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The importance of umbilical stem cell storage with a comparison between private and public banks, and their uses

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A cord blood bank is a facility which stores umbilical cord blood for future use. Cord blood stem cells are blood cell progenitors which can form red blood cells, white blood cells, and platelets. This is why they are currently used to treat blood and immune system related genetic diseases, cancers and blood disorders. Furthermore, recent studies have shown that cord blood has unique advantages over traditional bone marrow transplantation, particularly in children, and can be life-saving in rare cases where a suitable bone-marrow donor cannot be found. Public cord blood banks function like public blood banks, in that they accept donations from anyone, discard donations that fail to meet various quality control standards and use national registries to find recipients for their samples. Matches are most likely to be better in a public than a private bank. One disadvantage is that they do not charge storage fees and so medical centers do not always have the funds required to establish and maintain them. Traditionally, public cord blood banking has been more widely accepted by the medical community. Private cord blood banks store cord blood solely for potential use by the donor or donor's family. However, because of its cost, limited likelihood of use and inaccessibility to others, private banking is not usually recommended to low-risk families. Moreover, cord blood from private banks is more likely to suffer from various problems such as potential lower quality control and lower medical usefulness of using a patient's own potentially diseased cord blood. Nearly, all cord blood transfusions come from public banks, rather than private banks, partly because most treatable conditions can't use one's own cord blood.

Biography

Eleni Triantafyllou graduated from the Department of Biological Applications and Technologies, University of Ioannina, Greece. She performed on thesis with title: Investigation of post-transcriptional regulation factors of gene expression in brain tumors. She is now a Post-graduate student in Master's Program in Reproductive and Regenerating Medicine. She always had a strong interest in Regenerative Medicine as well as Genetics and Biotechnology.

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