WHAT IS ASSISTED REPRODUCTIVE TECHNOLOGY?

INFORMATION FOR PATIENTS FROM THE AFRICAN NETWORK AND REGISTRY FOR ART

Assisted Reproductive Technology (ART) is a form of treatment to help women and couples get pregnant. It involves taking eggs from a woman's body and then fertilizing the eggs with sperm in the ART laboratory. One or more fertilized eggs are then placed back in the womb to achieve a pregnancy.

*The scientific definition of ART is "All interventions that include the in vitro handling of both human oocytes and sperm or of embryos for the purpose of reproduction" (International Glossary on Infertility and Fertility Care, 2017)

WHO CAN BENEFIT FROM ART?

Any person or couple struggling or unable to get pregnant may benefit from ART. For some patients ART may be the only treatment for getting pregnant, while others may benefit after other forms of treatment have failed. In Africa, the commonest reasons to use ART are blocked tubes, weak sperm, ovulation disorders and endometriosis but there are also many other reasons.

WHAT IS AN ART CENTRE?

It is a hospital or clinic that provides ART through a team of medical doctors, laboratory staff and nurses who have been trained in ART. In Africa, the majority of ART centres are located in the private health sector.

WHAT IS AN ART CYCLE?

ART involves a series of steps all of which together are called a "ART cycle". Typically, these steps are:

1. **MEDICATION TO BOOST THE GROWTH OF EGGS.**

This usually involves daily injections, and most patients can learn how to inject themselves at home. Step 1 takes approximately 10 days.

2. **REMOVAL OF THE EGGS.**

This is done in the ART centre. The eggs are collected with a needle that is placed through the vagina into the ovaries. The woman is given the necessary pain relief during the egg collection., including anesthesia.

3. **FERTILIZING THE EGGS WITH SPERM IN THE LABORATORY**

The collected eggs are placed in a structure called incubator in the ART laboratory. They are then fertilized with sperm from the husband, partner, or sometimes a sperm donor.

4. **GROWTH OF FERTILIZED EGGS IN THE LABORATORY.**

The laboratory staff looks through the microscope to assess if the eggs have fertilized and how many. Fertilized eggs start dividing into a group of cells called "embryo". Embryos usually stay in the incubator for 3-5 days. Most eggs fertilize successfully and grow into embryos, but some may not.

5. **TRANSFER OF THE EMBRYO(S) TO THE WOMB.**

One or more embryos are taken from the incubator and transferred into the womb of the patient. This is a short procedure which is not painful. Afterwards, the patient continues taking medication to support that the embryo(s) embed ("implant") in the womb.

6. **FREEZING OF REMAINING EMBRYOS.**

Good quality embryos that were not transferred are usually frozen. They can be thawed and transferred at a later stage if the patient did not get pregnant, or if she did but wishes to have another baby.

7. **PREGNANCY TEST AND ULTRASOUND SCAN.**

About 10 days after the embryo transfer a pregnancy test is done. If the test is positive, an ultrasound scan is done around 7-8 weeks of pregnancy to confirm that a baby is growing in the womb.

8. **ONGOING CARE**

Ongoing pregnancy care is provided by the ART centre or the general health system in the country. It is important for ART centres to follow up on the outcome of the pregnancy and know whether a baby was born. If the cycle was not successful, the patient and couple will be counselled on their options for further treatment.

IS ART EFFECTIVE?

ART is not a guarantee for a baby but each year many thousands of babies are born from ART around the world. Many factors can affect the chance of success including the age of the woman, number of attempts (treatment cycles) and the individual circumstances of each person or couple.

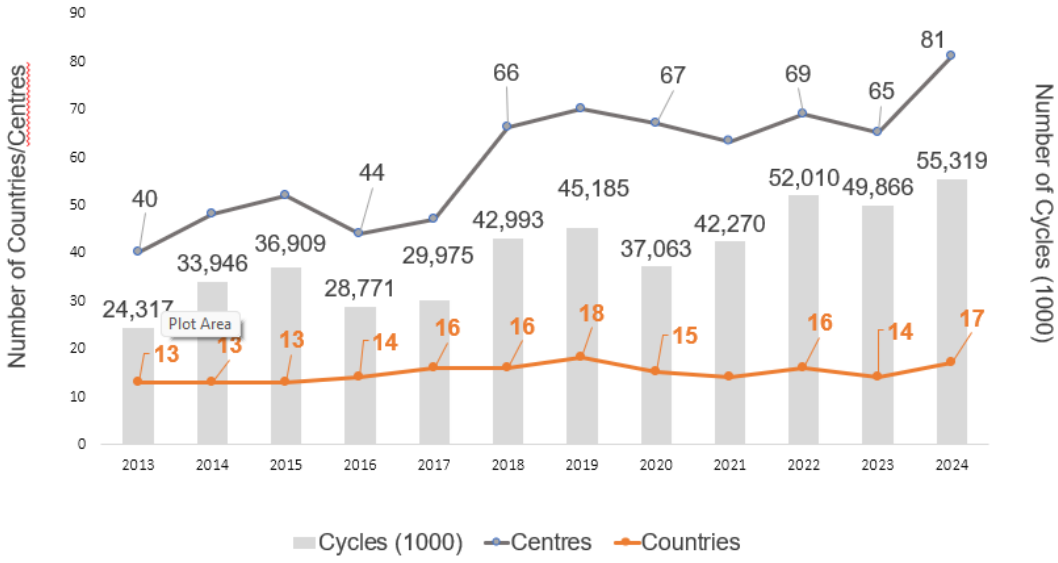
IS ART SAFE?

ART is safe and serious complications caused directly by ART are very rare. However, pregnancy complications can occur and some of these can be serious for mother and baby. Complications are more frequent in multiple pregnancies (two or more babies growing in the womb) compared to singleton pregnancies (one baby).

ANARA stands for “African Network and Registry for ART”. The network represents participating ART centres who voluntarily submit information on the treatment they provide to the registry. All data are anonymous, meaning no patient can ever be identified from the information that is shared. In addition, no data from each individual ART centers are ever disclosed. The registry monitors how available, effective and safe ART care is in Africa. ART monitoring is an important part of quality ART and happens in most regions of the world. Centres belonging to ANARA are listed on the ANARA website.

FIGURE 1: ART monitoring in Africa
(Source: The African Registry for ART, 2024)

The graph shows the number of cycles, centres and countries in the registry and network since ANARA was formed.



This factsheet is brought to you by the African Network and Registry for ART (ANARA) in cooperation with the Latin American Registry of Assisted Reproduction (RLA) and Network (REDLARA). It is endorsed by the International Committee for Monitoring ART (ICMART), the African Federation of Fertility Societies (AFFS)*, and Groupe Interafricain d’Etude, de Recherche et d’Application sur la Fertilité (GIERAF)**.

This information does not replace individual medical advice of a qualified care provider in ART.