve Repair or Bioprosthetic Valve Replacement (ENAVLE) study group. Efficacy and safety of edoxaban in patients early after surgical bioprosthetic valve implantation or valve repair:A randomized clinical trial. *J Thorac Cardiovasc Surg,* 2023;165(1):58-67.
- 4) Kim HH, Lee S, Lee SH, Youn YN, Yoo KJ, Joo HC. The long-term fate of ascending aorta aneurysm after wrapping versus replacement. *J Thorac Cardiovasc Surg.* 2022;164(2):463-74.
- 5) Shin YR, Kim SU, Lee S, Choi JY, Park HK, Yoo JE, Park YN. Noninvasive surrogates are poor predictors of liver fibrosis in patients with Fontan circulation. *J Thorac Cardiovasc Surg.* 2022;164(4):1176-85.
- 6) Kim DY, Seo J, Cho I, Lee SH, Lee S, Hong GR, Ha JW, Shim CY. Prognostic implications of biventricular global longitudinal strain in patients with severe isolated tricuspid regurgitation. *Front Cardiovasc Med.* 2022;Aug 3;9:908062.
- 7) Kim JH, Song JY, Shim HS, Lee S, Youn YN, Joo HC, Yoo KJ, Lee SH. Human tissue analysis of left atrial adipose tissue and atrial fibrillation after Cox Maze procedure. *J Clin Med.* 2022;4:11(3). 826.
- 8) Kim MS, Kim HR, Lee SH, Lee S, Joo HC. Aortic valve replacement in patients aged 50 to 69 years. Analysis using Korean National Big Data. *J Card Surg.* 2022;37(11):3623-30.
- 9) Kim JH, Lee HJ, Ku NS, Lee SH, Lee S, Choi JY, Yeom JS. Infective endocarditis at a tertiary care hospital in South Korea. *Heart* 2021;107(2)135-41.
- 10) Lee SH, Lee S, Hong GR, Shim CY. Carney Complex: Cardiac and extra-cardiac features.. *Eur Heart J.* 2020;41(1):193

- 11) Kim JH, Lee SH, Joo HC, Youn YN, Yoo KJ, Chang BC, Lee S. Long-term clinical impacts of functional mitral stenosis after mitral valve repair. *Ann Thorac Surg*;109(9):152-9
- 12) Kim HH, Lee S, Joo HC, Kim JH, Youn YN, Yoo KJ, Lee SH. Impact of suture techniques for aortic valve replacement on prosthesis-patient mismatch. *Ann Thorac Surg*, 2020;109(3): 661-7.
- 13) Kim JH, Lee SH, Lee S, Youn YN, Yoo KJ, Joo HC. Axillary artery cannulation reduces early embolic stroke and mortality after open arch repair with circulatory arrest. *J Thorac Cardiovasc Surg*. 2019; Mar 15
- 14) Suh YJ, Kim D, Shim CY, Han K, Chang BC, Lee S, Hong GR, Choi BW, Kim YJ. Tricuspid annular diameter and right ventricular volume on preoperative CT can predict postoperative right ventricular dysfunction in patients who undergo tricuspid valve surgery. *Int J Cardiol*. 2019;1288:44-50.
- 15) Suh YJ, Lee S, Chang BC, Shim CY, Hong GR, Choi BW, Kim YJ. Utility of cardiac CT for preoperative evaluation of mitral regurgitation: morphological evaluation of mitral valve and prediction of valve replacement. *Korean J Radiol*. 2019;20(3):352-63.
- 16) Lee S, Kim DH, Youn YN, Joo HC, Yoo KJ, Lee SH. Rosuvastatin attenuates bioprosthetic heart valve calcification. *J Thorac Cardiovasc Surg*. 2019; Jan 10
- 17) Joo HC, Youn YN, Kim JH, Lee SH, Lee S, Yoo KJ. Conventional open versus hybrid arch repair of aortic arch disease: early and long-term outcomes. *Ann Thorac surg*. 2019;107(5):1380-88.
- 18) Joo HC, Youn YN, Kim JH, Lee SH, Lee S, Yoo KJ. Surgical repair of distal aortic arch aneurysm with distal extension: sternotomy versus thoracotomy. *Ann Thorac Surg*. 2019;1007(4):1139-45.
- 19) Lee SH, Shim JK, Soh S, Song JW, Chang BC, Lee S, Kwak YL. The effect of perioperative intravenously administered iron isomaltoside 1000 (Monofer) on transfusion requirements for patients undergoing complex valvular heart surgery: study protocol for a randomized controlled trial. *Trials*. 2018;19(1):e350
- 20) Kim IC, Chang S, Hong GR, Lee SH, Lee S, Ha JW, Chang BC, Kim YJ, Shim CY. Comparison of cardiac computed tomography with transesophageal echocardiography for identifying vegetation and intracardiac complications in

patients with infective endocarditis in the era of 3-dimensional images. *Circ Cardiovasc Imaging*. 2018;11(3): e006986

21) Joo HC, Youn YN, Lee SH, Lee S, Chang BC, Yoo KJ. Clinical outcomes of different surgical approaches for proximal descending thoracic aneurysm involving the distal arch. *J Thorac Cardiovasc Surg*. 2018;155(6):2289-98.

22) Jung S, Song SW, Lee S, Kim SH, Ann SJ, Cheon EJ, Yi G, Choi EY, Lee SH, Joo HC, Ryu DH, Lee SH, Hwang GS. Metabolic phenotyping of human atherosclerotic plaques: Metabolic alterations and their biological relevance in plaque-containing aorta. *Atherosclerosis*. 2018;269:21-8.

Past or present clinical trials involved

National)

1) 25-year clinical experience of Bentall operation (Yonsei Univ.): finished.

2) Surgical management of coexisting coronary artery and valvular heart disease. (Yonsei Univ.): finished.

3) Comparison study of early goal-directed therapy using pulmonary artery catheter and non-invasive cardiac output monitoring (NICOM) device following valvular heart surgery. (Yonsei Univ.): finished

4) The impact of aortic prosthesis on late onset tricuspid regurgitation after double valve replacement (Yonsei Univ.): finished.

5) Impacts of Rosuvastatin on degeneration and calcification of aortic bioprosthetic valve in animal model. (Korean Society of Cardiology): finished.

6) Clinical impacts and risk factors of functional mitral stenosis after mitral valve repair with ring annuloplasty for degenerative mitral regurgitation. (Yonsei Univ.): finished.

International)

A randomized multicenter, double-blind, group-sequential study to evaluate the efficacy, immunogenicity, and safety of a single dose of Merck 0657nI *Staphylococcus aureus* vaccine in adult patients scheduled for cardiothoracic surgery. (MSD) : finished.