ISEM EAST CHAPTER 2014

(The 2nd Meeting, 18 June 2014, Tokyo)

Competency of Utility for Magnifying Glass
'Shall we try to suture the artificial vassals !'

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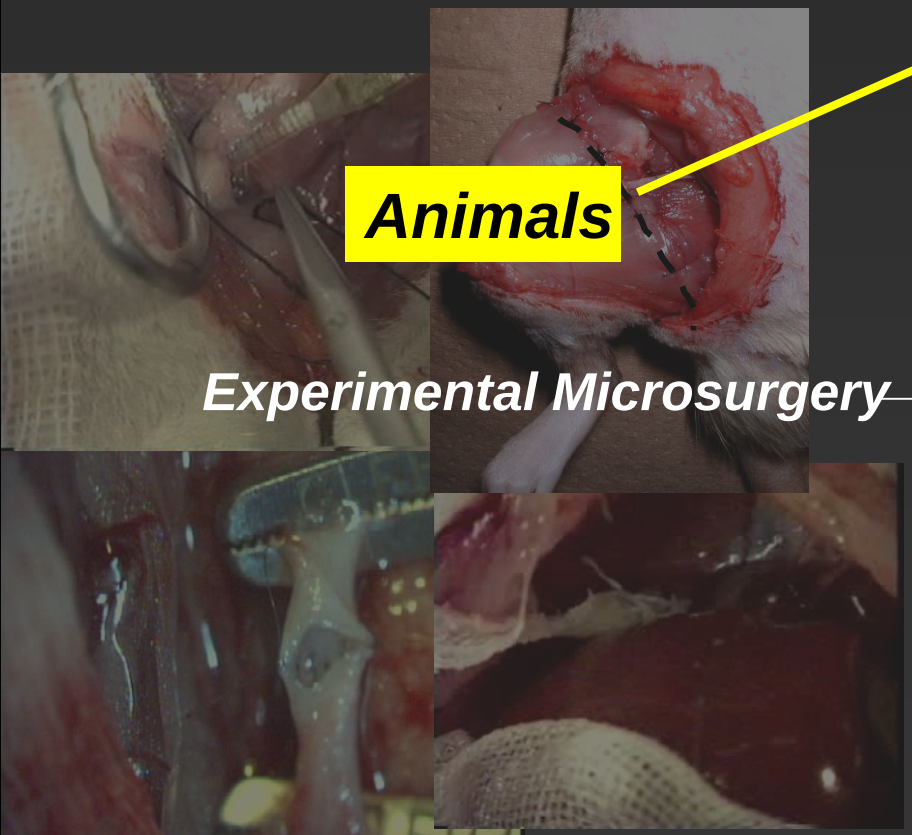
Introduction of International Society for Experimental Microsurgery (ISEM)

See you in Tianjin, China 2016

A Proposal Concept of 'Translational 'Microsurgery

Experimental Microsurgery* covered world-wide area as a powerful tool for *Translational Research



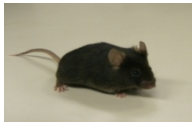
Animals → ***Human***

Experimental Microsurgery

- Transplantation
  - Immunology
  - Pharmacology
  - Ischemia/ Reperfusion
- Microsurgical Devises
- Tissue/Organ Engineering
- Minimum Invasive Surgery

(Kobayashi E 2009)

Can you justify the experiment using living animals ?



*(**Claude Bernard**; 1813-1878)*

A Proposal Concept of Two Way Approach

Human Trail

Veterinary Medicine

Classical Way

A Proposal Way

(Kobayashi E 2009)

Japanese Chapter of ISEM (The East Branch)

•***Monthly One Day Training***

We will use dry lab models in basic skills. Ten meeting will be opened while we help to progress the skills of competent participants.

•By more than 80% of attendance in every year, the young veterinary surgeons will receive ***the certificate for a year***.

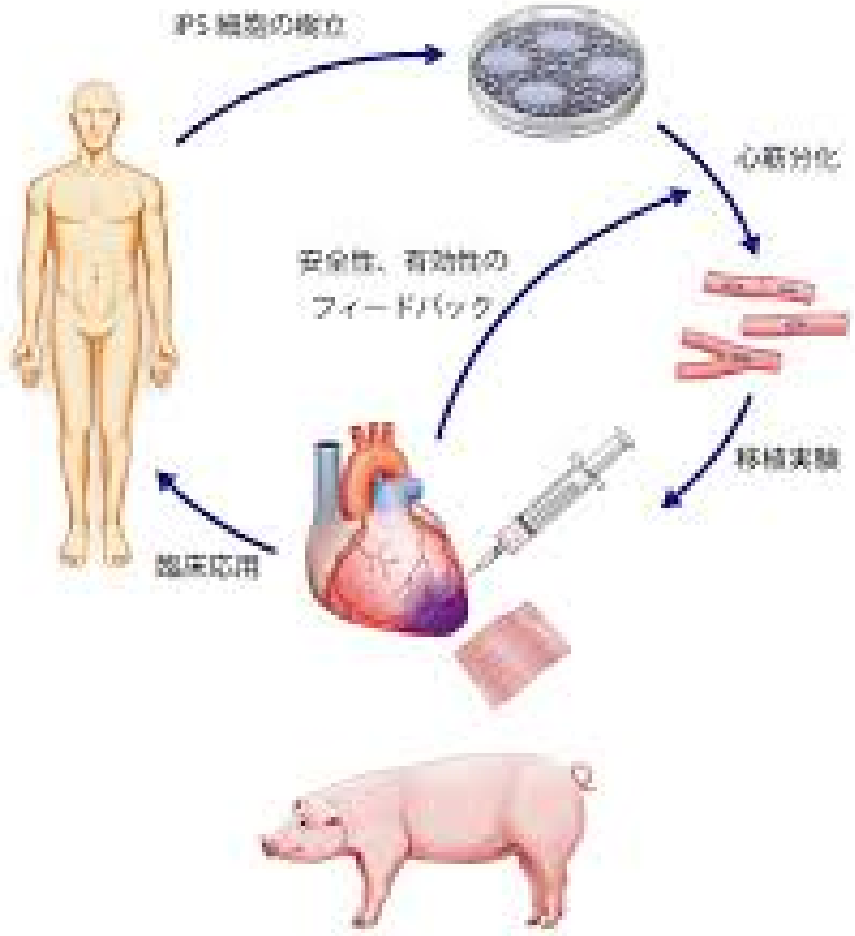
•Recommendation to be a ***member for ISEM***

We encourage that young veterinary surgeons will present their works in ISEM 2016 in China.

•This is ***volunteer work***. We would like to donate some money for ***Shelter Animals***.

(Ishii & Kobayashi 2014)

Introduction of the top translational researcher using human iPS cells for regenerative medicine



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Keio University School of Medicine

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Tokyo Women's Medical University

Yuuta Abe
Keio University School of Medicine

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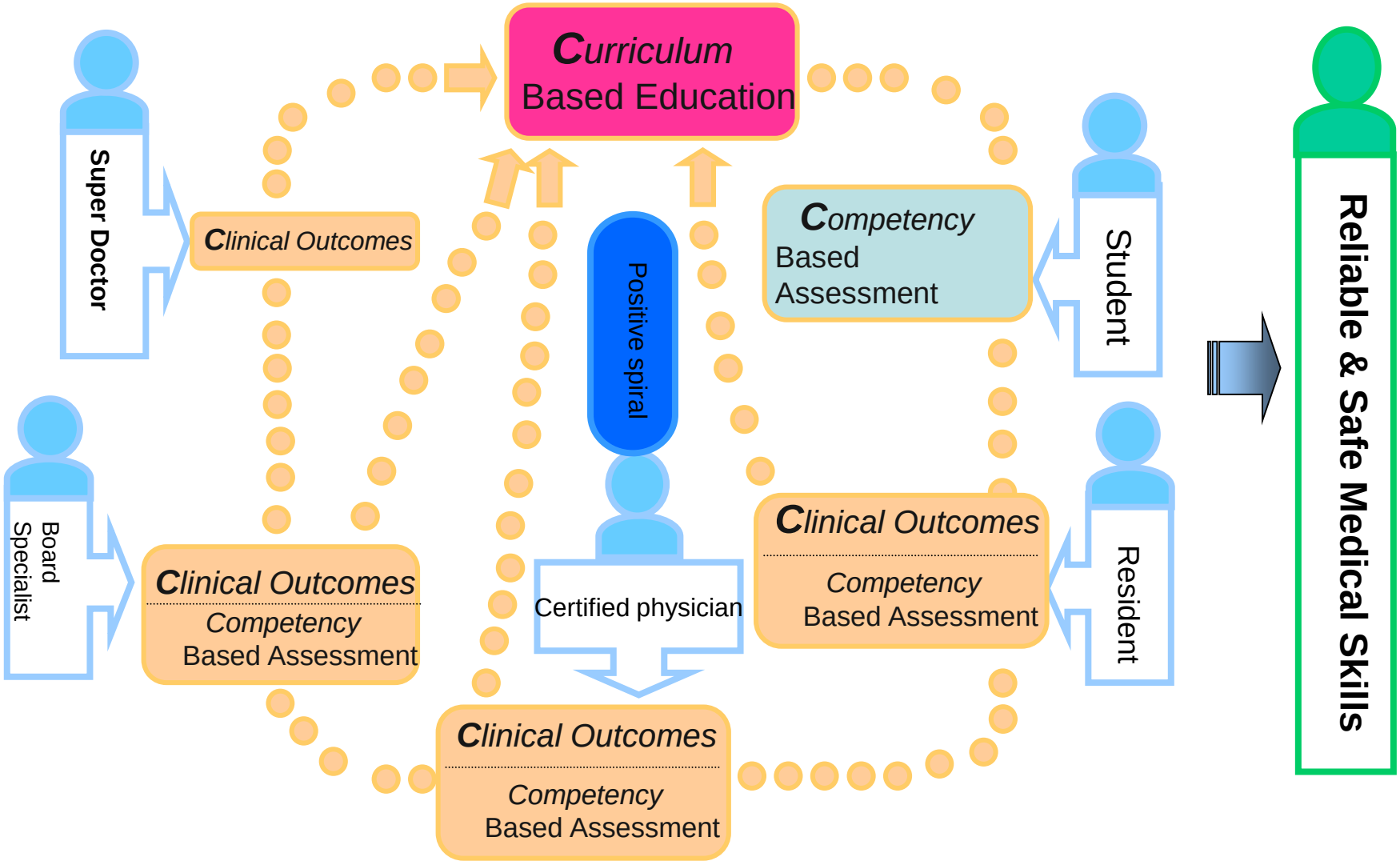
3 C Approach

教育を科学する

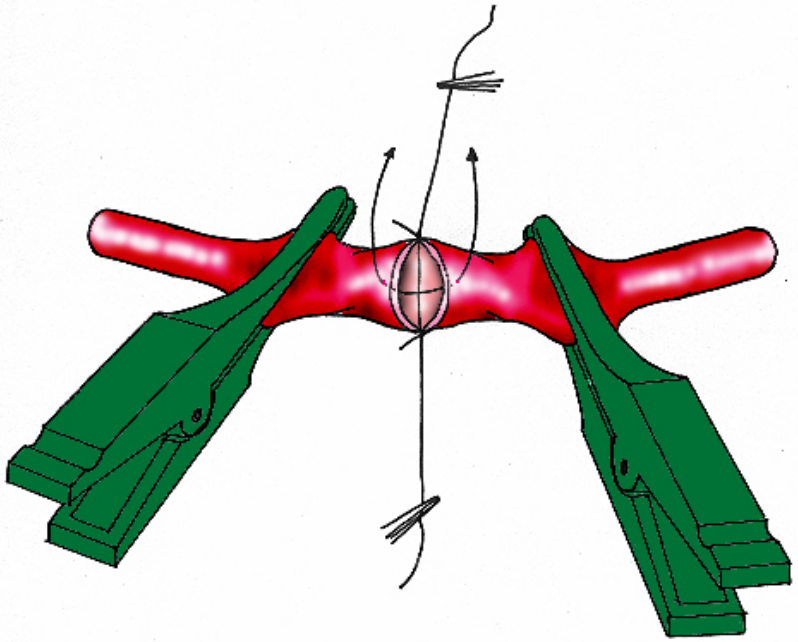
3 C Approach

- **Curriculum**:
  Teaching is driven by a written curriculum which is given to the students to guide their learning
- **Competency**:
  After the teaching, learners are evaluated to see if they have acquired the desired competency
- **Clinical outcomes**:
  Learners report their clinical experiences over the long term, to evaluate the value of the training in the clinical practice of medicine

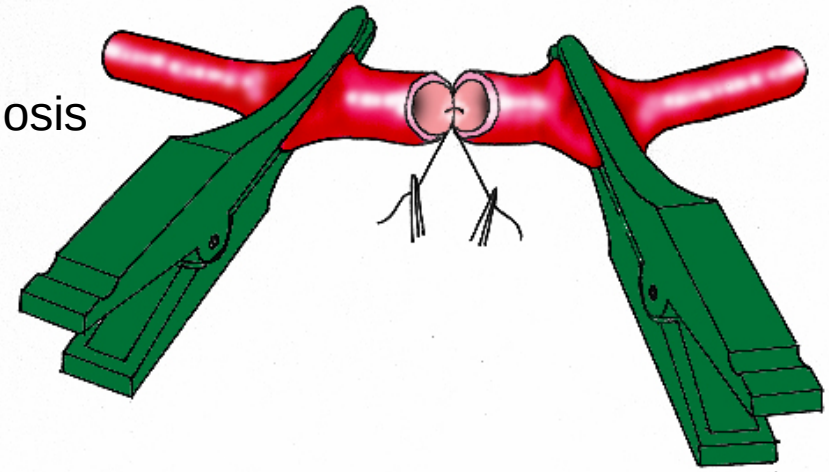
Proposal Educational System; 3 C

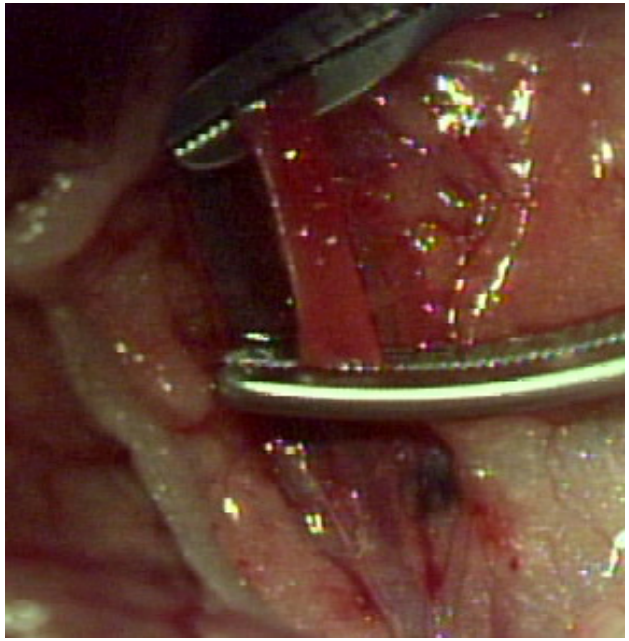


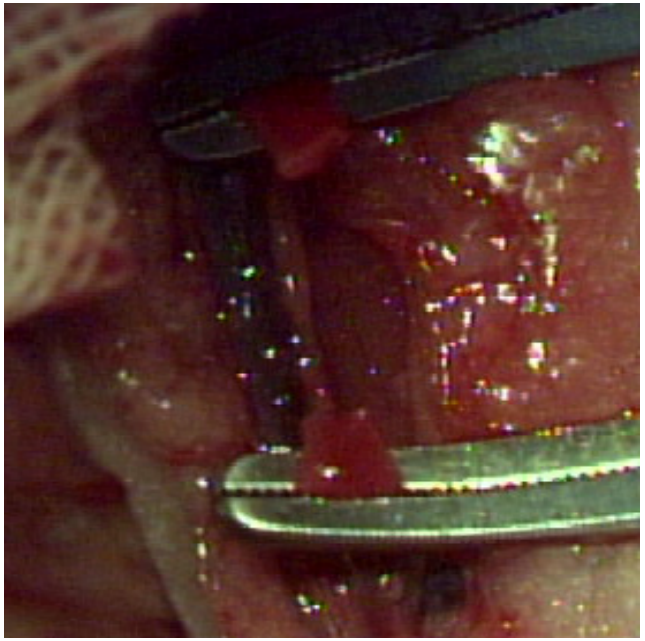
A : Twist type anastomosis

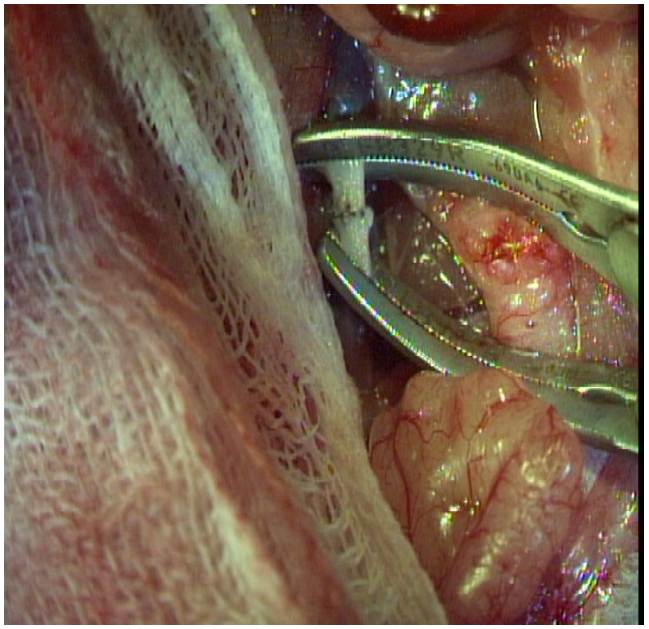


B : Non-twist type anastomosis

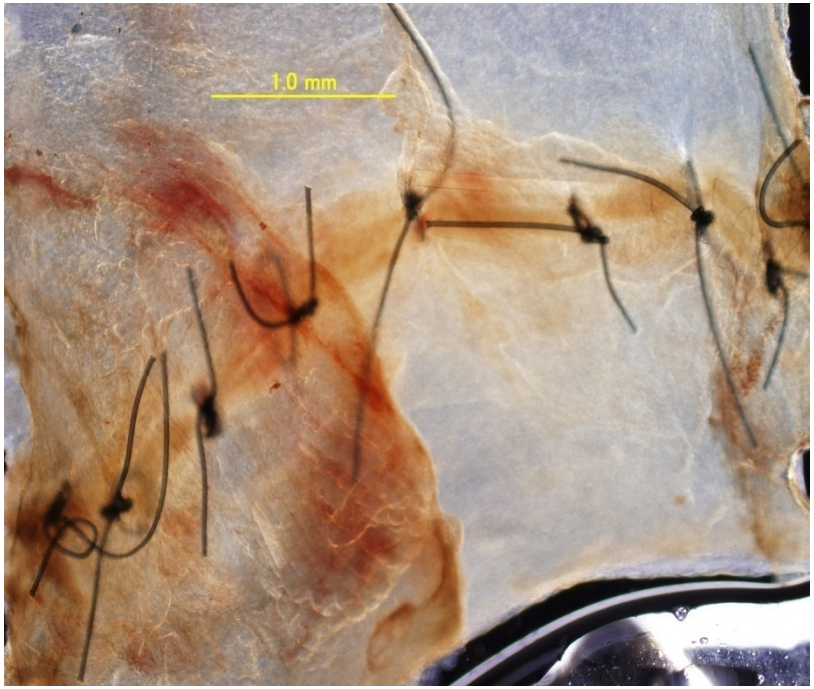




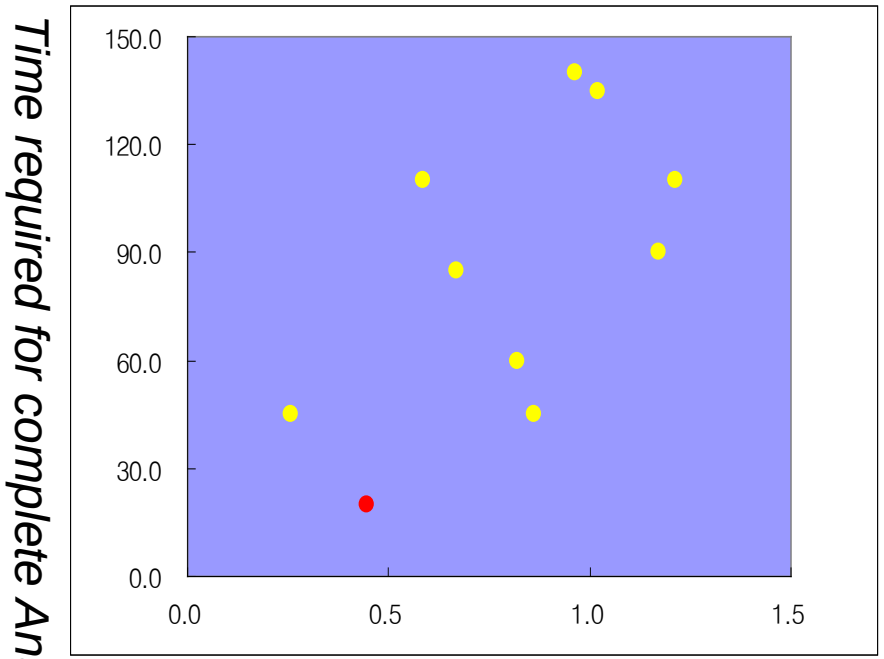




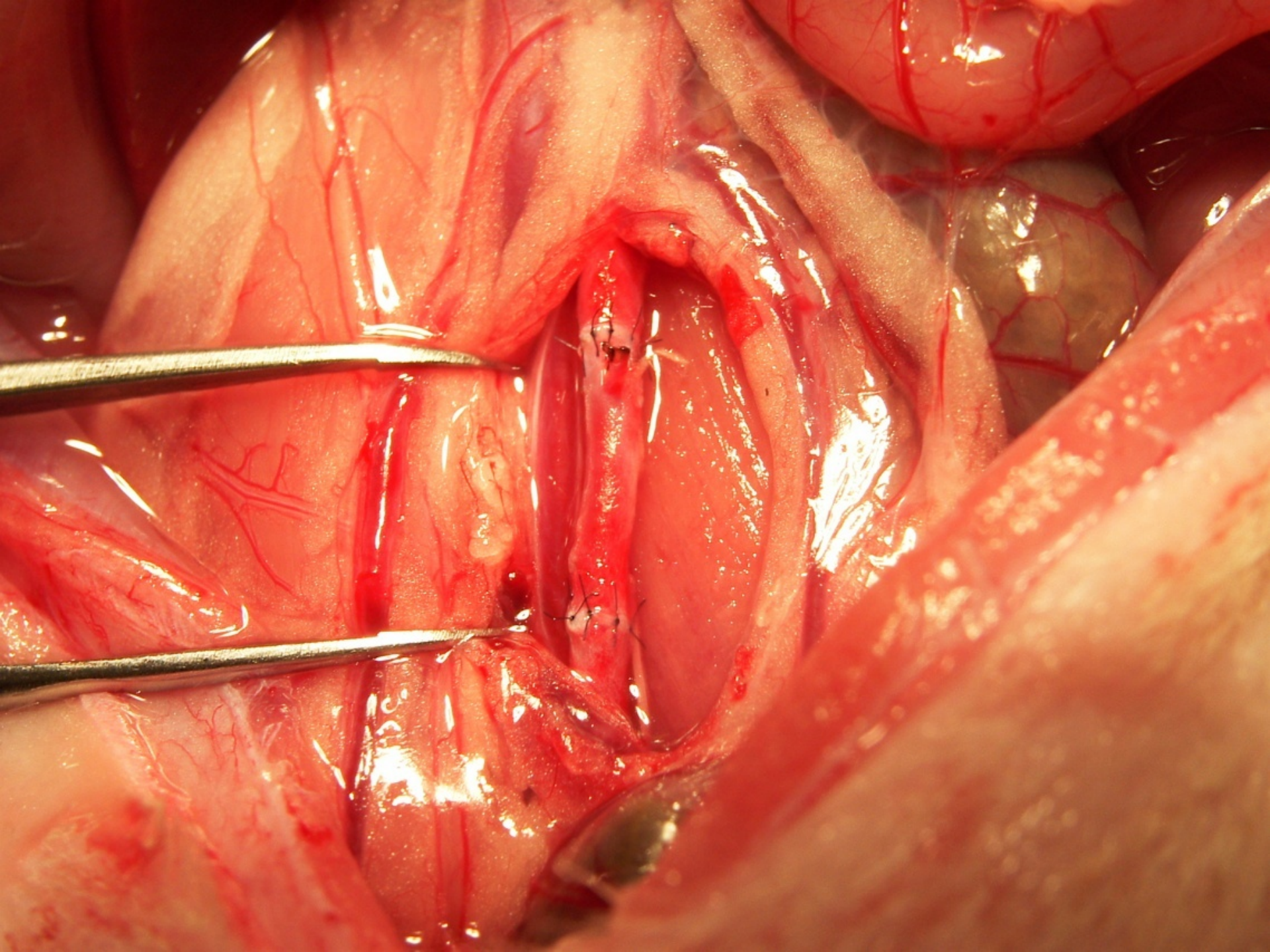
Scientific Evaluation of the Interloped Suture in Rats



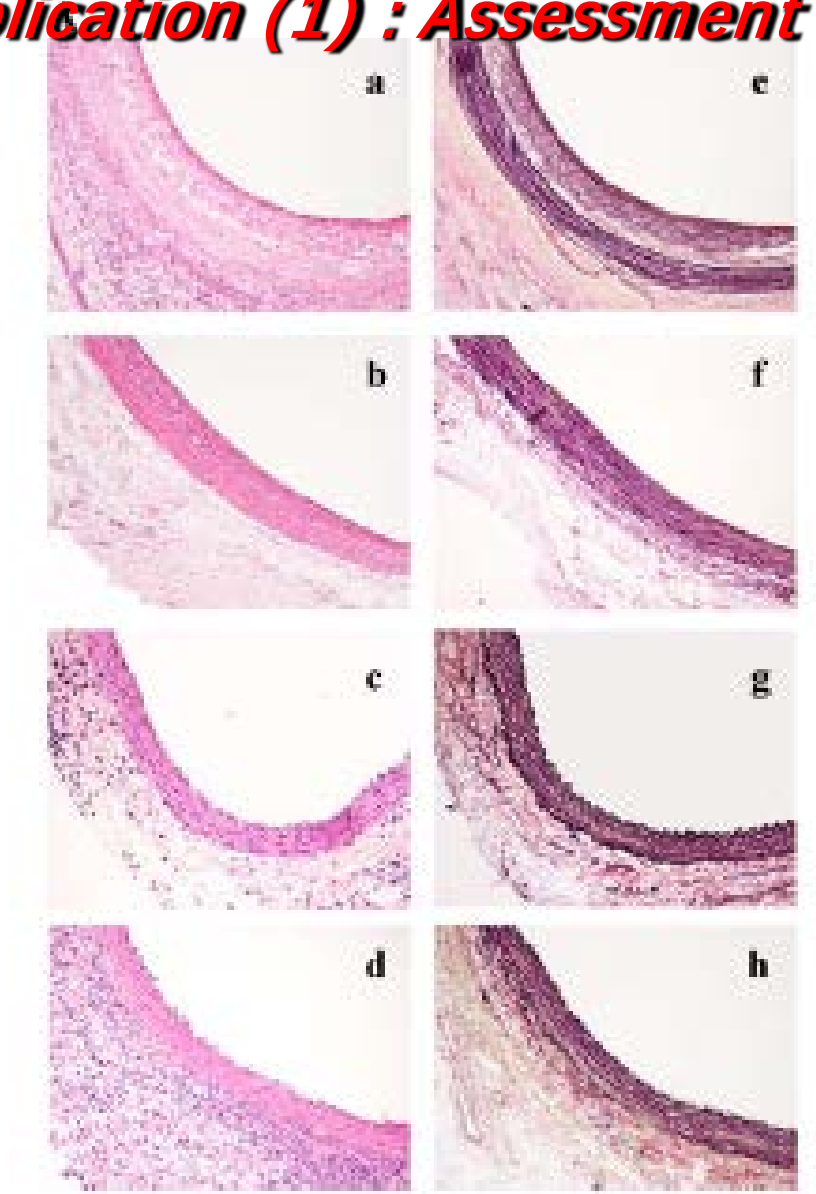
Dissected Abdominal Aorta at the site of anatomists

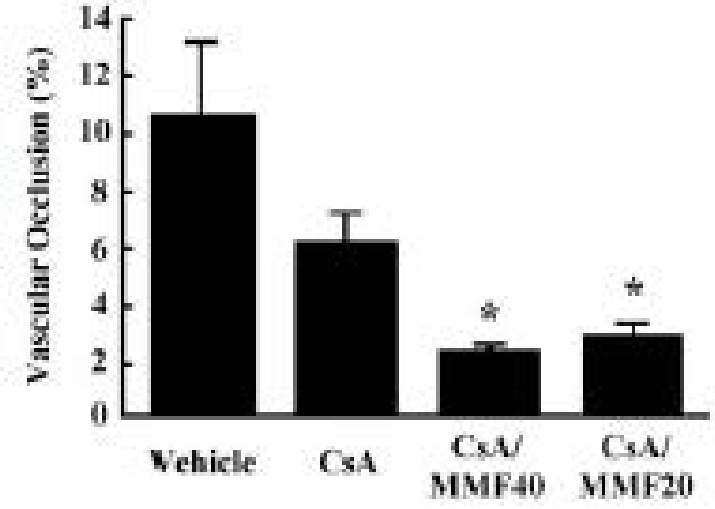


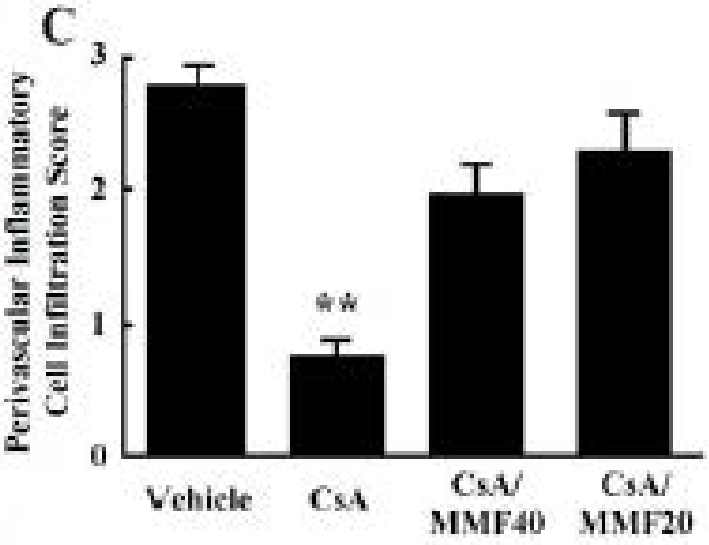
Standard Deviation (SD) of the length between interloped points



Application (1) : Assessment of Immunosuppressive Drugs



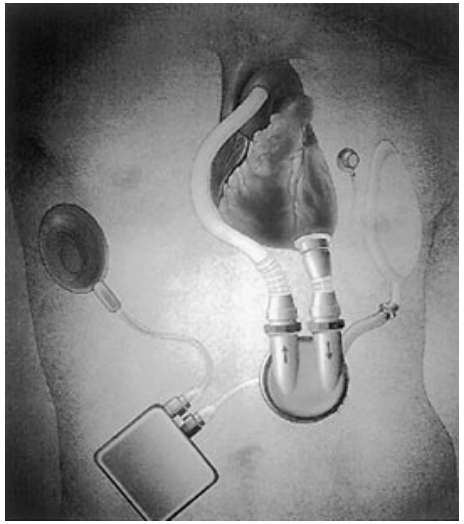


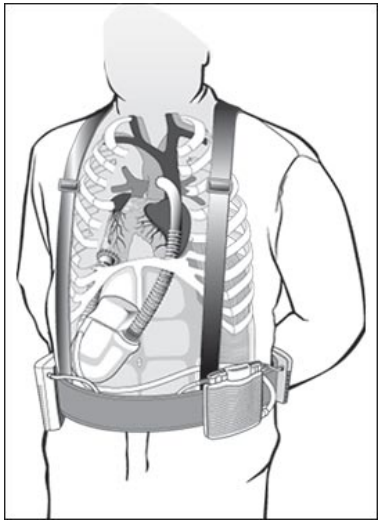


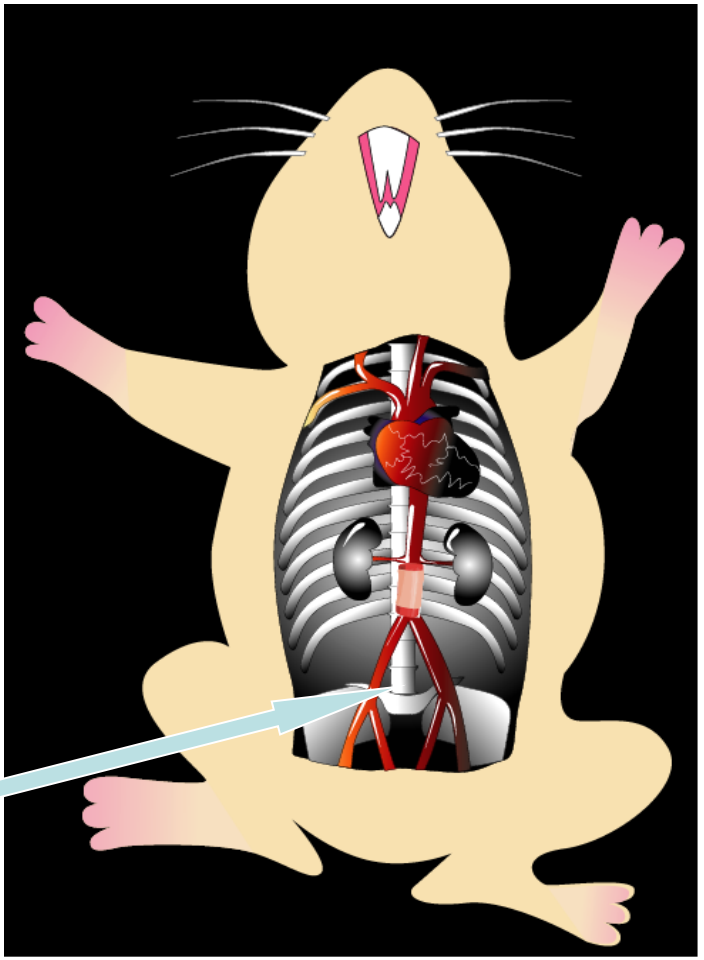
（Shimizu H, et al. Transplant Immun 13(3):219-227, 2004）

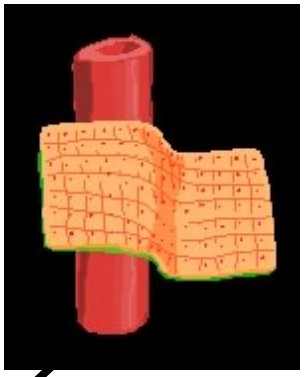
Application (2) :Beating tubes for circulatory support

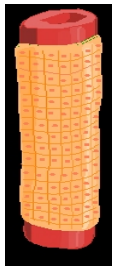
Ventricular Assist Device









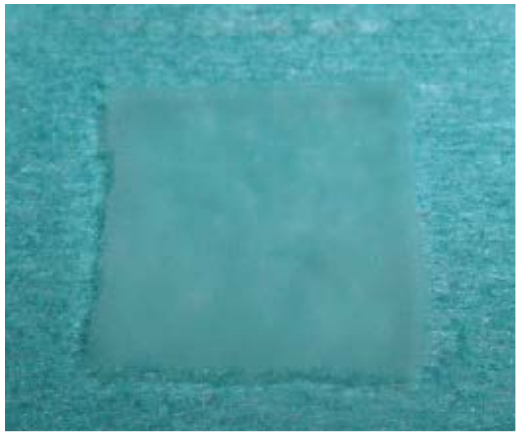


wrapping around aorta

resected aorta

（Sekine H, et al. Circulation 2006）

Fabrication and transplantation of cardiac tube

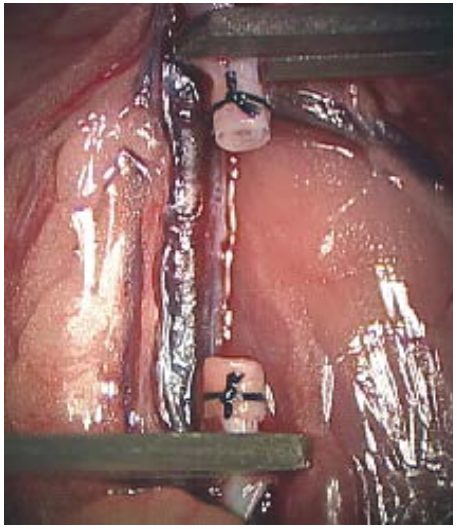


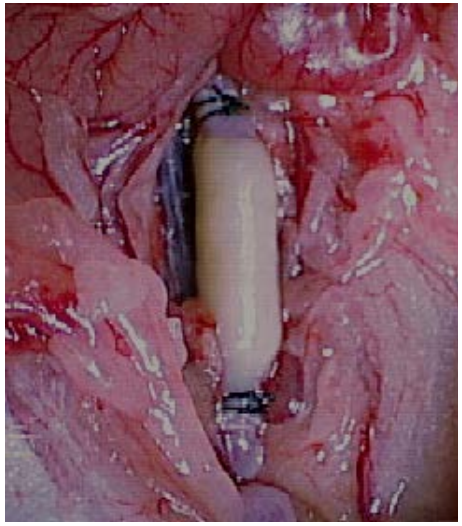
cardiomyocyte sheet

wrapped and layered

in vitro

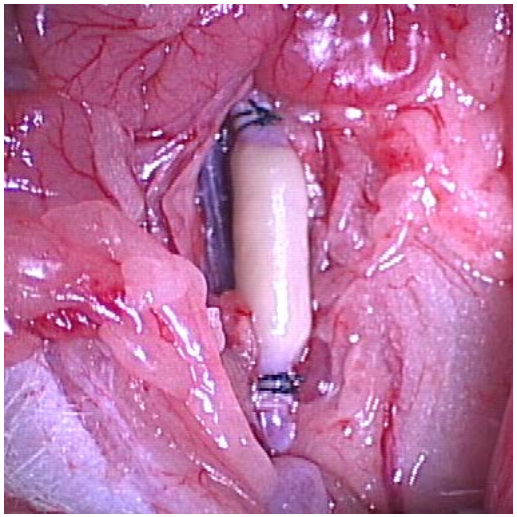
6 layered



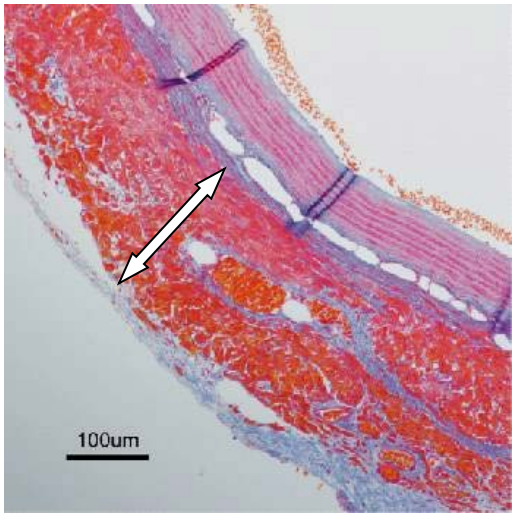


replacement of abdominal aorta

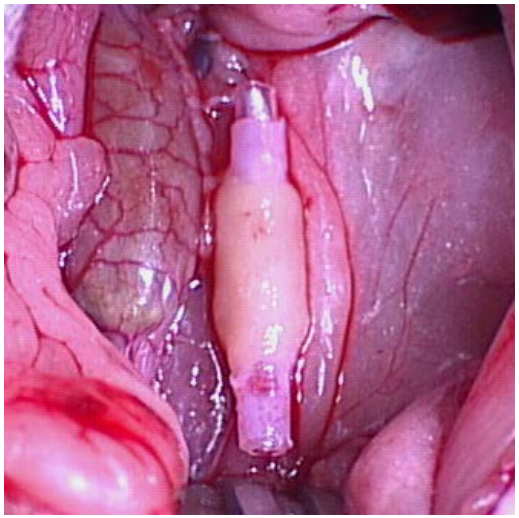
Histological comparison between cardiac tubes in the replacement and in the cavity



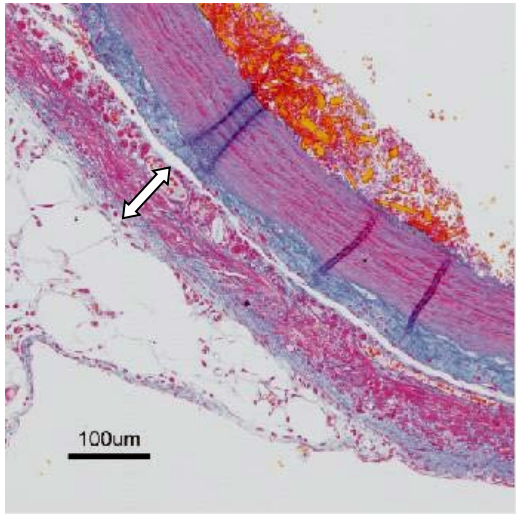
Aortic replacement



175±26μm

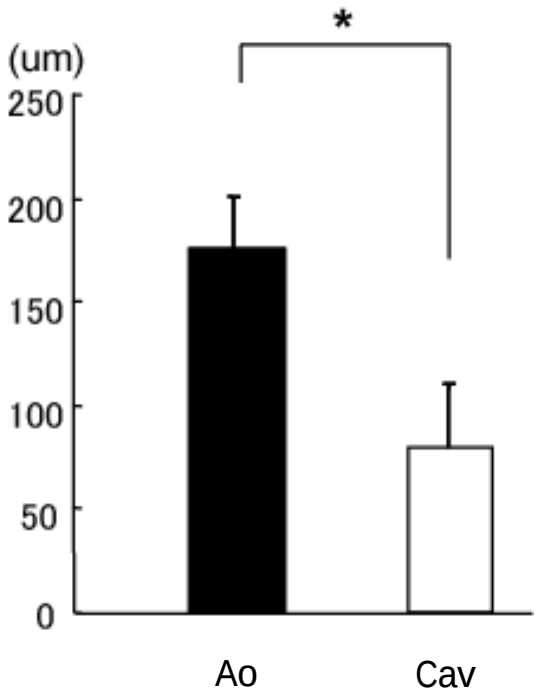


Abdominal cavity



80±30μm

* : p<0.05



Ao : aortic replacemant

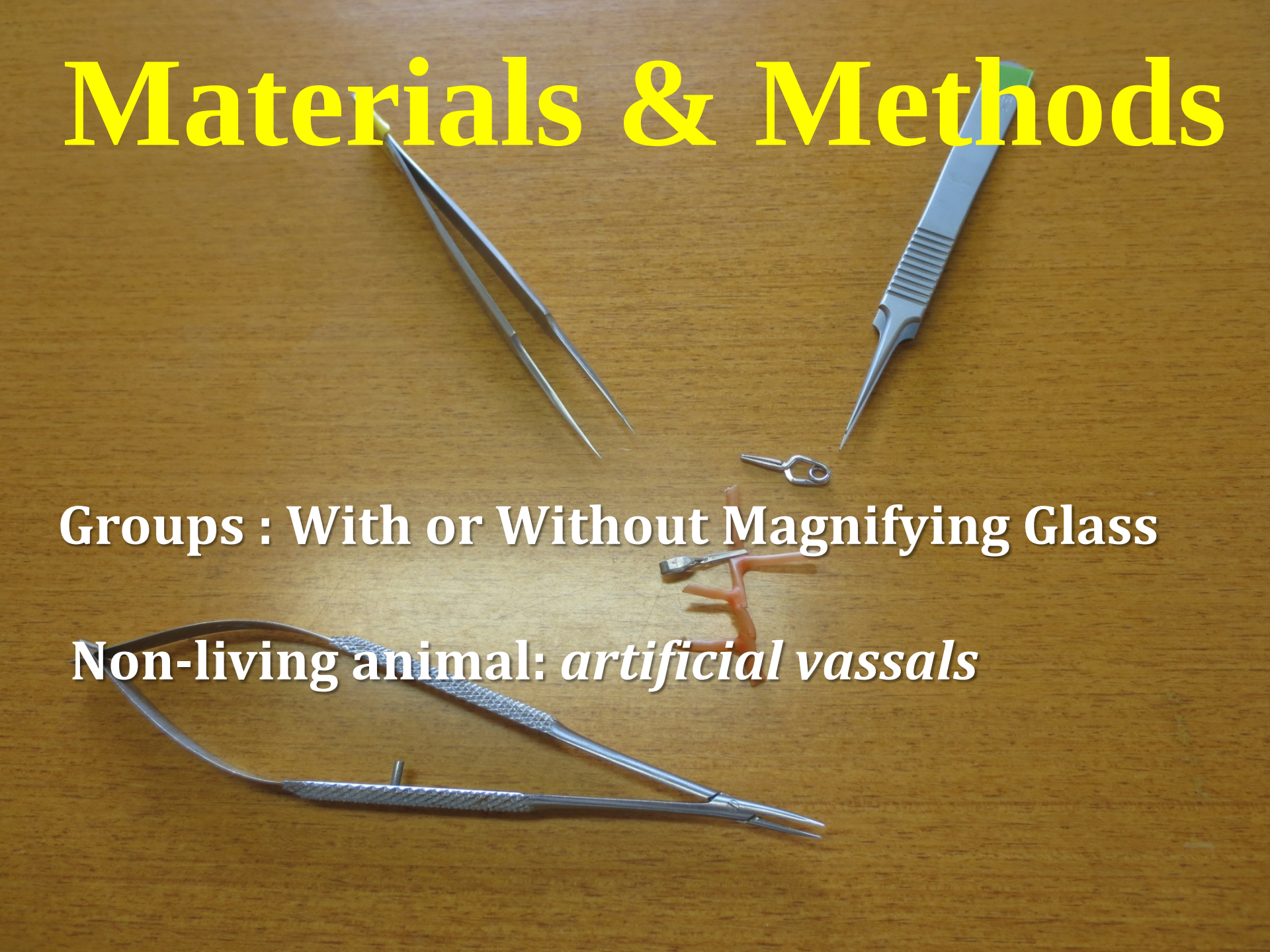
Cav : abdominal cavity

Today's Training

Competency of Utility for Magnifying Glass

'Shall we try to suture the artificial vassals !'

Materials & Methods



Groups : With or Without Magnifying Glass

Non-living animal: *artificial vassals*