

# Circle of Life

Facing death, Jeff Cross and Lily Cheng had run out of options. But a rare “domino” liver transplant, involving a living donor, gave both a future

**O**ne hour after going to bed on Oct. 1, Jeff Cross still could not fall asleep. That was hardly unusual. Since last spring, Cross, 29, had been tormented by night sweats, a side effect of the rare genetic illness that threatened to kill him unless he got a new liver. This time, however, his insomnia came from sheer anxiety. After months of waiting, Cross was scheduled for a transplant the following morning. “I was freaking out,” he recalls. “I was scared of going under and not waking up.”

Cross had good reason to be nervous. The surgery he was about to undergo at the UCLA Medical Center, near his home in Los Angeles, was as unusual as it was complex. First he would receive part of a liver from an unrelated living donor—a procedure that up until three years ago was rarely performed in the U.S. (The body needs only a portion of a liver to function, and the organ naturally regenerates.) Then he would donate his own de-



Andrews (center) made it possible for both Cross (left) and Cheng to be saved.

“We’re going to live a long, happy life together,” says Cross (at home with fiancée JoAnna Poblete).



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fective liver to a patient who could use it without harm because Cross's condition takes about 30 years to manifest itself. This transplant was even less common. A combination of the two had never been attempted in the U.S.

The "domino" transplant, as it is called, proved a triumph not only for Cross but for two others. Lily Cheng, a 43-year-old single mother who had cancer of the liver, would have died had she not received Cross's liver. Doug Andrews, 32, a pastor whose wife was a childhood friend of Cross's, risked his life by donating part of his healthy liver to Cross. The medical success was excellent news for the nearly 19,000 people who, at any given time, are on the waiting list for a new liver. Typically fewer than 5,000 such livers are available, and last year more than 1,600 patients died awaiting one. But surgeons hope that in the near future, as improved techniques make live-donor liver transplants more common, those statistics will improve sharply. "We are suffering a crisis from a lack of donors," says Dr. Ronald W. Busuttil, chief of the Dumont-UCLA Transplant Center. "Any medically and ethically sound opportunity that is available to us should be pursued."

Cross's disease, familial amyloidosis, prevents the liver from breaking down a protein called transthyretin. It takes about three decades for the substance to accumulate to dangerous levels, at which point it can destroy the victim's nerves and organs. For most of his life, however, Cross had enjoyed perfect health—and because of his background he had no idea that he carried a deadly gene. Born in South Korea, he was adopted as a 4-year-old orphan by Peter Cross, now 60, and his wife, Margaret, 68, who own a computer school in Belmont, Calif.



"I wasn't scared I would die," says Cheng (with Dr. Busuttil).



"I'm squeamish about IVs," says Andrews (recovering at UCLA).



**"Everything we prayed for came true," says Poblete (with Cross and physical therapist Vicki Myers on Nov. 14).**

His fighting spirit was evident from the start, says Margaret: "We saw a picture of him standing with his hands on his hips as if to say, 'Come on, world, I'm ready for you.' Of course we said yes when he was offered to us."

After receiving a degree in economics from the University of California at Riverside in 1995, Cross went to work in customer service for the investment firm Franklin Templeton in San Mateo. There he met JoAnna Poblete, now 27, a management trainee. In March 1998 the couple moved in together, and in August '99 they relocated to Los Angeles. Poblete entered graduate school in history at UCLA, while Cross found a job in technical support at the Creative Artists Agency. But Cross soon developed a cough so violent it made him vomit. His left foot hurt so badly that he could barely walk. "I blamed it on L.A.," he says with a laugh. A series of doctors came up with a string of diagnoses: asthma, acid reflux, a pinched nerve. Meanwhile Cross grew sicker, losing 25 lbs. and most of the sight in his right eye.

Then in April Dr. Marc O. Yoshizumi, professor of ophthalmology at UCLA's Jules Stein Eye Institute, suggested Cross get tested for amyloidosis. Initially Cross was diagnosed with a different, incurable form of the disease, which would likely have killed him by age 40. "All along Jeff had kept saying, 'In three months I'll be fine,'" Poblete recalls. "Then we got this diagnosis." In search of a second opinion, she tracked down amyloidosis experts on the Internet. Dr. Morie Gertz, chairman of the hematology division at the Mayo Clinic in Rochester, Minn., responded, and after Cross flew out for an exam, Gertz delivered a new conclusion: familial amyloidosis, which affects about 1 in 4 million people and can be cured with a new liver. "We were elated," Cross says.

That joy proved short-lived. Cross's protein-damaged heart was in such bad shape, doctors said, that it could give out within six months. Yet because his liver was functioning well, aside from its one defect, he would be a lower priority than many candidates for a cadaver-liver transplant. A desperate Poblete e-mailed 100 friends and family members, asking if anyone with the same blood type as Cross, O positive, would be willing to help. "We understand that a living donation is a lot to ask," she wrote. "But since time is now a crucial factor for Jeff, we have to at least put a feeler out there."

No one in Cross's adopted family proved a match, so Doug Andrews stepped forward. The younger of two sons raised in San Carlos, Calif., by Bruce, 64, an electrical engineer, and Verta, 62, a county health inspector, Andrews is youth pastor of the First Baptist Church of San Mateo. Though he wasn't close to the ailing man, his wife, Krissie, 28, a product manager for a medical-device company, had been pals with Cross since kindergarten. "He had a key to our house," she remembers. "My mom's friends used to think it was weird because this boy would come in and start eating." Cross had served as an usher at her 1997 wedding to Andrews, whom she had met in church. So when the couple heard of Cross's plight, says Andrews, "We prayed to see if this was something God wanted us to do." Then he wrote Cross: "I'd be honored to have you accept such an important part of me into your life."

In so doing he gave Lily Cheng a new chance at life as well. The youngest of three children born in Beijing, Cheng was a professional dancer before getting married and having a son, Jack, now 15. In 1989 she got into the import business and three years later moved to the U.S. After divorcing her husband in 1996, she settled with Jack in a two-bedroom apartment outside L.A. and went to work for an import-export business that requires her to make frequent trips to China.

It was on one such excursion in July that Cheng, who still felt more comfortable with the medical system in her native land, decided to get a routine physical. "The doctor saw something on my liver right away," says Cheng. Although she still had no symptoms, specialists back in the U.S. delivered a grim prognosis. Says Dr. Busuttill: "She would probably have been dead

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within a year." By the time she became eligible for a cadaver liver, the cancer would have spread throughout her body.

Even harder than hearing that news was breaking it to her only child. "She said she wanted to see me grow up and she loves me very much," Jack recalls. "I don't usually cry, but I cried when she told me." Cheng then returned to China to see her parents, for what she feared might be the last time. There she received the call from UCLA telling her she was a perfect candidate for Cross's liver, since it was similar in size to hers and their blood types matched. And because Cross's amyloidosis was so slow-acting, she would be in her 70s before symptoms set in. "I asked why, if Jeff's liver had problems with it, they would give it to me," Cheng says. "But they explained I wouldn't have problems for 30 years, so I said, 'Good. I'll take it.'"

With Andrews, Cross and Cheng lined up, doctors scheduled the triple surgery—and crossed their fingers. "I can't tell you how many details went into this thing," says Dr. R. Mark Ghobrial, assistant professor of transplant surgery at UCLA. For starters the surgeons would not be sure until they opened up Andrews that his liver was healthy enough to be transplanted. Even if it was, Cross had a 40 percent chance of dying on the operating table because his heart had grown so weak.

But it was Cheng who carried the most risk. Not only did doctors fear her cancer might have already spread beyond her liver—thereby rendering a transplant futile—but two nights before the surgery, she came down with a cold. Because transplants weaken the immune system, they cannot be performed on sick patients.

Cheng immediately checked into the hospital, and doctors had her infection-free within 24 hours. She met Cross and Andrews for the first time when they arrived on Oct. 1, trading jokes and encouragement with the men in Cross's room as the San Francisco 49ers played on the monitor overhead.

At 5 a.m. on Oct. 2, Cross and Andrews were wheeled into separate operating rooms, each staffed by a team of eight doctors and nurses. (Cheng would follow at 9 a.m.) First Dr. Ghobrial opened up Andrews. After seeing that his liver was in fine shape, Ghobrial sliced off a little more than half of the organ's right side. In the room down the hall, Dr. Busuttil began to remove Cross's liver.

At 11:30 a.m. Busuttil connected the partial liver from Andrews to Cross's now-empty liver cavity, stitching together veins, arteries and bile ducts. An hour later, after receiving word that Cheng's cancer was limited to her liver, Ghobrial moved to the third operating room to help implant Cross's liver into Cheng.

By 5:30 p.m. all three patients were in recovery. "There are often hitches in surgery," says Busuttil, "but with this particular one, it was like clockwork." Which is



"Our love is stronger," says wife Krissie (at home with Andrews).



"I'm so lucky I have this new life," says Cheng (at home with son Jack).

exactly what Cross's fiancée told him as soon as he woke up. "Jeff, you made it, you're okay," said Poblete. Cross, on a respirator, responded the only way he could—with tears.

A few complications cropped up post-surgery. Andrews spent an extra four days in the hospital until the nerves in his liver began functioning fully, while Cheng's bile duct had to be restitched after it developed a slight leak. But in early November Andrews resumed pastoral duties at his church and on Thanksgiving eve delivered a sermon about his experience. "My recovery took longer than expected," he says, "but it was worth all the pain." Cheng, meanwhile, has a 60 to 70 percent chance of surviving five years cancer-free. And though she, like Cross, will take immunosuppressant drugs for the rest of her life to prevent rejection of the new liver,

she's thrilled to have been given more time with her son. "Every time I see Jack," she says, "I feel grateful."

Cross, too, is counting his blessings. He was planning to return to work this month, and because doctors give him an 85 percent chance of surviving the next year, he and Poblete feel confident enough to plan a fall wedding. His eyesight has been restored, following a separate operation, and now Cross is undergoing physical therapy three times a week to rebuild the strength in his nerve-damaged feet. That should allow him to walk down the aisle and to fulfill another dream of Poblete's. "All I've ever wanted," she says, "is for him to be able to dance all night."

- Galina Espinoza
- Karen Brailsford in Los Angeles and Frances Dinkelspiel in San Mateo

"The hundreds of cards we got helped me get through," says Cross (with Poblete in their L.A. apartment).



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