



SOCIETÀ ITALIANA EMBRIOLOGIA
RIPRODUZIONE E RICERCA

SIERR Update 2023

Artificial Intelligence and IVF instructions for use

ROME (Italy), May 13th 2023

Venue: The Building Hotel
Via Montebello, 126

Preliminary Programme

OVERVIEW

Artificial Intelligence is effectively part of our daily lives. From voice assistants to social media, we are surrounded by systems that analyze information and perform tasks and deductions by simulating human capabilities.

Applications in the field of embryology and reproductive medicine could be diverse and in part represent a reality. However, the use of these technologies requires careful validation of the results and evaluation of the actual clinical effectiveness before they start seeing a widespread introduction in our field. Understanding how they work and defining state of the art is the goal of SIERR Update 2023.

The morning session will provide the theoretical basis and share the evidence to date. We will then devote the afternoon to presentations from players that have developed artificial intelligence tools in our field.

FACULTY

- * *Anastasi Attilio*
- * *Bernsten Jorgen*
- * *Boccato Tommaso*
- * *Borini Andrea*
- * *Campagnolo Luisa*
- * *Canosa Stefano*
- * *Capalbo Antonio*
- * *Casciani Valentina*
- * *Chrimes David*
- * *Colacurci Nicola*
- * *Coticchio Giovanni*
- * *Cozzolino Mauro*
- * *Dal Canto Mariabeatrice*
- * *Diciotti Stefano*
- * *Dini Luciana*
- * *Favero Federico*
- * *Ferrante Matteo*
- * *Garolla Andrea*
- * *Gaudesi Davide*
- * *Gilboa Daniella*
- * *Hickman Christina*
- * *Klinger Francesca Gioia*
- * *Licata Emanuele*
- * *Loewke Kevin*
- * *Nayot Dan*
- * *Padoan Andrea*
- * *Pagliardini Luca*
- * *Pallotti Francesco*
- * *Perugini Michelle*
- * *Pippucci Tommaso*
- * *Pisaturo Valerio*
- * *Rienzi Laura*
- * *Romito Alessia*
- * *Sacchi Lucia*
- * *Scarica Catello*
- * *Sosa Fernandez Laura*
- * *Tomasi Giovanna*
- * *Toschi Nicola*
- * *Vaiarelli Alberto*
- * *Yao Mylene*
- * *Zacà Carlotta*
- * *Zuccarello Daniela*
- * *Zuccotti Maurizio*

09:00 Registration

09:40 Welcome remarks from
*Federazione Nazionale degli
Ordini dei Biologi*

ENPAB

Centro Nazionale Trapianti

*Registro PMA dell'Istituto
Superiore di Sanità*

10:00 Introduction and Course
Description

Valerio Pisaturo

Policlinico Umberto I di Roma

Danilo Cimadomo

Clinica Valle Giulia, GeneralLife IVF

Francesca Gioia Klinger

UniCamillus

Opening Lecture

10:10 AI in everyday life
Stefano Diciotti - Università di
Bologna

SESSION 1

How AI is changing the world

Chair

Maurizio Zuccotti - Università di Pavia

10:30 An introduction to AI: history,
terminology, and relevance
Lucia Sacchi - Università di Pavia

10:45 Q&A
Discussant: *Luciana Dini* - Gruppo
Embriologico Italiano
(GEI-SIBSC); Università Roma
Sapienza

10:50 AI in Healthcare and Research
Nicola Toschi - Università di Roma
Tor Vergata; Harvard Medical School

11:05 Q&A
Discussant: *Nicola Colacurci*
Società Italiana di Ginecologia e
Ostetricia (SIGO);
Università della Campania Luigi
Vanvitelli

11:10 AI in Bioinformatics and Genetics
Tommaso Pippucci - IRCCS
Azienda Ospedaliero-Universitaria di
Bologna

11:25 Q&A
Discussant: *Daniela Zuccarello*
Società Italiana di Genetica Umana
(SIGU); Università di Padova

11:30 COFFEE BREAK

SESSION 2

AI in IVF

Chair

Catello Scarica - New Fertility Group

12:00 AI for reproductive counselling: is it needed?

Alberto Vaiarelli - Clinica Valle Giulia, GeneraLife IVF

12:15 Q&A

Discussant: Andrea Borini

Società Italiana di Fertilità e Sterilità e Medicina della Riproduzione (SIFES-MR); 9.baby, GeneraLife IVF

12:20 AI in the management of male factor infertility

Francesco Pallotti - Università Roma Sapienza

12:35 Q&A

Discussant: Andrea Garolla

Società Italiana di Andrologia e Medicina della Sessualità (SIAMS); Università di Padova

12:40 AI in the laboratory: why?

Luca Pagliardini - Ospedale San Raffaele

12:55 **Discussant: Andrea Padoan**

Società Italiana di Biochimica Clinica e Biologia Molecolare Clinica (SIBioC); Università di Padova

13:00 LUNCH BREAK

SESSION 3

AI players in IVF

PART 1

Moderators

Laura Rienzi – Clinica Valle Giulia, GeneraLife IVF

Antonio Capalbo – Juno Genetics

Federico Favero – ARCTER

14:00 From AI to better clinical outcomes

Christina Hickman - Fairtility

14:15 Q&A

14:20 Improving outcomes for patients by the implementation of AI in PGT

David Chrimes - Cooper Surgical

14:35 Q&A

PART 2

Moderators

Attilio Anastasi – Ospedale del Delta

Alessia Romito – Policlinico Umberto I

Mariabeatrice Dal Canto - Eugin

14:40 Demystifying AI: How can clinics evaluate, use, and communicate AI?

Michelle Perugini – Fujifilm Irvine Scientific, Life Whisperer

14:55 Q&A

15:00 Artificial intelligence for optimizing ovarian stimulation and embryo ranking

Kevin Loewke - Alife

15:15 Q&A

PART 3

Moderators

Mauro Cozzolino – IVI-RMA

Stefano Canosa – Livet, GeneralLife IVF

Emanuele Licata – Ospedale Sandro

Pertini

15:20 The new era of personalized patient counseling: Using AI/ML to expand IVF access

Mylene Yao - Univfy

15:35 Q&A

15:40 iDAScore - Embryo evaluation for both cleavage and blastocyst stages using AI

Jorgen Berntsen - Vitrolife

15:55 Q&A

16:00 COFFEE BREAK

PART 4

Moderators

Giovanni Coticchio – 9.Baby, GeneralLife IVF

Luisa Campagnolo – Università di Roma Tor Vergata

Valentina Casciani – Clinica Valle Giulia, GeneralLife IVF

16:30 Understanding IVF through AI: how we generate the era of computational biology

Daniella Gilboa - AiVF

16:45 Q&A

16:50 Clinical applications of using AI for oocyte evaluation

Dan Nayot (online) – Future Fertility

17:05 Q&A

PART 5

Moderators

Giovanna Tomasi - Centro Riproduzione Assistita (CRA)

Laura Sosa Fernandez – Embryos

Carlotta Zacà – 9.Baby, GeneralLife IVF

17:10 OPERA project: leveraging digital technology for an innovative large-scale multinational collection of ART Real World Data

Davide Gaudesi - Advice Pharma

17:25 Q&A

Closing Lecture

17:30 Novel AI paradigm, from chatting to painting: virtualizing human creativity

Matteo Ferrante and **Tommaso Boccato**

Università di Roma Tor Vergata

17:50 Closing Remarks

Valerio Pisaturo

Policlinico Umberto I di Roma

Daniilo Cimadomo - Clinica Valle Giulia, GeneralLife IVF

Francesca Gioia Klinger

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18:00 **HAPPY HOUR**

SUPPORTING ITALIAN SCIENTIFIC SOCIETIES
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SCIENTIFIC COORDINATORS
Danilo Cimadomo - Valerio Pisaturo

SCIENTIFIC COMMITTEE
Alessandra Alteri - Attilio Anastasi - Luisa Campagnolo
Stefano Canosa - Antonio Capalbo - Lucia De Santis - Fabiana Faja
Giulia Fiorentino - Francesca Gioia Klingler - Federica Innocenti
Sergio Ledda - Emanuele Licata - Francesco Pallotti - Catello Scarica
Laura Sosa Fernandez - Giovanna Tomasi - Carlotta Zacà
Daniela Zuccarello - Maurizio Zuccotti

LANGUAGE: ENGLISH

Free registration for members of
SIERR, GEI-SIBSC, SIAMS, SIBIOC, SIFES-MR, SIGO, SIGU

Registration fee for non-members: 150,00 euros + VAT

1,4 ECM for Gynecologists, Geneticists, Urologists, Endocrinologists,
Biologists, Midwives, Biomedical Laboratory Technicians, Nurses

ORGANIZING SECRETARIAT

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