Coping with Leukemia

A diagnosis of leukemia can be frightening and confusing. Leukemia is a form of blood disease that begins in the bone marrow. Other names for leukemia usually means “white blood.” While blood cells (leukocytes) move in the bone marrow and ready the body to fight infections and other foreign substances. There are different types of leukemia that affects an uncontrolled increase in the number of white blood cells.

The consequences of healthy red blood cells, platelets and function related to blood loss are critical with blood clotting when we’re dealing with low platelet counts. In addition, we’ve learned that it is very important to put in place every hospital across the country. We can commit to healthy red blood cells and that applies to all patients in all hospitals.

Bloodless programs are becoming more mainstream as technology and medical science improves. It is remarkable that the CBMS team is so personable and thorough when they meet with my wife and me, any questions we have, they are always answered.

Penn Medicine Physician Profile

Physician Profile

Meet Jock Davis

Patient 100

Meet Nathan Zink

Patient 99

For more information, please visit our website, www.cbms.org.

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**Medical Explanation**

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**plasma and platelets. At the Center for transfusions of red blood cells or platelets**

Many patients bank their own blood in transplants to combat these complications.

**transfusions are used in most stem cell**

**bleeding from thrombocytopenia, or low**

**bone marrow, stem cell transplants may be**

Healthy bone marrow is a soft and spongy

Medical director Dr. Patricia Ford and the Medical Explanation

**avoiding additional blood loss by minimizing**

**omitting all use of anticoagulants and aspirin.**

**stopping menstruation temporarily in female**

**supplementing vitamin intake to include**

**gastrointestinal acid production.**

**lymphoma and multiple myeloma. Most**

**stem cell transplant program had a 96 percent**

Mr. Davis described himself as a “healthy guy” before his medical problem started.

**stomach problems were the first indicators**

Mr. Davis described himself as a “healthy guy” before his medical problem started.

**lymphoma that usually occurs in middle-aged or older adults. It is marked by small- to fast-growing type of B-cell non-Hodgkin lymphoma include weight loss and enlarged**

**Myeloma cells collect in the bone marrow and**

**Many medical facilities throughout the country perform stem cell transplants, but physicians will only perform the procedure if it is the best treatment option for their patients.**

**avoiding additional blood loss by minimizing**

**omitting all use of anticoagulants and aspirin.**

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Mr. Davis explained that it takes patients months to recover from a stem cell transplant and the procedure is not a cure, but a treatment for patients with cancer.

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Many patients bank their own blood in anticipation of a future need. Apheresis is a procedure in which blood is drawn and separated into its components, some of which are retained, and other components are returned to the patient. After reinfusion, the apheresis catheter is usually removed. Apheresis is a procedure designed to minimize blood loss and improve platelet recovery. During the apheresis process, the blood is drawn from the vein and passed through a plastic tube through which a protein is filtered. The protein removed from the blood is often infused back into the patient.

Dr. Ford notes that these patients travel miles to receive the bloodless stem cell transplant at Pennsylvania Hospital – the most successful program of its kind in the world. Mr. Davis is the 100th person to receive a bloodless stem cell transplant.

Mr. Davis is the 100th person to receive a bloodless stem cell transplant.

Many medical facilities throughout the country perform stem cell transplants, but many physicians will only perform the procedures if they can accept blood transfusions as an option for the patient. Blood transfusions are not an option for Mr. Davis. Dr. Ford, a bloodless medicine specialist, explained that he does not accept blood transfusions as a result of religious beliefs. To Dr. Ford, a bloodless medicine specialist, an option that offers blood transfusions is not the same as bloodless treatment, as it would mean accepting blood transfusions under some circumstances.

Mr. Davis’ condition was complicated. She made adjustments to her regimen and the transplant. “The CBMS team worked well together and we encountered more roadblocks with health insurance than we anticipated,” Mr. Zink said.

Dr. Ford performed the procedure on Mr. Zink, and Mr. Zink was able to recover. He also had a good follow-up visit with his local oncologist and was able to return to his job.

Dr. Ford had performed the procedure on Mr. Zink, a lymphoma patient from Wisconsin, who was ready to go. But he couldn't find a hospital that could accommodate his condition and inpatient stay because of his religious beliefs. Dr. Ford, who had been using a substitution for what he described as “bloodless procedures” for years in some of his treatments, was able to accommodate Mr. Zink's request.

MR. DAVIS’ INTERVIEW

To watch Mr. Davis’ interview, visit Channel6 ABC or PennMedicine.org/bloodless.

Dr. Ford’s team has performed the procedure on Mr. Davis, who is doing well and has no complications.

100th Patient

TO WATCH MR. DAVIS’ INTERVIEW

On Channel6 ABC

Dr. Ford had performed the procedure on Mr. Davis, who is doing well and has no complications.

SUCCESSFUL BLOODLESS STEM CELL TRANSPLANT TREATMENTS

Nathan Zink, of suburban Milwaukee, was diagnosed with non-Hodgkin lymphoma last year. His primary physician told him that aggressive treatment for the cancer with chemotherapy and radiation was the best option.

For several months, Mr. Davis underwent chemotherapy. The chemotherapy was to control the cancer in his blood but had little effect. The cancer continued to grow.

Percutaneous biopsy, in a nearby hotel during the process. I had no complications from the procedure. I felt better after I was discharged. I was able to leave the hospital and return home. I was able to visit the hospital and see my family.

I was comfortable and I could have visitors. It was like I was on vacation. I spent the week prior to the transplant. I spent about a week in the hospital. I was comfortable and I could have visitors. It was like I was on vacation. I spent the week prior to the transplant. I spent about a week in the hospital.

Mr. Davis is doing well and has no complications.

Dr. Ford performed the procedure on Mr. Zink, a lymphoma patient from Wisconsin, who was ready to go. But he couldn't find a hospital that could accommodate his condition and inpatient stay because of his religious beliefs. Dr. Ford, who had been using a substitution for what he described as “bloodless procedures” for years in some of his treatments, was able to accommodate Mr. Zink's request.

Dr. Ford did not want to perform the procedure on Mr. Zink, who had non-Hodgkin lymphoma, because he was concerned about the risks of the procedure. He had performed the procedure on several patients with non-Hodgkin lymphoma, but he was concerned about the risks of the procedure. He had performed the procedure on several patients with non-Hodgkin lymphoma, but he was concerned about the risks of the procedure.

Mr. Davis is the 100th person to receive a bloodless stem cell transplant. He had found a doctor and a hospital that had experience with bloodless procedures.

He contacted the CBMS program from doing research on stem cell transplants. The CBMS program had a 96 percent survival rate. The mortality rate of 4 percent was much better than expected.

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What is a Bloodless Autologous Stem Cell Transplant? Stem cells are the body’s foundational cells and can become any cell type in the body, giving them great potential for medical treatments. A bloodless autologous stem cell transplant is a type of treatment where a patient’s own stem cells are collected and stored before undergoing cancer treatments, such as chemotherapy or radiation. These treatments can cause side effects like low blood counts and complications, so replacing them with healthy stem cells can help restore normal blood levels. Once the cancer treatments are finished, the patient’s stem cells are returned to their body to help fight the cancer and promote healing.

Healthy bone marrow is a soft and gelatinous structure that fills the bones of the body. It is the place where stem cells are produced. Bone marrow also produces blood cells, including red blood cells, white blood cells, and platelets. When a person is diagnosed with cancer, they may need to receive chemotherapy or radiation treatments, which can damage their bone marrow and reduce the production of blood cells. In some cases, this can lead to severe anemia, infection, and bleeding issues.

To address these complications, doctors may use blood transfusions, which involve giving a patient healthy blood from a donor. However, blood transfusions can carry risks and complications, such as blood typing errors, transfusion reactions, and the potential for transmitting diseases. For patients who cannot receive blood transfusions due to medical reasons, such as religious beliefs, a bloodless autologous stem cell transplant may be an option.

A bloodless autologous stem cell transplant is a procedure where the patient’s own stem cells are collected and stored before cancer treatments. Once the treatments are completed, the patient’s healthy stem cells are returned to their body to help fight the cancer and promote healing. This type of treatment can be an option for patients who cannot receive blood transfusions due to medical reasons, such as religious beliefs. By using the patient’s own stem cells, bloodless autologous stem cell transplants can reduce the risks and complications associated with blood transfusions, making it a valuable treatment option for certain patients.

100TH PATIENT Receives Bloodless Stem Cell Transplant at Pennsylvania Hospital

Johanna Davis is the 100th patient to receive a bloodless stem cell transplant at Pennsylvania Hospital – the most successful program of its kind in the country.

The Philadelphia news media visited him at Pennsylvania Hospital as preparation for the biopsy. “This television and newspapers reporters came to interview me,” he said, “and I really didn’t know how to do it because it was really effective. Dr. Ford and staff explained to me the process of the treatment by doing the transplant. After the biopsy, the patients received blood transfusions and will be helped by the patients who are on the plateau.

Dr. Ford further explained that the patient’s treatment involves a bloodless stem cell transplant, or a low-potency treatment. The treatment is not like the use of multiple stem cells, it is like a policy to keep patients dead and the stem cells are not low.

In time, he was going to undergo another surgery to treat his kidney failure. He is getting treated by both Dr. Ford and the national transplantation. In addition, his chemotherapy failed to control the cancer but his blood count has remained low. (I'm going to get my platelets from Dr. Ford, he is the best.” In that day, the doctors did more tests and procedures.

He was doing some school for training to become an echocardiogram technician. His primary physician did a blood test and discovered that my kidneys were failing. His primary physician did a blood test and discovered that my kidneys were failing. It was the first time he went into the hospital. “I've spoken with some doctors and staff at the hospital in Philadelphia to see whether or not they could perform a bloodless stem cell transplant. I thought it was possible that I could be a candidate for this procedure.”

After visiting the hospital, he decided to receive the treatment at the Center for Bloodless Medicine and Surgery. The transplant was performed by Dr. Ford in early May 2013. Davis, who had been suffering from lymphoma for the past two years, was able to receive the treatment at the Philadelphia-based hospital.

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So, I build their blood counts up before surgery to ensure that they don’t lose blood but they have low blood loss. With transplants, patients normally build up their blood counts before surgery to ensure that they don’t lose blood.

For example, I took the surgical concept of building up blood counts before surgery and applied it to stem cell transplants. I learned throughout the years working with surgical, medical and oncology professionals that applying surgical and medical principles to patients with low blood counts is not only safe but also effective.

Bloodless programs are becoming more mainstream as patients begin to learn about the benefits of bloodless medicine. It is a philosophy of care that focuses on reducing the need for blood transfusions by using alternative methods such as autologous stem cell transplantation, which allows patients to build their own blood cells.

In 2011, CBMS reached a major milestone. The Center’s Bloodless Stem Cell Transplant Program treated its 100th patient by safely using high dose chemotherapy and conditioning without the use of blood product support. Under the direction of CBMS founder Dr. Ed Ford, the program is now recognized as a model program by health care professionals and organizations throughout the country.

Dr. Ford and the CBMS team have been instrumental in developing and implementing strategies for bloodless medicine that are applicable to all hospitals and all patients. The program has been successful in treating patients with low platelet counts, and the team continues to offer innovative approaches to bloodless medicine.

Q: How do you develop and apply bloodless medicine methods for stem cell transplants?

A: We have simplified strategies put into place for Bloodless stem cell transplant procedures. I look at all the strategies that I have pursued throughout the years working with surgical, medical and oncology professionals and put them together to devise a single protocol for stem cell transplants. For example, I use the surgical concept of building up blood counts before surgery for procedures that have a lot of blood loss. With transplants, patients will do lose blood but they have their own blood cells from the high dose chemotherapy. So I build that blood count up before the transplant. That’s completely different than what a high level transplant center would do. They wait until patients have a low blood count and then administer blood transfusions.

For patients experiencing low platelet counts, we frequently deal with patients who are bleeding. I must know what other treatments are being done to help with blood clotting before we’re dealing with the low platelet count. In addition, I know that the source of blood loss is in hospitalized patients in the amount and frequency of blood losses. Often patients have had a draw on every day that is probably not necessary. We can conservatively and safely treat patients and that applies to all patients in all hospitals.

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Q: What are the key elements of a Bloodless Medicine and Surgery program that applies to all patients in all hospitals.

A: It requires education and a willingness by health care providers to learn and apply these strategies. It just requires education and a willingness for everyone in the hospital to participate and apply these strategies. The first thing that we have done is to develop strategies for specific patient populations. We have then developed strategies for all patients and all hospitals.

In addition, the National Cancer Institute (NCI) and the American Society of Clinical Oncology (ASCO) have published guidelines for bloodless medicine that recommend the use of bloodless medicine for patients who are at high risk for blood transfusion reactions.

The Center for Bloodless Medicine and Surgery at Pennsylvania Hospital is a leader in bloodless medicine and has been a pioneer in the field. The Center has treated more than 600 patients per year for more than 20 years.

Dr. Ed Ford is a board certified hematologist and a member of the American Society of Clinical Hematology and the American Society of Clinical Oncology. He is the program’s director and has been a member of the Center’s medical staff since 1996.

The Center’s Bloodless Medicine and Surgery program is designed to provide patients with a safe and effective treatment option for their medical needs. The program provides patients with a comprehensive approach to bloodless medicine, including autologous stem cell transplantation, which allows patients to build their own blood cells from their own bone marrow.

In addition, the Center offers a variety of services to patients and their families, including education programs, support groups and patient counseling.

The Center for Bloodless Medicine and Surgery has received numerous awards and recognition for its bloodless medicine programs, including the American Society of Clinical Oncology’s National Bloodless Medicine and Surgery Award for Excellence in Bloodless Medicine.

Meet Jock Davis

Patient 100

Nathan Zink of Greenfield, WI, traveled to Philadelphia for bloodless stem cell transplant treatment at Pennsylvania Hospital during the winter of 2010. He is the program’s 99th patient. Read his story on page 3.

In 2011, CBMS treated its 100th patient. Patient 100 received treatment at the Center’s Bloodless Stem Cell Transplant Program. The patient is now the program’s 100th patient. Read his story on page 4.

Meet Zach Zink

Patient 99

Leukemia is a form of blood cancer that affects the bone marrow and the blood. It is a cancer of the white blood cells (leukocytes) and platelets and can occur in children and adults of all ages.

Leukemia is a disease that affects the white blood cells, platelets and red blood cells. It can be acute or chronic and can occur in children and adults of all ages.

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I learned throughout the years working outside physicians who are uncomfortable or unfamiliar with bloodless procedures. Witness patients every year for all types of medical procedures. At CBMS, we see 600 to 700 Jehovah’s Witness patients every year for all types of medical conditions and reasons. Often patients are referred or transferred from physicians who are uncomfortable as CBMS has Bloodless procedures.

I think you could develop and apply bloodless methods for stem cell transplants.

We have simplified strategies into places for Bloodless stem cell transplant procedures. I teach all the strategies that I learned during the training with surgical, medical and radiation oncologists and put them together to devise a simple protocol for our stem cell transplant procedures. I teach the surgical concept of building the Bloodless program into surgery for procedures that have a lot of blood loss. With transplants, patients normally do lose blood they have blood loss from the high dose chemotherapy. So I build their blood count up before the transplantation. That’s completely different than what a high-level cancer center would do. They wait until patients have a low blood count and then administer blood transfusions.

For patients experiencing low blood counts, I frequently deal with patients who are hemorrhaging. I’m used to what pharmacologic or hormone therapies will do with blood without what we’re dealing with the low blood counts. In addition, I’ve learned that this source of blood loss in hospitalized patients is the amount and frequency of blood transfusions. Often patients have blood drawn repeatedly every day and that is probably not necessary. We can conserve blood by limiting blood draws, and that applies to all patients in all hospitals.

Bloodless programs are becoming more mainstream as radiotherapy and the news media start to take interest. Do you think programs like CBMS will become more commonplace in hospitals across the country?

A very challenging thing to change is physicians and hospital’s position towards bloodless programs is to bring it into an institution. Once doctors care for patients who do not accept blood transfusions, they recognize that these strategies are effective and applicable to all patients. But to start a program started, a physician or nurse has to become the champion. If a physician, the Joint Commission, which accredits health care facilities, is actually looking into instituting blood conservation measures to place it in every hospital across the country. Is this something that they want to do the right thing?

A lot of techniques and strategies we use are applicable for all patients and all hospitals. It just requires education and willingness of physicians, nurses, and other health care providers to learn and apply these techniques.

Dr. Ford

Dr. Patricia Ford earned her medical degree from the University of Miami. She completed her residency at Graduate Hospital of Philadelphia and fellowship training at Fox Chase Cancer Center and Temple University Hospital.

Dr. Ford is board-certified in hematology and oncology. She is a member of the American College of Physicians, the American Society of Hematology and the American Society of Clinical Oncology.

Dr. Ford founded the Society for the Advancement of Bloodless Medicine, an organization dedicated to improving patient outcomes through optimal blood management practices.

Dr. Ford co-founded the Society for Bloodless Medicine and Surgery in 1997. The Center for Bloodless Medicine and Surgery (CBMS) at Pennsylvania Hospital is one of the most recognized and respected programs for bloodless medicine and surgery in the world. Dr. Ford and her team established CBMS in 1996 to treat Jehovah’s Witness patients and others who do not accept blood transfusions for religious or personal reasons. The program is coordinated transfusion-free program for patients who prefer medical treatment without the use of blood products. CBMS is well known in the health care community, caring for more than 600 patients per year.

In 2011, CBMS reached a major milestone. The Center’s Bloodless Stem Cell Transplant Program treated its 100th patient by safely using high dose chemotherapy (HDC) followed by autologous stem cell transplant (ASCT) without the use of blood product support. Dr. Ford performed the 100th stem cell transplant — more than any other physician worldwide.

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