At a crossroads...

As we approach a new decade, MTF and the entire tissue banking industry stand at a crossroads of two opposing forces—the consistent growth of tissue donation versus a struggling economy in which surgeries using tissue transplants are relatively stagnant. How we proceed at this junction in large part depends on how well we work together to remain flexible in responding to ever-changing needs and market pressures.

To that end, MTF held a meeting in mid-October with several members of our Donation Board of Trustees to discuss how we might find reasonable solutions to a less than perfect situation—one that supports our Recovery Partners for their tremendous efforts and commitment to MTF while financially protecting both MTF and our Partners as much as possible.

MTF management reviewed the suggestions provided at that meeting as well as our current availability of unprocessed and processed tissue and determined that lowering our age criteria to 60 years of age for both males and females is a measure we must take, effective January 1, 2010.

Generous tissue donors and their families are at the heart of the MTF mission. The good news is that together we celebrate the continued growth of tissue donation due to the success of donor development programs, donor registries and improved consent and conversion rates. We also know that the need for many tissues remains high, especially for younger donors for tendons, biologics, stem cells, OA and OC grafts. Two articles in this issue of TX Files, one on Trinity Evolution, and another on OA and OC grafts, highlight these high-demand tissue forms. As always, MTF continues to seek new ways to use the important gift of tissue.

Although the current tissue donation environment is challenging, and no one has a crystal ball to predict the future, we are confident that with your help and our pledge of building new tissue demand we can all act in the best interest for ethical stewardship of the donated gift.

Happy Holidays to all.

Bruce Stroever, President and CEO, MTF

New Tissue Form Debuts with Phenomenal Acceptance from Orthopaedic Surgeons

A new allograft containing cancellous and demineralized bone along with viable adult stem cells is now available through MTF. Trinity Evolution helps boost patient bone growth in a number of orthopaedic procedures including spinal, non-healing fractures, and anywhere the surgeon needs to incorporate bone or repair musculoskeletal defects.

The trinity, or three essential components of this unique tissue form, contains all the critical “osteos” in one tissue form. These are: first, an osteoconductive scaffold, or a material with the ability to serve as a platform (scaffold) on which bone cells can attach or migrate, and then grow and divide; second, a verified osteoinductive potential, or a substance that stimulates bone formation; and third, a reliable number of osteogenic cells, which are stem cells that stimulate new cell growth.

These stem cells, called mesenchymal stem cells (MSC), differentiate into bone, cartilage, muscle, or fat given the proper signals.

Every step in the preparation of this new tissue form, from donor screening to liquid nitrogen storage and pre-release testing, is designed to maintain cell viability and ensure patient safety. In order to maintain cell health, there are processing time constraints. MTF must begin processing this tissue form within 72 hours after death, and processing must be completed within 96 hours after death. Tissue recovered from donors 55 years old and younger is used for this new tissue form.
Technical Sergeant Starr Named 2010 Rose Parade Float Rider

Not only does he do his part to support his country, but Jeremy Starr is also doing his part to raise awareness of the impact of tissue donation. The decorated Air Force Technical Sergeant* will represent the Musculoskeletal Transplant Foundation (MTF) on the Donate Life Float in the 2010 Tournament of Roses Parade in Pasadena, CA on New Year’s Day.

Currently assigned to the 305th Aerial Port Squadron at McGuire Air Force Base in NJ, Starr was on active duty in Aviano, Italy in 1999, when he injured his knee. The result was a torn ACL and two meniscal tears.

His knee was repaired in 2001, but while stationed in Kunsan, Korea four years later, he re-injured his ACL and was told his military career was probably over. Then, in the spring of 2006, while stationed at Hickman Air Force Base in Hawaii, he met the surgeon who would save his military career.

Lt. Col. Daniel White, MD of the Tripler Medical Center in Honolulu, HI told Jeremy that the injury had caused his left leg to bow, a condition which would prevent him from remaining in the Air Force, where he enjoyed a career leading over 60 military personnel daily.

Dr. White performed a two-phase surgery, the first correcting the bowing of his knee with a procedure called a tibial osteotomy, and the second, using a donated tendon and meniscus allografts to repair Jeremy’s ACL and to replace his menisci. Extensive physical therapy followed both surgical procedures.

An exceptional athlete in track and field since high school, Jeremy was delighted when he ran his first mile recently in just 10 minutes.

“MTF and Lt. Col. White have allowed me to continue my career in the military, and my love for cross country running,” said Jeremy. “Even at 30 years old, I can out-run most of the younger personnel in my unit. It is a great feeling and I owe most of it to Dr. White, my tissue donor and MTF.”


“MTF is privileged to have Technical Sergeant Starr represent us in the Tournament of Roses Parade,” said Bruce Stroever, MTF President and CEO. “Jeremy brings honor to his country as he serves in the military, and he brings distinction and respect to the field of transplantation as a tissue recipient. We are very proud of his accomplishments.”

*Jeremy Starr is participating in the Donate Life Rose Parade on an individual and voluntary basis. His voluntary participation does not constitute US Air Force or Department of Defense endorsement for, sponsorship of, or preferential treatment toward MTF or its affiliates.
Katie Coolican to be honored in Rose Parade Floragraph

Katie Coolican, daughter of Maggie Coolican, Founding Chairperson of the National Donor Family Council, will be honored by having her image depicted in a floragraph New Year’s Day in the 2010 Rose Parade in Pasadena, CA.

The floragraph, a portrait in flowers, will be part of the Donate Life America float during the tournament of Roses. The float honors millions of people touched by organ and tissue donation, including donor families, their deceased loved ones, living donors, and transplant recipients and candidates.

Katie was the youngest of Maggie and husband Don’s six children, a happy, freckle faced, curly-haired tomboy, and a first grader when she collapsed on the playground from an arteriovenous malfunction, an abnormal connection between veins and arteries. Katie’s parents chose to donate her organs and tissues so that others may live.

Katie’s death in a small New England town impacted many. As Maggie says, “We quickly understood that her death was not something we would ever get over, but would learn to live with. Friends, neighbors and strangers provided daily support and dedicated a playground in her memory in 1984. Her graduating classmates remembered Katie and dedicated a page in their senior yearbook. Katie’s donation educated many children and adults and continues to help her family.”

Maggie’s family received no support from the transplant organizations, however, but for one letter following Katie’s donation. Then they were left to grieve alone. There were no books or pamphlets about donation or grief. There were no support groups or cards remembering her birthday. There were no quilts or special memorial services or floats to remember Katie and other donors and their families.

Maggie began to speak about how the care and support she felt as a nurse and mother were lacking towards donor families. In 1982, she changed all that through the formation of the National Donor Family Council under the auspices of the National Kidney Foundation. As Council Chair, she published the Donor Family Bill of Rights, the National Communication Guidelines and several other resources for donor families. Maggie also created the National Donor Family Quilt and sewed the first 25 panels, 1,750 “patches of love,” putting Katie’s patch on the final panel.

During this time, Maggie also worked with Hartford Hospital to create a two-year follow-up bereavement program for families, which has been replicated throughout the country. She also participated on several national boards and committees, such as the UNOS, AMA Organ Task Force, Advisory Board on Organ Transplantation, AOPO Donor Family Council, and she was a founding member of Donate Life, CT among others.

In 1991 Maggie began working at the organ procurement organization in CT, now LifeChoice Donor Services, and later at Musculoskeletal Transplant Foundation where she continues to support and advocate for improved care and follow-up for donor families. She has published Katie’s Legacy in the American Journal of Nursing, For Those Who Give and Grieve, a donor family booklet written originally as Maggie’s graduate thesis, with over 125,000 copies distributed, and she edits the quarterly newsletter, For Those Who Give and Grieve.

Throughout her advocacy, her family has supported Maggie’s efforts to ensure that all those involved in donation know “in order for there to be a transplant, there needs to be a donor and a donor family. Donor families deserve compassionate, consistent care and support, as do all grieving individuals and families,” she says.

Katie, who is featured in a children’s coloring book about donation, Precious Gifts, continues to be an inspiration to her family.

“We should never take life for granted,” said Maggie. “What we can do is learn from Katie’s life. Go out of here and be an active, positive, smiling, happy, loving person and never expect anything in return.”
What are OA and OC Grafts?
By Darrel Lewis, MBA, CTBS, CEBT, Education Director, MTF

Most of you are familiar with the routine applications of musculoskeletal allografts distributed by MTF. Most common are the numerous bony void fillers, the machined configurations of cortical and cancellous bone for use in spinal fusion, and the patellar ligament, Achilles, tibialis and hamstring tendons used for ACL repair of the knee.

However, many of you may not be familiar with osteochondral (OC) or osteoarticular (OA) allografts. Demand for these health-improving tissue forms has increased over the past several years.

**OC Grafts**

Osteochondral grafts consist of bone (osteo) and cartilage (chondral). They must be transplanted within 28 days from the date of recovery to maximize cartilage cell viability. Demand for this tissue has increased steadily over the past several years and supply is limited by the relatively narrow donor criteria. The age criteria for donation of these grafts is 12 to 45 years since older donors would be more likely to have worn or damaged cartilage.

Once OC grafts are processed, they are used for cartilage repair and various sports injuries. Typically defects requiring this repair are on a weight bearing portion of the distal femur. Using specialized instruments provided by MTF, the defect is first cleared of all damaged cartilage and a single hole is drilled, slightly larger than the defect. A plug of the same size is then drilled from the OC allograft and pressed into the prepared hole in the recipient’s femur.

After a bad skateboarding accident when he was 13, Sonny Ward received an OC graft to repair cartilage in his leg. He is now 18 and doing very well. “Donation was a blessing for me,” said Sonny.

**OA Grafts**

OA grafts consist of bone and soft tissue attachments of the joint (tendons and ligaments). These grafts are used to replace large segments of bone that must be removed due to disease (usually tumors) or trauma. In most cases, receipt of an OA allograft is a limb-salvaging procedure since there is usually no other way to replace these large segments of bone.

These grafts are recovered from donors between the ages of 12 and 45 for lower and upper extremities. In special cases where a patient may have a unique need, OAs for bones of the hands and feet or the forearm may be requested from younger donors down to the age of five. In order to protect the soft tissues (tendons, ligament and joint capsules) associated with these grafts, they are typically recovered en bloc, or with the entire joint intact. Once processed these grafts are frozen and transported to hospitals on dry ice.

The surgeon’s primary concern when transplanting an OA graft is replacing a large segment of bone and restoring the function of the affected joint. Once the diseased or damaged bone has been removed, the allograft bone is anchored in place. The tendons of allograft are then sutured to the patient’s corresponding muscles to restore mobility to the joint.

MTF provides a graft matching service for both OC and OA grafts, designed to give Orthopaedic Surgeons the best possible, anatomically matched allograft for their patient’s surgical repair. This service saves both the surgeon and staff valuable time by eliminating the need for extensive modifications at the time of transplantation.

When he was 11, Jacob Seyle was diagnosed with an osteosarcoma in his right shoulder, one of the most common bone cancers found in children. He received an OA graft that enabled him to keep his right arm rather than have it amputated. He’s doing well, and is pictured here on a recent kayaking trip.

As the needs of the transplant community continue to evolve and expand, and new uses are discovered for allograft tissue forms, MTF relies on the generosity of donors and the willingness of our Recovery Partners to help meet these challenges.
Job Well Done!

The following employees from MTF Recovery Partners earned their CTBS certification through AATB in 2009. Thank you to AATB for providing this list.

From Gift of Life Donor Services:
Joshua Bulgrien, Joseph Caivano, Joseph Dimick, Rebecca Fritcher, Patrick Laird, Heather Yergan

From Intermountain Donor Services:
Danielle Tillett, Julee Stromquist Baird

From LifeBanc:
Hollie Abott, Cheryl Eiduke, Kadijah Jackson, Eric Mojzisik, Rebecca Nicholas, Sherrin Nicholas, Gina Santillo

From LifeGift Organ Donation Center:
Carla Arreola, Mark Roth, Debi Dalbey, Todd Farrish, Angelic Brown-Harris, Jennifer Reynolds, Jennifer Roberson, Sara Whitton

From LifeSource:
Dana Deutsch

From Mississippi Organ Recovery Agency:
Joel Smith

From Nebraska Organ Recovery System:
Todd Jackson

From New Jersey Organ & Tissue Sharing Network:
Jessica Hatton, Marci Jacobs, Karen O'Neil

From New York Organ Donor Network:
Patricia Harris

From Organ Donor Center of Hawaii:
Brad Spataro

Employees from MTF include:
Patricia Black, David Cameron Paul, Phil Cearley, Teri Dummer, Mina Gates, Edward Hallaran, Susan Haraway, Elisa LaDoux, Carol Parrilla, Tracy Smith, Nancy Varsanyi, Annette Whitsett, Edward Jameiro, Rick Daniels (from IIAM)