

# LiSS system, the Japan's first non-medical private sector for death investigation

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Kazuhiro Hanada, Chief <sup>4)</sup>

Miyuki Haga, Secretary <sup>5)</sup>

Ayumu Sugiyama, CEO <sup>5)</sup>

Ken-ichiro Hashizume, Embalmer, President <sup>3)</sup>

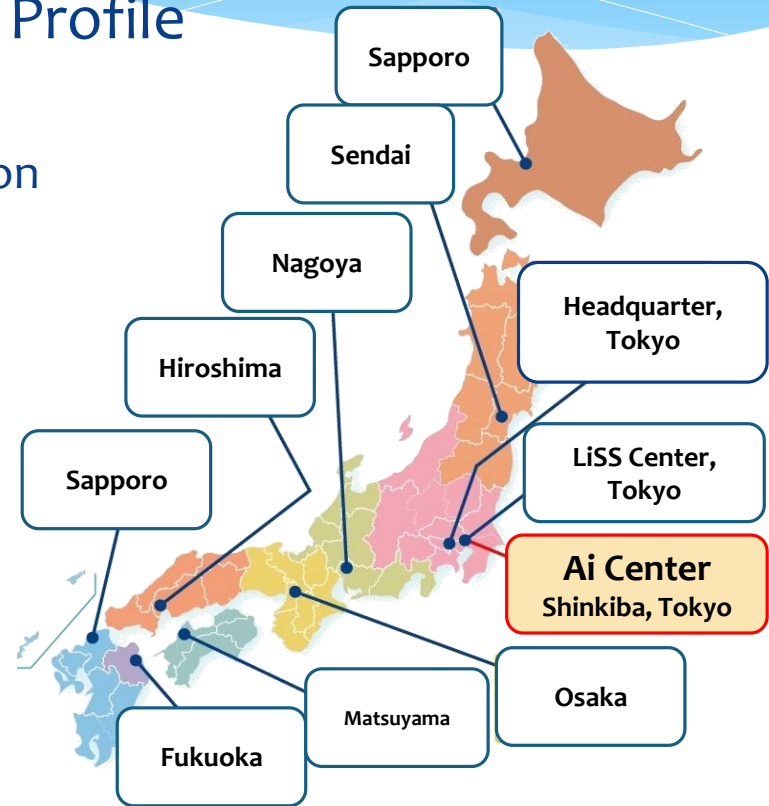
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# Introduction

## Company Profile

- \* Name: **NPO LiSS System**
  - \* NPO stands for non-profit organization
  - \* LiSS stands for **Life Support System**
  - \* Founded in Tokyo in 1993
- \* Locations
  - \* Headquater: Central Tokyo
  - \* LiSS Center: Shinkiba, Tokyo
  - \* **Ai Center Shinkiba: Shinkiba, Tokyo**
  - \* Branches: 8 branches
- \* Number of the employees
  - \* 75 employees
- \* Services
  - \* provides “End of life care” for the clients
- \* Number of the clients
  - \* 3,500



HQ and branches

# Introducing the presenter

## Prof. Morio Iino

Tottori University, Yonago, Japan

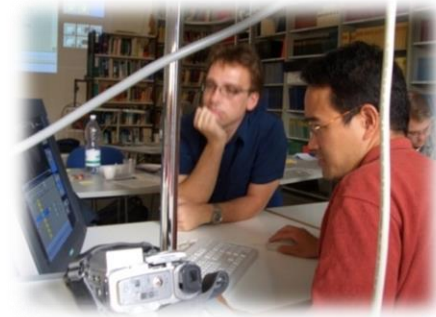
- \* Board Certified Forensic Pathologist
- \* founding member of the ISFRI
- \* Associate Editor of JOFRI
- \* Board member of the Japanese Society of Autopsy imaging (Ai)
- \* Councilor of the Japanese Society of Legal Medicine
- \* Consultant pathologist for the NPO LiSS System

## Experiences in postmortem imaging

- \* Attended 1<sup>st</sup> Virtopsy Basic Course in 2006
- \* Attended 1<sup>st</sup> Virtopsy Advanced Course in 2010
- \* Overseas fellow at VIFM, Australia in 2008-2009
  - \* Supervisor: Dr. Chris O'Donnell
- \* Installed CT scanner to Osaka University in 2010



VBC 2006



VBC 2006



VIFM, Australia in 2009

# Introduction of the LiSS System

## \* Background

- \* Family relationships in Japan have drastically changed over the past 20-30 years.
- \* Since the late 1980's, some people would not rest in a traditional family grave since their children would not be able to preserve it.
- \* As a solution, Mr. Nyokai Matsushima, a former Buddhist monk, made a form of shared grave called "Moyai Monument" in Tokyo in 1990.
- \* Next issue was who takes care of funerals besides their families.
- \* The answer is... yourself.
  - \* The funeral planned and done by the deceased is needed.



**Nyokai Matsushima, a founder of LiSS System**



**Moyai Monument, the shared grave**

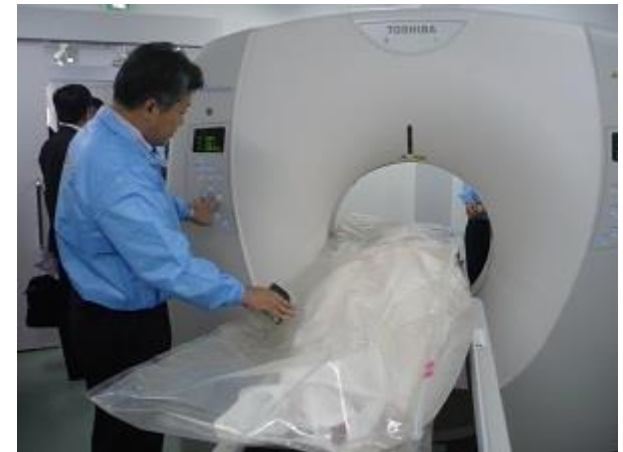


# Introduction

- \* The issues for funerals being done by the deceased
  - \* Legal issues
    - \* Solved by giving the deceased person “Supposed Human Rights”.
- \* The beginning of the LiSS System
  - \* End-of-life care
    - \* division of estate
    - \* funeral service
    - \* solving any legal issues after death
- \* Death is inevitable
  - \* Try to know “when” and “under what circumstances” the event has to take place
    - \* To ask cause of death of the deceased to the doctors was unacceptable in 1990’s since it seems to be doubting the medical treatment
  - \* The answer is “Autopsy imaging” , the technique of postmortem imaging

# Introduction

- \* Establishment of Ai Center
  - \* Installing CT scanner at the corner of LiSS Center to provide a service for death investigation in April, 2014
  - \* Opens 24/7
- \* Equipment
  - \* CT scanner: Aquillion 16 (Toshiba, Japan)
  - \* Workstation: Syngo via (Simens, Germany)
  - \* Cloud server: eSite HEALTHCARE
- \* Staff
  - \* One full-time organizer
  - \* One full-time radiographer
  - \* Other LiSS staffs for help
- \* Interpretation of the images (tele-radiology)
  - \* Referral radiologists and pathologists can interpret the images online



**Toshiba CT scanner at Ai Center**



# Medical Malpractice investigation

- \* In October, 2015, the government remodeled the act to enforce a medical malpractice checking system.
- \* When a patient unexpectedly dies during/after the medical treatment , the hospital has to report the case to the investigation center and investigate the cause/manner of death by themselves.
- \* In this system, they do not have to perform autopsy for death investigation.
  - \* The postmortem imaging is a useful method for investigation.
  - \* Ai Center of the LiSS System received attention from Tokyo Medical Association which helps solving issues of malpractice.

# Ai lecture series

- \* To start the postmortem imaging services, LiSS System had a lecture series to educate our staff and other interested parties.
- \* In September, 2015, they had a 2-day course for Ai education.
- \* One of the lecturers was Prof. Morio Iino, Tottori University.

## Time table for the course

Day 1	Day 2
Autopsy imaging and autopsy	What is Ai?
Summary of Medical malpractice checking system 1	Basic concept of post mortem scanning
Summary of Medical malpractice checking system 2	<u>Autopsy imaging in forensic medicine</u>
Infection prevention in transporting bodies	Medical safety management at the hospital
Legal issues of Autopsy imaging	How to treat the bodies 1
	How to treat the bodies 2



# Academic part of the LiSS System

- \* The LiSS System is not only a non profit organization.
- \* It has an academic part to absorb the latest information on death investigation.
- \* Mr. Matsushima makes every effort to understand the advanced way of death investigation.



**Mr. Matsushima in *Samue*, a traditional Japanese style**

# Tours overseas to gain knowledge

## \* Tour in Australia in March, 2016



**Visiting VIFM**



**A lecture at VIFM**



**Beautiful scenery in Melbourne**



**Visiting funeral service company**



**A crematorium**

# Tours overseas to gain knowledge

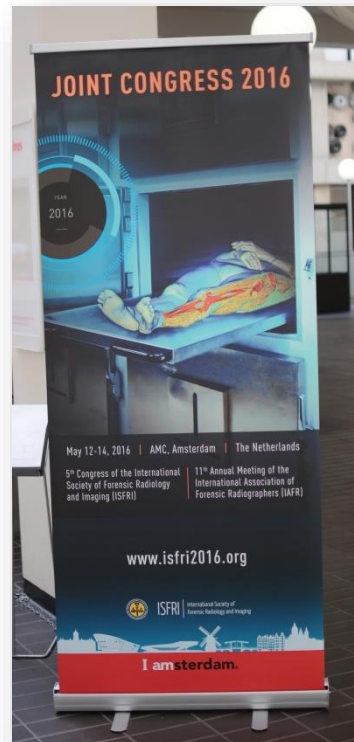
## \* Tour in Amsterdam for ISFRI in May, 2016



**Mr. Matsushima with Prof. Grabherr  
after attending the PMCTA workshop**



**Having Dutch beer**





# Lecture series in Japan

## Inviting forensic researchers to LiSS System

- \* Prof. Silke Grabherr
  - \* Talk on MPMCTA (June, 2016)
- \* Dr. Kurt Nolte
  - \* Free discussion on death investigation in the US (March, 2017)
- \* Dr. Valentinus Yudi
  - \* Talk on funeral service in Indonesia (November, 2016)



## Sponsored the congress dinner

forensic pathology and science symposium in  
Nagasaki (November, 2016)

Guest speakers: Prof. Dr. Hermann Vogel, Dr. Chris O'Donnell, Dr. Lars Ebert,  
Dr. Sookyoung Lee, Dr. Hideki Hyodoh



**Guest speakers at the  
congress in Nagasaki  
November, 2016**

# Installing the Virtangio

- \* Mr. Matsushima of the LiSS System would not stop seeking new successes in postmortem imaging.
- \* LiSS System decided to purchase the Virtangio for better understanding the cause of death of their clients.
- \* It was not easy to import the very first postmortem angiography device all the way from Europe.





# Delivering the Virtangio

- \* LiSS System does not have many cases since they are not a medical or forensic institute.
- \* Another new idea came to Mr. Matsushima.  
Delivering the Virtangio!
- \* They would deliver the Virtangio anywhere in Japan along with an embalmer and a radiographer .
  - \* We delivered the machine to Prof. Hasegawa's lab in Yokosuka



Ms. Imagawa, an embalmer has been trained how to insert the catheter.



delivery van for Virtangio

# Summary

- \* LiSS Sytem is an NPO which provides end-of-life care services.
- \* It provides postmortem CT scanning service.
- \* It is the first death investigation service done by non-medical private sector in Japan.
- \* It now provides MPMCTA service as well after the hard way of importing Virtangio device from Switzerland.
- \* Prof. Iino, a consultant forensic pathologist is a well trained pathologist who has much experience in postmortem imaging and he can give them a support in scanning and interpreting the images.
- \* LiSS System can work with Prof. Iino as a team in studying MPMCTA cases in Japan.
- \* We'd like to join the TWGPAM (Technical Working Group Post mortem Angiography Methods)





Thank you!





Thank you!