



# MAYO CLINIC CANCER CENTER

The Mayo Clinic Cancer Center is a National Cancer Institute designated comprehensive cancer center, with three campuses including Rochester, Minnesota, Jacksonville, Florida and Phoenix/Scottsdale, Arizona. As the only NCI comprehensive cancer center with a national footprint, this integrated three campus approach is mirrored in our membership in the National Comprehensive Cancer Network, American Association of Cancer Institutes and our Commission on Cancer accreditation.

Our cancer centers are designed to house and geographically integrate our cancer services to harness the efforts of over 1,200 cancer center faculty including cancer surgeons, radiation oncologists, hematologists, medical oncologists and many more physicians specializing in other disciplines. Our cancer education programs include residencies in radiation oncology and fellowships in hematology and medical oncology. Mayo Clinic offers many clinical trial options across all sites.

## REFER A PATIENT



### Jacksonville, Florida

800-634-1417



### Phoenix/Scottsdale, Arizona

866-629-6362



### Rochester, Minnesota

800-533-1564

Use our referring provider portal to submit referral requests and view your patients' Mayo Clinic medical records at the same time we do.

In addition, access to resources including clinical trials, CME, Grand Rounds, and scientific articles and videos are available.

[mayoclinic.org/medical-professionals](http://mayoclinic.org/medical-professionals)

## INSURANCE

[mayoclinic.org/insurance](http://mayoclinic.org/insurance)

## CONTINUOUS PROFESSIONAL DEVELOPMENT

[ce.mayo.edu](http://ce.mayo.edu)

## CLINICAL TRIALS

[www.mayo.edu/research/clinical-trials](http://www.mayo.edu/research/clinical-trials)

## MAYO CLINIC LABORATORIES

[mayocliniclabs.com](http://mayocliniclabs.com)

## PROTON BEAM THERAPY PROGRAM

The centerpiece of our new integrated cancer center is the proton beam therapy program. Proton beam therapy is available at our campuses in Arizona and Minnesota. Proton beam delivers a small pencil beam with extreme accuracy propelled by a particle accelerator guided by magnets. We also offer most other forms of radiotherapy, intra-operative radiotherapy, brachytherapy, 3D radiotherapy, intensity modulated radiotherapy and radiosurgery.

## CLINICAL SERVICES

Offering comprehensive cancer care delivery, our cancer care disease group clinics, and several multidisciplinary clinics leverage the comprehensive nature of the Mayo Clinic staff in addition to using our NCI Grant supporting Phase I/Early Therapeutics Program development, and our portfolio of over 150 interventional therapeutic trials. Mayo Clinic Laboratories ensures physicians receive the right test, for the right patient, at the right time. Patients benefit from faster results achieved through efficient transportation and processing of specimens.

Additionally, imaging resources led by Mayo Clinic radiology include one of the first PET MRI machines in the nation, a cyclotron for generating unique radioisotopes for imaging including C11-Choline for prostate cancer, as well as the full complement of standard techniques required for state-of-the-art cancer care.

## CLINICAL TRIALS

As an NCI-designated Comprehensive Cancer Center, Mayo Clinic Cancer Center faculty are dedicated to improving outcomes for cancer patients through clinical trials.

- ▶ Mayo Clinic Cancer Center offers innovative, impactful, and unique cancer clinical trials from early phase I through phase III that offer new options, sometimes not available elsewhere, for patients with cancer.
- ▶ Cancer Clinical Trials – 1-855-776-0015

## Early Cancer Therapeutics Clinic

The Early Cancer Therapeutics Clinic at Mayo Clinic offers patients whose cancers haven't responded to standard chemotherapy or other treatments the opportunity to join an early phase clinical trial.

The Early Cancer Therapeutics Clinic provides access to the most current phase I trials available from Mayo Clinic researchers, pharmaceutical companies and the National Cancer Institute. The clinic is available at all three Mayo Clinic campuses in Arizona, Florida and Minnesota.

- ▶ Early Cancer Therapeutics Clinical Trials – 1-855-776-0015

## CANCER CARE DISEASE GROUPS/CLINICS

- ▶ Benign Hematology
- ▶ Blood and Marrow Transplant
  - Pediatrics in collaboration with Phoenix Children's Hospital
- ▶ Breast Cancer
- ▶ Coagulation Disorders
- ▶ Cutaneous Malignancies (Melanoma)
- ▶ Endocrine Cancers
- ▶ Cancer Genetics
- ▶ Gastrointestinal Malignancies
  - Colorectal
  - Esophageal
  - Gastric
  - Hepatobiliary
  - Neuroendocrine
  - Neuroendocrine Tumors
    - Appendix
    - Lung
    - Pancreas
    - Rectum
    - Small intestines
  - Pancreatic
- ▶ Genitourinary Malignancies
  - Bladder
  - Prostate
  - Renal
  - Testicular
- ▶ Gynecological Malignancies
- ▶ Head & Neck Cancers

- ▶ Hematologic Malignancies
  - Acute Leukemias
  - Chronic Lymphocytic Leukemias
  - Lymphoma
  - Myeloma and Dysproteinemia
  - Myeloproliferative Neoplasms & Myelodysplastic Syndromes
- ▶ Lung/Thoracic Malignancies
- ▶ Neuro-Oncology
- ▶ Palliative Medicine
- ▶ Sarcomas

## MULTI-DISCIPLINARY CLINICS AND PROGRAMS

- ▶ Cancer Wellness  
(In conjunction with Integrative Medicine/Integrative Oncology)
  - Cancer Nutrition
  - Cancer Patient Education
  - Cancer Rehabilitation
  - Cancer Survivors Clinic
  - Palliative & Supportive Care Medicine
  - Psychiatry & Psychology
  - Social work
- ▶ Acoustic Neuroma and Skull Base program
- ▶ Breast Center (Diagnostics/Screening/High Risk)
- ▶ Cardio-Oncology
- ▶ Cutaneous T Cell Lymphoma Clinic
- ▶ Dermato-Oncology
- ▶ Graft vs. Host Disease Clinic
- ▶ Gynecologic Cancer
- ▶ Head & Neck Surgery Clinic
- ▶ Hepatocellular Clinic
- ▶ Neuro-Oncology Program
- ▶ Ophthalmology Clinic
- ▶ Pituitary Program

# BLOOD CANCERS AT MAYO CLINIC

Mayo Clinic's model of care gives hematologists direct, expedited access to multiple specialties to provide an integrated approach and individualized care. As one of the country's leading medical facilities for the diagnosis and management of blood disorders, Mayo Clinic combines personalized cancer treatment, leading-edge research and internationally recognized leaders in blood disorders to provide a better approach to cancer care. Mayo Clinic Cancer Center offers medical professionals the opportunity to refer and follow patients as well as access to medical education offered by key specialists.

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866-629-6362



### Rochester, Minnesota

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[mayoclinic.org/medical-professionals](https://mayoclinic.org/medical-professionals)

## WHY CHOOSE MAYO CLINIC FOR BLOOD CANCER CARE?

- ▶ Mayo Clinic specialists treat high volumes of complex and rare blood disorders and cancers
- ▶ Mayo Clinic hematologists collaborate extensively with referring physicians in ongoing patient care, leading to an unmatched partnership that benefits our mutual patients
- ▶ Research and treatment advances for lymphoma, chronic lymphocytic leukemia and multiple myeloma through National Institutes of Health Specialized Programs of Research Excellence (SPOREs), translates into knowledge for patient care and one of the largest patient databases
- ▶ Access to novel compounds available via Mayo Clinic investigator-initiated clinical trials

## CUTTING-EDGE TREATMENTS

- ▶ The Early Cancer Therapeutics Group at Mayo Clinic provides access to the most current phase I trials available from pharmaceutical companies and the National Cancer Institute
- ▶ Stem cell transplants
- ▶ Cellular therapies including chimeric antigen receptor T-cell (CAR-T cell) therapies
- ▶ Mayo Clinic led pivotal clinical trials using novel therapeutics (siRNA targeted drugs) for TTR amyloidosis

## BLOOD CANCER EXPERTISE

Blood cancer specialists at Mayo Clinic have expertise in diagnosing and treating all types of diseases and conditions that affect the blood, including very rare conditions. Our teams include hematologists, hematopathologists, pediatric hematologists, pathologists, radiation oncologists and bone marrow transplant specialists along with other specialists.

Referred patients have access to distinctive Mayo Clinic resources, including:

- ▶ Specialists with expertise in the diagnosis and management of complex and rare blood cancers
- ▶ The most advanced lab technologies to assist in diagnosis and management of a wide range of hematologic diseases (MRD testing, MASS-FIX, mate pair sequencing, genomic testing)
- ▶ Innovative imaging techniques including cardiac MRI and PYP SPECT
- ▶ Unique Mayo Clinic investigator-initiated clinical trials
- ▶ Unique expertise and care options for rare dysproteinemias (POEMS syndrome, MGUS related neuropathy, amyloidosis) through Mayo Clinic's integrated, cross-specialty care
- ▶ Stem cell transplant outcomes reported nationally by the Center for International Blood and Marrow Transplant Registry® (CIBMTR) are consistently at or above expected metrics

## ADVANCING PRACTICES

- ▶ Active physician participation in Mayo Clinic's continuously expanding research and unique treatment and clinical trial opportunities
- ▶ Mayo Clinic is at the forefront of groundbreaking hematology research in disease management and new drug discovery
- ▶ Mayo Clinic physicians with expertise in research have created risk adapted therapies for international staging systems for the treatment of multiple myeloma
- ▶ Mayo Clinic's cancer registry is the foundation upon which Mayo researchers improve care through the collection of information about cancer diagnoses, treatments and outcomes, which leads to innovation in patient care

## INHERITED CANCERS CLINIC

- ▶ Personalized risk assessment for cancer and tumors
- ▶ Coordination of genetic testing
- ▶ Tailored cancer screening recommendations
- ▶ Communication of information through the family
- ▶ High-risk, follow-up cancer screening
- ▶ Discussion at tumor board for complex cases involving medical and surgical decision making

## REFERRING PROVIDER PORTAL

Use our referring provider portal to submit referral requests and view your patients' Mayo Clinic medical records at the same time we do.

[mayoclinic.org/medical-professionals](https://mayoclinic.org/medical-professionals)

## APPOINTMENT SCHEDULING AND FOLLOW-UP COMMUNICATION

Mayo Clinic works directly with patients to schedule their appointment. Once your patient is seen at Mayo Clinic, you'll have access to medical records and summary reports.

## INSURANCE

Mayo Clinic has agreements with many insurance carriers, third-party administrators and employers. Patients should check with their insurance plan for specific coverage details before confirming an appointment with our scheduling office.

[mayoclinic.org/insurance](https://mayoclinic.org/insurance)

## CONTINUOUS PROFESSIONAL DEVELOPMENT

Mayo Clinic School of Continuous Professional Development offers a unique learning experience for today's health care professional. Educational activities enhance and enrich your medical knowledge and improve your service to the patient.

[ce.mayo.edu](https://ce.mayo.edu)

## CLINICAL TRIALS

Research is an integral part of Mayo Clinic. Mayo Clinic physicians are actively engaged in a wide range of novel clinical research, offering patients promising experimental agents and devices. Mayo Clinic investigators work together with you to optimize patient care.

[www.mayo.edu/research/clinical-trials](https://www.mayo.edu/research/clinical-trials)

## MAYO CLINIC LABORATORIES

Mayo Clinic Laboratories (MCL) is the global reference laboratory of Mayo Clinic. MCL provides highly specialized testing and pathology consultation across all medical subspecialties for patients around the world.

[mayocliniclabs.com](https://mayocliniclabs.com)

# CAR-T Cell Therapy

## IMMUNE THERAPY CREATED FOR EACH PATIENT'S NEEDS

Chimeric antigen receptor (CAR)-T cell therapy is a promising new treatment for cancers of the blood — an individualized therapy that harnesses the power of the immune system by genetically modifying cells to enable them to kill cancer. In some cases, CAR-T cell therapy may even be curative.

## WHY CHOOSE MAYO CLINIC FOR CAR-T CELL THERAPY CARE

- Mayo's CAR-T Cell Therapy Program is one of a few in select medical centers with experts trained and certified to use both Food and Drug Administration (FDA)-approved CAR-T cell therapies — axicabtagene ciloleucel and tisagenlecleucel — in clinical practice. These new CAR-T cell therapy products offer new hope to patients whose blood cancers are not responding to the conventional chemotherapies and stem cell transplants.
- At Mayo Clinic, CAR-T Cell Therapy Program specialists consult with you and their colleagues about your patient's condition and recommend treatment options based on their experience and evidence-based medicine. Mayo Clinic experts treated patients in the landmark clinical trial ZUMA-1 that led to FDA approval of axicabtagene ciloleucel to treat adults with non-Hodgkin lymphoma.
- Mayo Clinic Cancer Center offers innovative, impactful, and unique cancer clinical trials that offer new options, sometimes not available elsewhere, for patients with cancer.
- Mayo Clinic finds answers for patients with cancers through tailor-made treatments and new immunotherapy agents. Mayo invests in medical discovery, large-scale clinical trial activity, and recruitment of the world's best and brightest cancer experts to accelerate the impact these therapeutic breakthroughs make for patients and families.

## CAR-T CELL THERAPY IS A MULTISTEP PROCESS

- White blood cells are collected from the patient's blood.
- T cells are grown in the laboratory and engineered to make a new protein called a chimeric antigen receptor. The CAR enables a T cell to recognize a cancer cell that expresses the antigen.
- In FDA-approved CAR-T cell therapy, the CAR enables the patient's own T cells to recognize blood cells that express CD19.
- Each patient receives chemotherapy to prepare his or her body to receive CAR-T cells.
- The engineered CAR-T cells are infused back into the patient's body and are highly effective at killing the cancer cells in the body.

## REFER A PATIENT

### Jacksonville, Florida

904-956-3309

### Phoenix/Scottsdale, Arizona

480-342-1927

### Rochester, Minnesota

507-284-8707

Use our referring provider portal to submit referral requests and view your patients' Mayo Clinic medical records at the same time we do.

In addition, access to resources including clinical trials, CME, Grand Rounds, and scientific articles and videos are available.

[mayoclinic.org/medical-professionals](https://www.mayoclinic.org/medical-professionals)

## CAR-T CELL THERAPY

[mayoclinic.org/cartcelltherapy](https://www.mayoclinic.org/cartcelltherapy)

## INSURANCE

[mayoclinic.org/insurance](https://www.mayoclinic.org/insurance)

## CONTINUOUS PROFESSIONAL DEVELOPMENT

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## FDA-APPROVED USE OF CAR-T CELL THERAPY

FDA-approved conditions for CAR-T cell therapy include:

- B-cell precursor acute lymphoblastic leukemia (B-ALL) for patients up to 25 years of age
- Diffuse large B-cell lymphoma (DLBCL)
- Primary mediastinal large B-cell lymphoma
- Large B-cell lymphoma transformed from follicular lymphoma
- High-grade B-cell lymphoma
- Large B-NHL transformed from indolent lymphoma
- Mantle cell lymphoma
- Follicular lymphoma
- Multiple myeloma

Patients typically must have already failed standard of care chemotherapies to be eligible for consideration for CAR-T cell therapy.

## REQUEST A CONSULTATION

Mayo Clinic's CAR-T Cell Therapy Program offers medical professionals the opportunity to refer and follow patients and to access medical knowledge and education from key specialists.

Mayo Clinic hematologists are available to discuss possible referrals and whether CAR-T cell therapy may be an appropriate treatment option for your patient. Appointments for consultation are available Monday through Friday from 8 a.m. to 5 p.m. local time at each campus.

Mayo Clinic is typically able to offer an appointment for consultation within two weeks with a provider who specializes in your patient's type of cancer or medical condition.

Evaluation for CAR-T cell therapy is a complex process involving experts from multiple specialties. Each patient's overall health condition and ability to safely complete the therapy need to be evaluated in addition to the patient's specific cancer condition. Mayo Clinic specialists can complete this evaluation rapidly and thoroughly.

When referring a patient for CAR-T cell therapy please provide Mayo Clinic with the following:

- Most recent Hematology or relevant specialty clinical note
- Recent pathology reports and samples
- Recent imaging

[mayoclinic.org](http://mayoclinic.org)

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## THE INNOVATIVE PATIENT EXPERIENCE INCLUDES

- Pre-visit videos to set patient expectations
- Workbooks and patient education outlining each step in the process
- Nurse or referral coordinators to help guide care
- An online community for patients and caregivers to share their experiences and ask questions
- Wellness and resiliency resources
- 24/7 access to care teams

## FUTURE OF CAR-T CELL THERAPY: BEYOND BLOOD CANCERS

Mayo Clinic has an active and rapidly expanding research program in CAR-T cell therapy. Current active clinical trials examine the use of CAR-T cell therapy earlier in the management of leukemia and lymphoma and in other blood cancers such as multiple myeloma.

Researchers at Mayo Clinic also are identifying ways to manage the side effects of CAR-T cell therapy more safely.

Researchers across all three Mayo Clinic sites are working to develop new targets for blood cancers, solid tumors and even autoimmune diseases such as colitis. The hope is to bring these advances into clinical trial testing within the next couple years.

# BLOOD AND MARROW TRANSPLANT PROGRAMS

Mayo Clinic's blood and marrow transplant program is one of the largest and most experienced in the country. Transplant teams in Arizona, Florida and Minnesota perform more than 700 adult and pediatric blood and marrow transplants each year. Mayo Clinic is recognized as a leader in transplant outcomes, and all three campuses are accredited by the National Marrow Donor Program and the Foundation for the Accreditation of Cellular Therapy.

## MAYO CLINIC MODEL OF CARE

Mayo Clinic is internationally-recognized for having teams of experts who work together to provide the best possible outcome for complex patients. This means that an entire team of physicians focuses on one patient at a time. It also extends to the collaboration with local physicians and their staff who play a vital role in patients' care before and after transplantation.

### REFER A PATIENT



**Jacksonville, Florida**  
800-634-1417



**Phoenix/Scottsdale, Arizona**  
800-344-6296



**Rochester, Minnesota**  
800-533-1564

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[mayoclinic.org/medical-professionals](https://www.mayoclinic.org/medical-professionals)

### VISIT OUR WEBSITE

[mayoclinic.org/bone-marrow-transplant](https://www.mayoclinic.org/bone-marrow-transplant)

## BLOOD AND MARROW TRANSPLANT PROGRAM

- ▶ Matched and mismatched related and unrelated allogeneic blood and marrow transplants, umbilical cord blood transplants, haploidentical transplants, and autologous transplants
- ▶ Myeloablative and reduced-intensity (non-myeloablative) transplants
- ▶ Innovative therapies and clinical trials
- ▶ Specialists following patients before, during and after transplant to ensure best results and quality of care
- ▶ Comprehensive post-transplant protocol to quickly identify problems and enable early intervention, in partnership with local physicians
- ▶ Blood and marrow transplants are performed for a wide variety of malignant and non-malignant hematologic disorders

## BLOOD AND MARROW TRANSPLANT TEAMS

### Arizona

Jeanne M. Palmer, MD, *Medical Director, Adult Program*  
Roberta H. Adams, MD, *Medical Director, Pediatric Program*  
Leif Bergsagel, MD  
Januario E. Castro, MD  
Rafael Fonseca, MD  
Nandita Khera, MD  
Jeremy T. Larsen, MD  
Jose F. Leis, MD, PhD  
Pierre Noel, MD  
Craig B. Reeder, MD  
James L. Slack, MD  
Lisa O. Sproat, MD  
Keith Stewart, MB, ChB

### Florida

Mohamed A. Kharfan Dabaja, MD, MBA,  
FACP, *Medical Director, Adult Program*  
Michael J. Joyce, MD, *Medical Director, Pediatric Program*  
Ernesto Ayala, MD  
James M. Foran, MD  
Vivek Roy, MD

### Minnesota

William J. Hogan, MD, *Medical Director*  
Hassan Alkhateeb, MD  
Stephen M. Ansell, MD, PhD  
Francis K. Buadi, MD  
David Dingli, MD, PhD  
Angela Dispenzieri, MD  
Morie A. Gertz, MD  
Wilson Gonsalves, MD  
Suzanne R. Hayman, MD  
David J. Inwards, MD  
Patrick B. Johnston, MD, PhD  
Prashant Kapoor, MD  
Saad J. Kenderian, MB, ChB  
Taxiarchis Kourelis, MD  
Shaji Kumar, MD  
Martha Q. Lacy, MD  
Mark R. Litzow, MD  
Ivana N. Micallef, MD  
Eli Muchtar, MD  
Luis F. Porrata, MD  
Mithun Shah, MD, PhD  
Jose C. Villasboas Bisneto, MD  
Rahma Warsame, MD

## PEDIATRIC BLOOD AND MARROW TRANSPLANT

Shakila Khan, MD, *Medical Director*  
Vilmarie Rodriguez, MD, *Associate Medical Director*  
Carola A. S. Arndt, MD  
Richard J. Bram, MD, PhD  
Paul J. Galardy, MD  
Amulya A. Nageswara Rao, MBBS  
Deepti M. Warad, MBBS

## APPOINTMENT SCHEDULING AND FOLLOW-UP COMMUNICATION

Mayo Clinic works directly with patients to schedule their appointment, and coordinates with their referring physician for follow-up regarding outcomes of their visit.

## LONG-TERM HOUSING

The Gabriel House of Care in Florida, Gift of Life Transplant House in Minnesota, Help in Healing Home at the Village at Mayo Clinic in Arizona are available to transplant patients looking for a home-like environment who require long-term medical care away from home.

## CLINICAL TRIALS

Research is an integral part of Mayo Clinic. Mayo Clinic physicians are actively engaged in a wide range of novel clinical research, offering patients promising experimental agents and devices. Mayo Clinic Investigators work together with the referring physician to optimize patient care.

[clinicaltrials.mayo.edu](https://clinicaltrials.mayo.edu)

## INSURANCE

Mayo Clinic has agreements with many insurance carriers, third-party administrators and employers. Our appointment office and financial teams will discuss insurance coverage with patients prior to their appointment.

[mayoclinic.org/insurance](https://mayoclinic.org/insurance)

## CONTINUOUS PROFESSIONAL DEVELOPMENT

Mayo Clinic School of Continuous Professional Development offers a unique learning experience for today's health care professional. Educational activities enhance and enrich your medical knowledge and improve your service to the patient.

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