

INTERVENTIONAL RADIOLOGY UNIT

Director: M. Manzi MD

Hospital: Policlinico Abano Terme, P.za Cristoforo Colombo, 1
Abano Terme (PD)

Phone: 0039 049 8221381 cath-lab

Mail: marco.manzi@casacura.it

Mail: marcodocmanzi@gmail.com

Endovascular Treatment of CLI Fellowship Program

DIRECTOR:

Luis Mariano Palena, MD.

FACULTY:

Luis Mariano Palena, MD.

Marco Manzi, MD.

Fellowship Program

I. Goal: By the end of the Program, the Fellow will develop advanced competencies in the following areas:

- 1) Clinical and non-invasive evaluation of patients with PAD and CLI.
- 2) Integration of clinical and non-invasive data to design the best therapeutic strategy, including medical and invasive treatment.
- 3) Medical management of the patient with PAD and CLI.
- 4) Traditional and non-traditional access techniques as well as the entire spectrum of interventional procedures utilized in the treatment of basic and advanced peripheral arterial disease lesion subsets.
- 5) Integration of clinical and non-invasive data in the pre-procedural, procedural and post-procedural stages involved in the treatment of patients with PAD and CLI.
- 6) Creation of / Participation in a PAD / CLI / multidisciplinary team.
- 7) Interpretation of clinical data with subsequent formulation of a hypothesis and a resulting research project. The fellow is expected to publish at least one original research project in a peer-reviewed journal and present it in a international conference. This will allow the fellow to develop as a physician-scientist and provide the individual with the opportunity to pursue an academic career if so desired upon completion of the training.

II. Objectives:

- 1) Become proficient and independent in the basic (bedside physical exam) and advanced (bedside hand-held doppler, clinical angiosome) clinical evaluation of patients presenting with the entire spectrum of PAD, including CLI.
- 2) Become proficient and independent in the basic interpretation of non-invasive studies (ABI, Duplex, SPP, TcPO₂) in patients presenting with the entire spectrum of PAD, including CLI.
- 3) Become proficient and independent in the integration of the cutaneous and non-invasive angiosome in order to create the best treatment plan for each patient (including medical and interventional therapies).
- 4) Master the basic and advanced knowledge of peripheral vascular anatomy (with special concern in the vascular anatomy of the foot), including anatomical variations that are critical in the adequate management of patients with PAD and CLI.
- 5) Become proficient and independent in the knowledge of basic and advanced ultrasound techniques utilized to guide access in traditional and non-traditional locations of the arterial tree.
- 6) Become proficient and independent in the planning of invasive diagnostic tests in the evaluation of patients with PAD and CLI including selective infrapopliteal and foot angiography.
- 7) Become proficient and independent in the use / design of PAD and CLI inpatient treatment algorithms including medication regimes, management of co-morbidities, coordination of the multidisciplinary PAD / CLI team.
- 8) Become proficient and independent in the knowledge of invasive revascularization procedures in patients with PAD and CLI.
- 9) Become proficient and independent in the use / design of specific outpatient follow up protocols for patients with PAD and CLI.
- 10) Acquire the understanding and knowledge of all the phases of care involved in the diagnosis, treatment and follow up of patients with PAD and CLI, as well as the importance of the multidisciplinary team concept in order to be able to create or cooperate in the creation of a PAD / CLI / Amputation prevention program.

III. Teaching Methods:

- 1) Evaluation of patients in the office and inpatient setting during the pre-procedure stage.
- 2) One-on-one reading of noninvasive studies.
- 3) Clinical discussion of the creation of the joined clinical / cutaneous angiosome and the non-invasive mapping.
- 4) One-on-one teaching of the performance of basic and advanced invasive diagnostic testing, including ultrasound-guided access.
- 5) One-on-one teaching of the performance of basic and advanced interventional procedures, including CO₂-guided interventions.
- 6) Discussion of basic and current pertinent literature.
- 7) Self - Directed Reading

IV. Evaluation Methods:

- 1) Direct observation
- 2) Case-based oral presentations
- 3) Real time interactive feedback aimed at continuous learning and progress, correcting deficiencies on the go.

V. Program Duration:

The program's objectives are designed to be achieved to a proficient level in 3 months. In order to accommodate the needs and availability of different prospective candidates, this program has been subdivided in 3 rotations of one month each. Due to time issues, in trainings of less than three months, the clinical case scenarios and topics covered may differ from what is written below.

VI. Fellow Duties:

Fellows are expected to report at 8.30AM daily at the cath lab (5 days a week). At that time they will be assigned to an interventional radiologist who will precept that day at the location.

VIa - CATH LAB / ACCESS/ DIAGNOSTIC ANGIOGRAMS / INTERVENTIONS:

In the cath lab, it is expected that the fellow will be familiar with the patient history before scrubbing in the case. The fellow should also know the results of non-invasive studies and be ready to discuss positioning of the patient on the table, access site and plan of treatment. Not being familiar with this information will result in the inability to scrub for the case.

The fellows will have diagnostic cases assigned to present during vascular conference, as part of their training process.

VIb - INPATIENT / NON-INVASIVE STUDIES:

After cath lab work, the fellow will spend time rounding on the floors to cover the inpatient care aspect of the program and to acquire the necessary information for the next day interventions. The remainder time will be spent evaluating patients in the outpatient setting and reading vascular studies.

VIc - INVASIVE / INTERVENTIONAL COMPETENCIES:

All procedures will be directly conducted only by the preceptor. The mix of cases can not be predicted and therefore occasionally fellows won't be able to perform each one of the following outlined procedures.

- US-guided retrograde Common Femoral Access;
- US-guided antegrade Common Femoral Access;
- US-guided / Fluoroscopic retrograde tibial access;
- Diagnostic Angiography: Includes Aorto-Iliac Runoff, Selective contralateral Superficial Femoral arteriography with runoff and Selective Popliteal and infrapopliteal angiography.
- Iliac Interventions;
- SFA Interventions;
- Infrapopliteal Interventions.

VII. Specific Devices:

All procedures will be directly conducted only by the preceptor. The mix of cases can not be predicted and therefore occasionally fellows won't be able to perform each one of the following outlined procedures.

- Atherectomy;
- Stenting;
- Mimetic technologies;
- Drug-eluting Devices;



Dr. LUIS MARIANO PALENA