## **Next-Generation Supermicrosurgery Consortium**

## 21st Virtual Conference

# The Future of Surgery

TUE, Dec 17, 2024, 18:00-20:00 (JST)



#### 1. Opening speech

### The latest insights on super microsurgery 21

- Aesthetic Reconstruction and Pain Surgery of the Hand -

#### Isao Koshima, MD, PhD

Professor and Center Chief,
Department of Plastic and Reconstructive Surgery,
International Center for Lymphedema,
Hiroshima University Hospital

#### 2. Invited Lecture

# Neural Network-Based Reconstruction and the Use of Vascularized Nerves in Hand Surgery

### Satoshi Usami, M.D., Ph.D.

Tokyo Hand Surgery & Sports Medicine Research Institute
Department of Hand Surgery, Takatsuki Orthopedic Hospital,
Part-time Lecturer and Clinical Professor,
Department of Plastic and Reconstructive Surgery, Reconstructive Plastic
Surgery, Institute Science of Tokyo Hospital



#### 3. Q&A, Panel Discussion

Panelist: Prof. Koshima, Clinical Prof. Usami, Associate Prof. Ono, Dr. Sachin (India), Dr. Liu (China) We may also have additional special guests participating. Please look forward to it!

#### ■ Registration and Fees: https://cpk.jp/reg/2

Participation fees for organizations such as companies and public institutions are as follows: 15,000 yen per person, 28,000 yen for two people, and 40,000 yen for three people.

\*Special frequency ticket are also available. Please contact the secretariat.

\*Free for healthcare professionals, academia, and students (excluding adult students).

Seminar venue URL: https://cpk.jp/s/2160



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#### **Outline**

The hands play such a critical role that they are often referred to as the "second brain." Unlike other organs, they are governed by an extensive area of the brain, allowing for intricate movements and sensory perception. This enables the hands to receive and transmit a wealth of information. Additionally, the hands are equipped with a dense network of fine neural structures, which support their high functionality. However, when nerves are damaged, recovery is often limited, potentially impacting daily life.

In this lecture, we will introduce innovative treatment methods for cases where nerve recovery is challenging, such as "nerve transfer" and "nerve bypass" procedures. These techniques take advantage of neural plasticity—the ability of nerves to form new connections—and the potential for axons (the pathways that transmit information from nerve cells) to extend in multiple directions, aiming for a network-based sensory reconstruction. Furthermore, we frequently employ vascularized nerve grafting using microsurgical techniques to achieve favorable outcomes. This lecture will also discuss the methods for network-based reconstruction, the harvesting process for vascularized nerve grafts, and their potential applications.

President Isao Koshima (Professor of the department of Plastic and Reconstructive Surgery at Hiroshima University Hospital) of this research society will present the latest findings and global trends related to the invited lecture.

After the lecture, there will be a lively online panel discussion with the speakers.

We hope you will join us for this informative event!

### **Supprementary Information** [Career & Achievements]



#### Satoshi Usami, M.D., Ph.D.

Tokyo Hand Surgery & Sports Medicine Research Institute Department of Hand Surgery, Takatsuki Orthopedic Hospital, Part-time Lecturer and Clinical Professor,

Department of Plastic and Reconstructive Surgery, Reconstructive Plastic Surgery, Institute Science of Tokyo Hospital

- 2004: Graduated from the Faculty of Medicine, Tokyo Medical and Dental University
- 2004: Completed initial clinical training at Yokohama Rosai Hospital
   2006: Joined the Department of Plastic Surgery at Tokyo Medical and Dental University. After further training at affiliated hospitals, he studied abroad at the Department of Plastic Surgery, Hokkaido University
- April 2013: Appointed as an Assistant Professor in the Department of Plastic Surgery at Tokyo Medical and Dental
- 2015: Transferred to his current position at the Tokyo Hand Surgery & Sports Medicine Research Institute, Takatsuki
- October 2024: Tokyo Medical and Dental University changed its name to Institute Science of Tokyo. He is currently serving as a part-time lecturer and clinical professor in the Department of Plastic and Reconstructive Surgery, Reconstructive Plastic Surgery at Institute Science of Tokyo Hospital, while continuing to provide hand surgery treatment for trauma and degenerative diseases, as well as plastic surgery services at Takatsuki Orthopedic Hospital. He is particularly focused on innovative treatments for nerve injuries.

#### <Affiliations>

- Japan Society of Plastic and Reconstructive Surgery (Board-certified Specialist)
- The Japanese Orthopaedic Association (approved by the Japanese Orthopaedic Association)
   Japanese Society for Surgery of the Hand (Qualified Hand Surgeon certificated by the Japanese Society for Surgery of the Hand, Delegate)
- Japanese Society for Reconstructive Microsurgery (Councilor)

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