

Confocal Microscopy: Integration in Clinical Practice

Residents and Specialists Course | 03-05 April 2025 | Madrid, Spain

Course description

Reflectance Confocal Microscopy is a non-invasive imaging technique that enables obtaining precise information at subcellular level in real-time. In this course, we will describe the fundamental principles for confocal imaging of human skin in vivo, the major live microscopic features that characterize benign and malignant skin conditions, and its potential to monitor dynamic processes. In addition to, how to integrate this tool in clinical practice with real examples will be also discussed.

After the course, attendees will understand the basics principles of in vivo and ex vivo confocal microscopy, identify features of common inflammatory conditions and tumors of benign and malignant nature and integrate this technology in routine clinical workflow.

Learning Objectives

1. Understand the fundamentals of in-vivo and ex-vivo confocal microscopy;
2. Identify confocal features of benign and malignant skin tumors;
3. Identify confocal features of inflammatory conditions and infections;
4. Integrate in-vivo confocal microscopy in common clinical situations;
5. Understand ex-vivo confocal microscopy in dermatology surgery including Mohs Surgery.

Faculty

Chairs: Salvador González
Speakers: Marco Ardigo; Reyes Gamo; Melissa Gill; Francesco Lacarrubba;
Javiera Pérez-Anker
Tutors: Gonzalo Segurado; Virginia Velasco

Programme

DAY 1 – 03 April 2025

14:30-14:45 Introduction & Welcome
S. González

14:45-15:00 Pre-Course Kahoot Quiz (Evaluation)
G. Segurado, V. Velasco

15:00-15:30 Fundamentals: Equipment, Basic Optical Parameters of In-Vivo and Ex-Vivo Confocal Microscopy
S. González, J. Pérez-Anker

SECTION A. Glossary and Confocal Patterns

15:30-15:45 Inflammatory Lesions Patterns
F. Lacarrubba

15:45-16:15 **Coffee Break**

16:15-16:30 Non-Melanocytic Tumors
M. Gill

16:30-16:45 Melanocytic Tumors
R. Gamo

SECTION B1. Confocal Features and Algorithms. Inflammatory Conditions

- 16:45-17:15 Inflammatory Cutaneous Disorders
F. Lacarrubba
- 17:15-17:35 Scalp and Hair Diseases
M. Ardigo
- 17:35-17:55 Infections
F. Lacarrubba
- 17:55-18:30 Practical Session with Real-Time Image Acquisition on Patients in Clinic
G. Segurado, V. Velasco
- 20:30-22:30 Networking Dinner with Faculty and Participants

DAY 2 – 04 April 2025

- 09:00-09:30 Interactive Clinical Cases
M. Ardigo, F. Lacarrubba, G. Segurado, V. Velasco

SECTION B2. Confocal Features and Algorithms. Non-Melanocytic Tumors

- 09:30-10:00 Benign Non-Melanocytic Tumors
M. Ardigo
- 10:00-10:30 Basal Cell Carcinomas
S. González
- 10:00-11:00 Squamous Cancers
M. Ardigo
- 11:00-11:30 Coffee Break
- 11:30-12:30 Interactive Clinical Cases
M. Ardigo, S. González, G. Segurado, V. Velasco

SECTION B3. Ex-Vivo Confocal Features in Non-Melanocytic Tumors

- 12:30-13:00 Ex-Vivo Confocal in Dermatology Surgery: Protocols
J. Pérez-Anker
- 12:30-13:30 Basal Cell Carcinomas
J. Pérez-Anker
- 13:30-14:30 Lunch Break
- 14:30-15:00 Squamous Cell Carcinoma and Other Lesions
J. Pérez-Anker

SECTION B4. Confocal Features and Algorithms in Melanocytic Tumors

- 15:00-15:30 Common Acquired and Congenital Nevi
R. Gamo
- 15:30-16:30 Dysplastic Nevi and Melanoma
M. Gill
- 16:30-17:00 Coffee Break
- 17:00-17:30 Lentigo Maligna and Lentigo Maligna Melanoma
R. Gamo
- 17:30-18:00 Practical Session with Real-Time Image Acquisition on Patients in Clinic
G. Segurado, V. Velasco
- 20:30-22:30 Networking Dinner with Faculty and Participants

DAY 3 – 05 April 2025

09:00-10:00 Interactive Clinical Cases
M. Gill, R. Gamo, G. Segurado, V. Velasco

SECTION C. Integrating Confocal Microscopy in Clinical Workflow

10:00-10:30 Integrating Confocal Microscopy in Clinical Workflow (I)
M. Gill, M. Ardigo, F. Lacarrubba, R. Gamo, G. Segurado, J. Pérez-Anker, S. González

10:30-11:00 **Coffee Break**

11:00-11:30 Integrating Confocal Microscopy in Clinical Workflow (II)
M. Gill, M. Ardigo, F. Lacarrubba, R. Gamo, G. Segurado, J. Pérez-Anker, S. González

11:30-13:00 Practical Session with Real-Time Image Acquisition on Patients in Clinic
G. Segurado, V. Velasco

13:00-13:30 Post-Course Kahoot Quiz (Evaluation)
G. Segurado, V. Velasco

13:30-14:00 End of the Course and Farewell
S. González

The programme might be subject to changes

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