



Elsie Gyang Ross

Assistant Professor of Surgery (Vascular Surgery) and of Medicine (BMIR)

Surgery - Vascular Surgery

CLINICAL OFFICES

- **Stanford Vascular Surgery**

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Bio

BIO

Dr. Ross is a vascular surgeon and research scientist. She graduated from Stanford University School of Medicine in 2011 and completed her vascular surgery 0+5 residency at Stanford University School of Medicine in 2018. During her residency, she completed a two-year post-doctoral fellowship in biomedical informatics. Her current research focuses on using machine learning and electronic health records for early disease identification, precision medicine, and evaluating opportunities to engage in patient education beyond the clinic.

CLINICAL FOCUS

- Vascular Surgery
- Preventative health
- Peripheral vascular disease
- Carotid disease
- Venous disease
- AAA
- Vascular and endovascular treatment of abdominal and thoracic aortic aneurysms
- Vascular trauma

ACADEMIC APPOINTMENTS

- Assistant Professor - University Medical Line, Surgery - Vascular Surgery
- Assistant Professor - University Medical Line, Medicine - Biomedical Informatics Research
- Member, Cardiovascular Institute

HONORS AND AWARDS

- US-UK Fulbright Scholar, US-UK Fulbright Commission (2008-09)
- Soros Fellow, Paul & Daisy Soros Fellowship for New Americans (2008-2010)

- Association for Academic Surgery Young Investigators Award, Association for Academic Surgery (AAS) (2018-19)
- Society of University Surgeons Junior Faculty Award, Society of University Surgeons (SUS) (2018-2019)
- K01 Mentored Scientist Development Award, National Institutes of Health (2019-2024)

PROFESSIONAL EDUCATION

- Board Certification: Vascular Surgery, American Board of Surgery (2021)
- Medical Education: Stanford University School of Medicine (2011) CA
- Residency: Stanford University Vascular Surgery Fellowship (2018) CA
- Post Doc, Stanford University School of Medicine , Biomedical informatics (2015)
- MSc, London School of Hygiene and Tropical Medicine, London School of Economics , Health Policy, Planning and Financing (2009)
- BA, Stanford University , Human Biology (2004)

Research & Scholarship

CLINICAL TRIALS

- Evaluation of an Electronic Health Record-based Screening Tool for Peripheral Artery Disease, Not Recruiting

Teaching

STANFORD ADVISEES

Med Scholar Project Advisor

Tatenda Chakoma

Postdoctoral Faculty Sponsor

Lida Safarnejad, Fudi Wang

Publications

PUBLICATIONS

- **Leveraging Machine Learning and Artificial Intelligence to Improve Peripheral Artery Disease Detection, Treatment, and Outcomes.** *Circulation research*
Flores, A. M., Demsas, F., Leeper, N. J., Ross, E. G.
2021; 128 (12): 1833-1850
- **Comparison of Pre-Amputation Evaluation in Patients with and without Chronic Kidney Disease.** *American journal of nephrology*
Subramanian, N., Han, J., Leeper, N. J., Ross, E. G., Montez-Rath, M. E., Chang, T. I.
2021: 1–8
- **US National Trends in Vascular Surgical Practice During the COVID-19 Pandemic.** *JAMA surgery*
Ho, V. T., Eberhard, A. V., Asch, S. M., Leeper, N. J., Fukaya, E., Arya, S., Ross, E. G.
2021
- **Update on workforce diversity in vascular surgery.** *Journal of vascular surgery*
Dorsey, C., Ross, E., Appah-Sampong, A., Vela, M., Saunders, M.
2020
- **Update on Workforce Diversity in Vascular Surgery: What Has Changed in 20 Years?**
Dorsey, C. A., Ross, E., Saunders, M.
MOSBY-ELSEVIER.2020: E25
- **Toward Automated Detection of Peripheral Artery Disease Using Electronic Health Records**
Vy Thuy Ho, Leeper, N., Shah, N., Ross, E.

MOSBY-ELSEVIER.2020: E41

- **Identifying dietary and nutritional risk factors for symptomatic peripheral arterial disease using the UK biobank cohort study**
Kaufman, A., Fukaya, E., Leeper, N., Ross, E.
SAGE PUBLICATIONS LTD.2020: NP5
- **Evaluation of regional variations in length of stay after elective, uncomplicated carotid endarterectomy in North America.** *Journal of vascular surgery*
Ross, E. G., Mell, M. W.
2019
- **A Comprehensive Evaluation of Lifestyle and Social Factors Related to Peripheral Artery Disease Events in a Large Longitudinal Study**
Ross, E., Leeper, N., Ingelsson, E.
MOSBY-ELSEVIER.2019: E54–E55
- **Diagnosis and management of external iliac endofibrosis: A case report** *JOURNAL OF VASCULAR NURSING*
Lindo, F. A., Lee, J. T., Morta, J., Ross, E., Shub, Y., Wilson, C.
2019; 37 (2): 86–90
- **Predicting Future Cardiovascular Events in Patients With Peripheral Artery Disease Using Electronic Health Record Data.** *Circulation. Cardiovascular quality and outcomes*
Ross, E. G., Jung, K., Dudley, J. T., Li, L., Leeper, N. J., Shah, N. H.
2019; 12 (3): e004741
- **Evaluation of Cell Therapy on Exercise Performance and Limb Perfusion in Peripheral Artery Disease: The CCTRN Patients with Intermittent Claudication Injected with ALDH Bright Cells (PACE) Trial.** *Circulation*
Perin, E. C., Murphy, M. P., March, K. L., Bolli, R., Loughran, J., Yang, P. C., Leeper, N. J., Dalman, R. L., Alexander, J. Q., Henry, T. D., Traverse, J. H., Pepine, C. J., Anderson, et al
2017
- **Enhanced Quality Measurement Event Detection: An Application to Physician Reporting.** *EGEMS (Washington, DC)*
Tamang, S. R., Hernandez-Boussard, T. n., Ross, E. G., Gaskin, G. n., Patel, M. I., Shah, N. H.
2017; 5 (1): 5
- **The use of machine learning for the identification of peripheral artery disease and future mortality risk.** *Journal of vascular surgery*
Ross, E. G., Shah, N. H., Dalman, R. L., Nead, K. T., Cooke, J. P., Leeper, N. J.
2016; 64 (5): 1515-1522 e3
- **The Promise and Challenge of Induced Pluripotent Stem Cells for Cardiovascular Applications.** *JACC. Basic to translational science*
Youssef, A. A., Ross, E. G., Bolli, R., Pepine, C. J., Leeper, N. J., Yang, P. C.
2016; 1 (6): 510-523
- **National Comparison of Hybrid and Open Repair for Aortoiliac-Femoral Occlusive Disease**
Mell, M., Ross, E., Zavatta, M.
MOSBY-ELSEVIER.2016: 551
- **Use of Predictive Analytics for the Identification of Latent Vascular Disease and Future Adverse Cardiac Events**
Ross, E. G., Shah, N., Dalman, R. L., Nead, K., Leeper, N. J.
MOSBY-ELSEVIER.2016: 28S–29S
- **Use of Machine Learning to Accurately Predict Adverse Events in Patients with Peripheral Artery Disease Using Electronic Health Record Data**
Ross, E. G., Shah, N., Leeper, N.
SAGE PUBLICATIONS LTD.2016: 290
- **Statin Intensity or Achieved LDL? Practice-based Evidence for the Evaluation of New Cholesterol Treatment Guidelines** *PLOS ONE*
Ross, E. G., Shah, N., Leeper, N.
2016; 11 (5)
- **Learning statistical models of phenotypes using noisy labeled training data.** *Journal of the American Medical Informatics Association*
Agarwal, V., Podchyska, T., Banda, J. M., Goel, V., Leung, T. I., Minty, E. P., Sweeney, T. E., Gyang, E., Shah, N. H.
2016: -?

- **Factors impacting follow-up care after placement of temporary inferior vena cava filters** *27th Annual Meeting of the Western-Vascular-Society*
Gyang, E., Zayed, M., Harris, E. J., Lee, J. T., Dalman, R. L., Mell, M. W.
MOSBY-ELSEVIER.2013: 440–45
- **Effect of chronic red cell transfusion therapy on vasculopathies and silent infarcts in patients with sickle cell disease** *AMERICAN JOURNAL OF HEMATOLOGY*
Gyang, E., Yeom, K., Hoppe, C., Partap, S., Jeng, M.
2011; 86 (1): 104-106