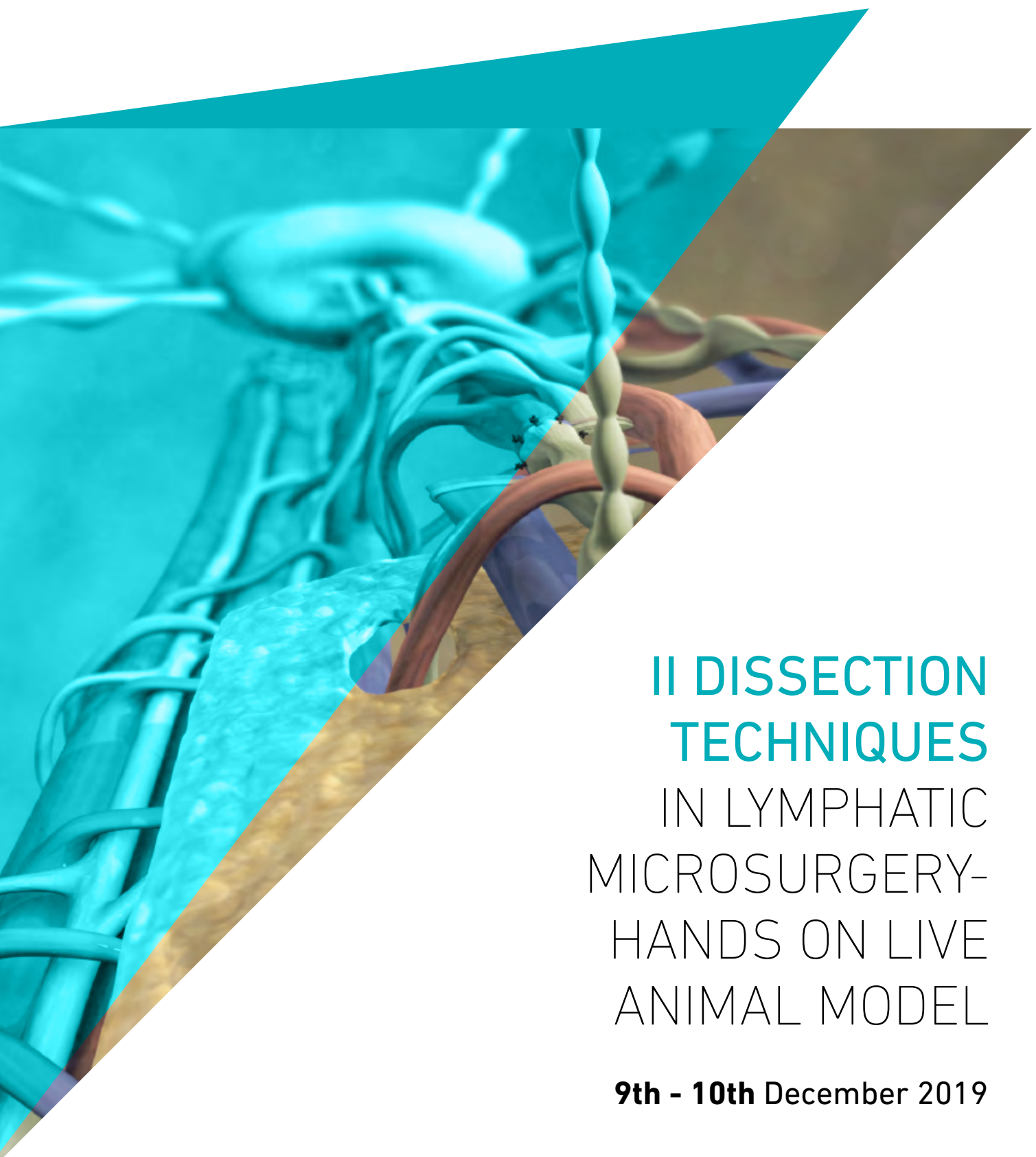




Reconstructive Microsurgery
European School



**II DISSECTION
TECHNIQUES**
IN LYMPHATIC
MICROSURGERY-
HANDS ON LIVE
ANIMAL MODEL

9th - 10th December 2019

II DISSECTION TECHNIQUES IN LYMPHATIC MICROSURGERY- HANDS ON LIVE ANIMAL MODEL

PROGRAM OVERVIEW

The course is available for residents and specialists in plastic surgery (worldwide) to learn or further refine their skills in lymphatic microsurgery.

Development of a training course in lymphatic reconstructive microsurgery as integrative part of the Reconstructive Microsurgery European School (RMES).

Lymphedema is a chronic debilitating disease affecting actually about 140 million people world-wide (1). Induced either by surgical removal of lymph nodes (e.g. secondary to cancer invasion) or presenting as inherited disease (e.g. primary lymphedema) in both upper and lower extremity, this disease is characterised by progressive lymph stasis which in turn leads to adipose hypertrophy and fibrosis of the subcutaneous tissues. In the advanced stages, can induce life-threatening conditions, exposing the patients to serious complications which untreated can even lead to limb loss.

During the last 40 years, much progress has been made in understanding the mechanisms of disease and the ways to treat it, nevertheless no efficient standardised therapy exists to date. Looking at the actual evidence in terms of ways to treat lymphedema, both microsurgical lymphatic bypass of the obstructed areas as well as redirectioning of the lymph flow into the venous system through lymphovenous anastomosis (LVA) or transplantation

of whole vascularised lymph nodes (LNT) had been shown to significantly reduce the volume of affected limbs. Moreover, actual scientific evidence sustains the concept of "preventive lymphatic microsurgery" to prevent secondary lymphedema in patients undergoing major tumor surgery (e.g. breast, melanoma) involving excision of major lymphatic stations. Microsurgical reconstruction of the lymphatic circulation is performed during the same operation with the tumor excision. As such, the development of secondary lymphedema can be avoided.

However, in-depth knowledge of the aetiology, anatomy of the diseased area as well as extensive microsurgical experience are instrumental prerequisites for successful therapy.

One of the most challenging caveats to achieve success is learning to perform the microsurgical lymphatic procedures from intraoperative identification of lymph vessels to performing lymphovenous anastomoses or harvesting a vascularised lymph-nodes to be used later on the same patient as free tissue transfer.

Such skills can only be learned and mastered in the laboratory on experimental animal models and then further refined on human tissue (e.g. cadavers).





Performing such surgery requires not only precise microsurgical and supramicrosurgical skills but also structured knowledge about the preoperative examination of lymphatic vessels (e.g. clinical examination, PDE Examination, Lympho-MRI).

These procedures need proper training before being applied clinically.

The Reconstructive Microsurgery European School (RMES) is an established, world-wide known program which offers the unique opportunity to surgeons willing to learn the entire spectrum of reconstructive microsurgery. From basic courses (e.g. microsurgical techniques, flap harvesting) to clinical immersion fellowships, this program provides a one of a kind platform able to train microsurgeons in all aspects of reconstructive surgery, from learning basic skills to performing free tissue transfers.

Since lymphatic microsurgery is a field experiencing a continuously growing interest within the plastic surgeons community, introducing a practical course focused on specific technical lymphatic microsurgery skills as well as pre- and intraoperative examination of lymphatics is justified and will be a welcomed addition to this program.

AIMS OF THE PROJECT

To develop a practical training course in lymphatic reconstructive microsurgery in live animal models (e.g. pigs). Furthermore the participants should be trained in diagnostics, indications and treatment options as well as postoperative care.

LOCATION

Centro de Cirugía de Mínima Invasión Jesús Usón (CCMIJU) Carretera N-521, km. 41 10004 - Cáceres (Spain). Tel: 927 18 10 32



COURSE STRUCTURE AND PROGRAM

Two-days intensive course focused on lymphatic microsurgery including over 15 hours of practical training in "wet lab" conditions on standardised live animal models (pigs).

DAY 1 - 9th December 2019		DAY 2 - 10th December 2019	
08.30 - 10.30	SESSION 1 <ul style="list-style-type: none"> Lymphatic disorders (S. Suominen) Imaging of the Lymphatic System (G. Pons) Surgical approach to the Lymphatic System. (J. Masià) LVA: The Japanese contribution (I. Koshima) LVA: Technical tricks and tips (T. Yamamoto) Pig animal model. (A. Nistor) Non-live animal model. (W. Chen) Videosurgery LVA 	08.30 - 10.30	SESSION 1 <ul style="list-style-type: none"> Free lymph-node transfer: anatomy, technique, donor site (S. Suominen) Shadows and limitations in lymph node transfer (J. Masià) Multiple lymphovenous anastomosis (MLVA). (A. Nistor) LVA: advanced tricks and tips. (G. Pons / T. Yamamoto / W. Chen) PRE / POST operative conservative treatment and follow up. (S. Suominen / T. Yamamoto / W. Chen) How to treat lymphatic fistulas (I. Koshima) How to set up a lymphedema network (J. Masià) Possibilities of the robotics in microsurgery: making more feasible and reliable the technique (G. Malzone) Videosurgery vascularised lymph node transplantation
10.30 - 10.45	Coffee Break	10.30 - 10.45	Coffee Break
10.45 - 14.30	Practical Session 1 Basics - PDE, Microscopes, Microinstruments Practical Session 2 Identification and dissection of lymph vessels in the groin & neck using the PDE device	10.45 - 14.30	Practical Session 4 LNT Groin
14.30 - 15.00	Lunch Break	14.30 - 15.00	Lunch Break
15.30 - 19.00	Practical Session 3 Microsurgical Lymphovenous (LVA) & Multiple Lymphovenous (MLVA) anastomosis Neck & Groin	15.30 - 19.00	Practical Session 5 LNT Neck & Choice of repeating a previous exercise
20.30	Course dinner		

Program-at-a-glance. (Abbreviations: LVA - lymphovenous, MLVA - multiple lymphovenous anastomosis; LNT - lymphnode transfer)

THE TRAINING MODELS

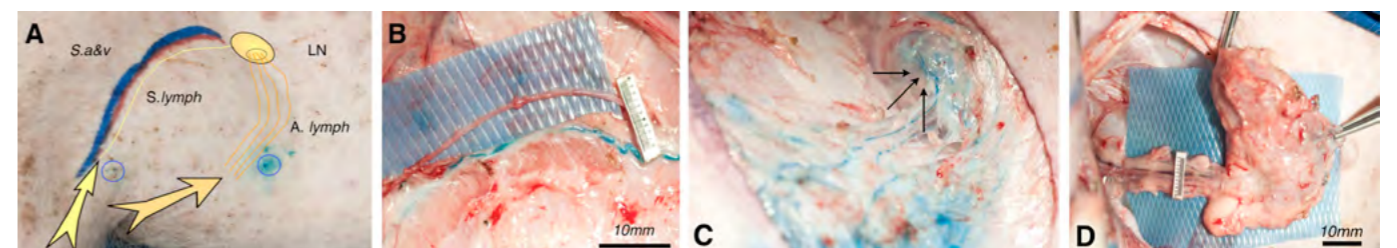
The course consists mainly of practical exercises which will be performed under either loupe or microscope magnification. The first practical session starts with a detailed introduction of the PDE device, the operative microscopes and microsurgical instruments which will be used throughout the course.

The first day is dedicated to identification (ICG/PDE Technique) and free preparation of lymphatic vessels followed by performing of either lymphovenous (LVA) or

multiple lymphovenous (MLVA) anastomosis at the groin and the neck level in live anaesthetised pigs.

The second day is dedicated to the lymph node transfer models and consists in identification and dissection of the inguinal and cervical lymph-nodes followed by free microsurgical transfer either in the neck or groin area.

The figure shows part of the experimental models that will be used during the course.



The Groin Model for Lymphatic Microsurgery in Fig. A - S.a&v - Saphenous artery and vein; S.lymph - solitary saphenous lymphatic channel; LN - inguinal lymphnode, A.lymph - Afferent lymphatics; **B** - Saphenous lymphatic channel alongside the saphenous vein; **C** - Dissected groin lymphnode with afferent lymphatics entering it (arrows); **D** - Dissected groin lymph node ready for free transplantation. The scale lies on the vascular pedicle of the lymph node (Pictures are courtesy of Dr. Jiga - not to be published or reproduced in any form without preliminary permission from its owner)



THE THEORETICAL PART

This part will include lectures separated into several practical issues to help surgeons start their practice related to lymphedema treatment.

1. The multidisciplinary approach concept for the modern treatment of lymphedema and lymphatic related complications after major tumor or vascular surgery
2. The concept of preventive lymphatic surgery in patients undergoing primary axillary or groin lymph node dissection for breast cancer or melanoma
3. The examination of the lymphedema patient from the first visit to after the surgery.
4. The use of preclinical investigations such as lymphatic-MRI and ICG Lymphography and their importance for diagnosis and setting the operative indication.
5. State-of-the-art in microsurgical reconstruction of the lymphatic system (type of procedures, their applications and success rates).
6. DRG-related issues when treating lymphedema patients.
7. Patient education networking.

The lectures will take place within the four planned theoretical sessions and will be held by the course faculty. All theoretical sessions are planned as interactive talks with the active participation of the trainees, following a practical problem-based approach.

FINAL EXAM

A final exam will include a questionnaire of 40 questions (multiple choice). A quote of 60 % is necessary to pass the exam. Proof of attendance is hand out by a certificate.

REGISTRATION FEE: **1.650 €**

CONTACT DETAILS

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Further information:

lymphaticmicrosurgerycourse.com

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