



Alexander C. Perino

Clinical Assistant Professor, Medicine - Cardiovascular Medicine

CLINICAL OFFICE (PRIMARY)

- **Heart Clinic**

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ACADEMIC CONTACT INFORMATION

- **Administrative Associate**

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Bio

BIO

Alexander C. Perino MD is a cardiac electrophysiologist, clinical informaticist, and cardiovascular researcher. In his clinical role, Dr. Perino treats patients with heart rhythm disorders at Stanford Health Care, performing catheter ablations and cardiac device implantations. In addition to complex ablation (e.g., atrial fibrillation and ventricular tachycardia ablation), Dr. Perino has expertise implanting leadless pacemakers, subcutaneous ICDs, and conduction system pacing leads (i.e., His bundle and left bundle branch area pacing leads). Dr. Perino is the medical informatics director for the Division of Cardiovascular Medicine at Stanford Health Care, providing informatics direction to improve 1) the quality and safety of cardiovascular care delivery and 2) patient and clinician experience derived from the electronic health record and related information and communication technologies. As a cardiovascular researcher, Dr. Perino uses large datasets to examine quality of care, outcomes, and risk prediction for heart rhythm disorders and cardiovascular disease.

CLINICAL FOCUS

- Cardiac Electrophysiology
- Catheter Ablation
- Atrial Fibrillation
- Supraventricular Tachycardia (SVT)
- Ventricular Tachycardia (VT)
- Atrial Flutter
- Implantable Cardioverter-Defibrillator (ICD)
- Pacemaker (transvenous, leadless, conduction system pacing)
- Cardiac Resynchronization Therapy
- Clinical Cardiac Electrophysiology

ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Medicine - Cardiovascular Medicine
- Member, Cardiovascular Institute

ADMINISTRATIVE APPOINTMENTS

- Associate Director of Inpatient Electrophysiology, Stanford Health Care, (2022- present)
- Director, Medical Informatics for Cardiovascular Medicine, Stanford Health Care, (2020- present)

PROFESSIONAL EDUCATION

- Board Certification: Clinical Cardiac Electrophysiology, American Board of Internal Medicine (2020)
- Board Certification, American Board of Internal Medicine , Cardiac Electrophysiology (2020)
- Board Certification: Cardiovascular Disease, American Board of Internal Medicine (2019)
- Board Certification: Internal Medicine, American Board of Internal Medicine (2015)
- Fellowship: Stanford University Clinical Cardiac Electrophysiology Fellowship (2020) CA
- Fellowship: Stanford University Cardiovascular Medicine Fellowship (2018) CA
- Residency: Stanford University (2015) CA
- Medical Education: University of Colorado School of Medicine (2012) CO

Research & Scholarship

CLINICAL TRIALS

- Pulsed Field Ablation (PFA) Vs Anti-Arrhythmic Drug (AAD) Therapy As a First Line Treatment for Persistent Atrial Fibrillation, Recruiting
- The Rhythm Evaluation for AntiCoagulaTion With Continuous Monitoring of Atrial Fibrillation, Recruiting

Publications

PUBLICATIONS

- **NOVEL ECG CRITERIA TO GUIDE SUCCESSFUL ABLATION OF VENTRICULAR ARRHYTHMIAS ARISING FROM THE ENDOCARDIAL CARDIAC CRUX**
Badhwar, N., Johnson, C. J., Bhatia, N. K., Perez, M., Perino, A., Viswanathan, M., De LarocheLiere, H.
ELSEVIER SCIENCE INC.2024: 265
- **NOVEL INTERACTIONS BETWEEN STROKE RISK FACTORS IN THE YOUNG REVEALED BY INTERNET SEARCH ALGORITHMS APPLIED TO ELECTRONIC HEALTH RECORDS**
Deb, B., Vasireddi, S., Perino, A., Clopton, P., Bhatia, N. K., Narayan, S. M.
ELSEVIER SCIENCE INC.2024: 2345
- **AUTOMATED, ACCURATE IDENTIFICATION OF VENTRICULAR TACHYCARDIA FROM ELECTRONIC HEALTH RECORDS USING NATURAL LANGUAGE PROCESSING**
Brennan, K., Azizi, Z., Feng, R., Goyal, J., Liu, X., Ganesan, P., Ruiperez-Campillo, S., Baykaner, T., Badhwar, N., John, R. M., Viswanathan, M., Perino, A., Wang, et al
ELSEVIER SCIENCE INC.2024: 2644
- **Cardioneuroablation for the management of patients with recurrent vasovagal syncope and symptomatic bradyarrhythmias: the CNA-FWRD Registry.** *Journal of interventional cardiac electrophysiology : an international journal of arrhythmias and pacing*
Aksu, T., Tung, R., De Potter, T., Markman, T. M., Santangeli, P., du Fay de Lavallaz, J., Winterfield, J. R., Baykaner, T., Alyesh, D., Joza, J. E., Gopinathannair, R., Badertscher, P., Do, et al
2024
- **ACC/AHA Hypertension Guidelines and CHA2DS2-VASc Up-Scoring in Patients With Atrial Fibrillation.** *JAMA network open*
Pundi, K., Gosch, K. L., Perino, A. C., Jones, P. G., Desai, N. R., Maddox, T. M., Turakhia, M.
2023; 6 (9): e2335722
- **Comparative arrhythmia patterns among patients on tyrosine kinase inhibitors.** *Journal of interventional cardiac electrophysiology : an international journal of arrhythmias and pacing*
Wei, C., Fazal, M., Loh, A., Kapoor, R., Gomez, S. E., Shah, S., Rogers, A. J., Narayan, S. M., Wang, P. J., Witteles, R. M., Perino, A. C., Cheng, P., Rhee, et al

2023

- **Association of CHA2DS2-VASc and HAS-BLED to Frailty and Frail Outcomes: From the TREAT-AF Study.** *American heart journal*
Pundi, K., Perino, A. C., Fan, J., Din, N., Szummer, K., Heidenreich, P., Turakhia, M. P.
2023
- **No pain, no gain: intraprocedural myocardial injury current and conduction system pacing lead performance.** *Journal of interventional cardiac electrophysiology : an international journal of arrhythmias and pacing*
Perino, A. C.
2023
- **Worldwide survey on implantation of and outcomes for conduction system pacing with His bundle and left bundle branch area pacing leads.** *Journal of interventional cardiac electrophysiology : an international journal of arrhythmias and pacing*
Perino, A. C., Wang, P. J., Lloyd, M., Zanon, F., Fujii, K., Osman, F., Briongos-Figueroa, S., Sato, T., Aksu, T., Jastrzebski, M., Sideris, S., Rao, P., Boczar, et al
2023: 1-12
- **Phrenic Relocation by Endoscopy, Intentional Pneumothorax Using Carbon Dioxide, and Single Lung Ventilation (PHRENICS) Technique.** *JACC. Clinical electrophysiology*
Shah, R. L., Perino, A., Wang, P., Lee, A., Badhwar, N.
2023; 9 (5): 692-696
- **Warfarin Time in Therapeutic INR Range and Direct Oral Anticoagulant Adherence for Venous Thromboembolism Across the Spectrum of Weight and Body Mass Index: Findings from Veterans Health Administration.** *Clinical and applied thrombosis/hemostasis : official journal of the International Academy of Clinical and Applied Thrombosis/Hemostasis*
Din, N., Fan, J., Schmitt, S., Guo, J. D., Hlavacek, P., Pundi, K., Russ, C., Emir, B., Turakhia, M. P., Perino, A. C.
2023; 29: 10760296231152474
- **Racial, ethnic, and sex disparities in atrial fibrillation management: rate and rhythm control.** *Journal of interventional cardiac electrophysiology : an international journal of arrhythmias and pacing*
Gomez, S. E., Fazal, M., Nunes, J. C., Shah, S., Perino, A. C., Narayan, S. M., Tamirisa, K. P., Han, J. K., Rodriguez, F., Baykaner, T.
2022
- **Trends in Utilization of Magnetic Resonance Imaging for Stroke Patients With Cardiac Rhythm Devices.** *The Neurohospitalist*
Culbertson, C. J., Perino, A. C., Gardner, R. M., Balasubramanian, V., Vora, N.
2022; 12 (4): 624-631
- **Atrial fibrillation bleeding risk and prediction while treated with direct oral anticoagulants in warfarin-naive or warfarin-experienced patients.** *Clinical cardiology*
Perino, A. C., Fan, J., Pundi, K., Schmitt, S., Kothari, M., Din, N., Heidenreich, P. A., Turakhia, M. P.
2022
- **Trends in Utilization of Magnetic Resonance Imaging for Stroke Patients With Cardiac Rhythm Devices** *NEUROHOSPITALIST*
Culbertson, C. J., Perino, A. C., Gardner, R. M., Balasubramanian, V., Vora, N.
2022
- **THE 2017 ACC/AHA HYPERTENSION GUIDELINES AND CHA2DS2-VASC UP-SCORING IN PATIENTS WITH ATRIAL FIBRILLATION: INSIGHTS FROM THE NCDR (R) PINNACLE (R) REGISTRY**
Pundi, K., Gosch, K., Din, N., Perino, A., Jones, P. G., Desai, N. R., Maddox, T. M., Turakhia, M.
ELSEVIER SCIENCE INC.2022: 12
- **Achievement and Quality Measure Attainment in Patients Hospitalized with Atrial Fibrillation: Results from the Get With The Guidelines - Atrial Fibrillation (GWTG-AFIB) Registry.** *American heart journal*
Ullal, A. J., Holmes, D. N., Lytle, B. L., Matsouaka, R. A., Sheng, S., Desai, N. R., Curtis, A. B., Fang, M. C., McCabe, P. J., Fonarow, G. C., Russo, A. M., Lewis, W. R., Heidenreich, et al
1800
- **Idiopathic Ventricular Outflow Tract Arrhythmias: Avoid the Use of a Sledgehammer to Crack a Nut.** *Journal of cardiovascular electrophysiology*
John, R. M., Perino, A. C.
2021
- **Anticoagulation Treatment and Outcomes of Venous Thromboembolism by Weight and Body Mass Index: Insights From the Veterans Health Administration.** *Circulation. Cardiovascular quality and outcomes*

- Perino, A. C., Fan, J., Schmitt, S., Guo, J. D., Hlavacek, P., Din, N., Kothari, M., Pundi, K., Russ, C., Emir, B., Turakhia, M. P.
2021: CIRCOUTC0MES121008005
- **Trends in Utilization of Magnetic Resonance Imaging for Stroke Patients With Cardiac Rhythm Devices.**
Culbertson, C. J., Perino, A. C., Gardner, R. M., Balasubramanian, V., Vora, N.
LIPPINCOTT WILLIAMS & WILKINS.2021
 - **Arrhythmias Other Than Atrial Fibrillation in Those With an Irregular Pulse Detected With a Smartwatch: Findings From the Apple Heart Study.** *Circulation. Arrhythmia and electrophysiology*
Perino, A. C., Gummidipundi, S. E., Lee, J., Hedlin, H., Garcia, A., Ferris, T., Balasubramanian, V., Gardner, R. M., Cheung, L., Hung, G., Granger, C. B., Kowey, P., Rumsfeld, et al
2021: CIRCEP121010063
 - **Direct Oral Anticoagulant Adherence of Patients With Atrial Fibrillation Transitioned from Warfarin.** *Journal of the American Heart Association*
Pundi, K. N., Perino, A. C., Fan, J., Schmitt, S., Kothari, M., Szummer, K., Askari, M., Heidenreich, P. A., Turakhia, M. P.
2021: e020904
 - **Association of kidney function and atrial fibrillation progression to clinical outcomes in patients with cardiac implantable electronic devices.** *American heart journal*
Szummer, K., Perino, A. C., Fan, J., Kothari, M., Turakhia, M. P.
2021
 - **Sex Differences in Ablation Strategy, Lesion Sets, and Complications of Catheter Ablation for Atrial Fibrillation: An Analysis From the GWTG-AFIB Registry.** *Circulation. Arrhythmia and electrophysiology*
Yunus, F. N., Perino, A. C., Holmes, D. N., Matsouaka, R. A., Curtis, A. B., Ellenbogen, K. A., Frankel, D. S., Knight, B. P., Russo, A. M., Lewis, W. R., Piccini, J. P., Turakhia, M. P.
2021: CIRCEP121009790
 - **Arrhythmia Patterns in Patients on Ibrutinib.** *Frontiers in cardiovascular medicine*
Fazal, M., Kapoor, R., Cheng, P., Rogers, A. J., Narayan, S. M., Wang, P., Witteles, R. M., Perino, A. C., Baykaner, T., Rhee, J.
1800; 8: 792310
 - **Appropriateness of Direct Oral Anticoagulant Dosing in Patients With Atrial Fibrillation: Insights From the Veterans Health Administration** *JOURNAL OF PHARMACY PRACTICE*
Leef, G. C., Perino, A. C., Askari, M., Fan, J., Ho, P., Olivier, C. B., Longo, L., Mahaffey, K. W., Turakhia, M. P.
2020; 33 (5): 647–53
 - **2020 ACC Expert Consensus Decision Pathway on Management of Bleeding in Patients on Oral Anticoagulants A Report of the American College of Cardiology Solution Set Oversight Committee** *JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY*
Tomaselli, G. F., Mahaffey, K. W., Cuker, A., Dobesh, P. P., Doherty, J. U., Eikelboom, J. W., Florido, R., Gluckman, T. J., Hucker, W. J., Mehran, R., Messe, S. R., Perino, A. C., Rodriguez, et al
2020; 76 (5): 594–622
 - **Incidence and outcomes of patients with atrial fibrillation and major bleeding complications: from the TREAT-AF study.** *Journal of interventional cardiac electrophysiology : an international journal of arrhythmias and pacing*
Perino, A. C., Kaiser, D. W., Lee, R. J., Fan, J. n., Askari, M. n., Schmitt, S. K., Turakhia, M. P.
2020
 - **Characteristics and Strength of Evidence of COVID-19 Studies Registered on ClinicalTrials.gov.** *JAMA internal medicine*
Pundi, K. n., Perino, A. C., Harrington, R. A., Krumholz, H. M., Turakhia, M. P.
2020
 - **Practice Variation in Anticoagulation Prescription and Outcomes after Device-Detected Atrial Fibrillation: Insights from the Veterans Health Administration.** *Circulation*
Perino, A. C., Fan, J., Askari, M., Heidenreich, P. A., Keung, E., Raitt, M. H., Piccini, J. P., Ziegler, P. D., Turakhia, M. P.
2019
 - **Appropriateness of Direct Oral Anticoagulant Dosing in Patients With Atrial Fibrillation: Insights From the Veterans Health Administration.** *Journal of pharmacy practice*
Leef, G. C., Perino, A. C., Askari, M., Fan, J., Ho, P. M., Olivier, C. B., Longo, L., Mahaffey, K. W., Turakhia, M. P.
2019: 897190019828270

- **Efficacy of Ablation Lesion Sets in Addition to Pulmonary Vein Isolation for Paroxysmal Atrial Fibrillation: Findings From the SMASH - AF Meta-Analysis Study Cohort.** *Journal of the American Heart Association*
Cluckey, A., Perino, A. C., Yunus, F. N., Leef, G. C., Askari, M., Heidenreich, P. A., Narayan, S. M., Wang, P. J., Turakhia, M. P.
2019; 8 (1): e009976
- **Urinary tract infection after catheter ablation of atrial fibrillation.** *Pacing and clinical electrophysiology : PACE*
Cluckey, A. n., Perino, A. C., Fan, J. n., Askari, M. n., Nasir, J. n., Marcus, G. M., Baykaner, T. n., Narayan, S. M., Wang, P. J., Turakhia, M. P.
2019
- **Intentional pneumothorax avoids collateral damage: Dynamic phrenic nerve mobilization through intrathoracic insufflation of carbon dioxide.** *HeartRhythm case reports*
Shah, R. L., Perino, A. n., Obafemi, O. n., Lee, A. n., Badhwar, N. n.
2019; 5 (9): 480–84
- **Site Variation and Outcomes for Antithrombotic Therapy in Atrial Fibrillation Patients After Percutaneous Coronary Intervention.** *Circulation. Cardiovascular interventions*
Olivier, C. B., Fan, J. n., Askari, M. n., Mahaffey, K. W., Heidenreich, P. A., Perino, A. C., Leef, G. C., Ho, P. M., Harrington, R. A., Turakhia, M. P.
2019; 12 (8): e007604
- **Comparison of Patient-Reported Care Satisfaction, Quality of Warfarin Therapy, and Outcomes of Atrial Fibrillation: Findings From the ORBIT - AF Registry.** *Journal of the American Heart Association*
Perino, A. C., Shrader, P. n., Turakhia, M. P., Ansell, J. E., Gersh, B. J., Fonarow, G. C., Go, A. S., Kaiser, D. W., Hylek, E. M., Kowey, P. R., Singer, D. E., Thomas, L. n., Steinberg, et al
2019; 8 (9): e011205
- **Secular trends in success rate of catheter ablation for atrial fibrillation: The SMASH-AF cohort.** *American heart journal*
Perino, A. C., Leef, G. C., Cluckey, A., Yunus, F. N., Askari, M., Heidenreich, P. A., Narayan, S. M., Wang, P. J., Turakhia, M. P.
2018
- **Geographic and racial representation and reported success rates of studies of catheter ablation for atrial fibrillation: Findings from the SMASH-AF meta-analysis study cohort.** *Journal of cardiovascular electrophysiology*
Leef, G. C., Perino, A. C., Cluckey, A., Yunus, F. N., Askari, M., Heidenreich, P. A., Narayan, S. M., Wang, P. J., Turakhia, M. P.
2018
- **Patient and facility variation in costs of catheter ablation for atrial fibrillation.** *Journal of cardiovascular electrophysiology*
Perino, A. C., Fan, J. n., Schmitt, S. n., Kaiser, D. W., Heidenreich, P. A., Narayan, S. M., Wang, P. J., Chang, A. Y., Turakhia, M. P.
2018
- **Association of Healthcare Plan with Atrial Fibrillation Prescription Patterns.** *Clinical cardiology*
Chang, A. Y., Askari, M. n., Fan, J. n., Heidenreich, P. A., Ho, P. M., Mahaffey, K. W., Ullal, A. J., Perino, A. C., Turakhia, M. P.
2018
- **Treating Specialty and Outcomes in Newly Diagnosed Atrial Fibrillation From the TREAT-AF Study** *JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY*
Perino, A. C., Fan, J., Schmitt, S. K., Askari, M., Kaiser, D. W., Deshmukh, A., Heidenreich, P. A., Swan, C., Narayan, S. M., Wang, P. J., Turakhia, M. P.
2017; 70 (1): 78–86
- **Amiodarone and risk of death in contemporary patients with atrial fibrillation: Findings from The Retrospective Evaluation and Assessment of Therapies in AF study.** *American heart journal*
Ullal, A. J., Than, C. T., Fan, J., Schmitt, S., Perino, A. C., Kaiser, D. W., Heidenreich, P. A., Frayne, S. M., Phibbs, C. S., Turakhia, M. P.
2015; 170 (5): 1033-1041 e1
- **The long-term prognostic value of the Q wave criteria for prior myocardial infarction recommended in the universal definition of myocardial infarction.** *Journal of electrophysiology*
Perino, A. C., Soofi, M., Singh, N., Aggarwal, S., Froelicher, V.
2015; 48 (5): 798-802
- **Evaluating the Cost-effectiveness of Catheter Ablation of Atrial Fibrillation.** *Arrhythmia & electrophysiology review*
Chang, A. Y., Kaiser, D., Ullal, A., Perino, A. C., Heidenreich, P. A., Turakhia, M. P.
2014; 3 (3): 177-183

- **Association between success rate and citation count of studies of radiofrequency catheter ablation for atrial fibrillation: possible evidence of citation bias.** *Circulation. Cardiovascular quality and outcomes*
Perino, A. C., Hoang, D. D., Holmes, T. H., Santangeli, P., Heidenreich, P. A., Perez, M. V., Wang, P. J., Turakhia, M. P.
2014; 7 (5): 687-692
- **The long-term prognostic value of the ST depression criteria for ischemia recommended in the universal definition of myocardial infarction in 43,661 veterans** *INTERNATIONAL JOURNAL OF CARDIOLOGY*
Perino, A. C., Singh, N., Aggarwal, S., Froelicher, V.
2014; 173 (3): 494-498
- **Comparison of a Safety Strategy Using Transradial Access and Dual-Axis Rotational Coronary Angiography with Transfemoral Access and Standard Coronary Angiography** *JOURNAL OF INTERVENTIONAL CARDIOLOGY*
Yasar, A. S., Perino, A. C., Dattilo, P. B., Casserly, I. P., Carroll, J. D., Messenger, J. C.
2013; 26 (5): 524-529