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ESHRE PAGES – EXECUTIVE SUMMARY

Revised guidelines for good practice in IVF laboratories (2015)†

The ESHRE Guideline Group on Good Practice in IVF Labs

Maria José De los Santos[1,*], Susanna Apter[2], Giovanni Coticchio[3], Sophie Debrock[4], Kersti Lundin[5], Carlos E. Plancha[6], Fernando Prados[7], Laura Rienzi[8], Greta Verheyen[9], Bryan Woodward[10], and Nathalie Vermeulen[11]

[1]IVI Valencia, Valencia, Spain [2]Fertilitetscentrum Stockholm, Stockholm, Sweden [3]Biogenesi, Reproductive Medicine Centre, Monza, Italy [4]Leuven University Hospital, Leuven, Belgium [5]Sahlgrenska University Hospital, Göteborg, Sweden [6]Inst. Histology and Developmental Biology, Faculty of Medicine of Lisbon, Lisbon, Portugal [7]Hospital HM Montepríncipe, Madrid, Spain [8]Genera c/o Clinica Valle Giulia, Roma, Italy [9]UZ Brussels, Brussels, Belgium [10]IVF Consultancy Services, Leicester, UK [11]European Society of Human Reproduction and Embryology, Grimbergen, Belgium

*Correspondence address. E-mail: mariajose.delossantos@ivi.es

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STUDY QUESTION: Which recommendations can be provided by the European Society of Human Reproduction and Embryology Special Interest Group (ESHRE SIG) Embryology to support laboratory specialists in the organization and management of IVF laboratories and the optimization of IVF patient care?

SUMMARY ANSWER: Structured in 13 sections, the guideline development group formulated recommendations for good practice in the organization and management of IVF laboratories, and for good practice of the specific procedures performed within the IVF laboratory.

WHAT IS KNOWN ALREADY: NA.

STUDY DESIGN, SIZE, DURATION: The guideline was produced by a group of 10 embryologists representing different European countries, settings and levels of expertise. The group evaluated the document of 2008, and based on this assessment, each group member rewrote one or more sections. Two 2-day meetings were organized during which each of the recommendations was discussed and rewritten until consensus within the guideline group was reached. After finalizing the draft, the members of the ESHRE SIG embryology were invited to review the guideline.

PARTICIPANTS/MATERIALS, SETTING, METHODS: NA.

MAIN RESULTS AND THE ROLE OF CHANCE: The guideline provides recommendations on the general organization of an IVF laboratory (staffing and direction, quality management, laboratory safety), and on the specific aspects of the procedures performed in IVF laboratories (Identification of patients and traceability of their reproductive cells, consumables, handling of biological material, oocyte retrieval, sperm preparation, insemination of oocytes, scoring for fertilization, embryo culture and transfer, and cryopreservation). A last section provides recommendations regarding an Emergency plan for IVF laboratories.

LIMITATIONS, REASONS FOR CAUTION: Evidence on most of the issues described is scarce, and therefore it was decided not to perform a formal search for and assessment of scientific evidence. However, recommendations published in the EUTCD and relevant and recent documents, manuals and consensus papers were taken into account when formulating the recommendations.

WIDER IMPLICATIONS OF THE FINDINGS: Despite the limitations, the guideline group is confident that this document will be helpful to directors and managers involved in the management and organization of IVF laboratories, but also to embryologists and laboratory technicians performing daily tasks.

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Key words: IVF guidelines / ESHRE / Embryology / good practice / special interest group / laboratory

Introduction

In line with the scope of the European Society of Human Reproduction and Embryology (ESHRE), the revised guidelines for good practice in IVF laboratories (2015) represent an updated version of the guidelines published in 2008 (Magli *et al.*, 2008). The aim is to provide a wider coverage of key aspects of the IVF laboratory, to give continuous support to laboratory specialists and consequently contribute to improving IVF patient care.

The current document is an Executive Summary and only contains the table of contents. The full length article can be found online at http://humrep.oxfordjournals.org/.

(1) Staffing and direction
  - 1.1 Laboratory director
  - 1.2 Laboratory supervisors
  - 1.3 Clinical embryologists

(2) Quality management

(3) Laboratory safety
  - 3.1 Laboratory design
  - 3.2 Laboratory air quality
  - 3.3 Laboratory equipment
  - 3.4 Cryopreservation facilities and material
  - 3.5 Infectious agents
  - 3.6 Protective measures

(4) Identification of patients and traceability of their reproductive cells

(5) Consumables

(6) Handling of biological material

(7) Oocyte retrieval

(8) Sperm preparation

(9) Insemination of oocytes
  - 9.1 Conventional IVF
  - 9.2 ICSI procedure

(10) Scoring for fertilization

(11) Embryo culture and transfer

(12) Cryopreservation

(13) Emergency plan

Supplementary data: Methodology

References

Kovacic B, Plas C, Woodward BJ, Verheyen G, Prados FJ, Hreinsson J, De Los Santos MJ, Magli MC, Lundin K, Plancha CE. The educational and professional status of clinical embryology and clinical embryologists in Europe. *Hum Reprod* 2015;**30**:1755–1762.

Magli MC, Van den Abbeel E, Lundin K, Royere D, Van der Elst J, Gianaroli L, Committee of the Special Interest Group on Embryology. Revised guidelines for good practice in IVF laboratories. *Hum Reprod* 2008; **23**:1253–1262.

The Istanbul consensus workshop on embryo assessment: proceedings of an expert meeting. *Hum Reprod* 2011;**26**:1270–1283.