From poor response to low prognosis concept: The new POSEIDON criteria

13 - 14 October 2017 - Athens, Greece
Overview
Managing patients with impaired or poor ovarian response (POR) is a challenging issue. Number of oocytes retrieved has been adopted as a criterion of POR in most clinical trials, although the threshold number differs considerably between studies. A panel of experts (Patient-Oriented Strategies Encompassing Individualized Oocyte Number, the POSEIDON group) recently proposed new criteria to help guide the physician in handling POR patients. This workshop will introduce the new POSEIDON criteria as a means to improve the management of patients exposed to assisted reproductive technologies, promote more specific approaches to patients with impaired prognosis during IVF, thereby offering better tools with which to optimize IVF success rates.

Learning objectives
By attending this live educational workshop, participants will be able to:
• Grasp the state of art regarding definition of impaired response to ovarian stimulation
• Comprehend the new low prognosis concept and its application in clinical practice
• Individualize and manage women with expected or unexpected low ovarian response to ART according POSEIDON classification

Target audience
This programme is intended for clinicians, embryologists, biologists and scientists working in ART.

Chairs
Carlo Alviggi
Federico II University of Naples
Naples, Italy

Sandro C. Esteves
ANDROFERT - Andrology & Human Reproduction Clinic and University of Campinas (UNICAMP)
Campinas, Brazil

Robert Fischer
Fertility Centre Hamburg
Hamburg, Germany

Peter Humaidan
Fertility Clinic, Skive Regional Hospital and Faculty of Health, Aarhus University
Skive, Denmark

EXCEMED designed this programme in partnership with Omnia Education.
CME Provider

EXCEMED is a non-profit foundation dedicated, since the last four decades, to the development of high-quality medical education programmes all over the world.

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Continuing medical education

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The CME workshop “From poor response to low prognosis concept: The new POSEIDON criteria” held on 13-14 October 2017 in Athens, Greece, is designated for a maximum of 8 (eight) hours of European CME credits (ECMEC). Each medical specialist should claim only those credits that he/she actually spent in the educational activity. EACCME® credits are recognized by the American Medical Association (AMA) towards the Physician’s Recognition Award (PRA). To convert EACCME® credit to AMA PRA category 1 credit, please contact the AMA.

EXCEMED adheres to the principles of the Good CME Practice group (gCMEp).
Venue
This live educational workshop takes place at:

**Athenaeum InterContinental Hotel**
Syngrou Avenue 89-93
Athens, 11745, Greece
Tel. +30-210-9206000
www.ihg.com

Language
The official language of this live educational workshop is English.

CME Provider
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This live educational event is allowing participants to express their own views and opinions through interactive workshops with clinical cases, panel discussions, real-time surveys with voting systems, questions cards and dedicated websites.

Access the dedicated website

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Download the conference application

and enjoy easy access to:
√ xxx xxx
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√ xxx xxx

Any question?
You can pose your question by using the question card in your folder
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√ xxx xxx
√ xxx xxx
Faculty

**Carlo Alviggi**  
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Naples, Italy

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Rome, Italy

**Sandro C. Esteves**  
ANDROFERT - Andrology & Human Reproduction Clinic and University of Campinas (UNICAMP)  
Campinas, Brazil

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Clamart, France

**Robert Fischer**  
Fertility Centre Hamburg  
Hamburg, Germany

**Peter Humaidan**  
Fertility Clinic, Skive Regional Hospital and Faculty of Health, Aarhus University  
Skive, Denmark

**Antonio La Marca**  
University of Modena and Reggio Emilia and Clinica Eugin  
Modena, Italy
## Friday, 13 October 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>9.00</td>
<td>Registration and welcome coffee</td>
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<tr>
<td>9.30</td>
<td>Opening</td>
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<td>R. Fischer [Germany]</td>
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<tr>
<td>9.45</td>
<td>Welcome and introduction</td>
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<td>C. Alviggi [Italy]</td>
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### Session I: Poor ovarian response: The relationship between quantity and quality

**Chair:** R. Fischer [Germany]

<table>
<thead>
<tr>
<th>Time</th>
<th>Lecture</th>
<th>Speaker</th>
<th>Location</th>
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<tbody>
<tr>
<td>10.00</td>
<td>L1: Why The POSEIDON classification?</td>
<td>S.C. Esteves [Brazil]</td>
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<tr>
<td>10.25</td>
<td>L2: What is The POSEIDON classification?</td>
<td>P. Humaidan [Denmark]</td>
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<tr>
<td>10.50</td>
<td>Panel discussion</td>
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<tr>
<td>12.00</td>
<td>Lunch</td>
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### Session II: From predict to treat

**Chair:** R. Fischer [Germany]

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<tr>
<th>Time</th>
<th>Lecture</th>
<th>Speaker</th>
<th>Location</th>
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<tr>
<td>13.15</td>
<td>L3: Markers of ovarian reserve: can we use them for daily clinical practice?</td>
<td>A. La Marca [Italy]</td>
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<td>13.40</td>
<td>L4: The impact of age on oocyte quality</td>
<td>A. Capalbo [Italy]</td>
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<td>14.05</td>
<td>L5: The ART Calculator: estimating a new marker of success in ART</td>
<td>S.C. Esteves [Brazil]</td>
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<tr>
<td>14.30</td>
<td>Panel discussion</td>
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<td>16.00</td>
<td>Reception - social get together</td>
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End of the first day
Saturday, 14 October 2017

**Session III**  Management of The POSEIDON groups

**Chair:** R. Fanchin (France)

- **08.30**  L6: POSEIDON Groups 1 - 2  
  C. Alviggi (Italy)
- **08.55**  L7: POSEIDON Groups 3 - 4  
  P. Humaidan (Denmark)
- **09.20**  L8: Strategy of accumulation in The POSEIDON groups  
  C. Alviggi (Italy)
- **09.45**  🗣️ Panel discussion
- **10.45**  The POSEIDON website  
  S.C. Esteves (Brazil)
- **11.00**  Coffee break

**Session IV**  Practical case studies and discussion

**Chair:** R. Fischer (Germany)

- **11.20**  📊 Case studies 1 - 2  
  C. Alviggi (Italy)
- **12.00**  📊 Case studies 3 - 4  
  P. Humaidan (Denmark)
- **12.40**  📣 General discussion
- **13.30**  Closing remarks
- **13.40**  End of the workshop

Closing lunch
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The following faculty provided information regarding significant commercial relationships and/or discussions of investigational or non-EMEA/FDA approved (off-label) uses of drugs:

**Carlo Alviggi**
Declared receipt of honoraria or consultation fees from Merck

**Antonio Capalbo**
Declared receipt grant and contract from GFI 2015. Receipt of honoraria or consultation fees from Merck and MSD. Declared to be shareholder of GENETYX Srl

**Sandro C. Esteves**
Declared receipt of honoraria or consultation fees from Merck and Besins

**Renato Fanchin**
Declared no potential conflict of interest

**Robert Fischer**
Declared no potential conflict of interest

**Peter Humaidan**
Declared receipt of unrestricted research grants from Merck, MSD and Ferring; of honoraria or consultation fees for lectures from Merck and MSD

The following faculty have provided no information regarding significant relationship with commercial supporters and/or discussion of investigational or non-EMEA/FDA approved (off-label) uses of drugs as of 18 September 2017.

**Antonio La Marca**
Carlo Alviggi obtained his MD degree (1994) with a specialty in Obstetrics and Gynaecology (1998), and a PhD in 2001 at the Faculty of Medicine, University of Naples “Federico II”, Italy. In 1998 he was a visiting fellow in the IVF Unit of the Imperial College of London– Hammersmith Campus, where he also collaborated with the Department of Immunology (Imperial College of London). Thereafter, he collaborated with the Laboratory of Immunology of the Italian National Research Council (Naples), the laboratory of Autoimmunity and Tolerance of the University of California (Los Angeles). This collaborative network resulted in various publications some of which concern new hypotheses on the pathogenesis of pelvic endometriosis. Over recent years, he has been working as associate professor in reproductive medicine at the Fertility Unit of the University of Naples “Federico II” (Department of Neuroscience, Reproductive Science and Odontostomatolgy). Dr Alviggi has published extensively and has been invited to lecture at over 100 international meetings dealing with reproductive medicine and gynaecological endocrinology. He has also served as adhoc reviewer for international journals in these fields. He has participated in several national and international (phase II-III) multicentric, prospective randomised trials. Dr Alviggi’s current research interests are the role of LH in folliculogenesis, the use of LH containing drugs in patients undergoing ovarian controlled stimulation for IVF, the pathogenesis of pelvic endometriosis, oncofertility, reproductive endocrinology and the genetics of human reproduction.
Antonio Capalbo received his Bachelor of Science Degree in Biotechnology from the University of Rome “La Sapienza” and a Ph.D. magna cum laude in Human Genetics at the Catholic University of the Sacred Heart of Rome in 2011. In the same year, he obtained a level II Master’s Degree in Epidemiology and statistical data analysis, also from the Catholic University of the Sacred Heart of Rome. He has been working as a clinical embryologist at G.EN.E.R.A., Reproductive Medicine Centers, Italy, since 2008. During this period, his research has focused on pre-implantation genetic diagnosis and screening and on the development of novel molecular methods to improve pregnancy and take-home baby rates in ART. In 2011 he worked as a research fellow at Reproductive Biology Associates, Atlanta, GA, USA and from 2012 he began collaborating as a consultant embryologist at the Embryonic Stem Cell Laboratories, Assisted Conception Unit of Guy’s Hospital, KCL, London, working on molecular profiling of human blastocyst differentiation. From 2012 he became a genetic consultant and PGD/PGS program coordinator at
Sandro Esteves is Medical and Scientific Director of ANDROFERT-Andrology and Human Reproduction Clinic a referral Fertility Center for male reproduction in Brazil. Dr. Sandro earned his MD. in 1990 from the University of Campinas (UNICAMP), Brazil, where he did residency training in General Surgery and Urology. He completed his training in the United States (1995-1996) as a Research Fellow at the Cleveland Clinic’s Center for Reproductive Medicine. He was awarded a Master Degree in Surgery in 1998, obtained at the University of Campinas (UNICAMP, Brazil), and a PhD. in Medicine (Urology) in 2001, at the Federal University of São Paulo (UNIFESP, Brazil). Dr. Esteves is Board-certified Urologist by the Brazilian Society of Urology (SBU), and certified ART Center director and IVF Consultant by the Brazilian Society of Assisted Reproduction (SBRA) and RedLatinoAmericana de Reproducción Asistida (RedLara). He is a Collaborating Professor in the Department of Surgery (Division of Urology) at UNICAMP (Campinas, Brazil) and Honorary Professor of Reproductive Medicine at the Faculty of Health, University of Aarhus, Denmark. Sandro Esteves is also Research Collaborator at both the Cleveland Clinic’s American Center for Reproductive Medicine (USA) and the Genetic Unit, Department of Biology, Universidad Autónoma de Madrid, (Spain). He holds an honorary title of Clinical Tutor in Urology at the University of Edinburgh (UK). His research/clinical interests include male infertility, reproductive endocrinology, cleanroom technology, and quality management. Dr. Esteves has published over 200 scientific papers in peer-reviewed journals, authored over 70 book chapters, and presented over 150 papers at both national and international scientific meetings. His current Hirsch index (hindex) is 27 while his citation count is more than 2,500. Sandro is also a Faculty member of F1000Prime in the area of reproductive endocrinology & infertility since 2016. He has served as an editor of 5 textbooks related to male infertility, reproductive medicine, and assisted reproductive technology. He is also the guest editor of 3 special issues in scientific journals on topics related to reproductive medicine. Dr. Sandro serves on the Editorial Board of several Journals and is Associate Editor of International Brazilian Journal of Urology and Frontiers in Reproductive Endocrinology (Section Reproduction). Dr. Esteves has been invited as guest speaker at many international meetings in over 30 countries. He is the recipient of the “Alumni of the Year” Award from the Cleveland Clinic Center for Reproductive Medicine, and the Star Award from the American Society for Reproductive Medicine for the last 4 years.
Renato Fanchin is the Chief of the Division of Reproductive Medicine, Department of Gynaecology and Obstetrics, Antoine Béclère Hospital, Clamart, France. He accomplished his specialization in Obstetrics and Gynaecology and Reproductive Medicine in France and obtained his PhD degree from University of Paris-Sud 11 in 2005. Professor Fanchin has been invited to speak in over 150 international meetings, is a full member of the Society for Gynecologic Investigation, and was awarded the Society for Assisted Reproductive Technology Prize Paper by the American Society for Reproductive Medicine in 1999. He is an active member of the INSERM unit 782 and his current research interests include the assessment of ovarian follicular status, ovarian ageing, and controlled ovarian hyperstimulation strategies. Prof. Fanchin, along with his colleagues, has published over 170 peer-reviewed articles in international journals. Under his clinical direction, the Center for Reproductive Medicine at Antoine Béclère Hospital, Clamart, France, is currently ranked number #1 in France in terms of delivery/oocyte retrieval.
Robert Fischer is founder and Medical Director of the IVF unit at the Fertility Center Hamburg - one of Germany’s largest and leading IVF centres. In July 1998 the Fertility Center Hamburg was one of the first centres in Germany, and worldwide, to introduce certified quality management according to the ISO 9001. In 2002, the IVF laboratory became ISO 17025 certified. Prior to these developments, in 1983 he pioneered and was medical director of the first outpatient IVF unit in Hamburg. Author of numerous publications in national and international scientific journals and books, as well as lecturer at conferences worldwide, he is also an active member of the American Society of Reproductive Medicine, founding member of the European Society of Human Reproduction and past member of its advisory committee as well as founding member of the German reproductive organisations, “AG Gynäkologische Endokrinologie und Fortpflanzungsmedizin” and “Berufsverband Reproduktionsmedizinischer Zentren”.

Robert Fischer
Fertility Centre Hamburg
Hamburg, Germany
Peter Humaidan is a specialist in reproductive endocrinology, Professor at The Fertility Clinic at Skive Regional Hospital, Aarhus University, Denmark, and Honorary Professor at Odense University, Denmark. He trained at the Sahlgrenska University Hospital, Gothenburg, Sweden. During his scientific work he has primarily focused on developing individualized treatment protocols for the infertile patient. His doctoral thesis (DMSc) explored the role of LH during the follicular and luteal phases in controlled ovarian stimulation. His main fields of interest are triggering ovulation with GnRH agonist, the use of GnRH antagonists, and OHSS prevention. He is the founder of the international society “The Copenhagen GnRHa Triggering Workshop Group” and board member of the ESHRE SIG Endocrinology Group. He has authored 100+ articles (H-index 26) in international peer reviewed journals as well as the Danish guidelines for OHSS prevention and chapters in textbooks. Peter Humaidan has a wide international scientific network and is frequently invited as a speaker at international conferences.
Antonio La Marca is Professor of Obstetrics and Gynecology at the Mother-Infant Department of the University of Modena and Reggio Emilia, Italy and he is the Medical Director of Clinica Eugin, Modena, Italy. He graduated in Medicine and Surgery at the University of Siena in 1996, specializing in Obstetrics and Gynaecology at the same institution in 2001. In 2006 he obtained a PhD, again at the University of Siena. He has been working at the Institute of Gynaecology and Obstetrics of the University Hospital of Modena since 2003. His clinical activity covers all the field of Reproductive Medicine and Surgery and has taken part in thousands of IVF cycles, laparoscopic and hysteroscopic surgical procedures. Present scientific interests include: ovarian reserve and pharmacological manipulation of ovarian activity. His most impactful articles concerned the physiological significance of AMH and AFC, their measurement and clinical utility. Moreover, he has published a long list of original articles dealing with the prediction of ovarian reserve and response in IVF and the personalization of ovarian stimulation protocols. He is author or co-author of 128 articles published in peer-reviewed journals and authored many chapters in national and international textbooks. He has been an Invited speaker in more than 100 international congresses. He is involved in several phase three and four trials as Principal Investigator and is the recipient of many competitively assigned research funds. He is an active member of many national and international professional and scientific societies and a consultant for the Italian Ministry of Health for female fertility-related issues.
Learning objectives:
• Illustrate the currently accepted criteria used to define “poor responders”
• Grasp the advantages of the new POSEIDON criteria: From the “poor” to “low prognosis” concepts
Learning objectives:

• Understand the stratification of low prognosis according to the new POSEIDON criteria
• Discern predictable and unpredictable low prognosis in ART: rationale physiopathological differences

What is The POSEIDON classification?

P. Humaidan (Denmark)
Learning objectives:
• Assess the benefit of ovarian reserve markers in clinical practice
• Weigh the pros and cons of AFC vs AMH
Learning objectives:

- Grasp the importance of good quality oocytes/embryos toward achieving IVF success
- Acknowledge that age is a reliable predictor of oocyte and embryo quality
The ART Calculator: estimating a new marker of success in ART

S.C. Esteves (Brazil)

Learning objectives:

• Recognize the correlation between the number of oocytes retrieved and IVF success
• Understand the algorithm for identifying the appropriate number of oocytes to achieve at least one euploid embryo

NOTES
POSEIDON Groups 1 - 2
C. Alviggi (Italy)

Learning objectives:
• Identify the concept of hypo-response in ART: epidemiology and clinical implications
• Consider treatment options, management, and topics for future research
Learning objectives:

• Comprehend the definitions and clinical implications for women with a priori low prognosis in ART
• Be aware of treatment opinions, management, and topics for future research
Learning objectives:

- Explain the rationale for accumulation programs in ART
- Exploit the Duo-Stim approach, considering patients and protocols
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