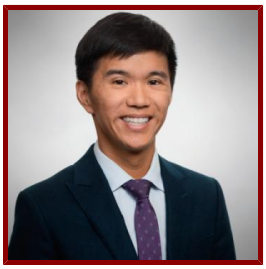
Stanford



Jason V. Tso, MD

Clinical Assistant Professor, Medicine - Cardiovascular Medicine

CLINICAL OFFICE (PRIMARY)

- **Cardiovascular Medicine**

  300 Pasteur Dr

  CV 158 MC 5406

  Stanford, CA 94305

  Tel (650) 736-7878 **Fax** (650) 498-4531

Bio

BIO

Dr. Tso is a board-certified cardiologist with the Sports Cardiology Program and the Center for Inherited Cardiovascular Disease. He serves as medical director of the Sports Cardiology Program and is a clinical assistant professor in the Division of Cardiovascular Medicine at Stanford University School of Medicine.

With clinical expertise in sports cardiology, Dr. Tso specializes in treating physically active patients. He cares for recreational weekend warriors, elite and professional athletes, and all those in between.

He has experience caring for athletes from professional sports teams and multiple National Collegiate Athletic Association (NCAA) Division I universities. Dr. Tso performs cardiac screening and consultation for multiple Bay Area sports teams and is the team cardiologist for Stanford Athletics and the San Francisco 49ers.

Dr. Tso's research interests include cardiovascular health and adaptation in athletes. He has spent years studying American-style football players and Masters endurance athletes. He has presented his research at multiple national meetings, including the American College of Cardiology Scientific Sessions, American Heart Association Scientific Sessions, Heart Failure Society of America, and American College of Sports Medicine.

Dr. Tso's research has been published in multiple peer-reviewed journals including the Journal of the American Heart Association, the European Journal of Preventive Cardiology, and the British Journal of Sports Medicine. He also regularly serves as a reviewer for multiple cardiology and sports medicine journals.

CLINICAL FOCUS

- Sports Cardiology
- Exercise Physiology

- Cardiopulmonary Exercise Testing
- Echocardiography
- Cardiovascular Disease
- Coronary Artery Disease
- Atrial Fibrillation
- Heart Valvular Disease
- Aortic Aneurysm

ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Medicine - Cardiovascular Medicine
- Member, Cardiovascular Institute
- Member, Wu Tsai Human Performance Alliance

ADMINISTRATIVE APPOINTMENTS

- Clinical Director, Sports Cardiology, Stanford University School of Medicine, (2023- present)
- Director, Cardiopulmonary Exercise Lab, (2023- present)

HONORS AND AWARDS

- Future Leader Award, American College of Cardiology California Chapter
- Governor’s Award for Excellence in Research, American College of Cardiology Georgia Chapter
- Most Outstanding Fellow, Emory University Department of Medicine
- First Place Poster Presentation, 27th and 28th Annual Cardiology Research Symposiums, Emory University
- First Place Oral Presentation, 27th Annual Cardiology Research Symposium, Emory University
- Top Research Abstract, 26th Annual Cardiology Research Symposium, Emory University
- Young Achiever Award, American College of Physicians
- Clinical Vignette Finalist, American College of Physicians National Conference
- First Place Southern California Clinical Vignette, American College of Physicians

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Leadership Council Member, American College of Cardiology Sports and Exercise Cardiology Section (2025 - present)
- Faculty Affiliate, Wu Tsai Human Performance Alliance (2024 - present)
- Fellow, American College of Cardiology (2019 - present)

PROFESSIONAL EDUCATION

- Board Certification: Adult Echocardiography, National Board of Echocardiography (2023)
- Board Certification: Cardiovascular Disease, American Board of Internal Medicine (2023)
- Board Certification: Internal Medicine, American Board of Internal Medicine (2019)
- Fellowship: Emory University School of Medicine (2023) GA
- Residency: Cedars Sinai Medical Center Internal Medicine Residency (2019) CA
- Medical Education: Keck USC Medical Center Medical Staff Office (2016) CA

Publications

PUBLICATIONS

- **The Athlete's ECG: Sport-Specific Patterns, Physiological Remodeling, and Clinical Interpretation.** *JACC. Advances*
  Ferrari, F., Tso, J. V., Shadid, G., Stein, R., Froelicher, V.
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- **The Emergence of Sports Electrophysiology: Care of Athletes With Arrhythmias, From the ACC's Sports and Exercise Cardiology Leadership Council.** *JACC. Clinical electrophysiology*
  Chung, E. H., Darden, D., Zorzi, A., Hammond, B., Stewart, K., Singh, T., Tso, J., Ackerman, M. J., Baggish, A. L., Bunch, T. J., Haigney, M., Martinez, M. W., Salerno, et al
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- **Resistance training in older adults: are the gains worth the strain?** *American journal of preventive cardiology*
  Petek, B. J., Moulson, N., Tso, J. V.
  2026; 28: 101569

- **Defining baseline high-sensitivity cardiac troponin levels in healthy collegiate athletes.** *American journal of clinical pathology*
  Jamal, Y. A., Montiel, A., Jones, S., Nair, P., Parikh, V., Haddad, F., Wheeler, M. T., Hwang, C., Tso, J. V., Bowen, R. A.
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- **Race- and Sex-Associated Electrocardiographic Repolarization Characteristics in Young American Athletes in the Digital Age.** *JACC. Advances*
  Tso, J. V., Montalvo, S., Ferrari, F., Collins, B., Jones, S., Christle, J. W., Hadley, D., Petek, B. J., Froelicher, V.
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- **Sex-specific electrocardiographic criteria for left ventricular hypertrophy in young athletes.** *Heart rhythm*
  Montalvo, S., Tso, J. V., Christle, J. W., Hadley, D., Wheeler, M., Perez, M., Myers, J., Ashley, E., Froelicher, V.
  2025

- **Proposed enhanced recommendations for interpretation of electrocardiographic screening of athletes.** *Progress in cardiovascular diseases*
  Froelicher, V., Husaini, M., Tso, J. V., Montalvo, S., Christle, J., Perez, M. V., Hadley, D., Wheeler, M., Stein, R., Vetter, V., Hsu, J. J., Asif, I. M., Hedman, et al
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- **Reference equations for peak oxygen uptake for treadmill cardiopulmonary exercise tests based on the NHANES lean body mass equations, a FRIEND registry study.** *European journal of preventive cardiology*
  Santana, E. J., Kim, D. S., Christle, J. W., Cauwenberghs, N., Celestin, B. E., Tso, J. V., Wheeler, M. T., Ashley, E. A., Peterman, J. E., Gardner, C., Arena, R., Harber, M., Kaminsky, et al
  2025

- **Can the outlier percentiles from norms increase the sensitivity of the ECG criteria for screening athletes?** *Progress in cardiovascular diseases*
  Tso, J. V., Montalvo, S., Christle, J., Froelicher, V.
  2024

- **One-year real-world experience with mavacamten and its physiologic effects on obstructive hypertrophic cardiomyopathy** *FRONTIERS IN CARDIOVASCULAR MEDICINE*
  Kim, D., Chu, E. L., Keamy-Minor, E. E., Paranjpe, I., Tang, W. L., O'Sullivan, J. W., Desai, Y. B., Liu, M. B., Munsey, E., Hecker, K., Cuenco, I., Kao, B., Bacolor, et al
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- **Hypertension in Athletes: Clinical Implications and Management Strategies.** *Cardiac electrophysiology clinics*
  Tso, J. V., Kim, J. H.
  2024; 16 (1): 15-24

- **Should ECG criteria for Low QRS voltage (LQRSV) be specific for Sex?** *American heart journal*
  Tso, J. V., Montalvo, S., Christle, J., Hadley, D., Froelicher, V.
  2024

- **COVID-19 Vaccine-Associated Myocarditis Considerations for Competitive Athletes** *CURRENT TREATMENT OPTIONS IN CARDIOVASCULAR MEDICINE*
  Tso, J. V., Kim, J. H.
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- **COVID-19 Vaccine-Associated Myocarditis Considerations for Competitive Athletes** *CURRENT TREATMENT OPTIONS IN CARDIOVASCULAR MEDICINE*
  Tso, J. V., Kim, J. H.
  2023
- **Longitudinal Aortic Root Dilatation in Collegiate American-Style Football Athletes** *JOURNAL OF THE AMERICAN HEART ASSOCIATION*
  Tso, J. V., Turner, C. G., Liu, C., Prabakaran, G., Jackson, M., Galante, A., Gilson, C. R., Clark, C., Williams III, B., Quyyumi, A. A., Baggish, A. L., Kim, J. H.
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- **LONGITUDINAL AORTIC ROOT DILATATION IN COLLEGIATE AMERICAN-STYLE FOOTBALL ATHLETES**
  Tso, J., Turner, C., Liu, C., Prabakaran, G., Jackson, M., Williams, B., Quyyumi, A. A., Baggish, A. L., Kim, J. H.
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- **EXPERIENCES WITH DISCRIMINATION IN NATIONAL COLLEGIATE ATHLETES (NCAA) DIVISION-I SELF-IDENTIFIED BLACK ATHLETES**
  Egoavil, A., Tso, J., Turner, C., Prabakaran, G., Ejaz, K., King, B., Kim, J. H.
  ELSEVIER SCIENCE INC.2023: 2183
- **Hypertension in Athletes Clinical Implications and Management Strategies** *CARDIOLOGY CLINICS*
  Tso, J., Kim, J. H.
  2023; 41 (1): 15-24
- **Exercise blood pressure changes and aortic dilatation in male Masters endurance athletes** *EUROPEAN JOURNAL OF PREVENTIVE CARDIOLOGY*
  Tso, J., Turner, C. G., Liu, C., Miller, A. B., Eapen, D. J., Sperling, L. S., Kim, J. H.
  2023; 30 (5): E18-E20
- **Psychiatric Medications and Cardiovascular Performance: Uncommon Depressing Side Effects.** *JACC. Case reports*
  Tso, J. V., Pelliccia, A.
  2022; 4 (20): 1341-1343
- **Metabolic Alterations Differentiating Cardiovascular Maladaptation from Athletic Training in American-Style Football Athletes** *MEDICINE & SCIENCE IN SPORTS & EXERCISE*
  Tso, J. V., Liu, C., Turner, C. G., Uppal, K., Prabakaran, G., Ejaz, K., Baggish, A. L., Jones, D. P., Quyyumi, A. A., Kim, J. H.
  2022; 54 (10): 1617-1624
- **Case Series of Coronary Artery Anomalies in Athletes: Challenges in Clinical Management and Sports Eligibility.** *JACC. Case reports*
  Tso, J. V., Cantu, S. M., Kim, J. H.
  2022; 4 (17): 1074-1079
- **Response to: Correspondence on 'Cardiovascular considerations for scuba divers' by Wilmshurst et al** *HEART*
  Tso, J., Powers, J. M., Kim, J. H.
  2022; 108 (17): 1416-1418
- **Myocarditis in the Athlete A Focus on COVID-19 Sequelae** *CLINICS IN SPORTS MEDICINE*
  Symanski, J. D., V. Tso, J., Phelan, D. M., Kim, J. H.
  2022; 41 (3): 455-472
- **Exercise And The Development Of Transthyretin Amyloid Cardiomyopathy - Is There An Association?**
  Aiken, A. V., Tso, J. V., Patel, N. J., Mersola, S., Vescio, R., Patel, J.
  CHURCHILL LIVINGSTONE INC MEDICAL PUBLISHERS.2022: S27
- **Hypertension and Ventricular-Arterial Uncoupling in Collegiate American Football Athletes** *JOURNAL OF THE AMERICAN HEART ASSOCIATION*
  Tso, J., Turner, C. G., Liu, C., Ahmad, S., Ali, A., Selvaraj, S., Galante, A., Gilson, C. R., Clark, C., Williams, B., Quyyumi, A. A., Baggish, A. L., Kim, et al

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- **Cardiovascular considerations for scuba divers** *HEART*
  Tso, J., Powers, J. M., Kim, J. H.
  2022; 108 (14): 1084-1089
- **Normative cardiopulmonary exercise data for endurance athletes: the Cardiopulmonary Health and Endurance Exercise Registry (CHEER)** *EUROPEAN JOURNAL OF PREVENTIVE CARDIOLOGY*
  Petek, B. J., Tso, J., Churchill, T. W., Guseh, J., Loomer, G., DiCarli, M., Lewis, G. D., Weiner, R. B., Kim, J. H., Wasfy, M. M., Baggish, A. L.
  2022; 29 (3): 536-544
- **Association between race and maladaptive concentric left ventricular hypertrophy in American-style football athletes** *BRITISH JOURNAL OF SPORTS MEDICINE*
  Tso, J., Turner, C. G., Liu, C., Galante, A., Gilson, C. R., Clark, C., Taylor, H. A., Quyyumi, A. A., Baggish, A. L., Kim, J. H.
  2022; 56 (3): 151-+
- **THE ASSOCIATION BETWEEN INCREASED BLOOD PRESSURE RESPONSE TO EXERCISE AND AORTIC DILATATION IN MALE MASTER ENDURANCE ATHLETES**
  Tso, J., Turner, C., Miller, A., Jamnik, A., Eapen, D., Sperling, L., Kim, J.
  ELSEVIER SCIENCE INC.2021: 3201
- **HYPERTENSION AND IMPAIRED LEFT VENTRICULAR SYSTOLIC FUNCTION PREDICT VENTRICULAR-ARTERIAL UNCOUPLING IN AMERICAN-STYLE FOOTBALL ATHLETES**
  Tso, J., Turner, C., Liu, C., Ahmad, S., Ali, A., Selvaraj, S., Galante, A., Gilson, C., Clark, C., Williams, B., Quyyumi, A., Baggish, A., Kim, et al
  ELSEVIER SCIENCE INC.2021: 3200
- **THE ASSOCIATION BETWEEN RACE AND ACQUIRED LEFT VENTRICULAR HYPERTROPHY IN AMERICAN-STYLE FOOTBALL ATHLETES**
  Tso, J., Turner, C., Liu, C., Galante, A., Gilson, C., Clark, C., Taylor, H., Quyyumi, A., Baggish, A., Kim, J.
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- **Nonsteroidal Anti-inflammatory Drugs and Cardiovascular Risk in American Football** *MEDICINE & SCIENCE IN SPORTS & EXERCISE*
  Tso, J., Hollowed, C., Liu, C., Alkhoder, A., Dommisse, M., Gowani, Z., Miller, A., Nguyen, G., Nguyen, P., Prabakaran, G., Wehbe, M., Galante, A., Gilson, et al
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- **A Hidden Threat: Anomalous Aortic Origins of the Coronary Arteries in Athletes** *CURRENT TREATMENT OPTIONS IN CARDIOVASCULAR MEDICINE*
  Tso, J., Turner, C. G., Kim, J. H.
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- **THE IMPACT OF AMERICAN-STYLE FOOTBALL PARTICIPATION ON VENTRICULAR-ARTERIAL COUPLING**
  Tso, J., Hollowed, C., Liu, C., AlBadri, A., Alkhoder, A., Dommisse, M., Gowani, Z., Miller, A., Nguyen, G., Nguyen, P., Prabakaran, G., Sidoti, A., Wehbe, et al
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- **Master Endurance Athletes and Cardiovascular Controversies** *CURRENT SPORTS MEDICINE REPORTS*
  Tso, J., Kim, J. H.
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- **Asymptomatic Recurrence of Right Ventricular Myxoma after Excision of Four-Chamber Myxoma.** *CASE (Philadelphia, Pa.)*
  Chen, C., Chu, H., Tso, J., Luthringer, D. J., Siegel, R.
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- **A Multidisciplinary Model of Dementia Care in an Underserved Retirement Community, Made Possible by Telemedicine.** *Frontiers in neurology*
  Tso, J. V., Farinpour, R., Chui, H. C., Liu, C. Y.
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