

## Training in ART

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Arusha 17 December 2007

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Nanni Ebermann

15 januari 2008 2

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## Several groups need education and training

- The public, locally and globally  
→The importance of infertility treatment
- Authorities
- Gynaecologists
- Embryologists – cell biologists
- Nurses or midwives

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## Outreach teaching

Information about sexual health  
Infertility  
Contraception  
Infections

School programmes  
Meetings with representatives of media  
Personal contacts with authorities

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## Training of an ART team

- Gynaecologist
- Embryologist
- Nurse or midwife
- Training as a team
- If some earlier experience, minimum a of a three-month period
- If no experience earlier, six month period
- ICSI training does not belong to the low cost programme

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## Assisted reproduction

- Insemination
  - Spouse's sperm
  - Donor sperm
- In vitro fertilization
  - Couple's own gametes
  - Donor gametes or embryos
- Intracytoplasmic sperm injection
  - Equipment and maintenance problematic in a low cost programme

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## Insemination in male infertility

- Optimally at least 1 million motile spermatozoa available after sperm preparation, worth while to try if fewer
- Anejaculation
- Low semen volume
- When donor sperm necessary
- Clomiphene citrate stimulation of the spouse improves pregnancy rate
- Sperm preparation with swim-up
  - But if the man HIV-infected, washing and centrifugation x2

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## In vitro fertilisation (IVF)

- Tubal infertility
- Endometriosis
- Mild male infertility
  - If no success with IUI
- Unexplained infertility
- Anovulation to avoid multiple pregnancies

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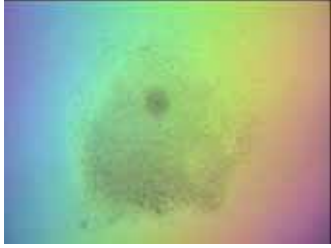
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Oocyte with cumulus

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A micrograph showing a large, roughly spherical cell (the oocyte) surrounded by a dense, multi-layered structure (the cumulus oophorus). The image has a color gradient from blue on the left to red on the right. A horizontal rainbow-colored bar is positioned above the image.

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M II oocyte



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A micrograph of a single cell, identified as an M II oocyte. The cell is roughly spherical with a distinct nucleus and is surrounded by a thin, clear layer. The background is a light blue color.

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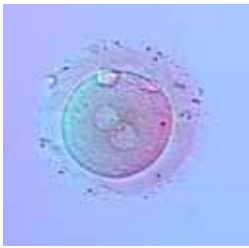
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A micrograph showing a cell similar to the M II oocyte, but with a more complex internal structure, possibly indicating a different stage of maturation. The cell is surrounded by a thin layer. The background is a light blue color. A horizontal rainbow-colored bar is positioned above the image.

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### Training of the nurse/midwife

- Counselling and support
- Advice at practical procedures
- Assistance in insemination, oocyte retrieval and embryo transfer
- Ultrasound scans
- In parallel with a colleague in an experienced ART unit
- Follow-up of the pregnancy

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### Training of the medical doctor/gynaecologist

- Selection and screening
- Diagnosing and planning
- Monitoring of the follicles by ultrasound
- Oocyte retrieval
- Embryo transfer, single embryo transfer in any conditions
- Follow up of the pregnancy

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### Training of the embryologists

- Earlier laboratory training
  - Cell culture optimal
  - Microbiology
- Semen analysis, WHO criteria
- Sperm preparation
  - Swim-up
  - Centrifugation and washing
- Identification of the oocytes
- Insemination of the oocytes
- Identification of pronuclei after denudation
- Aspiration to embryo transfer catheter
- Vitriification of the supernumerary zygotes, thawing
- Maintenance of the equipment
- Cleanliness

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### After initiation of the programme

- Support available
- Visit to oversee
- Communication in any questions, GSM

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### Training of the training unit

- Pedagogic skills
- Good training atmosphere

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What is easy for a snow hare is not that in human

Lepus timidus, triplets born 4 May 2002, Lohja, Finland

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