

September 2023

# Forming Families

*AI and Fertility  
Treatment: UCSF's  
Dr. Marcelle  
Cedars*

*How to  
Provide  
the Most  
Advanced  
Fertility  
Care*

*ARC Partners  
Leading the  
Way with AI*

Welcome once again to Forming Families, this time for our Fall 2023 edition. ARC Fertility is proud to bring you this issue of our quarterly newsletter, with thoughts from our staff, colleagues, and fertility medicine leaders on family forming, healthcare, workplace benefits, and more.

This autumn, we decided to center Forming Families on the technological advancements moving fertility medicine forward – specifically, new strides in artificial intelligence (AI). AI is the latest major innovation to capture the popular imagination, and has been making an impact in many industries, medicine very much included.

AI can be a controversial subject. As I write this, the entertainment industry is facing strikes from actors and writers concerned – among other factors – with being replaced by AI-generated assets. AI-driven stock trading threatens the chances of regular people doing well in the market. And some religious organizations have objected to the rise of AI, as if “man were playing God.”

Like any technology, artificial intelligence has great potential to do both good and harm. In the medical field, AI can make studies and research faster and more accurate, and even predict results. AI can help develop new drugs, calculate the perfect medicinal dosage, project the spread of a disease, and more.

When it comes to fertility treatment, AI can improve so much about the family-building experience. AI can use data analytics to predict procedure results, determine the optimal time to induce ovulation, or find the best donor tissue for each patient. But using AI successfully means understanding its strengths and weaknesses, and making sure to protect the privacy and autonomy of patients and doctors.

We’ve got more to say about AI, technology, and fertility medicine in the pages beyond, so read on and let us know what you think.



**David Adamson, MD**

Founder and CEO  
ARC Fertility

# Dr. Marcelle Cedars of UCSF Talks AI and Fertility Care

## Intro

Dr. Marcelle Cedars specializes in caring for patients going through in vitro fertilization and perimenopause, as well as patients with polycystic ovarian syndrome. She is Director of the Center for Reproductive Health and the Reproductive Endocrinology Division at UCSF. She focuses on how ovarian aging impacts women's fertility and health. Dr. Cedars was kind enough to join us and chat about the growing role of AI in fertility medicine.

## So glad you could join us, Dr. Cedars. To jump right in, what role has AI played so far in fertility medicine?

I think AI has many potential roles in Assisted Reproductive Technology (ART). Much of what we do is repetitive and based on subjective experience. The ability to combine large datasets is invaluable, such as follicle monitoring – with patient phenotypes and high-resolution imaging of oocytes or sperm and embryos or genomic and phenotypic information. AI can also find valuable predictive patterns in a way the human brain simply can't do.

## What is your personal experience using AI in fertility treatments?

We performed the first study to look at ovulation induction and identify optimal trigger timing. We are also working within the laboratory with AI to select the most optimal sperm for insemination and aid in embryo selection.

## Do you see any ethical concerns in using AI for family building?

I think AI still has a ways to go – we need to make sure this technology is validated across diverse populations, as it's not clear whether algorithms trained on one dataset will apply to another set. We also need to ensure that these technologies can be used to increase access to care and not just raise costs. Using AI to take our services further out of reach for many is not ethical.

Ultimately, it will be critical to assure that we have accurate data regarding the efficacy of these systems. Very frequently, new technology comes into use without validation and is then widely accepted. We need to



guarantee the external validation of these AI tools to confirm that we are actually moving the field of fertility medicine forward.

## Please discuss some benefits and drawbacks to using AI in fertility medicine.

Some of the benefits include improvements to the efficiency and quality of care we provide. If successful, AI could reduce time to pregnancy and improve clinical outcomes while decreasing cost, but that's a big ask. Right now there is a lot of promise, but we need to be rigorous in how we apply this new technology.

One of the biggest drawbacks for AI is the "black box" problem. Algorithms are proprietary and validation is frequently arduous. This makes evidence-based medicine difficult. Additionally, algorithms are, by nature, constantly changing, thereby making it difficult to secure ongoing approval from authorities.



# How to Provide the Most Advanced Fertility Care

*Artificial intelligence is just one of the many new innovations constantly being added to the toolbox available to fertility specialists. But technology moves faster than institutions, and many employers may not offer coverage for the most advanced treatments available. Prospective parents, however, want access to all the best options as they build their families, and business leaders who provide those options will stand the best chance of hiring and retaining a loyal, diverse team.*

Every technological advancement in medicine has its period of controversy. From open-heart surgery to chemotherapy to prosthetics, there will always be skeptics who resist the march of science. Must we even mention the ongoing resistance to the proven science of vaccination, or the political attack on safe and legal abortion?

So it is no surprise to see people so worried about artificial intelligence. Some people are worried about AI replacing human workers, others about our increasing reliance on imperfect and unfeeling machine learning. It is predictable that not everyone is comfortable leaving their healthcare in the hands of a computer.

Right now, however, AI is in no state to displace actual doctors (or many other types of skilled labor) and its many ways to potentially contribute need continued assessment. It is essential that the development and application of AI is guided by knowledgeable medical practitioners, AI can make a huge difference in fertility medicine and the family-forming journey -- whether by picking the ideal donor tissue for each patient, knowing when to induce ovulation or perform IVF, or predicting the chances of a successful procedure.

Unfortunately, insurance does not always cover the newest treatments. Since most people desiring a family obtain health coverage through their employers, they look to improve their chances by finding a workplace that offers benefits.

At the same time, employers looking to attract and retain talent need to provide fertility care that brings not only the latest technology to employees, but also must address diversity, equity and inclusion (DEI). The best employers make sure they choose a provider like ARC Fertility that can meet both technology and societal advances.

Smart business leaders need to be aware of both technology and social changes. ARC is proud that its mission has always been to increase access to quality care. This means providing programs that ensure that the latest technology is inclusive of everyone and comprehensive for every family-forming journey. Because ARC provides this to employers, we are seeing substantial growth in our family-forming benefits program.



## FERTILITY BENEFITS

# A Key to DEI

Offering your employees a way to grow their families is a great way to let the world know that your company is committed to the physical and emotional wellbeing of their teams. It is also a proven approach to attracting and retaining women, members of the LGBTQ+ community, and others who need assistance to bring children into their lives.



Employers are facing an increasingly competitive labor market. The unemployment rate is at 3.6%, which the Federal Reserve classifies as full employment. First-time jobless claims are at their lowest levels since 1970, while wages have steadily climbed over the past year. Companies are working harder to attract and retain quality employees, and higher pay is just one arrow in their quiver.

To entice and keep top-tier talent, many organizations have started offering, outside of traditional compensation plans, benefits which explicitly help employees start or expand their families.

Family-building benefits create significant goodwill between employers and employees because they show that a company is sensitive to its workforce's needs outside the workplace. Studies have shown that employees who use these benefits have increased loyalty to their employer, and even employees who never plan to use this coverage view them positively. These benefits typically cover treatments like in vitro fertilization (IVF), intrauterine insemination (IUI), adoption support services, fertility drug prescriptions, and surrogacy.

Build  
employee  
loyalty

Reduce staff  
turnover

Become  
an employer  
of choice for  
job seekers

Increase  
diversity

For more information about how ARC Fertility can help you reach your DEI goals by offering creative fertility benefits that allow employees to grow their families, please contact 1-888-990-2727 or [info@arcfertility.com](mailto:info@arcfertility.com).

For more information about ARC Fertility's Family Forming Benefits, please contact ARC directly at [info@arcfertility.com](mailto:info@arcfertility.com) or 1-888-990-2727.