

Money for Marrow?

BY TIM SABLİK

Roughly 5,000 people in the United States receive blood stem cells from a bone marrow transplant each year, but twice as many patients each year are diagnosed with blood diseases, such as leukemia, for which blood stem cells may be the best or only treatment. One California nonprofit hopes to close that supply gap by offering incentives in the form of scholarships or housing subsidies to donors with rare bone marrow types. But until a recent court decision, such a plan would have been illegal.

The 1984 National Organ Transplant Act (NOTA) bans compensation for organs, including bone marrow. MoreMarrowDonors.org, which plans to offer incentives to donors, was part of a group that filed suit in federal district court in California arguing that certain donations are outside the scope of NOTA. They conceded that the law may have originally included bone marrow to protect donors from a painful and potentially risky process. When NOTA was written, bone marrow was extracted directly from the hip bone via a large needle. The majority of marrow donations today, however, are collected using a less invasive process called apheresis. Donors are given medication to accelerate the production of blood stem cells, which are what transplant recipients need rather than the bone marrow itself. These cells can then be separated from the donor's blood through the same process used for donations of other blood components, such as platelets or plasma. The process is both less risky and much less painful.

The U.S. Court of Appeals for the Ninth Circuit ruled in December 2011 that since compensation for blood components is not prohibited under NOTA, compensation for blood stem cells obtained using apheresis is also legal. (The court did not address the constitutionality of the ban in NOTA.) The U.S. Justice Department asked the court to reconsider the decision, arguing that NOTA covers bone marrow stem cells regardless of how they are obtained, but the court rejected that request.

Economists have long argued in favor of some sort of market system to address widespread organ shortages. According to data from the United Network for Organ Sharing, headquartered in Richmond, there are 10,065 individuals waiting for an organ transplant in the Fifth District, and two-thirds of them have been waiting for a year or longer.

Economic theory predicts that increasing the price of a good will induce more sellers to enter a market, increasing supply. For example, blood banks in the United States regularly compensate people for donating blood plasma, and this has not only prevented a shortage, it has also resulted in a surplus — the United States supplies about half of the world's plasma,

exporting to countries that don't compensate donors.

Researchers Nicola Lacetera of the University of Toronto, Robert Slonim of the University of Sydney, and Mario Macis of Johns Hopkins University conducted a field experiment to see how economic incentives would affect general blood donations, which are often not compensated. They offered gift cards in varying denominations at Red Cross blood drives. They found that donations increased at drives offering incentives, and that effect rose with the value of the reward. Also, donors at those drives were more likely to persuade others to donate with them.

"Based on the results of our study on blood, and given the similarities between blood donation and bone marrow apheresis, I do expect marrow donations to increase when compensation is allowed," says Macis.

Blood and bone marrow are naturally replenished by donors' bodies, but most internal organs are not. Opponents of compensation for all organ transplants have argued that a marketplace for organs that can't be regenerated, such as kidneys, would exploit the poor and the desperate, who would be most likely to face situations in which they feel that selling organs is their only option.

"People deplore the degrading sale, a sale made in desperation, especially when the seller is selling something so precious as a part of his own body," Leon Kass, a professor emeritus at the University of Chicago and the former chairman of the President's Council on Bioethics, wrote in 1991.

Kass acknowledged that allowing for the sale of organs could increase the supply. But Kass and other bioethicists express moral aversion to putting a price tag on a human being. "The idea of commodification of human flesh repels us, quite properly I would say, because we sense that the human body especially belongs in that category of things that defy or resist commensuration," wrote Kass.

Macis argues that the moral objection can go the other way, as well. If two consenting parties agree to a transaction that they believe can make each better off, then one could raise a moral objection to a third party prohibiting that exchange from taking place. In addition to purely economic exchanges, Macis says there are other ways to provide incentives to organ donors. He cites the example of a "priority rule," implemented in Israel and Singapore, which grants registered donors priority on organ waiting lists, reassuring them that their generosity will be repaid if they find themselves in need of an organ.

Although the ruling from the Ninth Circuit is not likely to result in immediate changes to organ donation in the United States other than blood stem cells, it has once again raised the question of how best to solve a supply shortage that confronts patients and doctors daily. **RF**