



Artificial Reproductive Technology Desirable / Undesirable Outcomes

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Definition of infertility

What is Artificial Reproductive Technology (ART)

History of ART

Complications of ART including early pregnancy –
immediate, short term and long term seen on ultrasound

Infertility has defined as a

“ A disease characterised by the failure to establish a clinical pregnancy after 12 months of regular, unprotected sexual intercourse or due to an impairment of a person’s capacity to reproduce, either as an individual or as a couple”

European Society of Human Reproduction and Embryology (2021)

Artificial Reproductive Technology

An Intrauterine Insemination (IUI) cycle refers to steps in a process that involves:

- Ovarian stimulation
- Semen prep in a laboratory
- Transferring resulting prepared sample of sperm to the female reproductive tract



Artificial Reproductive Technology

An In Vitro Fertilisation (IVF) and an Intracytoplasmic Sperm Injection (ICSI) cycle refers to steps in a process that involves:

- Ovarian stimulation
- Surgical removal of eggs from the ovary
- Fertilization with sperm in a laboratory
- Transferring resulting embryo(s) to the female reproductive tract



www.lifefertility.com.au



www.vitrolife.com

Ultrasound has been fundamental in the advancement of ART treatments

Ultrasound is used for the assessment of the sub-fertile woman,
monitoring ovarian response to medication with follicle tracking scans,
oocyte retrieval, embryo transfer, assessment of early pregnancy and the
treatment of complications of ART including in early pregnancy



The Lancet

Volume 302, Issue 7831, 29 September 1973, Pages 728-729



Letters to the Editor

TRANSFER OF A HUMAN ZYGOTE

D. De Kretzer, P. Dennis, B. Hudson, J. Leeton, A. Lopata, K. Outch, J. Talbot, C. Wood

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[https://doi.org/10.1016/S0140-6736\(73\)92553-1](https://doi.org/10.1016/S0140-6736(73)92553-1)

Human Fertility, September 2009; 12(3): 137–143

Thirty years of IVF: The legacy of Patrick Steptoe and Robert Edwards

PETER R. BRINSDEN

Consultant Medical Director, Bourn Hall Clinic, Cambridge, UK

Abstract

In this article, the author presents a review of the early collaboration between Patrick Steptoe and Robert Edwards, gynecologist and scientist, which ultimately led to the birth of Louise Brown in 1978, the first baby to be born as a result of *in-vitro* fertilisation. Following this momentous event, the author shows how Steptoe and Edwards continued to influence further developments in the treatment of infertile couples, both in the United Kingdom and Worldwide.

Keywords: *In-vitro fertilisation (IVF), IVF treatment*

Pioneering work by Robert Edwards, Patrick Steptoe and Jean Purdy in the development of IVF



‘This is not the beginning of the end, but only the end of the beginning’

Patrick C Steptoe, Quote from the Press Conference following the birth of Louise Brown, 25 July 1978

Edwards and Steptoe were awarded the Nobel Peace Prize for Physiology or Medicine ‘for the development of in vitro fertilisation’
in 2010

A History of IVF

1978 – Birth of Louise Brown - worlds first IVF Baby

1984 – Birth of first Frozen Embryo Transfer Baby

1986 – Birth of First Babies born using Frozen Oocytes

1992 – Birth of First ICSI Baby

1978 First IVF Baby UK

Natural menstrual cycle

Laparoscopic retrieval of a single pre-ovulatory follicle

Fertilised *in vitro*

Single embryo transferred

1981 First IVF Baby USA

Ovaries stimulated with human menopausal gonadotropin induced the development of several follicles to produce oocytes (controlled ovarian stimulation)

Laparoscopic retrieval of pre-ovulatory oocytes

Fertilised *in vitro*

Cleavage stage embryos transferred

FERTILITY AND STERILITY

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**PREGNANCY FOLLOWING INTRAUTERINE IMPLANTATION OF AN EMBRYO
OBTAINED BY IN VITRO FERTILIZATION OF A PREOVULATORY EGG**

ALEXANDER LOPATA, M.B., B.S., Ph.D.*

IAN W. H. JOHNSTON, M.B., B.S., M.G.O., F.R.C.O.G., F.Aust.C.O.G.†

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ANDREW I. SPEIRS, M.B., B.S., M.R.C.O.G., F.Aust.C.O.G.†

A normally progressing pregnancy has been established by implanting an eight-cell embryo into the uterine cavity of an infertile woman. The embryo was obtained by in vitro fertilization of a preovulatory egg aspirated at laparoscopy 28 hours after the beginning of the luteinizing hormone surge during the patient's natural menstrual cycle. Elevated levels of serum human chorionic gonadotropin and progressively increasing levels of total urinary estrogens and pregnanediol confirmed the presence of an early pregnancy. Ultrasound examination revealed an intrauterine gestational sac at 5 weeks, a 1-cm fetus with fetal heartbeat at 7 weeks, and an active, normally growing fetus at 13 and 16 weeks. Chromosome analysis at this time revealed no abnormality, and the α -fetoprotein level was within normal limits. The patient is due to be delivered on or about June 28. Fertil Steril 33:117, 1980

First report of successful ultrasound-guided
oocyte retrieval – Copenhagen 1981



Letters to the Editor

**COLLECTION OF HUMAN
OÖCYTES FOR IN VITRO
FERTILISATION BY
ULTRASONICALLY GUIDED
FOLLICULAR PUNCTURE**

Suzan Lenz, J.Glenn Lauritsen, Merete Kjellow

[https://doi.org/10.1016/S0140-6736\(81\)92335-7](https://doi.org/10.1016/S0140-6736(81)92335-7)

- First Oocyte retrievals was performed by laparoscopy
- Associated risks of general anaesthetic, surgery and post operative risks

Implantation rates

The Early Days

< 5 % per embryo transferred

- Aggressive ovarian stimulation protocols
- Increasing the number of embryos transferred into the uterus

Desired Outcome



Complications of Artificial Reproductive Technology

Immediate:

- Infection
- Haemorrhage
- Ovarian Hyperstimulation Syndrome
- Ovarian Torsion

Short Term:

- Ovarian Hyperstimulation Syndrome
- Risks of early pregnancy

Long Term:

- Risks of multiple pregnancy

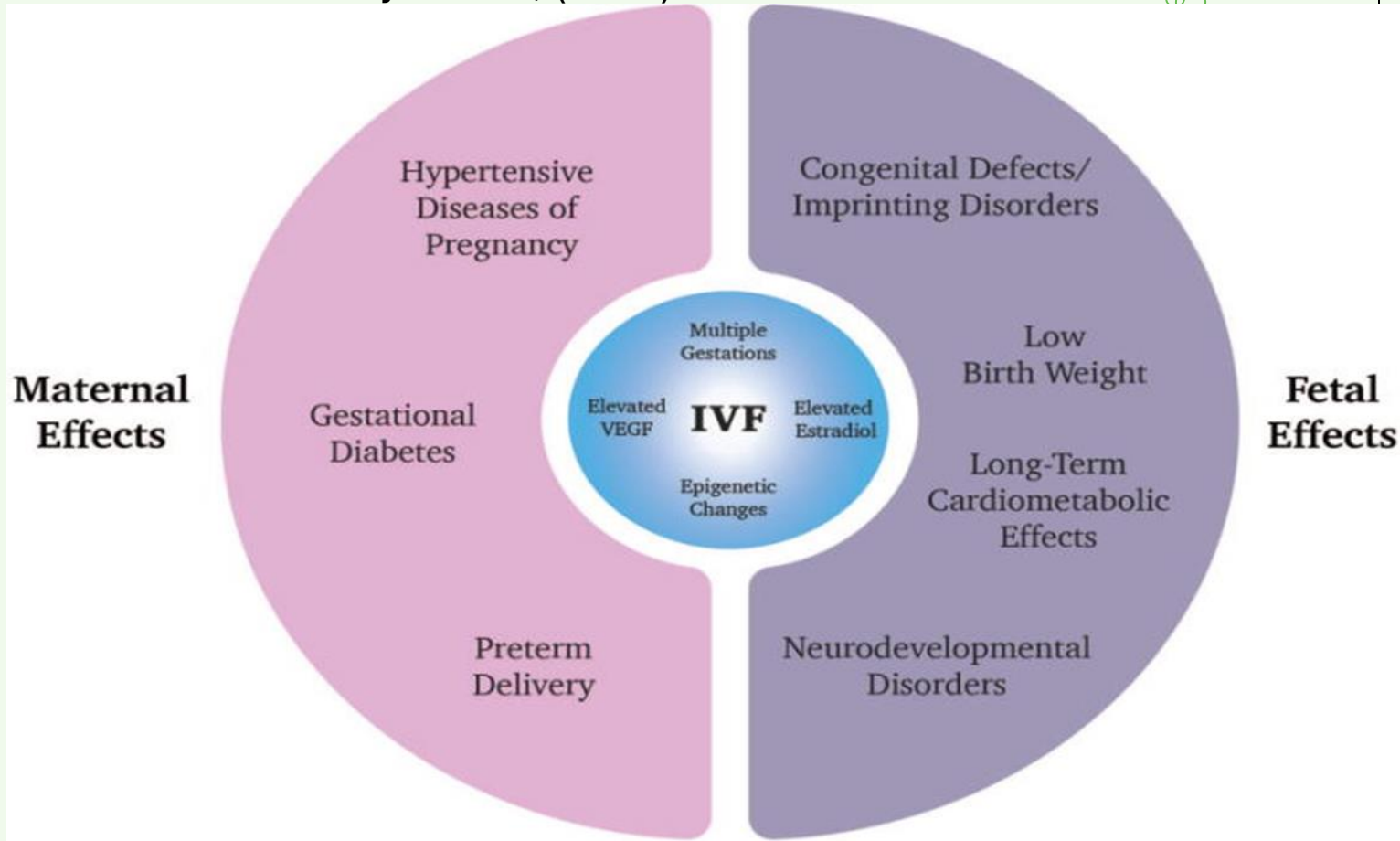


Figure 1. Summary of adverse maternal and fetal affects associated with IVF

Adverse maternal outcomes associated with IVF include hypertensive diseases of pregnancy, gestational diabetes, and preterm delivery.

Fetal effects include low birth weight, congenital defects/imprinting disorders, as well as potentially neurodevelopmental disorders and long-term cardiometabolic effects.

The risk of multiple gestations in IVF pregnancies is the main driver for these outcomes, but other mechanisms are actively being investigated.

Features of IVF including hormonal stimulation that leads to increased oestradiol and VEGF levels may contribute.

Epigenetic alterations in imprinted genes after hormonal stimulation and embryo culture may also be a driver for some of these adverse outcomes.

Risks of Oocyte Retrieval

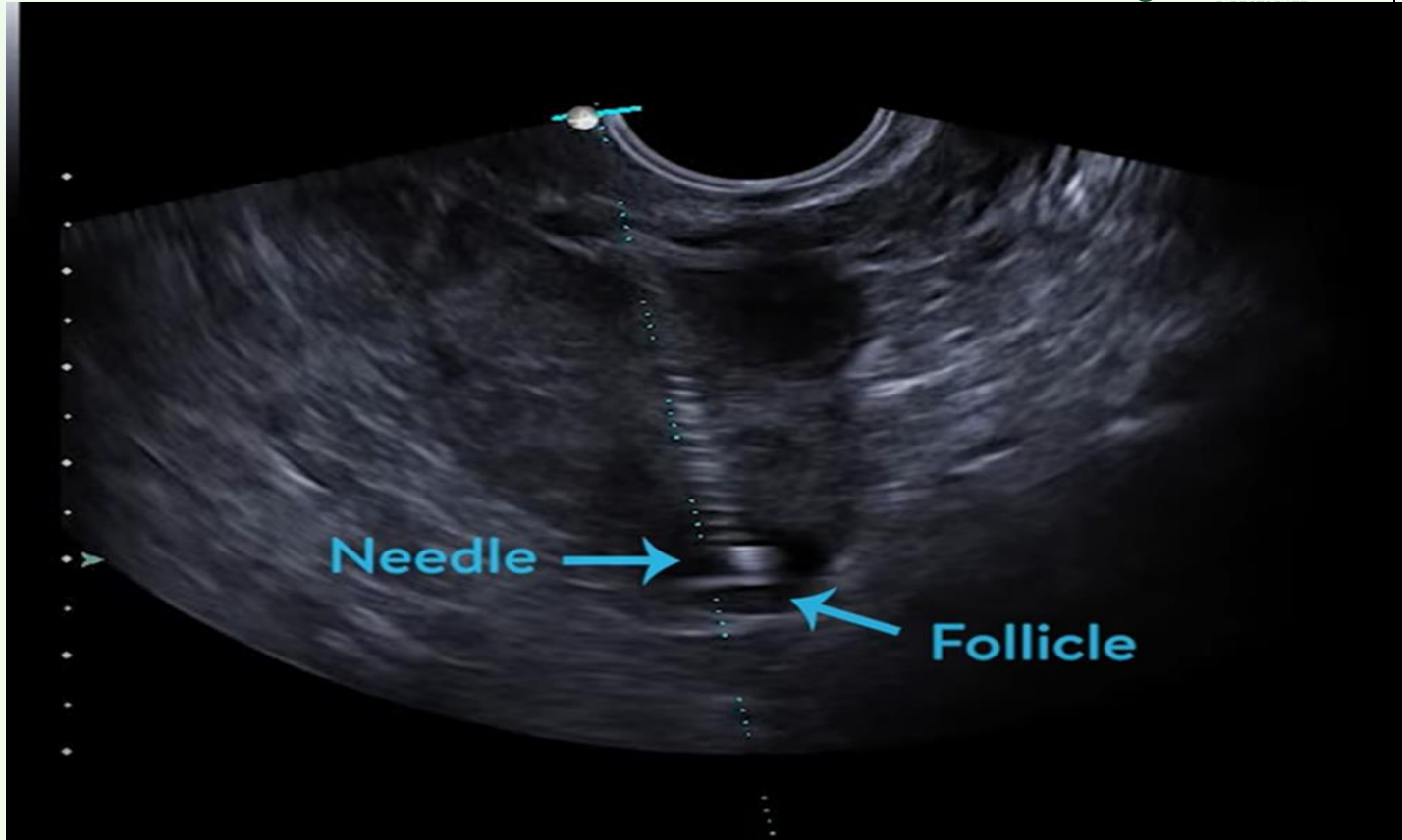
Involves the collection of eggs from the ovarian follicles using a needle under the guidance of transvaginal ultrasound

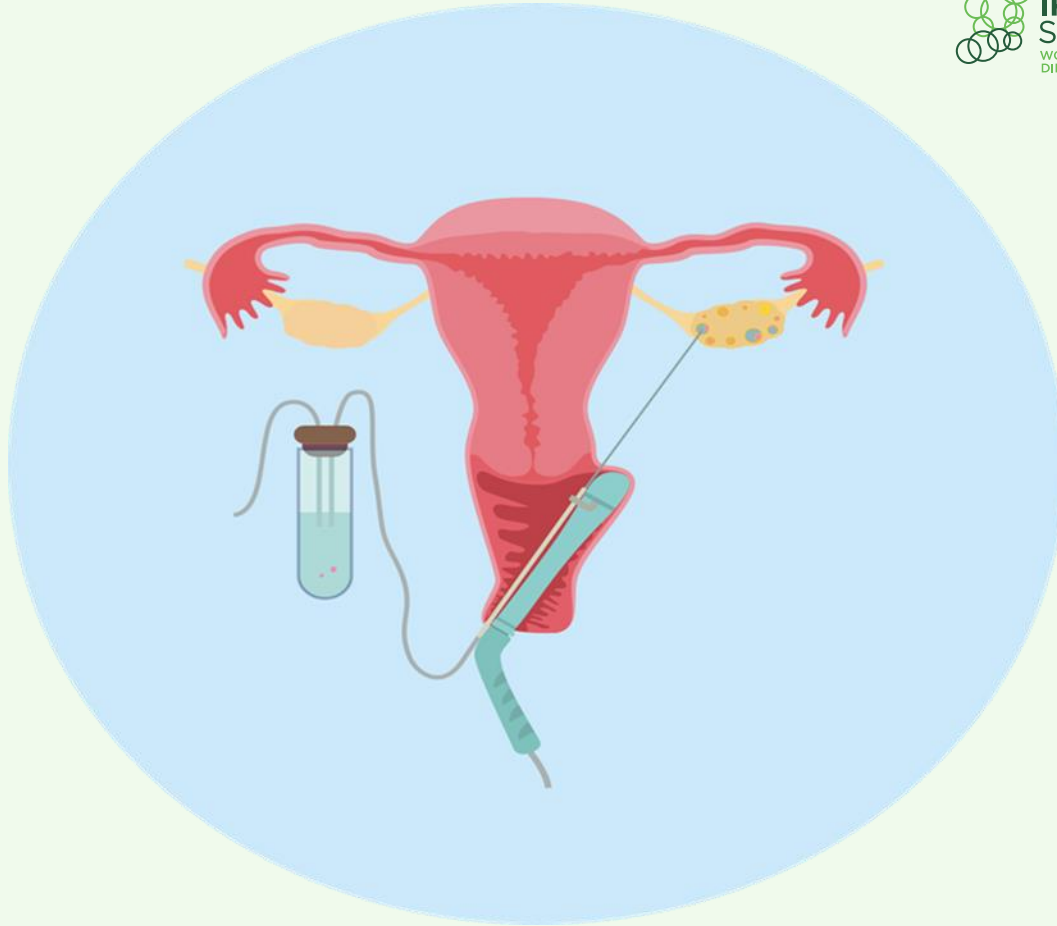
Complications of Oocyte retrieval include:

- Blood vessel injury
- Bowel perforation
- Ureteric injury
- Introduction of infection into the pelvis or abdomen

Rate of complications post OR 0.4% (Levi-Setti et al, 2018)







Infection

Detailed medical history prior to starting controlled ovarian stimulation

Identification of those women with comorbidities

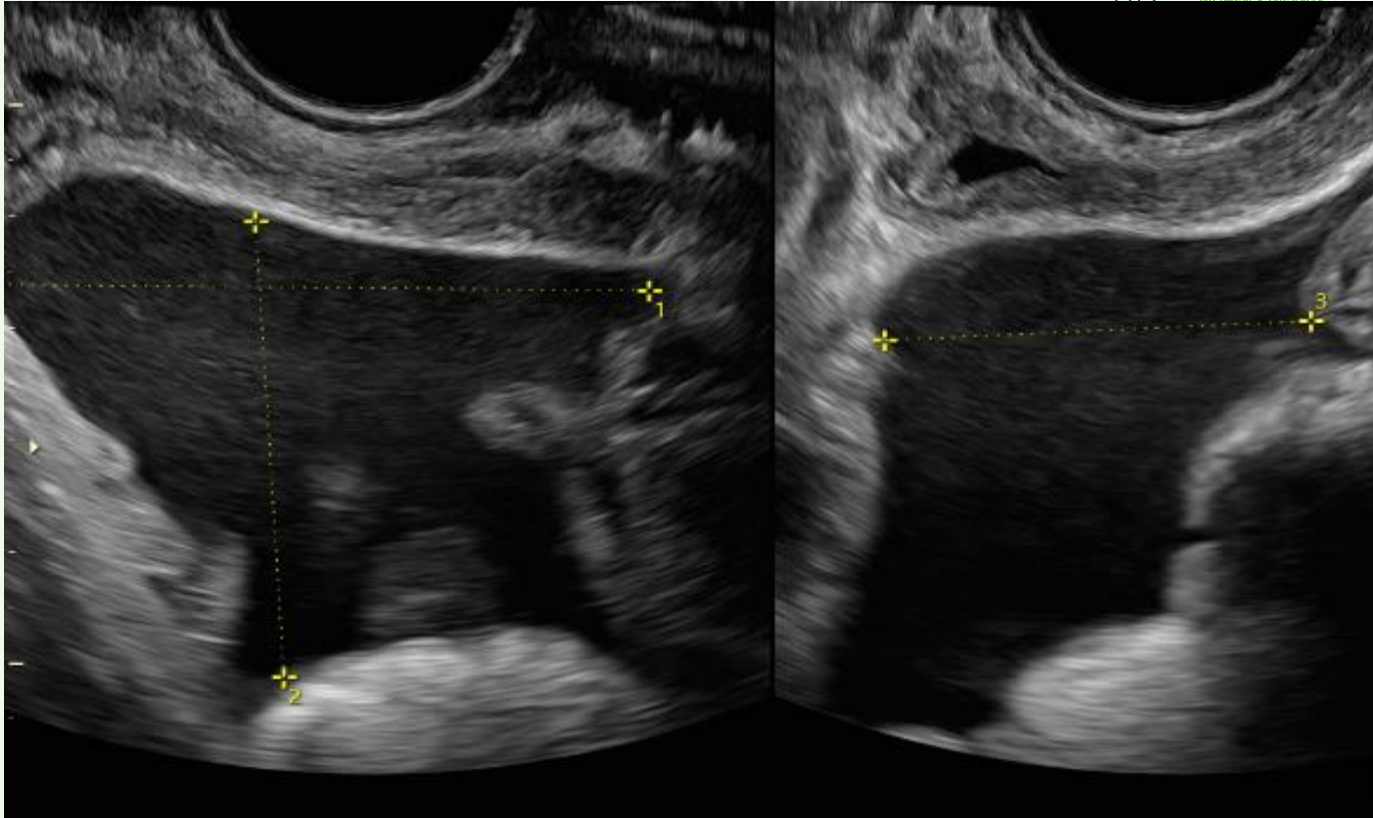
Identification of at-risk groups (immunocompromised, diabetics, severe endometriosis, history of multiple surgeries)

Use of prophylaxis antibiotics in this group

Haemorrhage

Oocyte retrieval is performed using Trans Vaginal Ultrasound

- Procedural risk of haemorrhage
- Limit the number of vaginal punctures to two where possible
- Use of ultrasound to identify peripheral follicles prior to puncture and aspiration
- Use of colour Doppler to identify blood vessels



Ovarian Hyperstimulation Syndrome (OHSS)



Ovarian hyperstimulation syndrome (OHSS) is an iatrogenic condition

It is a complication that can occur in assisted reproductive technology treatments

Characterized by an abnormally high response of the ovary to the medication administered, especially in *in vitro* fertilization

Excessive growth of ovarian follicles

Accumulation of fluid in the abdominal and lung cavities

A water imbalance in the body

Incidence of OHSS:

Death due to OHSS is rare, with a mortality rate estimated at 1:400 000–1:500 000 stimulated cycles (Brindsen et al, 1995)

0.4 % incidence of Ovarian Hyperstimulation Syndrome reported by the European IVF- monitoring consortium in 2016 (De Geyter et al, 2020)



Increase of estradiol and progesterone



Larger ovaries



Larger belly



Damaged liver



Damaged kidney



Thrombotic processes

Mild	✓	✓ Mild				
Moderate	✓	✓	✓			
Severe	✓	✓	✓	✓	✓	✓

Risk Factors for OHSS

IVF / ICSI treatment with controlled ovarian stimulation

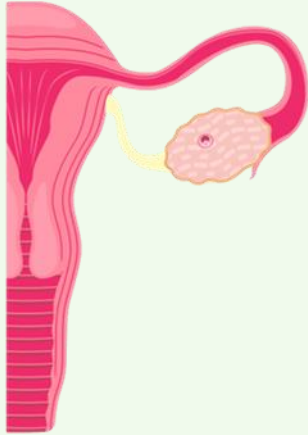
Polycystic Ovarian Syndrome (PCOS)

High AMH (> 30)

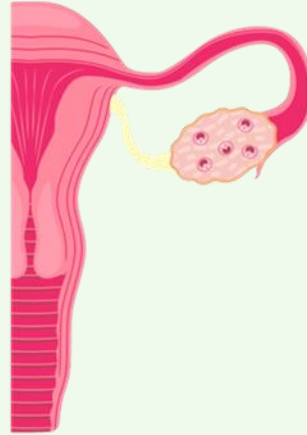
Age (<35)

Low BMI

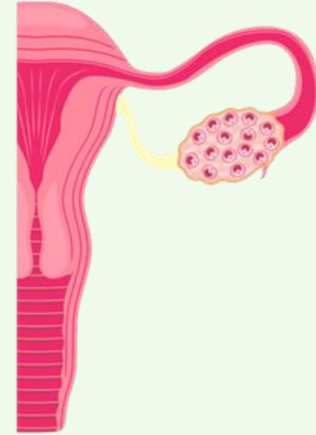
Previous ART cycle with OHSS



Natural Ovulation



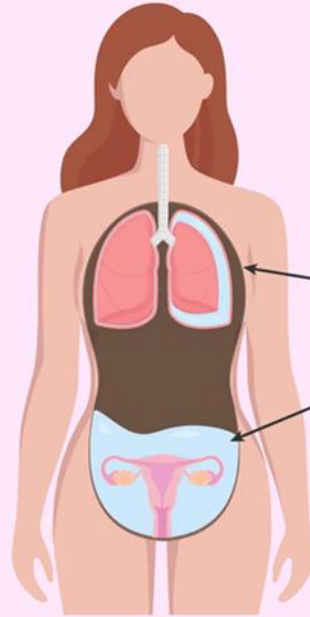
Controlled Stimulation



Ovarian Hyperstimulation

Signs and Symptoms of OHSS

- Severe abdominal pain
- Bloating with enlarged abdomen
- Rapid weight gain
- Severe nausea and vomiting
- Decreased urinary output
- Shortness of breath
- Symptoms of DVT/PE
- Increased ovarian size on ultrasound with large areas of adnexal free fluid



Appearance of liquid
in the abdominal
and lung cavity

Treatment of OHSS

Identify those women at risk of OHSS

Use of GnRH agonist for final oocyte maturation

Cancel cycle post oocyte retrieval, cryopreserve embryos and plan Frozen Embryo Treatment cycle

Use of carbergoline (Dopamine agonist) 0.5mgs/day for 5 to 7 days to those women at risk of OHSS

Use of antagonist protocol for those women at risk of OHSS for secondary prevention of severe OHSS

Use of venous thromboembolism prophylaxis for women who develop OHSS

ESHRE guideline: ovarian stimulation for IVF/ICSI[†]

The ESHRE Guideline Group on Ovarian Stimulation, Ernesto Bosch¹, Simone Broer², Georg Griesinger^{ID 3}, Michael Grynberg⁴, Peter Humaidan⁵, Estratios Kolibianakis⁶, Michal Kunicki⁷, Antonio La Marca⁸, George Lainas^{ID 9}, Nathalie Le Clef^{ID 10}, Nathalie Massin¹¹, Sebastiaan Mastenbroek¹², Nikolaos Polyzos¹³, Sesh Kamal Sunkara¹⁴, Tanya Timeva¹⁵, Mira Töyli¹⁶, Janos Urbancsek¹⁷, Nathalie Vermeulen^{ID 10}, and Frank Broekmans^{ID 2,*}

Prevention of OHSS

Which GnRH agonist medication as a method of triggering will add to the prevention of OHSS also with regards to overall efficacy

A GnRH agonist trigger is recommended for final oocyte maturation in women at risk of OHSS

Strong
⊕○○○

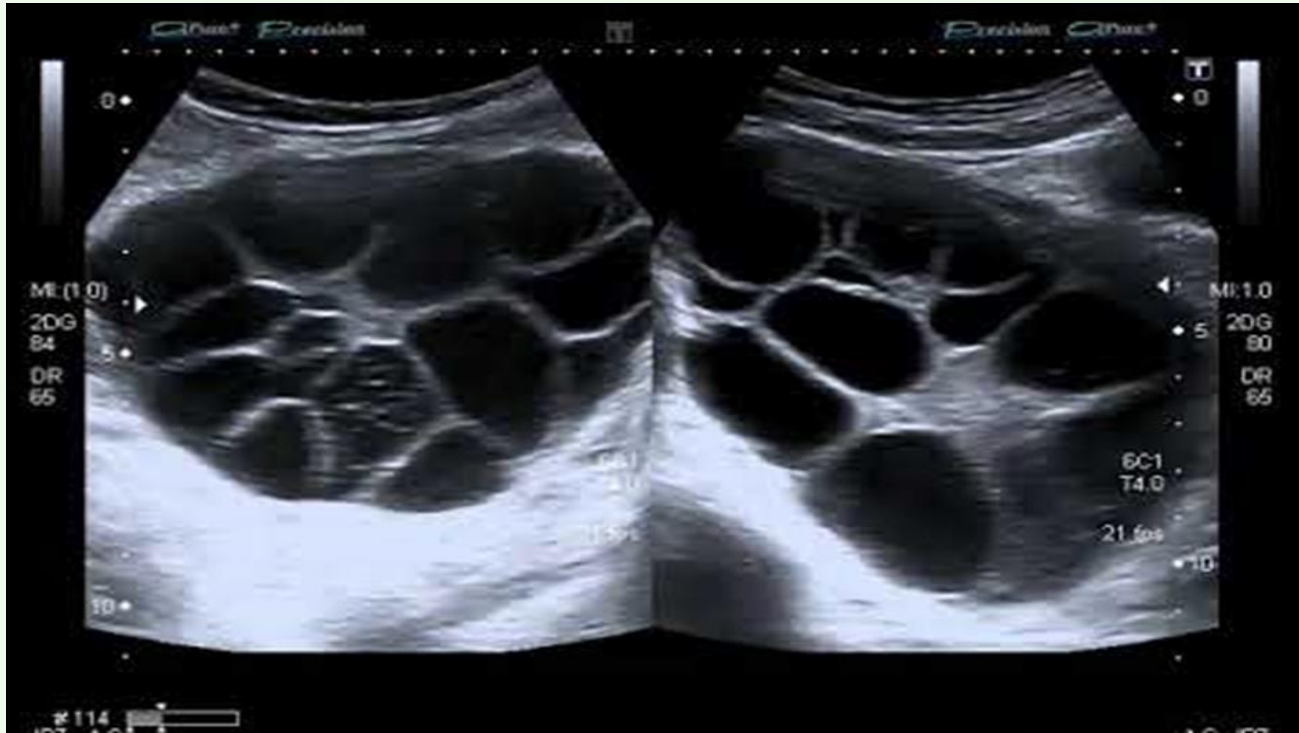
Is the freeze-all protocol meaningful in the prevention of OHSS also with regard to efficacy?

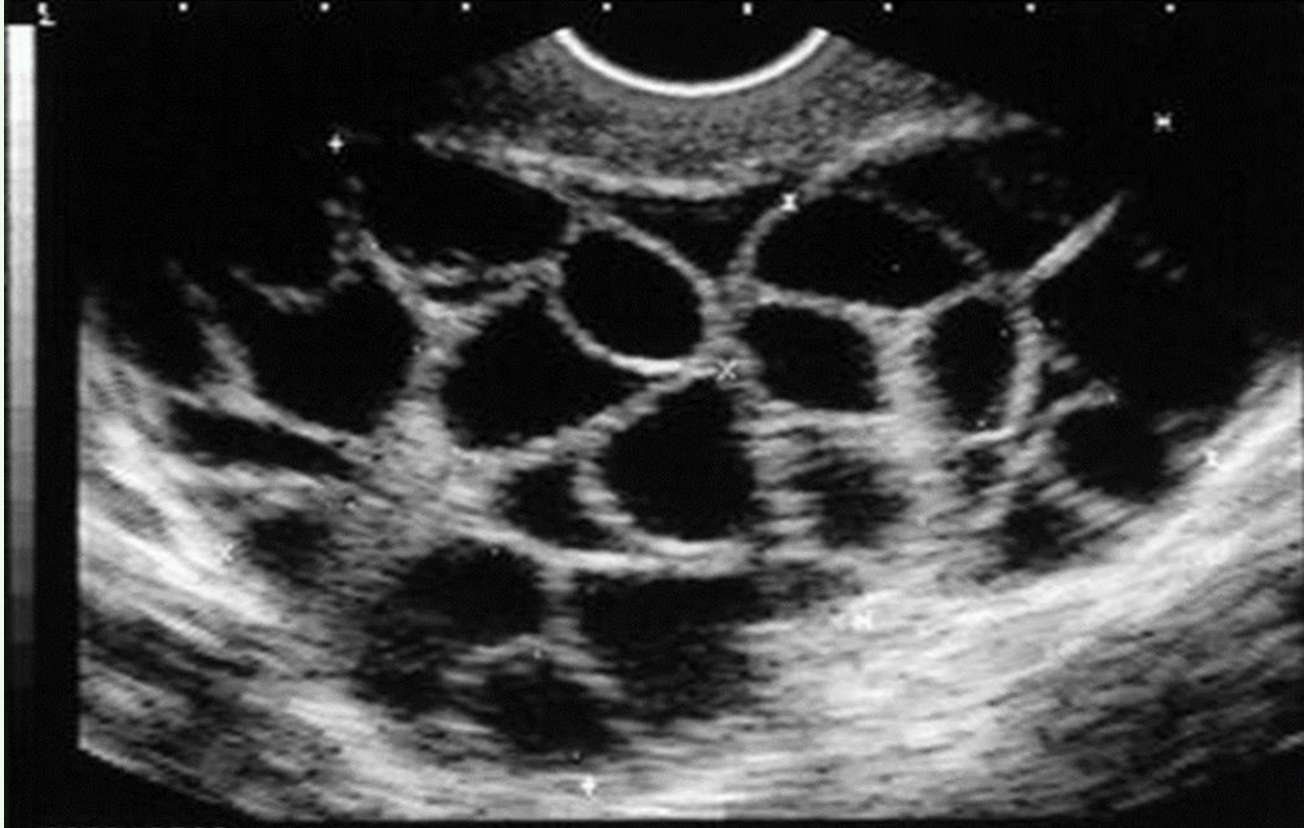
A freeze-all strategy is recommended to fully eliminate the risk of late-onset OHSS

Strong
⊕⊕⊕○



Figure 1 Schematic overview of the guideline 'ovarian stimulation for IVF/ICSI'. AMH: anti-Müllerian Hormone; AFC: antral follicle count; rFSH: recombinant FSH; p-FSH: purified FSH; hp-FSH: highly purified FSH; LPS: luteal phase support, ET: embryo transfer.





Ovarian Torsion

- Ovarian/ Adnexal torsion is a rare complication in ART
- Gynaecological emergency
- Incidence 0.025% - 0.2 % (Smith et al 2010)

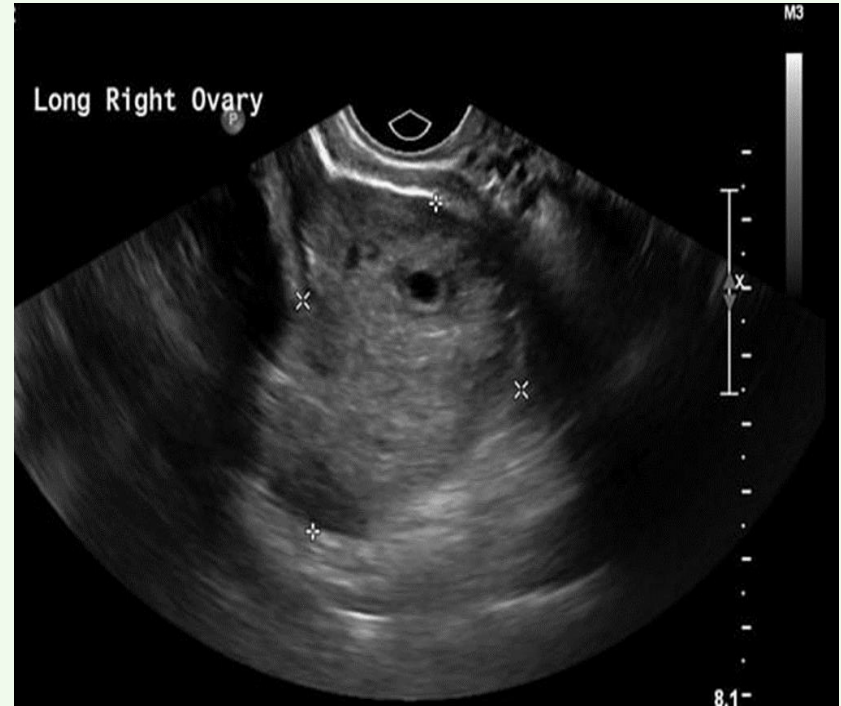
Predisposing factors include

- Increased ovarian size
- Mobile ovary
- Long pedicle

Ultrasound appearances:

Asymmetric enlargement of the
twisted ovary

Enlarged and oedematous ovarian
stroma with peripherally displaced
follicles



Miscarriage / Pregnancy Loss



Miscarriage is generally defined as the spontaneous loss of a pregnancy before it reaches viability

Early pregnancy miscarriage is a non-viable intrauterine pregnancy less than 13 weeks estimated gestation age

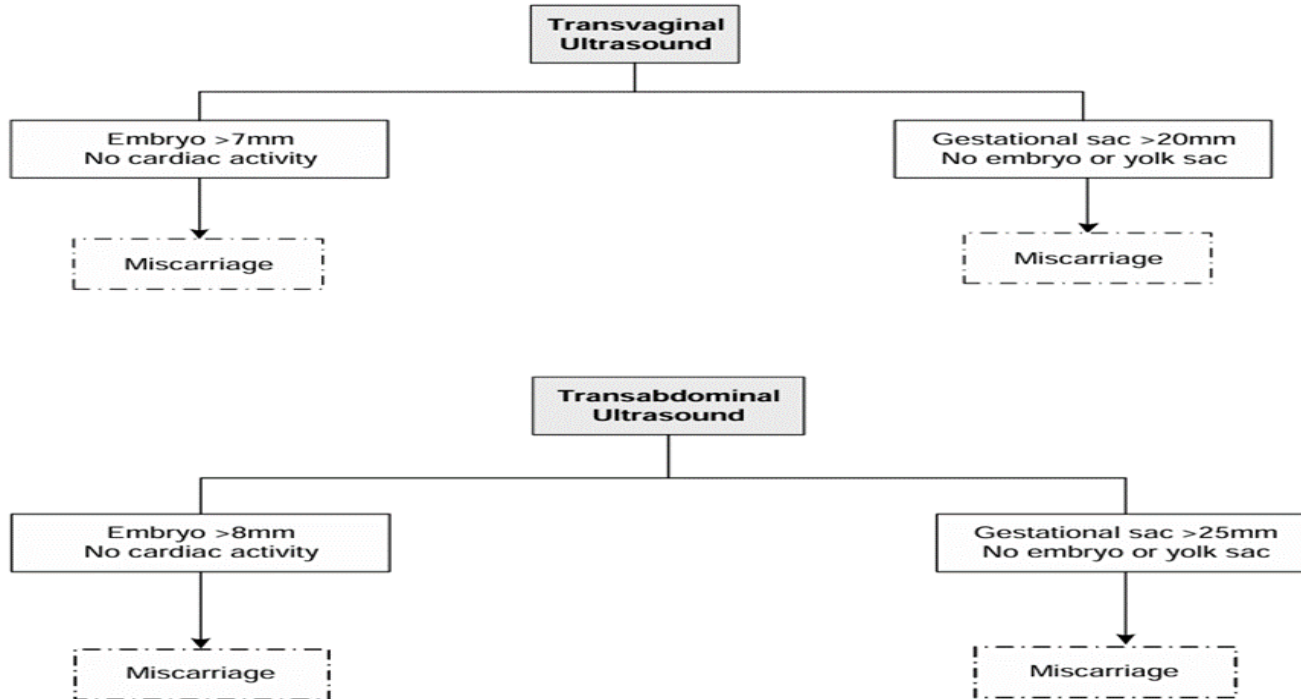
Most common complication of early pregnancy

Prevalence – up to 25 % of pregnancies

Governing Body	Recommendations
The Society of Gynecologists of Canada (SGOC) (21)	Embryo >5 mm and absent fetal cardiac activity
	Intrauterine mean gestational sac diameter >8 mm with absent yolk sac
	Intrauterine mean gestational sac diameter >16 mm without fetal pole
The American College of Radiologists (ACR) (22)	Embryonic crown-rump length >5 mm and absent fetal cardiac activity
Royal College of Obstetricians and Gynaecologists (RCOG) and Royal College of Radiologists (RCR) (23)	Intrauterine gestational sac with mean diameter \geq 20 mm and no yolk sac
	Fetal crown-rump length \geq 6 mm with absent fetal cardiac activity
Australasian Society for Ultrasound in Medicine (ASUM) (24)	Mean gestational sac diameter \geq 20 mm with absent embryonic structures
	Embryonic crown-rump length \geq 6 mm with absent fetal heart rate
Institute of Obstetricians and Gynaecologists, Royal College of Physicians of Ireland (25)	Mean gestational sac diameter >20 mm with absent embryonic structures (embryo or yolk sac)
	Embryonic crown-rump length \geq 7 mm with absent fetal heart rate

Ultrasound Determination of Nonviable Pregnancy (HSE 2012)

Ultrasound Determination of Nonviable Pregnancy

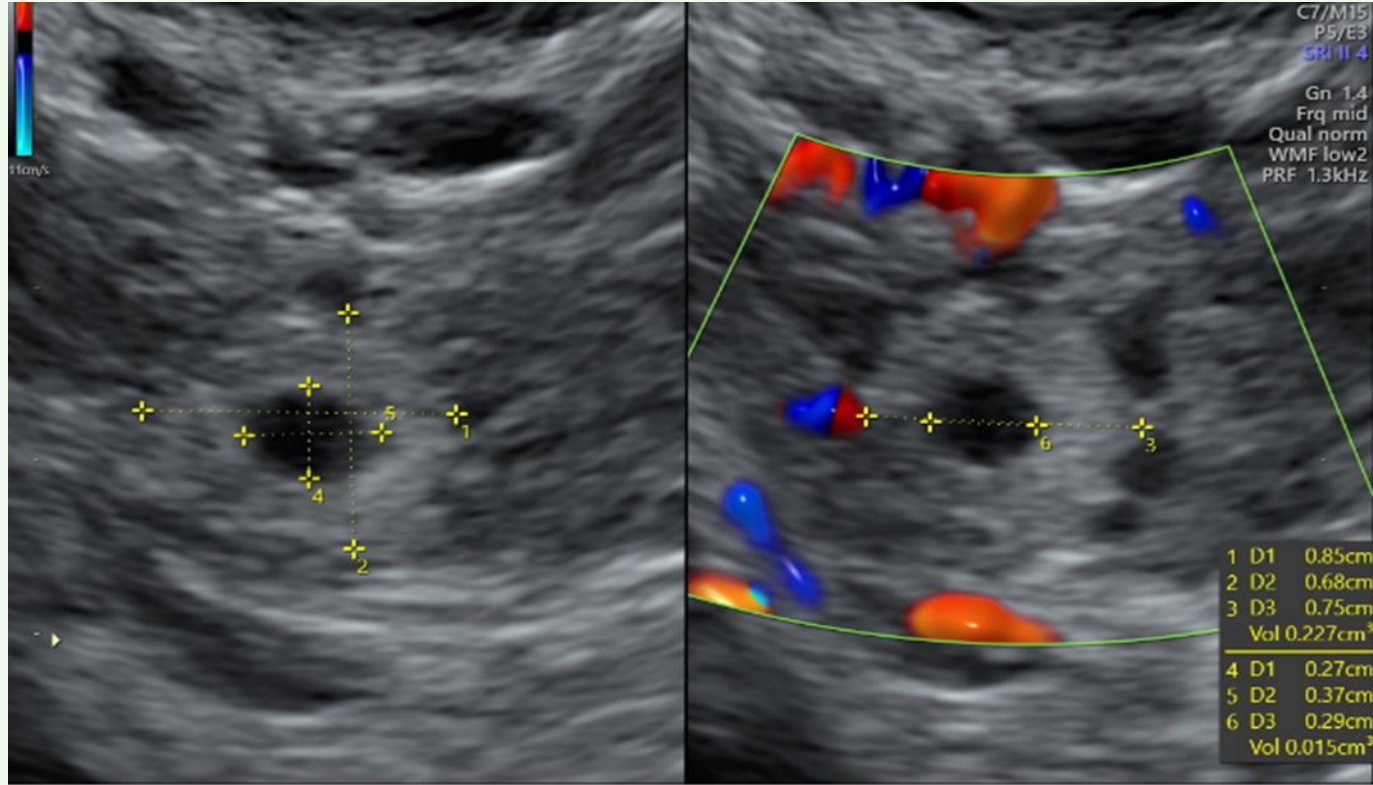


Ectopic Pregnancy

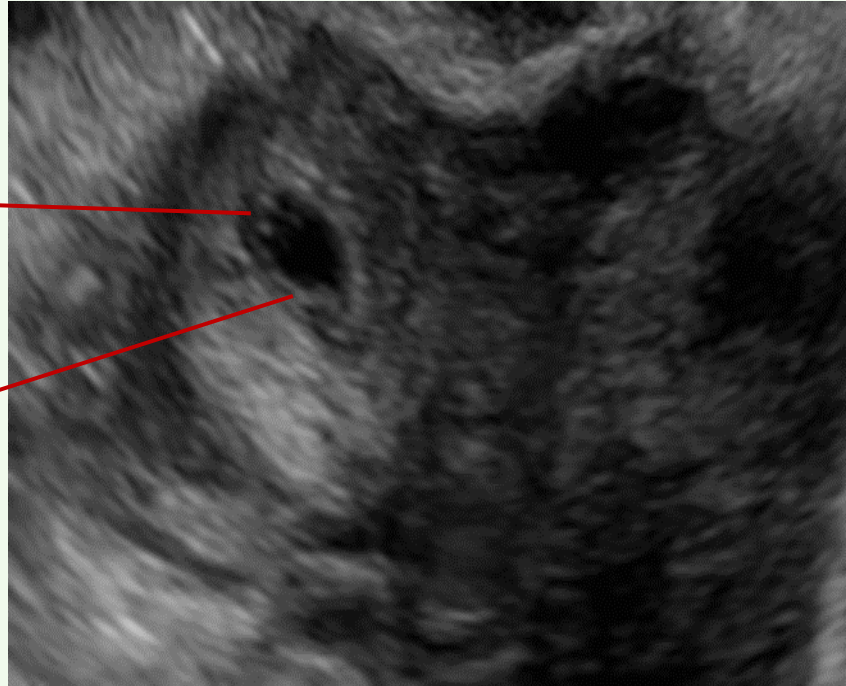
Ectopic pregnancy refers to a pregnancy that develops outside the uterine cavity

- Fallopian Tube
- Cervical ectopic
- Ovarian ectopic
- Caesarean scar ectopic
- Interstitial pregnancy
- Abdominal ectopic

Ectopic Pregnancy



Right adnexa



Yolk Sac

Gestational
Sac

Heterotopic

Defined as the presence of multiple gestations, with one being present in the uterine cavity and the other extrauterine, commonly in the fallopian tube and uncommonly in the cervix or ovary

Rare event in spontaneous conception 0.03 per 1000 pregnancies

ART incidence increases to 0.26 -1.5 per 1000 pregnancies
(Krishnanmoorthy et al, 2021)



Multiple Pregnancies and ART

Prior to 1984 nearly all viable embryos created through ovarian stimulation were transferred to optimise the chances of success leading to multiple pregnancies

1984 - The evolution of frozen embryo transfer led to a reduction in the transfer of > 3 embryos, but the transfer 2 – 3 embryos continued

2000 - The European Society of Human Reproduction and Embryology declared that a twin rate of $> \neq 25\%$ is unacceptable

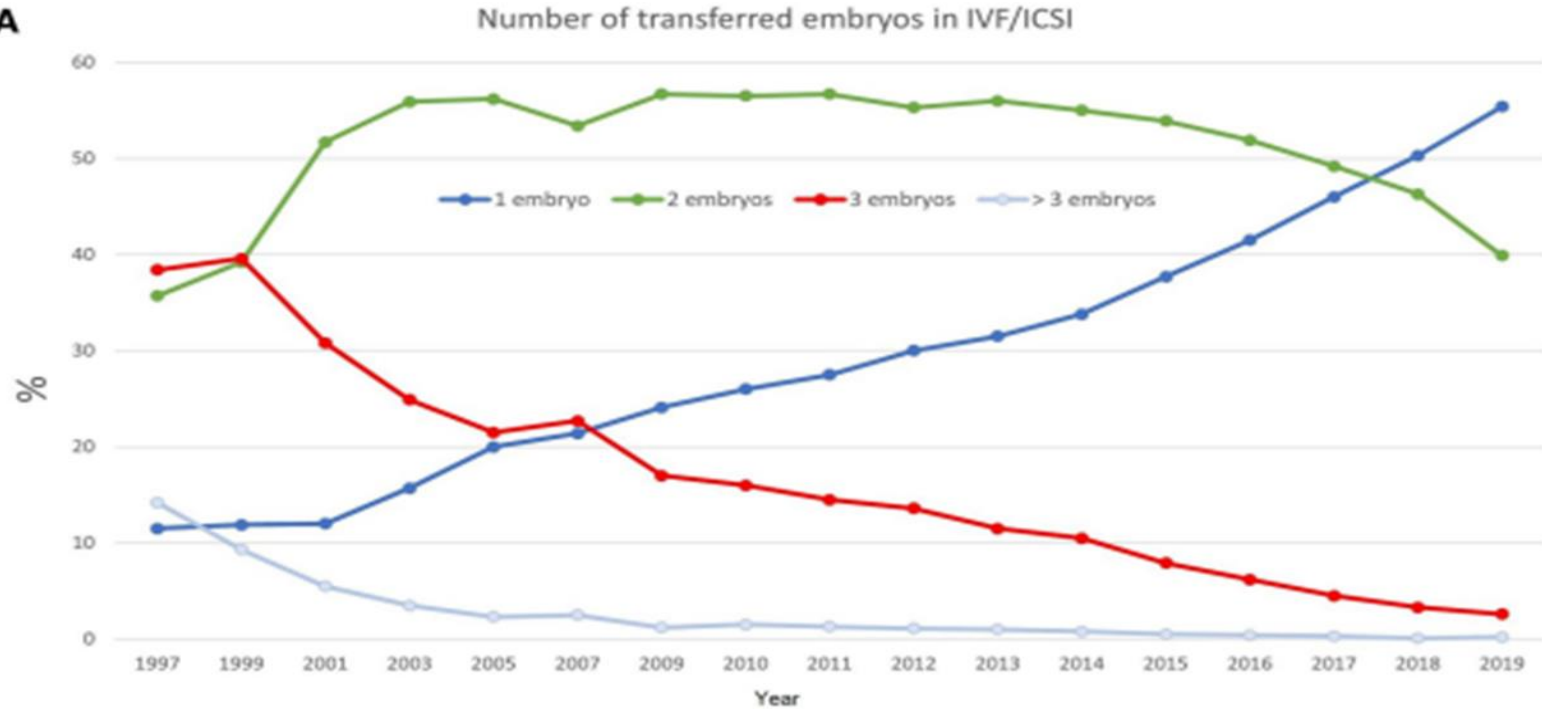
This led to the updating of legislation in some countries to impose an Elective single embryo transfer

If the global incidence for post-IVF/ICSI twinning is assumed to be 25% and for Higher Order Multiple pregnancies to be 3%, these ~100 000 ongoing pregnancies will result in 72 000 singletons, 50 000 twin children and 9000 triplet children for a total of 131 000 children (Gerris et al, 2004)

Assuming an incidence of 10% for severe complications and sequelae per child born to a multiple pregnancy – IVF/ICSI is responsible for approximately 6,000 severely disabled children each year (Wennerholm and Gerris, 2000)

ESHRE 2020

A



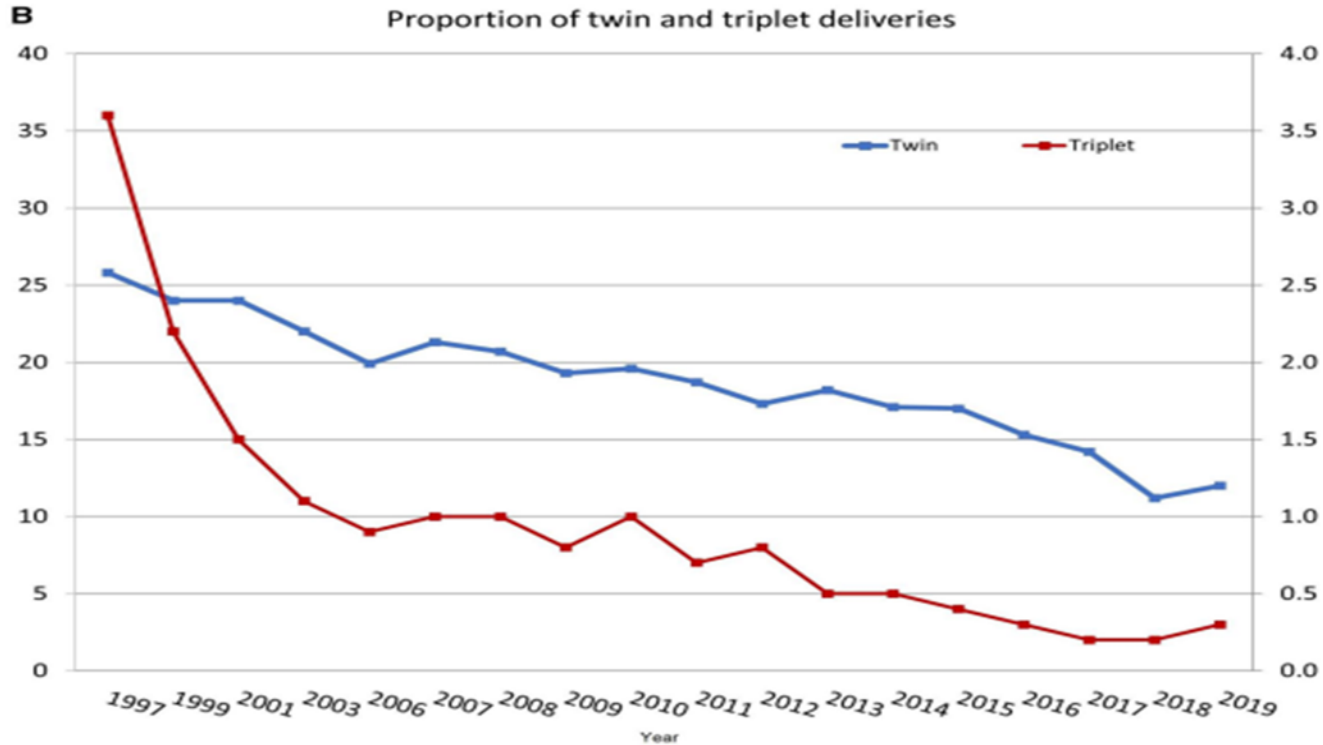


Figure 4. Embryo transfer and multiple births in Europe, 1997–2019. (A) Number of embryos transferred in IVF and ICSI during fresh cycles. **(B)** Percentages of twin and triplet deliveries.

Table 4. Number of embryos transferred after ART and deliveries in 2019.

Country	IVF + ICSI					FET					
	Transfers	1 embryo (%)	2 embryos (%)	3 embryos (%)	4+ embryos (%)	Deliveries	Twin (%)	Triplet (%)	Deliveries	Twin (%)	Triplet (%)
Albania	66	1.5	98.5	0.0	0.0	26	26.9	3.8	15	20.0	0.0
Armenia	544	26.1	52.4	21.5	0.0	211	16.1	3.3	702	3.6	0.6
Austria	5714	73.3	26.6	0.1	0.0	1640			961		
Belarus	2135	32.9	59.2	7.9	0.0	449	12.2	0.9	320	17.5	0.0
Belgium	12 048	72.5	24.5	2.7	0.3	2604	5.7	0.1	2902	4.2	0.0
Bosnia-Herzegovina, Federation part	71	76.1	19.7	4.2	0.0	26	3.8	0.0	11	18.2	0.0
Bulgaria											
Czech Republic	10 151	79.9	19.9	0.2	0.0	2033	5.7	0.1	3057	6.3	0.1
Denmark	8492	83.1	16.5	0.4	0.0	1695	3.5	0.1	1830	1.7	0.0
Estonia	1500	57.6	40.3	2.1	0.0	389	9.8	0.3	255	10.6	0.4
Finland	2564	95.7	4.3	0.0	0.0	680			892		
France	40 432	60.8	36.6	2.4	0.1	10 182	8.9	0.1	9613	5.4	0.1
Germany	53 737	34.4	62.6	3.0	0.0	12 936	18.1	0.4	6163	13.0	0.5
Greece	7284	23.5	61.0	13.2	2.2	1741	20.0	0.2	1584	17.3	0.3
Hungary	6883					1354	16.8	0.8	296	13.2	1.0
Iceland	299	100.0	0.0	0.0	0.0	82	0.0	0.0	125	2.4	0.0
Ireland	977	50.7	46.9	2.5	0.0	324	11.1	0.0	262	0.4	0.0
Italy	28 731	44.8	46.7	7.8	0.7	5151	12.3	0.3	4412	5.0	0.1
Kazakhstan	4193	51.9	46.5	1.6	0.0	1414	12.6	0.3	1702	12.0	0.1
Latvia	380	83.4	16.6	0.0	0.0	122	5.9	0.0	202	6.8	0.0
Lithuania	1386	56.1	29.5	14.4	0.0	256	11.0	1.7	28	29.2	0.0
Luxembourg	499	55.7	44.3	0.0	0.0	115	4.3	0.9	125	6.4	0.0
Malta	18					5			7		
Moldova											
Montenegro	481	29.7	49.1	21.2	0.0	148	23.6	0.0	29	20.7	0.0
North Macedonia	1734	35.9	62.2	1.8	0.1	488	14.8	0.0	81	11.1	0.0
Norway											
Poland	8884	66.9	32.9	0.1	0.0	2137	6.1	0.1	3400	4.1	0.1
Portugal	3692	54.0	45.6	0.4	0.0	941	9.9	0.2	801	9.0	0.1
Russia	58 120	61.1	38.5	0.3	0.0	13 758	12.5	0.2	13 737	12.2	0.2
Serbia	1511	23.5	31.8	41.8	3.0	380	28.7	1.6	71	9.9	0.0
Slovakia											
Slovenia	2578	61.8	38.1	0.1	0.0	686	7.3	0.0	459	6.3	0.0
Spain	23 132	52.8	46.2	1.0	0.0	6020	11.0	0.1	8056	8.9	0.0
Sweden	8587	88.8	11.2	0.0	0.0	2485	2.7	0.0	2668	1.8	0.0
Switzerland	3207	72.2	26.5	1.2	0.1	808	7.7	0.4	1272	4.7	0.2
The Netherlands											
Turkey	7796	58.7	41.3	0.0	0.0	2388	11.6	0.1	3294	13.4	0.2
Ukraine	5747	41.3	53.9	4.8	0.0	2042	15.8	0.2	5734	14.1	0.0
UK	30 879	68.6	29.7	1.7	0.0						
All*	344 452	55.4	39.6	2.6	0.2	75 746	11.0	0.3	75 066	8.0	0.1

* Total refers only to these countries where data on number of transferred embryos and on multiplicity were reported.
FET, frozen embryo transfer.

Irish Medical Journal 2012



Naasan et al, (2012) in their review of ART in Ireland summarised that the introduction of a state funded IVF programme with compulsory eSET should come sooner rather than later

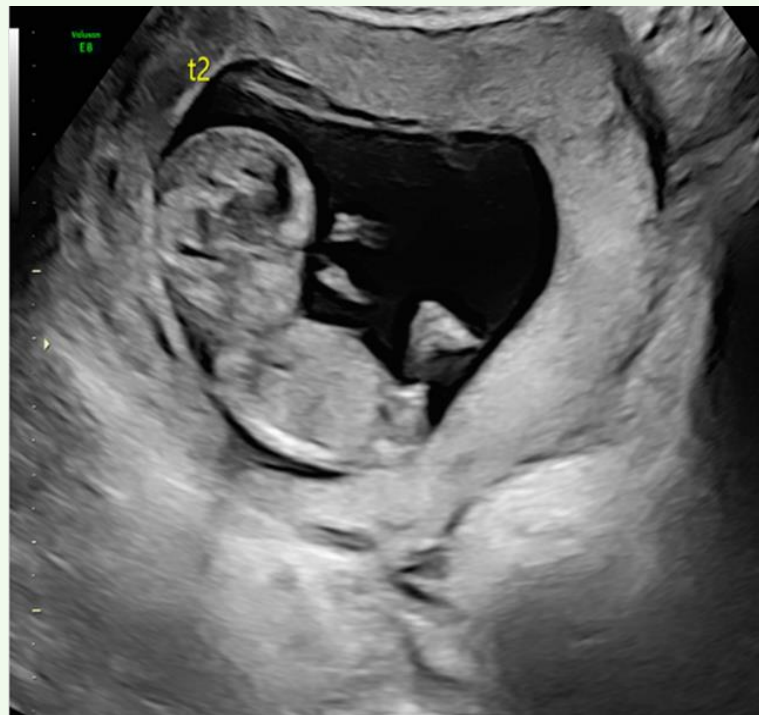
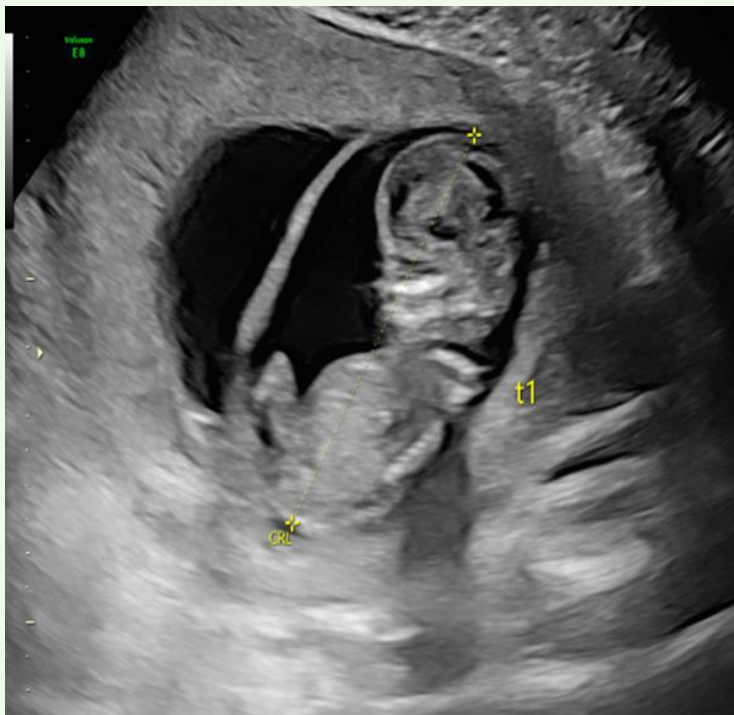
Multiple Pregnancy

Accurate assessment of chorionicity

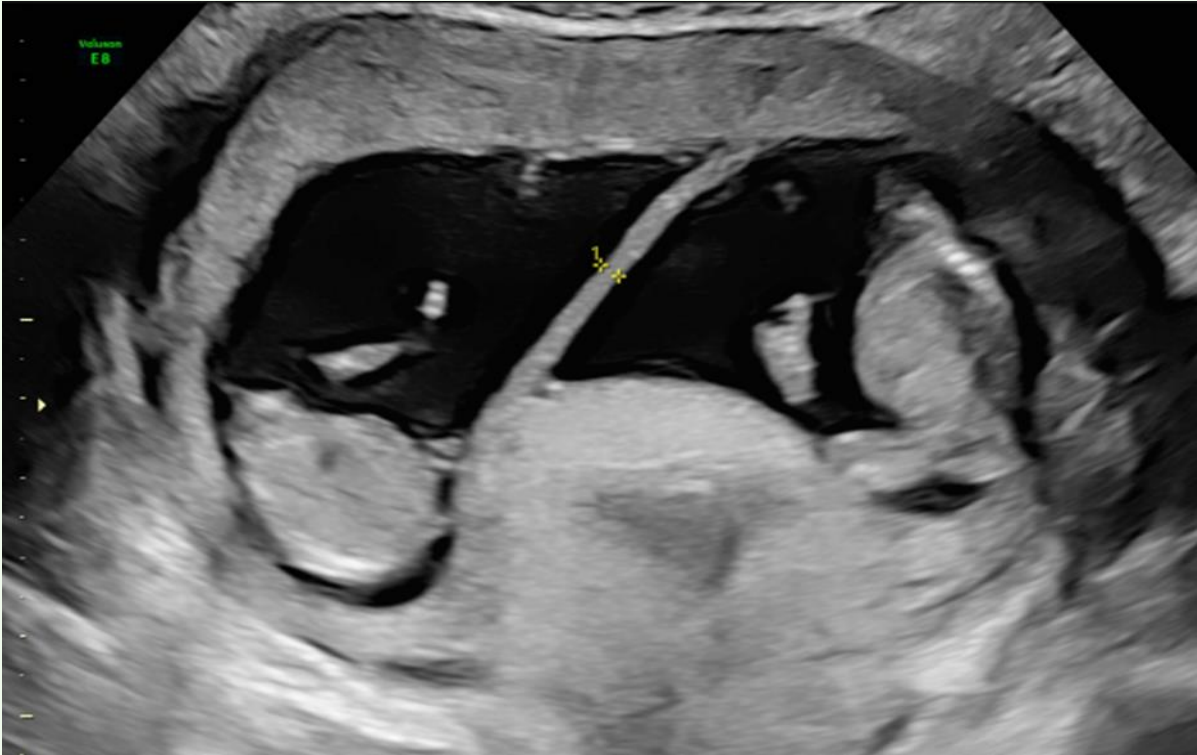
Determination of chorionicity and amnionicity – best achieved before 14 weeks gestation

- Number of placental masses
- Lambda Sign
- T- sign

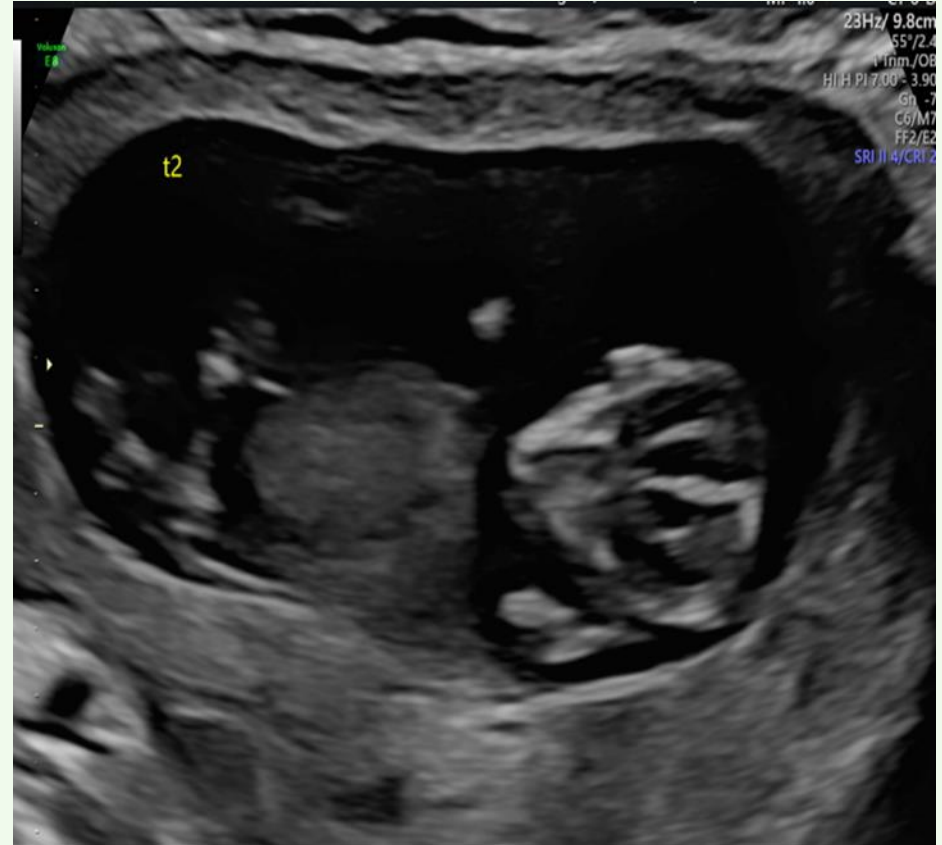
Dichorionic Diamniotic Twin Pregnancy



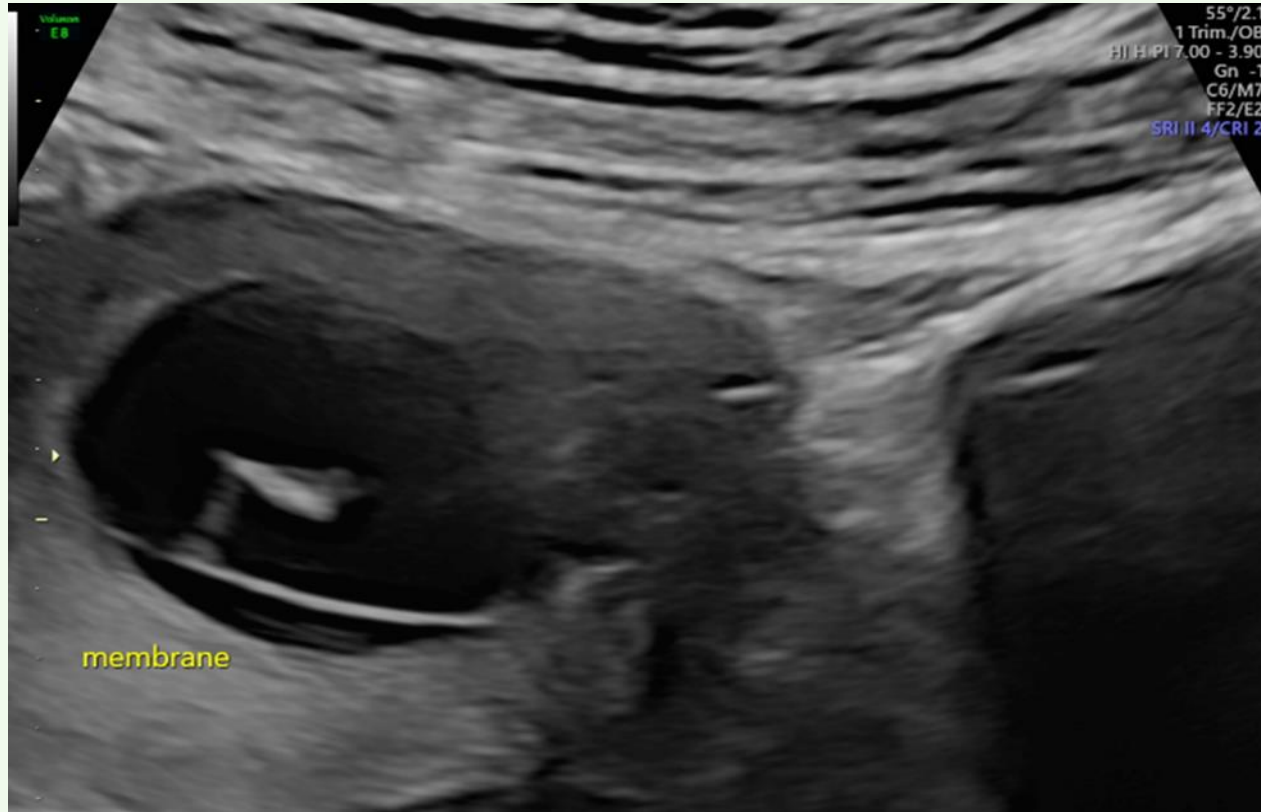
DCDA – LAMBDA SIGN



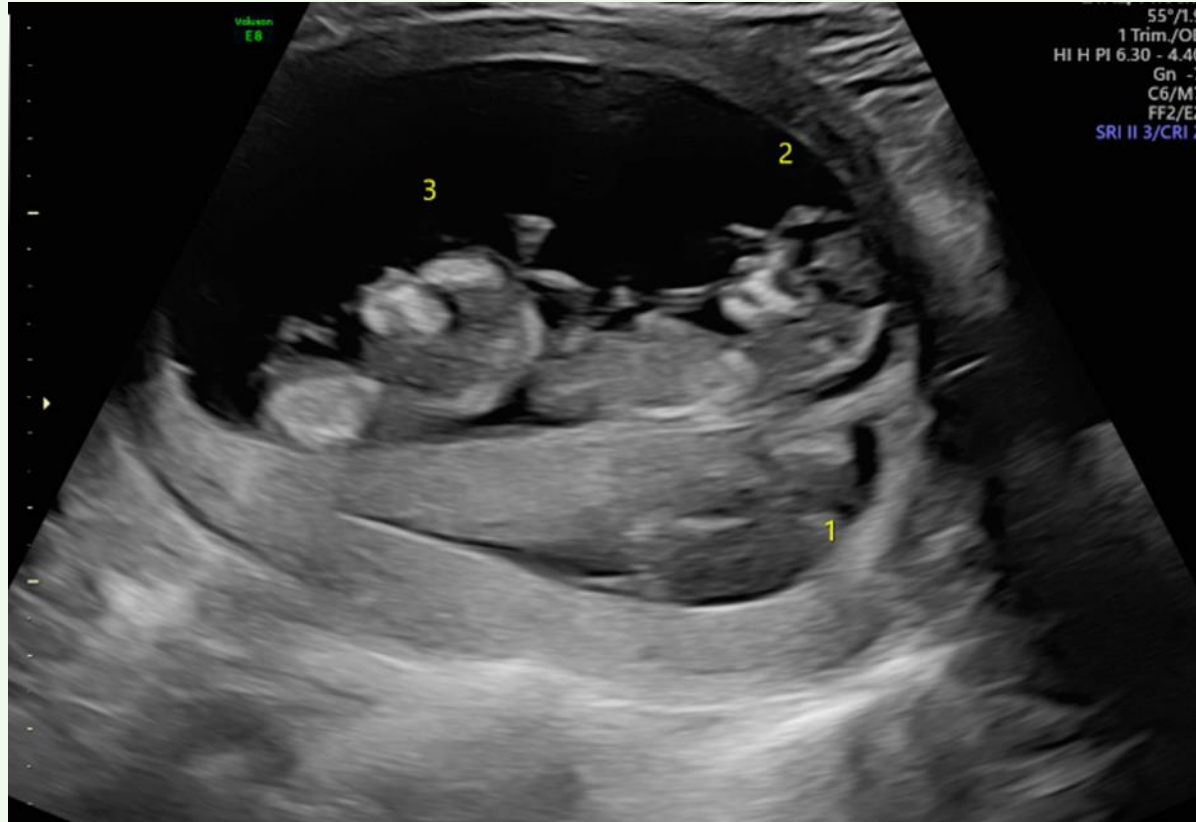
Monochorionic Diamniotic Twin Pregnancy



Membrane



Dichorionic Tri-amniotic Triplet Pregnancy



Tri-chorionic Tri-amniotic Triplet pregnancy



Complications of Multiple Pregnancies

Maternal

Pregnancy Induced

Hypertension

Pre-Eclampsia

Pre-term labour

Fetal

Premature delivery

Twin to twin transfusion

Fetal Growth Restriction

Increase in perinatal morbidity and mortality

Post ART treatment presentation to hospital



Consider differential diagnosis:

Haemorrhage – vaginal or intra-abdominal

Infection

OHSS – primary / secondary

Ovarian Torsion

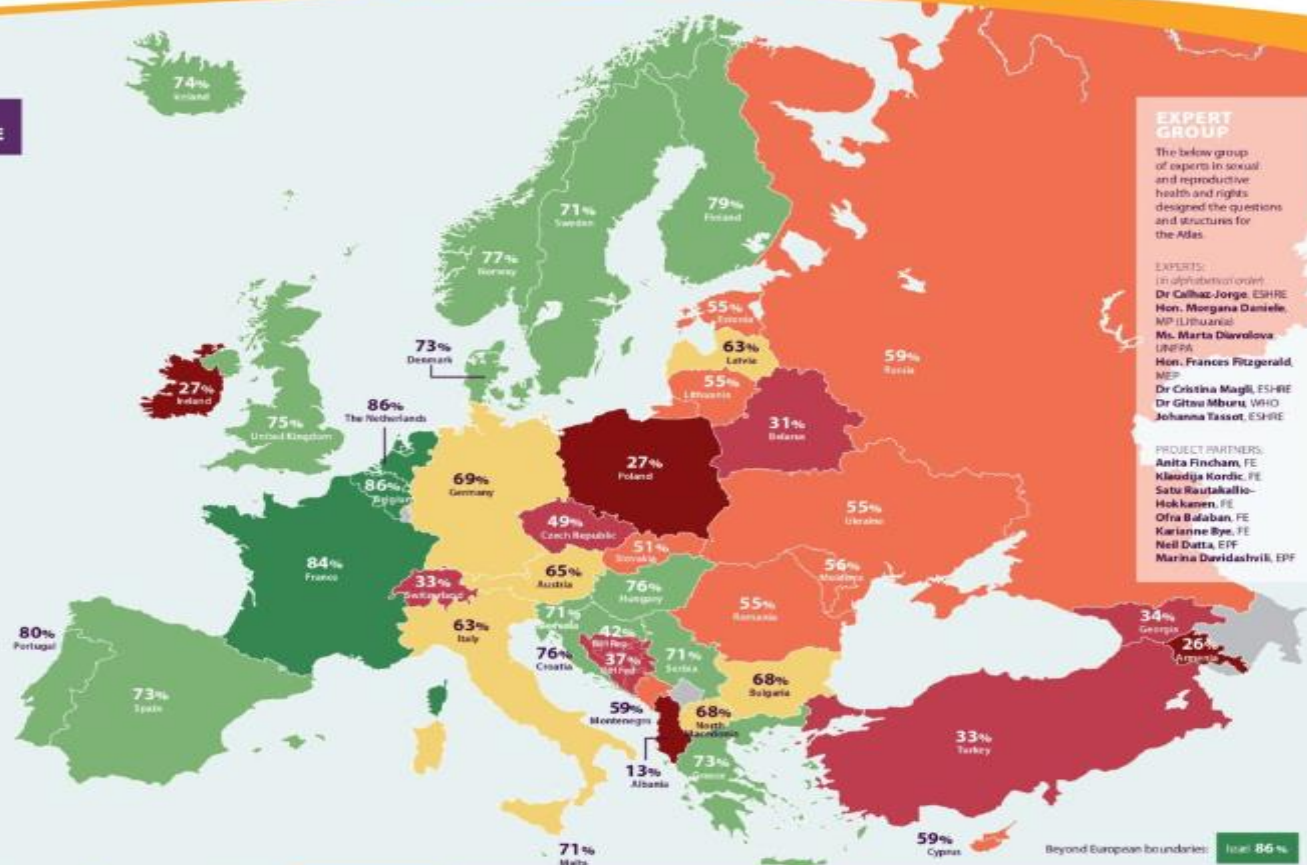
Complications of early pregnancy

EUROPEAN ATLAS OF FERTILITY TREATMENT POLICIES

DECEMBER 2021

RANKING POINTS SCALE

Belgium	86%
Israel	86%
The Netherlands	86%
France	84%
Portugal	80%
Finland	79%
Norway	77%
Costa Rica	76%
Hungary	76%
United Kingdom	75%
Ireland	74%
Denmark	73%
Greece	73%
Spain	73%
Malta	71%
Serbia	71%
Slovenia	71%
Sweden	71%
Germany	69%
Bulgaria	68%
North Macedonia	68%
Austria	65%
Italy	63%
Latvia	63%
Cyprus	59%
Montenegro	59%
Russia	59%
Moldova	56%
Estonia	55%
Lithuania	55%
Romania	55%
Ukraine	55%
Slovakia	51%
Czech Republic	49%
Bosnia & Herzegovina - Rep	42%
Bosnia & Herzegovina - Fed	37%
Georgia	34%
Switzerland	33%
Turkey	33%
Belarus	31%
Ireland	27%
Poland	27%
Armenia	26%
Albania	13%



EXPERT GROUP

The below group of experts in sexual and reproductive health and rights designed the questions and structures for the Atlas.

EXPERTS:
 In alphabetical order:
Dr Calixto Jorge, ESHRE
Hon. Morgana Daniele, MP (Lithuania)
Ms. Marta Diavelova, UNFPA
Hon. Frances Fitzgerald, MEP
Dr Cristina Magli, ESHRE
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Johanna Tassot, ESHRE

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Marina Davidashvili, EFF

TIME FOR A EUROPEAN GAME-CHANGING MOVEMENT ON INFERTILITY



In the European Union of one 25 million citizens face infertility



Infertility affects 1 in 6 couples worldwide

WE CALL ON POLICY MAKERS TO:

1. **Recognise** the right to try to have a child as a universal right across the EU.
2. **Ensure** equal, fair and safe access to fertility treatments.
3. **Provide** public funding for all levels of fertility treatments.
4. **Engage** the public sector in providing better information about fertility and infertility.
5. **Implement** communication campaigns to remove the stigma associated with infertility.

JOIN OUR CALL TO ACTION AT [HTTPS://FERTILITYEUROPE.EU/CTA/](https://fertilityeurope.eu/cta/)

INTERNATIONAL GUIDELINES

EUROPEAN PARLIAMENT

Notes that infertility is a medical condition recognized by World Health Organisation that can have severe effects such as depression, points out that infertility is on the increase and now occurs in about 15% of couples, calls on the Member States, therefore, to ensure the right of couples to have access to infertility treatment¹.

Calls on the Member States to ensure that all persons, of reproductive age have access to fertility treatments, regardless of their socio-economic or marital status, gender identity or sexual orientation, stresses the importance of closely examining fertility in the EU as a public health issue and the prevalence of infertility and subfertility which is a difficult and painful reality for many females and persons, calls on the Member States to take a holistic, rights-based, inclusive and non-discriminatory approach to fertility, including measures to prevent infertility, and ensuring equality of access to services for all persons of reproductive age, and to make readily assessed reproduction available and accessible in Europe².

WORLD HEALTH ORGANISATION

Government policies could mitigate the many inequities in access to safe and effective fertility care³.

¹ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017DC0166
² https://www.europarl.europa.eu/media-press/infobox.do?id=10000
³ https://www.who.int/news-room/fact-sheets/detail/infertility



Who is behind the Atlas?

This initiative is powered by fertility Europe (FE) and the European Parliamentary Forum for Sexual and Reproductive Rights (EPF). We are grateful to ESHRE, EM Survey on ART and IRT and to the numerous national organisations and country experts who contributed to gathering the data presented in the Atlas. The Atlas was produced in partnership with a group of experts in reproductive health (see above) who designed the questions and structures. The scope and the content of the European Atlas of Fertility Treatment Policies is the sole responsibility of FE, ESHRE, EPF, ESHRE, EM Survey on ART and IRT. Contact: info@fertilityeurope.eu

www.fertilityeurope.eu

Key Findings (2021) - Overall

Out of 43 countries analysed

Excellent (100-81%)	Very good (80-70%)	Medium (69-60%)	Poor (59-50%)	Very poor (49-31%)	Exceptionally Poor (30-0%)
Good regulations. Access to treatments for most patients. Good funding.	<i>Quite good regulations. Access to treatments to many groups of patients. Quite good funding.</i>	<i>Access to treatment for selected groups. Variable funding.</i>	<i>Access to treatments for selected groups. Poor funding.</i>	<i>Access to treatments limited. Funding poor or none.</i>	<i>Access to treatments very limited. No funding.</i>
Belgium 86 France 84 Israel 86 The Netherlands 86	Croatia 76 Denmark 73 Finland 79 Greece 73 Hungary 76 Iceland 74 Malta 71 Norway 77 Portugal 80 Serbia 71 Slovenia 71 Spain 73 Sweden 71 United Kingdom 75	Austria 65 Bulgaria 68 Germany 69 Italy 63 Latvia 63 North Macedonia 68	Cyprus 59 Estonia 55 Lithuania 55 Moldova 56 Montenegro 59 Romania 56 Russia 59 Slovakia 51 Ukraine 55	Belarus 31 Bosnia & Herzegovina (37, 42) Czech 49 Georgia 34 Switzerland 33 Turkey 33	Albania 13 Armenia 26 Ireland 27 Poland 27

EUROPEAN ATLAS OF FERTILITY TREATMENT POLICIES

For more information, please visit epfweb.org

JUNE 2024

RANKING SCALE



EXPERT GROUP
The below group of experts in sexual and reproductive health and rights designed the questions and structures for the Atlas.

EXPERTS: (in alphabetical order)
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Marta Dlavetsova, UNFPA
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Dr. Veronika Gocsmann, ESHRE
Klaudija Koric, Fertility Europe
Dr. Cristina Magli, ESHRE

TIME FOR A EUROPEAN GAME-CHANGING MOVEMENT ON INFERTILITY

- WE CALL ON POLICY MAKERS TO:**
1. Recognise the need to act right across Europe;
 2. Ensure equal access to safe and efficient fertility treatments;
 3. Provide public funding for all lines of fertility treatments;
 4. Engage the public sector in providing better information about fertility and infertility;
 5. Implement communication campaigns to remove the associated with infertility.

JOIN OUR CALL TO ACTION AT
<https://www.fertilityeurope.eu/act>

VISIT ATLAS 2024 AT
<https://www.fertilityeurope.eu/atlas>

INTERNATIONAL GUIDELINES

EUROPEAN PARLIAMENT
Notes that infertility is a medical condition recognised by World Health Organisation that can have severe effects such as depression; points out that infertility is on the increase and now occurs in about 15 % of couples; calls on the Member States, therefore, to ensure the right of couples to universal access to infertility treatment 1.

WORLD HEALTH ORGANISATION
Government policies could mitigate the many inequities in access to safe and effective fertility care 2.



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Thank you

Questions ?

