Stanford

Masafumi Shibata, MD, PhD

Bio

ACADEMIC APPOINTMENTS

- Member, Cardiovascular Institute

ADMINISTRATIVE APPOINTMENTS

- Clinical Instructor, Cardiothoracic Surgery, (2024- present)
- Visiting Instructor, Cardiothoracic Surgery, (2022-2024)
- Special Research Scholar, Department of Cardiovascular Surgery, Nippon Medical School Hospital, Tokyo, Japan, (2023- present)
- Assistant Professor, Department of Cardiovascular Surgery, Nippon Medical School Hospital, Tokyo, Japan, (2019-2022)

HONORS AND AWARDS

- TSF Scholarship, Thoracic Surgery Foundation (2024)
- Pilot Funding for Educational and Research Projects to Enhance Diversity, Equity, and Inclusion, Department of Cardiothoracic Surgery, Stanford University (2023)
- Travel Grant, Nippon Medical School (2019)
- Winner, U40 OPCAB contest (2018)
- Finalist, Challengers' Live Demonstrations (2016)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Board Certified Cardiovascular Surgeon, Japanese Society for Cardiovascular Surgery (2020 - present)
- Board Certified Surgeon, Japan Surgical Society (2020 - present)
- Member, Japan Surgical Society (2010 - present)
- Member, Japanese Association for Thoracic Surgery (2012 - present)
- Member, Japanese Society for Cardiovascular Surgery (2012 - present)
- Member, Japanese Circulation Society (2012 - present)
- Member, Stanford Cardiovascular Institute (2023 - present)

PROFESSIONAL EDUCATION

- Research Fellow, Heart Center Leipzig at the University of Leipzig, Leipzig, Germany , Structural Heart Disease (2022)
- Board Certification, Japanese Board of Cardiovascular Surgery , Cardiovascular Surgery (2020)
- PhD, Graduate School of Medicine, Nippon Medical School, Tokyo, Japan (2019)
- Residency, Nippon Medical School Hospital, Tokyo, Japan (2012)

- Medical Education, Nippon Medical School, Tokyo, Japan , Medicine (2010)

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Cardiovascular Medicine (Fellowship Program)

Publications

PUBLICATIONS

- **Impact of leaflet stiffness in aortic valve neocuspidization in ex vivo biomechanical simulation** *JTCVS Open*
  Shibata, M., Lee, J. Y., Sharir, A., Nilkant, R., Kim, J., Nullis, D. M., Okamura, K., Choi, P., Ono, Y., Zhu, Y., Park, M., Woo, Y., Ma, et al
  2026
- **Differentiating Creatine and Phosphocreatine In Vivo Using 3T1H MR Spectroscopy.** *Magnetic resonance in medicine*
  Hurd, R. E., Gu, M., Adamson, P. M., Okamura, K., Shibata, M., Ono, Y., Haidar, M., Riemer, K., Hanley, F. L., Spielman, D. M.
  2025
- **Risk of Reoperation Following Rheumatic Mitral Repair: Long-term Longitudinal Analysis.** *The Journal of thoracic and cardiovascular surgery*
  Shibata, M., Kim, K., Ono, Y., Kim, H. R., Kim, H. J., Yoo, J. S., Jung, S. H., Lee, J. W., Kim, J. B.
  2025
- **Gastruloids enable modeling of the earliest stages of human cardiac and hepatic vascularization.** *Science (New York, N.Y.)*
  Abilez, O. J., Yang, H., Guan, Y., Shen, M., Yildirim, Z., Zhuge, Y., Venkateshappa, R., Zhao, S. R., Gomez, A. H., El-Mokahal, M., Dunkenberger, L., Ono, Y., Shibata, et al
  2025; 388 (6751): eadu9375
- **The association between commissural height and graft size selection in valve-sparing aortic root replacement.** *European journal of cardio-thoracic surgery : official journal of the European Association for Cardio-thoracic Surgery*
  Sharir, A., Shibata, M., Park, S. J., Kim, J. B., Woo, Y. J.
  2025
- **The Circulatory Arrest Recovery Ammonia Problem (CARAP) Hypothesis: a 1H-MRS study of brain metabolism during neonatal cardiopulmonary bypass surgery.** *The Journal of thoracic and cardiovascular surgery*
  Spielman, D., Gu, M., Liu, H., Liu, S. C., Hurd, R., Riemer, K., Okamura, K., Shibata, M., Shuttleworth, P., Kleiman, Z., Epperson, K., Epperson, K., Hanley, et al
  2025
- **A Low-Cost, Open-Source 3D Printer for Multimaterial and High-Throughput Direct Ink Writing of Soft and Living Materials.** *Advanced materials (Deerfield Beach, Fla.)*
  Weiss, J. D., Mermin-Bunnell, A., Solberg, F. S., Tam, T., Rosalia, L., Sharir, A., Rütsche, D., Sinha, S., Choi, P. S., Shibata, M., Palagani, Y., Nilkant, R., Paulvannan, et al
  2025: e2414971
- **Simplified prediction of the right-left cusp overlap view for transcatheter aortic valve replacement: The rule of 22** *JTCVS Structural and Endovascular*
  Shibata, M., Abdelhafez, A., Fitzgerald, S., Trejo-Velasco, B., Kitamura, M., Jobs, A., Wilde, J., Desch, S., Thiele, H., Abdel-Wahab, M.
  2025; 5
- **Long#Distance Heart Transplantation With Ex Vivo Preservation Systems in a Pediatric Center: An Early Case Series** *Pediatric Transplantation*
  Choi, P. S., Pong, S., Hochstein, J., Ruaengsri, C., Shibata, M., Sharir, A., Nasirov, T., Dykes, J., Hollander, S. A., Rosenthal, D. N., Martin, E., Ma, M. R.
  2025
- **Exploring Advancements in DCD Heart Transplantation: Preservation Techniques, Ethical Challenges, and Clinical Outcomes** *Heart and Lung Transplantation*
  Shibata, M., Shudo, Y.
  Springer Nature.2025: 217-235

- **VITALS: an implantable sensor network for postoperative cardiac monitoring in heart failure patients** *npj Biomedical Innovations*
  Kight, A., Haidar, M., Shibata, M., Ono, Y., Ikeda, G., Sharir, A., Semproni, F., Palagani, Y., Taheri, S., Han, A., Ma, M., Riemer, K., McElhinney, et al
  2025; 2 (15)
- **Detection of elevated succinate in brain during circulatory arrest in a piglet model: A 3T 1H MR spectroscopy study.** *Magnetic resonance in medicine*
  Hurd, R. E., Gu, M., Okamura, K., Shibata, M., Ono, Y., Haidar, M., Riemer, R. K., Hanley, F. L., Spielman, D. M.
  2024
- **Combined simulation and ex vivo assessment of free-edge length in bicuspidization repair for congenital aortic valve disease.** *JTCVS open*
  Choi, P. S., Sharir, A., Ono, Y., Shibata, M., Kaiser, A. D., Palagani, Y., Marsden, A. L., Ma, M. R.
  2024; 22: 395-404
- **Harnessing the Power of ChatGPT in Cardiovascular Medicine: Innovations, Challenges, and Future Directions.** *Journal of clinical medicine*
  Leon, M., Ruaengsri, C., Pelletier, G., Bethencourt, D., Shibata, M., Flores, M. Q., Shudo, Y.
  2024; 13 (21)
- **Effect of graft sizing in valve-sparing aortic root replacement for bicuspid aortic valve: The Goldilocks ratio.** *JTCVS techniques*
  Choi, P. S., Sharir, A., Ono, Y., Shibata, M., Kaiser, A. D., Zhu, Y., Marsden, A. L., Woo, Y. J., Ma, M. R., Kim, J. B.
  2024; 25: 1-7
- **Femoral Arterial Calcification and Plug- vs. Suture-Based Closure Device Strategies Post-Transcatheter Aortic Valve Implantation: Insights From CHOICE-CLOSURE.** *Structural heart : the journal of the Heart Team*
  Fitzgerald, S., Dumpies, O., Shibata, M., Hartung, P., Obradovic, D., Boekstegers, P., Vorpahl, M., Rotta Detto Loria, J., Kiefer, P., Desch, S., Thiele, H., Abdel-Wahab, M.
  2024; 8 (2): 100236
- **Novel strategy to preserve valve morphology for 3-dimensional analysis of rat pulmonary valves** *JTCVS Structural and Endovascular*
  Ono, Y., Shibata, M., Ma, X., Gil Antunano, M., Sewell, H. L., Frank , H., Riemer, R. K., Abilez, O. J.
  2024; 1
- **Commissural Alignment of the ACURATE neo Valve in Transcatheter Aortic Valve Replacement.** *JACC. Cardiovascular interventions*
  Kitamura, M., Wilde, J., Gohmann, R., Majunke, N., Gutberlet, M., Shibata, M., Kiefer, P., Desch, S., Thiele, H., Holzhey, D., Abdel-Wahab, M.
  2021; 14 (15): 1740-1742
- **Patient-Specific Neocommissural Alignment of the Evolut Valve: A Pilot Study in Transcatheter Aortic Valve-in-Valve Replacement.** *JACC. Cardiovascular interventions*
  Kitamura, M., Wilde, J., Dumpies, O., Gutberlet, M., Gohmann, R., Shibata, M., Noack, T., Thiele, H., Holzhey, D., Abdel-Wahab, M.
  2021; 14 (8): 934-936
- **A novel method of vein cuff creation for below-knee femoropopliteal bypass with a prosthetic graft.** *Journal of vascular surgery cases and innovative techniques*
  Sakamoto, S. I., Shibata, M., Takahashi, K. I., Morishima, M., Hiromoto, A., Nitta, T.
  2020; 6 (2): 165-167
- **Enhanced Sternal Healing Through Platelet-Rich Plasma and Biodegradable Gelatin Hydrogel.** *Tissue engineering. Part A*
  Shibata, M., Takagi, G., Kudo, M., Kurita, J., Kawamoto, Y., Miyagi, Y., Kanazashi, M., Sakatani, T., Naito, Z., Tabata, Y., Miyamoto, M., Nitta, T.
  2018; 24 (17-18): 1406-1412
- **Intraoperative cardiac mapping in the treatment of an infant congenital fibroma.** *The Annals of thoracic surgery*
  Sakamoto, S., Shibata, M., Murata, H., Nitta, T.
  2015; 99 (3): 1064-6
- **Acute type-A aortic dissection with patent false lumen through to the abdominal aorta: effects of a conventional elephant trunk on malperfusion syndromes and narrowed true lumen.** *Perfusion*
  Imura, H., Tanoue, M., Shibata, M., Maruyama, Y., Shirakawa, M., Ochi, M.
  2014; 29 (5): 417-24
- **Medical relief activities conducted by Nippon Medical School in the acute phase of the Great East Japan Earthquake 2011.** *Journal of Nippon Medical School = Nippon Ika Daigaku zasshi*
  Fuse, A., Shuto, Y., Ando, F., Shibata, M., Watanabe, A., Onda, H., Masuno, T., Yokota, H.

2011; 78 (6): 397-400