

Stanford



Vedant Pargaonkar

Basic Life Research Scientist, Medicine - Med/Cardiovascular Medicine

Bio

BIO

My long-term research interests involve development of algorithms using computational methods for early detection of coronary pathophysiology including, endothelial dysfunction and microvascular dysfunction (MVD) and/or a myocardial bridge (MB) in patients with angina and no obstructive coronary artery disease (NOCAD) and the identification of novel target therapies for primary prevention and improved prognosis in these patients. Under the mentorship of Dr. Jennifer Tremmel in Cardiovascular medicine at Stanford, I have been systematically studying to better understand the underlying pathophysiology of these patients, as well as the optimal use of diagnostic testing and treatment using the angina and no-obstructive CAD Registry at Stanford. In collaboration with other investigators in this field, we have published multiple scientific articles highlighting the limitations of current testing in this population and identification of novel diagnostic tools for early diagnosis and management of patients with angina and no obstructive CAD. My research also focuses on myocardial infarction (MI) in women, particularly spontaneous coronary artery dissection (SCAD). I have been involved in the design and execution of the first international collaborative study in SCAD, investigating peripartum vs. non-peripartum SCAD. This is analyzing the largest cohort of patients recruited from multiple US and non-US sites to understand the pathophysiological differences in these patient cohorts.

INSTITUTE AFFILIATIONS

- Member (Staff), Cardiovascular Institute

HONORS AND AWARDS

- CVI Travel Award, Stanford Cardiovascular Institute (Sept 11, 2017)
- Outstanding Research Poster Award, Stanford Cardiovascular Institute (Oct 20, 2016)

EDUCATION AND CERTIFICATIONS

- MBBS, Maharashtra University of Health Sciences, India , Medicine (2012)

Publications

PUBLICATIONS

- **Angina with non-obstructive coronary arteries and myocardial bridge: long-term outcomes of surgical unroofing.** *European heart journal* Pargaonkar, V. S., Schnittger, I., Wong, C. C., Wang, H., Honda, Y., Fitzgerald, P., Fischbein, M. P., Mitchell, R. S., Boyd, J. H., Tremmel, J. A. 2026
- **Invasive Coronary Function Testing in Patients With Prior PCI Who Have Persistent ANOCA.** *Circulation. Cardiovascular interventions* Pargaonkar, V. S., Wong, C. C., Honda, Y., Schnittger, I., Tremmel, J. A. 2025: e015344

- **Invasive Assessment of Myocardial Bridging in Patients with Angina and No Obstructive Coronary Artery Disease.** *EuroIntervention : journal of EuroPCR in collaboration with the Working Group on Interventional Cardiology of the European Society of Cardiology*
Pargaonkar, V. S., Kimura, T., Kameda, R., Tanaka, S., Yamada, R., Schwartz, J. G., Perl, L., Rogers, I. S., Honda, Y., Fitzgerald, P., Schnittger, I., Tremmel, J. A.
2020
- **Effect of ranolazine on symptom and quality of life in patients with angina in the absence of obstructive coronary artery disease: A case control study** *INTERNATIONAL JOURNAL OF CARDIOLOGY*
Pargaonkar, V. S., Tremmel, J. A., Schnittger, I., Khandelwal, A.
2020; 309: 8–13
- **Dose-Response Relationship Between Intracoronary Acetylcholine and Minimal Lumen Diameter in Coronary Endothelial Function Testing of Women and Men With Angina and No Obstructive Coronary Artery Disease.** *Circulation. Cardiovascular interventions*
Pargaonkar, V. S., Lee, J. H., Chow, E. K., Nishi, T., Ball, R. L., Kobayashi, Y., Kimura, T., Lee, D. P., Stefanick, M. L., Fearon, W. F., Yeung, A. C., Tremmel, J. A.
2020; 13 (4): e008587
- **Accuracy of a novel stress echocardiography pattern for myocardial bridging in patients with angina and no obstructive coronary artery disease - A retrospective and prospective cohort study.** *International journal of cardiology*
Pargaonkar, V. S., Rogers, I. S., Su, J., Forsdahl, S. H., Kameda, R., Schreiber, D., Chan, F. P., Becker, H., Fleischmann, D., Tremmel, J. A., Schnittger, I.
2020
- **Accuracy of non-invasive stress testing in women and men with angina in the absence of obstructive coronary artery disease.** *International journal of cardiology*
Pargaonkar, V. S., Kobayashi, Y. n., Kimura, T. n., Schnittger, I. n., Chow, E. K., Froelicher, V. F., Rogers, I. S., Lee, D. P., Fearon, W. F., Yeung, A. C., Stefanick, M. L., Tremmel, J. A.
2018
- **Myocardial bridging is associated with exercise-induced ventricular arrhythmia and increases in QT dispersion.** *Annals of noninvasive electrocardiology : the official journal of the International Society for Holter and Noninvasive Electrocardiology, Inc*
Nishikii-Tachibana, M. n., Pargaonkar, V. S., Schnittger, I. n., Haddad, F. n., Rogers, I. S., Tremmel, J. A., Wang, P. J.
2017
- **Surgical Unroofing of Hemodynamically Significant Left Anterior Descending Myocardial Bridges.** *Annals of thoracic surgery*
Boyd, J. H., Pargaonkar, V. S., Scoville, D. H., Rogers, I. S., Kimura, T., Tanaka, S., Yamada, R., Fischbein, M. P., Tremmel, J. A., Mitchell, R. S., Schnittger, I.
2016
- **Long-Term Prognosis of Early Repolarization With J-Wave and QRS Slur Patterns on the Resting Electrocardiogram: A Cohort Study.** *Annals of internal medicine*
Pargaonkar, V. S., Perez, M. V., Jindal, A., Mathur, M. B., Myers, J., Froelicher, V. F.
2015; 163 (10): 747-755
- **Multiple Endotypes and Angina Burden in Patients With Nonobstructive Coronary Arteries.** *JAMA cardiology*
Wong, C. C., Pargaonkar, V. S., Dawson, L. P., Penumaka, R. R., Rehan, R., Yong, A. S., Ng, M. K., Honda, Y., Fearon, W. F., Schnittger, I., Tremmel, J. A.
2026
- **Comparison of International Expert Working Group Algorithms for Diagnosing Angina With Nonobstructive Coronary Arteries.** *JACC. Cardiovascular interventions*
Wong, C. C., Pargaonkar, V. S., Dawson, L. P., Penumaka, R. R., Rehan, R., Yong, A. S., Honda, Y., Fearon, W. F., Schnittger, I., Tremmel, J. A.
2025; 18 (24): 2995-3005
- **Association between blood pressure and invasive hemodynamic measures in myocardial bridging.** *American journal of physiology. Heart and circulatory physiology*
Dawson, L. P., Wong, C., Pargaonkar, V. S., Khandkar, C., Yong, A. S., Fearon, W. F., Schnittger, I., Shah, S. M., Tremmel, J.
2025
- **Comparison of Coronary Physiological Indices in Identifying Functionally Significant Myocardial Bridges in ANOCA.** *Circulation. Cardiovascular interventions*
Otsuki, H., Yoshida, A., Pargaonkar, V. S., Takahashi, K., Honda, Y., Fitzgerald, P., Schnittger, I., Tremmel, J. A.

2025: e014824

- **INVASIVE CORONARY FUNCTION TESTING FOR PERSISTENT ANGINAL SYMPTOMS IN PATIENTS WITH PRIOR PERCUTANEOUS CORONARY INTERVENTION**
Pargaonkar, V., Schnittger, I., Tremmel, J.
ELSEVIER SCIENCE INC.2025: 1916
- **CLINICAL PRESENTATION, CARDIAC EVALUATION, AND SYMPTOM BURDEN IN ANGINA WITH NONOBSTRUCTIVE CORONARY ARTERIES (ANOCA)**
Pargaonkar, V., Schnittger, I., Tremmel, J.
ELSEVIER SCIENCE INC.2025: 1918
- **Comprehensive Cardiovascular Risk Factor Control With a Mobile Health Cardiovascular Risk Self-Management Program.** *Journal of the American Heart Association*
Paz, E., Pargaonkar, V. S., Roach, B. J., Meadows, M., Roberts, J. M., Gazit, T., Zaleski, A. L., Craig, K. J., Serra, S. J., Dunn, P., Michos, E. D.
2024; 13 (10): e033328
- **Impact of Social Determinants of Health on Blood Pressure and Cholesterol Control in a Smartphone-Based Cardiovascular Risk Self-Management Program**
Pargaonkar, V. S., Roach, B., Paz, E. E.
LIPPINCOTT WILLIAMS & WILKINS.2023
- **Association Between Self-monitored Blood Pressure, Heart Rate, And Anxiety Symptoms In A Digital Heart Health Self-management Program**
Paz, Y. E., Pargaonkar, V. S., Roach, B. J., Jacob, M. S.
LIPPINCOTT WILLIAMS & WILKINS.2023
- **Impact of Diastolic Vessel Restriction on Quality of Life in Symptomatic Myocardial Bridging Patients Treated With Surgical Unroofing: Preoperative Assessments With Intravascular Ultrasound and Coronary Computed Tomography Angiography.** *Circulation. Cardiovascular interventions*
Hashikata, T., Honda, Y., Wang, H., Pargaonkar, V. S., Nishi, T., Hollak, M. B., Rogers, I. S., Nieman, K., Yock, P. G., Fitzgerald, P. J., Schnittger, I., Boyd, J. H., Tremmel, et al
2021; 14 (10): e011062
- **Abnormal shear stress and residence time are associated with proximal coronary atheroma in the presence of myocardial bridging.** *International journal of cardiology*
Yong, A. S., Pargaonkar, V. S., Wong, C. C., Javadzdegan, A., Yamada, R., Tanaka, S., Kimura, T., Rogers, I. S., Sen, I., Kritharides, L., Schnittger, I., Tremmel, J. A.
2021
- **IMPACT OF DIASTOLIC VESSEL RESTRICTION ON CLINICAL SYMPTOMS IN PATIENTS WITH SYMPTOMATIC MYOCARDIAL BRIDGING**
Hashikata, T., Honda, Y., Wang, H., Pargaonkar, V., Hollak, M., Rogers, I. S., Yock, P., Fitzgerald, P., Schnittger, I., Boyd, J., Tremmel, J.
ELSEVIER SCIENCE INC.2021: 165
- **Effect of ranolazine on symptom and quality of life in patients with angina in the absence of obstructive coronary artery disease: A case control study.** *International journal of cardiology*
Pargaonkar, V. S., Tremmel, J. A., Schnittger, I., Khandelwal, A.
2020
- **Off-Pump Mini Thoracotomy Versus Sternotomy for Left Anterior Descending Myocardial Bridge Unroofing.** *The Annals of thoracic surgery*
Wang, H. n., Pargaonkar, V. S., Hironaka, C. E., Bajaj, S. S., Abbot, C. J., O'Donnell, C. T., Miller, S. L., Honda, Y. n., Rogers, I. S., Tremmel, J. A., Fischbein, M. P., Mitchell, R. S., Schnittger, et al
2020
- **Antegrade Dissection Re-Entry After Subintimal Wiring of an Occluded Vessel From Spontaneous Coronary Artery Dissection.** *JACC. Case reports*
Daniels, D. V., Pargaonkar, V. S., Nishi, T., Tremmel, J. A.
2020; 2 (1): 72-76
- **Computed Tomographic Angiography-Based Fractional Flow Reserve Compared With Catheter-Based Dobutamine-Stress Diastolic Fractional Flow Reserve in Symptomatic Patients With a Myocardial Bridge and No Obstructive Coronary Artery Disease.** *Circulation. Cardiovascular imaging*

- Jubran, A. n., Schnittger, I. n., Tremmel, J. n., Pargaonkar, V. n., Rogers, I. n., Becker, H. C., Yang, S. n., Mastrodicasa, D. n., Willemink, M. n., Fleischmann, D. n., Nieman, K. n.
2020; 13 (2): e009576
- **Improving risk stratification in heart failure with preserved ejection fraction by combining two validated risk scores.** *Open heart*
Boralkar, K. A., Kobayashi, Y., Moneghetti, K. J., Pargaonkar, V. S., Tuzovic, M., Krishnan, G., Wheeler, M. T., Banerjee, D., Kuznetsova, T., Horne, B. D., Knowlton, K. U., Heidenreich, P. A., Haddad, et al
2019; 6 (1): e000961
 - **Asymmetric dimethylarginine predicts impaired epicardial coronary vasomotion in patients with angina in the absence of obstructive coronary artery disease.** *International journal of cardiology*
Parikh, R. V., Pargaonkar, V. n., Ball, R. L., Kobayashi, Y. n., Kimura, T. n., Yeung, A. C., Cooke, J. P., Tremmel, J. A.
2019
 - **Association of Endothelin-1 with Accelerated Cardiac Allograft Vasculopathy and Late Mortality Following Heart Transplantation.** *Journal of cardiac failure*
Parikh, R. V., Khush, K., Pargaonkar, V. S., Luikart, H., Grimm, D., Yu, M., Akada, K., Honda, Y., Yeung, A. C., Valantine, H., Fearon, W. F.
2018
 - **Surgical unroofing of hemodynamically significant myocardial bridges in a pediatric population.** *The Journal of thoracic and cardiovascular surgery*
Maeda, K., Schnittger, I., Murphy, D. J., Tremmel, J. A., Boyd, J. H., Peng, L., Okada, K., Pargaonkar, V. S., Hanley, F. L., Mitchell, R. S., Rogers, I. S.
2018
 - **THE COMPLEMENTARY VALUE OF THE GET WITH THE GUIDELINES: HEART FAILURE RISK SCORE AND LABORATORY MARKERS AT DISCHARGE IN PREDICTING MORTALITY IN PATIENTS HOSPITALIZED WITH HEART FAILURE WITH PRESERVED EJECTION FRACTION**
Boralkar, K., Kobayashi, Y., Pargaonkar, V., Moneghetti, K., Tuzovic, M., Krishnan, G., Amsallem, M., Kouznetsova, T., Horne, B., Knowlton, K., Heidenreich, P., Haddad, F.
ELSEVIER SCIENCE INC.2018: 839
 - **SUBCLINICAL LEFT VENTRICULAR DYSFUNCTION IN WOMEN WITH ANGINA IN THE ABSENCE OF OBSTRUCTIVE CORONARY ARTERY DISEASE: A COMPREHENSIVE INVASIVE AND ECHOCARDIOGRAPHIC STUDY**
Bouajila, S., Pargaonkar, V., Kobayashi, Y., Kobayashi, Y., Haddad, F., Tremmel, J.
ELSEVIER SCIENCE INC.2018: 132
 - **MYOCARDIAL BRIDGE MUSCLE INDEX (MMI): A MARKER OF DISEASE SEVERITY AND ITS RELATIONSHIP WITH ENDOTHELIAL DYSFUNCTION AND SYMPTOMATIC OUTCOME IN PATIENTS WITH ANGINA AND A HEMODYNAMICALLY SIGNIFICANT MYOCARDIAL BRIDGE**
Pargaonkar, V., Schnittger, I., Rogers, I., Tanaka, S., Yamada, R., Kimura, T., Boyd, J., Tremmel, J.
ELSEVIER SCIENCE INC.2018: 160
 - **EFFECT OF RANOLAZINE ON SYMPTOMS AND QUALITY OF LIFE IN PATIENTS WITH ANGINA IN THE ABSENCE OF OBSTRUCTIVE CORONARY ARTERY DISEASE: A RETROSPECTIVE COHORT STUDY**
Pargaonkar, V., Tremmel, J., Schnittger, I., Khandelwal, A.
ELSEVIER SCIENCE INC.2018: 161
 - **Myocardial Bridges on Coronary Computed Tomography Angiography#- Correlation With Intravascular Ultrasound and Fractional Flow Reserve.** *Circulation journal : official journal of the Japanese Circulation Society*
Forsdahl, S. H., Rogers, I. S., Schnittger, I. n., Tanaka, S. n., Kimura, T. n., Pargaonkar, V. S., Chan, F. P., Fleischmann, D. n., Tremmel, J. A., Becker, H. C.
2017
 - **Impact of Asymmetric Dimethylarginine on Coronary Physiology Early After Heart Transplantation.** *The American journal of cardiology*
Parikh, R. V., Khush, K. K., Luikart, H. n., Pargaonkar, V. S., Kobayashi, Y. n., Lee, J. H., Sinha, S. n., Cohen, G. n., Valantine, H. A., Yeung, A. C., Fearon, W. F.
2017
 - **Effect of Sex Differences on Invasive Measures of Coronary Microvascular Dysfunction in Patients With Angina in the Absence of Obstructive Coronary Artery Disease** *JACC-CARDIOVASCULAR INTERVENTIONS*
Kobayashi, Y., Fearon, W. F., Honda, Y., Tanaka, S., Pargaonkar, V., Fitzgerald, P. J., Lee, D. P., Stefanick, M., Yeung, A. C., Tremmel, J. A.
2015; 8 (11): 1433-1441

- **Effect of Sex Differences on Invasive Measures of Coronary Microvascular Dysfunction in Patients With Angina in the Absence of Obstructive Coronary Artery Disease.** *JACC. Cardiovascular interventions*
Kobayashi, Y., Fearon, W. F., Honda, Y., Tanaka, S., Pargaonkar, V., Fitzgerald, P. J., Lee, D. P., Stefanick, M., Yeung, A. C., Tremmel, J. A.
2015; 8 (11): 1433-41
- **Examining QRS amplitude criteria for electrocardiographic left ventricular hypertrophy in recommendations for screening criteria in athletes.** *Journal of electrocardiology*
Singla, V., Jindal, A., Pargaonkar, V., Soofi, M., Wheeler, M., Froelicher, V.
2015; 48 (3): 368-372
- **A New Electrocardiographic Left Ventricular Hypertrophy Prognostic Score** *AMERICAN JOURNAL OF CARDIOLOGY*
Jindal, A., Singla, V., Pargaonkar, V., Froelicher, V.
2015; 115 (7): 982-985

PRESENTATIONS

- Clinical Presentation, Management and Prognosis of Patients with Spontaneous Coronary Artery Dissection - ACC Scientific Sessions 2016 (4/1/2016 - 4/4/2016)
- Effect of Surgical Unroofing of a Myocardial Bridge on Exercise Induced QT Interval Dispersion and Anginal symptoms in Patients with Angina in the Absence of Obstructive Coronary Artery Disease - ACC Scientific Sessions 2016 (4/1/2016 - 4/4/2016)
- Clinical Outcome and Short-term Follow up After Surgical Unroofing of a Myocardial Bridge in Patients with Angina in the Absence of Obstructive Coronary Artery Disease - AHA Scientific Sessions 2015 (11/7/2015 - 11/11/2015)
- Invasive Assessment of Myocardial Bridging in Women and Men Presenting with Angina in the Absence of Obstructive Coronary Artery Disease - AHA Scientific Sessions 2015 (November 7, 2015 - 11/11/2015)
- Sex Differences in Coronary Pathophysiology in Patients with Angina in the Absence of Obstructive Coronary Artery Disease - American College Cardiology Scientific session 2015
- The Diagnostic Value of Stress Echocardiography and Electrocardiography in Identifying Occult Coronary Abnormalities in Patient with Angina and No Obstructive Coronary Artery Disease - American College of Cardiology Scientific Session 2105
- The Effect of Mindfulness-Based Stress Reduction on Angina and Vascular Function in Women with Non-Obstructive Coronary Artery Disease - American College of Cardiology Scientific Sessions 2015
- A Long-Term Prognostic Study of Early Repolarization with J wave Patterns on the Resting Electrocardiogram - AHA Scientific Sessions 2014
- The Diagnostic Value of Abnormal Heart Rate Recovery during Exercise Stress Testing in Predicting the Presence of Endothelial and Microvascular Dysfunction - AHA Scientific Sessions, New Orleans 2016 (11/12/2016 - 11/16/2016)
- Diagnostic Value of Abnormal Heart Rate Recovery during Exercise Stress Testing in Predicting the Presence of Endothelial and Microvascular Dysfunction - AHA Scientific Sessions 2016