The choices expectant parents make today go beyond whether to find out the gender of their unborn baby or whether he or she may potentially have a genetic disorder. Today, many parents must decide whether to store their baby's umbilical cord blood.

Some are calling it a kind of biological insurance for your child's future. Cord blood provides a rich source of stem cells, primitive cells that have been used for cancer treatment for more than 20 years. Cord blood is marketed for two uses -- as a treatment for diseases such as leukemia and sickle cell disease, and as a potential source of cells for regenerative medicine -- a cutting-edge field of medicine studying how to repair tissues damaged by everything from heart disease to cerebral palsy.

Many banking firms tout an impressive list of 70 to 80 diseases in their marketing material that are purportedly treatable by cord blood. The list of diseases advertised as possibly treatable includes osteopetrosis -- a rare condition where the body produces excess bone, which causes blindness and can be fatal if left untreated. But most diseases on such lists are genetic and can't be treated with a child's own cord blood.

Cord blood can be banked two ways -- in public banks for use by anyone in need whose blood type is a match, and in private banks where it is only available to the family of the child who donated.

There are currently 17 public banks in the United States that serve not the U.S., but also send cord blood to other countries. The public banks tend to collect from nearby hospitals to ensure high quality. Most do not hold cord blood for the individual who donated it; instead they provide the blood to anyone who matches within the donation system. The public system is primarily designed to provide cord blood for treatment, not regenerative medicine which requires a patients' own stem cells.

While a majority of parents will choose to do nothing and the cells will be discarded after birth as medical waste, some parents will work to decipher the debate between private cord blood firms competing to get into the lucrative industry and public banks attempting to boost donations, especially by ethnic minorities, to build a national cord blood system.

Public banks are free, but private storage of a newborn's umbilical cord blood can range from $2,000 to $3,000 up front, plus yearly storage fees of $85 to $125. The choice to privately bank your child’s cord blood goes beyond the financial commitment, however.

Many parents-to-be ponder what umbilical cord stem cells can be used for right now, and what is being looked at for the future. Understanding the answers is critical in making an informed decision.

Tracey Dones of Hicksville, N.Y., saw an advertisement for a cord blood banking firm in a magazine. After reading an accompanying article, she was sold on the idea and paid a private company to bank her son Anthony's cord blood.

"God forbid if my child ever got sick -- his or her own stem cells are its own perfect match -- how could we not save that?" said Dones. "I thought I was getting something that would've saved his life, if need be."

Four months after Anthony Dones was born, he was diagnosed with osteopetrosis.
"Finding out the diagnosis was devastating enough. And then when they mentioned the stem cells, I said, 'I bet if you had cord blood we could use that. And immediately, they said, 'absolutely not,'" said Dones.

Since osteopetrosis is a genetic disorder, Anthony's cord blood stem cells carry the same disease, thus his own private cord blood banking was useless to treat Anthony. While stem cells are effective in treating genetic disorders like osteopetrosis, according to Dones, they were not told that using their baby's own cord blood would not work if he had a genetic disease.

"I was devastated. Anthony's father and I were both like, so why did we save this?" asked Dones.

Navigating the Public and Private Market

The advertisements for cord blood banking appear in magazines, online, in doctor's offices, and on Facebook. Oftentimes an expression of interest by expectant parents prompts an invitation by private banking companies to a fancy informational dinner.

ABC News sent a producer with a hidden camera to one of these informational dinners to investigate what expectant parents are being told.

"Why is this so important? It's important because with the amount of diseases that we can treat today, by the time you reach the age of 70 you'll have approximately the chance of receiving a stem cell transplant – one in 200, one in 217," said Dr. Albert Sassoon, obstetrician gynecologist in New York, at an informational dinner for expecting parents.

Dr. Machi Scaradavou, pediatric oncologist at Memorial Sloan Kettering hospital in New York and medical director of the New York blood bank, told ABC News that the chance that anyone will benefit by their own cord blood is much lower than that.

"The chance of somebody needing their own cord blood is extremely, extremely low," said Scaradavou.

In many cases, however, a sibling's cord blood could be used, said Sassoon.

"The survival rate is higher when using matches from private banks because of the increased chance of finding a related match," said Sassoon in a written statement to ABC News.

Critics claim that private cord blood banks exploit expectant parents' worries using emotional advertising and confusing statistics to convince them to buy expensive banking they may never need or be able to use.

Because a child's own cord blood does not work to treat many disorders, private companies emphasize regenerative treatments for diseases such as cerebral palsy or stroke, where a child may need his or her own blood. While some industry leaders predict that in a few years regenerative medicine will be able to heal damaged tissues in the body, research suggests it is too early to bank on the technique.

According to Scaradavou, one of the best reasons to opt for private banking is if there is another child in the family who has a blood disorder like leukemia or sickle cell disease that will need his or her sibling's cord blood immediately.

"If there is somebody in the family that already has a disease, that is a good indication to do family banking to save a sibling's cord blood for that patient," said Scaradavou. "You don't keep it for any reason in the future; you keep it for that existing patient that has a disease that can be cured by transplant."

In fact, Anthony's doctors found a match for him at the New York public cord blood bank. Unlike private banks, public banks do not charge to collect cord blood. And once it is entered in the public system, the blood is available to anyone who needs it.

Taking Research to the Bank

The American Medical Association and the American Academy of Pediatrics recommends public banking over private, favoring private banking only when there is already an affected family member or a disease in the family that would benefit from a transplant. Many consumer cord blood banking organizations do not support one type of banking over another but recommend that parents be informed...
of the pros and cons of the various options.

According to Frances Verter, founder and director of the nonprofit organization, Parent's Guide to Cord Blood Foundation, the overall benefits outweigh the chance it may never be used. And, because there are only 17 public banks in the U.S. that tend to collect units from nearby hospitals, many families may not be in an area where public bank donation is as accessible, she said. That makes it more difficult for many parents to understand their options when it comes to choosing between public and private banking.

"The only problem is that there are a limited number of places that accept donations," said Verter. "So the downside is that lots of parents want to donate, but it requires money to process the donation. There's a certain infrastructure involved that not a lot of centers have in place."

According to Charis Ober, co-founder of Save the Cord Foundation, besides the limited number of public banks available for parents to choose, it is often difficult to distinguish between the various options that individual private companies offer.

"Everything looks great on the Internet, but there are great differences between all of the private banks," said Ober. "So you really need to do your homework to make sure the bank you choose is right for you."

**Cord Blood: Choosing Between Private and Public Banks**

Many states require that expectant parents be informed about both public and private banking options before deciding which, if any, they would like to choose, according to Verter. Regardless, Verter said, many parents do find it difficult to navigate between claims made by private bankers to get parents to choose their firm over another.

"If [the marketing] gets excessive then of course it's not healthy. You can't blame a company for wanting to market," said Verter. "At the same time the private marketing helps the public banks too. When private firms pay to market banking, it benefits both types of banking."

"I think every bank should be upfront about costs and factual about what it is and what it isn't," said Ober. "You need to be a cautious discerning consumer. In cord blood, you only have a small window of time to collect it. So you really need to educate yourself on the pluses and minuses."

Both Viacord and Cord Blood Registry state that for most of the conditions listed in their marketing materials they are referring to possible future uses for cord blood and not implying these diseases are currently being treated with cord blood stem cells or that you can use your own cord blood stem cells for all of the conditions listed.

But, in a particularly vulnerable time for most families, including the Dones', Tracey Dones said many parents like her are not fully informed on the difference.

"[Private banking] was the life boat that didn't float," she said.