creando *familias*

ENDOMETRIOSIS
THE DISEASE THAT PRESENTS AN OBSTACLE TO MOTHERHOOD

SURPLUS EMBRYOS
WHAT IS THEIR FATE?

THE IMPORTANCE OF **ACCOMPANIMENT** IN **FERTILITY** PROCESSES: BEYOND THE PHYSICAL ASPECT

N° 15 JUNE 2025

Reproduction International Group

THE DELICATE BALANCE OF MOTHERHOOD,

WHERE THE SCALES SWING BETWEEN EXCITEMENT AND VERTIGO

Motherhood has gone from being an inevitable destiny to becoming a conscious decision charged with contradictions generated by our present-day society.

Women of today are faced with a complex dilemma: on the one hand, a relentless **biological clock**, and on the other, a society that demands a **stable career**, financial independence and personal projects before even contemplating motherhood.

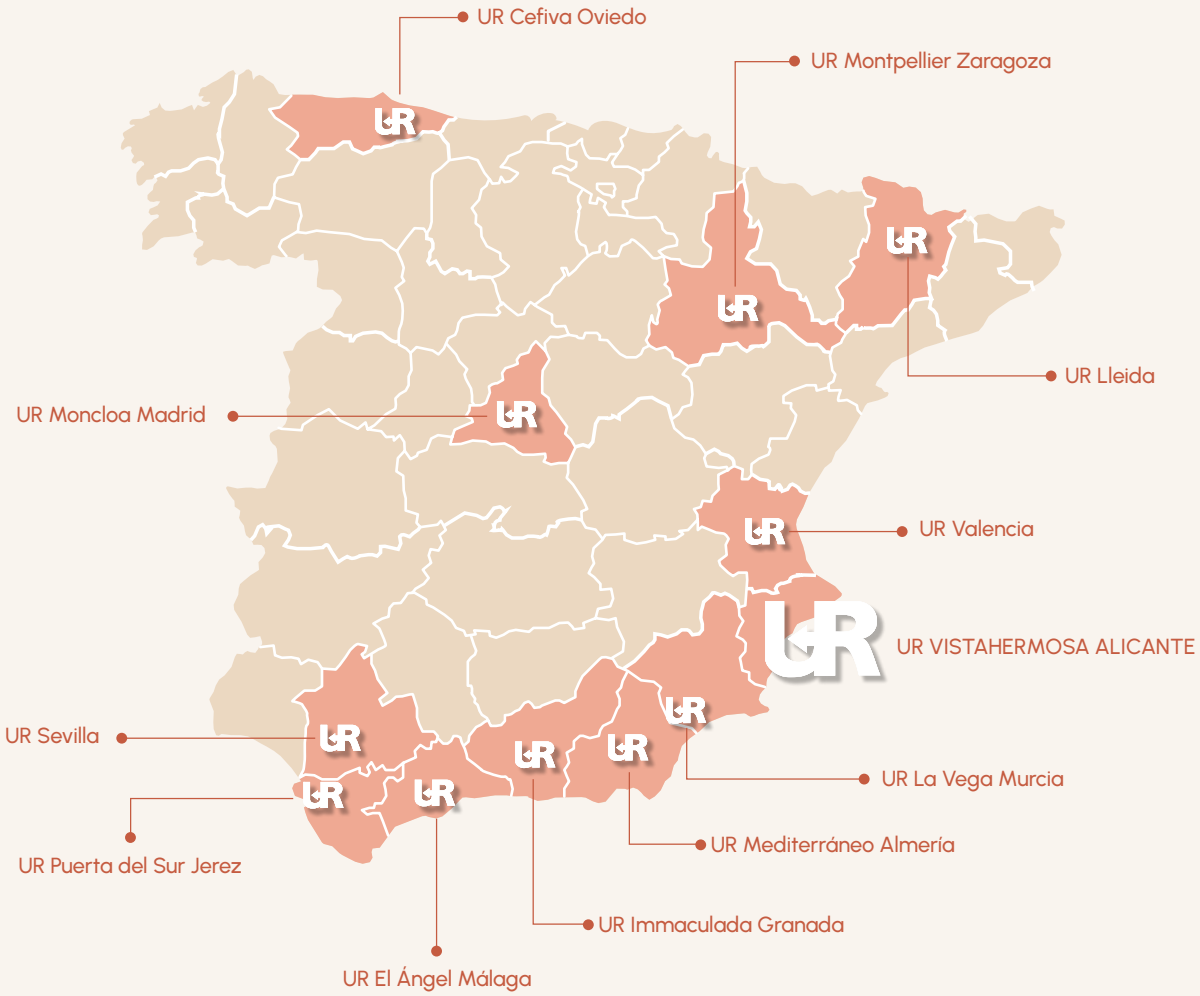
This conflict reflects a palpable reality: we are living in a society where motherhood goes hand in hand with **structural challenges**. From the difficulty of striking a balance between work and family life to the social perception that being a mother means you miss out on opportunities. Meanwhile, the modern-day pace demands constant productivity, as if the biological clock and the professional advanced at a similar rate.

Today, being a mother means navigating **uncertainty**: the fear of not living up to expectations or losing out on opportunities. Many women feel that motherhood places them in a delicate balance where the scales swing between excitement and vertigo. Women today are facing questions such as: **"Will I be capable?", "Am I sacrificing too much?" or "What if I lose myself?"** Acknowledging these fears is not weakness, but rather the first step towards motherhood chosen freely.

Against this backdrop, assisted reproduction is there for women to give them security, hope and time to stabilise their life. Egg vitrification becomes not just a technique to treat infertility, but also an insurance policy providing freedom for those who decide to postpone maternity without giving it up.

In **"UR Reflections: overcoming challenges, creating life"**, Grupo Internacional UR addresses the complex problems that have been generated within our society when it comes to motherhood, and makes it clear that the solution lies not only in consulting with assisted reproduction, laboratories and technology, but also in building a society where motherhood is not an obstacle, but a sustainable choice. Despite the fears, doubts and challenges, motherhood nevertheless reveals itself as the most transformative and gratifying experience a woman can have.

Every sacrifice is transformed into a heartbeat of unconditional love, every doubt into a lesson in strength, because the arrival of a child reflects genuine love, the purest and most unconditional kind, and it is in this moment that it becomes clear that **no obstacle was too great.**



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Index

Dr. Rocío Núñez Calonge | *Scientific Coordinator Grupo Internacional UR*

Evolution of the **PERCENTAGE** of live births via **IN VITRO FERTILISATION**

over the course of 12 years in Spain

THE NUMBER OF ASSISTED REPRODUCTION TREATMENTS IS PROGRESSIVELY INCREASING ALL OVER THE WORLD AT THE SAME TIME AS CASES OF INFERTILITY ARE RISING.

In Spain, all centres are obliged to send the data of the treatments performed to the National Register of Assisted Reproduction each year. The results of a study that analysed the data from the National Register of Assisted Reproduction of the Spanish Fertility Society (SEF), and that includes **563,000 treatments** of in vitro fertilisation (IVF), were presented in an oral communication at the 34th National Congress of the SEF in A Coruña and at the ASEBIR congress, where it was a finalist in the category of best communication.

The first aspect analysed in the study was the trend in the number of babies born from 2009 to 2021. In total, they represent **563,000 cycles** of in vitro fertilisation (IVF) by patients who used their own oocytes. Of these, **359,587** transfers were carried out with fresh embryos and **36,400** with cryopreserved embryos. An initial analysis found that the live birth rate per initiated treatment cycle has not increased over the years. Nor was an increase observed in the live birth rate per fresh embryo transfer.

How can these results be explained?

The answer lies in the number of treatments that have been carried out thanks to the freezing of embryos. At the same time as treatments

THE DATA ENABLES US TO CONFIRM THAT, ALTHOUGH THE RATE OF CHILDBIRTH PER INITIATED TREATMENT CYCLE HAS NOT INCREASED OVER THE YEARS, THE TECHNIQUE OF EMBRYO VITRIFICATION HAS CONTRIBUTED TO A RISE IN THE NUMBER OF ASSISTED REPRODUCTION BIRTHS.

with the transfer of only a single embryo to avoid multiple pregnancy are increasing, cycles with frozen embryos are also on the rise (from 29% to 48%). What is more, the rate of live births after transferring said frozen embryos **has grown exponentially from 4% to 24%** over the course of these 12 years.

In general, the success of IVF has been reported in terms of live births per fresh cycle or per transfer of embryos. Nonetheless, an IVF treatment should incorporate not only the results associated with the transfer of fresh embryos, but also those resulting from transfers with the remaining frozen embryos. Despite these arguments, however, the majority of national registers do not report systematically on the cumulative rates, most likely due to the difficulty of reaching an agreement on how to calculate them.

This research was carried out with the collaboration of doctor **José Andrés Guijarro**, who devised a formula to solve this problem and correct the calculation of the success rate of IVF. Thus, including the embryos that were transferred while fresh, in addition to those that may potentially be transferred after thawing, this study found that, in these twelve years, the cumulative rate of live births shows a steady increase of **1.7%** annually from 2012, climbing from **22% to 35%** of births per initiated cycle. This formula demonstrates that what is truly important for verifying the effectiveness of IVF is not the result of live births per treatment cycle, nor per individual transfer of fresh embryos, but rather the cumulative rate. That is to say, all the embryos that have been frozen in each cycle must be taken into account.

REPORTING ON THE CUMULATIVE RATE INSTEAD OF THE SUCCESS RATES BASED ON THE TRANSFER OF FRESH EMBRYOS WOULD BE MORE APPROPRIATE FOR UNDERSTANDING THE EFFICACY OF THE TREATMENT.

Dr. Ruth Sánchez | *Gynaecologist - UR Vistahermosa Reproduction Unit*

ENDOMETRIOSIS

LA ENFERMEDAD QUE OBSTACULIZA LA MATERNIDAD

> UNBEARABLE MENSTRUAL PAIN, PAINFUL SEXUAL INTERCOURSE, CHRONIC FATIGUE, INFERTILITY.

THIS COMBINATION SOUNDS FAMILIAR TO MANY WOMEN, BUT FOR YEARS THEY HAVE HEARD THAT THIS IS "NORMAL". HOWEVER, THESE SIGNS MAY BE AN INDICATION OF A CHRONIC, SILENT AND OFTEN UNDER-RECOGNISED DISEASE: **ENDOMETRIOSIS.**

Despite the fact that it affects approximately **one in every ten women of childbearing age**, the diagnosis of endometriosis can take an average of between **7 and 10 years**. In this time, many patients suffer a progressive worsening of their quality of life without understanding the source of their pain.

This disease is one of the main cases of female infertility. However, many patients do not receive a diagnosis until they attempt to conceive. The problem is not just medical, but a structural issue: **menstrual pain has been normalised**, thus delaying access to appropriate treatment.

A DIAGNOSTICAL OBSTACLE COURSE

Endometriosis occurs when the tissue similar to the endometrium – which covers the lining of the uterus – **grows outside of it**, affecting the ovaries, fallopian tubes, intestine and even the bladder or diaphragm. This tissue reacts to menstrual cycle hormones as if it were inside the uterus: it bleeds, becomes inflamed and causes scarring.

Yet the most difficult part is not understanding the disease, but **detecting it in time**. Many teenage and adult women see their severe menstrual pain as something commonplace, in part due to a culture that has **normalised female suffering**. Others, when they do see a doctor, may receive misdiagnoses such as irritable bowel, recurring urinary infections or even psychological problems.

The diagnosis of endometriosis starts with **attentive listening**: a properly performed medical history is the first step. Added to this is a gynaecological examination, imaging tests such as a **transvaginal ultrasound** or **magnetic resonance imaging** and, ultimately, a **laparoscopy** with a biopsy, the method that definitively confirms the disease.

HOW IS IT DIAGNOSED?

The diagnosis of endometriosis is not simple, as there is no single definitive test except for exploratory surgery. **IT IS BASED ON VARIOUS STEPS:**

DETAILED MEDICAL HISTORY	Symptoms such as pelvic pain, debilitating periods and discomfort during sexual intercourse are analysed.
GYNAECOLOGICAL EXAMINATION	This can detect lumps or sensitive areas.
TRANSVAGINAL ULTRASOUND	Useful for identifying **endometriomas** (ovarian cysts), but does not always detect deep lesions.
MAGNETIC RESONANCE IMAGING	Gives greater precision in complex cases.
LAPAROSCOPY WITH BIOPSY	Considered to be the **definitive diagnostic method**. Makes it possible to see the lesions directly and extract samples for analysis.

ENDOMETRIOSIS AND INFERTILITY: HOW ARE THEY RELATED?

Around **30% to 50% of women with endometriosis have difficulty conceiving**.

THIS IS DOWN TO VARIOUS FACTORS:

ANATOMICAL DISTORTION

The adhesions may obstruct the tubes or change the position of the reproductive organs.

CHRONIC INFLAMMATION

Affects the quality of the egg and the uterine environment.

IMMUNOLOGICAL DISORDERS

Complicate implantation of the embryo.

IN SOME CASES, SURGERY CAN IMPROVE SPONTANEOUS FERTILITY. IN OTHERS, IT IS NECESSARY TO TURN TO **ASSISTED REPRODUCTION** TECHNIQUES SUCH AS IN VITRO FERTILISATION (IVF).

MORE THAN PHYSICAL PAIN

Endometriosis doesn't just cause pain in the body: it also **impacts mental health, self-esteem, relationships and professional life**. For many women, their ability to work, have a satisfying sex life or become mothers is limited.

What is more, since this is a chronic disease, the treatment is not always a cure. Up until now, the treatment of endometriosis has predominantly been based on **painkillers, the use of hormone medications or surgery**. However, new horizons are currently opening up with **innovative specific hormone treatments** that provide a welcome sense of hope to affected patients. All of this helps considerably to manage the disease, combined with moderate physical exercise and a healthy, anti-inflammatory diet. Nonetheless, the crucial step remains the same: **being listened to in time**.

ADVOCATING FOR EARLY DIAGNOSIS

In recent years, endometriosis has begun to gain space in the media, social networks and healthcare agendas, thanks to the fight led by patients and associations who are demanding more investment in research, medical education and awareness campaigns.

The early diagnosis of endometriosis **not only improves quality of life**, but also protects women's future fertility. It is essential to educate professionals, listen to patients from the very first consultation and break away from a culture that minimises gynaecological pain.

BECAUSE BEHIND EVERY LATE DIAGNOSIS, THERE MAY BE **YEARS OF UNNECESSARY SUFFERING** AND OPPORTUNITIES TO BE A MOTHER THAT COULD HAVE BEEN PRESERVED.

Dr. Salvador García Aguirre | *Medical Director - UR Montpellier Zaragoza*

QUALITY OF EGGS

Essential for female fertility and the health of the baby

WOMEN WITH GOOD QUALITY EGGS MAY HAVE A GREATER LIKELIHOOD OF CONCEIVING IN LESS TIME, WHILE THOSE WITH ISSUES IN THEIR OOCYTE QUALITY MAY FACE A LONGER AND MORE CHALLENGING CONCEPTION PROCESS.

A high-quality egg not only makes conception easier, but also helps to reduce the risk of complications in pregnancy, such as spontaneous abortions or congenital defects. Oocyte quality influences the **stability of the DNA** and the egg's cellular resources, which may in turn influence the health of the embryo and the long-term development of the pregnancy.

Oocyte quality is linked, predominantly, to the genetic stability of the embryo. Eggs with chromosomal abnormalities have a higher risk of producing embryos with genetic alterations, which increases the **risk of spontaneous abortion**, especially during the first trimester of pregnancy. This risk is particularly relevant for older women, given that the likelihood of chromosomal abnormalities in eggs increases with age. Oocyte quality is a reflection of **overall health** as well as of multiple internal and external factors. Improving lifestyle habits, reducing stress and following a healthy diet can contribute to optimising reproductive health

.

Causes of poor oocyte quality

Age is one of the most determining factors in the quality of eggs. Over time, both the quantity and the quality of eggs decline. From the **age of 35** onwards, this decline speeds up, and the ovarian reserve starts to diminish. As a woman's age increases, the eggs accumulate chromosomal alterations, which may reduce fertilisation rates and increase the risk of spontaneous abortions.

In addition to unhealthy habits such as an unbalanced

THE QUALITY OF EGGS IS A FUNDAMENTAL ASPECT OF FEMALE FERTILITY, AS IT DIRECTLY INFLUENCES THE ABILITY TO CONCEIVE AND THE HEALTH OF THE EMBRYO IN THE INITIAL STAGES OF DEVELOPMENT.

diet, smoking, the excessive consumption of alcohol or exposure to pollutants, which can increase levels of **oxidative stress**, other pathologies such as endometriosis, polycystic ovary syndrome or treatments with radio/chemotherapy can have a harmful effect on eggs. Also, some women have **genetic predispositions** that may affect the quality of their eggs. Genetic alterations may cause chromosomal abnormalities that affect the development and function of the egg, which may complicate the fertilisation or early development of the embryo.

Understanding the status of the ovarian capacity

In order to check the status of the ovarian reserve, an antral follicle count is carried out using ultrasound, in addition to analyses that determine the levels of **FSH** (follicle-stimulating hormone), E2 (basal estradiol) and **AMH** (anti-Müllerian hormone). Conversely, the only way to know whether quality eggs are being produced is via a cycle of in vitro fertilisation, which makes it possible to check whether the eggs have the ability to develop correctly. Still, as already mentioned, the most important factor in indicating the quality of the eggs is the age of the woman. Thus the younger the better, and it is from the **age of 38** that quality decreases progressively, whereby it becomes hard to achieve a pregnancy with one's own eggs from the **age of 43**.

However, although age is the most important marker in terms of the chromosomal quality of eggs, there may be other factors, such as those already touched on (environmental or genetic factors), that may decrease the functional capacity of eggs and that can only be determined and, in some cases, remedied in the context of a **cycle of in vitro fertilisation**, especially if studying the chromosomal status of embryos using the PGT-A technique.

Pablo Alberola, Celia Ortíz, José de Madaria | *Laboratory Team - UR Moncloa Madrid*

ARTIFICIAL INTELLIGENCE *and* FERTILITY

A MAJOR STEP IN ASSISTED REPRODUCTION

Artificial intelligence (AI) has begun to revolutionise medicine, and in the field of assisted reproduction in particular, it will enable the optimisation of procedures, the personalisation of treatments and the improvement of results.

In this field, AI is used (and its applications will undoubtedly be expanded) to analyse large volumes of data, establish advanced algorithms and predictive models, identify patterns and make informed decisions, which makes it possible to **improve the success rates** of fertility treatments and offer more precise, effective and personalised options to patients.

One of the applications it can offer is supporting laboratories in the selection of the embryos to be used for in vitro fertilisation procedures by way of the **morphological analysis** of the embryos using computer vision techniques. Traditionally, the classification and selection of embryos depends on microscopic observations performed by embryologists. However, AI uses con-

volutional neural networks (CNNs) to process high-resolution images of embryos and **evaluate characteristics** such as cellular symmetry and the fragmentation and number of cells, which could improve the precision in the selection of embryos, leading to a greater probability of implantation. A recent study has attested that AI is capable of predicting, with over **80%** certainty, the embryos with a greater probability of implantation in the uterus, compared to **50%** when the laboratory team was doing so without this kind of help.

AI is also being implemented to analyse the **quality of reproductive gametes**: sperm cells and eggs. This is of genuine relevance, as it can be assumed that choosing a good gamete can create embryos of higher quality, and can therefore increase the chances of a pregnancy. In doing so, AI takes note of details that may be missed by specialists, given the limitations of the human eye.

Another highly interesting application currently being developed is **individualised medicine**. Just as every person is different, the same is also true for our bodies and the way we respond to medications in a stimulation procedure. AI models can help to analyse a large quantity of data such as age, hormonal levels or medical history and, with this, apply a better dose to achieve the main objective: an **improved response without side effects**.

Another aspect to keep in mind is the possibility to **predict the long-term results of treatments**. Using algorithms based on historical data, AI can calculate the probability of pregnancy based on genetic factors, the quality of the sperm and the egg, the response to ovarian stimulation and other biomedical parameters. This predictive ability could help specialists make informed decisions and better manage the expectations of patients. What is more, it can **anticipate possible medical complications** that may occur during the processes of stimulation, follicular puncture or, delving into another field, those derived from pregnancy, etc...

In laboratories, AI could also help, if possible, to ensure that everything works more safely and efficiently. For example, there are programming models that **monitor embryo development** at all times without the need to move the embryos. If anything were to happen, this system would detect it immediately and alert the medical staff. As with any technological advancement, these tools must be used in a **responsible and ethical** manner. This is why all of these applications are currently being developed by experts so that artificial intelligence is used in a way that is safe, fair and respects the privacy of patients.

Ultimately, AI would not replace embryologists or doctors, but it would help them with their decision-making. This would give peace of mind to patients and the medical team in the selection of embryos, dosage of medications or detection of incidents in the laboratory. Although we are still in the learning phase when it comes to this tool, with the appropriate support, **technology, science and empathy**, the desire to form a family gets a little closer every day.

Technical and Ethical Challenges

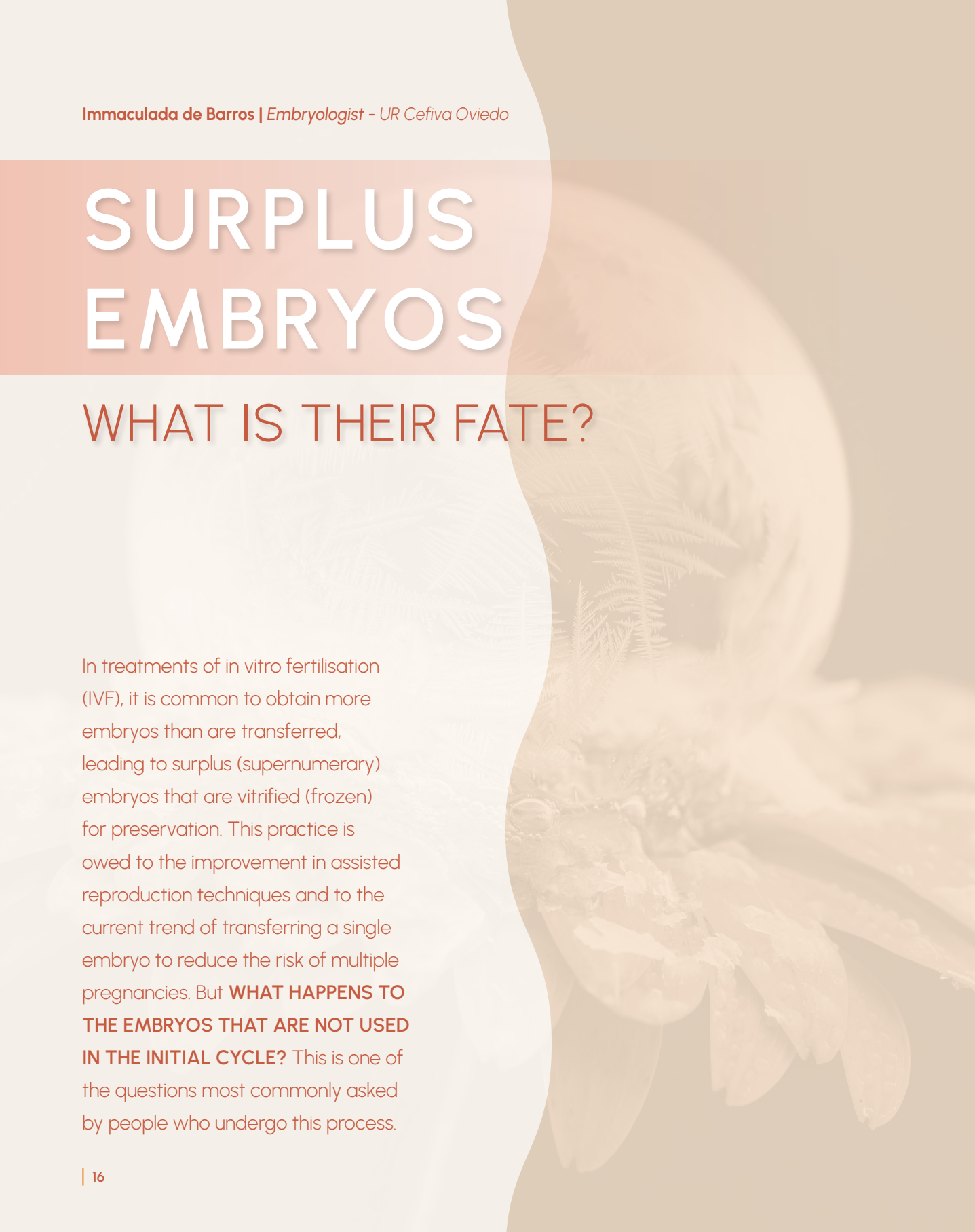
Despite the advances, the implementation of AI in assisted reproduction faces various challenges. One of the biggest obstacles is the **quality and availability of data**, since AI models require large quantities of complete and accurate data in order to be trained and function correctly. Moreover, the integration of AI in clinical practice requires continuous validation, ensuring that the systems are effective and safe in a range of different contexts and for different types of patients.

Ethical concerns also exist regarding the use of AI in medical decision-making, especially in relation to patient autonomy and the transparency of the algorithms. Excessive dependency on machines may give rise to doubts regarding the role of the embryologist and the doctor, who should continue to be responsible for the ultimate decisions.

Immaculada de Barros | *Embryologist - UR Cefiva Oviedo*

SURPLUS EMBRYOS

WHAT IS THEIR FATE?



In treatments of in vitro fertilisation (IVF), it is common to obtain more embryos than are transferred, leading to surplus (supernumerary) embryos that are vitrified (frozen) for preservation. This practice is owed to the improvement in assisted reproduction techniques and to the current trend of transferring a single embryo to reduce the risk of multiple pregnancies. But **WHAT HAPPENS TO THE EMBRYOS THAT ARE NOT USED IN THE INITIAL CYCLE?** This is one of the questions most commonly asked by people who undergo this process.

CRYOPRESERVATION TECHNIQUES HAVE MADE IT POSSIBLE TO STORE CELLS AND HUMAN TISSUE AT EXTREMELY LOW TEMPERATURES (-196oC IN LIQUID NITROGEN), THUS HALTING ALL BIOLOGICAL ACTIVITY WITHOUT ANY DETRIMENT TO THE QUALITY OF SAID CELLS.

. IN REPRODUCTIVE MEDICINE, THE CRYOPRESERVATION OF GAMETES AND EMBRYOS REPRESENTS A SIGNIFICANT BREAKTHROUGH, AS IT ENABLES THEIR PRESERVATION FOR MEDICAL, THERAPEUTIC AND EVEN SOCIAL PURPOSES.

ETHIS PROCEDURE, IN ADDITION TO OPTIMISING THE CHANCES OF SUCCESS IN REPRODUCTIVE TREATMENTS, ALSO ALLOWS WOMEN TO POSTPONE PREGNANCY FOR PERSONAL OR PROFESSIONAL REASONS.

OPTIONS FOR SUPERNUMERARY EMBRYOS

Assisted reproduction techniques are regulated by **Law 14/2006, of 26 May**, on assisted human reproduction techniques. The possibilities provided for by the law with regard to supernumerary embryos from a cycle of in vitro fertilisation are the followings:

1. Cryopreservation for own use

Vitrification makes it possible to preserve the embryos, and in this way they can be used by the same couple in subsequent attempts without the need to repeatedly undergo a process of ovarian stimulation and egg extraction. This procedure has been shown to be **highly effective**, with success rates similar to those of fresh embryos.

2. Donation to other patients for reproductive purposes

Some people choose to **donate** their embryos to other couples or individuals, provided that the requirements established by law are abided by. Donation is an **altruistic and anonymous act** that is legally regulated in Spain and that gives people who cannot become parents with their own gametes the chance to fulfil this wish.

3. Donation for scientific research purposes

Scientific studies are conducted with the aim of improving assisted reproduction techniques, investigating genetic diseases or contributing to the development of cell therapies. This requires the **informed consent** of the parents and the **approval of ethics committees** that oversee compliance with regulations. An additional requirement is that a research project must be associated with the centre safeguarding said embryos. In Spain, there are very few centres with a research project that entails the use of human embryos, as it is difficult to obtain specific authorisation for this purpose.

4. Disposal of embryos without any other purpose

If parents decide not to use the embryos nor donate them, they can choose to have them **destroyed**. This will only be applicable once the maximum storage period established by this Law ends, i.e. once the recipient no longer fulfils the clinically appropriate requirements to perform the technique of assisted reproduction.

This decision can be an emotionally difficult one. It is essential that the decision regarding the fate of the surplus embryos is formalised by way of **informed consent**, in which the chosen option is specified. What is more, Spanish legislation establishes that this consent must be renewed or modified at least every **two years**. If, during two consecutive renewals, it is not possible to obtain the signed consent and it is proven that every possible effort has been made to do so without any success, the embryos remain at the disposal of the centre in which they are stored. Said centre may allocate the embryos for the **various purposes established by law**, always maintaining confidentiality and anonymity.

THE PROBLEM OF SUPERNUMERARY EMBRYOS

Today, the high number of embryos stored in assisted reproduction centres in Spain is creating a major issue. According to the data from the National Register of Assisted Reproduction, in 2019 a total of **668,082 cryopreserved embryos** were reported in Spain. This poses an additional difficulty for the assisted reproduction centres, as the storage, safeguarding and preservation of these embryos, in addition to **significant maintenance costs**, also creates a substantial amount of work managing the documentation associated with these embryos.

One of the main reasons behind the existence of this high number of stored embryos is the **moral dilemma** faced by patients when the time comes to decide what to do with their embryos, as in addition to the legal aspects, this decision also involves a series of moral and personal considerations that make decision-making difficult.

It is very important that before beginning a cycle of in vitro fertilisation, patients are well informed with regard to the options available for the surplus embryos from the cycle carried out. For this, the assisted reproduction professionals will let them know about the **available options** for said embryos and the importance of renewing both the informed consent as well as the pre-established fee in order to make the preservation of the embryos in the clinic banks a viable option

.

FOR ALL OF THE AFOREMENTIONED REASONS, IT IS NECESSARY TO INSTIL IN PATIENTS THE PRINCIPLE OF RESPONSIBILITY FOR THEIR EMBRYOS AND OF RESPONDING TO REQUESTS BY THE CENTRES TO RENEW THE NECESSARY FORMALITIES IN ORDER TO PRESERVE THESE EMBRYOS.

Fanny Sánchez | *Patient Care - UR Moncloa Madrid*

PANORAMA of a patient's first CONTACT with ASSISTED REPRODUCTION

PREPARING FOR THE JOURNEY AHEAD

LET US DELVE INTO THE COMMON ELEMENTS SHARED BY ASSISTED REPRODUCTION PATIENTS WITH THE AIM OF IDENTIFYING THEM ON OUR OWN JOURNEY AND BEING ABLE TO ANTICIPATE THEIR IMPACT.

1. ON UNCERTAINTY AND THE LOSS OF CONTROL

THE FIRST THING WE NEED TO UNDERSTAND AND ACCEPT IS THAT IT IS REAL. The second thing we need to understand and accept is that we will be living with it throughout the entire process, be it fast and predictable or complex and prolonged. This uncertainty exists because science can only take us so far. Nobody has 100% foolproof knowledge; nobody can offer a 100% guarantee.

In our country, we have very advanced knowledge, highly developed technology and intensive research, yet despite all this, we will **never reach 100%** because our own biology is superior to us. We can continuously expand our framework of knowledge, reducing the realm of uncertainty as much as possible, but we cannot eliminate it. It exists, both for patients and for the medical team, and we cannot ignore it.

The sensation of a **loss of control** is truly uncomfortable. In reality, believing that we have life under control at any point in time is endearingly naive. Realising this fact brings a significant shift in perspective. Losing control is not the same as accepting that it has its limits. This places us in a realistic scenario, where we can manage this uncertainty as a possibility to be very much kept in mind.

2. ON THE LACK OF KNOWLEDGE AND BUILDING TRUSTA

THE UNCERTAINTY of which we speak is intimately connected to the lack of knowledge about the environment in which the patient suddenly finds themselves. It is absolutely logical for us to feel lost when entering this new and disconcerting territory. Our prior expectations also do a number on us here, because we've built these expectations without having the knowledge of all the components, implications and details that will be necessary and unavoidable when it comes to the moment of truth.

No painstakingly prepared plan made in the comfort of our living room will support the harsh reality of a medical diagnosis. **Not in terms of content, form, time nor results.** The expectations are the spanner in the works. The expectations are an essential pillar of the false sense of security that crumbles after the first ultrasound or semen analysis. A plan without knowledge is not a plan; it is an absurd stab in the dark. And the doctors are the ones with the knowledge. Until we are seen by a doctor, it is impossible to truly understand what is happening and how we can effectively and safely tackle it.

From the start, the most important thing will be **building trust** in the person who will be your doctor; the person with the ability to decipher the facts and the possibility to create a plan of action and put it into practice. The professional with the competence that is essential to be able to seek and offer the answers we need. That famous **"good feeling"** from our doctor is not about whether we like them or they tell us what we want to hear.

This initial match is viable when we achieve a high level of effective **communication** with our doctor, from whom we can expect commitment and sincerity as well as the reliability that should characterise them as a specialist, because this is what will help the patient to be well informed, advised and supported in making decisions that will most likely be of transcendental importance in their lives. We generally become aware of this in retrospect.

SO WHEN YOU FIND YOUR DOCTOR, YOUR TEAM – TRUST THEM. PLACE YOURSELF IN THEIR HANDS. THIS IS THE OTHER MASSIVE INTERNAL SHIFT WE HAVE TO MAKE: PUTTING OUR TRUST IN OUR CHOSEN SPECIALIST.

3. ON EXTERNAL BOMBARDMENT

Nowadays, it is very easy to access the torrent of information making its rounds online; what is not quite so easy is discerning from among all that information which content stems from reliable sources and which other content may have questionable origins.

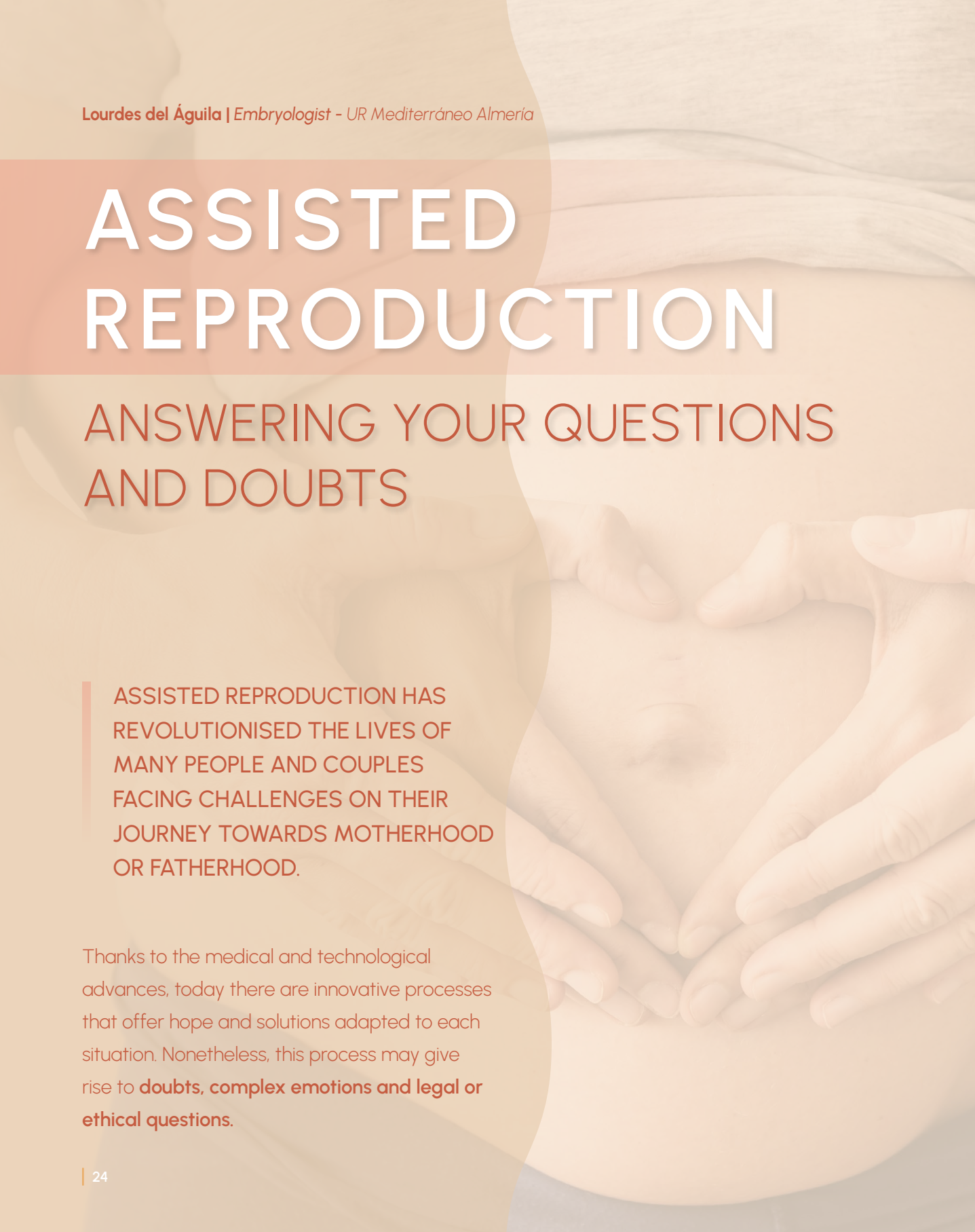
In the majority of cases, this **FLOOD OF INFORMATION** has the opposite effect, leading to patients isolating themselves in an attempt to stay away from the conflict caused by this noise and the inability to gauge the reliability of the information. If we maintain that this information is necessary, then the idea of isolating oneself is not as great as it might seem. The other option is exposing ourselves to the deluge of data from all sides, leaving us with only one safe path: **asking a medical professional**. If you need a second opinion: **consult another doctor**. Turning to accredited professionals prevents and avoids unnecessary problems and complications for the patient in the future.

In this moment, we do not need testimonials that are unrelated to our circumstances, nor gurus with a decalogue of universal solutions, nor well-meaning advice about treatments that we don't even know are relevant to us yet, nor alternative options to something that hasn't even happened yet. All of that can wait. The main priority is having information that is real, reliable and tied to the specific corresponding case, and this always comes from the specialist themselves. If you need more information, the specialist doctor will be able to refer you to publications, professionals, studies and documents that are verified and reliable. **ASK**.

Lourdes del Águila | *Embryologist* - *UR Mediterráneo Almería*

ASSISTED REPRODUCTION

ANSWERING YOUR QUESTIONS AND DOUBTS



> ASSISTED REPRODUCTION HAS REVOLUTIONISED THE LIVES OF MANY PEOPLE AND COUPLES FACING CHALLENGES ON THEIR JOURNEY TOWARDS MOTHERHOOD OR FATHERHOOD.

Thanks to the medical and technological advances, today there are innovative processes that offer hope and solutions adapted to each situation. Nonetheless, this process may give rise to **doubts, complex emotions and legal or ethical questions.**

THE TREATMENTS CURRENTLY OFFERED BY REPRODUCTIVE MEDICINE GENERATE DOUBTS, COMPLEX EMOTIONS AND LEGAL OR ETHICAL QUESTIONS. THIS ARTICLE TACKLES 10 FREQUENT QUESTIONS ABOUT ASSISTED REPRODUCTION WITH THE AIM OF ADDRESSING CONCERNS AND PROVIDING VALUABLE INFORMATION TO THOSE WHO ARE CONSIDERING OR ALREADY UNDERGOING FERTILITY TREATMENT.

1. IS IT NORMAL TO EXPERIENCE MOMENTS OF FRUSTRATION, SADNESS OR DEPRESSION WHEN THERE IS A FERTILITY ISSUE?

Yes, these feelings are quite common in couples who are seeking to get pregnant; sometimes, one of the partners in the couple may feel responsible and blame themselves for the issue, and this is when the support of the other partner is fundamental.

2. HOW LONG DO SPERM CELLS TAKE TO FORM?

Spermiogenesis is the process by which sperm cells are produced by the germ cells, and this process **takes 86 days** to be completed, which is why semen analyses can often differ somewhat if 3 months have passed between them.

3. UNTIL WHEN CAN I PRESERVE MY FERTILITY?

There is no age limit, but it is recommended to do so before the **age of 35** – if the patient is older than this, we have to keep in mind that the quality and ovarian reserve begin to decline from this age onwards.

4. UNTIL WHEN CAN GAMETES (EGGS AND SPERM CELLS) BE PRESERVED?

There is no time limit. The gametes and embryos, once vitrified, can remain preserved for as long as the recipient is able to be a mother. This can be for as long as is needed.

5. WHAT IS THE DIFFERENCE BETWEEN FISH AND SPERM FRAGMENTATION?

Although both techniques focus on the genetic evaluation of the sperm, each test reveals unique information. DNA fragmentation gives us the percentage of sperm cells from the semen sample that exhibit breaks in the DNA chain, and FISH is a technique that probes certain chromosomes such as chromosome X, Y, 13, 18 and 21, with the test results indicating what proportion of sperm cells has an altered number of these chromosomes.

6. IF THE OPTION OF EGG DONATION IS CHOSEN, WILL THE CHILD LOOK LIKE THE MOTHER?

Generally, the maximum resemblance to the patient is sought. Various publications have observed a relationship between the future mother and the embryo via the endometrium, inducing epigenetic changes that are crucial to its development.

7. CAN MORE THAN 3 EMBRYOS BE TRANSFERRED?

No, never. Law 14/2006 of 26 May stipulates that "in the case of in vitro fertilisation and related techniques, only the transfer of a **maximum of three pre-embryos** in each woman in each reproductive cycle is authorised". As a general rule, we will usually recommend transferring a single embryo, although this may vary depending on each patient's case.

8. IS IT POSSIBLE TO CHOOSE THE SEX OF THE BABY?

No, the Spanish legal framework only permits this in exceptional cases. Based on law 14/2006 of 26 May, this is considered a very serious infringement. The sex may only be selected for "the detection of early-onset, very serious diseases that are not amenable to postnatal curative treatment in accordance with the current scientific knowledge, with the aim of carrying out the embryonic selection of the unaffected pre-embryos for the transfer thereof" and in "the detection of other alterations that may compromise the viability of the pre-embryo".

9. WHAT IS SIRHA?

SIRHA is a platform where information on assisted human reproduction is recorded and managed, with the objective of guaranteeing the traceability of donated gametes (eggs and sperm) and pre-embryos, as well as the safety and confidentiality of the treatments.

10. CAN THE FILIATION OF CHILDREN BORN BY WAY OF ASSISTED REPRODUCTION TECHNIQUES BE RENOUNCED?

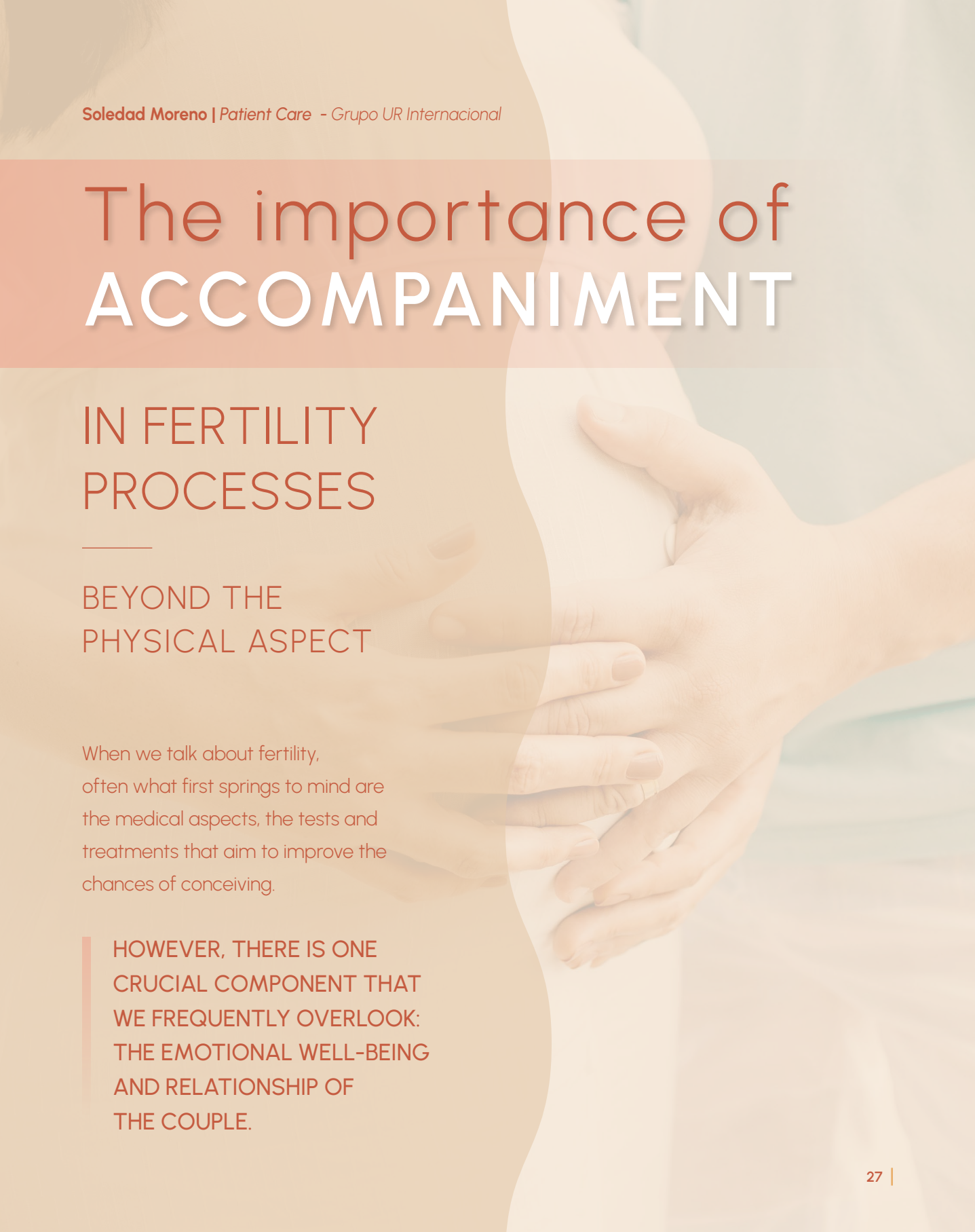
No, even if donor eggs or semen have been used. According to law 14/2006 of 26 May, "neither the female parent nor the husband, if they have granted their formal, prior and express consent to specific fertilisation with the contribution of a donor or donors, may dispute the matrimonial filiation of the child born as a consequence of said fertilisation".

The advances in assisted reproduction continue to offer more and more successful options. This is a medical field in constant evolution that combines science, medicine and empathy to help people realise their dream of forming a family. **Each case is unique**, which is why it is essential to obtain personalised professional advice that allows people to make informed and conscious decisions. The most important thing is not to lose sight of mutual support as a couple, patience and trust in the medical team. **With clear information and the right support, this process can be undertaken with a greater sense of security and hope.**

Soledad Moreno | *Patient Care* - *Grupo UR Internacional*

The importance of ACCOMPANIMENT IN FERTILITY PROCESSES

BEYOND THE PHYSICAL ASPECT



When we talk about fertility, often what first springs to mind are the medical aspects, the tests and treatments that aim to improve the chances of conceiving.

> HOWEVER, THERE IS ONE CRUCIAL COMPONENT THAT WE FREQUENTLY OVERLOOK: THE EMOTIONAL WELL-BEING AND RELATIONSHIP OF THE COUPLE.

THIS IS WHERE A FERTILITY COACH CAN BECOME A **FUNDAMENTAL PILLAR** FOR MANY COUPLES SEEKING TO MAKE THEIR **DREAM OF BEING PARENTS** A REALITY.

As a fertility coach, my focus is on **accompanying** the couples not only in their physical process, but in their overall well-being too. This journey is filled with intense emotions such as frustration, fear, uncertainty and, in many cases, desperation.

Here, my work is to help couples find their balance, managing these emotions and showing them how to identify what aspects of their personal life and their relationship may be influencing their ability to conceive. Because the **body and the mind are often far more connected** than we imagine.

One of the areas in which I have observed the most need for support is in the relationship between **the couple**. The pressure to become parents can seriously affect everyday life and the intimacy between two people. Stress, the routine visits to the clinic and the obsession with the results can often displace the affection, desire and complicity they share. As a coach at Grupo Internacional UR, I strive to remind couples that, before being future parents, they are a couple, and their relationship is the pillar on which their family will be built.

My approach also includes tools to work on aspects such as communication, trust and stress management, but above all, I invite them to find their way back to the love and passion that brought them together when they first met. This emotional and physical **reconnection** not only strengthens the relationship, but can also be key in unblocking the emotional barriers that may be affecting fertility.

THE STORY OF

Ana and Carlos

Ana and Carlos came to me after three years of trying to have a baby, undergoing various fertility treatments without success.

Both of them felt emotionally drained, distant and frustrated. The stress of not achieving a pregnancy had caused their relationship to deteriorate to the point that they were barely affectionate with one another, and their intimacy had become an obligation more than an expression of love. In these circumstances, their marriage was at risk.

My first step with them was to make them see that before focusing on falling pregnant, we should work on their relationship. It was crucial for them to rediscover one another, rediscover their desire to be together and, above all, to stop seeing each other only as two people who were trying to have a baby.

We began working individually, remembering what each of them liked to do before they began the treatments. I also introduced dynamics that allowed them to remember the happy moments and the reasons why they fell in love, and most of all, my main objective was for them to once again become accomplices in all aspects of life, not just focusing on fertility. I helped them find enjoyment with the help of tools I use as a coach, with leisure activities and by finding their **"ikigai"** again (doing what makes you happy, that which motivates you to keep going).

In this process, something magical happened: Ana started pole dance again, she felt good about herself, in her body, the days were no longer passing so slowly and she was barely thinking about her fertility process. She wrote to me telling me how happy she was. Carlos, in turn, started playing the guitar again, took up DIY and was no longer spending hours on his phone on the sofa barely doing anything.

The following sessions with Carlos and Ana took a 360-degree turn; in fact, they told me that since the two of them had begun working for and on themselves, the couple was more united than ever and was spending more quality time together. This shared project as a couple not only allowed them to unite each of their talents, but also gave them a new perspective on life and something else to focus on, thus reducing the anxiety that had previously revolved around conceiving.

After a few months, Ana wrote to me to tell me that **she was pregnant**. What started as a fertility process was transformed into a journey of discovering the love, passion and creativity that each of them had.

BASED ON MY EXPERIENCE, I WOULD LOVE TO REACH MORE COUPLES. IF YOU ARE IN A FERTILITY PROCESS AND YOU FEEL THAT YOUR RELATIONSHIP NEEDS A BOOST, DON'T HESITATE TO SEEK SUPPORT, BECAUSE BEING ACCOMPANIED ON THIS JOURNEY IS WHAT MAKES ALL THE DIFFERENCE.

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