

Under the
auspices of




1st EFLM online
Postgraduate course


BIostatISTICS IN LABORATORY MEDICINE


1 September - 3 November 2021

Statistics plays a crucial role in many areas of Laboratory Medicine. The knowledge and the correct use of the statistical methods allows us to deal with data variation, to organize and summarize information, to make inference and communicate meaningful experimental results. Moreover, specific statistical methods are frequently applied to routine results and experimental data from validation study designs or verification protocols. In this virtual course, basic statistical concepts, including descriptive and inferential statistics, will be reviewed and applied to real scenarios using a statistical software. Recorded sessions for self-paced learning (theory and practice) will be followed by interactive live sessions with open discussion and case simulation.

The EFLM Postgraduate Courses, organized by EFLM Working Group on Congresses and Postgraduate Education (WG-CPE), aim to focus on attractive topics for young trainees, and specialists. These educational courses are generally organized on 1 or 2 days and the theme, programme and speakers are proposed by the WG-CPE. Due to current pandemic, EFLM is offering these courses on-line on these following two topics: Leadership Skills and Biostatistics.

 **OFFERED BY**
EFLM Working Group on
Congresses and Postgraduate
Education

 **SCHEDULED**
01.09.2021 - 03.11.2021

 **MODE OF DELIVERY**
Online



OUTCOME OF THE COURSE

To learn basic methods of descriptive and inferential statistics and apply them to real scenarios. The knowledge and the correct use of the statistical methods will allow you to deal with data variation, to organise and summarise information, to make inference and communicate meaningful experimental results.

TARGET AUDIENCE

Specialisants/trainees, Residency students, PhD students, Specialist of LM, Lab. Directors

COURSE ORGANIZING COMMITTEE

Eser Sozmen, Zsuzsa Bagoly, Daria Pašalić, Silvia Cattaneo

COURSE SCIENTIFIC COMMITTEE

Matteo Vidali, Andrea Padoan

SPEAKERS



PROF. ANDREA PADOAN

University of Padova, Dept of Medicine
DIMED, Padova, Italy

Andrea Padoan works as Assistant professor of Clinical Biochemistry and Clinical Molecular Biology at Department of Medicine, University of Padova, Italy. He has PhD degree in Biostatistics and Epidemiology, from University of Milano-Bicocca.

He is Director of the “Big Data and Artificial Intelligence” working-group, Italian Society of Clinical Biochemistry and Clinical Molecular Biology and Co-director of the “Statistics within the laboratory” working-group, Italian Society of Clinical Biochemistry and Clinical Molecular Biology. His research and teaching activities include: Metabolic alterations of subcellular functions, Risk in healthcare, Risk Management, Emergency Lab and Medical Statistics and development of new biostatistical algorithm for the evaluation of mass spectrometry data for prostate cancer diagnosis.



DR. MATTEO VIDALI

Fondazione IRCCS Ca' Granda, Ospedale
Maggiore Policlinico, Milan, Italy

Matteo Vidali works as Clinical Pathologist at the Central Laboratory, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy.

He is the coordinator of the Italian Working Group on “Statistics for the Laboratory” of the Italian Society of Clinical Biochemistry and Clinical Molecular Biology (SIBioC) and the statistical reviewer of *Biochimica Clinica*, official journal of SIBioC.

His research activities include: application of statistical techniques and machine learning algorithms to laboratory medicine, analytical method development and validation, analytical method comparison, pre-analytical and analytical quality, instrument alignment, development of software tools for Laboratory Medicine.

PART 1 - STATISTICS THEORY

Recorded sessions accessible on individual basis

From 1 September to 15 October 2021

- 1) Types of variables: how to summarize and display categorical variables and how to summarize and display numerical variables.
A. Padoan (2h session)
- 2) Probability distributions, Central Limit Theorem and confidence intervals.
A. Padoan (1h session)
- 3) Statistical analysis of numerical data.
M. Vidali (2h session)
- 4) Statistical analysis of categorical data.
M. Vidali (1h session)
- 5) Effect Size, Sample Size and statistical Power.
M. Vidali (0.5h session)
- 6) Correlation and Regression.
A. Padoan (1.5h session)
- 7) ROC analysis.
M. Vidali (1h session)

PART 2 - PRACTICAL SESSIONS (with MedCalc)

Recorded sessions accessible on individual basis

From 15 to 29 October 2021

MedCalc statistical software need to be installed by all participants to attend both practical and interactive live sessions.

In due time, the Organising Secretariat will send the instructions to download the software with a special demo license.

Since the free demo version is available for a limited period of time (30 days), installation should be done immediately before accessing these sessions.

- 1) Descriptive statistics.
A. Padoan (1h session)

- 2) Inferential statistics.
M. Vidali (2h session)

PART 3 - INTERACTIVE LIVE SESSIONS

Live sessions scheduled on 2 and 3 November 2021.

Participants will be divided in two groups: A and B.

2 November 2021

GROUP A: h. 15:00-16:00 CET

GROUP B: h. 17:00-18:00 CET

Discussion with participants - *A. Padoan, M. Vidali*

3 November 2021

GROUP A: h. 15:00-16:00 CET

GROUP B: h. 17:00-18:00 CET

Multiple Case simulation by interaction - *M. Vidali*

GENERAL INFORMATION

LIMITED NUMBER OF PLACES AVAILABLE

The Course is upon registration and open to a maximum of **100** participants. Registrations will be accepted **from 12 April 2021** on a first come, first served basis. Deadline for registrations: 15 July 2021.

To register please go to www.mzcongressi.com, section “Virtual events & FAD” and click on the button “Register and login” after having selected the event.

REGISTRATION FEES

EFLM Academy members	€ 150,00
non-EFLM Academy members	€ 200,00
Students/Young scientists - EFLM Academy members	€ 100,00
Students/young scientists - non-EFLM Academy members	€ 150,00

Please note that:

- we identify as “[EFLM Academy Members](#)” those who paid the EFLM Academy annual fee for 2021;
- we identify as “Students and Young Scientists” participants < 35 years old.

HOW TO ACCESS THE COURSE

Recorded sessions (PART 1 & 2) will be accessible online through the MZ Virtual Platform. Interactive live sessions (PART 3) will be accessible through a special link provided by the Organising Secretariat.

Participants will receive all necessary instructions to access the contents.

Organising secretariat



VIRTUAL

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