

HEALTH REPORT

SPECIAL SECTION: WOMEN'S HEALTH

When pregnancy becomes a project

Infertility treatments vary in cost, invasiveness and success in becoming pregnant and having a child.

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Tina and James Nessler adore their 7-month-old daughter, Victoria Giselle. She's outgoing like her parents and they rush home from work to see her every day.

Their bubbly baby is very different from how they first met their child: a cluster of cells, an embryo about to be implanted in Tina's body. In 2009, Tina was 35 and having difficulty getting pregnant when she sought infertility help.

About one-third of couples in which the woman is older than 35 have fertility problems, and are turning to infertility treatments, according to the Centers for Disease Control and Prevention. The treatments vary in cost, invasiveness and success in becoming pregnant and having a child.

"At the end of the day it's the best money you'll ever spend because having a child is the most wonderful thing a couple can do. It's bringing your love to life," Tina said.

•TURN TO IVF, 6H



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MONEY WELL SPENT: Tina and James Nessler at their Kendall-area home with 7-month-old Victoria Giselle, who was conceived through in vitro fertilization.

OVARIAN CANCER

For those with ovarian cancer, new hope is on the horizon

■ Ovarian cancer, which can be difficult to detect, is very deadly. A new treatment at



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CERVICAL CANCER

HPV vaccine seen as added safeguard against cancer risk

■ Despite relatively low cervical cancer rates in the U.S., doctors recommend that young girls get the HPV vaccine.

BY MELISSA SANCHEZ

that cause most cervical cancers.

"It's a pretty straightforward conversation," said López-Luciano, whose practice is affiliated with Homestead Hospital at Baptist Health South Florida. "Most

OVARIAN CANCER

Ovarian cancer hard to detect until it spreads

• TREATMENT, FROM 1HH

vila became one of the first 20 women at the University of Miami Hospital to receive the latest, most promising treatment available for ovarian cancer — hypothermic intraperitoneal chemotherapy.

The hospital is the only medical facility south of Moffitt Cancer Center in Tampa to offer the treatment, called HIPEC.

The New England Journal of Medicine in 2006 reported a national study that showed HIPEC can slow the cancer's progression and increase patient survival rate. More recent studies from France, Italy, Australia and Spain tout similar results.

University of Miami Hospital began using the procedure in November 2010. Schuman said all patients are faring well but only time will tell how effective HIPEC is for each individual.

"It's too soon to have hard data yet, but the procedure is proven to be safe and [results] have been encouraging. Theoretically, I am convinced it is a step in the right direction," Schuman said.

Simply described, HIPEC is a 90-minute wash of the entire peritoneal (abdominal) cavity using an intense solution of chemotherapy heated to about 107 degrees Fahrenheit.

Typically, Schuman said, the accepted standard treatment for the disease is the surgical removal of tumors followed by rounds of intravenous chemotherapy. Additional rounds of chemo, delivered by tubes placed in the abdomen directly at the disease, provide more punch. Still, ovarian cancer returns in about 75 percent of patients.

Dr. Michel Vulfovich, a gynecology oncology physician at Memorial Cancer Institute at Memorial Regional Hospital in Hollywood, said ovarian cancer can recur a month after treatment.

"It only takes one cell resistant to the therapy for the cancer to start again. The likelihood of cancer in other parts of the body is more than possible — it is probable," Vulfovich said.

Another problem is that different kinds of ovarian cancers act uniquely from one woman to the next.

"We've treated some with very advanced ovarian cancer who were cured and others who came in early who were not. We can have 10 patients with the disease and 10 totally, completely different cases," Vulfovich said. "We just don't fully understand the biology of the tumors."

Many cancer centers, including Memorial, are adding new antibodies Avastin and AMG-479 to treatments to slow the cancer's growth. Both antibodies are in clinical trials.

With HIPEC, the abdomen is slit open to expose the peritoneal cavity and remove all visual tumors on the ovaries and other organs. Outflow and inflow catheters are inserted and then connected to a pumping machine. The abdomen is then stitched closed to allow intense chemotherapy fluid, heated to about 107 degrees, to circulate through the abdomen.

The abdomen is massaged and shaken to ensure chemo distribution to all surfaces and organs. After 90 minutes, the incision is reopened, the fluid is drained and the abdomen washed with saline.

The procedure takes from five to 12 hours.

Davila didn't see it coming.

Ovarian cancer is one of the least detectable cancers because vague symptoms such as fatigue, abdominal swelling or discomfort, trouble eating or frequent urination, can indicate common ailments that soon pass. A visit to the gynecologist is urged when symptoms persist for two or more weeks.

"Let me tell you — I had no appetite, my energy was low and my stomach was a little upset but I never thought it was cancer. I didn't even go to the gynecologist — I went to the proctologist thinking a hemorrhoid had flared up," Davila said.

An exploratory CT scan discovered tumors and Davila was scheduled for surgery the same day. She had Stage 3 ovarian cancer that had spread to her abdomen.

"HIPEC is not the first choice for fighting ovarian cancer. Going to your gynecologist annually and catching it in the first stage is much better," Davila said.

INFERTILITY

IVF: Most cost, most success

• IVF, FROM 1HH

The couple wanted to have a family together and tried for four years, after they married in 2005. But medical complications got in the way, as Tina takes medications to combat multiple sclerosis. In 2009, at 35, Tina visited an infertility clinic. "We were realizing we were getting older and we had to do something. We didn't have time on our side and we really wanted to have a child," she said.

At the Fertility & IVF Center of Miami, they tried two unsuccessful rounds of intrauterine insemination, costing \$1,500 each round. Then they turned to the more aggressive and more expensive in vitro fertilization. Their plan, including medications, cost about \$17,640. The doctors couldn't diagnose why the couple couldn't get pregnant on their own.

Dr. Bernard Cantor, a professor and infertility expert at Florida International University's Herbert Wertheim College of Medicine, said the most common cause of infertility is the woman not ovulating regularly, or at all. In an infertility evaluation, Cantor will review the three things needed for pregnancy: sperm quality, egg quality and any impediment for the sperm and egg to meet in the fallopian tube, like blockage from a prior infection. He will also look for medical conditions that can impact ovulation, like a thyroid problem or polycystic ovarian syndrome with associated insulin resistance and possible diabetes. Other factors, like being overweight and smoking, can also reduce a woman's chances of conceiving.

Most insurance companies will cover diagnostic testing for infertility but will generally not cover the infertility treatment. In Florida, unlike states like Massachusetts, insurance companies are not mandated to cover IVF.

There are five main options that are usually recommended to couples, depending on what doctors believe is causing their infertility:

- Oral medication, such as clomid and serophene, to improve ovulation. This can cost about \$300 per cycle.
- Injections of hormones — gonadotropins — that can stimulate eggs to grow in the ovary and ovulate.
- Surgery to remove scar tissue in the woman's fallopian tubes, where eggs must travel, but which can become blocked or scarred by pelvic infections, previous surgeries or endometriosis, an overgrowth of the tissue lining the uterus.

• Intrauterine insemination, in which the sperm is placed in the uterus during ovulation. This reduces the distance the sperm has to travel.

• In vitro fertilization, in which the egg and sperm are combined in lab and the resulting embryos are placed inside the uterus. Before the fertilization, the woman has to take hormones to stimulate ovulation, so that doctors can extract a number of eggs. With IVF, it is common now for doctors to transfer embryos after five days.

The idea is that at the more advanced stage, fewer embryos have to be transferred, thus reducing one of the biggest risks of IVF: multiple births. However, research by the CDC indicates the day-five embryo transfer does not translate into fewer multiple births. The other downside of IVF is the discomfort. It can cause hyper-stimulation to the ovaries,



AND BABY MAKES THREE: "We didn't have time on our side and we really wanted to have a child," Tina says of the decision to go through IVF.

causing a woman to feel bloated and distended and resulting in possible complications.

Tina likened the process to "your period times 10." She had 19 eggs produced by the time doctors determined it was time to retrieve eggs for fertilization. "It's bearable. Those 19 eggs, it's the closest you've ever been to being pregnant," she said. "People should definitely think positive."

IVF, which is the most expensive option, is also the most successful, said Dr. Fernando Akerman, with the Fertility & IVF Center of Miami.

Akerman said couples who are younger than 35 have about 25 percent chance of getting pregnant on their own — having unprotected sex several times a week for one year.

If that same couple have infertility issues and use IVF, their success rate of getting pregnant and having a child climbs to 60 to 70 percent, Akerman said.

"If the patient's age increases, the success rate decreases because of the quality of their eggs," Akerman said. He said couples who are older than 35, the success rate for IVF is about 31 percent. Cantor said the success with IVF is as low as 5 to 10 percent in women over 40.

Couples can check out the success rates for individual clinics at a database kept by the CDC.

When to seek medical help? That also depends on your age.

Dr. George Attia, with the University of Miami's UHealth Fertility Center, said the older the patient is, the faster the recommendation.

If the woman is younger than 35, the couple should try on their own for a year, he recommends. If she is between 35 and 40, try for six months before consulting with a reproductive endocrinologist or infertility specialist.

If the patient is older than 40, a consultation is recommended after three months of unsuccessfully trying. Attia stressed the infertility treatment recommended for a couple depends on what the underlying cause is. For patients who don't have success with IVF with their own eggs and sperm, he will suggest they consider using a donor egg or sperm.

Another option is a "gestational carrier" — another woman who will carry the embryo to term.

Cantor said his best advice is for couples "to have their children at the earliest age that is economically and socially feasible."

Cantor said success rates for all

What causes infertility in women?

- Age is a major factor, especially for women over 35.
- Lack of ovulation, often caused by polycystic ovarian syndrome, which is a hormone imbalance.
- Blocked fallopian tubes, resulting from pelvic inflammatory disease, endometriosis, or surgery for an ectopic pregnancy.
- Being overweight or underweight can also make it difficult to conceive.
- Smoking.
- Abnormalities in the cervix or uterus.
- Uterine fibroids, which are non-cancerous clumps of tissue and muscle on the walls of the uterus, can prevent successful pregnancy.
- About 20 percent of cases are unexplained. Future research is expected to focus on gene and cellular function.

SOURCES: CENTERS FOR DISEASE CONTROL AND PREVENTION, DR. BERNARD CANTOR

women who turn to IVF have improved with a freezing technique called "vitrification," which prevents ice formation in the egg. It's still considered experimental by the American Society for Reproductive Medicine. It was first designed for women to preserve their eggs as they underwent chemotherapy and radiation for various cancers.

"This use has now been overtaken by what I call social reasons, such as women who for career or other reasons have not yet found a mate and whose biologic clock is ticking," Cantor said. Most programs will not freeze eggs from women over 38. Others use it at a younger age as insurance to guard against age-related degeneration of their eggs.

In October, the Nessels' daughter, Victoria Giselle, was born. Tina cried for 20 minutes after the Caesarean delivery.

Two fertilized embryos were implanted in Tina: one with seven cells, one with eight cells.

"The most interesting thing about IVF is you have seen this baby since she was cells," she said. "Once you see her it's the most amazing thing in the world."