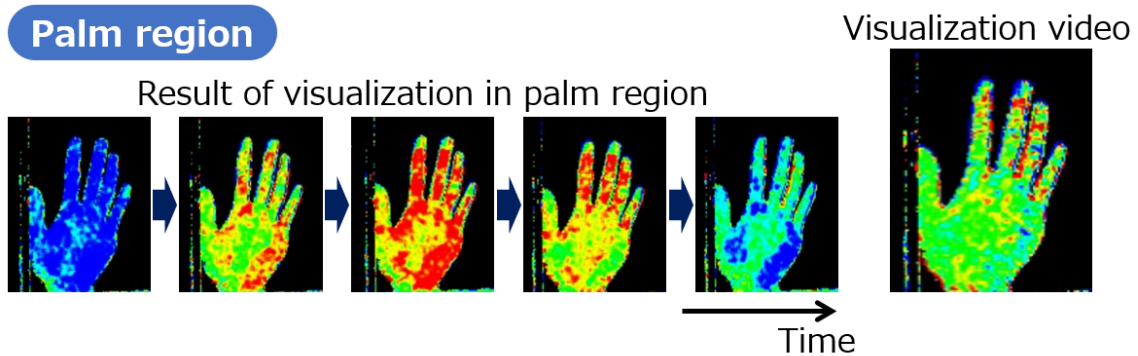


Summary of VBL Research Project

Theme	Research on Measurement of Hemodynamics and Autonomic Nervous Function with a Portable Camera
Researcher	Norimichi Tsumura (Graduate School of Engineering)

In this research, we will mobilize the technology accumulated by the applicants we developed until now, and newly develop a measurement technique of hemodynamics and the state of the autonomic nervous system that controls the hemodynamics by synchronizing with the diagnosis of Kampo medicine. We will finally develop a system that diagnoses and evaluates using images taken by patients themselves with a portable camera. Dr. Tsumura, who is a research representative, will share the development of the performance of the camera of the hemodynamic measurement system and the development of quantification and visualization methods of hemodynamic and autonomic nervous system status. Dr. MD Ogawa in Kanazawa University Hospital uses the concept of hopefulness diagnosis to accumulate medical needs and needs of patients, and makes specification recommendations for effective quantification and visualization and medical interpretation of measurement results. With these research and development, the disorder of the blood circulation caused by the disturbance of the autonomic nervous system is the cause of many diseases including myocardial infarction, so early detection of such non-disease state is appropriate. Intervention will realize the medical system in the super aging society.

Palm region

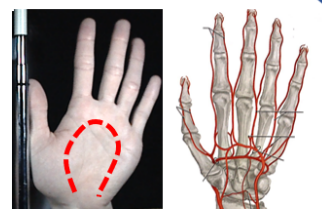


Characteristics of pulse wave in palm

Pulse wave transits around dotted line.



**It is reasonable result
from the blood vessel structure.**



Vessel structure