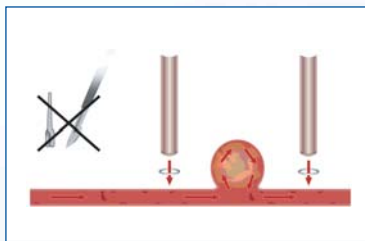




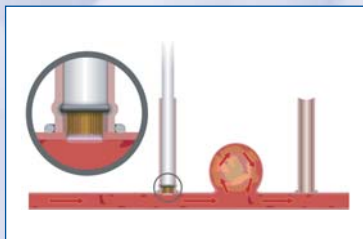
### Introduction

The ELANA technique is invented by Prof. dr. C.A.F. Tulleken and his team at the University Medical Center in Utrecht, The Netherlands. The ELANA (Excimer Laser Assisted Non-occlusive Anastomosis) technique can be used for performing a bypass by which, other than in traditional techniques, the recipient artery is not occluded. This allows for a continued bloodstream during the operation to the body tissue that is serviced by this vessel. Therefore the ELANA technique can be used for indications where previously there was no alternative. The technique is performed as follows:



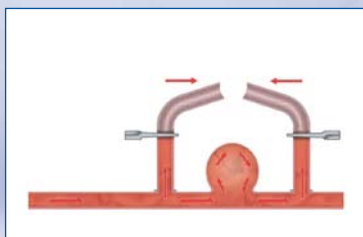
The recipient artery is not occluded with clips. No perforation is made just yet. The donor grafts are sutured to the recipient artery together with a metal ring.

A hollow catheter conducting laser light is slid in the donor vessel. By means of a vacuum pump the hollow catheter sucks the recipient vessel wall against the catheter. With a laser pulse the catheter punches a round hole in the wall of the recipient vessel. The metal ring ensures that the catheter stays in place and does not shoot through.



The catheter is retracted from the donor vessel. The donor vessel is occluded temporarily with a clip. The cut out tissue (flap) of the recipient artery is sucked against the catheter tip. The procedure can be applied to the proximal and distal anastomosis.

The donor vessels are connected and subsequently the aneurysm can be treated safely.



### Course objectives

- Train micro surgical skills
- Master the ELANA technique (in vivo and in vitro)
- Learn about selection criteria for ELANA technique
- Master the ELANA operation protocol
- Handling the laser and Elana disposables
- Understand the theoretical background

### Profile attendees

The course is given to surgeons that practice or would like to practice vascular micro surgery, and in particular are interested in or would like to adapt the ELANA technique. A graduation from medical school is obligatory. Attendees have to identify themselves at the course site.

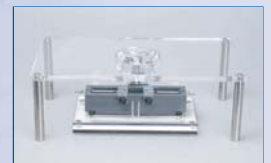
### Course programme

#### Day 1 "Medical and technical backgrounds"

Outline of the history and relevant publications / describing the various proven and possible future indications / anatomical details / diagnostics and selecting patients / describing preclinical and clinical cases / demonstration videos of ELANA technique / interaction between the attendees and tutors on medical aspects / introducing the medical devices and instruments / technicalities of the Excimer laser (Spectranetics CVX-300) / running a procedure in theory.

#### Day 2 "In vitro micro surgical training"

Setting up the Elana practice model / basic skills training: a) preparing the model b) suturing the platinum ring c) connecting the graft d) using the suture less device e) execute the laser procedure. Assisting a procedure:



a) get the laser and pump system ready, b) handling of the pump, c) handling of the laser d) learn the ELANA protocol.

#### Day 3-4 "In vivo micro surgical training"

Describing the protocol and the procedures for experiments in the animal lab / advanced skills training on an aorta of a rabbit: a) suturing the platinum ring b) connecting the graft c) using the suture less device d) execute the laser procedure.



## Day 5 "Clinical procedure"



Participants are welcome to attend a procedure on another occasion.

Attending a clinical revascularization procedure at the UMC Utrecht / describing the protocol for clinical procedures. This part of the course depends on the scheduling of patients. In case there is no procedure during an ELANA course, participants

## Faculty

The faculty of the ELANA training programme is formed by specialists of the UMC Utrecht, faculty of neurosurgery and department of Medical Technology and Media. Prof. dr. CAF Tulleken is director of the course.



## Course schedule

The course is designed for 3-6 persons. There are 6 courses scheduled throughout the year, additional courses will be scheduled on request.

## Tuition fees & Payment

The fee for the 5 days course is € 2.750 (excluding 19% VAT). Included are hands on in vivo and in vitro course, documentation, all lunches and 1 faculty dinner. Excluded are training device (€ 2.900 excluding 19% VAT), travel to the Netherlands, transfer to the UMC Utrecht, hotel costs and additional meals. The fee is in advance payable to Elana bv.

Banking details:

Rabobank

IBAN NL96 RABO 0122 9563 03

BIC RABONL2U

Utrecht, The Netherlands

## Contact details & Management

The course is managed by Elana bv. Elana bv is a spin-off from the UMC Utrecht and is therefore strongly linked to their research and development team. For additional information please contact our Office Manager:

Phone: + 31 30 253 7276

Fax: + 31 30 253 7265

E-mail: info@elana.com

## Certificate

Participants will get a certificate for attending the course.

## Location & Transfer

This course will be conducted at the University Medical Centre in Utrecht, The Netherlands.

Amsterdam Airport is our main airport. From Amsterdam Airport you can travel to Utrecht in about 30 min by train or taxi.

## About Utrecht

Utrecht is the fourth largest city of the Netherlands, with a population of 250.000. Utrecht's central location in the Netherlands makes it an attractive city to live.



Utrecht is only 20 min. from

Amsterdam and 30 min from The Hague. Utrecht has a rich history that goes back to the beginning of our calendar. The old innercity, with its canals and cellars by the wharves, ancient churches, and of course the Dom tower, give the city a distinctive character.

## Accommodation

For the convenience of our attendees we can recommend the following hotels:

### Malie Hotel

The Maliehotel is a Hampshire Classic Hotel.

Reservations can be made by phone (+31 30 231 6424) or fax (+31 30 234 0661). Room rate is approx. € 115,- incl. breakfast and excl. city taxes.

### Hotel Karel V

Grand Hotel Karel V is member of the Steigenberger Reservation Service (SRS World Hotels) and is part of the Deluxe Collection. SRS Worldhotels Reservation numbers:

Europa 00-800-SRSWORLD/ 00-800-77 79 67 53 USA 1-800-223 56 52 Other countries (+49)69 66 41 91 01. Room rate approx. € 220,- per night, excl. breakfast and citytaxes.

For reservations please

contact our Office Manager.

