

THE UNIVERSITY OF KANSAS

CANCER CENTER



Report to the Kansas Legislature

January 2021

Introduction

The University of Kansas Cancer Center operates as a matrix organization spanning cancer research, education and clinical care. Key entities include the KU Medical Center campuses in Kansas City, Wichita and Salina; the University of Kansas in Lawrence and its School of Pharmacy; The University of Kansas Health System; and the Masonic Cancer Alliance (MCA). The MCA is the outreach arm of the cancer center and extends the latest cancer research and clinical trials across the state enabling patients to receive leading-edge care close to home.

Vision

Under the leadership of its director, Roy A. Jensen, MD, the cancer center has established the following vision:

- Develop paradigm-changing therapeutic advances
- Leverage multi-disciplinary discovery and translational programs to understand cancer at a fundamental level and enable a comprehensive approach to improve cancer outcomes and quality of life
- Focus on cancer prevention and control strategies
- Establish an institutional culture that trains the next generation of leaders in cancer research, clinical care and advocacy
- Lead efforts locally and nationally to reduce the burden of cancer

Our Challenge

During the next 10 years, the incidence of cancer is projected to increase by 45 to 50 percent. Over our lifetime, 1 in 2 men and 1 in 3 women will be diagnosed with cancer. Cancer is one of the leading causes of death in both Kansas and Missouri due to several factors:

- Aging population
- Obesity
- Tobacco use
- HPV (human papillomavirus)

Individuals without health insurance at the time of cancer diagnosis face a 50 percent less chance of survival.

National Cancer Institute Designation

Through world-class research and patient care, The University of Kansas Cancer Center is working towards a world without cancer. As one of only 71 National Cancer Institute (NCI)-designated cancer centers in the country, KU Cancer Center is committed to providing the highest level of research, treatment, prevention and survivorship services available. The cancer center has over 350 cancer researchers and 150 disease-specific oncologists.

Why NCI Designation is Important

NCI designation is only awarded to the nation's premier cancer research and treatment centers. These centers are pioneers in cancer research, recognized for scientific leadership, resources and depth of research in basic, clinical and population science.

The numbers speak for themselves....

A 2009 study led by researchers at Dartmouth compared mortality rates at NCI cancer centers against non-NCI centers, and found that mortality at both one year and three years after a cancer diagnosis was “significantly” reduced for patients at NCI cancer centers. The likelihood of **mortality one year after a diagnosis among NCI cancer center patients was about 25 percent lower** compared to patients at other centers.

A more recent study conducted by University of California, Davis and Stanford University found that patients with acute myeloid leukemia (AML) who received treatment at an NCI-designated cancer center in California **reduced their risk of early mortality by 53 percent**. The authors pointed out that consistent supportive care, access to clinical trials and more sophisticated, intensive care units may have contributed to the dramatic difference.

Finally, researchers at City of Hope assessed care at NCI Comprehensive Cancer Centers in southern California compared to regional health systems not NCI-designated. “NCI Comprehensive” is the highest level of designation a cancer center can receive, and there are only 51 such centers in the United States. Their findings? Adults with a newly diagnosed cancer who were treated at a Comprehensive center experienced “superior” survival compared to those treated at a non-Comprehensive center. After adjusting for sociodemographic and clinical variables, there was a **20 to 50 percent increased risk of mortality for those not treated at an NCI-designated Comprehensive Cancer Center**.

NCI Designation Transforms our Region

Each year, approximately 16,000 Kansans are diagnosed with cancer. The University of Kansas Cancer Center's NCI designation allows these patients to remain close to home while receiving the most advanced cancer care from a multidisciplinary team of specialists.

Next Leg of the Journey: NCI Comprehensive Cancer Center Designation

In 2017, the National Cancer Institute (NCI) renewed The University of Kansas Cancer Center's designation increasing our score from "excellent" to "outstanding." Just as significant, Children's Mercy joined the Stowers Institute for Medical Research as a formal NCI consortium partner.

December 2020 marks approximately 200 days until the next NCI application due date. Cancer center leaders developed a strategic plan outlining the roadmap for 2021 when we will reapply for NCI Comprehensive Cancer Center status.

That roadmap includes the core features that make up all NCI Comprehensive Cancer Centers:

- Drive scientific discovery
- Translate discovery to benefit patients
- Change the practice of medicine
- Impact public policy
- Train the next generation of scientists

Defining the Cancer Treatments of Tomorrow

NCI centers provide the best care known to medicine and continuously elevate the standards in cancer care. This means our physicians are not only offering the most innovative cancer treatment available, they are defining the cancer treatments of tomorrow. No other cancer program in the region can match the depth and breadth of our 350 cancer researchers and clinicians.

We have 150 disease-specific oncologists, and physicians and surgeons who have extensive training encompassing all aspects of cancer care. For example, if you are diagnosed with breast cancer, your team will include a breast medical oncologist, breast radiologist, breast pathologist and breast cancer surgeon. Because we are so highly specialized, we had 20,656 new cancer patient visits last year.

350

Cancer Researchers
& Clinicians

150

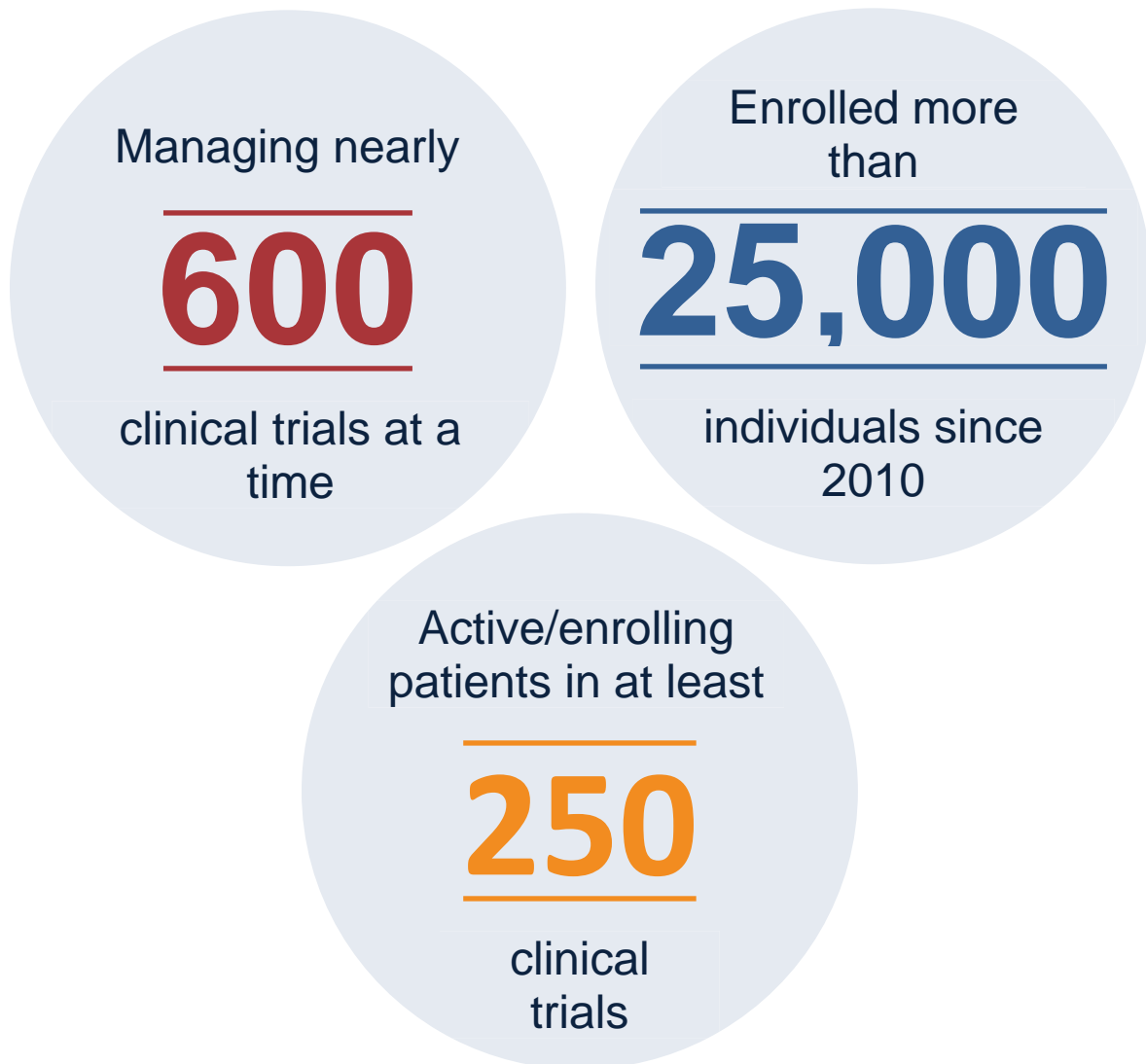
Disease-specific
Oncologists

20,656

New Cancer Patient Visits

Spearheading Clinical Research

To raise the bar of care across all cancer types, we lead clinical research trials to find ways to prevent, treat and cure cancer. Typically, we manage nearly 600 clinical trials at a time and are participating in 250+ active and enrolling trials. Since 2010, we have enrolled more than 25,000 individuals in clinical trials. Our investigators also initiate clinical trials to find better and more innovative ways to treat cancer.



Preventing Cancer in our Rural/Frontier Communities

People in rural areas get cancer less often but die from it at higher rates. This is in part due to distance of care. The University of Kansas Cancer Center closes the gap by partnering with allied health care professionals via tele-technology to provide specialized training and education, collaborating with community members to support research and cancer control efforts and advancing research to better understand the differences in health outcomes and increasing clinical trial access across our catchment area.

REACHING RURAL COMMUNITIES

Research shows that better access to quality care may reduce disparities in survival between cancer patients in rural areas and those in urban areas.

CHALLENGES



Lack of screening, treatment access



Shortage of rural oncologists



Higher rates of behavioral risk factors (smoking, high BMI, low physical activity)



Lack of or no transportation, extreme distances, weather conditions



Lack of, inadequate or no insurance coverage

HOW CAN WE CLOSE THE GAP?

PARTNER VIA TECHNOLOGY

The cancer center's outreach network, the Masonic Cancer Alliance (MCA), connects clinicians and allied health professionals with specialized cancer care training and support.

- In 2019, MCA provided 1,586 continuing education credits to its members
- Efficacy of Point of Service Testing in Breast Cancer (ePOST BC) telermentoring program
- KanSurvive, telehealth-based education to promote best practices and shared-care model between primary and cancer care providers



ENGAGE COMMUNITY

Partner with community members, survivors and co-survivors to support research and cancer control.

- Facilitate four regional cancer coalitions across Kansas*
- Patient research advocacy program, PIVOT, connects researchers to survivors/co-survivors using televideo-based programs
- Gynecologic Cancer Patient Mentorship program



ADVANCE RESEARCH**

Rural-tailored research aims to better understand the differences in outcomes, as well as increase clinical trial access.

- RePower (Rural Engagement in Primary Care for Optimizing Weight Reduction)
- KPPEPR (Kansas Patients and Providers Engaged in Prevention Research)
- Only rural Minority Underserved NCORP (National Cancer Institute's Community Oncology Research Program) site



*Supported by Centers for Disease Control and Prevention (grant # DP17-1701)

**Study of ~ 37,000 patients: Urban and rural cancer patients have similar survival outcomes when enrolled in a clinical trial.

Top Five Cancers in Our Catchment Area

Incidence	Mortality
Breast	Lung
Lung	Colon
Prostate	Pancreas
Colon	Breast
Melanoma	Prostate



Retaining Cancer Patients in Kansas

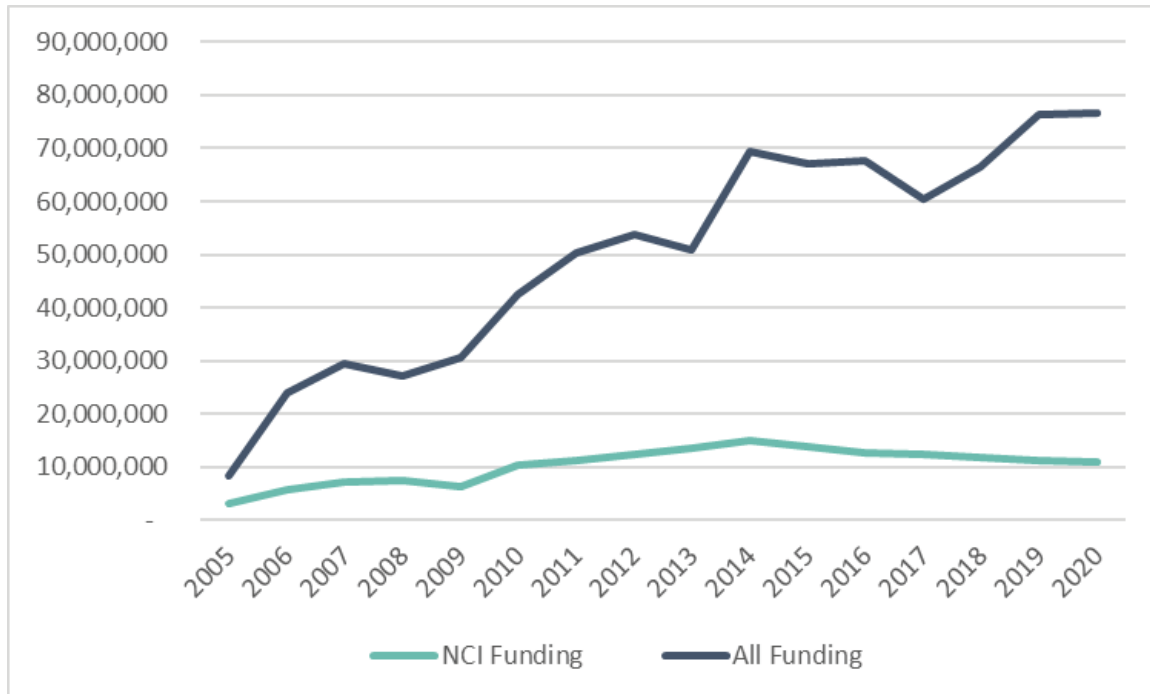
Historically, some people chose to travel to Houston or Rochester, Minn., to receive world-class cancer care. Those with financial means would leave the state for care while the average Kansan would go without access to leading-edge treatments.

Since achieving NCI designation in 2012, we have seen a significant decrease in patients leaving the state for their cancer care.



Cancer Related-Funding

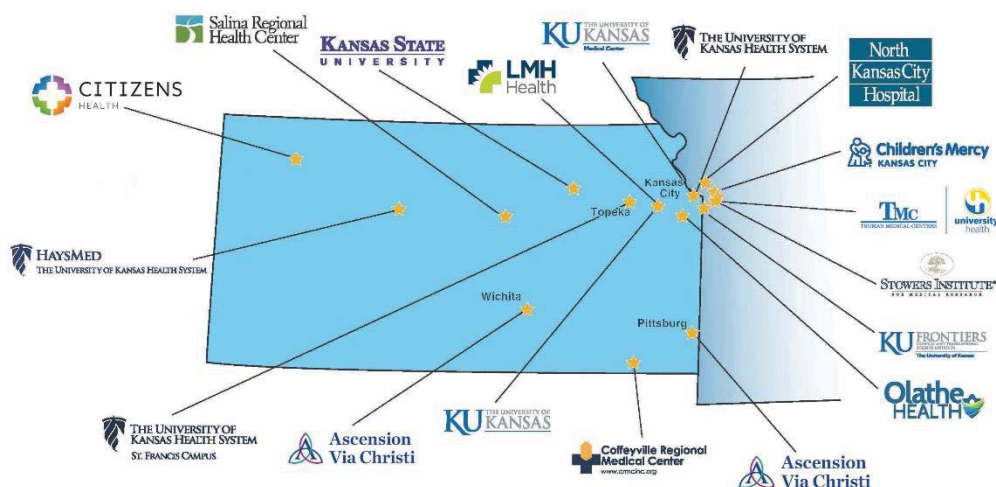
In 2004, KU Cancer Center had a total of \$23 million in total cancer-related research funding, of which \$4.9 million was from the NCI. In 2020, KU Cancer Center garnered about \$11 million in NCI funding and a total of \$76.5 million in overall funding.



Masonic Cancer Alliance

The Masonic Cancer Alliance (MCA) is a membership-based organization that brings together cancer research, care and support professionals to advance the quality and reach of cancer prevention, early detection, treatment, and survivorship in the Heartland.

The MCA links The University of Kansas Cancer Center research and services with member hospitals, medical professionals and their patients so that the latest cancer research and care can be found close to home.



- **Tele-Oncology:** Televideo-based system for on-site patient consultations with oncology teams at KU Cancer Center and continuing education for professionals.
- **Patient Navigation:** Assistance from trained MCA Patient Navigator in developing a customized system by which trained health professionals proactively guide patients through community health resources to get the care they need.
- **Survivorship Transition Clinic:** To address the needs of adult survivors of pediatric cancers, Children's Mercy and KU Medical Center work with childhood cancer survivors entering young adulthood to facilitate communication with oncologists and primary care providers to address the impact of late effects of cancer care.
- **Clinical Trials:** Information about the latest research protocols including Phase I to III therapeutic and prevention trials.
- **Biobanking:** The MCA's Biobank Coordinator assists members to procure specimens for the purpose of research.
- **Outreach Programs and Events:** Individualized prevention, screening, early detection, and survivorship programs and events co-sponsored by the MCA and member institutions.

- **Patient and Investigator Voices Organizing Together (PIVOT):** Infuses greater patient engagement in all aspects of research through a KU Cancer Center-supported research advocacy network.

Promoting Good Public Policy

KU Cancer Center is committed to promoting policies that have the potential to save lives and decrease the incidence of cancer. KU Cancer Center advocated strongly in support of multiple issues, including:

- Effective advocacy in Washington for biomedical research funding
- \$10 million from State of Kansas
- Clean Indoor Air
- Clinical Trials coverage mandate
- Oral Chemotherapy Bill
- Breast Cancer Check-Off/License Plate
- Johnson County Education and Research Tax
- Kansas Tobacco Tax
- Indoor Tanning
- Tobacco 21
- Kansas Radon Program
- HPV vaccinations



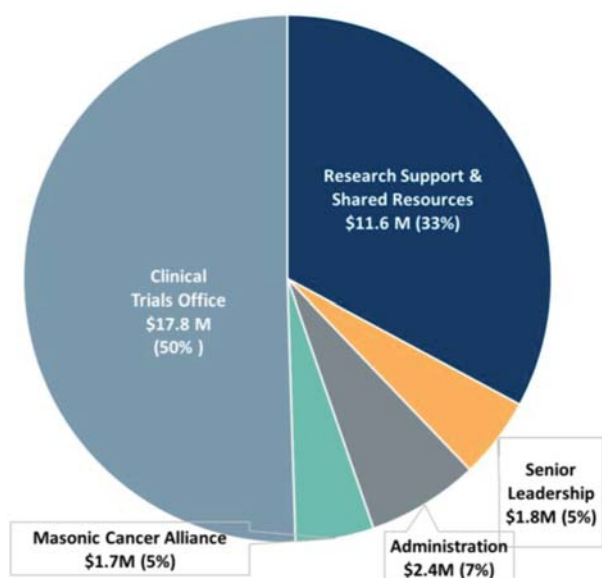
Critical Role of the State Investment

The state of Kansas, the legislature and the governor have been strong supporters of the quest for NCI since 2007. We simply would not have achieved NCI designation without the support of the state. In 2020, the legislature approved an additional \$5 million from the state budget for the KU Cancer Center Research Fund and signed by Governor Laura Kelly. These additional funds are crucial to the KU Cancer Center's competitive application for NCI Comprehensive cancer center designation in September 2021.

The \$10 million in annual support funds activities that donors are unlikely to fund include:

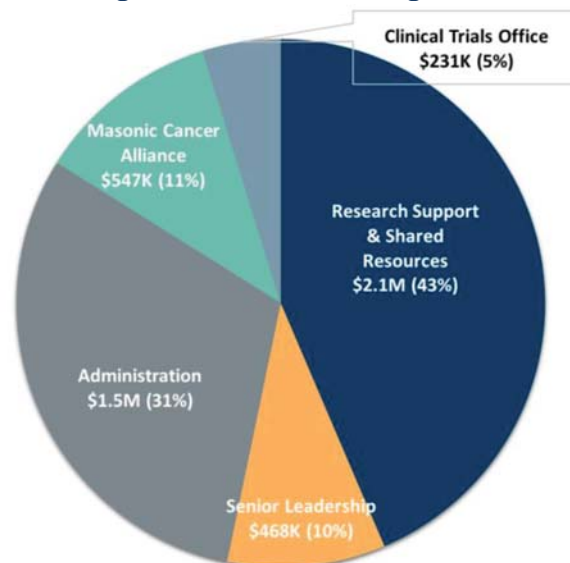
- **Senior Leadership:** Salary support for key scientific leaders, including Roy A. Jensen, MD.
- **Recruitment:** Recruit 29 new cancer researchers who would bring or create \$56 million in new cancer research funding and create 60 new research staff positions.
- **Clinical Trials Office:** Growing the cancer clinical trials office, which supports 250+ active and enrolling trials to ensure leading-edge therapies and drugs are available to patients in Kansas.
- **Masonic Cancer Alliance:** Organizations from across the region collaborate with KU Cancer Center to connect communities to research. MCA supports members in building clinical trials infrastructure, and as a result they can enroll patients on research trials in their own local communities.
- **Administration:** Supporting operations and administrative infrastructure that are the foundation of the Center.
- **Research Support & Shared Resources:** We are committed to ensuring our researchers' success. For example, since 2012, our Grants Development Office has helped researchers in the submission of 750 grants resulting in more than \$94.4 million awarded from a variety of funding agencies. In addition, we provide our researchers with start-up funds to advance cancer research initiatives.

\$35.2M FY21 Cancer Center Operations Budget



14% of KUCC
Operations
Budget Funded
by State

Usage of \$4.8M State Budget



Cancer Research Grant Matching Funds

The cancer center continues to strive to diversify our funding sources. See the table below for our university research grant matching funds for FY20. (State requires 1:1 match for \$5 million grant.)

	FY 20 Funding Sources	Percentage
Shared Resource Service Fees	\$6,091,771	41%
NCI Cancer Center Support Grant	\$3,761,046	26%
Masonic Cancer Alliance Fees	\$1,000,000	7%
Philanthropy	\$3,871,819	26%
	\$14,724,636	100%