Stanford



Lillian L. Tsai, MD

Clinical Assistant Professor, Cardiothoracic Surgery

CLINICAL OFFICE (PRIMARY)

- **Stanford Cardiac Surgery**
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Bio

BIO

Dr. Lillian L. Tsai is a fellowship-trained cardiothoracic surgeon with Stanford Health Care. She is a clinical assistant professor in the Department of Cardiothoracic Surgery, Division of Thoracic Surgery at Stanford University School of Medicine.

Dr. Tsai specializes in thoracic surgery, providing all aspects of care from diagnosis through recovery. She has expertise in treating complex thoracic diseases with robotics and minimally invasive techniques, which often increase precision, reduce risk, and improve recovery. She is dedicated to delivering comprehensive, patient-centered care that combines technical excellence with compassion.

As a physician-researcher, Dr. Tsai has completed a dedicated, grant-funded research fellowship in thoracic surgery during her general surgery training. Her research portfolio spans basic and translational science and clinical outcomes, as well as clinical trials. Her current research focuses on using artificial intelligence to improve diagnosis, surgical planning, and outcomes in thoracic surgery.

Dr. Tsai has published in many renowned peer-reviewed journals, including Annals of Thoracic Surgery, Annals of Surgery, and Journal of Thoracic and Cardiovascular Surgery. She has also shared her expertise and research at conferences across the country, such as the American Association for Thoracic Surgery, the Society of Thoracic Surgeons, and the Southern Thoracic Surgical Association.

Dr. Tsai is a member of the Society of Thoracic Surgeons.

CLINICAL FOCUS

- Thoracic Surgery (Cardiothoracic Vascular Surgery)

ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Cardiothoracic Surgery

HONORS AND AWARDS

- Administrative Chief Resident, General Surgery, Johns Hopkins Hospital
- Excellence in Robotic Surgery, Johns Hopkins Department of Surgery
- Honoring Our Cleveland Clinic Mentors Program, American Association for Thoracic Surgery (AATS) Foundation
- Looking to the Future Scholarship, Society of Thoracic Surgeons
- Peter C. Pairolero Scholarship, General Thoracic Surgical Club 35th Annual Meeting
- Physicians of Tomorrow Scholarship, American Medical Association
- Stanford Artificial Intelligence and Health Scholarship, Stanford University School of Medicine
- Thoracic Surgery Directors Association (TSDA) Benson R. Wilcox Award, TSDA
- Thoracic Surgery Foundation (TSF) Southern Thoracic Surgical Association Resident Research Award, TSF
- Thoracic Surgical Robotics Fellowship, AATS

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, Alpha Omega Alpha Honor Medical Society (2025 - present)
- Member, Society of Thoracic Surgeons (2025 - present)

PROFESSIONAL EDUCATION

- Board Certification: General Surgery, American Board of Surgery (2024)
- Fellowship: Stanford University Thoracic Surgery Fellowship (2025) CA
- Residency: Johns Hopkins Hospital Surgery Residency (2023) MD
- Medical Education: Emory University School of Medicine (2016) GA

Publications

PUBLICATIONS

- **Lung Cancer Risk for Patients Undergoing Cardiac Chest CT: Identification of a New High Risk Population for Lung Cancer Screening.** *The Annals of thoracic surgery*
  Tsai, L. L., Anokwuru, C., Kapula, N., Fan, J., Satoyoshi, M., Wallen, B., Zhang, M., Luo, I., Han, S., Elliott, I. A., Guenthart, B. A., Liou, D. Z., Lui, et al
  2026

- **National analysis of the incidence and prognostic importance of nodal metastases in atypical lung carcinoid tumors.** *JTCVS open*
  Sauer, A. B., Kapula, N., Tsai, L., Liou, D. Z., Elliott, I. A., Berry, M. F.
  2026; 32: 101879

- **Updated Analysis of the Impact of Pulmonary Function Tests on Complications After Lung Resection.** *Annals of thoracic surgery short reports*
  Wallen, B. S., Kapula, N., Tsai, L. L., Guenthart, B. A., Liou, D. Z., Lui, N. S., Backhus, L. M., Berry, M. F., Shrager, J. B., Elliott, I. A.
  2026; 4 (2): 363-368

- **Deep-learning based quantitative evaluation of postoperative atelectasis following right upper lobectomy.** *NPJ digital medicine*
  Kamtam, D. N., Facchi, G. M., Lin, N., Tsai, L. L., Lui, N. S., Elliott, I. A., Liou, D. Z., Backhus, L. M., Berry, M. F., Guo, H. H., Langlotz, C. P., Shrager, J. B.
  2026

- **Endoscopic findings predictive of pathologic upstaging in T2N0 esophageal cancer.** *JTCVS open*
  Tsai, L. L., Bommakanti, S., Kapula, N., Satoyoshi, M., Aboujudom, C., Elliott, I. A., Guenthart, B. A., Liou, D. Z., Lui, N. S., Backhus, L. M., Shrager, J. B., Berry, M. F.
  2026; 29: 101561

- **Endoscopic findings predictive of pathologic upstaging in T2N0 esophageal cancer** *JTCVS OPEN*
  Tsai, L. L., Bommakanti, S., Kapula, N., Satoyoshi, M., Aboujudom, C., Elliott, I. A., Guenthart, B. A., Liou, D. Z., Lui, N. S., Backhus, L. M., Shrager, J. B., Berry, M. F.
  2026; 29

- **Consensus map for robotic right lower lobectomy-essential components for artificial intelligence and education applications.** *Journal of thoracic disease*
  Mansur, A., Costantino, C. L., Tsai, L. L., Amores, J., McKinley, S. K., Ott, H. C., Auchincloss, H., Kent, M. S., Sarkaria, I. S., Lazzaro, R. S., Yang, S. C., Hashimoto, D. A., Yang, et al
  2025; 17 (11): 10471-10477

- **Accuracy of DOTATATE-positron emission tomography for preoperative nodal staging of carcinoid tumors of the lung.** *JTCVS open*
  Tsai, L. L., Bommakanti, S., Sridharan, S., Myall, N. J., Guenthart, B. A., Liou, D. Z., Lui, N. S., Backhus, L. M., Berry, M. F., Shrager, J. B., Elliott, I. A.
  2025; 27: 157-163

- **Modern Preoperative Evaluation for Lung Cancer Treatment.** *Surgical oncology clinics of North America*
  Tsai, L. L., Elliott, I. A.
  2025; 34 (4): 501-512

- **Metastasectomy in Thymic and Germ Cell Tumors.** *Thoracic surgery clinics*
  Tsai, L. L., Lui, N. S.
  2025; 35 (2): 267-271

- **The impact of extent of nodal involvement on stage IIIA (N2) non-small cell lung cancer outcomes.** *JTCVS open*
  Wong, L. Y., Tsai, L. L., He, H., Elliott, I. A., Berry, M. F.
  2025; 23: 256-265

- **Endoscopic Findings Predictive of Pathologic Upstaging in T2N0 Esophageal Cancer**
  Tsai , L., Bommakanti , S., Kapula , N., Satoyoshi , M., Aboujudom , C., Elliott , I., Guenthart , B., Liou , D., Lui , N., Backhus , L., Shrager , J., Berry , M.
  JTCVS Open.
  2025

- **Understanding the long-term impact of the COVID-19 pandemic on non-muscle-invasive bladder cancer outcomes: 12-Month follow-up data from the international, prospective COVIDSurg Cancer study.** *BJUI compass*
  Alexander, C. E., Nathan, A., Light, A., Gao, C., Chan, V., Khadhouri, S., Gallagher, K., Byrnes, K. G., Walters, M., Hughes, T., Perry, R., Okoth, K., Magill, et al
  2024; 5 (11): 1044-1051

- **Decreased Lung Metastasis in Triple Negative Breast Cancer Following Locally Delivered Supratherapeutic Paclitaxel-Loaded Polyglycerol Carbonate Nanoparticle Therapy.** *Biomacromolecules*
  Sabatelle, R. C., Chu, N. Q., Blessing, W., Kharroubi, H., Bressler, E., Tsai, L., Shih, A., Grinstaff, M. W., Colson, Y.
  2024; 25 (3): 1800-1809

- **Exclusion of a Giant Right Coronary Artery Aneurysm with Concomitant Bypass Grafting** *International Journal of Cardiovascular and Thoracic Surgery*
  Mullis , D., Alnasir, D., Garrison , A., N, V., LL, T.
  2024

- **Automatic 1-year follow-up appointment creation and reminders can improve long-term follow-up after carotid revascularization** *AMERICAN JOURNAL OF SURGERY*
  Stonko, D. P., Mohammed, S., Skojec, D., Rutkowski, J., Call, D., Verdi, K. G., Tsai, L. L., Black III, J. H., Perler, B. A., Abularrage, C. J., Lum, Y., Salameh, M. J., Hicks, et al
  2024; 227: 57-62

- **A dedicated robotic bedside physician assistant significantly enhances trainee console operating time in general thoracic surgery.** *JTCVS open*
  Jones, B. T., Ha, J. S., Lawrence, C., Tsai, L. L., Yang, S. C.
  2023; 16: 1070-1073

- **First-in-Human Intrathoracic Implantation of Multidrug-Eluting Microdevices for In Situ Chemotherapeutic Sensitivity Testing as Proof of Concept in Nonsmall Cell Lung Cancer.** *Annals of surgery*
  Tsai, L. L., Phillips, W. W., Hung, Y. P., Dominas, C., Deans, K., Ahn, S., Ferland, B., Weiss, K., Lanuti, M., Auchincloss, H., Schumacher, L., Jonas, O., Colson, et al
  2023; 277 (5): e1143-e1149

- **Midterm outcomes of isolated thoracic aortic replacement in congenital versus degenerative aortopathy in a 15-year institutional cohort.** *Journal of vascular surgery*
  Sorber, R., Tsai, L. L., Hicks, C. W., Black, J. H.
  2023; 77 (1): 20-27

- **Commentary: Mentorship based on authentic connection.** *The Journal of thoracic and cardiovascular surgery*
  Tsai, L. L., Ha, J. S.
  2023; 165 (1): 406-407

- **Lung Cancer in Women.** *The Annals of thoracic surgery*
  Tsai, L. L., Chu, N. Q., Blessing, W. A., Moonsamy, P., Colson, Y. L.
  2022; 114 (5): 1965-1973

- **Commentary: Reducing Resection of Benign Pulmonary Nodules - A Laudable Goal, but How and at What Cost?** *Seminars in thoracic and cardiovascular surgery*
  Tsai, L. L., Broderick, S. R.
  2022; 34 (3): 1100-1101

- **The impact of surgical delay on resectability of colorectal cancer: An international prospective cohort study.** *Colorectal disease : the official journal of the Association of Coloproctology of Great Britain and Ireland*
  2022; 24 (6): 708-26

- **Porous Paclitaxel Mesh Reduces Local Recurrence in Patient-Derived Xenograft Resection Model**
  Tsai , L., Fitzgerald , D., Liu, R., Korunes-Miller , J., Neal , E., Hung , Y., Bilton, S., Haha, A., Grinstaff, M., Colson , Y.
  Annals of Thoracic Surgery.
  2022

- **The Translational and Regulatory Development of an Implantable Microdevice for Multiple Drug Sensitivity Measurements in Cancer Patients.** *IEEE transactions on bio-medical engineering*
  Dominas, C., Bhagavatula, S., Stover, E., Deans, K., Larocca, C., Colson, Y., Peruzzi, P., Kibel, A., Hata, N., Tsai, L., Hung, Y., Packard, R., Jonas, et al
  2022; 69 (1): 412-421

- **Machine learning risk prediction of mortality for patients undergoing surgery with perioperative SARS-CoV-2: the COVIDSurg mortality score.** *The British journal of surgery*
  2021; 108 (11): 1274-1292

- **Effect of COVID-19 pandemic lockdowns on planned cancer surgery for 15 tumour types in 61 countries: an international, prospective, cohort study.** *The Lancet. Oncology*
  2021; 22 (11): 1507-1517

- **Head and neck cancer surgery during the COVID-19 pandemic: An international, multicenter, observational cohort study.** *Cancer*
  2021; 127 (14): 2476-2488

- **Delivery of eupenifeldin via polymer-coated surgical buttresses prevents local lung cancer recurrence.** *Journal of controlled release : official journal of the Controlled Release Society*
  Al Subeh, Z. Y., Chu, N. Q., Korunes-Miller, J. T., Tsai, L. L., Graf, T. N., Hung, Y. P., Pearce, C. J., Grinstaff, M. W., Colby, A. H., Colson, Y. L., Oberlies, N. H.
  2021; 331: 260-269

- **Preoperative nasopharyngeal swab testing and postoperative pulmonary complications in patients undergoing elective surgery during the SARS-CoV-2 pandemic** *BRITISH JOURNAL OF SURGERY*
  Glasbey, J. C., Omar, O., Nepogodiev, D., Minaya-Bravo, A., Bankhead-Kendall, B., Fiore, M., Futaba, K., Gabre-Kidan, A., Gujjuri, R. R., Isik, A., Kaafarani, H. M. A., Kamarajah, S. K., Li, et al

2021; 108 (1): 88–96

- **Chapter 89: Acute Pancreatitis**
  Tsai , L., Lipsett, .
  Vincent Textbook of Critical Care 8e.
  2021

- **Chapter 45: Systemic Complications: Respiratory**
  Tsai , L., Lipsett , P.
  Rutherford Vascular and Endovascular Therapy 10e.
  2021

- **Asian Americans in Academic Surgery**
  Tsai , L., Ha , J., Yang , S.
  Annals of Surgery.
  2021

- **Elective Cancer Surgery in COVID-19-Free Surgical Pathways During the SARS-CoV-2 Pandemic: An International, Multicenter, Comparative Cohort Study.** *Journal of clinical oncology : official journal of the American Society of Clinical Oncology*
  Glasbey, J. C., Nepogodiev, D., Simoes, J. F., Omar, O., Li, E., Venn, M. L., , Abou Chaar, M. K., Capizzi, V., Chaudhry, D., Desai, A., Edwards, J. G., Evans, J. P., et al
  2021; 39 (1): 66-78

- **Outcomes from elective colorectal cancer surgery during the SARS-CoV-2 pandemic.** *Colorectal disease : the official journal of the Association of Coloproctology of Great Britain and Ireland*
  2020; 23 (3): 732-49

- **Training of Male and Female Surgical Residents.** *JAMA surgery*
  Sorber, R., Weaver, M. L., Tsai, L. L.
  2020; 155 (10): 998

- **Should We Perform Carotid Doppler Screening Before Surgical or Transcatheter Aortic Valve Replacement?** *The Annals of thoracic surgery*
  Condado, J. F., Jensen, H. A., Maini, A., Ko, Y. A., Rajaei, M. H., Tsai, L. L., Devireddy, C., Leshnower, B., Mavromatis, K., Sarin, E. L., Stewart, J., Guyton, R. A., Babaliaros, et al
  2017; 103 (3): 787-794

- **Does a Higher Society of Thoracic Surgeons Score Predict Outcomes in Transfemoral and Alternative Access Transcatheter Aortic Valve Replacement?** *The Annals of thoracic surgery*
  Jensen, H. A., Thourani, V. H., Forcillo, J., Condado, J. F., Binongo, J. N., Babaliaros, V., Lasanajak, Y., Leshnower, B., Devireddy, C., Guyton, R., Mavromatis, K., Block, P., Simone, et al
  2016; 102 (2): 474-82

- **Intensive Glycemic Control in Cardiac Surgery.** *Current diabetes reports*
  Tsai, L. L., Jensen, H. A., Thourani, V. H.
  2016; 16 (4): 25

- **Will transcatheter valve-in-valve become the standard for replacing the degenerative aortic valve bioprosthesis? Hold your horses, the jury is still out.** *The Journal of thoracic and cardiovascular surgery*
  Forcillo, J., Tsai, L. L., Thourani, V. H.
  2015; 150 (6): 1568-9

- **Minimalist transcatheter aortic valve replacement: The new standard for surgeons and cardiologists using transfemoral access?** *The Journal of thoracic and cardiovascular surgery*
  Jensen, H. A., Condado, J. F., Devireddy, C., Binongo, J., Leshnower, B. G., Babaliaros, V., Sarin, E. L., Lerakis, S., Guyton, R. A., Stewart, J. P., Syed, A. Q., Mavromatis, K., Kaebnick, et al
  2015; 150 (4): 833-9

- **The aged and the ill: A decade of surgical aortic valve replacement outcomes.** *The Journal of thoracic and cardiovascular surgery*
  Tsai, L. L., Jensen, H. A., Thourani, V. H.
  2015; 150 (3): 579-80

- **The Heart and the Head: Neurological Implications of Transcatheter Aortic Valve Replacement.** *Journal of the American College of Cardiology*
  Thourani, V. H., Tsai, L., Jensen, H.
  2015; 66 (3): 218-220

- **“A Couple Hours.”**
  Tsai , L.
  Consortium of Universities for Global Health. Reflection and Global Health Education: An Anthology.
  2015

- **The use of transcatheter aortic valve replacement vs surgical aortic valve replacement for the treatment of aortic stenosis** *RESEARCH REPORTS IN CLINICAL CARDIOLOGY*
  Jensen, H. A., Tsai, L. L., Thourani, V. H.
  2015; 6: 105-116

- **Identification of in vivo-induced bacterial proteins during human infection with Salmonella enterica serotype Paratyphi A.** *Clinical and vaccine immunology : CVI*
  Alam, M. M., Tsai, L. L., Rollins, S. M., Sheikh, A., Khanam, F., Bufano, M. K., Yu, Y., Wu-Freeman, Y., Kalsy, A., Sultana, T., Sayeed, M. A., Jahan, N., LaRocque, et al
  2013; 20 (5): 712-9

- **Identification of immunogenic Salmonella enterica serotype Typhi antigens expressed in chronic biliary carriers of S. Typhi in Kathmandu, Nepal**
  Charles, R.
  PLoS Neglected Tropical Diseases .
  2013