

# **Umbilical cord stem cell banking becoming popular in Puerto Rico** <sup>[1]</sup>

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## **Calificación:**



Cited from [endi.com](#) <sup>[2]</sup> "A stem cell is a pluripotent cell that can divide indefinitely. Stem cells have the capacity to specialize in the different kinds of cells in our body, like the cardiac muscle, brain tissue and hepatic cells. Theoretically, scientists are able to maintain stem cells forever, and make them differentiate into specialized cells as they are needed." "Currently umbilical cord stem cells are used to treat hematopoietic or blood cell diseases, like leukemia and sickle-cell anemia. The beneficiaries are usually the donors themselves or their siblings; because few stem cells can be obtained from the umbilical cord are obtained, they are rarely used to treat adults. The umbilical cord stem cells are harvested after the umbilical cord is cut off the newborn, frozen and stored for the next 21 years after birth. "The umbilical cord stem cells would have 100% of compatibility with the baby, 50% with the parents and a 25% of probability with another relative." Harvesting umbilical cord stem cells is not routine procedure; it's only performed if parents request it with sufficient time before the childbirth. Before the procedure parents are tested for blood-transmitted diseases. Currently, around 20% of women ask for and arrange for the harvesting and storage of umbilical cord stem cells mother of the umbilical cord. "According to information in the Internet the initial cost, including the harvesting kit, among other things, is around \$1,600. That does not include the storage of the genetic material for 21 years, which exceeds \$3,500. Nevertheless, there are several credit payment options." "There are several banks that offer the harvesting and storage service in the United States. In Puerto Rico, usually the families contact the bank of their preference, usually through the Internet. They pay with credit cards, receive "kit" by mail and at the time of the childbirth, they give it to the obstetrician, that is the one who gathers the sample and sends it (by express mail)" As the practice becomes popular,

umbilical cord stem cells banking generates ethical, moral and religious debates. It is worth indicating that there is a difference between the embryonic stem cells and umbilical cord stem cells. Embryonic stem cells are obtained from aborted fetuses or fertilized ova that leftover from in vitro fertilization, reason why they are at the center of the moral and ethical controversy that questions the legal status of a fetus. The use of umbilical cord stem cells could provide an alternative to the moral debate. Nevertheless, this procedure is not free of the moral and ethical scrutiny. Several arguments arise: What happens with the cells after 21 years, where do they end up? This is an expensive procedure however it's not a biological insurance. These cells have an enormous potential, theoretically, the scientists are able to turn them into any type of cell. Nevertheless, a lot of research needs to be done to know the biology and physiology of stem cells. Another source of preoccupation is the lack of "laws of genetic privacy that allow each person to decide who and under what circumstance their genetic information can be analyzed."

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