



# UNIVERSITY of MILANO - BICOCCA



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# MASTER in ENDOVASCULAR TECHNIQUES

# MET

## Introduction

The Monza Medical School of the University of Milano-Bicocca, in accordance with the Post Graduate Medical Education (PGME) Programmes, is pleased to announce that it has established the Master in Endovascular Techniques (MET) which started in the year 2001 and which commences in October of each year.

This initiative is in line with the intentions of the University, which is to organize and promote courses with the purpose of high specialization and level of education, according to Articles 3 and 7 (sections 8 and 4 respectively) of the Ministry of Education, formulated on the 3<sup>rd</sup> November 1999, N° 509 Regulations on the Didactic Independence of Universities, published on the Official Gazette N° 2 of 4 January 2000. This is also in line with the spirit of 'Messages and Themes of the European Commission' and in particular, following a proposition contained in the document entitled 'Life-long Learning', approved at the General Assembly of Council of the Italian Universities (CRUI) held on the 21<sup>st</sup> June 2001.

## Objectives

Endovascular techniques were introduced in the 1970's for the treatment of vascular lesions of difficult access and with a high risk of mortality. During the 80's and especially during the last ten years, endovascular procedures have become practically the treatment of preference for almost all arterial diseases, both obstructive and aneurysmal in the various arterial territories. In the 1990's the introduction of the use of endo-prosthesis with a stent, revolutionized completely the treatment of vascular diseases, which until then, were treated with traditional open surgery.

With the rapid, progressive increase in the number of procedures performed (approximately 300,000 only in the year 2003) the question of which specialist was most qualified to treat these cases became inevitable. Four specialities appeared to be eligible: vascular surgery (VS), cardiology (C), radiology (R) and neuro-radiology (NR). More recently, other specialists such as cardiac surgeons (CS) or vascular medicine physicians (VMP), have shown particular interest in this peculiar field of medical practice in rapid evolution, with the intention of dedicating to it at least part of their professional activity.

The vascular surgeon has good experience on the ward, in the operating theatre, in both elective and emergency surgery, is familiar with arterial plaques and lesions, has an excellent concept of three-dimensional anatomy and is aware of the importance of sterility.

The interventional cardiologist has equally good clinical experience on the ward but less surgical experience and less familiarity with plaques but, on the other hand has wider experience in coronary angioplasties than the vascular surgeon. Both vascular surgeons and interventional cardiologists have scarce practical knowledge on the use of radiological apparatus and 'imaging'.

Interventional radiologists and interventional neuro-radiologists are those who have the most experience in navigating and manoeuvring guide-wires and catheters in the vascular territories, but compared to interventional cardiologists and especially vascular surgeons, it is they who have the least experience in elective surgery, in emergency situations and in patient follow-up. Their patient referral is usually scarce.

A situation has come about in which, in the interest of the patient, it would be preferable, in order to maintain the 'gold-standard', that at least two or more of the above-mentioned specialists be present and consulted in each centre where endovascular procedures are carried out. This situation may not always be possible and could cause conflict among colleagues of an endovascular team, since it is quite clear that only one person can be considered ultimately responsible at a time for each procedure.

More recently, as a result of the tremendously rapid evolution of technical skills and professional acquisitions and development of new devices, the large majority of vascular procedures can be performed either endoluminally or through hybrid (endovascular and open) approaches.

It is frequently reported that a procedure is performed by an interventional cardiologist or radiologist with the support of a vascular surgeon, whose contribution is often required just for ancillary procedures, or is performed by a vascular surgeon who does not have a background of adequate training in manoeuvring catheters or in imaging skill formation and has difficult or insufficient access to imaging equipment.

**We are witnessing a transitional situation. The problems that we are now facing, did not exist in the past and will not exist in the future.**

In the year 2000, we established at the University of Milano-Bicocca the **MET** educational programme, with the conviction in mind that in the near future the excellence for the non-medical treatment of vascular diseases will be represented by the **Interventional Vascular Specialist**, who will acquire a background totally different from what is presently conceived in order to be defined as a specialist in vascular surgery, interventional cardiology and radiology.

**MET is a philosophical approach to the need to create a hybrid specialist through professional training from highly qualified tutors.**

Following these considerations a conclusion has been reached, which is that of constituting a new role of specialist who should acquire and reunite in one, notions of the various specialities involved.

## Objectives

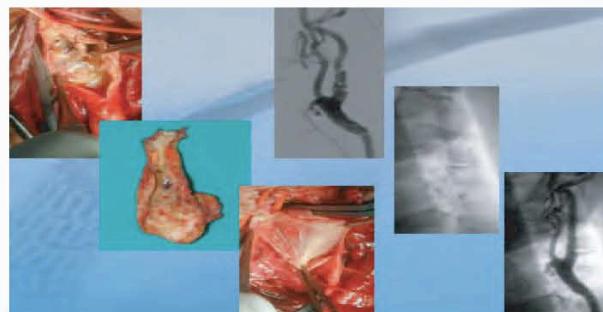
During the MET the trainee should:

- Learn how to diagnose and judge in patient selection.
- Learn how to find the solution to vascular problems in the most efficient, durable and less invasive manner possible.
- Be in a position to handle procedures, foreseeing, avoiding or resolving any eventual complications that may arise.

## Bedside Training

Ninety per cent of the training period is directly with the patients and the trainee is exposed to assisting and directly performing a relevant number of cases:

- At least 100 diagnostic angios.
- Over 100 balloon and stenting procedures.
- From 30 to 50 EVARs with the tutoring of trained doctors, nurses and technicians.
- Over 50 open and hybrid procedures.



## Non-Bedside Training and Research

A Faculty of Milano-Bicocca University Lecturers (Internal Members) and experts in the field of diagnosis, indication and practice in catheter derived procedures, from other Italian and non-Italian Institutions (External Members), has been constituted. These tutors participate in the didactic programme of the Master, with seminars, traditional lectures, master-classes and workshops, etc. which will cover the remaining 10% of the training period.

In addition, the trainee is requested to write a scientific paper (in English) on a specific case (case report) to which he/she was personally exposed during the training period, or a clinical study with reviews from literature or finally, original research or project.

## Faculty

Chairman: **Giorgio M. Biasi**

Co-Chairman: **Luigi Inglese**

### INTERNAL MEMBERS (University of Milano-Bicocca)

**Giorgio M. Biasi** - Full Professor of Vascular Surgery

**Ferruccio Fazio** - Full Professor of Nuclear Medicine

**Alberto Froio** - Assistant Professor of Vascular Surgery

**Cristina Giannattasio** - Associate Professor of Internal Medicine

**Maria Carla Gilardi** - Full Professor of Biomedical Technologies

**Marialuisa Lavitrano** - Associate Professor of Clinical Pathology and Immunology

**Giuseppe Mancia** - Full Professor of Internal Medicine

**Sandro Sironi** - Associate Professor Radiology and Radiotherapy

### EXTERNAL MEMBERS

**Giuseppe Bonaldi** - Neuroradiologist (Bergamo)

**Emilio Calabrese** - Vascular Surgeon (Pavia)

**Antonio Colombo** - Interventional Cardiologist (Milano)

**Virgilio Colombo** - Interventional Cardiologist (Monza)

**Alberto Cremonesi** - Interventional Cardiologist (Cotignola)

**Paolo Danna** - Interventional Cardiologist (Milano)

**Gaetano Deleo** - Vascular Surgeon (Monza)

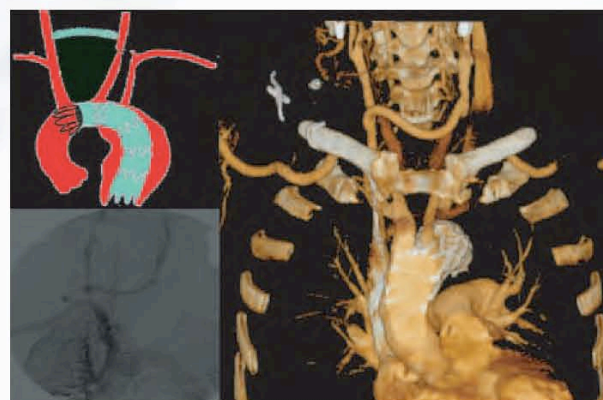
**Francesco Gentile** - Interventional Cardiologist (Cinisello B.)

**Luigi Inglese** - Haemodynamist - Interventional Cardiologist (San Donato Milanese)

**Simona Pierini** - Interventional Cardiologist (Cinisello Balsamo)

**Claudio Rabbia** - Interventional Radiologist (Torino)

**Maurizio Viecca** - Interventional Cardiologist (Milano)



## Official Language

The official languages of the MET are English and Italian.

## Registration Fee

The registration fee is Euro 12,000.00 which also includes an insurance coverage. Participants eligible may take advantage of eventual scholarships made available to cover part of or the total fee. Accommodation and meals can be provided at budget prices.

The names of the participants are posted on the Board of the University Milano-Bicocca, as well as on the Board of the Organizing Secretariat of the MET.

## Acknowledgments

The Organising Committee acknowledges the generous contribution of the following Associations and Partner Companies to the educational and scientific activities of the MET.

- Association for the Pre-Clinical & Clinical Research, the Prevention and the Treatment of Cardio-Vascular Diseases
- Abbott Vascular S.p.A.
- Boston Scientific S.p.A.
- Medtronic Italia S.p.A.
- Serom Medical Technology S.r.l.
- W.L. GORE & Associati S.r.l.



**Medtronic**  
When Life Depends on Medical Technology



**Abbott**  
Vascular



**Boston**  
Scientific

## Programmes and Certification

### General Prospect of the Training Programmes and Relevant Accreditation

The entire MET educational programme covers a period of 1 year, starting every year in October. Trainees are required to attend full-time the institutions involved in the MET for a total of 1600 hours, comprehensive of clinical practice, seminars, master classes, interactive lectures, workshops and courses with live case demonstrations from an International Faculty and finally, individual study. The minimum attendance has been established at 75% of the total hours required. The trainees have to fill-in their activities in their trainee book on a daily basis, which need to be certified by the tutor. An assessment of progress is made at the end of the first semester and upon completion of the Course. Upon successful completion of their certified training period, the trainee will receive official certification, awarded by the University of Milano-Bicocca and a total of 64 university credit points will be assigned.

The MET gives a choice of three didactic alternatives:

#### - Programme for Vascular and Cardiac Surgeons

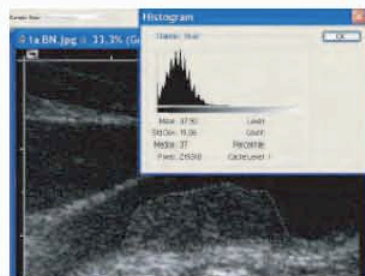
Required Participation In:	Hours	Credits
Techniques In Imaging and bioengineering	36	4
Pathology, Immunology and molecular medicine	20	2
Techniques and procedures in interventional radiology	58	8
Tools and devices in interventional radiology	48	5
Techniques and procedures in interventional cardiology	80	8
Tools, devices and drugs in interventional cardiology	38	4
Emergency care techniques in cardiology	36	4
Participation In endovascular procedures	725	29
Final examination	--	2
Free hours for individual study	583	--
<b>Total</b>	<b>1,600</b>	<b>64</b>

#### - Programme for Radiologists

Required Participation in:	Hours	Credits
Techniques in imaging and bioengineering	36	4
Pathology, immunology and molecular medicine	20	2
Techniques and procedures in elective vascular surgery	72	7
Techniques and procedures in emergency vascular surgery	48	5
Tools and devices in vascular surgery	48	5
Techniques and procedures in interventional cardiology	80	8
Tools, devices and drugs in interventional cardiology	36	4
Emergency care techniques in cardiology	36	4
Participation in endovascular procedures	575	23
Final examination	--	2
Free hours for individual study	649	--
<b>Total</b>	<b>1,600</b>	<b>64</b>

#### - Programme for Cardiologists

Required Participation In:	Hours	Credits
Techniques In Imaging and bioengineering	36	4
Pathology, immunology and molecular medicine	20	2
Techniques and procedures in elective vascular surgery	72	7
Techniques and procedures in emergency vascular surgery	48	5
Tools and devices in vascular surgery	48	5
Techniques and procedures in interventional radiology	56	6
Tools and devices in interventional radiology	48	5
Participation in endovascular procedures	700	28
Final examination	--	2
Free hours for individual study	572	--
<b>Total</b>	<b>1,600</b>	<b>64</b>



## Admission Criteria

The Course is open to MD's who have already completed their certified training programme in Vascular Surgery, Cardiac Surgery, Radiology, Cardiology, Neuro-Radiology or those who have received the relative Certificate of Completion of Specialist Training (CCST) in their respective country of origin. Selection for admission will be on the basis of confirmation of eligibility criteria and on the curriculum vitae.

Since its constitution, the Course has made available the following number of positions:

- For the academic year 2001/2002: 2
- For the academic year 2002/2003: 3
- For the academic year 2003/2004: 3
- For the academic year 2004/2005: 4
- For the academic year 2005/2006: 3
- For the academic year 2006/2007: 2
- For the academic year 2007/2008: 5

## Application

The MET commences in October. Application forms are usually available starting from June of each year. For more information on the training programmes and for the application forms, interested candidates should please visit the website of the University of Milano-Bicocca at [www.unimib.it](http://www.unimib.it) or inquire directly to the Scientific Secretariat, co-ordination and administration office:

Department of Surgical Sciences  
 Università degli Studi di Milano-Bicocca  
 c/o: Vascular Surgery Unit, 3rd Floor, sector C, San Gerardo University Hospital  
 Via G.B. Pergolesi, 33 – 20052 Monza (Milan) Italy  
 Tel:+39.039.367021 – Fax: +39.039.2301454  
 e-mail: [met@unimib.it](mailto:met@unimib.it) web site: [www.unimib.org](http://www.unimib.org)