

Frozen

Egg preservation can help dreams of a future family come true

By Adrienne Sylver

A kindergarten teacher, Carolina Gomez* always wanted to be a mom. Her dream hit a snag in 2013, when she was diagnosed with Hodgkin's lymphoma at the age of 33. The cancer meant chemotherapy treatments that would likely leave her infertile. But thanks to quick-thinking medical specialists and advances in fertility options, Ms. Gomez preserved her ability to become a mother by freezing her eggs.

The first frozen-egg baby was born in 1997, but the American Society for Reproductive Medicine didn't lift the experimental label from the procedure until 2012. By then, improved success rates and new technology had resulted in several thousand births, said Michael Jacobs, M.D., a Baptist Health Quality Network physician.

"There are a number of good reasons to freeze eggs," said Dr. Jacobs, a reproductive endocrinologist who performs the procedure on the Baptist Hospital campus. "Some women are diagnosed at a young age with a fertility problem that will make it difficult for them to conceive later. Also, there's a growing group of women who decide to delay childbirth and understand their odds of getting pregnant in their 40s improve by using younger eggs — eggs they froze years earlier. And it's especially gratifying to help a woman or couple going through a traumatic health problem, like cancer."

It's now standard practice to perform a fertility assessment on each cancer patient, said Leonard Kalman, M.D., deputy director of the new Miami Cancer Institute at Baptist Health. Specialists there will work closely with fertility experts when the Institute opens on the Baptist Hospital campus in 2016.

"In Carolina's case, we used the most fertility-sparing drugs possible in her first round of chemo," Dr. Kalman said. "When she relapsed, we knew she needed more potentially damaging drugs, so we referred her to a fertility specialist to explore her options before undergoing more chemotherapy." Radiation, particularly to the pelvic area, can also harm fertility.

Ms. Gomez is grateful. "At one point I told my family that the thought of not having children was worse than whatever fate cancer

brought me. At least the science that will allow me to potentially have children of my own one day is now available," she said.

That science includes an improved flash-freezing technique called vitrification. Patients are first given fertility drugs to stimulate egg production. Then eggs are retrieved in the office with the patient under sedation. Very sensitive to temperature change, the eggs are dehydrated then rapidly cooled in liquid nitrogen. Within seconds, they are taken from room temperature to minus 196 degrees Fahrenheit. Eggs are stored at that temperature at a special facility until ready for use.

Before widely offering the procedure, Dr. Jacobs and his team embarked on a small pilot program to ensure their pregnancy rates. The pilot program concluded with an egg survival rate of 84 percent and a 77 percent fertilization rate. Nine of 11 patients, or 82 percent, became pregnant, a rate higher than the national average.

As a result of participating in the program, Stephanie Arce, 31, and her husband, Armando, 32, are expecting a baby in March. An infertility problem led them to use viable sperm from Mr. Arce and Ms. Arce's frozen eggs. "We are ecstatic," Ms. Arce said. "It's a very exciting time for us."

At the other end of the egg-freezing spectrum is University of Miami junior Sarah Warman.* Single and 20, she recently learned she suffers from low ovarian reserves, or few remaining eggs in her ovaries. This same problem caused infertility in her 24-year-old married sister. "It's a strange decision to make at my age," Ms. Warman said. "I'm in college. My friends are out partying. When I researched egg freezing, there was absolutely nothing on young women."

Egg freezing also is a good choice for those with religious objections to freezing embryos. "It avoids those concerns because eggs are not fertilized," Dr. Jacobs said. "They are not considered life any more than a frozen sperm sample. The beauty of it is that with some advance planning, egg freezing provides another option for those who want children."

*Names have been changed to protect privacy.