

Curriculum Vitae

Contact Details:

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Present Position:

Research Fellow, Department of Experimental Cardiovascular Pathology, CVPath Institute

Education:

2002.4-2009.3 MD, Wakayama Medical University, Wakayama, Japan

2023.1 PhD, Osaka University, Osaka, Japan

Clinical Training:

2009.4-2010.3 Residency, Kansai Rosai Hospital

2011.4-2013.3 Clinical Fellow, Kansai Rosai Hospital Cardiovascular Center

2014.4-2015.3 Medical staff, Kansai Rosai Hospital Cardiovascular Center

2016.4-2019.3 Medical staff, Department of Cardiovascular Medicine, Osaka University Hospital

2020.4-2023.3 Assistant Professor, Department of Cardiovascular Medicine, Osaka University Graduate School of Medicine

2023.4- Research Fellow, Department of Experimental Cardiovascular Pathology, CVPath Institute

Major Research Interests:

Cardiovascular intervention, Coronary allograft vasculopathy, Critical limb ischemia, Interleukin-31 vasculopathy

Personal Statements:

I am board-certified in cardiology by the Japanese Circulation Society and in cardiovascular intervention by the Japanese Association of Cardiovascular Intervention and Therapeutics, holding both an MD and a PhD. My clinical research, which formed the basis of my PhD, focused on cardiac allograft vasculopathy following heart transplantation. My dedication to cardiovascular medicine earned me the Young Investigator Award at the Japanese College of Cardiology Conference in 2021 and several research grants in Japan.

In April 2023, I commenced work at the CVPath Institute in the United States, a center renowned for its cardiovascular pathology research, to delve deeper into the mechanisms of vasculopathy post-heart transplantation. Working under the mentorship of Dr. Alope Finn in CVPath Institute Inc., I have garnered promising preliminary data that

lays the groundwork for ongoing research. The scientific insights and methodological skills I have honed will significantly bolster this project, paving the way for new therapeutic and diagnostic strategies.

Awards:

- Young Investigator Award of the 69th The Japanese College of Cardiology Conference, 2021
- Young Investigator Award of the 123th The Japanese Circulation Society Kinki Regional Conference, 2017

Research Funding:

- Mochida Memorial Foundation Grant. 2023.
- SENSIN Medical Research Foundation Grant. 2022.
- The 47th Japan Heart Foundation Research Grant. 2022.
- The 36th Osaka Heart Club Research Grant. 2022.
- Grant-in-Aid for Young Scientists (B), Japan Society for the Promotion of Science. 2017-2019. (grant number 17K16005)

Publications:

Articles (First author or corresponding author*)

- **Shiraki T**, Ichibori Y, Ohtani T, et al. Pathophysiological evaluations of initial plaque development after heart transplantation via serial multimodality imaging and cytokine assessments. J Heart Lung Transplant. 2022;41:877-885.
- Kiyose Y, **Shiraki T***, Mizote I, et al. Dynamic Nature of Nodular Calcification in Cardiac Allograft Vasculopathy. 2021;14:1378-1380.
- **Shiraki T**, Takahara M, Iida O, et al. Baseline and Updated Information on Nutritional Status in Patients with Chronic Limb Threatening Ischaemia Undergoing Revascularisation. Eur J Vasc Endovasc Surg. 2020 Dec 21:S1078-5884(20)31057-1.
- **Shiraki T***, Iida O, Okamoto S, et al. Long-term outcomes after endovascular therapy for anti-centromere antibody patients with critical limb-threatening ischemia. J Vasc Interv Radiol. 2020;31:1993-1997.
- **Shiraki T***, Iida O, Inoue K, et al. Very Late Histopathological Evaluation of Neointimal Characteristics after Bare-Metal Stents Implantation in the Superficial Femoral Artery. J Vasc Interv Radiol. 2019;30:616-7.
- **Shiraki T***, Awata M, Okayama K, et al. A Ruptured Fibrous Cap of Vulnerable Plaque Visualised by Angioscopy. Asaiintervention, 2019;5:52.
- **Shiraki T***, Iida O, Takahara M, et al. Comparison of Clinical Outcome After Surgical and Endovascular Revascularization in Hemodialysis Patients with Critical Limb Ischemia. J Atheroscler Thromb. 2017;24:621-29.
- **Shiraki T***, Iida O, Takahara M, et al. The Geriatric Nutritional Risk Index is Independently Associated with Prognosis in Patients with Critical Limb Ischemia Following Endovascular Therapy. Eur J Vasc Endovasc Surg. 2016;52:218-24.
- **Shiraki T***, Iida O, Suemitsu K, et al. Retrograde Approach Using Surgical Cut-down Technique for Limb Salvage in a Case of Critical Limb Ischemia with Severely Calcified Tibial Occlusive Disease. Vasc Endovascular Surg. 2016;50:295-8.

- **Shiraki T***, Iida O, Okamoto S, et al. Usefulness of Endovascular Therapy for Penile Gangrene Secondary to Calciphylaxis: A Case Report. *Ann Vasc Surg.* 2015;29:1451
- **Shiraki T***, Iida O, Takahara M, et al. Predictors of 2-Year Mortality and Risk Stratification after Surgical and Endovascular Revascularization for Hemodialysis Patients with Critical Limb Ischemia due to Infrainguinal Artery Disease. *J Endovasc Ther.* 2015;22:719-24.
- **Shiraki T***, Iida O, Takahara M, et al. Predictors of delayed wound healing after endovascular therapy of isolated infrapopliteal lesions underlying critical limb ischemia in patients with high prevalence of diabetes mellitus and hemodialysis. *Eur J Vasc Endovasc Surg* 2015;49:565-73.
- **Shiraki T***, Iida O, Takahara M, et al. Predictive scoring model of mortality after surgical or endovascular revascularization in patients with critical limb ischemia. *J Vasc Surg.* 2014;60:383-9.

Articles (Co-author)

- Suemitsu K, **Shiraki T**, Iida O, Oka K, Ota N, Izumi M. Ultrasound-Assessed Lesion Morphology and Drug-Coated Balloon Treatment for de novo Dysfunctional Arteriovenous Fistula in Hemodialysis Patients. *J Endovasc Ther.* 2023 in press.
- Ishihara T, Mizote I, Nakamura D, Okamoto N, **Shiraki T**, Itaya N, Tsujimura T, Takahara M, Nakayoshi T, Iida O, Hata Y, Nishino M, Ueno T, Nakatani D, Hikoso S, Mano T, Sakata Y. Comparison of 1-month and 12-month vessel responses between the polymer-free biilimus A9-coated stent and the durable polymer everolimus-eluting stent. *Circ J.* 2022;86:1397-1408.
- Nakamura D, Dohi T, Ishihara T, Kikuchi Am Mori N, Yokoi K, **Shiraki T**, Mizote I, Mano T, Higuchi Y, Yamada T, Nishino M, Sakaya Y. Predictors and outcomes of neoatherosclerosis in patients with in-stent restenosis. *Eurointervention.* 2021;17:489-496.
- Suemitsu K, **Shiraki T**, Miyamoto M, Sasagawa N, Nakamura T, Izumi M. Delamination of Acuseal early cannulation arteriovenous graft months after implantation. *J Vasc Access.* 2021;22:840-844.
- Tomoi Y, Soga Y, Okazaki J, Iida O, **Shiraki T**, Hiramori S, Ando K. Drug-coated stent implantation vs. bypass surgery for in-stent occlusion after femoropopliteal stenting. *Heart Vessels.* 2021;36:646-653.
- Yokoi K, Nakamura D, Mizote I, **Shiraki T**, Ohtani T, Hikoso S, Sakata Y. Comparison of intravascular ultrasound and optical coherence tomography images of calcified lesions during rotational atherectomy. *JACC Cardiovasc Interv.* 2021;14:474-475.
- Yokoi K, Mizote I, **Shiraki T**, Ide S, Mukai T, Nakamura D, Oeun B, Ohtani T, Hikoso S, Ikari Y, Sakata Y. Differences in routes of guiding catheters for left coronary artery according to access sites assessed by the combined angiography-computed tomography system. *Cardiovasc Interv Ther.* 2021;36:298-306.
- Usunomiya M, Takahara M, Fujihara M, **Shiraki T**, Kozuki A, Fukunaga M, Tan M, Yoshioka R, Tomoi Y, Mori S, Iwasaki Y, Sasaki S, Nakamura M. Effect of target lesion revascularization on restenosis kesions of the superficial femoral artery without recurred symptoms after endovascular therapy. *J Atheroscler Thromb.* 2021;28:643-655.
- Fukunaga M, Fujii K, Takahara M, Fujihara M, Utsunomiya M, Sasaki S, Tsubakimoto Y, **Shiraki T**, Inoue T, Aihara H, Iwasaki Y, Azuma K, Nakata T, Iida O, Yokoi H, Yokoi Y, Kasawaki D. Assessment of Microvasculature after Intervention as a Predictor of Wound Healing in Patients with Tissue Loss. *JACC Cardiovasc Interv.*

2020;13:976-985.

- Yokoi K, Otsuka F, Mizote I, **Shiraki T**, Tsukamoto Y, Nakamura D, Ohtani T, Hikoso S, Ikeda Y, Hatakeyama K, Sakata Y. In vivo intracoronary imaging assessment of cardiac allograft vasculopathy with histopathological confirmation. *JACC Cardiovasc Interv.* 2020;13:2305-2307.
- Usunomiya M, Takahara M, Iida O, Soga Y, Hata Y, **Shiraki T**, Nagae A, Kato T, Kobayashi N, Suematsu N, Tasaki J, Horie K, Uchida D, Kodama A, Azuma N, Nakamura M. Limb-Based Patency after Surgical vs Endovascular Revascularization in Patients with Chronic Limb-Threatening Ischemia. *J Endovasc Ther.* 2020;27:584-594.
- Chimura M, Ohtani T, Yokoi K, **Shiraki T**, Katsimichas T, Kitao T, Awata M, Mizote I, Hikoso S, Sumitsuji S, Sakata Y. Diagnostic Performance of Coronary Angiography Utilizing Intraprocedural 320-row Computed Tomography with Minimal Contrast Medium. *Heart Vessels.* 2020;35:1341-1348.
- Suemitsu K, **Shiraki T**, Miyamoto M, Sasagawa N, Nakamura T, Izumi M. Delamination of Acuseal early cannulation arteriovenous graft months after implantation. *J Vasc Access.* 2020 doi: 10.1177/1129729820933396.
- Nakamura D, Dohi T, Ishihara T, Kikuchi A, Mori N, Yokoi K, **Shiraki T**, Mizote I, Mano T, Higuchi Y, Yamada T, Nishino M, Sakata Y. Predictors and outcomes of neoatherosclerosis in patients with in-stent restenosis. *Eurointervention.* 2020 doi: 10.4244/EIJ-D-20-00539
- Yokoi K, Mizote I, **Shiraki T**, Ide S, Ohtani T, Hikoso S, Ikari Y, Sakata Y. Mechanism of good back-up support with a deep-seated guiding catheter during percutaneous coronary intervention. *Circ J.* 2019;83:1763
- Yokoi K, **Shiraki T**, Mizote I, Sakata Y. Difference of guiding catheter positions between left and right radial approach. *JACC Cardiovasc Interv.* 2018;11:e163-165.
- Kurata N, Iida O, **Shiraki T**, Fujita M, Masuda M, Okamoto S, Ishihara T, Nanto K, Kanda T, Sunaga A, Tsujimura T, Takahara M, Mano T. Impact of Stent-to-Vessel Diameter Ratio on Restenosis in the Superficial Femoral Artery after Endovascular Therapy. *Circ J.* 2018;82:1412-7.
- Suemitsu K, **Shiraki T**, Iida O, Kobayashi H, Matsuoka Y, Izumi M, Nakanishi T. Impact of Lesion Morphology on Durability After Angioplasty of Failed Arteriovenous Fistulas in Hemodialysis Patients. *J Endovasc Ther.* 2018;25:649-654.
- Tsuji Y, **Shiraki T**, Iida O, Tsuji Y, Kitano I, Sugimoto K, Okita Y. Impact of infrapopliteal endovascular treatment on the outcome of subsequent ipsilateral distal bypass for critical limb ischemia. *J Cardiovasc Surg (Torino).* 2017;58:828-34.
- Ishihara T, Iida O, Okamoto S, Fujita M, Nanto K, **Shiraki T**, Kanda T, Tsujimura T, Okuno S, Yanaka K, Uematsu M. Potential mechanisms of in-stent-occlusion in the femoropopliteal artery: an angioscopic assessment. *Cardiovasc Interv Ther.* 2017;32:313-7.
- Masuda M, Fujita M, Iida O, Okamoto S, Ishihara T, Nanto K, Kanda T, **Shiraki T**, Sunaga A, Matsuda Y, Uematsu M. Influence of underlying substrate on atrial tachyarrhythmias after pulmonary vein isolation. *Heart Rhythm.* 2016;13:870-8.
- Hioki H, Miyashita Y, **Shiraki T**, Iida O, Uematsu M, Miura T, Ebisawa S, Ikeda U. Impact of deteriorated calcium-phosphate homeostasis on amputation-free survival after endovascular revascularization in patients with critical limb ischemia on hemodialysis. *Vasc Med.* 2016;21:137-43.
- Tomoi Y, Soga Y, Iida O, **Shiraki T**, Kobayashi Y, Hiramori S, Ando K. Impact of Drug-Eluting Stent Implantation for

Femoropopliteal In-Stent Occlusion. J Endovasc Ther. 2016;23:461-7.

- Suemitsu K, Iida O, **Shiraki T**, Suemitsu S, Murakami M, Miyamoto M, Izumi M, Nakanishi T. Predicting loss of patency after forearm loop arteriovenous graft. J Vasc Surg. 2016;64:395-401.
- Masuda M, Fujita M, Iida O, Okamoto S, Ishihara T, Nanto K, Kanda T, **Shiraki T**, Sunaga A, Matsuda Y, Uematsu M. Steerable versus non-steerable sheaths during pulmonary vein isolation: impact of left atrial enlargement on the catheter-tissue contact force. J Interc Card Electrophysiol. 2016;47:99-107.
- Okuno S, Iida O, **Shiraki T**, Fujita M, Masuda M, Okamoto S, Ishihara T, Nanto K, Kanda T, Takahara M, Uematsu M. Impact of Calcification on Clinical Outcomes After Endovascular Therapy for Superficial Femoral Artery Disease: Assessment Using the Peripheral Artery Calcification Scoring System. J Endovasc Ther. 2016;23:731-7.
- Yanaka K, Ishihara T, Iida O, Okamoto S, Fujita M, Masuda M, Nanto K, **Shiraki T**, Kanda T, Uematsu M. Yellow neointima following stent implantation in the superficial femoral artery on angioscopy. Circ J. 2016;80:2249-51.
- Ishihara T, Iida O, Awata M, Nanto K, **Shiraki T**, Okamoto S, Iida T, Fujita M, Watanabe T, Nanto S, Uematsu M. Extensive arterial repair one year after paclitaxel-coated nitinol drug-eluting stent vs. bare-metal stent implantation in superficial femoral artery. Cardiovasc Interv Ther. 2015;30:51-6.
- Kanda T, Masuda M, Sunaga A, Fujita M, Iida O, Okamoto S, Ishihara T, Nanto K, **Shiraki T**, Sera F, Uematsu M. Fabry cardiomyopathy presenting with a high defibrillation threshold: A short case report. J Arrhythm. 2015;31:170-1.
- Kanda T, Fujita M, Iida O, Masuda M, Okamoto S, Ishihara T, Nanto K, **Shiraki T**, Takahara M, Sakata Y, Uematsu M. Novel echocardiographic approach to the accurate measurement of pulmonary vascular resistance based on a theoretical formula in patients with left heart failure –pilot study. Circ J. 2015;79:2408-13.
- Tsuchiya T, Iida O, **Shiraki T**, Soga Y, Hirano K, Suzuki K, Yamaoka T, Miyashita Y, Kitamura M, Kajinami K. Clinical characteristics of patients with Rutherford category IV, compared with V and VI. SAGE Open Med. 2015 Jul 22;3:2050312115597087.
- Ishihara T, Iida O, Awata M, **Shiraki T**, Nanto S, Uematsu M. Angioscopically apparent large thrombus and uncovered stent struts 6 months after late stent thrombosis of a paclitaxel-coated nitinol drug-eluting stent implanted in the superficial femoral artery. Cardiovasc Interv Ther. 2014;29:82-5.

International conference:

- **Shiraki T**, Nakamura D, Ohtani T, et al. The relationship between donor-transmitted lipid burden and plaque progression in patients after heart transplantation. ACC 2022.
- **Shiraki T**, Ohtani T, Kioka H, et al. Serial evaluation of cardiac allograft vasculopathy after heart transplantation by dual-modality intravascular ultrasound and optical coherence tomography. ESC 2020
- **Shiraki T**, Iida O, et al. Geriatric Nutritional Risk Index Predicts 2-Year Mortality in Patients with Critical Limb Ischemia Following Endovascular Therapy. ACC 2015.
- **Shiraki T**, Iida O, et al. Clinical Outcomes after Surgical Versus Endovascular Revascularization in Hemodialysis Patients with Critical Limb Ischemia. ACC 2015.
- **Shiraki T**, Iida O, et al. Predictors of 2-Year Mortality and Risk Stratification after Surgical and Endovascular Revascularization for Hemodialysis Patients with Critical Limb Ischemia due to Infrainguinal Artery Disease. ESC 2015.

- **Shiraki T**, Iida O, et al. A Predictive Model of 2-Year Mortality after Revascularization in Patients with Critical Limb Ischemia. ACC 2014.
- **Shiraki T**, Iida O, et al. Functional Independence Measure Score Predicts Amputation-free Survival in Patients with Critical Limb Ischemia Following Endovascular Therapy. ESC 2014.
- **Shiraki T**, Iida O, et al. Predictors of 2-year Mortality and Risk Stratification after Endovascular Therapy or Bypass Surgery for Patients with Critical Limb Ischemia. ACC 2013.
- **Shiraki T**, Iida O, et al. Predictors of 2-year mortality after endovascular therapy for patients with critical limb ischemia. ACC 2012.
- **Shiraki T**, Iida O, et al. Predictors of 2-year mortality and risk stratification after endovascular therapy for patients with critical limb ischemia. AHA 2012.