

Spring 2011

Sharing Mayo Clinic

Information and news for friends of Mayo Clinic



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Marrow transplant knocks out patient's multiple myeloma

Jessie Barksdale remembers 1986 well. It was when she was told she had cancer. She recalls asking her doctor: "Do you think I'm going to make it?"

Diagnosed with multiple myeloma, the second most frequent type of blood cancer, Barksdale had a right to be concerned. Based on statistics, she didn't have great prospects. Multiple myeloma affects about five in 100,000 people and is often not diagnosed until the disease has progressed. Most patients are told they have a short time to live.

Multiple myeloma is a cancer of the plasma cells, a type of white blood cells in the bone marrow — the soft, blood-producing tissue in the center of most bones. The exact cause of the disease is unknown, but doctors know that multiple myeloma begins in the bone marrow with one abnormal cell that multiplies. While the condition, which most often affects older patients, can be managed, there is no cure.

The disease can cause bones to thin, leading to fractures and pain. It can also cause low red blood cell count and fatigue. As the myeloma cells crowd out normal cells in the bone marrow, the production of normal blood cells is affected. This process can cause anemia, prevent

normal blood clotting and interfere with the body's immune system, leading to infection or kidney failure.

Because Barksdale's illness was caught early, she was able to forgo traditional therapy for a time. But in 1998 she relocated to Palm Coast, Fla., and sought an oncologist for continued monitoring. A family member referred her to Mayo Clinic.

"I'm from Harlem," says Barksdale, now 73. "I had never heard of Mayo Clinic. But my niece said it's the best place in the world to go for your disease. So I made an appointment." Larry Solberg, M.D., a hematologist/oncologist, became her "guardian angel," she says. "He told me I had taken wonderful care of myself, but progress was being made with treatments and it was time for additional therapy now."

She began a chemotherapy regime, which is common for most multiple myeloma patients, but over time, the disease continued to escalate. With two grown children and grandchildren, Barksdale wasn't sure what more to do. "I got to the point where I thought what's to be will be, and I just asked God to give me strength."

Dr. Solberg and his colleagues at Mayo Clinic were working hard to find new alternatives for patients with multiple myeloma.



Jessie Barksdale had a bone marrow transplant in 2001 and has been in remission from multiple myeloma since.

"There has been a lot of work into understanding a person's unique myeloma and tailoring a treatment plan to his or her particular situation," says Vivek Roy, M.D., a colleague of Dr. Solberg and medical director of the Blood and Marrow Transplantation Program at Mayo Clinic's campus in Jacksonville. "Research is leading to earlier diagnosis and more effective treatments and therapy combinations to extend the lives of patients with multiple myeloma." Doctors suggested Barksdale undergo a bone marrow transplant. The goal was to repopulate the bone marrow that had been compromised due to the toxic effects of the chemotherapy and the multiple myeloma itself.

On February 13, 2001, Barksdale underwent what she described as a relatively painless procedure.


"I had never heard of Mayo Clinic, but my niece said it's the best place in the world to go for your disease. So I made an appointment." — Jessie Barksdale

About Bone Marrow Transplants

Due to her condition, Barksdale was able to undergo an autologous donation where her own cells were used to replenish her body's supply of healthy blood-forming cells.

She's been in remission ever since. "When I realize how long I've been in remission and I look back at all I've gone through, I'm so thankful," Barksdale says. "A lot of people get this diagnosis and think it's the worst scenario, but look how far I've come. It's been more than 20 years and I'm still here."

Despite her disease, Barksdale has been able to enjoy life, especially daily walks and evenings out with her husband. She's thankful for the advances in care. "I'm a testament of how far we've come."

Says Dr. Roy: "We still have work to do to find best treatment for multiple myeloma, but stories like Ms. Barksdale's give us hope, encouragement and inspiration for the future." 

A bone marrow transplant is a procedure to fight cancer where healthy cells are infused into the body after a course of chemotherapy, with or without radiation therapy.

In 2002, Mayo Clinic in Florida, Nemours Children's Clinic and Wolfson Children's Hospital in Jacksonville formed a single blood and marrow transplantation program. To date the program has provided more than 500 autologous (using the patient's own cells) and allogeneic (using donor cells) transplants to patients.

The combined program is certified by the National Marrow Donor Program, allowing it to provide transplants from unrelated adult donors and umbilical cords to pediatric and adult patients. Additionally, the Foundation for the Accreditation of Cellular Therapy has recognized Mayo Clinic as a leader in transplant outcomes and accredited all three Mayo Clinic locations.

A bone marrow transplant can treat many diseases, including:

- Acute and chronic leukemia
- Myelodysplastic syndrome
- Hodgkin's lymphoma
- Non-Hodgkin's lymphoma
- Multiple myeloma
- Amyloidosis
- Aplastic anemia
- POEMs syndrome
- Other solid tumors and inherited disorders

For more information on the Blood and Marrow Transplantation Program call 904-953-7223 or e-mail mcjbm@mayo.edu

Florida campus named LAM center of excellence

Mayo Clinic in Florida has been recognized as a leader in addressing rare pulmonary disorders. The LAM Foundation has designated the clinic as a center of excellence, one of 22 such centers across the country.

Lymphangiomyomatosis (*lim-FAN-jee-oh-ly-oh-myoh-ma-TOE-sis*), commonly known as LAM, is a rare lung disease that affects almost exclusively women, usually during their childbearing years. This progressive, often fatal disease is marked by the growth of cysts and abnormal cells in lung tissues. Over time, these cells can block the lymph vessels, blood vessels and airways, preventing the lungs from providing oxygen to the rest of the body.

More than 1,500 women have been identified with LAM worldwide.

"We are pleased that Mayo Clinic in Florida now joins our colleagues in Minnesota and Arizona to be recognized for our team approach to care and our ability to accurately diagnose and treat this disease as well as manage its many complications," says Charles Burger, M.D., a pulmonologist, who serves as director of the LAM program at Mayo Clinic's Florida campus.

Diagnosis and treatment involve many specialists,

including pulmonologists, radiologists and pathologists as well as interventional radiologists, cardiothoracic surgeons and lung transplantation specialists, respiratory therapists, nutritionists and physical therapists.

Symptoms of LAM include shortness of breath, cough,

collapsed lung, chest pains and/or fatigue — similar to other ailments so patients are often misdiagnosed with asthma, emphysema or pulmonary bronchitis.



Charles Burger, M.D.

Targeted light energy destroys tumors

Laser ablation improves grim prognosis

A new treatment that destroys cancer cells with heat is providing hope to patients who previously had few options. Mayo Clinic physicians are among the first to use MRI-guided laser ablation to heat up and destroy tumors in the liver, kidney and prostate.

“With laser ablation, we can precisely target and kill tumors without harming the rest of an organ,” says Eric Walser, M.D., an interventional radiologist who has pioneered the procedure at Mayo Clinic in Florida. “We believe there are a lot of potential uses for this technique — which is quite exciting.”

In laser ablation, a small needle is inserted into the tumor. Light energy is transmitted via the needle to destroy the tumor. The outpatient procedure is performed with the guidance of a magnetic resonance imaging (MRI) machine, which can precisely monitor temperature inside and around the tumor. When

the tumor and a small portion of the surrounding tissue (which may contain cancerous cells) are heated to the point of destruction, the laser is turned off.

“With laser ablation, we can precisely target and kill tumors without harming the rest of an organ.”

— Eric Walser, M.D.

According to Dr. Walser, it is the combination of the laser and the MRI that make the treatment so successful. “With MRI imaging, we are able to pinpoint these lesions and watch on the monitor as they are being destroyed. We can deliver the laser precisely to the tumor for the exact amount of time, leaving

the surrounding organs unharmed,” he says.

Dr. Walser is leading the effort on the Florida campus to use laser ablation for kidney and liver tumors and is adapting the procedure for lung, thyroid and bone tumors. So far, more than 15 patients have been treated with laser ablation in Jacksonville.

“The best patients for this procedure are those with either a solitary tumor or metastatic cancer that is confined to one organ,” he explains. Tumors measuring 5 centimeters (about 2 inches in diameter) or less are most responsive. Larger tumors are usually treated with chemotherapy or radiation therapy. Because the technique is performed inside an MRI machine, patients with pacemakers or other metallic implants aren’t candidates for the procedure.

Patients undergo general anesthesia to prevent them from moving while the laser fiber is active, which takes only about 2.5 minutes for tumors in the liver and kidneys. Many patients are able to return home the same day and experience some local pain and flu-like symptoms as the body absorbs the destroyed tissue. Side effects usually subside within a week.



Eric Walser, M.D., leads efforts on the Florida campus to use laser ablation for kidney, liver, lung, thyroid and bone tumors.

For prostate tumors, too

At Mayo Clinic in Rochester, Minn., laser ablation is proving to be an excellent method for treating men with recurring prostate tumors. “This technique provides a less invasive and minimally traumatic alternative for men fighting prostate cancer,” says David Woodrum, M.D., Ph.D., an interventional radiologist at Mayo Clinic in Rochester. He is leading the effort to treat prostate cancer patients with laser ablation as an alternative to other therapies.


For prostate cancer patients, the treatment takes up to four hours due to the size and location of these types of tumors. The tumors are small — usually 5 to 17 millimeters — and are often wrapped around the urethra, so ablation is more complex. An additional benefit is patients’ sexual and urinary functions usually are not affected. Dr. Woodrum and his team have successfully treated 14 patients.

Depending on the degree and spread of the lesions, some patients are treated with MRI-guided cryoablation rather than the laser. Cryoablation uses extremely cold gas to destroy cancerous tissue. Successful results have been reported in both types of treatments. “Immediately after treatment, we found no residual tumor,” says Dr. Woodrum. Long-term results are not available yet because the treatment was introduced only about one year ago.

Because prostate cancer is the third most common cause of death

from cancer in men, the potential for laser ablation is far-reaching. “Cancer recurrence rates after removing the prostate can be as high as 15 to 20 percent, and as high as 40 percent for men who have received radiation,” says Dr. Woodrum.

Most of Dr. Woodrum’s patients had recurring tumors despite surgical removal of the prostate. “Many of these men have run out of options. These technologies provide viable treatment options for these men with very few side effects,” he says. Patients usually experience some mild discomfort and are often able to return home the following day. With cryoablation and laser ablation, “we’re providing these men hope where they had no hope before.”

While the technology for MRI-guided laser ablation is still in its infancy, Mayo Clinic doctors are optimistic about its potential. “With the trend toward early detection — when tumors are still relatively small — laser ablation is becoming an option for more and more people,” says Dr. Walser. 



David Woodrum, M.D., has been leveraging both heat and cold for treating patients with various cancers, including prostate cancer.



Thanks to successful laser ablation, Al Burne is eligible for a liver transplant to treat a genetic disorder.

One patient’s story

For some patients with liver disease, laser ablation gives them more time while awaiting a liver transplant. Al Burne, 47, who has a genetic liver and lung disorder, is one of those patients. Burne’s condition makes his body unable to produce an essential protein, causing the liver to break down. He was not a candidate for a liver transplant because he had more than three tumors.

“Without a transplant, my prognosis was very grim,” says Burne, the father of two young children. “I feel very blessed that Mayo Clinic is helping me to get through this.” He underwent laser ablation in January and is now living a busy, active life.

“I required one pain pill after the treatment and was able to walk later that day,” says Burne, of Greenville, N.C. Initial results showed the tumors were destroyed; follow-up scans will determine whether he will need additional ablation treatments before eventually receiving a liver transplant. About 10 to 20 percent of patients need more than one treatment to remove the cancerous tissue.



After a robot-assisted partial knee replacement, Lauren Whomsley was up and walking the day after surgery. Now, the Florida native is back to her active lifestyle.

Leaving knee pain behind

Thanks to robot-assisted partial knee replacement

I could walk. Everything revolved around my knee pain," she says.

In fall 2009, Whomsley, then 52 and living in Jacksonville, Fla., sought help from a local orthopedic practice but was unable to find long-term relief.

The former trauma nurse was used to challenges, but her quality of life was deteriorating rapidly. Within a year, she was 20 pounds heavier and in so much pain that many days she had to crawl up and down the stairs of her two-story home. "The pain was constant," Whomsley says. "On a scale of 10, I was at a five or six daily. I couldn't imagine living my life this way for the next 20 years."

Physicians told her that a knee replacement was her best option. But the surgery — traditionally an invasive procedure with a long recovery time — would mean Whomsley would have to give up her active lifestyle for good. That wasn't her idea of living, so Whomsley sought other options and was referred to Mayo Clinic.

In September 2010, Whomsley met with Cedric Ortiguera, M.D., a Mayo Clinic orthopedic surgeon, who recommended a robot-assisted partial knee replacement.

Using a new robotic arm system — the only one of its kind in northeast Florida — surgeons replace a small area of the knee with an implant, while preserving much more of the knee than was possible previously.

"This device allows us to be precise in removing as little bone as feasible, replacing it with a small implant that mimics the

healthy knee surface," says Mary O'Connor, M.D., another Mayo Clinic orthopedic surgeon who uses the robot.

The procedure is an excellent option for patients in their 50s and 60s who are experiencing knee pain due to athletic overuse or arthritis and have a limited amount of arthritis in their knee, says Dr. O'Connor. Older patients typically have arthritis throughout the knee and a full or total knee replacement is the better operation for such patients.

Osteoarthritis can lead to more widespread degenerative knee disease over time, says Dr. Ortiguera, but one benefit of the robot-assisted procedure is that patients still have options if the disease progresses.

"Because so little bone is removed — and the natural knee structure, including most of the ligaments, is preserved, we can still replace the entire knee at some point years into the future, if needed," Dr. Ortiguera says. "For patients in their 40s and early 50s, this is a procedure that can help keep them active and pain-free for years."

"I was at a point where I was ready to do almost anything to get my quality of life back," says Whomsley, who underwent surgery in November and was planning her next hiking trip two months later.

"I'm very fortunate that I had access to Mayo Clinic — to the top physicians and the newest and best technologies — right here in my backyard," says Whomsley. "I only wish I had known sooner." [SMC](#)

Active is a word often used to describe Lauren Whomsley. The Florida native loved the outdoors. When she wasn't walking or biking on the beach, she was running five to seven miles a day. Vacations were spent fly fishing or hiking in the Rockies.

But over the years, Whomsley's knees started to ache. She was diagnosed with osteoarthritis, which occurs when cartilage in joints wears down over time. The pain, caused by bone rubbing on bone, started out as a minor irritant but grew to impact her ability to do the things she loved. "I'd try to run through it, but it just got to a point where I couldn't do it anymore," she recalls.

Errands became increasingly difficult. "I couldn't plan anything — even a trip to the grocery store — because I didn't know how far

Dementia researcher honored with prestigious award

The American Academy of Neurology (AAN) has awarded the 2011 Potamkin Prize to Dennis Dickson, M.D., a neuropathologist at Mayo Clinic in Florida. The Potamkin Prize honors researchers for their efforts advancing the understanding of Pick's disease, Alzheimer's disease and related disorders.



Dennis Dickson, M.D.

Dr. Dickson directs the brain bank at Mayo Clinic in Florida and is responsible for neuropathologic studies of brains to identify and describe changes that occur due to neurological disorders.

The Potamkin Prize was awarded to Dr. Dickson in recognition of his wide-ranging neuropathologic research in neurodegenerative disorders, in particular studies on tau protein. He shares the \$100,000 prize with two scientists at the Max Planck Unit for Structural Molecular Biology in Germany.

Tau is a protein that accumulates in tangles in the nerve cells in the brains of people with Alzheimer's disease and other disorders, which are collectively termed "tauopathies." Partly because of his research, scientists now believe that tau has a critical role in causing dementia in Pick's disease and Alzheimer's disease and movement problems in PSP and other atypical parkinsonian disorders.

Transplant center celebrates milestones

The Department of Health and Human Services has awarded the McCalla Transplant Center on Mayo Clinic's Florida campus a Gold Medal of Honor for liver transplantation and a Bronze Medal of honor for lung transplantation. The awards recognize outstanding efforts to increase the availability of organs for transplantation. The liver transplant program was the only transplant program in the country to receive a gold medal.

In January, the lung program completed its 300th transplantation. The program, which performed 44 procedures in 2010, is one of the largest in southeast.

The kidney and heart transplant programs are celebrating their 10-year anniversaries in 2011. The kidney program performed 110 transplants last year, the most ever in a year, and the heart program performed 26.

Joint Commission recertifies stroke center

The Joint Commission has reaccredited the stroke center on Mayo Clinic's Florida campus as an Advanced Primary Stroke Center.

Certification means the program complies with the national standards for establishing clinical practice guidelines, performance measurements and continuous improvement programs in caring for stroke patients. Mayo Clinic is also certified as a Comprehensive Stroke Center by the Florida Agency for Health Care Administration (AHCA).

"These certifications are national recognition of our excellence in caring for stroke patients," says Mayo Clinic neurologist James Meschia, M.D., the stroke center's medical director. "Patients can be assured of certain standards



James Meschia, M.D.

regarding diagnosis, prevention, treatment and rehabilitation, with the ultimate goal of reducing the time between stroke onset and treatment." Part of what distinguishes Mayo Clinic's stroke center, which treated more than 400 patients last year, is its advanced diagnostic capabilities and treatments for routine brain attacks as well as complex stroke cases.

400+ stroke patients were treated by Mayo Clinic in Jacksonville in 2010

Mayo Clinic works with hundreds of insurance companies and is an in-network provider for millions of people. In most cases, Mayo Clinic doesn't require a physician referral. Some insurers require referrals, or may have additional requirements for certain medical care. All appointments are prioritized on the basis of medical need.

To make an appointment, contact us by phone or online:

Arizona 480-301-8484

Florida 904-953-2272

Minnesota 507-284-2111

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Coming to Mayo Clinic? These short videos offer tips

There's a new way to learn the ins and outs of visiting Mayo Clinic. About two dozen short videos, most about a minute in length, offer tips to make visiting Mayo Clinic just a bit easier.

"The videos offer looks at all three campuses and answer questions about travel arrangements, parking, dining, registration and other logistics," says Lee Aase, director of social media at Mayo Clinic.

"But we also include information that even veteran visitors might not know about."

For example, for the Arizona campus, you'll hear about spa services available in the hospital and a nature trail adjacent to the outpatient clinic. For the Florida campus, bring your iPod or laptop as there is free Wi-Fi. In Minnesota, you'll learn about art tours

and where to check a coat or a walker (Gonda Building information desk).

"It's just another way to make visiting Mayo Clinic as convenient as possible for our patients and visitors," says Aase.

Find the patient video guides at Sharing Mayo Clinic blog: sharing.mayoclinic.org/.

Share your tips

Do you have a favorite tip about visiting Mayo Clinic? Or something you wish you would have known before coming? Send your ideas to socialmediacenter@mayo.edu and we'll consider featuring your suggestion in a video.

