Bone Marrow Transplant Program
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The MISSION of the Bone Marrow Transplant (BMT) Program in the Taussig Cancer Institute is to provide high quality specialized patient care in a setting of education and research. The entire BMT staff embraces the values of initiative, innovation, collaboration, confidentiality, empathy and integrity. We put our patients first. Our goals are to provide safe and effective new technologies to all patients; to continually monitor methods to ensure clinical excellence at all times; to assess all patient concerns including clinical, psychological and financial; and to perform constant audits on all aspects of care that influence patient outcomes and satisfaction.

“We’re proud to offer state of the art technology and patient centered amenities that provide patients with the best possible surroundings to aid in their treatment and recovery here.”

BRIAN BOLWELL, MD, DIRECTOR
The Cleveland Clinic Taussig Cancer Institute is dedicated to providing exceptional cancer care and support to individuals with cancer. More than 250 cancer specialists, nurses and technicians work together to plan and implement treatment designed to meet the individual needs of each patient. The best in high quality treatment, access to the latest technology and research, and the all encompassing “Patients First” philosophy makes Taussig Cancer Institute a leading cancer center.

Taussig Cancer Institute encompasses both a comprehensive clinical cancer treatment facility and cancer research laboratories that conduct more than 350 clinical trials a year and produce internationally recognized, innovative translational research results. Every year, more than 25,000 patients with cancer receive treatment at the Cleveland-based Taussig Cancer Institute and at 10 locations throughout Northeast Ohio. Cleveland Clinic cancer care is ranked in the top 10 in the nation U.S. News & World Report.

Cleveland Clinic offers the top rated cancer care in Ohio.
ACCREdITATIONS:

• Foundation for Accreditation of Cellular Therapy
• Joint Commission on Accreditation of Healthcare Organizations
• American Association of Blood Banking
• Ohio Hematopoietic Stem Cell Transplant Consortium
• Southwest Oncology Group
• National Marrow Donor Program (NMDP) founding member
• American Society of Histocompatibility and Immunogenetics

National insurance payers and networks designate Cleveland Clinic’s Bone Marrow Transplant Program as an elite class of providers commonly known as a “centers of excellence or COEs.” This designation is based upon actual experiences for clinical quality, outcomes and volumes.

Cleveland Clinic also is a National Marrow Donor Collection Center, meaning our BMT Program is contracted with the NMDP to collect marrow for other Transplant Centers around the world.
Although bone marrow transplantation can offer long-term remissions and even cure, it is not a procedure to be taken lightly. The process of transplantation can render patients extremely vulnerable to life-threatening complications. Choosing a transplant center with experience, such as Taussig Cancer Institute’s renowned program, can be paramount when considering a bone marrow transplant.

Careful evaluation of the disease, the patient and the benefits versus the risks of the procedure will provide valuable insight for making the best treatment choice. Cleveland Clinic’s BMT Program, initiated in 1975, is regarded among the leading transplant programs in the country. Research shows that this level of experience contributes to better patient outcomes.

Diagnoses transplanted at Cleveland Clinic with bone marrow/stem cell/umbilical cord blood include Hodgkin’s and non-Hodgkin’s lymphoma; acute and chronic leukemias; multiple myeloma; myelodysplastic and myeloproliferative syndromes; aplastic anemia; germ cell tumors; and other bone marrow failures.

“The many members in our bone marrow transplant team function individually within their specialties, but as one unit to accomplish the same goal of meeting the needs of the patients and their involved families.”

JOSHUA WORKMAN, ADMINISTRATIVE COORDINATOR
The Bone Marrow Transplant Program utilizes the skills and talents of medical and supportive personnel to develop a comprehensive, individualized treatment plan to meet the unique needs of each patient.

**Physicians** Your physician will guide you through every phase of cancer care, from diagnosis through treatment. Each of Cleveland Clinic’s treating physicians is board certified with years of experience in treating blood-related illnesses. Their clinical expertise is bolstered by active involvement in research.

Each year, several physician members of our treatment team are awarded “top” rankings by two independent national sources: Castle Connolly Medical Ltd; and Best Doctors in America®. In addition, they hold leadership roles in several professional groups and societies.

**Nurses** Cleveland Clinic nurses have achieved the highest national award for excellence in nursing, the prestigious Magnet Award conferred by the American Nurses Association.

Patients on our specialized nursing units receive highly skilled medical care and monitoring. Our low patient-to-nurse ratio means that our patients receive more individualized attention.

**Transplant Coordinators** Each transplant patient has a registered nurse as his or her dedicated transplant coordinator to help guide them through the outpatient care process. This includes events pre- and post-transplant, such as assisting in the search for HLA-matched donors. Transplant coordinators are available to answer any questions and offer crucial support.

**Physician Assistants** Physician assistants play an active role in the care of our patients. A physician assistant (PA) is a medically educated practitioner licensed by the Ohio State Medical Board. The inpatient Bone Marrow Transplant Unit is staffed by PAs who follow the medical care of patients along with a staff physician.
CONTINUITY OF CARE

Every member of the Bone Marrow Transplant team is readily available to assist you. Their continuous collaboration is invaluable for providing the best care for each patient. Communication continues long after the patient is discharged from our care. Our team is there to provide support before, during and after transplantation.

Social Workers  Social Workers take a holistic approach to care, ensuring that the needs of our bone marrow transplant patients, family members and care partners are adequately addressed. Masters-prepared, independently licensed social workers provide psychosocial assessment, individual and family counseling and support groups. They also assist families in problem solving regarding lodging, transportation and financial needs that may arise during the transplant process.

Cleveland Clinic bone marrow transplant social workers have a history of spearheading psychosocial research initiatives focusing on quality of life and care giving issues. This research has been presented and published to national and international audiences since 2003.

“The entire bone marrow transplant team is committed to making patients and family members feel as comfortable as possible, physically and emotionally.”

JANE DABNEY, LISW-S, SOCIAL WORKER
Autologous Peripheral Stem Cell Transplantation

Malignancies such as leukemia, lymphoma and myeloma are very sensitive to chemotherapy. However, the amount of chemotherapy that can safely be given is limited by toxicity to the bone marrow. The bone marrow produces stem cells that mature into vital red blood cells, white blood cells and platelets. The autologous stem cell transplant involves removing healthy stem cells; delivering very high doses of chemotherapy to potentially destroy the disease; and then returning the patient’s own (autologous) stem cells, enabling the bone marrow to recover.

Prior to the collection of stem cells, the bone marrow is stimulated to produce large numbers of stem cells through daily injections of a growth factor. This is either given alone or in combination with a single dose of chemotherapy. This outpatient procedure, known as “priming,” can take two to three weeks, which includes catheter placement and other outpatient appointments. The stem cells are then collected from the bloodstream in a process called apheresis. This outpatient procedure takes approximately five days. The collected stem cells are then frozen and stored.

The patient is then admitted to the Cleveland Clinic Bone Marrow Transplant Unit for high-dose chemotherapy. The stem cells that were previously collected are thawed and returned intravenously. The cells will begin to repopulate the bone marrow, allowing blood counts and other organs to recover from the side effects of treatment. This inpatient stay is approximately three weeks.

Following discharge, patients are monitored closely on an outpatient basis by their local oncologist and will return to the Taussig Cancer Institute for follow-up evaluations with their bone marrow transplant physician.
Allogeneic Bone Marrow Transplantation  Allogeneic bone marrow transplants are used to treat a variety of cancers, blood diseases and immune disorders that were once considered incurable. This potentially curative process involves transferring or infusing bone marrow, peripheral stem cells or umbilical cord blood from an HLA-matched donor to the patient. This can be someone related to the patient, or someone unrelated that is found to be a suitable match through registries including the National Bone Marrow Donor Program.

High doses of chemotherapy and/or radiation are given to the patient to potentially destroy his or her cancer. The donor’s cells are then intravenously infused into the patient. These donor cells will grow (or engraft) and be released into the patient’s bloodstream. The patient must take medication that suppresses the immune system to allow the new donor cells to engraft. Patients are hospitalized from three to six weeks.

Once the patient is discharged from the hospital, close follow-up care continues at the Taussig Cancer Institute.

Allogeneic transplant patients have a risk of developing a complication called graft-versus-host disease (GvHD) where donor cells attack the patient’s own organs or tissues. The condition can be mild and treated as an outpatient, or more serious, requiring hospitalization. Therefore, most allogeneic transplant patients need to reside close to Cleveland Clinic for at least three months after the transplant.

“Because bone marrow transplant is a long and complex procedure, we really get to know our patients. They become part of our extended family.”

DEB SCOTT, RN, NURSE
Reduced intensity Bone Marrow Transplantation Reduced intensity allogeneic bone marrow transplants or reduced intensity BMT can be curative for certain cancers. This approach is an ideal choice for older patients, patients with certain medical conditions, and patients who could not tolerate the toxicity of high-dose chemotherapy that is given during a standard allogeneic transplant.

Reduced intensity BMTs use smaller doses of chemotherapy and/or radiation. After the chemotherapy and/or radiation is given, stem cells from a matched related or unrelated donor are given to the patient. These donor stem cells grow in the patient’s bone marrow and eventually replace it.

Like traditional allogeneic transplants, patients are at risk for developing graft-versus-host disease (GvHD), where donor cells attack the patient’s own organs or tissues. The condition can be mild and treated as an outpatient, or more serious, requiring hospitalization.

At the Taussig Cancer Institute, reduced intensity bone marrow transplants are done on an inpatient or outpatient basis depending on the treatment plan. Patients are monitored very closely by a team of specially trained medical personnel, including a physician and transplant nurse coordinator. Patients are required to stay within a one-hour drive of the campus for a specified amount of time.
Cleveland Clinic’s transplant team has a robust research program that boasts some of the most innovative research in bone marrow transplantation. The research team includes physicians, scientists, nurse coordinators, research coordinators and biostatisticians who offer a depth of experience and leadership in the field.

Each year, the team embarks on newly sponsored research protocols, as well as our own authored protocols. We continue to investigate new mobilizing agents for the collection of peripheral stem cells and perform numerous research activities for the management of acute and chronic graft-versus-host disease and other toxicities associated with transplantation.

Cleveland Clinic Taussig Cancer Institute physicians and staff are dedicated to providing patients with the most up-to-date cancer treatment options. At any given time, several hundred clinical trials are available to qualifying patients.

Visit clevelandclinic.org/cancerclinicaltrials to learn more.
In 2009, both the inpatient and outpatient units of the Bone Marrow Transplant Program moved into renovated facilities.

The 22-bed, hospital floor is designed to meet the unique clinical and emotional needs of bone marrow transplant patients and their families. It features several elements that specifically address the concerns of our immune-compromised bone marrow transplant patients, including a centralized air-handling system that reduces risk of infection. The system continually filters all of the air on the floor, removing 99.98 percent of potential pollutants.

A dedicated restroom with a shower for family members also help protect patients’ health, while amenities like wireless Internet, flat screen TVs with built-in DVD players, and large picture windows in every room help ease the burden of enduring the three- to six-week average stay for patients and their families.

Other features of the hospital floor include:
- All rooms are private
- Bed chairs or reclining chairs for family/visitors
- Exercise room and nourishment room
- Fully wired for telemetry to monitor patients
- A washer and dryer for family use

Additional enhancements to our facilities include:
- Renovated outpatient clinic with group and private treatment rooms complete with television and an extensive video library for use during treatment appointments
- Outpatient pharmacy that provides quick and convenient prescription and information services
- Café offering light breakfasts and lunches to patients and family
Supporting and caring for patients is the number one priority at Taussig Cancer Institute. In addition to clinical and research expertise, Taussig provides a large variety of programs and services to assist patients and their caregivers with the challenges of their cancer experience.

**Cancer Answer Line** – For questions or concerns about cancer, or to schedule a second opinion, Monday through Friday, 8 a.m. to 4:30 p.m., call 216.444.7923 or toll-free 866.223.8100.

**Post-Transplant Preparation Group** – an inpatient education group directed by a social worker and nurse coordinator, along with representatives from the Bone Marrow Transplant inpatient team and nutrition program. The group gives patients and their caregivers all of the necessary tools and information to prepare for care after transplant.

**Healing Services** – designed to support well-being during your hospital stay by helping you relax and heal naturally. The Healing Services Team includes contributions from the Office of Patient Experience Spiritual Care Department and the Touch Therapy Team. The Touch Therapies Program includes light massage therapy, Reiki and Healing Touch™, which can relieve muscle tension, assist in pain relief and provide an overall sense of well-being and relaxation.

**Support Groups** – providing patients, families, and friends an opportunity to have their concerns, fears, and hopes re-affirmed by others who are experiencing similar life challenges. Support groups are led by our cancer institute’s oncology social workers, oncology nurses and psychologists who are specialists in providing reliable and helpful information in an atmosphere of encouragement.

**Reflections Wellness Program** – offering a variety of complementary and aesthetic services to Cleveland Clinic Taussig Cancer Institute patients. All treatments are designed to reduce anxiety and promote healing while patients are undergoing cancer treatments and leave them feeling their best.

**Music Therapy** – a dedicated, certified music therapist combines music and therapeutic techniques to aid in the physiological, psychological and emotional well-being of bone marrow transplant patients during treatment. The patient’s musical background and musical preferences are identified and taken into consideration as the music therapist designs goals and
interventions used within sessions to meet the patient’s needs. A music therapist also participates in treatment planning and the ongoing evaluation and follow-up care of the patient.

Scott Hamilton CARES Initiative – the Scott Hamilton Cancer Alliance for Research, Education and Survivorship (CARES) initiative, created by the champion figure skater after successful treatment at Cleveland Clinic Taussig Cancer Institute, promotes cancer awareness, education and research.

Chemocare.com – developed jointly by Taussig Cancer Institute and the Scott CARES initiative, this website takes the mystery out of chemotherapy.

The 4th Angel Mentoring Program – a key component of the Scott CARES initiative, this patient-mentoring program matches newly diagnosed patients with trained volunteers who are cancer survivors.

Late Effects Clinic – following up with cancer survivors years after successful treatment to stave off or detect minor or serious side effects as early as possible.

Fertility Preservation for Cancer Patients – offers options prior to treatment for cancer patients who hope to eventually become parents.

Medical Concierge – a complimentary service for patients and families who travel from out-of-state. Call 800.223.2273, ext. 55580, or email medicalconcierge@ccf.org

Global Patient Services – complimentary assistance for national and international patients and families. Call 001.216.444.8184 or visit clevelandclinic.org/gps.

High Tea – patients and their families can enjoy a pleasant diversion from their rounds of treatments and physician appointments – high tea. At 2:30 p.m. every Wednesday in the Taussig Cancer Institute Bistro, tea and pastries are served to those who would like the opportunity to relax for an hour and socialize. Each month, a different theme is planned, reflecting seasonal changes and holidays.

Helen Meyers McLoraine Patient Resource Center – Staffed by two clinical nurse specialists and an administrative coordinator, the Patient Resource Center is located in the northeast corner of Taussig Cancer Institute providing print and online information on everything from treatment overviews to support groups. The Center is open from 8 a.m. to 4:30 p.m., Monday through Friday.
HOPE LODGE

The American Cancer Society’s Hope Lodge is a unique option for adults who need temporary, no-cost accommodations while receiving cancer treatment and who live a distance from Cleveland. The Hope Lodge is located just blocks away from Cleveland Clinic. Oncology patients and/or families can stay here while receiving treatment in Cleveland. Patients must have care-partners stay with them at Hope Lodge. Your social worker can register you for this facility. If you do plan to stay at Hope Lodge, it is recommended that you make back-up lodging arrangements because there is a waiting list, and room availability may not be known until just before your bone marrow transplant.

ON-CAMPUS HOTELS

Overnight accommodations are available at hotels located on Cleveland Clinic main campus:

The InterContinental Hotel & Conference Center Cleveland
phone 216.707.4100; reservations 877.707.8999

The InterContinental Suites Hotel
phone 216.707.4300; reservations 877.707.8999

More information about lodging is available by calling the Cancer Answer Line at 886.223.8100.

TRAVEL BUREAU

American Express One is a full-service travel bureau that offers airline, local lodging and car rental reservations, as well as vacation planning services. The office is located on main campus at P83 and is open Monday - Friday from 8 a.m. to 4:30 p.m.
phone 216.444.2564 or 800.955.6111
Cleveland and its variety of ethnic neighborhoods offer a wealth of cultural and recreational attractions. The downtown skyline continues to evolve. Cleveland also is home to Browns football, Indians baseball and Cavs basketball.

Our North Coast harbor area features the Rock and Roll Hall of Fame and Museum and the Great Lakes Science Center, which houses the Cleveland Clinic OMNIMAX© Theater. Cleveland Clinic is located near University Circle, the center of the city’s cultural and educational offerings. Around the Circle are Case Western Reserve University, Severance Hall (home of the world renowned Cleveland Orchestra), the Cleveland Museum of Art, the Museum of Natural History and the newly renovated Botanical Garden, to name but a few.

A new upscale shopping complex called Legacy Village is just 20 minutes from the Cleveland Clinic campus. The 615,000-square-foot center has brought a number of high-end retailers to the local market.

The Metroparks that surround the city are perfect for hiking, horseback riding, cross-country skiing and ice skating. The Cleveland Metroparks Zoo, Geauga Lake water park and Cedar Point amusement park offer fun for the entire family.
APPOINTMENTS

BONE MARROW TRANSPLANT PROGRAM  |  APPOINTMENTS  |  REFERRALS
216.445.5600 or
800.223.2273, ext. 55600

CANCER ANSWER LINE  |  TAUSIG CANCER INSTITUTE  |  APPOINTMENTS  |  REFERRALS
216.444.7923 or toll-free 866.223.8100
clevelandclinic.org/cancer