

Division of Cancer Prevention and Population Sciences

MD Anderson Cancer Center is one of the world's most respected centers devoted exclusively to cancer patient care, research, education and prevention. Created by the Texas Legislature in 1941 as a component of [The University of Texas System](#), the institution is one of the nation's original three Comprehensive Cancer Centers designated by the National Cancer Act of 1971. Today MD Anderson Cancer Center is one of 41 such institutions across the country.

MD Anderson has initiated a multifaceted approach to cancer prevention and risk assessment. Expanding research efforts in **epidemiology** and **behavioral science** complement achievements made in **clinical cancer prevention**. Laboratory activities support developmental and practical applications of cancer prevention. Research programs focus attention on disparities in prevention and care among ethnic minorities and medically underserved populations and translate discoveries into real world settings through our **health disparities research** department. Both the growing need to develop strategies to answer key national and institutional questions regarding cancer care delivery and the need to demonstrate "value" in health care and, specifically, in the cancer care cycle of prevention, intervention and survivorship, contributed to the decision to establish a department of **health services research**.



The cancer prevention program, one of the foremost in the world, is one of MD Anderson's many innovations. Our experts understand that the mission to eradicate cancer worldwide can never fully be achieved without a complete understanding of the biological mechanisms, environmental influences and behavioral factors that lead to cancer development and progression — and the ability to hinder or halt the impact of these factors before cancer develops. The division's research efforts are supported by grants and contracts from federal, state, pharmaceutical, foundation and philanthropic partners. Annual division expenditures have increased by 42 percent since 2004, with 80 percent of our research support coming from the National Institutes of Health.

The **Cancer Prevention Center** provides evidence-based cancer screening and personalized risk-reduction services. It houses the Undiagnosed Breast Clinic to assess and diagnose breast abnormalities, and the Undiagnosed Dermatology Clinic to evaluate skin changes and irregularities. The MD Anderson Patient History Database used in the Center provides a standardized foundation of data to develop personalized risk assessments.

The **Cancer Prevention Research Training Program** prepares health scientists and clinicians to assume leadership roles as research investigators in the field of cancer prevention. The program's multidisciplinary emphasis expands the perspective of the trainees by moving from their base of strength in a particular specialty to equip them with basic knowledge in the other disciplines in cancer prevention research. Trainees learn the relevant principles, research methods and analytic approaches — this multidisciplinary training is accomplished through specific graduate courses, our seminar series, and by participation in ongoing peer-reviewed, mentored research.



The **Duncan Family Institute** serves to foster collaboration aimed at breaking new ground in cancer prevention. Scientists affiliated with the Institute are discovering the roles and effects of the interaction of biologic, genetic, environmental, behavioral and social factors in cancer development, investigating new medical and lifestyle interventions and the effect of the combination of these on reducing cancer risk, and increasing the pace of translation of discovery to the clinic and the community so that, ultimately, the benefits of our discoveries help reduce the overall burden of cancer.

*Advancing the discovery and translation of new knowledge about cancer risk and prevention
in the laboratory, the clinic and the community*

MD Anderson Cancer Center offers faculty a unique and vibrant scientific environment coupled with competitive salaries and excellent benefits. Houston is an innovative and diverse city, nurturing great neighborhoods, competitive private and public schools, an exceptional music and theater scene, highly acclaimed museums, international cuisine, and year-round outdoor recreational activities. Located in the Texas Medical Center www.texasmedicalcenter.org/root/en. For more information about MD Anderson, visit www.mdanderson.org/divisionofcancerpreventionandpopulationsciences



THE UNIVERSITY OF TEXAS
**MD Anderson
Cancer Center**
Making Cancer History®

Conducts biobehavioral research on cancer risk behaviors and develops, implements, evaluates, and disseminates interventions that contribute to preventing and reducing cancer incidence, mortality and morbidity. Research is organized around four major topics: Primary Prevention (tobacco-cessation research and skin cancer prevention); Inherited Cancer Syndromes and Genetic Testing and Counseling; Screening and Early Detection; and Psychosocial Oncology. In tobacco and smoking cessation, major extramurally funded projects center around, youth smoking initiation and cessation, work with special populations including those with cancer, psychiatric and other medical co-morbidities, testing new medications and behavioral therapies, and technologies for treatment delivery; pharmacogenetics and neuroscience of tobacco addiction. Funded research in the department also includes research on quality of life issues and sexual counseling in cancer patients, patient-provider communication, evaluation of diet and exercise interventions for improving the health of cancer survivors, using innovative, distance-based assessment and intervention methods; the development of e-health interventions for cancer survivors, their families, and community populations and work focused on improving psychosocial and behavioral outcomes in genetic counseling and testing for hereditary cancers.

Behavioral Science

Clinical Cancer Prevention Investigates basic, translational, and clinical cancer prevention research with a focus on carcinogenesis research, animal models of cancer, cancer preventive interventions (including chemoprevention, dietary, or behavioral interventions), cancer vaccines, cancer risk assessment (genetic, screening and early detection), and survivorship research (early detection and prevention of second primary cancers). The department houses the *Clinical Cancer Prevention Program (CCPP)*, which coordinates the clinical and translational cancer prevention research activities of 55 faculty from 20 departments for a variety of cancers. The Cancer Prevention Center provides a dedicated cancer prevention clinic where the CCP department clinical faculty practice. In this clinic, CCP faculty and staff provide cancer risk assessment and risk reduction services (including tobacco cessation counseling, nutrition counseling), cancer screening services, medical therapy to prevent cancers (chemoprevention and vaccines), and survivorship services. In FY10, over 16,000 patients were seen in this clinic. CCP faculty members also conduct state-of-the-art cancer prevention research to translate their research findings to the general population, setting new standards of care. CCP investigators currently conduct nationally funded research to identify and target critical carcinogenic pathways in breast, prostate, colon, and esophageal cancers.

Conducts national and international collaborative integrative epidemiology research to identify and clarify the combined effects of genetic susceptibility and environmental causes on all aspects of the cancer continuum. The department actively participates in eight Specialized Program of Research Excellence grants and has strength in four thematic areas: application of phenotypic assays for molecular epidemiology studies; assessment of the effect of common genetic variants on cancer susceptibility, response to therapy, and prognosis; development of large, well characterized cohorts to understand the determinants of disease, prognosis, and quality of life; and creation of sophisticated methods in statistical genetics useful in studying complex gene-environment and gene-gene interactions. A new theme is translational epidemiology, for which the newly created *Center for Translational and Public Health Genomics* aims to bridge the gap between epidemiologic discoveries and their translation into clinical and public health applications.

Epidemiology

Health Disparities Research Focuses on six themes - environmental health; tobacco control; breast cancer; health communications; system-based approaches; and recruitment to clinical trials, HDR investigators seek to reduce, and ultimately eliminate, disparities in cancer incidence, morbidity and mortality and cancer-related behavior through research and education addressing the determinants of disparities and through development of interventions and policies designed to eliminate disparities. Investigators in HDR conduct studies to elucidate the critical pathways between social/population-level factors and cancer-related behavior/disease. Their studies, many of which are interdisciplinary collaborations, encompass multiple levels of analysis, from the molecular to the societal levels, spanning the continuum of discovery, development and delivery/dissemination. Prominent components of HDR include the *Center for Community Engaged Translational Research* and the *Center for Research on Minority Health (CRMH)*, the only congressionally mandated center focusing on minority health and disparities outside the federal government.

Examines the motivations, methods, context, and results of cancer care delivery to try to improve its effectiveness, quality, safety, efficiency, and equity. Faculty will conduct research on health care organization, financing, technologies and delivery to examine the influence of these factors on access and outcomes as reported by practitioners, payers, and patients. Faculty in this newly-established department are expected to conduct original research, develop novel methods, and create essential resources towards advancing the science of health services research and our understanding of optimal cancer care.

Health Services Research