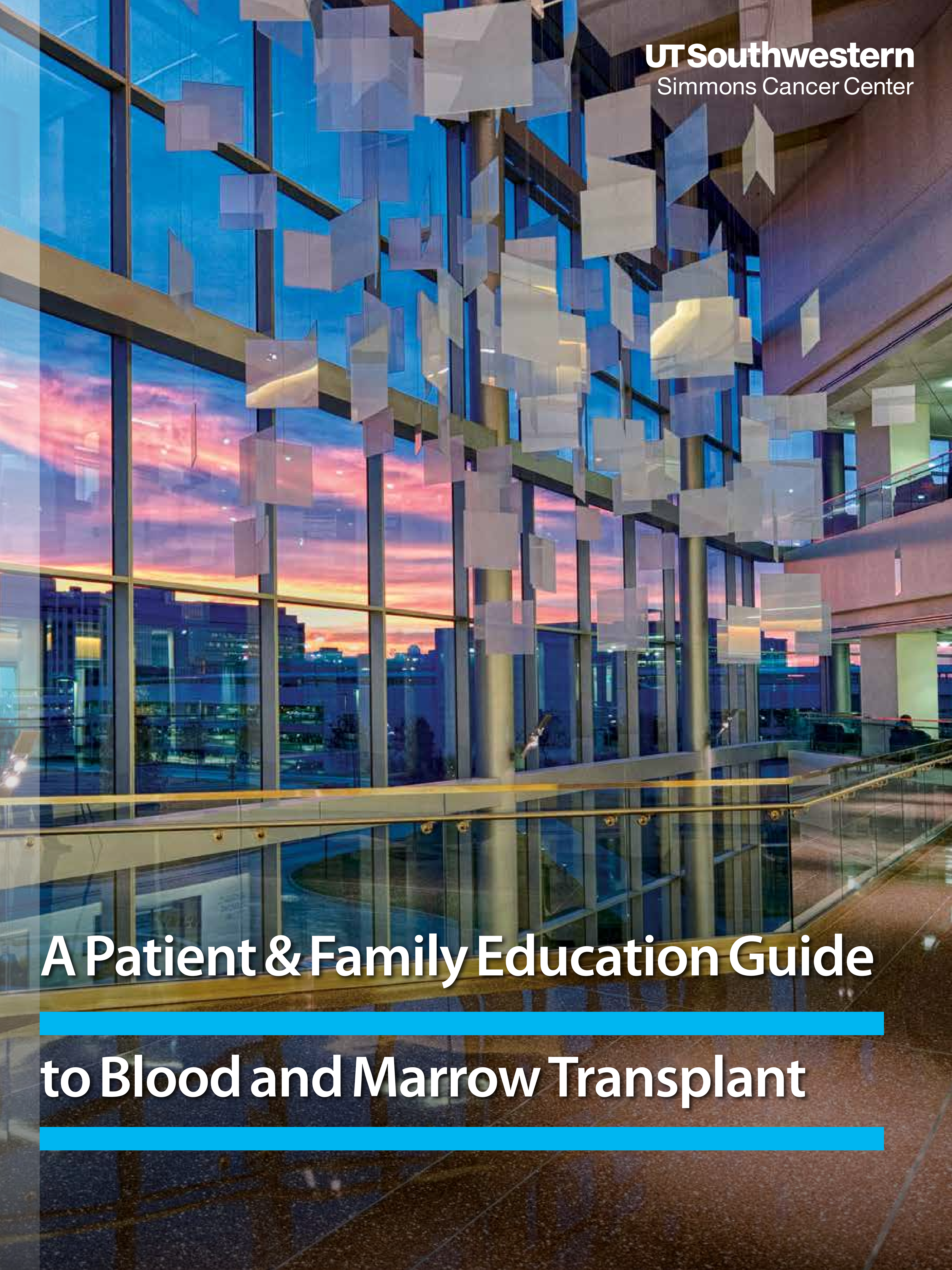
UT Southwestern
Simmons Cancer Center



A Patient & Family Education Guide to Blood and Marrow Transplant

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Welcome to UT Southwestern Medical Center

We're pleased you have chosen UT Southwestern Medical Center for your health care needs. For more than seven decades, our physicians have been healing, curing, and advancing the cause of medicine. All of us – physicians, nurses, and staff – will do our utmost to deliver attentive, compassionate care at every step of your visit.

Harold C. Simmons Comprehensive Cancer Center, the only NCI-designated Comprehensive Cancer Center in North Texas, is a multidisciplinary program responsible for the cancer care and cancer research conducted at UT Southwestern. Our mission is to reduce the impact of cancer today and to work to eliminate the threat of cancer in Dallas, North Texas, and the nation.

Our Hematologic Malignancies and Cellular Therapy Program is led by a nationally recognized team of physicians who specialize in blood cancers and stem cell transplantation. These physicians are committed to working side by side with a multidisciplinary team of nurses, advanced practice providers, pharmacists, psychologists, social workers, dietitians, and chaplains to deliver unparalleled care. Our program has outstanding results, with the highest survival rate for allogeneic transplant patients in Texas, very low complication rates, and patient satisfaction in the 99th percentile across the nation.

Patient care is provided in modern, state-of-the-art facilities on the UT Southwestern campus, including an innovative hospital for inpatient care, as well as an outpatient clinic located in our Cancer Care Outpatient Building. These comprehensive resources enable patients to have initial consultations, testing, follow-up visits, and any needed medical procedures done right here on campus, without having to travel to facilities elsewhere.

We wish you the best of health and a speedy recovery!

Thank you for entrusting us with your care here at UT Southwestern Medical Center. Our Hematologic Malignancies and Cellular Therapy Program at the Harold C. Simmons Comprehensive Cancer Center takes a multidisciplinary approach when it comes to treating your condition. We are committed to providing excellent, compassionate care to all of our patients.

Most patients and their families have many questions and practical concerns about transplants and treatments. We hope the information in this booklet answers most of your immediate questions and helps you prepare for your upcoming transplant. Please write down any additional questions you might have, and when our coordinators contact you to facilitate arrangements for your transplant, they will assist in answering these questions. In addition, feel free to contact our team and we will be more than happy to assist you.

Robert H. Collins Jr., M.D., FACP

Director of the Hematologic Malignancies and Cellular Therapy Program and the Combined Adult/Pediatric Stem Cell Transplant Program

Mission Statement

UT Southwestern Medical Center is committed to providing excellent, compassionate care for patients with blood cancers and carrying out research to improve therapy for these patients.

Bone Marrow Transplants and the UT Southwestern Advantage

Bone marrow transplants are often used in conjunction with other therapies to treat patients with certain cancers of the blood, bone marrow, and lymph nodes, as well as some types of blood and immune disorders.

Also known as stem cell transplants, bone marrow transplants transfer normal mature stem cells from donors into patients who need them.

No. 1 Survival Rate

The UT Southwestern Bone Marrow Transplant Program is recognized as one of the country's top programs of its kind and stands out among regional care centers for blood cancers. With more than 2,000 transplants to date, our program is **No. 1 in North Texas for one-year survival rates** for allografts and is a National Center of Excellence for all the major national insurance carriers.

We are the only transplant program in North Texas associated with a National Cancer Institute-designated Comprehensive Cancer Center.

In addition, UT Southwestern's Bone Marrow Transplant Program is accredited by the Foundation for the Accreditation of Cellular Therapy, which recognizes bone marrow transplant programs offering top-quality patient care in cellular therapies. We are also an affiliate of the National Marrow Donor Program.

Experts in All Types of Transplants

Our experienced and highly skilled team performs both autologous (using a patient's own cells) and allogeneic (using donor cells) transplants for patients ranging in age from early adulthood to those in their early 70s.

Our team also performs haploidentical (half match) and cord blood transplantation, making transplantation a viable option for many more patients than in the past. In addition to state-of-the-art technologies and facilities, we also offer a range of therapies that support these procedures.

Clinical Trial Opportunities

Some patients who receive a blood or marrow transplant might be offered the option to join a clinical trial, also known as a research study. Clinical trials have led to improved results for transplant patients and continue to help doctors make important discoveries for future patients. If you're asked to join a clinical trial, your doctors should tell you:

- What they are trying to learn
- What the treatment and tests are
- Your rights as a patient

If you choose to participate in a clinical trial, your doctor or research nurse will go through a consent process with you. This means they will tell you more about the purpose of the study, the risks and benefits, other options available to you, and your rights as a participant in the study. Make sure you ask questions so you understand the clinical trial process. Then, if you decide to participate in the trial, you will get a consent form to sign.

Key Contact Information

Blood Cancers/Transplant and Cellular Therapies Clinic

To contact clinic staff, schedule appointments, or reach the after-hours operator, call:

Main number: **214-645-HOPE (4673)**

(choose appropriate option after listening to pre-recorded message)

William P. Clements Jr. University Hospital – Inpatient Bone Marrow Transplant Unit

To reach hospital staff, call: **214-633-1100**

Meet Our Team

Team Members and Functions

Physicians

Our physicians lead the Blood and Marrow Transplant team with a compassionate focus on patient care. They see patients every day, providing assessments and diagnoses, developing treatment plans, managing care both in and out of the hospital, and shaping clinical treatment procedures. Physicians are on call 24 hours a day, seven days a week, and help walk our patients through each major step of their care journey.

Advanced Practice Providers

Our advanced practice providers are clinically trained professionals who work closely with your BMT physician to care for you before, during, and after your transplant. During your clinic visits and/or hospitalization you will be seen by the advanced practice provider as well as the Blood and Marrow Transplant (BMT) physician.

Transplant Coordinators

Our transplant coordinators are nursing professionals who will coordinate all aspects of your pre-transplant process. Their scope of duties include coordination of new patient referrals; educating patients and their families/caregivers regarding the transplant process; facilitating national and international unrelated donor searches; scheduling patient assessments and evaluations; maintaining contact with the referring physician's office; and arranging local accommodations and long-term follow-up with you after your transplant.

In addition, one of our transplant coordinators is located in the inpatient unit. They will help facilitate your transition from the outpatient setting to inpatient stay and then continue to support you and your family/caregiver throughout your transplant and hospitalization. They also work in conjunction with the inpatient care team to prepare you for post-transplant discharge and follow-up in our outpatient clinic.

Inpatient & Outpatient Nurses

These individuals will provide you with specialized nursing care whether you are a patient in our outpatient clinic or the inpatient unit. Our nurses receive highly specialized, extensive training and are certified in chemotherapy administration as outlined by Oncology Nursing Society (ONS) and Foundation for the Accreditation of Cellular Therapy (FACT) standards.

Insurance Coordinators

Our transplant insurance coordinators will contact your insurance provider and obtain the necessary information concerning your insurance benefits, coverage for the transplant, and requirements for pre-authorization. In addition, you will meet with our insurance coordinators at the beginning of the transplant process to assist with insurance-related planning. These individuals are available throughout the entire transplant process should you have any further questions or concerns.

Clinical Pharmacy Coordinators

Clinical pharmacy coordinators oversee the safe and appropriate utilization, dosing, and preparation of chemotherapy, immunosuppressive drugs, investigational agents, and other medications. These individuals, who reside in both the outpatient and inpatient settings, participate in inpatient daily rounds with the physicians and are key multidisciplinary team members interacting with patients in the outpatient clinic on a daily basis.

Licensed Clinical Social Workers

A pre-transplant evaluation is performed by our licensed clinical social workers in order to ensure that your emotional well-being and supportive care have been addressed. Our social workers provide support throughout the transplant process, managing the challenges that accompany diagnosis, treatment, and survivorship. These individuals are part of the multidisciplinary team that is present in the outpatient clinic and inpatient unit on a daily basis.

Registered Dietitians

Our dietitians will meet with you to assess your nutritional status and educate you on appropriate diets, including choices of snacks, meals, and supplements to meet your caloric intake and protein needs while in the hospital and after discharge. These individuals are part of the multidisciplinary team that is present in the outpatient clinic and inpatient unit on a daily basis.

Chaplain Services

Members of the Chaplain Services staff are available to assist you, whatever your religious tradition, when spiritual support is needed. On the day of your transplant, a Chaplain Services staff member will come to your room and perform a "blessing of the stem cells" if you desire. This can be arranged in advance by asking the inpatient staff to contact Chaplain Services. In addition, clergy of all faiths are welcome to visit their hospitalized members at any time.

Occupational & Physical Therapists

A pre-transplant evaluation is performed by our Physical Therapy staff to evaluate you prior to transplant. Our occupational and physical therapists will work with you during your inpatient stay to help you build strength, endurance, and mobility. They will also provide assistance with activities of daily living, such as eating, drinking, dressing, bathing, using the toilet, cooking, and basic housekeeping. In addition, they can employ techniques for pain management and medications. If you need additional therapy services post-transplant and after you have been discharged, your physician might refer you to our Oncology Rehabilitation Clinic. These specialists will provide individualized care needed to address your unique situation.

Understanding Bone Marrow Transplant

What are bone marrow and stem cells?

Bone marrow is a spongy material found in the center of bones. Stem cells are the earliest form of a blood cell and are found in the bone marrow. Stem cells can grow into mature red blood cells, white blood cells, platelets, or plasma cells. (See figure below.)

Stem cells are an essential part of a person's immune system. They are also in your blood. These are called peripheral blood stem cells. Stem cells are also present in a baby's umbilical cord blood.

Thus, there are three places to obtain stem cells for transplantation: the bone marrow, the blood stream, and the umbilical cord immediately after birth.

Why is bone marrow transplantation done?

A bone marrow transplant might be necessary if bone marrow has been damaged by disease. Additionally, bone marrow transplants might be required if doses of chemotherapy or radiation needed to cure a cancer are so high that bone marrow stem cells are permanently damaged or destroyed.

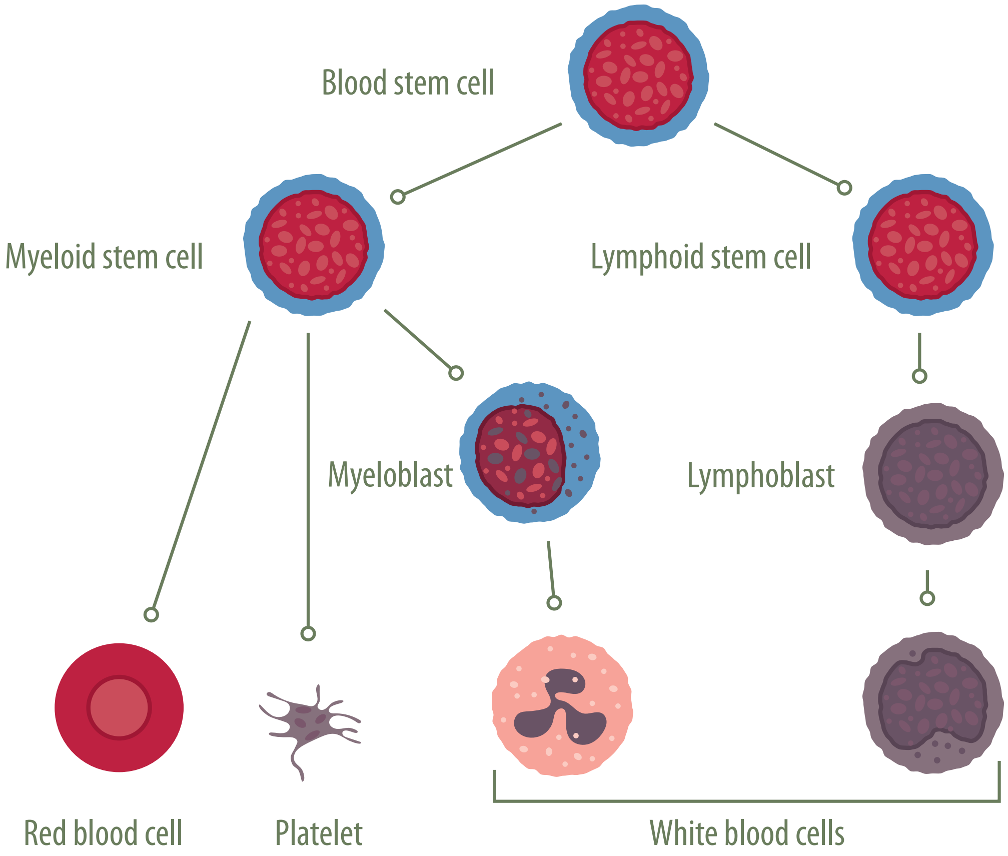
Your ability to make blood cells is restored by transplanting healthy stem cells into your body. It takes several weeks for the stem cells to grow (engraft) in your bone marrow space and then produce red cells, white cells, and platelets. During this time you are susceptible to complications and will need close monitoring.

Red blood cells carry oxygen to other cells in your body. When these cells are low you are considered "anemic."

White blood cells/leukocytes fight infection.

Platelets/thrombocytes help your blood to clot.

Neutrophils are a type of white blood cell that is best at fighting infection. When these cells drop below normal, the result is called "neutropenia." We often refer to your absolute neutrophil count (ANC). When your ANC is less than 1,000 you are considered "neutropenic," and during this time you will be at higher risk for infection.



What are the types of bone marrow transplant, and what kind will I need?

The type of bone marrow transplant is based on the source of stem cells. Disease and clinical status will determine the type of transplant we recommend you have.

Transplant	Source of Stem Cells
Autologous:	The patient
Allogeneic:	A related or unrelated donor, or cord blood
Haploidentical:	Parent, child, or sibling – half match
Syngeneic:	Identical twin

In an **autologous** transplant, your own stem cells are taken from your bone marrow or collected from your bloodstream. These cells are then stored in a freezer to be given back to you (transplanted) after you have received chemotherapy, radiation, or both.

In an **allogeneic** transplant, you will receive stem cells from another person – either someone in your family or an unrelated donor. The stem cells can come from the bone marrow, bloodstream, or umbilical cord of the donor. In a **cord blood** transplant, blood is collected from the umbilical cord and placenta after a baby is born. This blood is rich in blood-forming cells. The donor chosen has a tissue type that matches your tissue type as closely as possible. If you do not have a suitable family member donor, you might be able to find a donor in the general population that closely matches your tissue type. A search is done through Be The Match® (National Marrow Donor Program), which includes national and international donors.

In a **haploidentical** transplant, your donor's cells half match your cells and are usually from a parent, child, or sibling.

In a **syngeneic** transplant, the donor is your identical twin.

Preparing for Your Transplant

The Pre-Transplant Process

The pre-transplant process begins with you meeting the bone marrow transplant physician and nurse. This is called the consultation. During this visit, the physician will review records from your past treatments and decide whether transplant is the correct treatment for you. Included in this visit are a medical history and physical exam. The visit should take approximately two hours. Once your transplant physician informs you that transplant is the correct treatment for you, the pre-transplant workup process will begin.

Pre-Transplant Workup

The pre-transplant workup is done to ensure that you are healthy enough to tolerate the transplant. This will also provide us time to educate you more about the transplant process. This process is facilitated by your transplant coordinator and includes:

Education consult: You will meet with the bone marrow transplant coordinator who will help answer any questions you might have related to the transplant process.

Psychosocial evaluation: You will have a discussion with a bone marrow transplant clinical social worker to evaluate your readiness for a transplant and to gauge your needs during and after the transplant process.

Heart evaluation: We will do a multigated acquisition (MUGA) scan or echocardiogram to see how well your heart pumps.

Lung evaluation: You will have a pulmonary function test (PFT) to see how well your lungs work.

Kidney evaluation: A 24-hour urine collection for creatinine clearance will be done to see how well your kidneys work. You will be given a container to save your urine for 24 hours at home.

Liver evaluation: Blood tests will be done to determine how well your liver works.

Restaging studies: Depending on your disease, tests will be conducted (CT scan, PET scan, skeletal survey, bone marrow aspiration, etc.) to tell us how much disease you have and where it is in your body.

Bone marrow biopsy: This is a short procedure that is done in the clinic by the BMT physician or physician assistant. First, we will numb a small area on your lower back with a medicine called lidocaine. Then, we will insert a needle into the back of your hip (pelvis). We will take a sample of both the liquid and the spongy part of your bone marrow in order to look for disease.

Blood tests: Your blood will be collected and tested to give the BMT team a baseline to compare to during your treatment.

Research sample: Your BMT physician might ask you for your permission to be included in a research study to evaluate your disease and other diseases.

Dental evaluation: The mouth can be a source of infection following transplant. These infections can be traced to pre-existing diseases of the teeth and gums. You should receive a thorough dental examination (including X-rays) prior to transplant. Dental cleaning, review of oral hygiene care, and repair of decayed or broken teeth should be done if your medical condition permits.

Fertility preservation: Cancer treatment can interfere with fertility in both men and women in many ways because the medicines and treatments that work to kill cancer cells also affect other cells, organs, and hormones in the body. The effects on fertility can be temporary or permanent. Newly diagnosed patients, those actively undergoing treatment, and long-term survivors all will have individual and unique paths to consider.

Insurance Coverage, FMLA, and Disability Paperwork

Insurance Approval for Transplantation

Insurance approval, pre-certification, billing, and disability as it relates to your transplant are handled by our transplant insurance coordinators.

The Review Process

The transplant insurance coordinators at UT Southwestern will contact your insurance provider and obtain the necessary information concerning your insurance benefits, coverage for the transplant, and the requirements for pre-authorization.

UT Southwestern Medical Center and William P. Clements Jr. University Hospital require that your insurance company provide a letter or authorization number confirming your insurance coverage and medical approval for the transplant. If your medical approval for the transplant is denied, the transplant insurance coordinator will contact you with additional information. Remember, in some cases, a denial can be reversed by filing an appeal with your insurance company or in some cases your employer. At any time during the approval process, you can call the transplant insurance coordinator for a status update.

Referral and Authorization

If your insurance plan is POS (Point of Service) or an HMO (Health Maintenance Organization), it might be necessary for you to obtain a referral from your primary care physician and/or an authorization number prior to treatment or service to receive benefits. The transplant insurance coordinator will assist with this process.

Pre-Certification

Before you can be admitted to the hospital, the insurance company will have a requirement that you obtain a pre-certification, pre-authorization, or pre-admission review. It is important that you become familiar with any requirements of your insurance plan necessary to receive full benefits. Failure to comply with your insurance company's pre-certification process might result in a reduction or denial of benefits. Pre-certification is ultimately your responsibility. However, the transplant insurance coordinators will take care of this for you. Transplant coordinators will provide medical information to the insurance coordinators, who will send it to your insurance company (if required) in order to obtain the authorization for the transplant and the transplant admission.

Prescription Coverage

Check with your employer's benefit office or your policy book to determine if there is a requirement to use a specific pharmacy for your outpatient medications. If so, please notify the transplant coordinator.

FMLA/Disability Insurance

Questions and claim forms relating to your FMLA/disability insurance should be given or sent to the transplant clinical team. If you are unable to bring the form to the clinic, please mail or fax it to:

UT Southwestern Medical Center
Blood Cancers/Transplant and Cellular Therapies Clinic
6202 Harry Hines Blvd., 6th Floor
Dallas, TX 75235
Fax #: 214-645-2661

Family Medical Leave Act: This law requires covered employers to provide up to 12 weeks of unpaid, job-protected leave to eligible employees for a serious health condition or to care for a spouse, son, daughter, or parent who has a serious health condition. It is available to employees of companies with 50 or more employees who have worked for the employer for at least 12 months or over 1,250 hours within a 12-month period. **You must provide your employer 30 days advance notice if possible**. Benefits, including health insurance, will continue (with certain limitations). At the end of the leave, the employee is entitled to return to his/her position or one equivalent in pay and other benefits. All forms and letters required for the employer will be handled by the transplant insurance coordinator. Please fax forms to the above fax number or bring into the clinic. Contact your employer for details concerning the law.

Change Insurance Company or Insurance Status

If your insurance company or your insurance benefits change during the pre-transplant, transplant, transplant admission, or post-transplant phase of your treatment, please contact the transplant insurance coordinator as soon as possible.

If you are considering changing your insurance, your employer is terminating coverage, or you are changing insurance policies, please contact the transplant insurance coordinator. Please notify us before your existing policy terminates. This includes changes from traditional Medicare or Medicaid to managed Medicare or Medicaid plans. The transplant insurance coordinator can inform you about insurance plans that are currently accepted.

COBRA Extensions and Individual Policies

It is extremely important that you pay your monthly insurance premiums in a timely manner. If you are one day late, the insurance company can discontinue your coverage. Financially, this period might be a difficult time. However, loss or reduction of insurance benefits will be more costly. **It is your responsibility to ensure that insurance coverage continues**.

Billing

Statements of your accounts will come from many providers of care before, during, and after your transplant. Many patients find it helpful to keep a file for all insurance documents, statements, bills, and explanation of benefits (EOB). If you have questions about any bill, please call the billing office at the phone number on the statement. Please note that for physician statements you will have only one account number. The hospital, however, will issue multiple statements; each will be for a different account number. For example, there will be an account for each month of outpatient visits and an account for each inpatient admission.

We know this time is very difficult for you and your family. We will work with you, a family member, or significant other concerning your insurance problems and questions. Please let us know the name and phone number of the contact person who will be handling these issues for you. We will discuss this information, answer your questions, and provide you and your insurance company with any additional information throughout the transplant process.

Social Work Services

There are designated social workers within the BMT Program. From diagnosis through treatment and survivorship, they are here to support patients, caregivers, and families in both the outpatient clinic and the inpatient unit.

Social work services include the following:

Psychosocial assessment: All patients receive an in-depth psychosocial assessment conducted by a clinical social worker to identify any barriers to a successful transplant and to assist in developing a plan to resolve these challenges. These might include financial, insurance, lodging, caregiving, transportation, coping skills, and psychosocial-spiritual concerns.

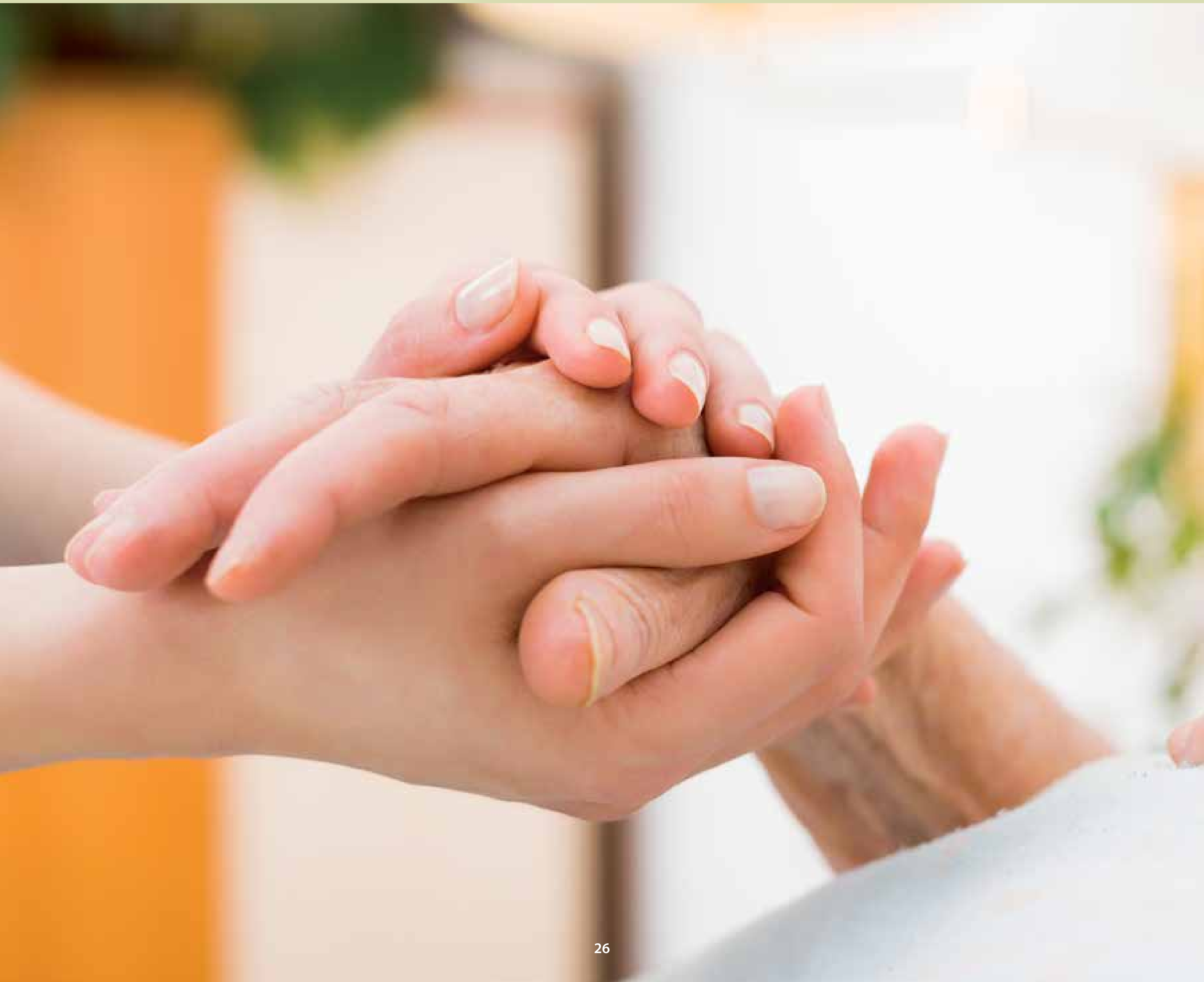
Practical matters: Social workers understand the financial challenges related to your treatment. They are familiar with assistance programs offered by government agencies, nonprofit organizations, and pharmaceutical companies and will help you apply for assistance you might be eligible for. Our social workers can educate and link you with resources regarding Social Security disability, Medicare, SSI/Medicaid, FMLA, and the Affordable Care Act. BMT social workers will assist you with appropriate referrals for home health or any medical equipment you might need.

Counseling and support: Our social workers are part of the Supportive Services team, which includes social workers, psychologists, dietitians, and music therapists. Social work provides short-term, solution-focused counseling and emotional support (including meditation and relaxation techniques) to patients and their families as they move through their journey, and it also offers ongoing support and education for our caregivers. Individual time can also be scheduled with our psychologist.

Coordination: Through the close collaboration of our inpatient and outpatient social workers, our team will assist you with the adjustments to the many transitions you might have, such as from acute to more chronic stages of disease, from outpatient to inpatient and back to outpatient, and from illness to recovery. Our inpatient social workers hold the title of Transitional Care Coordinators and are involved in care planning and care coordination for our patients admitted to the inpatient units. Transitional care coordinator goals include helping accomplish smooth transitions between the different levels of patient care and reducing readmissions and time spent in the hospital.

Advance directives: Advance directives are documents in which individuals give instructions about their preference for future health care. Under Texas law, these directives must be followed if patients become mentally or physically unable to express their wishes. We know it can be difficult for patients and their loved ones to make good decisions when they're under stress or emotional strain. This is particularly true in areas where there are no clear-cut answers, such as the use of life-support systems and determining levels of care. Your social work team can assist you in proactively completing a Medical Power of Attorney, Directive to Physicians, and/or an Out-of-Hospital Do-Not-Resuscitate Order that can be added to your Medical Record.

End-of-life issues: BMT social workers can provide education and support to patients and their families around issues relating to loss, anticipatory grieving, and end-of-life concerns. They will also assist with transition to palliative or hospice care.



Caregiver Requirements

Is a caregiver required?

YES. A caregiver is a responsible family member or friend who is able to provide physical care, observation, and emotional support for you during and after the transplant.

You must establish a plan for caregiving and identify specific caregivers who can support you during the outpatient phase of the transplant process. If needed, we will be pleased to assist you in exploring options for caregiver support. Caregiver responsibilities can be shared among family members or friends.

What are the caregiver responsibilities?

- Making arrangements
- Transportation to and from the clinic
- Tracking appointments
- Accompanying the patient to all appointments
- Providing emotional support
- Providing physical care
- Monitoring and caring for the central intravenous line
- Helping the patient take oral medications
- Keeping track of medications taken
- Giving intravenous fluids and medications using a pump device (with training from a nurse)
- Identifying changes in the patient’s condition
- Obtaining medical care if needed
- Reporting symptoms to health care staff
- Maintaining the home environment
- Cleaning
- Food preparation
- Gathering information
- Serving as a communication link with other family members and friends

The caregiver has a demanding role in helping with your treatment and recovery. It is important to consider in advance who would be able to be your caregiver. If more than one person will be taking care of you, a written schedule listing each person’s time should be made before arriving for transplant.

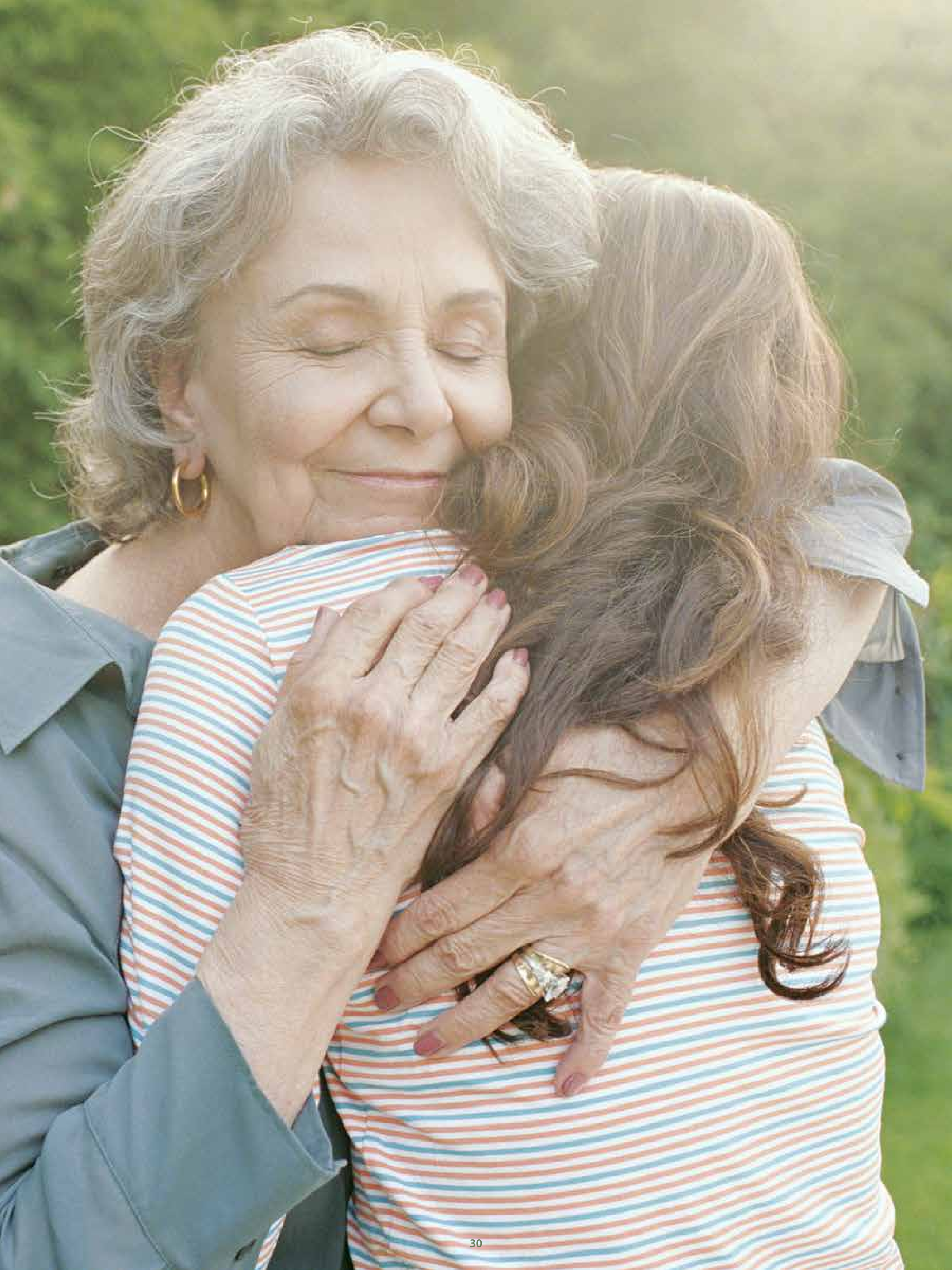
Potential caregivers should consider these patient-need levels:

ALLOGENEIC Transplant Patients

Consistent Support: Caregiver is present the majority of the time; breaks should be less than three to four hours. Adult patients left alone should have access to the phone, food, and fluids, and have the ability to contact emergency services, operate ambulatory pumps, and get to the restroom.

AUTOLOGOUS Transplant Patients

Intermittent Support: Does not need a caregiver the majority of hours within a 24-hour period. A caregiver is available two to three times per day to provide assistance with medications and transportation, and to process information provided during conferences or clinic visits.



What should my caregiver bring?

- Insurance cards and other important paperwork, passport, birth certificate, driver's license, etc.
- Comfortable clothing
- Laptop computer
- Work-related materials if you will be telecommuting
- Large bag or backpack to carry materials to and from the clinic
- Medical, dental, and contact information

Caring for Children While You're a Patient

Children tend to get infections and colds that can be dangerous to you until your immune system fully recovers. Each family is different, so talk with your doctor about a plan that works for you.

Things you should consider:

- Arrange for alternative child care options. If kids are sick, or you are too tired, you might need help taking care of them while you're recovering.
- If possible, don't have your kids attend day care. Children are often exposed to illnesses that they could bring home to you.

Your child should NOT get LIVE vaccines while your immune system is weak. Talk to your doctor and your child's doctor about your child's immunization schedule.

Review Workup

The review workup is an appointment with the BMT physician and nurse to go over all of the pre-transplant test results. Then we will decide if we should go ahead with the transplant. This is a time when you and your family can ask questions and you will sign your consent forms. This appointment will take approximately two to three hours.

Collection Process

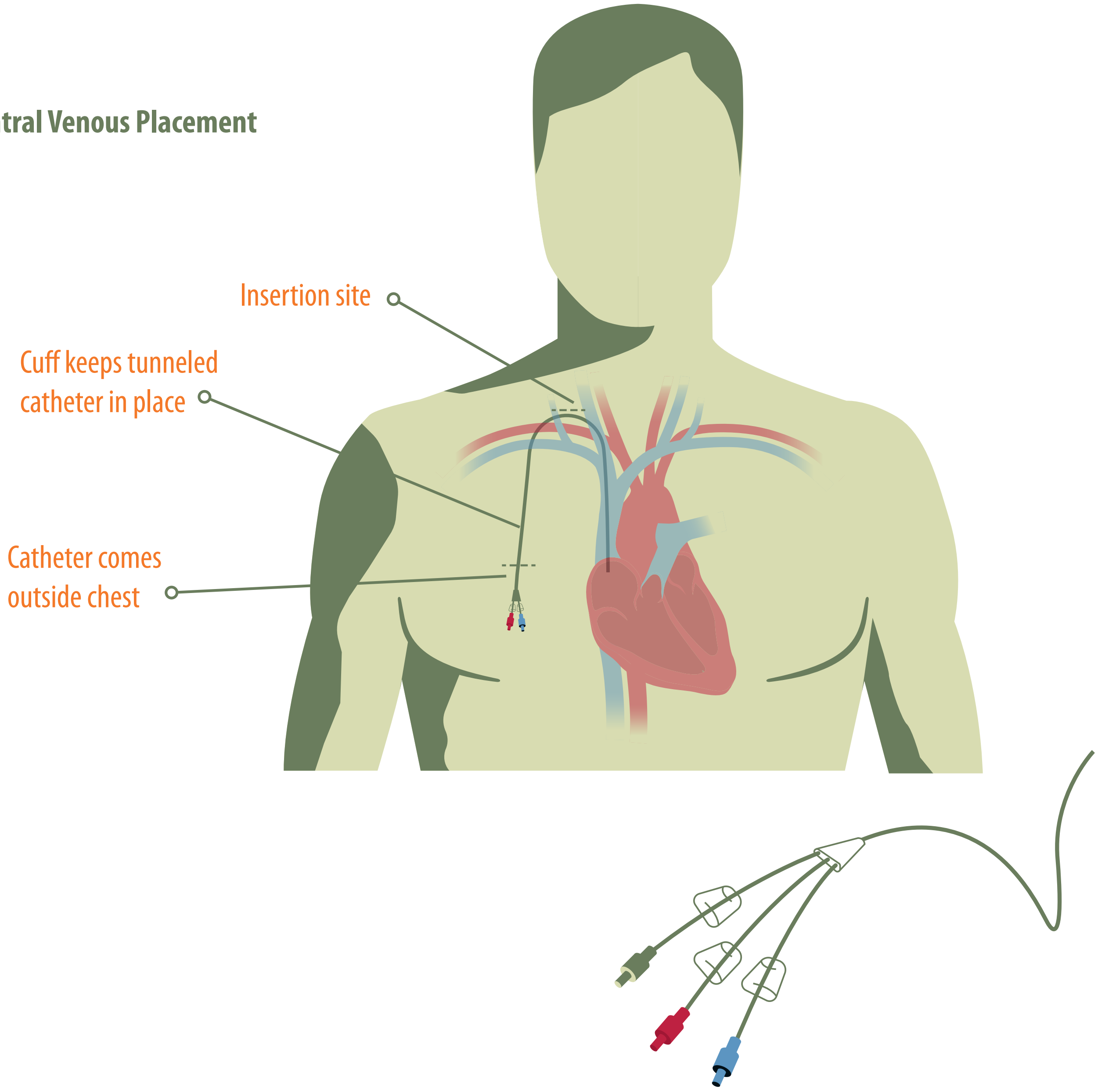
Central Line Placement

A central line catheter is a flexible tube inserted into your body through a large vein that allows the medical team to give you large amounts of fluid and withdraw blood. We often refer to this as a Trifusion catheter. A physician assistant or M.D. will insert your line in the procedure room. You will be given medications to make you drowsy, but you should not feel the line being placed. This procedure does not take long, but you might need to stay in the day surgery clinic for up to six hours.

This catheter is chosen because we can also use it to collect peripheral blood stem cells before an autologous transplant and it can be used for common procedures after an allogeneic transplant. The catheter leaves your body as one tube that has three branches. A clear dressing is always kept over the site where the catheter exits your chest to prevent germs from entering. The inpatient and outpatient nurses will care for your line by flushing it with saline and heparin and changing your dressing weekly. It is important for you to watch for problems by looking at the site daily. These are some things to watch for and call the physician or nurse if you observe:

- Redness, swelling, or soreness at the site or the area around where the catheter comes out of your chest
- Reddish, yellow, green, or clear liquid at the site where the catheter comes out of your chest
- Any trouble breathing
- Swelling in the arm closest to the line
- Pain in the area longer than three days after your line was put in
- Fever greater than 100.4° F

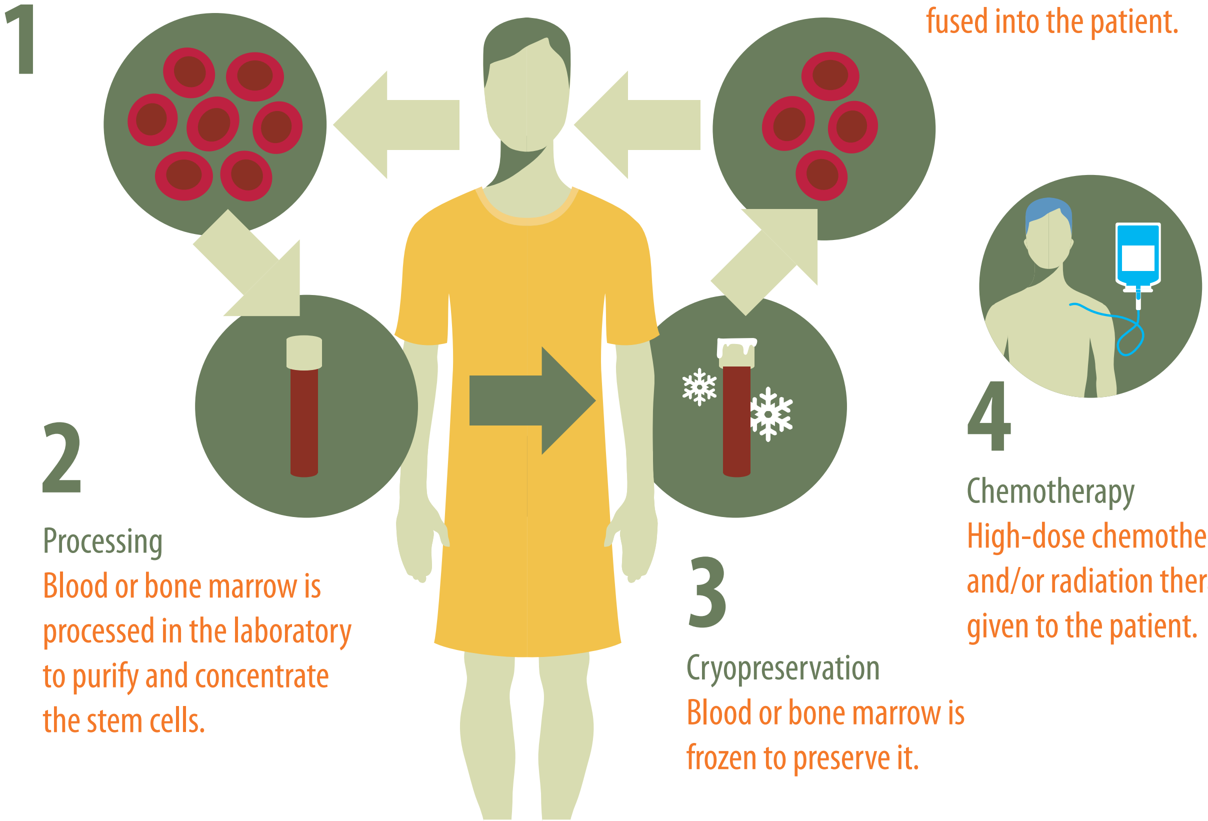
Central Venous Placement



Stem Cell Collection – Autologous Transplant

Stem cells are collected by a procedure called apheresis. You will have your stem cells collected before you enter the hospital for your transplant. In order to increase the number of stem cells in your blood- stream, you will be given shots of growth factors for five to seven days.

The Autologous Transplant Process



1 Collection
Stem cells are collected from the patient's bone marrow or blood.

2 Processing
Blood or bone marrow is processed in the laboratory to purify and concentrate the stem cells.

3 Cryopreservation
Blood or bone marrow is frozen to preserve it.

4 Chemotherapy
High-dose chemotherapy and/or radiation therapy is given to the patient.

5 Reinfusion
Thawed stem cells are reinfused into the patient.

Growth Factors

Growth factors, also referred to as colony-stimulating factors, are used to increase the number of white blood cells and push them from the bone marrow into the bloodstream. The medical team will use the term mobilization to describe the movement of white blood cells from the bone marrow to the bloodstream.

Growth factors are given subcutaneously (into the fat) on the backs of arms or thighs, or on the stomach. The BMT nurse might give you these shots or teach you how to give them yourself.

Growth factors are given for two reasons:

1. To increase the number of stem cells before the transplant
2. To help engraftment (make your bone marrow cells come back) after transplant

Some side effects that might occur when taking growth factors include achy bones, mild fever, and a feeling like you have the flu. Even though we expect these might happen, if they become worse you must notify the physician or nurse.

Filgrastim or Biosimilars

Filgrastim (Neupogen®) or Biosimilars are fairly well-tolerated by most patients; however, at least 25 percent of patients have flu-like side effects including fever, chills, fatigue, and muscle, joint, or bone aches. These side effects are usually controlled with medications such as Tylenol® or Motrin®. Claritin® also has been found to help with pain relief.

Plerixafor

Plerixafor (Mozobil®) is given in combination with filgrastim to help move the peripheral stem cells out of the bone marrow and into your circulating blood. Mozobil is well-tolerated by most patients; however, 35 percent of patients can have a reaction at the injection site, or experience diarrhea or nausea. A smaller percentage of patients (13 percent) can have joint pain and fatigue. We encourage you to take Imodium® if you experience diarrhea after the injection.

Apheresis Process

Apheresis is the process used to separate stem cells from the blood. If you will be receiving an autologous transplant, you will be connected to a machine through your Trifusion catheter OR through one vein. Your blood will be removed through one branch of your catheter or through another vein and then run through the machine, which separates the stem cells. The remaining parts of your blood will be circulated back to you through another branch of your catheter or through another vein. This procedure is painless. Special tubing is used during the procedure so that your blood does not come in contact with the machine and the tubing is used only once.

During this procedure you might feel a tingling sensation around the mouth, fingers, and toes. This normally happens during apheresis. Eating foods or drinking liquids with calcium such as milk, yogurt, or cheese might help you avoid this side effect. You will be given Tums® during apheresis if you have this side effect. If this side effect becomes more severe, we can give you calcium through your veins.

The usual apheresis time is four to six hours a day. You will have it done for up to five days in a row. The Stem Cell Lab will count the stem cells after each collection. This process continues until enough stem cells are collected. If we cannot collect enough stem cells, a bone marrow harvest might be done.

After the collection your stem cells are frozen and stored in a container cooled with liquid nitrogen.

Allogeneic Transplant – Peripheral Blood Stem Cell Donation

Stem cells are collected from the donor by a procedure called apheresis. Apheresis is the process used to separate out a specific part of the blood such as stem cells for transplantation. In most instances your donor will have their stem cells collected the day before your scheduled stem cell infusion. In rare instances these are taken ahead of time and are frozen and stored until needed.

In order to increase the number of stem cells in the blood stream, your donor will be given shots of growth factors for five to seven days. The blood is removed through one vein and run through the machine, which separates the stem cells. The remaining parts of the blood are circulated back to the donor through another vein.

The usual time to complete apheresis is four to six hours a day. The donor will have this done for one to two days. The Stem Cell Lab will count the stem cells after each collection. This process continues until enough stem cells are collected.

Allogeneic Transplant – Marrow Donation

Bone marrow donation is another method of collecting blood-forming cells for bone marrow transplants. Bone marrow donation is a surgical procedure that takes place in a hospital operating room. Doctors use needles to withdraw liquid marrow (where the body's blood-forming cells are made) from both sides of the back of the pelvic bone. Donors will be given anesthesia and feel no pain during the donation. After donation, the liquid marrow is transported to the patient for transplant.

Typically, the hospital stay for marrow donation is from early morning to late afternoon, or occasionally overnight for observation. The donation will take place in the transplant center hospital or in a hospital that is experienced and participates in marrow collections for Be The Match®.

How Your Stem Cells Get to You

Typically cells from a donor arrive in one or two bags, similar to the ones used for blood transfusions.

If your cells come from an unrelated donor, they will be delivered to your transplant center by a trained courier. The courier picks up the cells at the hospital or clinic where your donor donated his or her cells and brings them to your transplant center. Your cells may come from anywhere in the United States or even a different country. Experienced Be The Match® staff coordinate with your transplant team on the delivery of your donated cells and will make sure they get to you exactly when you need them.

If your cells come from a family member, he or she will likely donate at the same facility where you are getting your transplant. The cells will arrive at the hospital on the day of your scheduled infusion.

Planning Ahead for the Hospital

What should I bring to the hospital?

- Comfortable socks, shoes, and non-skid slippers that are expandable – not slip-ons
- Casual, comfortable, loose-fitting clothing such as shorts and sweatpants that are washable. Dressing in layers is helpful as temperatures in the clinic/hospital vary. Clothing that you do not want stained should be left at home.
- Female patients might find sports bras helpful because of the central intravenous line connection.
- Front-buttoning pajamas and/or robe
- Items to help you relax (such as music, etc.). Headphones at night might help in minimizing noise.
- Head coverings, scarves, hats, or a wig
- Small electronics such as a laptop, iPod, MP3 player, Kindle, docking station, tablets, etc.
- Books, magazines, pictures, craft items, or games to help pass the time
- Athletic, tennis, or anti-skid walking shoes
- Cellphone or phone cards
- Living Will and Medical Power of Attorney
- Work-related materials if you will be telecommuting
- Electric razors (only electric as these are safer and less likely to cause cuts)
- Toiletries, such as an extra-soft bristled toothbrush, toothpaste, shampoo/conditioner, soap/body wash, lip balm, etc. Please avoid oil-based lotions.
- Clean pillow and blankets from home (if desired)
- Small coolers to keep drinks cold (optional)
- Custom canes or walkers, braces, or other custom orthotics you require for mobility

Guidelines for Hospitalized Patients and Their Visitors

1. There is 24-hour visitation at Clements University Hospital. You may have someone stay with you.
2. Each room in the unit is fitted with a HEPA filter that cleans the air. The door must stay closed at all times for the filter to work.
3. All patients must wear a mask when outside their room.
4. The physician visits daily. This is you and your caregiver's time to talk with the BMT team.
5. Visitors will be screened once daily for any signs of infection prior to entering the unit.
6. Every person must wash their hands before going in your room. There is a sink located in the BMT unit. Antiseptic foam containers are also located inside each patient room. After chemotherapy, you will be at risk for infection. The best way to protect yourself is by washing your hands and having visitors do so as well.
7. If visitors are sick or are coughing, they should not visit.
8. Children under the age of 12 years are not allowed to enter the BMT unit. An area is available nearby for you to visit with your children, but you must get physician approval if visitation with your children is desired. You have the ability to videoconference with your family from the hospital room.
9. Visitors who have been exposed to chicken pox or other viruses cannot visit.
10. Patients will not be able to leave the BMT unit.
11. Fresh flowers, dried flowers, fruits, and vegetables from home are not allowed in your room or the BMT unit. Please tell your friends and family before you are admitted. If flowers do come, your family will be asked to take them home.
12. Eating outside-cooked food, unless cooked at home by a friend or family, is not encouraged. Cooking guidelines must be followed as set in this guide (refer to Appendix A).
13. The inpatient unit will allow food to be brought in from the outside that has been prepared following the guidelines in this education guide. The food container will be labeled with your name and kept in the community refrigerator for two days. Once the food container has entered your room, it cannot be returned to the refrigerator. All foods should be portioned into small, single-serve containers.
14. Fast food/restaurant food is prohibited unless special authorization is obtained from the doctor.

Daily Routine in the Hospital

Labs

Each day, your nurse will draw blood samples from your central venous catheter. This is done very early in the morning so that the results will be back when the physicians make their morning rounds. The physicians will evaluate the test results to determine your needs for fluids or red-cell or platelet transfusions and to adjust the dose of certain medications. Your physician will also evaluate the need for potassium or magnesium supplements. Your body can lose potassium or magnesium through vomiting, diarrhea, and certain medications. Your liver and kidney functions will also be assessed every day.

Intravenous Fluids and Medications

You will be started on IV fluids through your catheter the first evening you are admitted to the hospital. IV fluids and medications are given via an electric pump that is attached to a mobile pole. At times during your treatment, you might have many IV bags and medications running in all three ports of your catheter at once. Your nurses will be able to explain all of your medications, fluids, and blood transfusions as they are given.

Vital Signs and Assessments

Daily assessments, including the evaluation of vital signs (temperature, blood pressure, respiration, pulse), weight, and heart and lung sounds, along with checking your mouth, central line site, and skin for any rashes or sores, are done by your nurse. Vital signs are checked every four hours and more frequently during blood product transfusions or if you are experiencing any fever or other complications. This helps the physicians and nurses prevent any problems before they get worse and also helps in making treatment decisions. An assessment will also be made of your daily weight. This will help the BMT team make decisions related to your fluid status.

Fluid Status

You will be instructed on how to measure your intake and output on a daily basis. This involves recording the amount of fluids that you take in (IV or orally) and all fluids that leave you (stool, urine, vomit). These numbers will help guide decisions made about your fluid status.

Daily Rounds

Daily rounds occur in the morning. You will be seen by a transplant team that includes doctors, a physician assistant or nurse practitioner, nurses, and pharmacists. The transplant team will closely monitor your progress. This is your chance to ask questions and discuss problems or concerns with the transplant team. It is a good idea to write down questions as you think of them.

Hygiene

You will be expected to shower every day and pay careful attention to the areas under your arms and your perineal area (the area between your genitals and rectum). You will also be taught to do mouth care three times a day and more often if needed. You will be at risk for mouth sores due to high-dose chemotherapy. Diligent mouth care is helpful in preventing infection and helps promote healing in those affected areas.

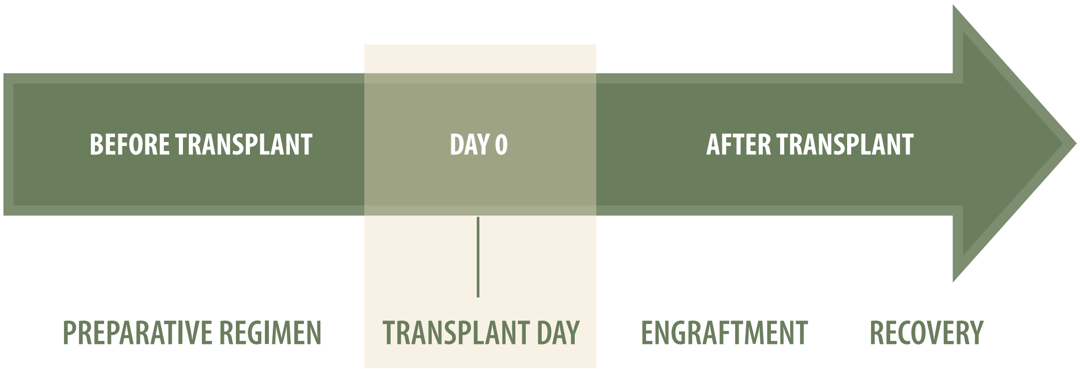
On the days your blood counts are low, you will be instructed on how to give yourself a chlorhexidine bath at least two hours after your shower. Your nurse will assist you with this process. This is part of the central line infection prevention plan.

How UTSW Ensures Patient Safety – Preventing Patient Falls

When patients are in a weakened state due to illness, injury, or surgery, they are at increased risk of falling when they move around the hospital. Fall prevention programs can be an effective way to reduce the risk of patients falling and sustaining injuries. Fatigue and weakness from treatment can increase the risk of falling in bone marrow transplant patients. In addition, the risk of injury is high for transplant recipients due to low platelet count and weakness.

UTSW considers fall prevention an important part of its patient safety efforts and has in place a fall prevention program to reduce the number of falls and injuries. Every patient at UT Southwestern will be assessed for fall risk upon admission to the hospital, registration at a hospital-based clinic, at least once during each shift, and with any change in patient condition or status.

Preparative Regimen & Transplant Process



In the first stage of your bone marrow transplant, you will get high-dose chemotherapy for one to seven days to destroy any cancer cells. Each chemotherapy regimen is different depending on your disease. This chemotherapy is called the **preparative regimen** and will be chosen specially for your disease. The days you are receiving chemotherapy are called the minus days (-). Day 0 (zero) is always the day of your bone marrow transplant, and all days after are plus days (+).

High-Dose Chemotherapy

Chemotherapy kills cancer cells. Faster growing cells in your body (e.g., in the lining of your mouth and GI tract, hair, and skin) are often affected by chemotherapy as well. After receiving these drugs you might have:

Nausea and vomiting: During your chemotherapy you will be given anti-emetics, which are drugs used to stop queasiness or vomiting. Many people never have this feeling, but if you do, contact the nurse right away because there are drugs you can take to make you feel better.

Hair loss: Most people lose their hair after high-dose chemotherapy. This usually happens 10 to 14 days after your last dose of chemotherapy. Your hair will grow back but will look and feel different.

Tiredness: You might feel much more tired after doing simple tasks such as bathing or walking. You can expect this after your chemotherapy and also expect that it will get better with time. Resting after you do something might help you feel less tired.

Loss of appetite: The dietitian will help you find foods that you can eat. Eating and drinking are important for you to get better. It is important to find foods that taste good to you. Your taste for food gets better once you are home, but altered taste sensations can persist for several weeks.

Mouth sores: Chemotherapy might cause mouth sores or soreness. This usually happens about three to five days after your last chemotherapy dose and gets better in about two weeks when your white blood cells return to normal. To keep your mouth clean the nurses will have you:

- Brush your teeth with a soft toothbrush three to four times a day.
- Rinse your mouth with salt water and baking soda every two to three hours (the nurses will give this to you when you get to your hospital room). Do not use mouthwash because it has alcohol, which can cause your mouth to get dry and hurt.
- Clean dentures and bridges separately. It is highly recommended that you do not wear your dentures until your blood counts are recovered to prevent irritation of oral mucosa.

Diarrhea: You might have loose or runny stools during or after high-dose chemotherapy. The nurse might offer drugs called anti-diarrheal medications. You need to drink liquids often to help replace fluids. Stool must be tested for infection prior to starting anti-diarrheal medication. If negative, medications may be started. You must notify your nurse when you notice loose, watery stools.

Skin changes: Your skin might become dry and flaky after chemotherapy. Lotions and creams provided by the hospital are kept at your bedside and should be used often. Dry skin might last for many weeks after treatment. Avoid use of scented lotions, perfume, cologne, or after-shave.

Cabin fever: It is difficult to be in a hospital room with a closed door. The chaplain and/or nurses are available to discuss any feelings you are having. The entire BMT team is available to help you through your stay.

Transplant Day & Expected Changes in Blood Counts

Day 0 (zero) is your transplant day (the day you get your bone marrow cells). If your cells were frozen, a drug called DMSO (dimethyl sulfoxide) is put in the bag to keep the cells whole when they are being thawed.

Each bag of cells is thawed in a warm water bath. As the cells go in, you will notice a sudden smell and taste in your mouth. This is from the DMSO. Hard candy takes the taste away. Visitors might notice this smell for up to two days, but you will probably not be able to smell it. You will be given pre-medications (drugs) Benadryl®/diphenhydramine and Tylenol®/acetaminophen before you get your cells. They might make you sleepy.

The other side effects that might happen are:

- A tickle in your throat
- A queasy feeling
- Chills or shivering

There will be a nurse in your room during the entire transplant procedure that can help you with any side effects.

Changes in Blood Counts

The most important side effect you will have is a decrease in your blood counts. High-dose chemotherapy works against cancer cells but also affects the normal cells made in the bone marrow. White blood cells, red blood cells, and platelets are made in the bone marrow and are sent to the bloodstream. About three to five days after the last dose of chemotherapy, these blood counts reach very low levels and this could cause an infection or bleeding.

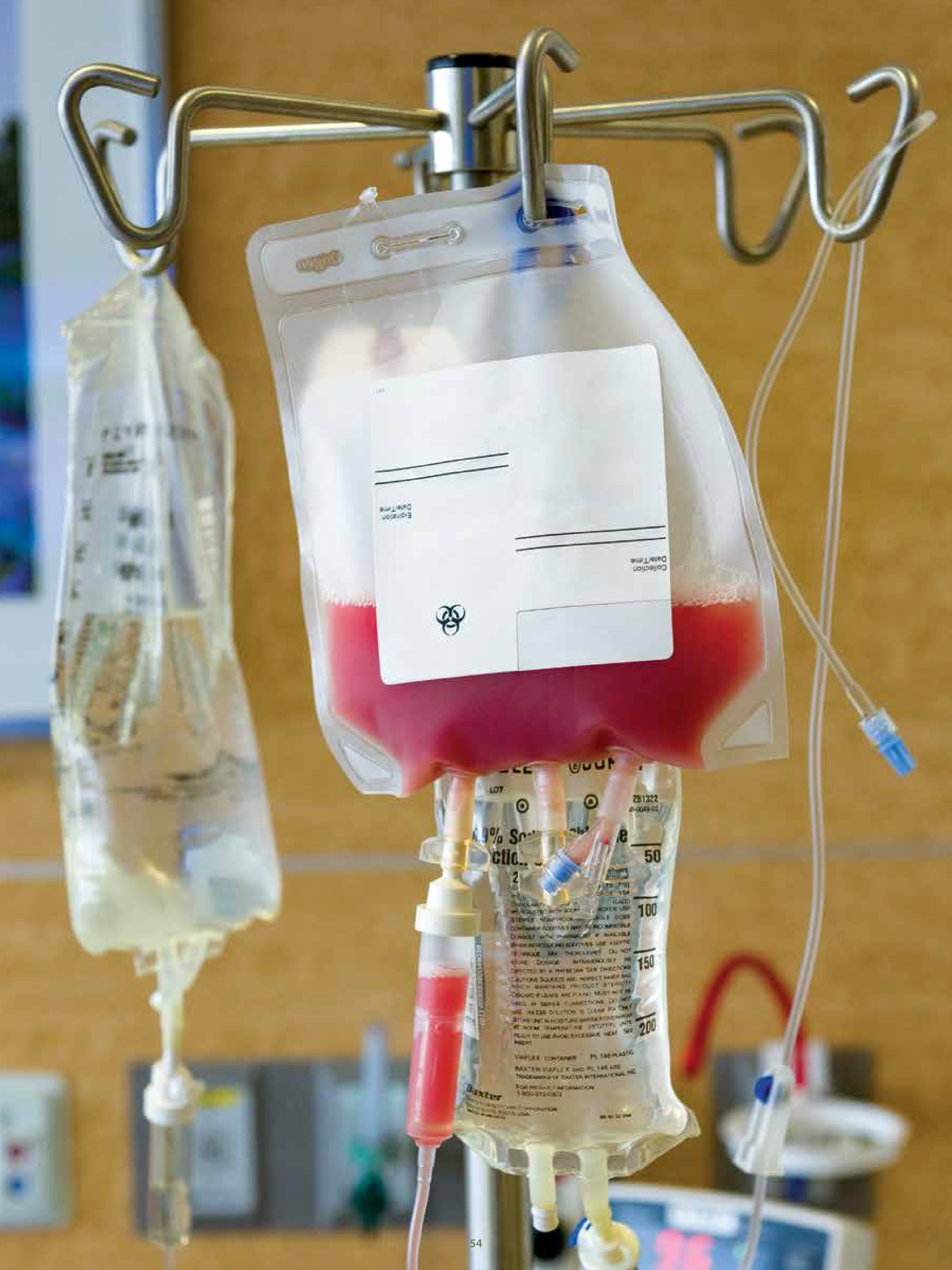
Neutropenia occurs when the number of infection-fighting white blood cells is less than 1,000. When your neutrophils are under 1,000, you are considered "neutropenic," and you are at a high risk for infection. The medical team counts your infection-fighting cells (neutrophils) every day by determining your **ANC (absolute neutrophil count)**.

The formula used is:

ANC=Total white blood cells x % neutrophils

To lessen the time that you are at risk for infection, you will be given growth factors daily to raise your white blood cell count. You will also be reminded to wash your hands after walking in the hall and after you use the bathroom. The medical team will be watching you for signs of infection (fever). Antibiotics will be given through your central line until your ANC (white blood cell count) is normal.

Anemia occurs when the number of red blood cells falls below normal. When you are anemic you might feel tired and get winded easily. You might need a blood transfusion during the time when your red blood cell count is low.



Thrombocytopenia occurs when the number of platelets becomes extremely low. When your platelets are low you are at risk for bleeding and easy bruising. During this time the medical team will be watching you for signs of bleeding:

- In your stool (you might not be able to see it)
- In your urine
- From mouth sores
- From your nose
- From petechiae, which look like small red dots on your legs, arms, or back

You might get a platelet transfusion if your platelet count is too low or you are bleeding. To help lessen the chance of bleeding you should:

- Not floss your teeth
- Shave with an electric razor only
- Not strain when you go to the bathroom
- Not do straining exercises
- Tell the nurse of any bleeding right away

Blood Count Recovery

The stem cells we give you find their way to the bone marrow space and start to grow and mature. When they get to the marrow they engraft and begin to produce the white blood cells, red blood cells, and platelets your body needs. Usually, the white blood cell count will come back first, followed by the red blood cells and then the platelets. Every person is different and will engraft at a different rate. Your blood counts usually start coming back to normal in 10 to 20 days. Once your blood counts reach a safe level (so that you can adequately fight infections, clot your blood, and produce enough red blood cells) then the antibiotics and transfusions will stop.

Potential Side Effects

Body Image and Sexual Feelings

The stem cell transplant process can be both physically and mentally challenging. Treatment effects can include hair loss, skin rash, swelling, weight loss or weight gain, and decrease in sexual desire.

These changes can affect the way you feel about yourself as well as your relationship with others. You might feel self-conscious or unattractive as you recover and regain your health.

It's important that you communicate how you feel about your body image and sexual feelings with your spouse or partner. Members of your care team can help answer your questions or provide counseling for you and your partner.

Emotional Issues

A diagnosis of cancer or any other chronic disease can cause sad or depressing feelings. Having a bone marrow transplant can make you feel more emotional.

These are a few of the feelings people who have gone through this treatment have had:

Feeling overwhelmed: You will learn about the treatment, have many tests, and get a lot of information. Have someone write everything down. They are hearing it more clearly and can help you sort through it later if you feel nervous.

Fear of the unknown: As you go into the transplant you might still feel scared about what will be happening. This is very normal. Ask questions and get as much information as possible.

The need to make others feel better: When you are in the BMT unit, you might get a lot of visitors and people wanting to visit who are very worried about you. Have your family members allow people in who you really want to see as you may not be up to it during your treatment. Creating social media pages is one example of a way to allow friends/family to get updates on how you are doing.

Guilt over not doing your "usual" roles: It will be hard to give up all the things you normally do outside of the hospital. You might feel guilty that someone else has to fill in or you might worry that they are not doing it as well as you. Save your energy for things that are most important to you. Ask and allow others to help you. Talk to your family about your worries.

You might feel down: There will be days when you will feel depressed or sad. These feelings will come and go. The chaplain as well as your nurses will be happy to talk to you about how you feel.

Graft-Versus-Host Disease (GVHD) – for Post-Allogeneic Patients Only

What is Graft-Versus-Host Disease (GVHD)?

GVHD occurs when the cells from your donor (the graft) see your body's cells (the host) as different and attack them. There are medicines to help lower your risk of getting GVHD. But even with medicine, some people still get GVHD.

GVHD can range from mild to severe. Many patients will have some symptoms of GVHD after transplant.

Having some GVHD is not always bad. If your transplant was for a blood cancer, your doctor may see mild GVHD as a good thing. It's a sign that the new cells are working to destroy any cancer cells that are still in your body. Patients who have some GVHD may have a lower risk of the cancer returning after transplant.

Acute GVHD: All patients receiving transplants from donors are at risk of developing acute GVHD. The best way to avoid it is to:

- Take your prescribed medications every day as directed. Do not skip any doses.
- Stay out of the sun.
- If outdoors during the day, wear a hat, long sleeves, and long pants, whenever possible.
- Always apply sunscreen (SPF 30 or higher) and limit the amount of time spent in the sun.

Despite being careful, some patients will get acute GVHD. It is important to watch for any signs and symptoms of GVHD. If you should develop any of the following, notify your physician immediately:

- Fever
- Rash
- Nausea, vomiting, or diarrhea

Chronic GVHD: Another form of GVHD, which might occur around day 100 or later, is called chronic graft-versus-host disease. The skin can become dry, scaly, and discolored with patches of thickened or hardened underlying tissue. The surface of the eyes and mouth can become dry. Mouth lesions might develop. Occasionally the esophagus, gastrointestinal tract, and liver are affected. Weight loss from poor absorption of food can occur. Bacterial infections are common. Treatment protocols have been developed for this condition. Having GVHD might not be all bad; it has been found that patients with GVHD have a lower risk of the cancer returning after transplantation than patients who do not develop GVHD.

Acute GVHD

Skin

- Very faint to severe sunburn-like rashes
- Blisters

Stomach

- Nausea that doesn't go away
- Loss of appetite
- Vomiting (throwing up)
- Feeling full after eating very little

Intestines

- Diarrhea
- Belly pain that does not go away
- Feeling bloated, or full of gas
- Blood in your stool

Liver

- Jaundice (your skin or eyes look yellow)
- Dark (tea-colored) urine
- Pain in the upper part of your belly
- Swelling in your legs or belly

Chronic GVHD

Skin and nails

- Skin texture changes
- Nail changes
- Rash
- Unusual hair loss or thinning
- Itchy skin

Mouth

- Trouble opening (thickening)
- Sores
- Irritation that doesn't go away
- Chapped lips
- Pain

Joints and muscles

- Arthritis-like symptoms (pain and stiffness)
- Muscle pain, cramps

Lungs

- Cough that doesn't go away
- Shortness of breath or weakness
- Trouble breathing

Eyes

- Dry eyes
- Irritation that doesn't go away
- Blurred vision
- Teary eyes

Digestive system

- Nausea or vomiting (throwing up)
- Diarrhea
- Stomach pain or cramping

Genitals

- Irritation or dryness
- Rash
- Painful intercourse

What is the treatment for GVHD?

Starting treatment as early as possible can lead to the best results. Steroids, such as prednisone, are the main treatment for GVHD. Steroids are a type of medication that act as "immunosuppressants." These medications weaken the new donor immune system that you received during your transplant.

Because your new immune system is weaker, you might have limitations on what you can do, even if your transplant was one or more years ago. For example, you might need to avoid yardwork and large crowds.

Ask your transplant team what you might need to avoid. Follow your doctor's instructions carefully when taking these medicines. Do not stop taking them without letting your doctor know. If you can't take them for any reason, tell your doctor. If you can't swallow your medicines, you might need to temporarily get them through your central line (directly into your bloodstream).

The treatment for GVHD works well for many patients. However, you might need to be treated anywhere from weeks to months for the medications to be successful. This is because it can take time to find the best type and dose of medicine with the fewest side effects to treat your GVHD.

Discharge

Recovering after your transplant might take a year or longer. Every person's experience is different, but these guidelines, along with the teaching you get from the transplant team, should help you take care of yourself when you leave the hospital.

The BMT team will decide on your discharge date. The usual amount of time in the hospital is three to four weeks, although it can be longer or shorter depending on how you are feeling. The inpatient BMT coordinator will spend time with you in the hospital before you are discharged and provide you with information to help you at home. When you leave you will have your first clinic appointment scheduled and have prescriptions for any medications you will need to take at home. Your central line will be cared for by the outpatient clinic nurses.

Early Discharge

If you are feeling well enough during your transplant, you may be allowed to have an early discharge from the hospital. In order to do this, you must have someone to care for you all day and night and you must be near the hospital. When you leave the hospital, the nurse will teach you and your caregiver how to care for yourself at home. You will have to go to the BMT clinic at least two times per week, maybe more frequently, to be seen by the BMT team. As you get better, you will be seen less in the clinic each week.

When to call the doctor:

1. Fever: Call the doctor for any **temperature greater than or equal to 100.5° F or a temperature of 100.0° F for two consecutive days**.

- Take your temperature two times a day.
- If you have chills or feel hot or achy, take your temperature.
- Washing your hands is the best way to fight infection.

2. Any bleeding – even small amounts from:

- Mouth or gums
- Urine
- Stool
- Nose
- Menstruation
- Vomit

3. Central line problems:

- Redness around where the catheter exits your body
- Swelling around where the catheter exits your body
- Pain or discomfort
- Oozing from where the catheter exits your body
- If the catheter pulls out of your body
- If the cap comes off
- If the catheter gets punctured or cut
- If the dressing comes off or is loose

4. Shortness of breath or difficulty breathing without exercise

5. Vomiting or diarrhea that lasts longer than two days

Post-Transplant Medications

You will be required to take medications following your transplant. Before you are discharged, your doctor, pharmacist, and nurse will answer questions you might have about your medications. The following information will be important to follow:

- Know the name and dosage of your medications and carefully read the label on all medication containers. If you can't remember all the names, write the name and dosage on a piece of paper and carry it with you in your purse or wallet.
- Know the purpose, benefits, and reason for your medications use.
- Know the possible side effects of your medications. When you are prescribed medications, your doctor or nurse will explain the possible side effects to you and what to do should they occur.
- Understand the directions. Ask your doctor, pharmacist, or nurse to explain directions on the label if you do not understand them.
- Always check with your doctor before you stop taking a prescribed medication or if you miss a dose.
- Do not use NSAIDs (nonsteroidal anti-inflammatory drugs) – including aspirin or aspirin-containing products – without first checking with your doctor. There is a higher risk of bleeding when taking these products at certain times during your transplant process. Examples of NSAIDs include ibuprofen (Advil® or Motrin®) and naproxen (Aleve®).
- Do not start taking any over-the-counter drugs, vitamins, or supplements without first checking with your doctor. We will need to ensure there are no interactions with your prescribed medications and/or chemotherapy.
- Store your medications properly; avoid areas that are very warm, moist, or in direct sunlight.
- Let your doctor know when you are getting low on any medications so refills can be ordered before you run out.
- During your clinic visits, your doctor will review your medications and make any changes in dosages that are necessary.

What to Expect

After Discharge

Clinic Visits

Once you are at home you can expect to be seen in the clinic two to three times per week depending on your health. At each clinic visit you will have blood drawn from your central line by the infusion room nurse. Be sure to tell the BMT nurse if you are having any problems. You will be seen in the BMT clinic until the BMT physician sends you back to the care of your regular doctor. This could be as short as three weeks or as long as a year.

Every person should expect frequent clinic visits to see the BMT doctor and health care team. Every person will be on a complex list of medications that need to be taken carefully, and most people complain of feeling tired all the time when they first leave the hospital. There are also special precautions that need to be followed, including:

- Preventing and taking care of infection
- Preventing and taking care of any bleeding
- Using care with food and making sure nutrition is good
- Issues specific to BMT, such as graft-versus-host disease

Infection

Infection occurs because your immune system is not yet completely recovered and your white blood cells (infection fighting cells) might not be back to normal levels.

Call your doctor immediately if:

- Your temperature is 100.5° F or 38.0° C
- Chills and/or sweating occur
- Changes in the skin around the central line (redness, swelling, pain, discharge) occur
- Your pain increases
- You are coughing or are feeling breathless
- Painful urination occurs

How to prevent infection:

- Stay away from crowds or crowded areas (shopping malls, public elevators, crowded restaurants, church) especially during cold and flu season.
- Stay away from people (adults and children) with an infection that might be contagious (coughing, sneezing, fever, flu).
- Stay away from people who might have chickenpox or shingles. If you get exposed, call your physician immediately.
- Stay away from gardening or touching plants and loose dirt.
- Do not mow the grass/lawn.
- Do not have porcelain nails put on or have manicures or pedicures until your doctor says it is safe.
- Do not empty or change the litter box. Litter boxes should be put away from where food is made or eaten.
- Do not clean dog cages, fish tanks, or change birdcage linings.
- Do not sleep with pets or animals.
- Do not buy new pets of any kind. Animals that are in the home already are OK.
- Make sure your pet is healthy. Pets with diarrhea should see the veterinarian right away.
- Avoid working in settings that involve animal contact (e.g., ranch/farming environments, chicken coops, slaughterhouses).
- Avoid carpentry work and woodworking (sawdust).
- Avoid exposure to disturbed soil, including construction, excavation sites, caves, (i.e., dust-laden environments in order to avoid exposure to molds).

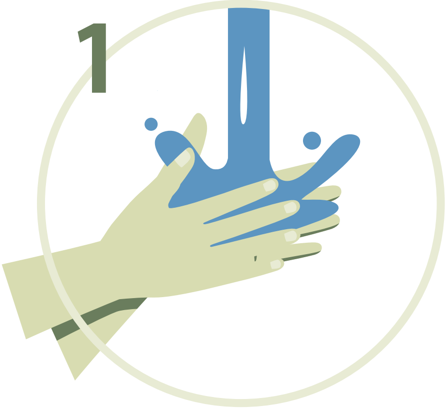
Handwashing

Remember to continue to wash your hands often, especially:

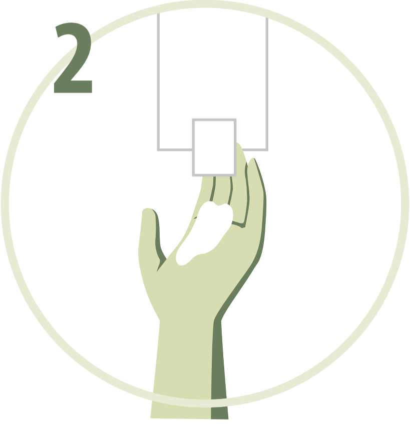
- After using the bathroom
- Before eating or making food
- After changing diapers – wear gloves when changing and wash hands after
- After touching pets or animals
- After going outdoors and every time you return home
- Before touching your nose or mouth – the most common way to get a cold is by rubbing your nose, eyes, or mouth after exposure
- Before and after touching wounds
- After shaking hands with others

Ask all visitors, family, and friends to wash their hands when they come into your home. When buying liquid soap, be sure the label says "antibacterial."

Fight germs by washing your hands



Wet your hands



Soap

Lather and scrub - 20 sec.

While scrubbing for 20 seconds, don't forget to wash

Between your fingers

Your nails

Top of your hands

Rinse - 10 sec.

Turn off tap

Dry your hands

Rash

Notify your doctor promptly if any rash develops.

Temperature

Take your temperature if you are feeling sick or think you might have a fever. If you do have a fever, call the doctor right away.

Travel Safety

Travel to a developing country (Mexico, India, parts of China, etc.) can be risky. You should always talk with your doctor before planning any travel, but certain places carry higher risk. If you must go, you should not eat or drink:

- Raw fruits and vegetables
- Tap water or any untreated or contaminated water
- Ice made from tap water or any contaminated water
- Unpasteurized milk or any unpasteurized dairy products
- Fresh fruit juices
- Food and drinks from street vendors
- Raw or undercooked eggs

Steaming hot foods, fruits that you peel yourself, and bottled and canned processed drinks are probably OK. Please talk to the transplant team if in doubt.

Swimming

- Never swim if you have a central line.
- Do not go into hot tubs, lakes, ponds, or rivers.
- If swimming is your first choice of exercise, ask your doctor if swimming in a chlorinated pool is OK.

Sexual Activity

- Limit the number of sexual partners.
- For vaginal dryness try using K-Y Jelly or another lubricant.
- Check with your doctor before using a drug for impotence (e.g., Viagra).
- Kissing and holding your partner is OK unless they have been ill.
- You can have sexual intercourse when your neutrophil count is over 2,000 and your platelet count is over 50,000.
- Use condoms if you are not in a long-term, monogamous relationship.
- Do not perform oral or anal sexual practices.
- You can develop infections that you could pass to your partner. Check with your doctor if you have an infection that you could pass to others.

Bleeding

Bleeding might occur because the platelets (cells that clot blood) are not at a normal level. Any bleeding that you have is very important and must be reported right away because there are not enough cells to stop the bleeding.

Call your doctor immediately if you have:

- Bruising or bleeding on the skin
- Bleeding gums
- Nosebleeds
- Blood in urine or stool
- Vaginal bleeding

Use these precautions to prevent or lessen bleeding:

- Use an electric razor rather than a straight-edge razor.
- Use special care with scissors, nail clippers, or sharp objects.
- Blow your nose gently.
- If you have constipation, ask your doctor about a stool softener.
- Do not use rectal thermometers, suppositories, enemas, tampons, or douches.
- Do not do strenuous exercise or dangerous activities, which could cause harm.
- Use a soft toothbrush and do not use dental floss or toothpicks. Do not floss until your platelet count is greater than 50,000.

For cuts or wounds that are bleeding, apply pressure and call the doctor right away. Do not ignore minor bleeding, as it might indicate something more severe.

Mouth Care

Daily flossing and brushing are very important. Flossing should be done only if your platelet count is greater than 50,000. Keep using saline rinses if your mouth is dry, if you have a lot of mucous, or if you are being treated for oral fungus. Mix two teaspoons of baking soda and one teaspoon of table salt with one quart of warm water.

Dental Visits

Your doctor will let you know when it is safe to go to the dentist for routine cleaning following your transplant. See your dentist every six months for examination once you are released to return to the dentist. X-rays may be taken if appropriate. In general, preventive (prophylactic) antibiotics are recommended before any dental work. Ask your doctor about this if any dental work is needed.

Dry Mouth

If severe, you should visit your dentist more frequently than normal. (Cavities are much more likely if the mouth is dry.)

Mouth Changes

Contact your physician for any change such as ulcers, stinging, burning, dryness, pain, difficulty with eating, or loose teeth.

Nutrition

Your appetite might not have returned by the time you leave the hospital, so you might have to try harder to get the calories you need. Your dietitian can help you plan meals that are satisfying and will meet your nutritional needs. Listed below are guidelines to maintain or improve your nutritional status:

- Eat small snacks and five or six small meals daily instead of three large meals.
- Eat high-calorie and high-protein snacks such as milkshakes, cheese and crackers, nuts, high-calorie supplements, etc.
- Add gravies and margarine to the foods you already eat. Drink eight large glasses of fluid daily. Try to include fluids with calories (instant breakfast, sports drinks, etc.), and avoid excessive amounts of caffeine (e.g., colas, coffee, tea).
- Avoid alcoholic beverages. They can have some unpleasant interactions with your medications.
- Consult your physician or BMT caregiver before adding raw fruit or vegetables to your diet. Usually you will be able to eat fresh fruits and vegetables when your neutrophil count is greater than 1,500. Once you have been told you may eat raw fruits, make sure to wash them thoroughly with a produce wash or vinegar/water solution.
- Watch for stomach cramps, diarrhea, or gas after eating or drinking milk or milk products (ice cream, cheese, yogurt, etc.). These problems could mean that you are unable to properly digest lactose and ingredients of milk. If you think you have this problem, ask to speak to a dietitian.

Refer to Appendix A of this booklet (page 78) for further details concerning diet and food safety.

Activity and Exercise

You might be more tired than you expect, especially the first few months after your transplant. Slowly increase your activities. Listen to your body and allow rest periods in between exercise.

The following are good ways to exercise:

- Taking walks
- Riding a stationary bike

Stay Away From:

- Vigorous exercises, e.g., weightlifting or contact sports
- Swimming or hot tubs until approved by your doctor
- Athletic facilities until approved by your doctor

Environmental Concerns

There are no general rules for cleaning your home after discharge from the hospital. These are good "rule of thumb" ideas to use:

- Keep your home free from excess dust and dirt.
- If your house or apartment has a swamp cooler, the synthetic drip pads should be replaced before you return home. The cooler should be run daily for at least 30 minutes to avoid water sitting in the reservoir.
- Air conditioners in both the car and home should be cleaned and serviced prior to your discharge from the hospital.

Long-Term Care

All patients will have a series of tests done approximately three months after their stem cell infusion date (Day – 0). The goal of this evaluation is to reassess the outcomes of the transplant. This workup has several purposes:

1. Determine the status of the underlying disease (the original diagnosis)
2. Assess any possible side effects of the treatment
3. Evaluate the general post-transplant recovery process

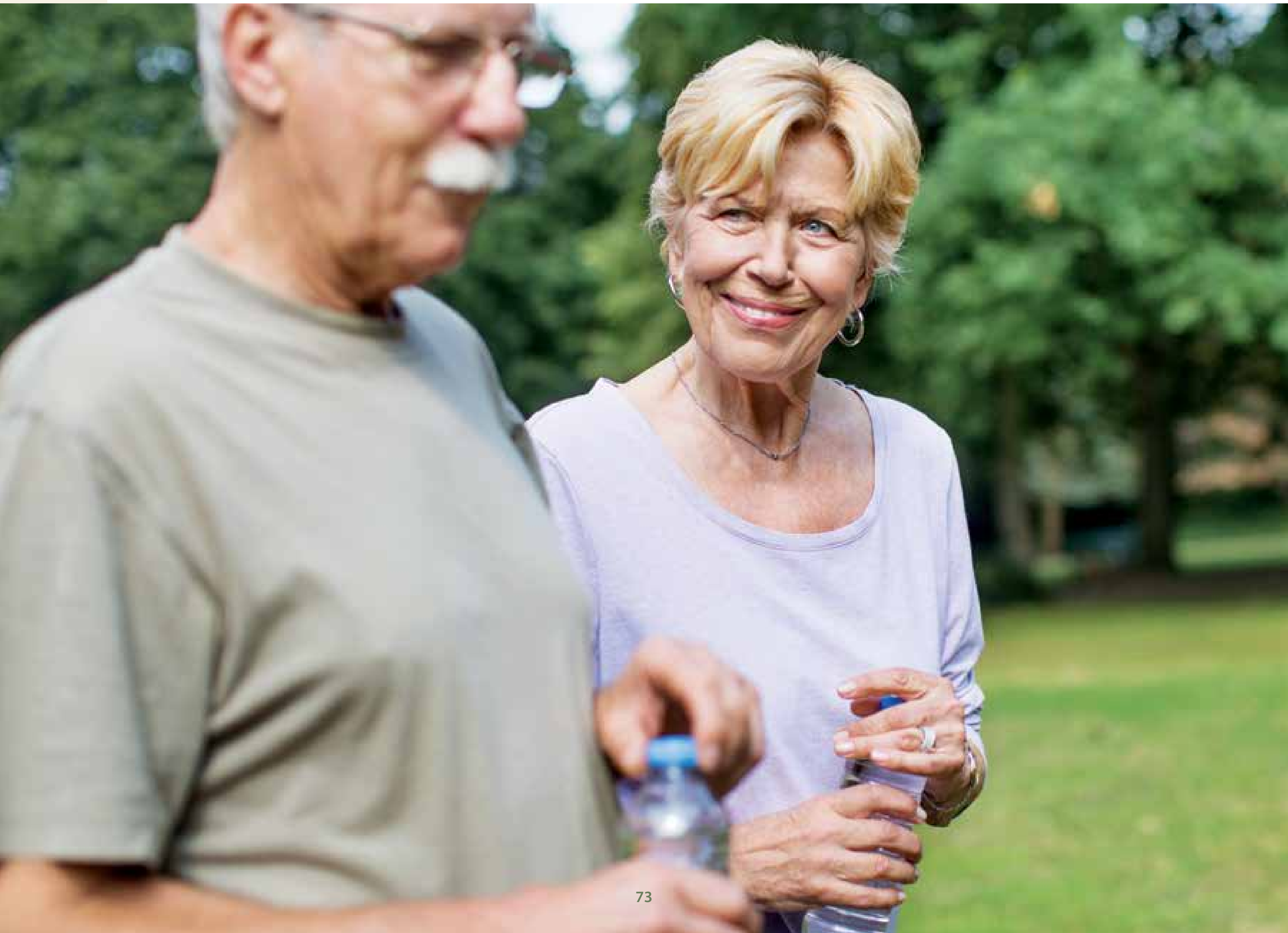
The tests are necessary to rule out any possible complications. These tests can determine if there is a problem, even though there may be no symptoms. You will be familiar with many of the tests.

We often repeat these tests again at six months, 12 months, and 24 months post-transplant. Your transplant team will give you more information about these evaluations as the day approaches.

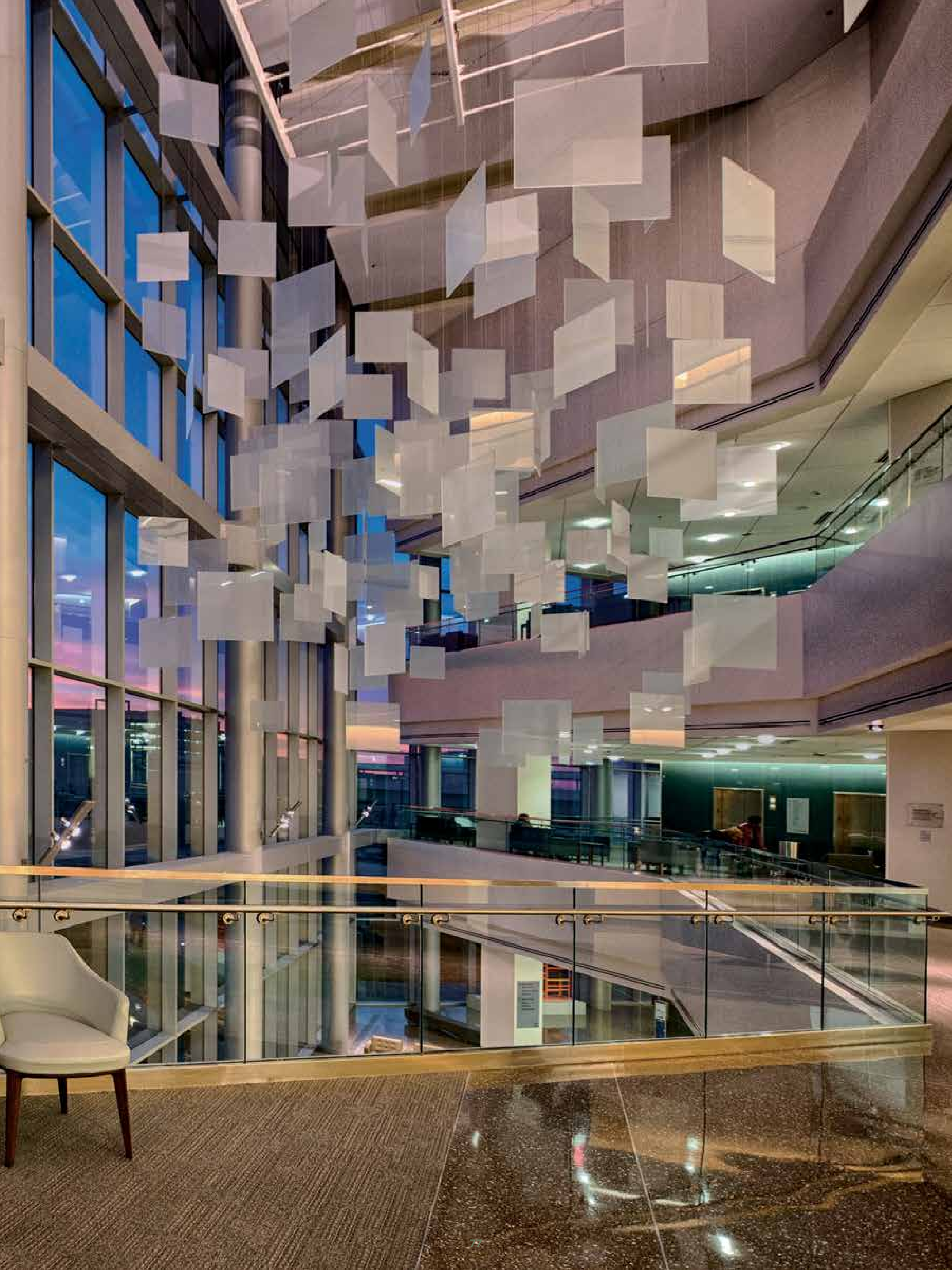
Immunizations

After your transplant, you will lose the protection from vaccines you received as a child. You will have to repeat childhood vaccines once your immune system has recovered. This usually starts about 6-12 months after your transplant.

Vaccines can protect you from preventable infections and diseases. Your transplant team will decide when it is safe for you to begin receiving your vaccines and will make sure you get all of the vaccinations you need during your follow-up care.



Appendix



Dietary Recommendations and Restrictions During Transplant

ACADEMY OF NUTRITION AND DIETETICS

Hematopoietic Stem Cell Transplant Nutrition Therapy

This nutrition therapy addresses the food safety concerns of individuals whose immunity is suppressed and who are at high risk for foodborne illness.

Meal Planning Tips

- Small, frequent meals might be easier for you to tolerate than larger meals.
- Choose high-calorie foods if you can't eat much. Good choices include:
  - Breaded meats
  - Vegetables with sauces
  - Starches such as rice, potatoes, and pasta
  - Fruits and vegetables with toppings or dips
  - Whole milk products and cheese
- If you experience diarrhea, bloating, gas, or stomach pain after having milk or dairy foods, talk with your doctor or dietitian. You might need to avoid these foods or take lactase enzyme supplements.
- If you are losing weight because you cannot eat enough, talk to your doctor or dietitian. Commercial supplements might be helpful, particularly between meals.

Shopping Tips

- Buy foods in small amounts so they will be fresh when eaten.
- Choose snack-sized or single-serving packages. These might help you measure portions and not waste food.

Cooking Tips

- Wash hands well before, during, and after making and eating food.
- Do not share your food with other people.
- Wash raw foods well before eating them.
- Wash fruits/vegetables with produce wash or vinegar/water solution.
- Check food for bruises, broken skins, rot, and mold. Do not use food that looks or smells bad.
- Cook meats, fish, poultry, and eggs until well done.
- Keep cold foods cold (less than 40° F, which is less than 4.4° C) and hot foods hot (more than 140° F, which is more than 60° C).
- Clean all cooking tools, pots, and dishes completely before and after use.
- Do not keep refrigerated leftovers for more than three days.

Recommended Foods

The following eating guidelines specify which foods that are OK to eat to minimize the risk of foodborne illness. Variations among institutions and physicians might occur, as well as updates with new food safety information.

Dairy	All pasteurized milk and milk products Commercially packaged cheese and cheese products made with pasteurized milk (e.g., mild and medium cheddar, mozzarella, parmesan, Swiss) Pasteurized yogurt Dry, refrigerated, and frozen pasteurized whipped topping Ice cream, frozen yogurt, sherbet, ice cream bars, homemade milkshakes Commercial medical nutrition supplements (liquid and powdered) Commercial eggnog
Meat and Meat Substitutes	All well-cooked meats (beef, pork, lamb, poultry, fish, shellfish, ham, bacon, sausage) Canned meat or fish and meat spreads Well-cooked eggs and egg substitutes Reheated deli meats and hot dogs Well-cooked tofu
Entrées and Soups	All cooked entrées and soups
Fruits and Nuts	Canned and frozen fruit and pasteurized fruit juices Well-washed raw fruit or foods containing well-washed raw fruits Dried fruits Canned or bottled roasted nuts Nuts in baked products; shelled roasted nuts Commercially packaged peanut butter
Vegetables	All frozen, canned, or fresh vegetables and cooked potatoes Well-washed raw vegetables Fresh, well-washed herbs and dried herbs and spices
Bread, Grain, and Cereal Products	All breads, bagels, rolls, muffins, pancakes, sweet rolls, waffles, French toast, potato chips, corn chips, tortilla chips, pretzels, popcorn Cooked pasta, rice, and other grains All cereals, cooked and ready-to-eat
Beverages	Tap water and ice made from tap water Commercially bottled distilled, spring, and natural waters All canned, bottled, and powdered beverages Instant and brewed coffee and tea; cold-brewed tea made with boiling water Brewed herbal teas using commercially packaged tea bags Commercial nutrition supplements (liquid and powdered)
Desserts	Refrigerated commercial and homemade cakes, pies, pastries, and pudding Refrigerated cream-filled pastries Homemade and commercial cookies Shelf-stable cream-filled cupcakes (e.g., Twinkies, Ding Dongs), fruit pies (e.g., Pop-Tarts, Hostess fruit pies), and canned pudding Ices, Popsicle-like products
Fats and Oils	Oil, shortening Refrigerated lard, margarine, butter Commercial, shelf-stable mayonnaise and salad dressings (refrigerate after opening) Cooked gravy and sauces
Other	Salt, granulated sugar, brown sugar Jam, jelly, syrups Commercial (heat-treated) honey Ketchup, mustard, BBQ sauce, soy sauce, other condiments Pickles, pickle relish, olives Candy, gum

This list of recommended foods was adapted with permission from the Fred Hutchinson Cancer Research Center Diet Guidelines for Immunosuppressed Patients at fhcrc.org/science/clinical/ltfu/patient/diet guidelines.html.

Foods NOT Recommended

Food and fluid restrictions vary among treatment providers; however, it is generally recommended to avoid foods on the "not recommended" list. If gastrointestinal graft-versus-host disease (GVHD) symptoms are present, it is prudent to avoid lactose, high amounts of fat (including fried foods, rich sauces, and rich desserts), and high amounts of fiber (including legumes, nuts, and whole grain cereals with more than three grams of fiber/serving).

Dairy	Unpasteurized or raw milk, cheese, yogurt, and other milk products Cheeses containing chili peppers or other uncooked vegetables Cheeses with molds (e.g., blue, Stilton, Roquefort, Gorgonzola) Sharp cheddar, brie, camembert, feta cheese, farmer's cheese
Meat and Meat Substitutes	Raw or undercooked meat, poultry, fish, game, raw tofu Raw or undercooked eggs and egg substitutes Smoked or pickled salmon or other fish Tempe (tempeh) products Sliced meats from the deli and hot dogs unless reheated until steaming hot Refrigerated pátes and meat spreads
Entrées and Soups	All miso products (e.g., miso soup)
Fruits and Nuts	Unwashed raw fruits Unroasted raw nuts Roasted nuts in the shell Unpasteurized fruit and vegetable juices and cider
Vegetables	Unwashed raw vegetables or herbs All raw vegetable sprouts (e.g., alfalfa, radish, broccoli, mung bean) Salads from delicatessens Commercial salsas stored in refrigerated case
Bread, Grain, and Cereal Products	Uncooked grain products Breads, rolls, and pastries in self-service bins
Beverages	Well water (unless tested yearly and found to be free of coliforms) Cold-brewed tea made with warm or cold water Unpasteurized fruit and vegetable juices and cider Mate tea
Desserts	Unrefrigerated, cream-filled pastry products
Fats and Oils	Refrigerated fresh salad dressings containing aged cheese (e.g., blue, Roquefort) or raw eggs
Other	Raw or non-heat-treated honey; honey in the comb Herbal and nutrient supplement preparations Brewer's yeast, if uncooked

Food and Water Safety Guidelines After Transplantation

Eating Issues

While you are in the hospital you will be seen by a dietitian who will help you with your diet. The dietitian is there to get you the foods you like and meals that taste good. There are special food guidelines while you are in the BMT unit. Some foods naturally have a lot of germs on them that could cause an infection after you have chemotherapy. The list below will help you choose foods that are good for you.

After discharge from the inpatient unit, a dietitian will follow up with you in the outpatient clinic.

Eating tips after your transplant:

- If you feel you are not eating well, ask to see a dietitian during your clinic visit.
- Eat small, frequent meals during the day.
- Drink eight cups of water each day.
- To help your food taste better rinse your mouth before you eat.
- To help prevent heartburn do not lie down flat after eating.
- Carbonated drinks might make you feel less queasy.
- Use a straw to drink fluids if your mouth is sore.

Foodborne illness, or food poisoning, is caused by bacteria that we eat from poorly handled foods. You can catch food poisoning from the food handler, the environment, or the food itself. Food poisoning can be spread from all of these sources by cross-contamination. Cross-contamination is the transfer of bacteria to food from other foods, cutting boards, utensils, or unwashed hands. Infection is a major concern in patients undergoing marrow or stem cell transplantation. You and your family must take great care to ensure safe food handling practices.

By following these suggestions, you and your family can reduce the risk of foodborne illness:

Grocery Shopping

- Look for milk and cheese products with "pasteurized" on the label. Pasteurization is a process used in food preparation to kill harmful bacteria.
- Check "Sell By" and "Best Used By" dates. Do not purchase if the dates have passed.
- Avoid foods from self-serve or bulk containers.
- Avoid taste-testing free food samples.
- Do not eat delicatessen foods. Avoid unrefrigerated cream and custard-filled desserts and pastries.
- Check packaging dates on fresh meats, poultry, and seafood. Do not buy if out of date.

Food Storage

- Store food items separately from cleaners and chemicals.
- Rotate food stock so that older items are used first.
- Keep food storage areas clean.
- Store eggs in their original cartons, and refrigerate as soon as possible. Discard eggs with cracked shells.
- Wash fresh fruits and vegetables very well with a fruit and vegetable rinse or vinegar/water solution, and refrigerate to reduce spoilage.
- Shelf-stable products that are unopened, packaged, bottled, or canned can be stored at room temperature prior to opening. Read the food label to see if product needs refrigeration after opening.
- Monitor expiration dates and discard food accordingly.
- Discard entire food packages or containers with any mold present.
- Dispose of any freezer burned food.
- Never cook or taste any food that looks or smells strange. WHEN IN DOUBT, THROW IT OUT.
- Refrigerator temperatures should be maintained between 34° F to 40° F. Freezer temperatures should be maintained below 5° F.
- Please make note of how long foods will keep in the refrigerator:

FOOD	**REFRIGERATOR LIFE**
Fish, raw	1-2 days
Meat, raw	2-3 days
Poultry, raw	2-3 days
Leftovers	2-3 days
Meat, luncheon	4-7 days
Milk	5 days
Fruits, vegetables	1 week

Food Preparation

- Wash hands with soap and warm, running water for at least 20 seconds before and after every step in handling food and after using the bathroom, handling garbage, changing diapers, or touching pets.
- Wash cutting boards, dishes, utensils, and countertops with hot, soapy water between each food preparation step. Use hot, soapy water and paper towels or clean cloths to wipe up kitchen spills. Wash cloths frequently in the hot cycle of your washing machine.
- A solution of one teaspoon of bleach in one quart of water may be used to sanitize surfaces, utensils, cutting boards, and sponges. Sanitize cutting boards weekly.
- Use one cutting board for cooked foods and a separate one for raw foods. Once cutting boards become excessively worn or develop hard-to-clean grooves, replace them.
- Keep appliances free of food particles. Carefully clean microwaves, blenders, toasters, and can openers. Blender blades and bottoms should always be removed when washing the blender jar.
- Wash tops of canned foods and beverage cans before opening, and clean the can opener regularly.
- Wash fresh fruits and vegetables thoroughly under running water before peeling and/or cutting. Scrub foods as needed.
- Always keep countertops and kitchen surfaces clean.

Cooking Food Safely

- Thaw frozen meat, fish, or poultry in the refrigerator, in a bag under cold running water, or on the defrost setting of your microwave. Never thaw foods on the kitchen counter.
- Never leave perishable food out of the refrigerator for more than two hours. Egg dishes and cream- and mayonnaise-based foods should not be left unrefrigerated for more than one hour.
- Cook eggs until the whites are completely hard and the yolks begin to thicken. The yolk should no longer be runny. Do not use raw eggs in uncooked food.
- Always marinate food in the refrigerator, not on the counter.
- Sauce that is used to marinate raw meat, poultry, or seafood should not be used on cooked foods, unless it is boiled just before using.
- Cook meats thoroughly. Red meats should be cooked to an internal temperature of 165° F and poultry to 180° F. Use a meat thermometer to test for "doneness." If meat is too thin to test, follow the recipe and cook until the juices are clear.
- During food preparation, do not taste the food with the same utensil used for stirring.
- Do not interrupt cooking by partially cooking food and finishing later. Partially cooked food might encourage bacterial growth by not reaching appropriate temperatures.
- Serve cooked meat, poultry, and seafood on clean plates. Never place back on the plate with raw juices. Cross-contamination can occur between cooked and uncooked foods.

Safe Microwave Cooking

- Microwave cooking does not heat food evenly and can leave cold spots in food where bacteria can survive. If there is no turntable in your appliance, rotate the dish a quarter-turn a few times during cooking.
- When heating leftovers, use a lid or vented plastic wrap for thorough heating.
- Stir the food several times during reheating.
- Remember to clean your microwave oven regularly, especially after spills.

Leftovers

- Refrigerate cooked foods as soon after the meal as possible, within two hours or less.
- Sauces and gravies should be reheated to a rolling boil for at least one minute before eating.

Dining Out

- Avoid high-risk food sources such as salad bars, buffets, and sidewalk vendors.
- Make sure meat, fish, and poultry are cooked thoroughly. Fish should be flaky. Check to see that steaks, hamburgers, and poultry are cooked until the center is no longer pink.

Water Safety

- Tap water: Water from your home faucet is considered safe if your water source is a city water supply or from a municipal well serving highly populated areas.
- Well water: The quality of well water cannot be guaranteed. It is recommended that other approved water sources be used to ensure a safe water supply, including boiled, bottled, or distilled water.
- Do not use well water from private wells or from public wells in communities with limited populations because tests for microbial contamination are performed too infrequently. Drinking well water from municipal wells serving highly populated areas is regarded as safe. Most water filtration devices will not make the water safe if a private well water or smaller community well water supply is not chlorinated.

UT Southwestern Medical Park Apartments

To assist with housing accommodations during your transplant, Simmons Cancer Center has apartments available for patients. The apartments provide needed amenities for extended stays and are in close proximity to the hospital.

Patients will need to meet certain criteria to qualify for a stay in the apartments. Our multidisciplinary team will help determine if you meet these criteria. The length of stay needed will be determined by your transplant physician and team.

Unfortunately, the apartments are not available to family members or caregivers when the patient is admitted to the hospital.

With the exception of service animals, no pets are allowed in the apartments.

Apartment amenities include:

- Fully furnished
- Basic essentials (towels, sheets, pillows, pots, pans, dishes)
- Central air and heat
- Washer and dryer
- Kitchen appliances, such as a refrigerator/icemaker, stove, microwave, and dishwasher
- Ceiling fans
- 2 bedroom/2 bathroom
- Monitored alarm system
- Free basic cable
- A cleaning schedule is provided when you check in. Apartments are cleaned during your stay and after your stay is completed.

The gated community has a 24/7 public safety officer stationed at the entry control booth, an on-premises leasing office, a fitness center, a clubhouse with a study center, a gazebo with gas grills, and a swimming pool.
Location: 6401 Maple Ave., Dallas, Texas 75235

Rate

The two bedroom apartments are $60 per night. This rate might be reduced if the user is eligible for the housing discount. (Please see Housing Exception Status.)

Housing Exception Status

Patients might be eligible for a housing discount. You will be asked to complete the Housing Exception Form/Discount Application that will be reviewed and kept on file. The housing form will require the applicant to provide information about their monthly income and respond to questions related to their status.


UT Southwestern Medical Center
SOUTHWESTERN MEDICAL PARK
APARTMENTS
6401

Support Services

We understand there's more to treating illness, injury, and disease than simply attending to physical symptoms. There are often social, emotional, spiritual, and financial concerns as well. That's why UT Southwestern Medical Center offers a variety of support services to help patients while they're in our hospitals and clinics, and even after they've gone home.

Patients and their families also receive assistance from our dedicated staff of volunteers, who are committed to making stays and visits at UT Southwestern as comfortable as possible. We're always happy to welcome new volunteers to UT Southwestern, too, if you have an interest in joining us.

Simmons Cancer Center Support Services

utswmed.org/cancer/support-services

- Support groups and classes
- Young adult cancer support
- Oncology nurse navigators
- Oncology social work
- One-on-one support
- Psycho-oncology
- Music therapy
- Oncology nutrition
- Oncology skin care, makeup, and wigs
- Spiritual support
- Transitional care coordination
- Oncology rehabilitation
- Pet therapy
- Children and family support program

Comments or Concerns?

If patients are concerned about any aspect of their care, UT Southwestern wants to hear about it. We depend on our patients and their guests to notify us when a problem arises so that we can take action to correct it and ensure that our services are the best they can be.

Patient Assistance Office

The Patient Assistance Office is available to assist patients and their guests who have comments or concerns about any aspect of their visit. You may reach the Patient Assistance Office by calling 214-648-0500.

Chaplain Services

Your health care team at UT Southwestern believes that total patient care includes the spiritual as well as the physical and emotional needs of each patient. Members of the Chaplain Services staff are available to assist patients, whatever their religious tradition, when spiritual support is needed. We also welcome clergy of all faiths to visit their hospitalized members at any time.

Meditation chapels are located on the second floor of William P. Clements Jr. University Hospital and on the first floor of Zale Lipshy Pavilion. Visitors of all faiths are welcome to visit the chapels for prayer, quiet reflection, and time to "just be."

Weekly services at Clements University Hospital chapel:
- Nondenominational Christian service – Sunday, 10 a.m.
- Roman Catholic service – Wednesday, 11:30 a.m.
- Services are televised in patient rooms on Channel 1.

To receive support services from the Chaplain Services staff, please call 214-633-4080.

Dining Options

At UT Southwestern, dining options are all about choice – for both patients and visitors. For hospital patients, we offer an innovative approach to food service called "At Your Request Room Service Dining®." (It's even available for visitors and family.)

Inpatient Dining

At Your Request Room Service Dining® is based on hotel room service, allowing patients to order what they want, when they want it. It's available at both Clements University Hospital and Zale Lipshy Pavilion.

Coffee and tea are available in the pantry (kitchen) on each patient floor. Vending machines are located on the third floor of Zale Lipshy Pavilion and by the Emergency Department waiting area at Clements University Hospital.

Dietary Restrictions

Built-in safeguards in the meal-ordering software ensure each patient's dietary restrictions and nutritional needs are followed with every order.

Hours of Operation

Meals from the At Your Request® menu can be ordered from 5:30 a.m. to 7 p.m. Pre-prepared meals such as sandwiches and salads are available in the Night Pantry and can be obtained by a nurse.

Menus

At Your Request Room Service Dining® menus are available at the bedside in every room. Patients are introduced to the service when they check in. Menus are available in English and Spanish.

Ordering

To use At Your Request Room Service Dining®, simply decide what you would like to order and dial extension 3-4000. You'll be connected to specially trained Nutrition Services staff members who will assist you in ordering. Each meal is individually prepared and delivered within 45 minutes.

Visitors and Family

Visitors and family may order guest trays from At Your Request Room Service Dining® by pre-paying at the cafeteria in either Clements University Hospital or Zale Lipshy Pavilion. The cost is $10, and the tray will be delivered with the patient's tray. Visitors and family are also welcome to visit any of UT Southwestern's many dining locations.

Outpatient and Visitor Dining

For outpatients and visitors, UT Southwestern Medical Center offers several dining and food-service locations throughout our campus:

Cancer Care Outpatient Building (North Campus)
Cancer Care Outpatient Building Café: Monday–Friday, 6:30 a.m. to 4 p.m. Located on level 3 of the Cancer Care Outpatient Building, the café offers a variety of healthy meal options for patients and their families. Lunch is served daily until 2 p.m. Grab-and-go items are available until 4 p.m.
Coffee Bar: Monday–Friday, 8 a.m. to 4 p.m. A coffee and snack bar is conveniently located inside the gift shop on level 2, between the parking garage and main lobby.

Clements University Hospital (West Campus)
Main Cafeteria: Located on the first floor of the hospital, the cafeteria offers healthy, restaurant-quality food seven days a week. Monday–Friday, 6:30 a.m. to 2 a.m.; Saturday and Sunday, 7 a.m. to 2 a.m.
Simply to Go: Also on the first floor, Simply to Go is open around the clock, seven days a week. It offers lighter fare, including salads, sandwiches, snacks, sushi, beverages, coffee, and desserts.
Coffee Shop: Located inside Simply to Go, the Coffee Shop features a variety of coffee blends. Monday–Friday, 6:30 a.m. to 5 p.m.

Outpatient Building (West Campus)
Coffee Shop: (ground floor)
Sandwiches, assorted snack items, coffee, soda, and bottled water
Hours: Monday–Friday, 7 a.m. to 4 p.m.

Professional Office Building 2 (West Campus)
Fresh Market: (ground floor atrium)
Hot and cold sandwiches, soup and salad bar, daily hot lunch specials, and a variety of snack foods and beverages
Hours: Monday–Friday, 7 a.m. to 3 p.m.

T. Boone Pickens Biomedical Building (North Campus)
North Campus Commons Food Court: Hot breakfast, pre-made salads, sandwiches, daily soup special, pizza, and hot entrées
Hours: Monday–Friday, 7 a.m. to 3 p.m.
Cafeteria: (14th Floor)
Salads, a grill, and a selection of Panini sandwiches, soups, quesadillas, and blue-plate specials
Hours: Monday–Friday, 7 a.m. to 2 p.m.

Zale Lipshy Pavilion (South Campus)
Cafeteria: Hot food, sandwiches, and salads
Hours: Monday–Friday, 6:30 a.m. to 9 a.m.; 11 a.m. to 2 p.m.; 4:30 p.m. to 7:30 p.m.
Saturday and Sunday, 6:30 a.m. to 9:30 a.m.; 11 a.m. to 2 p.m.
Coffee Shop:
Hours: Monday–Friday, 6:30 a.m. to 1:30 p.m.
Saturday and Sunday, 7:30 a.m. to 7 p.m.
Simply to Go: 24/7

Guest Services

Guest and Patient Services representatives are available at UT Southwestern to help make each patient's hospital stay and each guest's visit as comfortable and pleasant as possible. They give directions, answer questions, and can arrange such services as a personal escort, wheelchair, and stretcher assistance. Representatives are available 24 hours a day, seven days a week.

Representatives can also help coordinate or arrange for hotel reservations, transportation, food deliveries, guest trays, translation services, hair care appointments, birthdays and anniversaries, flowers, videos, and reading material.

Frequently Used Services

- Internet access: We offer free Wi-Fi for our visitors.
- ATMs: We have two ATMs on-site.
- Laundry: We don't have a public laundry on-site, but there are several facilities nearby.
- Mail: Patients and visitors are welcome to drop off outgoing mail at the William P. Clements Jr. University Hospital Gift Shop. If you need to mail something while the Gift Shop is closed, please drop it off at the main Guest Services desk in the ground-floor lobby.

Gift Shops

UT Southwestern Medical Center operates gift shops at the Cancer Care Outpatient Building, Clements University Hospital, and Zale Lipshy Pavilion. Gift items, jewelry, magazines, greeting cards, candy, toiletries, stationery, and flowers are for sale at all three locations.

Foreign Language Interpreters

UT Southwestern offers interpreters for a number of foreign languages, should a patient require them. Medical interpreting is available for patients seven days a week.

To ensure that an interpreter is available for an outpatient visit, please notify the clinical practice when making the appointment that the patient will need an interpreter.

Services are also available to assist visually and hearing-impaired patients and guests. Patients who are hearing impaired can receive assistance from the Language Services office. Both William P. Clements Jr. University Hospital and Zale Lipshy Pavilion provide TDD/TTY telephone devices.

For more information, call the Language Services Department at 214-645-1270.

Notary Services

UT Southwestern is pleased to offer notary services for patients and their families. For more information, contact us at the numbers below.

William P. Clements Jr. University Hospital
Notaries are available Monday–Friday, 7 a.m. to 4 p.m. Please call 214-633-4700 for assistance.

UT Southwestern Clinics
Notaries are available at UT Southwestern Clinics, Monday–Friday, 7 a.m. to 4 p.m.

- Aston Building, 214-645-2393
- Cancer Care Outpatient Building, 214-645-1700
- Outpatient Building, 214-645-1700
- Professional Office Buildings 1 and 2, 214-645-1700

Contact Us

The Guest and Patient Services desk is located in the main lobby of both Clements University Hospital and Zale Lipshy Pavilion. Patient representatives are available daily.

Location	Hours	Guest Services Contact
Clements University Hospital	24 hours/7 days a week	214-633-4700
Zale Lipshy Pavilion	24 hours/7 days a week	214-633-4700

UT Southwestern Clinics

Guest and Patient Services representatives are available at UT Southwestern Clinics during regular business hours, Monday–Friday, 8 a.m. to 5 p.m.

Other Locations

Building	Weekday Hours	Patient Representative Contact
James W. Aston Ambulatory Care Center	7 a.m.–6 p.m.	214-645-1700
Outpatient Building	5:30 a.m.–6 p.m.	214-645-1700
Professional Office Buildings 1 and 2	7 a.m.–6 p.m.	214-645-1700
Harold C. Simmons Radiation Oncology Building	8 a.m.–5 p.m.	214-645-8525
West Campus Building 3	7 a.m.–6 p.m.	214-645-1700
Cancer Care Outpatient Building	7 a.m.–6 p.m.	214-645-1700
Clinical Center Richardson/Plano	8 a.m.–5 p.m.	972-669-7070

Housing Options

We hope your stay at UT Southwestern is brief, but if you need lodging, our Guest and Patient Services staff can help you make arrangements.

UT Southwestern is located just north of Dallas' Central Business District, major entertainment venues, large convention facilities, and numerous shopping areas. We are also within a few miles of many hotels and motels, offering a wide range of pricing and amenities.

Contracted Room Rates for University Hospital Patrons

Patients and their families might wish to take advantage of agreements UT Southwestern has signed with several area hotels that offer discounts on standard room rates for University Hospital patrons. These arrangements are available to long-term patients and their family members, based on availability and are subject to applicable city, county, state, and federal taxes. Please contact Guest and Patient Services for further information at 214-633-4700.

Other Accommodations

UT Southwestern maintains a list of other hotels within a two-mile radius of the Medical Center, and some of these hotels offer a courtesy discount rate when rooms are available. The list of other nearby hotels is updated annually. Please note that both rates and availability are subject to change without notification. Please contact Guest and Patient Services for further information at 214-633-4700.

Parking

UT Southwestern provides both valet and self-parking options for most clinical buildings on campus. Several additional lots are designated for general campus visitor parking.

Rates for UT Southwestern patient and visitor parking vary but do not exceed $5. Patients should note the location of their physician's office or diagnostic center in advance to determine the best parking option. Other campus visitors might wish to get specific parking instructions from their campus host.

Valet Parking

Valet parking is offered at the main entrances of these buildings:

- James W. Aston Ambulatory Care Center
- W.A. Monty & Tex Moncrief Radiation Oncology Building
- Harold C. Simmons Radiation Oncology Building
- West Campus Building 3
- Professional Office Building 1 (also serves Professional Office Building 2)
- Cancer Care Outpatient Building (Simmons Cancer Center)
- William P. Clements Jr. University Hospital
- Zale Lipshy Pavilion – William P. Clements Jr. University Hospital

Valet parking fees are posted at each valet station. A book of five coupons can be purchased for $20 at the valet stations. Visitors who valet park and then drive to another facility on our campus on the same day can valet park for free at the second location by presenting their first valet receipt. A one-time-access valet ticket is $5.

Self-Parking

Rates for UT Southwestern-managed self-parking areas vary, but do not exceed $3. Rates for Medical District self-parking areas vary, but do not exceed $6. Patients should note the name of the building where their physician's office or diagnostic center is located to determine the best parking option.

Park and Pay

Several parking garages are controlled by "Park & Pay Stations," which are electronic vending machines located on the main floor of the garage, adjacent to the building. Visitors should keep their parking ticket with them to pay as they leave the building.

After the visitor feeds their parking ticket into the Park & Pay station, the machine displays the amount due; payment can be made by voucher, cash, or debit/credit card. The machine then returns the paid parking ticket, which the visitor inserts at the exit gate to raise the arm.

Self-Parking Locations by Building

For detailed information about parking at a particular building, call 866-645-6455. For automated directions to a building, call 214-648-6264.

Academic, Research, and Administrative Buildings

For information about visitor parking elsewhere on the UT Southwestern campus, please refer to the Campus Map. All Visitor Parking lots and garages are shaded yellow and indicated by a yellow-circled "P"; valet parking stations are indicated by a yellow-circled "V".

The Visitor Information Booth is also a convenient resource for visitors arriving on campus. Staffed on weekdays, the booth is located near the main entrance to UT Southwestern on Inner Campus Drive (opposite Harry Hines Boulevard from Butler Street).

After parking, visitors can walk to the Visitor Information Center (Building A), where the staff can provide maps, parking and shuttle information, and directions to specific campus buildings. The Visitor Information Center is located at the entrance to McDermott Plaza and is open from 7:30 a.m. to 5 p.m., Monday through Friday. Visitors might also wish to obtain specific parking instructions from their campus host.

UT Southwestern Pharmacies

Campus pharmacies offer a convenient and affordable way for patients to meet their prescription needs. Our campus pharmacy locations welcome orders from UT Southwestern clinics and honor most major insurance plans. Compounding services are available for special orders.

A discount is available to patients ages 60 and older, and a 90-day pricing program can provide additional savings. (Discounts are not valid on insurance copayments, the 90-Day Generic Drug Pricing Program, or edibles.)

Location	Phone Number	Hours
Campus Pharmacy – Aston 5303 Harry Hines Blvd. Dallas, Texas 75390-8862	214-648-2422	Monday–Friday 8:30 a.m.–5 p.m.
Simmons Cancer Center Specialty Retail Pharmacy 6202 Harry Hines Blvd. Suite NM 2.850 Dallas, Texas 75235	214-645-2666	Monday–Friday 8:30 a.m.–5 p.m.
Clements University Hospital Retail 6201 Harry Hines Blvd. Suite 01.117B Dallas, Texas 75390-9236	214-633-4122	24 hours a day/ 7 days a week
Moncrief Cancer Retail 400 W. Magnolia Ave. Suite 2500 and 2503 Fort Worth, Texas 76104	817-288-9757	Monday–Friday 8:30 a.m.–5 p.m.

Other (Non-UTSW) Retail Pharmacies on Campus

Walgreens
Location: UT Southwestern West Campus, Professional Office Building 1, first floor directly across from Laboratory Services
Phone: 214-630-6252
Fax: 214-879-9999
Hours: 8:30 a.m.–5:30 p.m., Monday–Friday

Campus physicians and patients are the top priority for Walgreens and will experience a high level of personal service, along with the added benefits that a national pharmacy leader brings. Walgreens fills both patient and employee prescriptions, and welcomes requests to stock particular medications.

Walgreens also offers:

- One-on-one patient medication counseling
- Hard-to-find medications
- Easy prescription refills at nearly 8,000 Walgreens pharmacies nationwide and online at walgreens.com
- Automatic refills
- Compounding
- Insurance expertise

Security

The UT Southwestern Medical Center Police Department employs both commissioned and non-commissioned personnel who are available around the clock to serve the community. Our commissioned personnel are peace officers and are certified by the Texas Commission on Law Enforcement (TCOLE).

APPENDIX D

Total Body Irradiation (if required)

Total Body Irradiation (TBI) is a treatment often used in preparation for stem cell and bone marrow transplantation. TBI is used both for malignant conditions, such as leukemia, and benign conditions, such as aplastic anemia. TBI is planned in conjunction with chemotherapy prior to transplant. It is given either as a single treatment or in up to eight treatments, twice a day, depending on the patient's diagnosis and plan for transplant, as determined by the medical oncologist and radiation oncologist.

Role of Total Body Irradiation

TBI has several purposes in the transplant setting. First, leukemia cells are very sensitive to low doses of radiation and easily die when irradiated. Second, TBI helps kill bone marrow cells so that new, healthy cells can be engrafted into healthy bone marrow.

The blood and the bone marrow are target organs for radiation treatment since this is where the leukemia and blood-producing cells are formed. Because blood and bone marrow are present throughout the body, radiation must be delivered to the whole body so that no areas are left untreated.

Treatment

Treatments for TBI can be received in a standing position, lying on a stretcher, or lying in a frame conforming to the patient's body. All of the different techniques for TBI are tailored to individual patients and designed to achieve appropriate treatment results. Depending on diagnosis, treatment duration, and general physical condition, the physician will decide the best technique for the patient. Patients will be asked to hold still and will not feel anything during the treatment.

For adult and older pediatric patients who do not require general anesthesia we use our in-house Volumetric Modulated Arc Therapy (VMAT) technique. This technique is based on selecting dose intensities that will best conform to individual patients. As above, patients will be asked to hold still and will not feel anything during the treatment. Younger patients requiring anesthesia are positioned on a stretcher using a conformal device to maintain body shape. Both types of treatments can last up to two hours; all treatment types are conventional, convenient, and well-tolerated.

Side Effects

The most common side effects of TBI include nausea, vomiting, and diarrhea. Medication can be prescribed to manage these adverse effects as needed. Swelling of the salivary glands might also occur with pain, but usually resolves after treatment. Some patients might develop flu-like symptoms, including cough and shortness of breath caused by pneumonitis (inflammation of the lungs).

Pneumonitis can occur weeks or months after completing radiation therapy and is treated with steroids. Radiation might cause cataract formation years after treatment. Radiation also increases the risk of secondary cancer formation as a late side effect of treatment, particularly in children. Routine follow-up and physical exams with an oncologist or primary care provider are encouraged to monitor late side effects of TBI.

Coordination of Care

Scheduling for TBI treatment is coordinated between the Radiation Oncology Clinic and the Bone Marrow Transplant Clinic at Simmons Cancer Center (for adult patients) or Children's Medical Center (for pediatric patients). Ambulance transportation will be arranged for patients admitted to the hospital throughout the entire transplant process.

UT Southwestern
Simmons Cancer Center

5323 Harry Hines Blvd., Dallas, TX 75390
214-645-8300