

AGENCY STRATEGIC PLAN  
FOR FISCAL YEARS 2011 – 2015

BY

CANCER PREVENTION AND RESEARCH INSTITUTE OF TEXAS

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June 18, 2010

Signed & Approved:

  
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## Statewide Vision, Mission, and Philosophy

In March 2010, Governor Rick Perry issued the following in his *Strengthening our Prosperity: The Statewide Strategic Planning Elements for Texas State Government*:

### Priority Goals

I am confident we can address the priorities of our citizens with the limited government principles and responsible governance they demand. I know you share my commitment to ensuring that this state continue to shine as a bright star for opportunity and prosperity for all Texans. I appreciate your dedication to excellence in public service and look forward to working with all of you as we continue charting a strong course for our great state:

*Ensuring the economic competitiveness of our state by adhering to principles of fiscal discipline, setting clear budget priorities, living within our means, and limiting the growth of government;*

*Investing in critical water, energy, and transportation infrastructure needs to meet the demands of our rapidly growing state;*

*Ensuring excellence and accountability in public schools and institutions of higher education as we invest in the future of this state and ensure Texans are prepared to compete in the global marketplace;*

*Defending Texans by safeguarding our neighbors and neighborhoods and protecting our international border; and*

*Increasing transparency and efficiency at all levels of government to guard against waste, fraud, and abuse, ensuring that Texas taxpayers keep more of their hard-earned money to keep our economy and our families strong.*

### The Mission of Texas State Government

Texas state government must be limited, efficient, and completely accountable. It should foster opportunity and economic prosperity, focus on critical priorities, and support the creation of strong family environments for our children. The stewards of the public trust must be men and women who administer state government in a fair, just, and responsible manner. To honor the public trust, state officials must seek new and innovative ways to meet state government priorities in a fiscally responsible manner.

Aim high...we are not here to achieve inconsequential things!

## ***The Philosophy of Texas State Government***

The task before all state public servants is to govern in a manner worthy of this great state. We are a great enterprise, and as an enterprise, we will promote the following core principles:

- First and foremost, Texas matters most. This is the overarching, guiding principle by which we will make decisions. Our state, and its future, is more important than party, politics, or individual recognition.
- Government should be limited in size and mission, but it must be highly effective in performing the tasks it undertakes.
- Decisions affecting individual Texans, in most instances, are best made by those individuals, their families, and the local government closest to their communities.
- Competition is the greatest incentive for achievement and excellence. It inspires ingenuity and requires individuals to set their sights high. Just as competition inspires excellence, a sense of personal responsibility drives individual citizens to do more for their future and the future of those they love.
- Public administration must be open and honest, pursuing the high road rather than the expedient course. We must be accountable to taxpayers for our actions.
- State government has a responsibility to safeguard taxpayer dollars by eliminating waste and abuse and providing efficient and honest government.
- Finally, state government should be humble; recognizing that all its power and authority is granted to it by the people of Texas, and those who make decisions wielding the power of the state should exercise their authority cautiously and fairly.

## ***Relevant Statewide Goals and Benchmarking***

**Higher Education:** To prepare individuals for a changing economy and workforce by furthering the development and application of knowledge through teaching, research, and commercialization.

### *Statewide Benchmarks*

- Percentage increase in research and development expenditures in emerging technologies over previous biennium.
- Number of patents obtained in emerging technologies.
- Number of patents obtained by institutions of higher education that are commercialized.
- Number of private sector companies created as a result of activities at public institutions of higher education.

**Health and Human Services:** To promote the health, responsibility and self-sufficiency of individuals and families by continuing to create partnerships with local communities, advocacy groups, and the private and not-for-profit sectors; and investing state funds in Texas research initiatives which develop cures for cancer.

### *Statewide Benchmarks*

- Number of state funded cancer research grant projects.
- Amount of leveraged dollars invested in state funded research grants projects.

**Economic Development:** To provide an attractive economic climate for current and emerging industries that fosters economic opportunity, job creation, capital investment, and infrastructure development by promoting a favorable business climate.

### *Statewide Benchmarks*

- Number of emerging technology research commercialization investments awarded.
- Number of nationally recognized researchers recruited to Texas public institutions of higher education as a result of emerging technology research superiority grants.

**General Government:** To provide citizens with greater access to government services while reducing service delivery costs and protecting the fiscal resources for current and future taxpayers by supporting effective, efficient, and accountable state government operations.

### *Statewide Benchmark*

- Issuance cost per \$1,000 in general obligation debt.

# Cancer Prevention and Research Institute of Texas Mission and Philosophy

## ***Agency Mission***

The Cancer Prevention and Research Institute of Texas is the state agency established to create and expedite innovation in the area of cancer research and to enhance the potential for a medical or scientific breakthrough in the prevention of cancer and cures for cancer; attract, create, or expand research capabilities of public or private institutions of higher education and other public or private entities that will promote a substantial increase in cancer research and in the creation of high-quality new jobs in this state; and develop and implement the *Texas Cancer Plan*.

## ***Agency Philosophy***

The Cancer Prevention and Research Institute of Texas will maintain the highest integrity and dedication to the mission of finding a cure for cancer. The Institute will become a world-class leader in research and prevention by collaboration with a variety of entities, community leaders, and other organizations involved in the fight against cancer; innovation in the selection of research projects emphasizing immediate or long term medical breakthroughs; commercialization of completed research and education for citizens with culturally appropriate information about ways in which their risks of developing and dying from cancer can be reduced.

## External and Internal Assessment

### Overview

Texas voters overwhelmingly approved a constitutional amendment in 2007 establishing the Cancer Prevention and Research Institute of Texas (CPRIT) and authorizing the state to issue \$3 billion in general obligation bonds over ten years to fund groundbreaking cancer research and prevention programs and services throughout the state. House Bill 14, 80<sup>th</sup> Texas Legislature, is the authorizing statute that charges CPRIT to:

- Create and expedite innovation in the area of cancer research and in enhancing the potential for a medical or scientific breakthrough in the prevention of cancer and cures for cancer;
- Attract, create, or expand research capabilities of public or private institutions of higher education and other public or private entities that will promote a substantial increase in cancer research and in the creation of high-quality new jobs in this state; and
- Develop and implement the *Texas Cancer Plan*.

Under the guidance of the Oversight Committee, CPRIT's governing board, CPRIT accepts applications and awards grants for a wide variety of cancer-related research and for the delivery of cancer prevention programs and services by public and private entities located in Texas. All CPRIT-funded research will be conducted in state by Texas-based scientists and reflect CPRIT's mission to attract and expand the state's research capabilities and create high quality new jobs in Texas.

Since the first appropriation of \$225 million of cancer bond funds became available on September 1, 2009, CPRIT has awarded funds for individual investigator research projects; high-risk innovation research projects; evidence-based prevention programs and services; health promotion and public education prevention programs; innovation prevention awards; micro prevention grants; company-based research; professional education programs; planning awards; research recruitment grants; multi-investigator research awards; and training research awards. CPRIT is awarding funds to academic institutions to recruit outstanding researchers to Texas as *CPRIT Scholars in Cancer Research* and to train exceptional predoctoral and postdoctoral candidates who are committed to pursuing a career in basic, translational, and clinical cancer research to cultivate the next generation of investigators and leaders in the cancer research field in Texas. CPRIT is also focusing a significant amount of funding on community collaborative prevention programs for breast, cervical, and colorectal cancers and on multi-institutional collaborations to enhance the capabilities and infrastructure in Texas to improve the research resources for the future growth of the state's biotechnology industry.

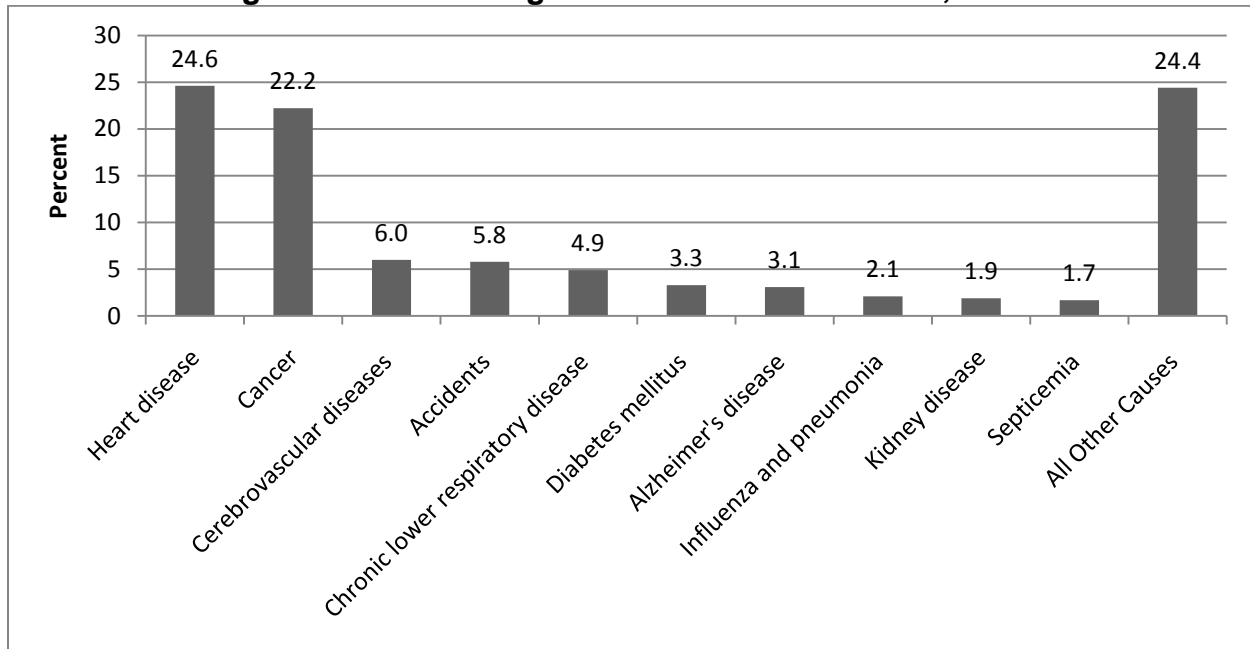
The Institute relies upon a multi-stage external peer review process to evaluate the applications for grant awards. More than 150 experts in the field of cancer research and/or cancer prevention are appointed by the Institute's Executive Director to serve on Scientific Research and Prevention Program committees conducting peer review. To minimize the potential for conflicts of interest and create a firewall around the review process, all peer review committee members live and work outside of the State of Texas.

The Institute's peer review process is overseen by research, prevention, and commercialization review councils. The review councils assess the evaluations completed by the committees conducting peer review and create a final list of funding recommendations for the Institute's Executive Director. Texas law affords great weight to the review council's funding recommendations, requiring the Executive Director's final recommendations for funding awards to be "substantially based" on the list submitted by the review council. The Executive Director's list is considered final and the Oversight Committee may set aside the funding recommendations only if 8 of the 11 members vote to do so.

## ***Cancer in Texas***

Despite great advances, cancer remains the second leading cause of death in Texas, accounting for nearly one of every four deaths (Figure I).<sup>1</sup> It is estimated that in the early part of the 21st century, cancer will overtake heart disease as the leading cause of death in the United States. In 2010, an estimated 38,000 Texans will die from cancer, which equates to more than 100 Texans dying each day. And for the first time, the number of patients with a newly diagnosed cancer is expected to exceed 100,000 in 2010.<sup>2</sup> Cancer is second only to cardiovascular disease as the most costly chronic disease in the United States.<sup>3</sup> A cancer diagnosis often means lengthy, costly treatments, many of which are debilitating, painful, and exhausting. And the financial costs in medical care and lost productivity are staggering, bankrupting families and burdening health care systems. In Texas, a conservative estimate of the annual cost of cancer is \$21.9 billion, which includes direct medical costs (\$10 billion), indirect costs from lost productivity (\$11.8 billion) and expenditures of State agencies and other organizations involved in cancer prevention and control (\$78.5 million).<sup>4</sup> As the population increases, new treatments are discovered, and survival rates continue to increase, it is expected that costs will continue to rise.

**Figure I - Ten Leading Causes of Death in Texas, 2006<sup>1</sup>**



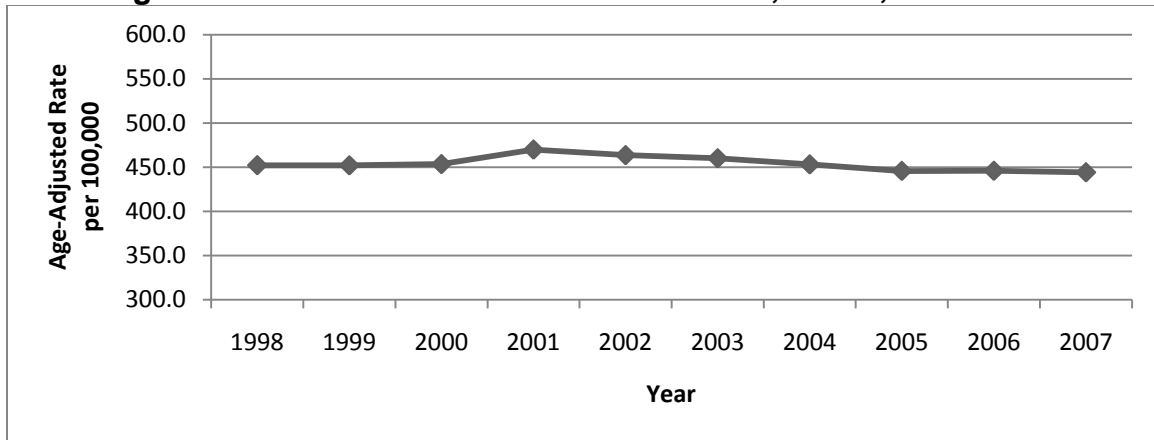
Cancer represents more than 100 distinct diseases, all characterized by uncontrolled reproduction of abnormal cells in the body. Each type of cancer possesses distinct risk factors and manifestations that necessitate different prevention measures and treatments. Some cancers are preventable, while others are successfully treated—even cured—if detected early enough. Survival rates vary greatly, depending on cancer site, stage at diagnosis, access to care, and a host of individual factors. There is no single cause or cure for cancer.

In 2009, the American Cancer Society, the Centers for Disease Control and Prevention, the National Cancer Institute, and the North American Association of Central Cancer Registries issued *the Annual Report to the Nation on the Status of Cancer, 1975 – 2006*. According to the report, cancer deaths in the United States decreased 1.6 percent per year from 2001 to 2006.<sup>5</sup> This decrease was observed in Texas as well.<sup>2</sup> The decline is credited to wider use of screening and early detection methods and better treatments that have extended life expectancy after diagnosis.

In order to accelerate this trend, Texas must continue to invest in research and prevention efforts that will help Texans reduce their risk of developing cancer, or detect it early, when treatments are more successful and less costly. CPRIT's goal is to expedite innovation and commercialization in cancer research and to enhance public access to evidence-based prevention programs and services throughout the State, ultimately enhancing the potential for a medical or scientific breakthrough in the prevention of and cure for cancer.

**Incidence:** Although cancer incidence rates in Texas are decreasing (Figure II), the number of new cancer cases is rising as the population of the State continues to age and grow.<sup>2</sup>

**Figure II - Trends in Cancer Incidence Rates, Texas, 1998-2007<sup>2</sup>**



In 2010, an estimated 104,000 Texans will be diagnosed with cancer. Among those:

- 15,300 Texas women will be diagnosed with breast cancer;
- 15,700 Texas men will be diagnosed with prostate cancer;
- 14,300 Texans will be diagnosed with lung cancer;
- 10,300 Texans will be diagnosed with colorectal cancer;
- 4,200 Texans will be diagnosed with melanoma, a form of skin cancer; and
- 1,200 Texas women will be diagnosed with cervical cancer.

Approximately 900 Texas children ages 0-14 were diagnosed with cancer in 2007.

Cancer is manifested differently in children, the most common cancer sites being blood and bone marrow, brain, lymph nodes, nervous system, kidneys, and soft tissues. About 9,700 Texas children will be diagnosed with cancer over the next decade, causing severe financial and emotional hardships for an equal number of Texas families.

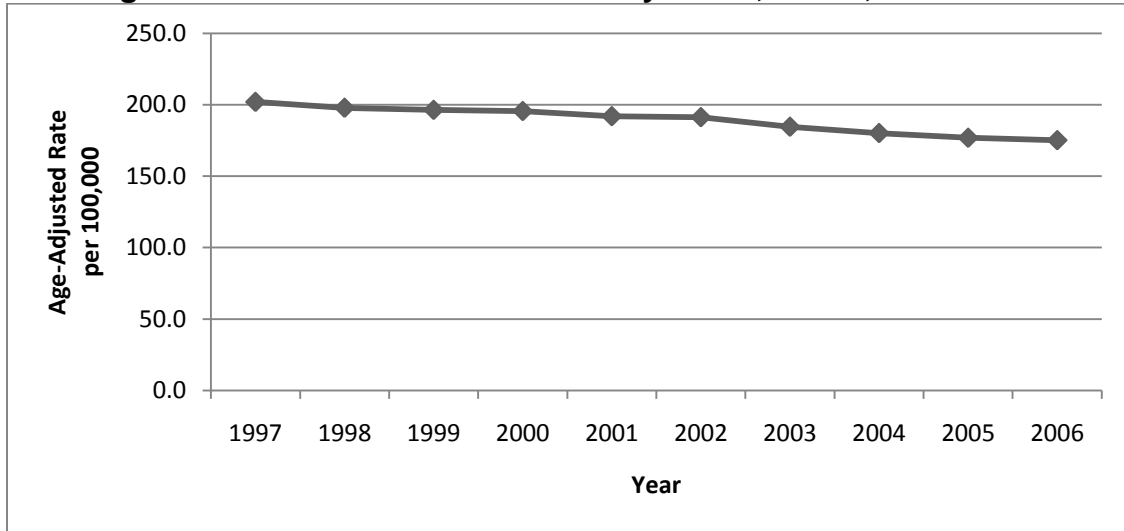
**Mortality:** Approximately 22 percent of all deaths in Texas were attributed to cancer in 2006 (Figure III), making cancer the second-leading cause of death.<sup>1</sup> The overall cancer mortality rate in Texas decreased by an average of 1.6 percent a year from 1997-2006 (Figure IV).<sup>2</sup> Similar to cancer incidence, as the population ages and grows, the number of deaths will continue to increase even as the rate decreases. It is estimated that almost 38,000 Texans will die from cancer in 2010. Among the leading causes:

- 10,600 Texans will die from lung cancer;
- 3,500 Texans will die from colorectal cancer;
- 2,700 Texas women will die from breast cancer;
- 2,100 Texans will die from pancreatic cancer; and
- 1,800 Texas men will die from prostate cancer.

**Figure III - Cancer Mortality in Texas by Sex, 2006<sup>1</sup>**

	Total Deaths	Male	Female
All Deaths	156,525	78,837	77,688
Deaths Attributed to Cancer	34,903	18,561	16,342
% Cancer	22.3%	23.5%	21.0%

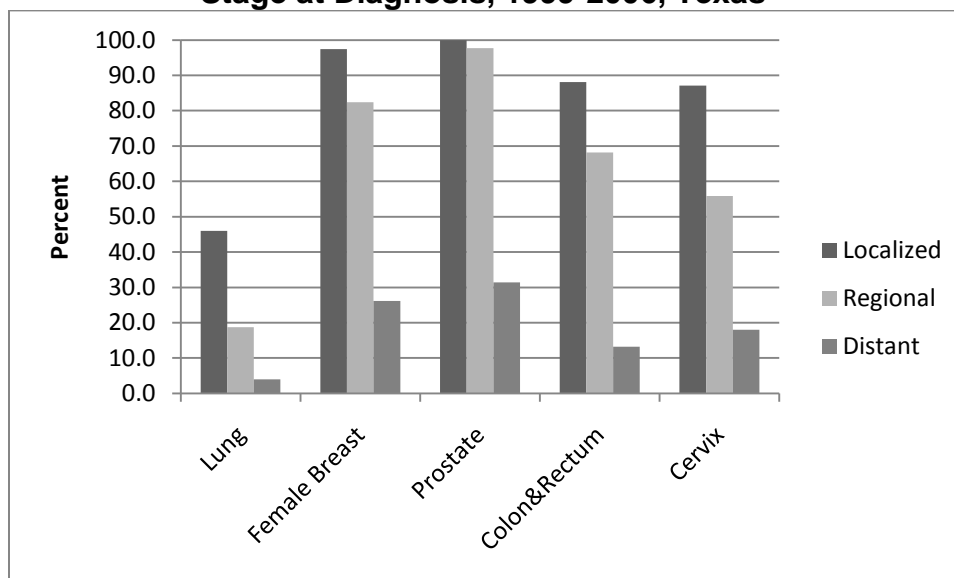
**Figure IV - Trends in Cancer Mortality Rates, Texas, 1997-2006<sup>2</sup>**



Cancer is the leading cause of death from disease among children in Texas and the United States. Approximately 11 percent of all deaths in children between the ages of 1 to 14 were attributable to cancer in 2006.<sup>1</sup>

**Survivors:** It is estimated that 441,000 Texans who were diagnosed with cancer in the last ten years are alive today.<sup>2</sup> Survival differs greatly by the type of cancer and the stage at which the cancer was diagnosed. As Figure V below indicates, five-year survival rates for lung, breast, prostate, colon and rectum, and cervical cancers drop substantially once the cancer spreads beyond the local tumor. Early detection, and effective treatments for these cancers greatly improve five-year survival rates.

**Figure V - Five-Year Relative Survival Rates by Stage at Diagnosis, 1999-2006, Texas<sup>2</sup>**



Due to advances in diagnosis and treatment, children with acute lymphoblastic leukemia now have at least an 80 percent 5-year survival rate.<sup>6</sup> The recent phenomenon of children surviving cancer is causing a host of new questions and policy issues related to their long-term development, education, and insurance coverage needs, as well as research into relative risks for developing new cancers later in life.

**Cost:** In addition to improving survival chances, detection of cancer at an early stage can significantly reduce the cost of treatment. Early detection also decreases cost in terms of suffering and lost productivity. Cancer costs may contribute up to six percent of total health care expenditures in the United States.<sup>3</sup> The estimated annual cost of cancer in Texas for 2007 is \$21.9 billion, and costs vary substantially across regions of the state and by cancer sites.<sup>4</sup> This includes direct medical costs (\$10 billion), indirect costs from lost productivity (\$11.8 billion) and expenditures of State agencies and other organizations involved in cancer prevention and control (\$78.5 million).

Estimates of the cost of cancer care in 2007 for the four most common cancers include:

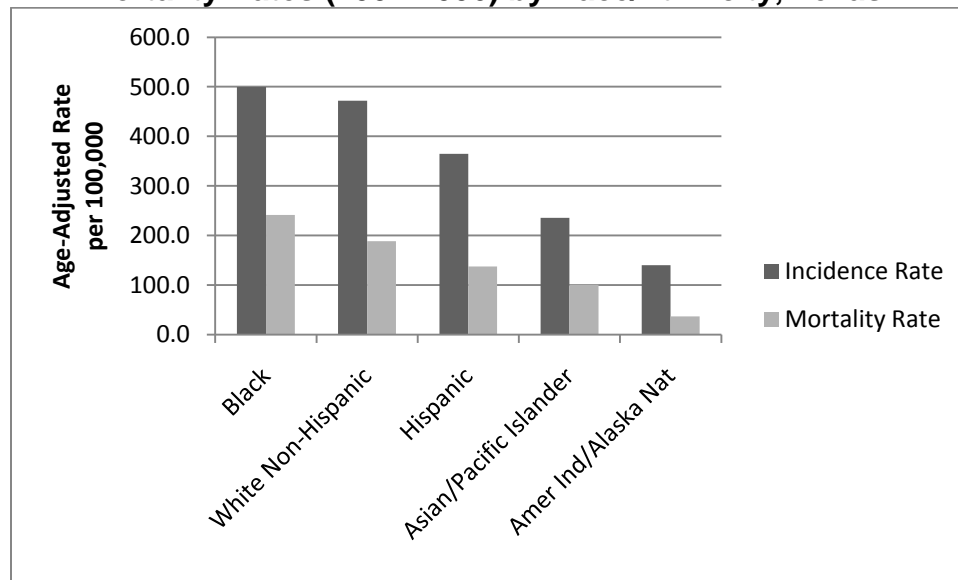
- Colorectal, \$1.1 billion;
- Lung, \$1 billion;
- Prostate, \$955 million; and
- Breast, \$923 million.

**Cancer Disparities:** Underserved segments of the Texas population are affected by cancer to a greater degree. Some racial and ethnic groups are more likely than others to have cancer discovered at a later stage, leading to higher mortality rates. Rural and low-income populations have geographic and financial barriers to accessing cancer

prevention and treatment resources. Barriers are compounded by insufficient numbers of health professionals and facilities in many sparsely populated counties.

**Race and Ethnicity:** Cancer incidence and mortality rates vary by race and ethnicity (Figure VI). Differences in incidence and mortality rates in some populations can be a result of many factors, including differences in risk factors, access to screening and treatment, and need for culturally sensitive preventive healthcare.

**Figure VI - Overall Cancer Incidence (2003-2007) and Mortality Rates (2002-2006) by Race/Ethnicity, Texas<sup>2</sup>**



Blacks bear an excess burden of cancer overall with cancer incidence and mortality rates that exceed those of whites and other racial/ethnic groups.<sup>2</sup> The greatest differences are seen in men, where black males have an incidence rate 1.2 times higher and a mortality rate 1.4 times higher than non-Hispanic whites.<sup>7</sup>

Disparities in incidence and mortality among racial and ethnic groups differ by cancer site as well. For example, Hispanic women have higher incidence rates of cervical cancer compared with other racial/ethnic groups, while black women suffer higher mortality rates for cervical cancer than other racial/ethnic groups.

**Income:** Low-income populations face financial barriers to accessing cancer prevention and treatment resources. During 2008, 15 percent of the people in Texas were below poverty level, compared to the national rate of 13 percent<sup>8</sup>. The median household income in Texas in 2008 was \$50,049. In addition, Texas has the highest percentage of uninsured population of any state, estimated at 27 percent in 2006, or 5,854,743 people.

**Age:** The risk of developing cancer increases with age; adults in mid-life or older are most affected. In Texas, as in the Nation, the growing number of older adults will

increase the number of people affected by cancer, thereby making present-day prevention efforts all the more imperative.

Over 95 percent of cancer deaths occur among Texans who are age 45 years or older.<sup>2</sup> With the maturing of the Baby Boom generation, cancer deaths will continue to increase unless the trend is reversed by a major breakthrough in cancer knowledge and treatment, and significant improvements in prevention and early detection occur for those most at risk.

**Geographic Areas:** Texas is a unique state, with more than 260,000 square miles and a vastly diverse population. It is not uncommon for rural patients to travel hundreds of miles to access prevention, detection, or treatment services. Cancer incidence and mortality rates vary by geographic area. The reason for these differences are likely due to variation in cancer risk factors (e.g., tobacco use) and population demographics of an area, including age, racial/ethnic makeup, income, and insurance coverage.<sup>7</sup>

Disparities are apparent in the 38-county area of South Texas, where two-thirds of the population is Hispanic.<sup>9</sup> Cancer incidence is higher in this area (compared to the rest of Texas) for such cancers as stomach, liver, and cervix. An estimated 33 percent of adults from South Texas are uninsured, more than double the national average. Two critical access to care issues facing this region are lack of health insurance and a shortage of health care providers.

Rural Texans are another medically underserved population. Rural Texans tend to be older, have less income, and are less likely to have insurance than their urban counterparts. When considering total incidence and mortality in the state, rural counties in Texas share a greater cancer burden than their urban counterparts.<sup>2</sup> Residents of rural areas often have less contact and fewer visits with physicians and, in general, lower levels of available preventative care.

## **Prevention and Control**

Cancers that can be prevented or detected earlier by screening, such as cancers of the colon, rectum, breast, and cervix, account for at least half of all new cancer cases.<sup>6</sup> Other cancers could be greatly reduced if people did not use tobacco, adopted healthy eating behaviors, engaged in regular physical activity, took precautions against excessive sun exposure, and minimized the use of alcohol.

Primary cancer prevention efforts seek to keep a disease from occurring and are the front-line in promoting health and reducing cancer risk in the general public. Secondary prevention seeks to identify and treat asymptomatic individuals who are at risk for developing cancer. Tertiary prevention includes treating and supporting people diagnosed with cancer in order to minimize clinical complications and recurrence. Preventive measures taken today will not guarantee an individual will be cancer-free during his or her lifetime; however, they greatly reduce future risks of disease.

### **Primary Prevention**

Primary prevention strategies give people the knowledge, skills, and resources they need to reduce their risks of developing cancer.

Research suggests that about one-third of cancer deaths are related to overweight or obesity, physical inactivity, and poor nutrition. Adopting healthy behaviors can reduce a person's risk of developing cancers associated with these risk factors.<sup>6</sup>

Vaccines also help reduce cancer risk. The human papillomavirus (HPV) vaccine has been proven effective to prevent most cervical cancers and some vaginal and vulvar cancers.<sup>10</sup> In addition, the hepatitis B vaccine can help reduce risk of developing liver cancer.

Cigarette smoking has been linked to cancers of the lung, oral cavity and pharynx, larynx, esophagus, bladder, pancreas, kidney, cervix, stomach, and acute myeloid leukemia cancers.<sup>11</sup> It is estimated that in 2008, approximately 18,200 Texans died from these tobacco-related cancers. Smoking is estimated to cause almost 90 percent of all lung cancer deaths in men and 80 percent in women. There is also evidence that suggests smoking can lead to cancers of the colon, rectum, and liver. Reducing smoking-related deaths requires evidence-based, comprehensive, and coordinated efforts to prevent initiation of tobacco use, increase tobacco cessation, and reduce second hand smoke exposure.

In addition, many cases of skin cancer could be prevented by protection from the sun's rays and avoiding indoor tanning. Reducing risk of developing skin cancer begins with education, starting with children.

Unfortunately, providing information on health risks and benefits does not always lead to adoption of risk-reduction behaviors. Prevention education messages are not always delivered at an appropriate literacy level or in a manner that is culturally relevant for all Texans. Education and awareness must also be followed by strategies that motivate, initiate, and sustain behavior change. Thus, persistent, effective, and culturally sensitive education efforts and support of behavior change become all the more imperative and are a critical part of any prevention program.

### **Secondary Prevention**

**Screening and Early Detection:** The objective of cancer screening is to diagnose pre-cancerous conditions in people who do not have any symptoms of disease or to find cancer early, when treatment is likely to have greater success. When people have signs or symptoms of disease, or have a positive screening test, further medical tests are performed to diagnose the actual existence and extent of disease.

Some cancers can be prevented completely if tissue changes are detected early and are removed at a precancerous stage. Such changes can be found through screening for cancers of the colon, rectum, and cervix. Screening can also detect cancers early for breast, prostate, oral cavity, and skin cancers.<sup>6</sup>

There currently is discussion within the scientific community about the initial age and rate at which breast cancer screening should be conducted. The American Cancer Society, for example, recommends that women receive a screening mammogram and clinical breast exam every year beginning at age 40 (and that this be continued as long as they are in good health), and that women in their 20s and 30s should receive a clinical breast exam every three years.<sup>12</sup> The United States Preventive Services Task Force (USPSTF), however, recommends biennial screening mammography for women, specifically for ages 50 to 74 years, and suggests the decision to begin screening before the age of 50 should be an individual decision made in consultation with a physician.<sup>13</sup> The USPSTF also cited insufficient evidence to assess the benefits and harms of clinical breast exam beyond age 40 in women. Despite these differences in medical and scientific opinion, it is agreed that mammograms do save lives from breast cancer. Therefore, it is critical that women in Texas have access to information, referrals, and screening services to reduce their risk of dying from this disease.

Recommended screening procedures for adults 50 to 75 years of age to detect colorectal cancer include fecal occult blood testing, sigmoidoscopy, or colonoscopy.<sup>14</sup> Detected early at a localized stage, the five-year relative survival rate for colorectal cancer is 90 percent. Unfortunately, only 40 percent of these cancers are caught at this stage. When colorectal cancer has spread to distant sites, the survival rate drops to only 11 percent.<sup>6</sup> Screening can literally prevent this cancer; therefore, public and professional education efforts, along with reducing access to screening could save thousands of lives.

Cervical cancer screening is conducted with the Papanicolaou (Pap) test, which diagnoses pre-cancerous lesions of the cervix. The Pap test is an inexpensive test that

is generally performed within three years after a woman becomes sexually active or at age 21 (whichever comes first).<sup>15</sup> The test can reveal pre-cancerous lesions as well as cancers. Treatment of pre-cancerous lesions actually prevents cervical cancer, and cervical cancers are essentially 100 percent curable when diagnosed and treated in the precancerous stage.

Clear, evidence-based recommendations for prostate cancer screening remain elusive. There is no medical consensus about whether screening for prostate cancer reduces mortality or whether early treatment of prostate cancer prolongs life. A clearer understanding of the benefits of screening will be especially important to black men, who have rates of prostate cancer nearly twice as high as other groups of men.

### **Survivorship**

The end of cancer treatment is not the end of the cancer experience. A diagnosis of cancer is the beginning of the survivorship journey. The definition of *cancer survivor* has evolved as knowledge and success in understanding cancer has increased. When cancer was considered incurable, the term “survivor” was used to describe family members who survived the loss of a loved one to cancer. Then, physicians began to define “survivor” as someone who had survived five years following a diagnosis. Today, due to the advocacy efforts of such organizations as the National Coalition for Cancer Survivorship (NCCS) and the Lance Armstrong Foundation, the term “cancer survivor” has been redefined. Many private and public organizations now use the term “cancer survivor” to describe those who have been diagnosed with cancer and the people in their lives who are affected by the diagnosis, including family members, friends, and caregivers. This expanded definition acknowledges the complexity of cancer survivorship and the need for personal, familial, and extended resources.

Due to advances in cancer early detection and treatment, people are now living many years beyond a cancer diagnosis. The growing population of cancer survivors, that includes both children and adults, has created a demand for long-term follow-up services and psychosocial support services, as well as a need for public policies that ensure employment and insurance opportunities. Evidence-based survivorship services aimed at reducing the after-effects of cancer diagnosis and treatment are necessary as this population in the state continues to grow.

### **Prevention Supported by CPRIT Grant Awards**

CPRIT’s prevention grant awards will make it possible for prevention strategies and services to reach many more Texans and ultimately decrease the burden of cancer. We have a great opportunity through CPRIT’s mission to fund both the delivery of prevention and early detection programs and services, and also fund research into better means of prevention and early detection.

The ability to reduce cancer death rates depends, in part, on more broadly applying some of the strategies we currently have. There are effective evidence-based strategies available that are currently not being delivered to all communities in Texas. Through prevention programs, we will invest in building our understanding of and capacity to

deliver effective community-based interventions so that new technologies and services are made available to all, especially those who have historically been underserved. Despite successes in reducing cancer incidence and mortality, we cannot become complacent and must increase the rate of progress of cancer prevention and early detection. Unique projects and new partnerships that will apply evidence-based programs and services in novel ways are necessary in order to increase rates of recruitment, provision of services, early detection, and ultimately survival rates.

**Prevention Program Priorities:** CPRIT will use timely, accurate cancer data to inform our strategic direction, establish priorities, develop targeted RFAs, and to ensure funded projects are addressing the most pressing needs in the state. CPRIT seeks to fund projects that are innovative and collaborative, as well as leverage resources and challenge the status quo for cancer prevention and control programs and services. We will encourage unique projects and partnerships that will apply evidence-based programs and services in new ways in order to increase the current rates of recruitment, provision of services and cancer detection leading to an increase in survival rates.

Specifically, CPRIT seeks to fund projects that will:

- Offer effective and efficient prevention program and services based on the existing body of knowledge about and evidence for cancer prevention in ways that far exceed current performance in a given service area;
- Provide tailored, culturally appropriate, and accurate information on early detection and prevention to the public that results in sustained behavior change and a direct health impact that can be measured;
- Provide effective and innovative outreach strategies to educate the public and increase recruitment into appropriate clinical screening and survivorship programs and services that demonstrate increased rates of early-stage cancer diagnosis and improved quality of life;
- Provide education and training for health care providers that is designed to improve practice behavior and system support related to primary and secondary prevention of cancer as well as cancer survivorship issues;
- Provide access to state-of-the-art preventive services to individuals;
- Target delivery of preventive services to areas and populations in the State with the greatest need; and
- Deliver evidence-based survivorship services aimed at reducing the after-effects of cancer diagnosis and treatment.

Population priorities include:

- Underinsured and uninsured individuals – especially men and women age 50 and older who have never been screened for colorectal cancer, women age 18 and older who have never been screened for cervical cancer or have not been screened in the past five years, and women age 40 and older who have not received a mammogram within the past five years;
- Geographically or culturally isolated populations;
- Medically unserved or underserved populations;
- Populations with low health literacy skills;

- Racial, ethnic, and cultural minority populations; and
- Any other populations with low screening rates, high incidence rates, high cancer risk factors, and high mortality rates.

## **Research**

The CPRIT was created with the mission to expedite innovation in the area of cancer research, thereby enhancing the potential for scientific and medical breakthroughs in the prevention of cancer and cures for cancer. In carrying out its mission, the CPRIT endeavors to identify and support innovative proposals exploring the causes for cancer and the development of strategies for prevention, diagnosis, treatments, and ultimately, cures.

The CPRIT will become a world-class leader in cancer research through collaboration with a variety of entities, including public and private institutions of higher education, academic health institutions, governmental organizations, nongovernmental organizations, public and private companies, and others involved in the fight against cancer. Enhancing the research capabilities of public or private institutions of higher education and other public or private entities in Texas will promote a substantial increase in cancer research and in the creation of high-quality new jobs in this state.

The opportunity for improving cancer care has never been greater because of rapid advances in biomedical research, especially advances that permit detailed definition of the genetic basis of different types of cancer. The CPRIT supports innovation in the selection of research projects emphasizing immediate or long-term medical breakthroughs and commercialization opportunities for research it funds. The CPRIT endeavors to ensure that the most creative, innovative cancer research projects are funded, while providing assurance to the public that the evaluation process is impartial and fair.

### ***Innovative Cancer Research Supported by Grant Awards***

The Institute fosters cancer research in Texas by providing financial support for a wide variety of cancer-related research projects undertaken by public and private entities located in Texas. Impact is the single most important criterion for the award of CPRIT funding. Will the proposal, if successful, change the way that other scientists think about and conduct their own research? Will it change the way that physicians evaluate and treat their patients?

The potential for scientific discoveries that will make a meaningful difference to cancer patients can occur at any stage in the research process. Rather than focusing on specific areas of cancer research, the Institute encourages innovation by offering several types of grants that address research at various development stages, spanning the spectrum from basic science to translational research and clinical applications. Similarly, research grants awarded by the Institute vary in amount and duration -- from the relatively modest short-term projects targeting early-stage ideas to the complex, multi-year research programs at several laboratories and research facilities throughout the state that may take a life-saving drug through its final stages of development.

To stimulate a diverse portfolio of cancer research projects, the CPRIT issues requests for application tailored to support particular projects, including projects led by a single

investigator, multi-disciplinary collaborative scientific and clinical teams, or research projects undertaken at public and private companies in Texas. All Institute-funded research is conducted in state by Texas-based scientists and reflects our mission to attract and expand the state's research capabilities and create high-quality new jobs in Texas.

### ***Basic Research on the Genetics and Biology of Cancer***

Because cancers arise from derangements of basic molecular and cellular functions and alter basic biological processes, the most rapid advances in resolving the major problems standing in the way of curing cancer will come from basic research. Basic research is mainly carried out at universities and is undertaken to advance fundamental understanding about cancer in general and the differences between specific types of cancer.

Basic research explores new pathways, usually at the molecular or cellular level, aiming to prove or disprove ideas about how cancer cells are created, mutate, grow, spread, and die. Although the end results of basic cancer research endeavors may have no immediate commercial benefits, the data and experiences derived from these activities serve as essential building blocks and stimulate new thinking about cancer diagnoses, treatments and cures. Rational attempts to develop new methods for prevention, diagnosis, and treatment of cancer are developed from basic research.

The CPRIT plays a catalytic role as a supporter of basic research and the discovery and development of new ideas. While basic research may be more speculative (riskier) and take a longer time to reach practical application, the CPRIT is committed to supporting basic research efforts through its grant award process because basic science can lead to breakthroughs or paradigm-shifts in the practice of treating cancer patients. The development of new tools and therapies for use in cancer patients must begin with the proof of principle established by basic research's exploration of the genetic and molecular mechanisms that are abnormal in cancer cells.

### ***Translational Laboratory Research/Discovering New Treatments and Diagnostic Tests***

Once the basic proof of principle has been achieved, research moves from the research lab to pre-clinical development. Translational research focuses on transforming scientific discoveries more quickly and efficiently into practices that will help patients by reducing cancer incidence, morbidity, and mortality. Translational research is often described as an approach seeking to move cancer research "from bench to bedside" – out of the laboratory and to the patient. These projects have a more direct path to commercialization than basic cancer research and are carried out in both academic and industrial settings.

Translational research to be funded by the Institute may include studies on optimizing a drug (or other anti-cancer agents such as vaccines), including the formulation and

toxicology, pharmacology in animals, and identification of molecular markers that predict patients who are likely to respond to the treatment. In addition, bioengineering, nanotechnology, and research on imaging techniques contribute important new approaches to cancer detection and treatment.

### ***Clinical Research Exploring the Efficacy of New Treatments and Diagnostic Tests in Patients***

Clinical research is performed using patients as experimental subjects (or sometimes using material derived from patients, such as tissue). Clinical trials are a common form of clinical research. These are carefully controlled research studies that may in some cases be done first with normal volunteers but more commonly involve cancer patients at all stages of the investigations. These studies test whether a new treatment is acceptably safe and how well the treatment works in humans. Clinical trials may also test new ways to diagnose or prevent disease. There are four stages (Phase I – IV) of clinical trials, with Phase I being the smallest group and earliest stage where treatments are first tested in humans. The goal is to determine basic safety and find a tolerable dose if a drug is involved for further testing. Researchers seek to prove the concept of a drug's effectiveness in Phase II. Phase III are usually relatively large "registration" trials necessary to receive approval for marketing a drug from the U.S. Food and Drug Administration (FDA). Phase IV trials generally involve post-marketing surveillance after the drug has been released for use.

Clinical trials have led to numerous advances in cancer prevention, diagnosis, and treatment, and they are essential for such progress to occur. However, there are many challenges inherent in the clinical trial process. Many of these challenges are of a regulatory nature because of the necessary legal and ethical demands of research performed on human subjects. Currently, it frequently takes a cancer drug about eight years after beginning clinical trials to receive FDA approval. This is in addition to the time – perhaps six years – necessary to identify, optimize, and test the drug in cellular and animal studies prior to testing in people. Clinical trials are also tremendously expensive, costing hundreds of millions of dollars. Thousands of potential drugs may be tested before just one reaches the point of being evaluated in a clinical trial. Current estimates are that it costs, on average, well over \$1 billion in research and development costs to bring a new drug to market.

### ***Collaborative Statewide Research Endeavors***

Support for clinical research is vital in order to increase the availability of FDA approved therapeutic interventions and improve patient outcomes in Texas. In order to accelerate progress in cancer care, discoveries from research laboratories must be translated into the clinical setting more efficiently and clinical trials must be completed more rapidly in diverse patient populations. Numerous studies have suggested that patients receive better care if they participate in a clinical study. Testing new treatment strategies will require the creation of integrated networks of academic centers and community-based health care providers.

## ***Personalized Medicine Provides Promising Opportunities for Institute-Funded Research***

Cancer has long been defined by cell type and site of origin. Scientists now understand that there are multiple variants of the more than one hundred different types of cancer. Identification of the subtle differences within a single type of cancer permits more specific and personalized treatment plans and cures as opposed to a “one-size-fits-all” approach.

The expanding field of personalized medicine provides significant opportunities for Institute-funded research as new genetic markers are identified with increasing frequency. Medicine is moving further in its reliance upon information technology and electronic patient-specific data. By aligning information technology platforms that combine patient information and clinical research data, more opportunities develop for targeted intervention and new methods of care – ultimately expediting the transition of research from the bench to the bedside. Sequencing an individual’s cancer genome will assist in identifying whether a patient is at risk for certain cancers, will respond to a drug, and help the patient avoid treatments that will not work.

Because of the resources available in Texas, including unsurpassed research institutions, a rapidly growing bio-science industry, and diverse patient populations, the state is perfectly positioned to leverage functional genomics into real results for patients and drug development. The state’s diverse patient populations (urban, rural, poor, wealthy, various ethnicities) also provide an opportunity for comparative effectiveness research to inform patients, providers, and decision-makers about effective interventions for particular patients under specific circumstances.

## ***Recruiting Top Talent to Texas***

Consistent with its mission to augment the state’s cancer research superiority, the Institute has created an ambitious program to attract top talent to Texas in both the academic and private industry sectors. The *CPRIT Scholar in Cancer Research* program recruits exceptional researchers to Texas universities and cancer research institutions. The *CPRIT Scholar* initiative enhances innovative programs of excellence in the state by providing scientific and programmatic support for promising first-time, tenure-track faculty, rising stars, or established outstanding investigators.

The individuals recruited through the *CPRIT Scholar* program are the best in their field, and their presence in Texas will attract other scientists and industry eager to collaborate with scientists working on the cutting-edge of cancer research. Superb investigators recruited to Texas will also increase the ability of the state to leverage research grant support from sources outside of the state. Most of the additional grant support is likely to be spent to pay the salaries of those who work with the *CPRIT Scholar* to carry out her/his research program.

Similarly, the Institute will recruit industry partners with a proven record of commercialization in the field of cancer care to relocate to Texas and remain in Texas. By targeting qualified companies with exceptional cancer-care product portfolios, the Institute will advance economic development and treatment efforts in the State of Texas. Stimulating the development of a strong bio-science industry in Texas will increase the number of high quality jobs statewide.

### ***Training the Next Generation of Cancer Researchers***

To promote the next generation of Texas-based investigators and leaders in cancer research, the Institute awards funding for training outstanding predoctoral and postdoctoral candidates committed to pursuing a career in basic, translational, or clinical cancer research. Expanding the skills and expertise of Texas-based trainees will lead to the development of high-quality, innovative, and creative cancer research projects.

The Institute's training programs encourage participation by individuals from underrepresented racial and ethnic groups, individuals with disabilities, and individuals from disadvantaged backgrounds. In addition to predoctoral and postdoctoral research training, the Institute will support master's degree-level programs to train clinical investigators; undergraduate summer research internship programs, including those directed at recruitment of underrepresented minorities; and master's degree-level programs to encourage the pursuit of alternative careers in laboratory support positions.

### ***Research Grant Awards Leverage Additional Resources for Cancer Research***

The CPRIT requires every research award recipient to certify that the award recipient has their own funds dedicated to the cancer research project. The recipient's matching funds must equal at least one-half of the Institute's grant award and be spent on the same area of cancer research. Matching funds may be raised from investors, contributed by donors, or acquired through other federal, state or non-profit grant programs. The Institute's matching fund requirement means that over the course of the next decade, CPRIT research awards will add an additional \$1.5 billion to cancer research funding in Texas.

## ***Commercialization***

Because groundbreaking research is most valuable when it can be translated into products that are available to Texans, a crucial component of the Institute's mission is to create and support infrastructure in Texas that accelerates the movement of new cancer drugs, diagnostics, and therapies from the laboratory to the patient. The Institute's ability to promote commercialization pathways distinguishes it from more traditional cancer research funding sources.

By engaging the business community and encouraging entrepreneurial approaches, Texas will see a return on its investment in research and enhance the opportunities for breakthrough cancer-related technologies. Commercializing cancer research benefits Texans in a variety of ways, including the introduction of new products; the creation of new, highly skilled jobs; increased economic activity; enhanced state revenues; and reduced health care costs and lost productivity.

## ***Intellectual Property Policies for Institute Funded Research***

Benefits like new products and increased economic activity are realized only when knowledge gained by CPRIT researchers is brought into the public domain through intellectual property agreements that encourage additional investment from the private sector to develop and commercialize new products. Texas law requires all grant award contracts issued by the Institute to include an intellectual property agreement that allows the state to collect royalties, income and other benefits realized as a result of Institute-funded projects. The Institute's intellectual property policies are designed to promote the efficient and diligent commercialization of diagnostics and therapies into new products that benefit Texans.

Consistent with its legislative obligation, the Institute will monitor the commercialization efforts of its grant recipients and provide input, if necessary, at specific critical stages to augment the power and capabilities of university technology transfer offices and emerging bioscience companies. The Institute is able to bridge the gap between early stage discoveries and product development with additional resources, expediting the transition of discoveries into commercially-available products, prevention measures, diagnostics, and treatments available to Texans.

Centralized, systematic reporting of the intellectual property created with Institute funding benefits the state because the information can be used to create a database that serves as a critical source of information for researchers and a sustainable cancer industry in Texas.

The state's investment in cancer research will continue to pay dividends through additional breakthroughs and commercial efforts for activities that are not directly funded by CPRIT. CPRIT encourages open dissemination of Institute-funded discoveries and research tools throughout the scientific community with non-exclusive, royalty-free licenses for non-profit institutions pursuing research, educational, or other non-commercial purposes.

## ***Strategic Direction and Priorities***

As a new state agency and a learning organization, CPRIT has the ability to choose the best practices from other state agencies as well as national organizations and adapt them to best accomplish its mission. CPRIT has been able to build on the best practices of the Texas Cancer Council, the predecessor agency to CPRIT, for many of its internal operating procedures. However, with the increase in annual funding by 75 percent in the 2010-11 biennium and the accompanying increase in the number of grant awards it would make annually compared to the Texas Cancer Council, CPRIT looked at practices and processes of other national organizations which award grants for cancer research and prevention programs, such as the National Cancer Institute (NCI), the American Cancer Society, the Lance Armstrong Foundation, and the Komen for the Cure.

CPRIT followed the lead of all of these organizations to establish a scientific peer review process through which all research and prevention grant proposals are thoroughly reviewed and scored. Scientific peer review provides an objective evaluation of the proposed hypothesis, methodology to prove the hypothesis, and prospective findings. Because CPRIT is making awards only to organizations in Texas, it recruits scientific experts who live and work outside of Texas to participate on the peer review panels to reduce any potential conflict of interest between the reviewers and the proposals under review.

Any research proposals received from companies require an additional diligence review to determine whether there is a commercial path for the prospective discovery in order to make it available in health care practice to cancer patients for treatment or to the general population as a preventive measure, such as a vaccination. The commercialization review is unique to CPRIT among cancer grant-making organizations and ensures that CPRIT is investing in research on discoveries with the highest probability of reaching and benefiting people.

With the exception of the National Cancer Institute, all of the other organizations use some mixture of contract services to manage their online application systems and proposal review process. In fact, given the decades-long history that the NCI has had to hire expert staff and develop and refine its proposal review process, it was not feasible for CPRIT to recreate the federal cancer grant selection and award process in a reasonable timeframe to be able to award cancer prevention and research grants during fiscal year 2010, the first year it is authorized to expend cancer bonds on grants.

CPRIT chose the model of outsourcing to a contractor, SRA International, its online application system and proposal review process. With SRA International's depth of scientific, management, information technology, and other technical experts to support CPRIT's processes, CPRIT was able to issue its first requests for applications—the public notices to solicit grant applications—at the end of August 2009, within three months of receiving authorization from the Texas Legislature to expend cancer bond funds. The time that lapsed between the issuance of the RFAs in August 2009 to the award of the first cycle of research grants in January 2010 was less than 6 months. Comparatively, NCI's timeframe for grant award selection from the time an RFA is issued is approximately one year.

With the first biennial legislative appropriation of \$450 million, the Oversight Committee made a strategic decision not to allocate specific amounts or percentages of funds among certain types of prevention or research projects nor among certain types of cancer. Instead, CPRIT funds prevention programs which align with the goals laid out in the *Texas Cancer Plan*. These goals focus on: prevention information and services, early detection and treatment, cancer data acquisition and utilization, and survivorship.

CPRIT's funding decisions for research awards are based on 10 core principles laid out in Texas Health and Safety Code, Chapter 102, to fund proposals that:

1. could lead to immediate or long-term medical and scientific breakthroughs in the area of cancer prevention or cures for cancer;
2. strengthen and enhance fundamental science in cancer research;
3. ensure a comprehensive coordinated approach to cancer research;
4. are interdisciplinary or inter-institutional;
5. address federal or other major research sponsors' priorities in emerging scientific or technology fields in the area of cancer prevention or cures for cancer;
6. are matched with funds available by a private or non-profit entity and institution or institutions of higher education;
7. are collaborative between any combination of private and non-profit entities, public or private agencies or institutions in this state, and public or private institutions outside this state;
8. have a demonstrable economic development benefit to this state;
9. enhance research superiority at institutions of higher education in this state by creating new research superiority, attracting existing research superiority from institutions not located in this state and other research entities, or enhancing existing research superiority by attracting from outside this state additional researchers and resources; and
10. expedite innovation and commercialization, attract, create, or expand private sector entities that will drive a substantial increase in high-quality jobs, and increase higher education applied science or technology research capabilities.

## ***Major Program Collaborations***

Because of the emphasis on collaborations, CPRIT is encouraging Texas academic institutions and other major research entities to work together to develop game-changing projects that speed the understanding, prevention, and treatment of cancer. Toward this end, CPRIT hosted a summit in Austin in October 2009 where more than 50 cancer research scientists gathered to brainstorm on the types of initiatives to pursue.

The initiatives that came to the forefront for the Institute to pursue are research projects that promote team science and collaborative endeavors, such as the development of a statewide clinical trials network. By fostering a non-competitive, team science concept that brings together multidisciplinary approaches (prevention, basic biology, clinical science, statistics, bioinformatics, computer science, imaging, etc.), CPRIT can stimulate proposals with extraordinary potential. Closely related to this effort is the Institute's support for statewide data and tumor repositories. By creating a statewide biorepository with high quality tumor samples, The information gained from the molecular characterization of the cancers in high quality tumor samples will result in the creation of a data warehouse of cancers and effective treatments for those cancers which can be turned into real results for patients. Texas can be a leader in this area by developing streamlined administrative and legal systems that enhance the operations of tumor and tissue banks.

Support for clinical research is vital in order to increase the availability of FDA approved therapeutic interventions and improve patient outcomes in Texas. In order to accelerate progress in cancer care, discoveries from research laboratories must be translated into the clinical setting more efficiently and clinical trials must be completed more rapidly in diverse patient populations. Numerous studies have suggested that patients receive better care if they participate in a clinical study. Testing new treatment strategies will require the creation of integrated networks of academic centers and community-based health care providers.

## ***Institute Partnerships***

Private sector partnerships are essential to CPRIT's success. A close affiliation with the American Cancer Society allows Institute projects to reduce duplication and fill needed gaps in cancer services. Together, our organizations have launched efforts to reduce colon cancer, tobacco use, prostate cancer, and improve quality of life for cancer survivors.

The Institute collaborates with the Centers for Disease Control and Prevention (CDC), the Cancer Research Foundation of America and the National Cancer Institute to plan innovative cancer control policies for colorectal, breast and cervical cancers.

At the local level, Institute initiatives bring together non-profits, American Cancer Society units, health care professionals, county and city health departments, cancer foundations, cancer centers, teaching institutions, and business and community leaders, working together to reduce their community's cancer risks.

Institute staff and board members serve on advisory bodies, working committees, and task forces of other cancer fighting organizations to ensure all our efforts are well coordinated, and to prevent duplication of effort. Such coordination is vital to optimize available cancer control resources.

Steady and clear coordination with federally funded cancer programs at the Texas Department of State Health Services (DSHS) ensure our two agencies create synergy in our cancer control efforts. Staff of both agencies work diligently to ensure efforts are optimized. CPRIT works closely with the Texas Cancer Registry (TCR) at the department, serving on its advisory council and relying on the TCR to supply important data and statistics for cancer planning and monitoring of Institute initiatives. The TCR collects, maintains, and disseminates the highest quality cancer data. TCR serves as the foundation for measuring the Texas cancer burden, comprehensive cancer control efforts, health disparities, and progress in prevention, diagnosis, treatment, and survivorship.

To ensure strategic coordination among state agencies involved in the fight against cancer, the Health and Human Services Commission, DSHS, and CPRIT have identified several opportunities for short- and long-term collaboration. These opportunities include joint strategic planning and cancer-related initiative development as well as program coordination. Another opportunity involves co-locating the TCR at CPRIT to enhance strategic collaboration and attainment of shared goals. To formalize these collaborative opportunities, the CPRIT and DSHS have entered into a Memorandum of Understanding. Initially, four TCR employees will be housed at CPRIT. DSHS and CPRIT are working on long-term plans for additional TCR employees to be housed at CPRIT.

Close collaboration between the CPRIT and TCR fulfills many of the Institute's legislative directives and provides better access to data regarding the cancer burden across Texas. In particular, it allows the Institute to:

- Better target prevention services to have the greatest health impact for Texans by identifying populations and geographic areas of the state with the greatest cancer burden
- Assist grantees by ensuring they have the most accurate data to assess the cancer burden in their communities and measure the progress made with CPRIT funds
- Accurately measure the return on Texas' \$3 billion investment in cancer research and prevention.

Working closely with the TCR, the Institute monitors all available data sources, including national, state, and regional cancer mortality and prevalence rates, and Behavioral Risk Factor Surveillance System (BRFSS) and Youth Risk Behavior Survey (YRBS) results

to determine areas of greatest need and to monitor the state's success in achieving its goals. A reduction in cancer incidence and mortality are the ultimate indicators of success in cancer control, although prevention strategies may take decades to show an impact on cancer incidence and deaths. For this reason, the Institute has developed interim measures that can be used to extrapolate the longer term impact of funding invested in cancer research and prevention projects.

Alignment of CPRIT and TCR also allows for a process of continued improvement and increased infrastructure support, establishing the TCR as an expanded cancer registry and enabling the TCR to become the top-ranked cancer registry in the nation.

### ***Recent Federal and State Legislation***

President Obama signed into law the Patient Protection and Affordable Care Act (H.R. 3590) on March 23, 2010, and the Health Care and Education Reconciliation Act of 2010 (H.R. 4872) on March 30, 2010. These laws are intended to increase access to and improve the quality of health care.

Federal health care reform is pertinent to CPRIT's prevention initiatives because the law mandates health care coverage for individuals and expands Medicaid coverage of certain populations to 133 percent of the Federal Poverty Level. In addition, the law provides federal funding for a health care education campaign to increase young women's knowledge about breast health, a similar education campaign directed at physicians and other health care professionals, and prevention research on breast cancer in younger women.

House Bill 1358, 81<sup>st</sup> Texas Legislature, Regular Session, clarified certain sections of the Texas Health and Safety Code, Chapter 102 (CPRIT's authorizing statute). The bill changed the purpose of the Scientific Research and Prevention Programs Committee, created a University Advisory Committee, created an ad hoc committee of experts on childhood cancer, and established conflict of interest standards for appointees of all CPRIT advisory committees.

Senate Bill 39, 81<sup>st</sup> Texas Legislature, Regular Session, requires health benefit plans to provide coverage of routine patient care costs for plan members who participate in Phase I, II, III, or IV clinical trials.

## ***Customer Feedback***

CPRIT's direct customers are the individuals and entities applying for cancer research and prevention grant awards. The agency surveyed these professionals to assess their satisfaction in working with CPRIT and the CPRIT online Grant Application Receipt System during the initial grant application cycle.

Survey results indicated that the professionals who applied for CPRIT grant awards online agreed that the online receipt process was easy to use and that their grant submission was successful. The results further specified that the application instructions were clearly described in the request for application, the instructions, and the receipt system. In addition, the survey showed that the helpdesk staff were courteous, responsive, and that the customer received assistance in a timely manner. Suggestions and feedback from customers are vital and staff will review processes against survey results and make revisions whenever changes are necessary to improve customer service.

Other sources of input are important to funding the best cancer grants in order to save lives and prevent cancer. CPRIT has a number of advisory committees that provide feedback to the Oversight Committee members. CPRIT staff also maintain relationships with other states engaged in comprehensive cancer control as well as national organizations like the Centers for Disease Control and Prevention, the National Institutes of Health, the American Cancer Society, the Lance Armstrong Foundation, the Intercultural Cancer Council, and C-Change to stay informed of best practices in cancer prevention and control.

## **Agency Goals; Objectives and Outcomes Measures; Strategies and Output; Efficiency; and Explanatory Measures**

**GOAL: 1**

Cancer Research and Prevention Services

**OBJECTIVE: 1**

To create and expedite innovation in the area of cancer research and prevention services

**STRATEGY: 1.1.1.**

Award Cancer Research Grants

**OUTCOME**

1. Non-State Funds Leveraged as Match for Research Grants (in millions)
2. Total Research Matching Fund Expenditures

**OUTPUT**

1. Number of Researchers Recruited to TX to Conduct Cancer Research
2. Number of Entities Relocating to TX for Cancer-Research Related Projects

**EXPLANATORY**

1. Average Dollar Amount of Research Grants Awarded
2. Number of Research Grant Awards
3. Number of New Jobs Created and Maintained
4. Number of Published Articles on CPRIT-Funded Research Projects

**STRATEGY: 1.1.2.**

Award Cancer Prevention Grants

**OUTCOME**

1. Percent of Texas Counties with Cancer Prevention Services and Activities Initiated as addressed in the Texas Cancer Plan through Grant Awards

**OUTPUT**

1. Number of People Served by Institute-funded Prevention and Control Activities
2. Number of Health Care Professionals Educated

**EFFICIENCY**

1. Average Cost per Health Care Professional Educated

**EXPLANATORY**

1. Annual Age-adjusted Cancer Mortality Rate

**STRATEGY: 1.1.3.**

Grant Review and Award Operations

**GOAL: 2**

Indirect Administration

**OBJECTIVE: 2**

Indirect Administration

**STRATEGY: 2.1.1.**

Indirect Administration

## Historically Underutilized Businesses

CPRIT makes a good faith effort to purchase and award contracts to historically underutilized businesses (HUB) in accordance with the Texas Government Code, Title 10, Subtitle D, Chapter 2161 and rules established by the Comptroller, Texas Procurement and Support Services Division (TPASS) in Texas Administrative Code, Title 34, Part 1, Chapter 20, Subchapter B.

A HUB expenditure is a payment made to a business that has been certified as a HUB by the Comptroller TPASS and classified under a Comptroller Object Code chosen for tracking HUB expenditures. The Comptroller TPASS tracks the Institute's HUB expenditures through the Uniform Statewide Accounting System.

State agencies are required to include in their strategic plans agency goals, objectives, performance measures, and strategies addressing their HUB expenditure plans located in the Internal Assessment. CPRIT's purchases consist of other services, professional services, and commodities. The operating budget for a small agency limits the dollars spent; however, the Institute continues to increase HUB purchases.

### **Historically Underutilized Businesses Plan**

CPRIT will continue to encourage increased participation of Historically Underutilized Businesses (HUB) in procurement and contracting. During fiscal years 2011-2015, CPRIT will make a good faith effort to purchase and contract with HUBs to achieve the target goals established for state agencies.

**Figure XV HUB Plan**

	The Institute will implement existing policies and procedures to ensure meaningful and substantial inclusion of HUB's in all possible agency purchases
Objective	To attain agency HUB targets for professional services, other services and commodities over the next year
Outcome Measure	Percentage of total dollar value of purchasing contracts awarded to HUB's
	Implement the agency plan for increasing HUB purchases
Measures	<ul style="list-style-type: none"> <li>• Number of HUB contractors contacted for bid proposals</li> <li>• Number of HUB contracts awarded</li> <li>• Dollar value of HUB contracts awarded</li> <li>• Percentage of HUB expenditures attained</li> </ul>

CPRIT grant award recipients are strongly encouraged to make a good faith effort to use the services, products, or materials provided by a certified HUB. The CPRIT Project Guide includes a requirement that grant recipients must submit a quarterly report identifying their efforts to procure goods and services through HUBs. Staff verifies the reports submitted. The Institute is proactive in notifying eligible contractors about procedures for becoming certified as HUBs.

CPRIT will continue to analyze internal quarterly expenditures made with HUBs and look for opportunities to increase HUB procurements.

**Figure XVI Annual Internal HUB Measures for FY 2009**

Measures	<ul style="list-style-type: none"> <li>• Number of HUB contractors contacted for bid proposals 0</li> <li>• Number of HUB contracts awarded 66</li> <li>• Dollar value of HUB contracts awarded \$ 200,952</li> </ul>	
<b>Percentage of HUB Expenditures Attained</b>	<b>Percent Attained</b>	<b>Unadjusted Goal</b>
Professional Services	0 %	20 %
Other Services	2.14%	33 %
Commodities	49.2%	12.6 %

# Technology Resource Planning

## *Technology Assessment Summary*

### ***Vision***

The vision for the CPRIT Information Technology division is to foster an environment that embraces the change that technology represents while leveraging technology to promote an accessible, collaborative, supportive and empowering culture internally within our agency and fostering a spirit of transparency in service to the people of Texas. As a supporting foundation of this vision, Information Technology is committed to the following core values and principles: accountability, integrity, teamwork, efficient and effective innovation, and responsiveness.

### ***Core Information Technology Processes***

Information Technology acts as an operational foundation for CPRIT serving the needs of agency staff, partners and the general public. This foundation has three major components: infrastructure management (ensure daily operations, security, continuity), direct user/public support (troubleshooting, education), and agency/departmental level technology planning support (planning, business analysis, sustainability).

### ***Mission and Strategic Goals***

The overall mission of Information Technology is to provide a reliable, consistent and secure information technology infrastructure that advances the core objectives of the Institute, enhances administrative operations, is driven by institutional priorities, incorporates stakeholder needs, and complies with statewide initiatives and goals set forth by the Department of Information Resources. IT's basic goals are access, collaboration and innovation, privacy and security, quality service, and "greener" IT. To this end, we have defined five broad strategic goals that encompass and support our department's mission.

#### **Goal 1: Anywhere/Anytime Access**

Public and agency stakeholder access to information should not be limited or restricted because of physical location or time of day. Information Technology will utilize redundant services and web-based tools to provide secure access to internal agency systems and hosted applications for agency personnel. Additionally, the agency website and other web-based services will be used to provide agency constituents and the general public with access to agency contact information, Institute mission objectives, grant request for applications, information on awarded grants, agency guidelines and policies.

## **Goal 2: Collaboration and Innovation**

We accept the challenge of thinking outside of the box. By leveraging IT staff knowledge and embracing new technologies, we will create efficient and cost-effective solutions to address agency issues and objectives. Focusing on the deployment and utilization of collaborative tools, we will enable staff to engage with each other and the public at large, working together to support and generate new ideas and processes to assist in the delivery of truly innovative and efficient services and solutions.

## **Goal 3: Privacy and Security**

Protecting critical agency resources and sensitive information from service vulnerabilities, accidental disclosure, theft and cyber attacks are of paramount concern. Information Technology will continue to ensure that infrastructure components are sufficiently robust and protected by developing processes in which periodic independent audits and internal policy reviews regularly occur.

## **Goal 4: Quality of Service and Continuous Improvement**

Utilizing performance metrics and stakeholder feedback to determine Information Technology effectiveness and to quantify performance will maintain a highly responsive and nimble enterprise environment which fosters a spirit of constant learning and comprehensive technical process examination to continue improving and evolving to meet agency initiatives and to efficiently and effectively serve the needs of our staff and constituents.

## **Goal 5: “Greener” IT**

Information Technology will leverage software solutions and hardware platform selection as well as better defining internal processes to vigilantly reduce the agency’s ecological footprint. By utilizing server and application virtualization, IT can remain highly responsive and innovative while maximizing the usage of current infrastructure components, realize cost savings from the reduction and centralization of infrastructure resources and support agreements, increase redundancy, and reduce disaster recovery response timelines.

## Part II: Technology Initiative Alignment

The following table summarizes CPRIT Information Resources objectives and strategies as they relate to departmental goals. Additionally, each objective and/or strategy is correlated to related Statewide Strategic Plan (SSP) strategies if possible.					Goal 1: Anywhere/Anytime Access	Goal 2: Collaboration and Innovation	Goal 3: Privacy and Security	Goal 4: Quality of Service and Continuous Improvement	Goal 5: "Greener" IT
Objectives	Strategies	SSP	Status	Goals					
1. Incorporate effective IT governance mechanisms that align technology priorities and policies with established agency goals and objectives	1.1: Develop an annual work plan detailing the prioritization of information technology efforts	3.2 4.1	Planned		✓		✓		
	1.2: Clearly define key progress indicators and expected results for IT projects		Planned		✓		✓		
2. Clarify IT life-cycle policy and ensure that it continues to provide reliable, efficient and cost effective enterprise infrastructure services	2.1: Maintain existing enterprise infrastructure and services	1.3	Current	✓		✓	✓	✓	
	2.2: Continue agency current policy of responsible procurement	1.3	Current		✓	✓	✓	✓	
	2.3: Implement a IT asset management and ticketing system	4.1	Planned		✓		✓		
3. Facilitate implementation of business continuity and disaster recovery planning and scheduled testing	3.1: Deploy agency-wide system, application level and service monitoring		Planned		✓		✓		

Objectives		Strategies	SSP	Status	Goal 1: Anywhere/Anytime Access	Goal 2: Collaboration and Innovation	Goal 3: Privacy and Security	Goal 4: Quality of Service and Continuous Improvement	Goal 5: "Greener" IT
The following table summarizes CPRIT Information Resources objectives and strategies as they relate to departmental goals. Additionally, each objective and/or strategy is correlated to related Statewide Strategic Plan (SSP) strategies if possible.									
		3.2: Create a virtualized, fully redundant hardware and software infrastructure on-site	1.3	Current	✓	✓		✓	✓
		3.3: Clarify and update agency disaster recovery and emergency response plans	1.2	Planned	✓	✓	✓	✓	
4. Develop a methodology to review, revise, and implement agency record, service and system security policies to ensure the privacy and integrity of information resources		4.1: Complete an annual analysis of information resources procedures and security policies	2.1	Planned		✓	✓	✓	
		4.2: Development an Incident Response Plan	2.1	Planned		✓	✓	✓	
		4.3: Regularly educate and inform agency staff on security policies, best practices, and incident reporting	2.1	Planned		✓	✓	✓	
		4.4: Define and require a consistent encryption policy to	2.1	Planned			✓	✓	

Objectives		Strategies	SSP	Status	Goal 1: Anywhere/Anytime Access	Goal 2: Collaboration and Innovation	Goal 3: Privacy and Security	Goal 4: Quality of Service and Continuous Improvement	Goal 5: "Greener" IT
The following table summarizes CPRIT Information Resources objectives and strategies as they relate to departmental goals. Additionally, each objective and/or strategy is correlated to related Statewide Strategic Plan (SSP) strategies if possible.									
		protect sensitive agency information							
		4.5: Engage DIR to perform an annual system/network vulnerability test	2.1	Planned			✓	✓	
5. Support and Enhance Agency Collaborative Efforts		5.1: Implement an agency-wide, resource planning and project tracking system		Planned		✓		✓	
		5.2: Deploy an enterprise collaboration suite and integrated storage system		Planned		✓		✓	
		5.3: Maintain and expand agency adoption of audio/video technologies		Current		✓		✓	✓
6. Provide Access to Agency Information and Services Anywhere/Anytime		6.1: Provide secure, web-based access to information, storage resources and critical services for agency staff and stakeholders	3.1 4.1	Current	✓	✓		✓	✓

Objectives		Strategies	SSP	Status	Goal 1: Anywhere/Anytime Access	Goal 2: Collaboration and Innovation	Goal 3: Privacy and Security	Goal 4: Quality of Service and Continuous Improvement	Goal 5: "Greener" IT
The following table summarizes CPRIT Information Resources objectives and strategies as they relate to departmental goals. Additionally, each objective and/or strategy is correlated to related Statewide Strategic Plan (SSP) strategies if possible.									
7. Redefine and enhance the agency's World Wide Web presence	7.1: Make existing agency public web resources easier to discover, navigate, and understand	3.1 3.2	Current	✓	✓		✓		
	7.2: Implement a web content management system	3.1 3.2 4.1	Current	✓	✓		✓		
8. Maintain and expand an environmentally responsible IT operational focus	8.1: Conduct an annual energy audit of agency servers and desktop system to determine and track footprint changes		Planned				✓	✓	
	8.2: Implement centralized storage and virtualization systems	1.3	Current				✓	✓	

## **Technology Initiative Alignment Details**

**Objective 1:** Incorporate effective IT governance mechanisms that align technology priorities and policies with established Institute goals and objectives, and overall mission. Senior management and IT will work together to create an annual work plan defining agency-wide technology initiatives and establishing the prioritization of those efforts. IT will assist executive management in developing a policy framework that addresses stakeholder expectations, transparently defines infrastructure capabilities, and communicates risks in plain language inherent in new agency technology initiatives and requests. Working with agency senior management to establish a standard set of metrics and benchmarking measures for IT projects.

**Objective 2:** Clarify IT life-cycle policy and ensure that it continues to provide reliable, efficient and cost effective enterprise infrastructure services, maintenance services, and reviewing and updating maintenance contracts to ensure that core systems, equipment, and software platforms are fully covered and serviceable.

**Objective 3:** Facilitate implementation of business continuity and disaster recovery planning and scheduled testing to ensure that redundant systems exist to sufficiently protect the integrity and security of agency data and maintain business continuity and accessibility to critical agency technical resources. This includes proactive monitoring of network, server and application level infrastructures; utilizing server virtualization technologies, redundant network infrastructure hardware along with centralized storage to ensure that physical and application-level redundancy exist on-site; and updating agency service/system criticality and service restoration guidelines and engaging with the Department of Information Resources, other state entities as well as commercial solution providers to determine what cloud-based or offsite resources exist for co-location or relocation of agency resources in the event of a facility, natural or man-made, disaster.

**Objective 4:** Develop a methodology to review, revise and implement agency record, service and system security policies to ensure the privacy and integrity of information resources. This includes reviewing agency security policies annually will assist in streamlining processes, in maintaining an effective service plan to address weaknesses and will ensure that major changes in technological trends are evaluated and prepared for; defining and developing an Incident Response Plan that will encompass the agency's process of identification of, response to, and notification of compromised or infected systems, determination of privacy impact, and target/victim notification; enhancing general security awareness among staff; defining and implementing an encryption policy for all agency data storage systems, mobile computing devices, email, electronic data transfers; and engaging the Department of Information Resources to perform an independent annual system, application, and external network vulnerability test.

**Objective 5:** Support and enhance agency collaborative efforts which includes implementing an agency-wide resource planning and project tracking system and enhancing teleconference bridges as well as both desktop and conference room videoconferencing systems and web-based meeting software to enhance collaboration between remote entities and CPRIT offices.

**Objective 6:** Provide access to agency information and services which includes a web-based, secure virtual private network for staff usage ensuring access to email, shared file storage locations and hosted productivity applications, providing access to collaborative resources and critical information from any location.

**Objective 7:** Redefine and enhance the agency's World Wide Web which provides accurate, up-to-date, and responsive information and a platform to assist the public in understanding the direct impact and relevance of CPRIT funded projects in their local neighborhoods, cities, counties and in the entire state of Texas.

**Objective 8:** Maintain and expand an environmentally responsible IT operational focus which includes purchasing infrastructure hardware designed for low energy consumption, limiting endpoint power usage by standardizing on small form factor PCs, and maintaining a limited infrastructure footprint by consolidating agency physical storage devices and server systems through the use of virtualization.

## Appendices

### ***Appendix A: Description of Agency's Planning Process***

The following describes the key dates and activities undertaken by the Institute in its strategic planning process:

- **November 2009**

Meeting with Staff and Board Members to discuss strategic planning process and future goals.

Priority areas for future program development were determined by the legislation creating the Institute and current ongoing prevention and education programs being funded.

- **March 2010**

Institute strategic plan and information resources strategic plan instructions were received from the Governor's Office of Budget and Planning and the Legislative Budget Board. Staff will develop content and format of the FY 2011 – 2015 Strategic Plan (External/Internal Assessments, Mission, Goal, Objective, Strategies, Outcome, and Outputs).

Meeting with facilitator to discuss priority areas and plans for implementation.

- **May - June 2010**

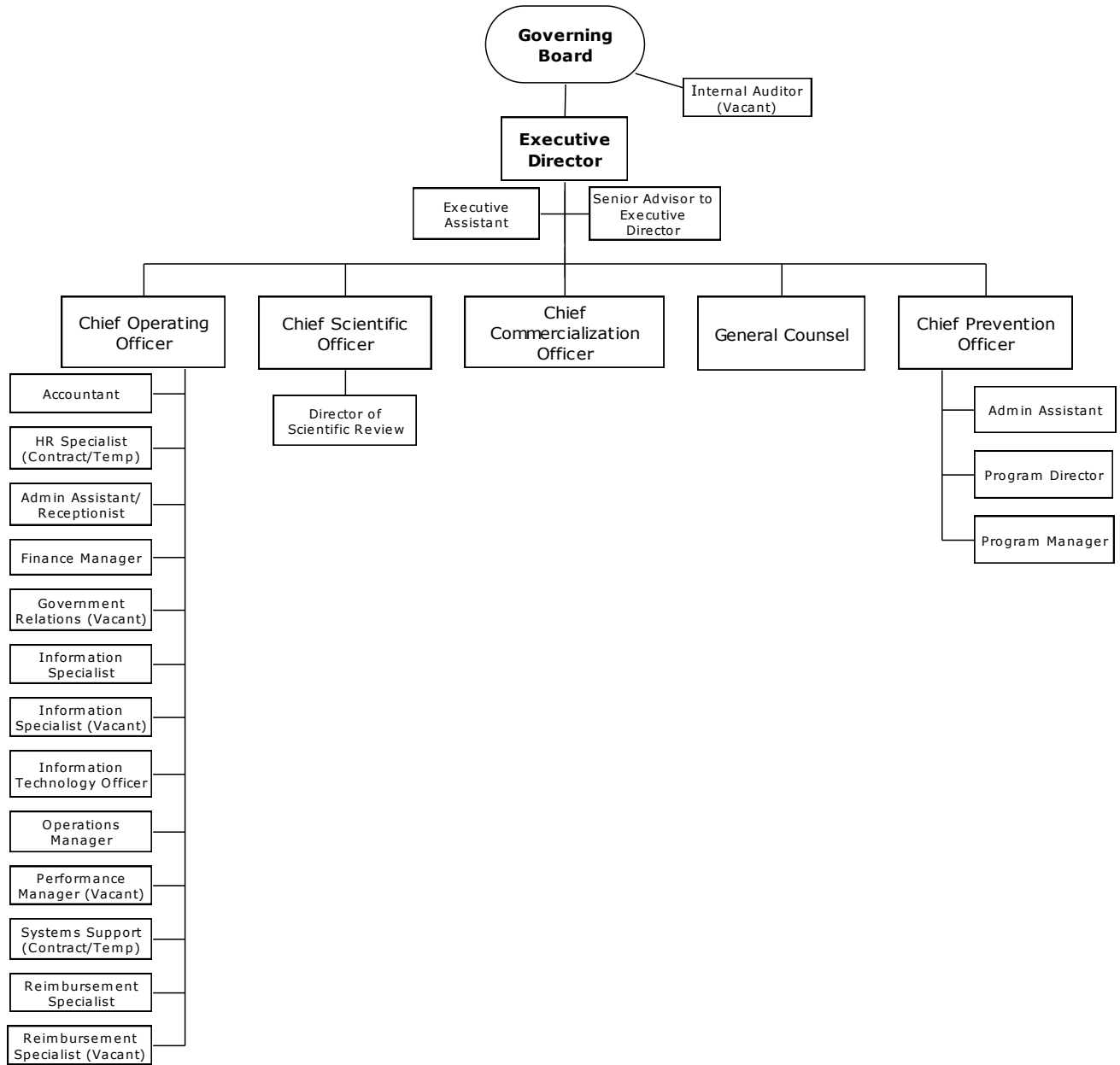
Strategic plan contents reviewed, approved, and authorized for submission by Institute Oversight Committee.

- **June 2010**

FY 2011 – 2015 Strategic Plan submitted.

# Appendix B: Current Organizational Chart

As of May 2010



**Appendix C: Five Year Projections for Outcomes 2011-2015**

<b>OUTCOME</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Non-State Funds Leveraged as Match for Research Grants (in millions)	65,000,000	65,000,000	65,000,000	65,000,000	65,000,000
Total Research Matching Fund Expenditures	65,000,000	65,000,000	65,000,000	65,000,000	65,000,000
Percent TX Regions w/ Cancer Prevention Services and Activities Initiated	100%	100%	100%	100%	100%

**Non-State Funds Leveraged as Match for Research Grants:**

Total amount of non-state funds leveraged as match for Institute research grants. Non-state funds include any federal, non-profit, corporate, or philanthropic sources of money used as match.

**Total Research Matching Fund Expenditures:**

The total expenditures for the conduct of research and development from all matching fund sources during the reporting period. The total may include indirect costs and fringe benefits.

**Percent of Texas Regions with Cancer Prevention Services and Activities Initiated as addressed in the *Texas Cancer Plan* through Grant Awards:**

Total verified number of Texas regions (expressed as a percentage) receiving cancer prevention services through direct Institute intervention or Institute-funded contracts that address one or more of the following *Texas Cancer Plan* goals: Prevention Information and Services; Early Detection and Treatment; Professional Education and Practice; Cancer Data Acquisition and Utilization; and Survivorship. The measure reflects the Institute’s ability to provide a comprehensive approach to cancer control planning and implementation. Inclusion of a Texas county in this measure calculation does not imply that all of the goals, objectives, and strategies related to the *Texas Cancer Plan* have been implemented.

## Appendix D: Performance Measures Definitions

### GOAL 1 – Cancer Research and Prevention Services

Objective A.1: Invest in Texas-Based Cancer Research Projects

<b>Outcome Measure A.1.</b>	<b>Non-State Funds Leveraged as Match for Research Grants (in millions)</b>
Short Definition:	Total amount of non-state funds leveraged as match for Institute research grants. Non-state funds include any federal, non-profit, corporate, or philanthropic sources of money used as match.
Purpose/Importance:	This measure indicates the amount of non-state appropriated dollars invested in cancer research in Texas.
Source/Collection of Data:	Data for all leverage funds announced is documented in the Institute agreements signed by grant recipients.
Method of Calculation:	Institute staff will total the amount of leverage investments identified in signed protect agreements for projects receiving Institute awards.
Data Limitations:	None
Calculations Type:	Cumulative
New Measure:	Yes
Desired Performance:	Higher than target

<b>Outcome Measure A.2.</b>	<b>Total Research Matching Fund Expenditures</b>
Short Definition:	The total expenditures for the conduct of research and development from all matching fund sources during the reporting period, including indirect costs. This would exclude amounts granted by the Cancer Prevention and Research Institute and would also exclude the Institute's fringe benefits.
Purpose/Importance:	This measure is an indicator of the level of matching research dollars expended for cancer research grant awards.
Source/Collection of Data:	Annual financial reports from grant recipients documenting actual expenditures of all funds related to the Institute's grant award.
Method of Calculation:	The total dollar amount of matching fund expenditures for the conduct of research and development from all funding sources documented in the Institute's award agreements signed by the grant recipients.
Data Limitations:	None
Calculations Type:	Cumulative
New Measure:	Yes
Desired Performance:	Higher than target

<b>Outcome Measure A.3.</b>	<b>Percent TX Regions w/ Cancer Prevention Services and Activities Initiated</b>
Short Definition:	Total verified number of Texas regions, as described by the Texas Health and Human Services Commission, expressed as a percentage, receiving cancer prevention services through direct Institute intervention or Institute-funded contracts that address one or more of the Texas Cancer Plan goals.
Purpose/Importance:	The Texas Cancer Plan goals are: Prevention Information and Services; Early Detection and Treatment; Professional Education and Practice; Cancer Data Acquisition and Utilization; and Survivorship. The measure reflects the Institute's ability to wage a multi-faceted attack on cancer.
Source/Collection of Data:	Each initiative is required to apply for Institute funding annually. The applicant must report which Texas Cancer Plan goals are being addressed by their activities and must also indicate the geographic area(s) their program will serve. Each applicant must address at least one Cancer Plan goal and may address multiple goals.
Method of Calculation:	Institute staff verifies the goals being addressed and creates a matrix documenting all initiatives and goals addressed. Geographic areas served will also be tracked. Agency records, and/or a current list of initiatives that are promoted by direct Institute intervention or funded initiatives will substantiate the percentage of Texas regions with services and activities addressed in the Texas Cancer Plan.
Data Limitations:	Inclusion of a Texas region in this calculation does not imply that all of the goals, objectives, and strategies related to the Texas Cancer Plan have been implemented.
Calculations Type:	Non-cumulative
New Measure:	Yes
Desired Performance:	Higher than target

<b>Output Measure A.1.1.2.</b>	<b>Measure: Number of People Served by Institute Funded Prevention and Control Activities</b>
Short Definition:	Total verified number of people in Texas receiving cancer related information or services provided by the Institute or Institute funded initiatives <del>Measure includes certain mass media efforts but.</del> <u>This measure</u> excludes professionals who are counted under a separate measure. Duplicate counts may occur if people make multiple contacts with Institute initiatives.
Purpose/Importance:	<del>Providing cancer related information and services to Texans is of critical importance to the Institute.</del> <u>This measure is an indication of the prevention program's reach to Texans with effective science-based programs and/or services.</u>
Source/Collection of Data:	The number of persons in Texas receiving cancer related information and services is reported in <del>initiatives' grantees'</del> quarterly reports. <del>Persons served via mass media may be counted if a ver and reliable methodology is used to estimate the number of people served in the targeted audience.</del>
Method of Calculation:	Institute staff verifies the number of people served and creates a cumulative total that is substantiated by <del>on-site reviews of contractor records and/or rosters of people participating in activities funded by the Institute.</del> <u>Projects distributing materials in bulk must be able to substantiate the number actually distributed to people. A verifiable and reliable methodology for estimating the number of people served in the target audience must be used to count people served through mass media records retained at contractors' sites.</u>
Data Limitations:	The majority of data reported by the Institute involves work done by grantees and their subcontractors. This can create a lag time in reported data resulting in a need for updating previously reported numbers. <u>Large</u> <del>variances</del> in performance from quarter to quarter and year to year are likely to occur due to the <u>wide</u> variety of <del>work done by Institute funded initiatives</del> <u>End year reporting does reflect complete and accurate reporting programs and services funded by the Institute.</u>
Calculations Type:	Output
New Measure:	Yes
Desired Performance:	Higher than the target

<b>Output Measure A.1.1.2.</b>	<b>Number of Health Care and/or Education Professionals Who Receive Training <u>Educated</u></b>
Short Definition:	Total verified number of health care and/or education <del>other</del> professionals <del>who attend training events in Texas or are provided training materials in Texas focusing on</del> <u>educated on</u> cancer related issues and provided by the Institute or Institute <u>CPRIT</u> funded initiatives. <del>Institute funded training events must take place in Texas. If a Institute funded initiative participates in an event held outside of Texas, only those attendees that can be established as living in Texas can be counted. Duplicate counts may occur if people</del> <u>professionals attend make</u> multiple training events and/or receive multiple training materials <u>contacts with programs and services funded by the Institute.</u>
Purpose/Importance:	Educating health professionals about cancer <u>prevention and control</u> related issues has significant impact on the patients they treat. <del>Educating professional educators is a primary route for getting cancer prevention and control information to students. Information about cancer prevention and control is constantly changing and health professionals and educators must have up to date information.</del>
Source/Collection of Data:	Educating health professionals about cancer <u>prevention and control</u> related issues has significant impact on the patients they treat. <del>Educating professional educators is a primary route for getting cancer prevention and control information to students. Information about cancer prevention and control is constantly changing and health professionals and educators must have up to date information.</del>
Method of Calculation:	Institute staff verifies the number of health care and education professionals <u>educated</u> provided with training and or materials on cancer <u>related issues</u> and creates a cumulative total that is substantiated by <del>on-site reviews of contractor records</del> <u>retained at contractor's sites.</u> and/or rosters of health care and/or education professionals who attend training events, mailing lists of training materials distributed to health care and/or education professionals, agendas of training events, and copies of training materials distributed.
Data Limitations:	The majority of data reported by the Institute involves work done by grantees and their subcontractors. This can create a lag time in reported data resulting in a need for updating previously reported numbers. Variances in performance from quarter to quarter and year to year are likely to occur due to the variety of work done by Institute funded initiatives. End of year reporting does reflect complete and accurate reporting.
Calculations Type:	<u>Output</u>
New Measure:	<u>Yes</u>
Desired Performance:	<u>Higher than the target</u>

<b>Output Measure A.1.1.2</b>	<b>Number of Public and Private Funding Opportunities to Increase Funding.</b>
Short Definition:	Total verified number of private and public funding opportunities pursued to increase funding and resources for Institute activities. The Institute pursues new sources of funding and resources through funded initiatives or directly.
Purpose/Importance:	The Institute has an established record of leveraging limited state general revenue funding with grants, donations, and in-kind support from private and public sources in order to advance the goals of the Texas Cancer Plan. This measure will codify the Institute's efforts.
Source/Collection of Data:	The number of funding opportunities pursued from private and public sources to advance the goals of the Texas Cancer Plan is reported in Institute funded initiative's quarterly reports. Institute staff will track and report private and public funding opportunities pursued directly by the Institute or through funded initiatives of the Institute.
Method of Calculation:	Council staff verifies the number of private and public funding opportunities pursued by the Institute or through funded initiatives. Institute staff creates a cumulative total that is substantiated by a list of the opportunities pursued by the Institute and funded initiatives. Data is substantiated by Institute records and review of documentation supporting applications for and/or receipt or denial of outside funding. This measure excludes funds donated for the purchase of food.
Data Limitations:	This measure captures both formal and informal pursuit of funds to support initiative activities. Documentation supporting the receipt or denial of funds will be accepted as evidence that funds were pursued. The majority of data reported by the Institute involves work done by grantees and their subcontractors. This can create a lag time in reported data resulting in a need for updating previously reported numbers. Variances in performance from quarter to quarter and year to year are likely to occur due to the variety of work done by Institute funded initiatives. End of year reporting does reflect complete and accurate reporting.
Calculations Type:	Output
New Measure:	N
Desired Performance:	Higher than the target

<b>Output Measure A.1.1.2</b>	<b>Number of clock hours donated to local contractors</b>
Short Definition:	Total verified number of clock hours professionals or individuals donate to Institute-funded contractors and the Institute that improves the public awareness of cancer prevention, early detection, access to care, increasing the knowledge and skill level of professionals concerning cancer prevention, control and management and implementation of the Texas Cancer Plan. Donation of time signifies that contractors and Institute did not expend Institute funds for an individuals' time. Therefore, limited resources for cancer control are leveraged.
Purpose/Importance:	The Institute recognizes the importance of leveraging limited State funding through the extremely valuable donation of time by experts, leaders, and individuals interested in cancer control and advancing the goals of the Texas Cancer Plan.
Source/Collection of Data:	The number of hours donated to contractors and the Institute in order to implement the Texas Cancer Plan, increase public awareness, professional education and early detection activities, and the number of clock hours of training conducted for health care and/or education professionals are reported in contractor's quarterly reports.
Method of Calculation:	Institute staff verifies the number of hours donated and the number of hours of training conducted by Institute-funded initiatives and creates a cumulative total that is substantiated by a list of individuals per project or activity, and documentation of the number of hours.
Data Limitations:	The majority of data reported by the Institute involves work done by grantees and their subcontractors. This can create a lag time in reported data resulting in a need for updating previously reported numbers. Variances in performance from quarter to quarter and year to year are likely to occur due to the variety of work done by Institute funded initiatives. End of year reporting does reflect complete and accurate reporting.
Calculations Type:	Output
New Measure:	No
Desired Performance:	Higher than the target

<b>Output Measure A.1.1.1.</b>	<b><u>Number of Researchers Recruited to TX to Conduct Cancer Research</u></b>
Short Definition:	<u>The total number of Scientific researchers who relocate to Texas for a faculty position at a Texas based academic institution.</u>
Purpose/Importance:	<u>This measure indicates the number of scientific researchers in the area of cancer research attracted to Texas because of the availability of CPRIT research grant funds.</u>
Source/Collection of Data:	<u>CPRIT records of the number of academic institutions awarded a grant ratified by the Oversight Committee based on a grant application to recruit a scientific researcher to their institution.</u>
Method of Calculation:	<u>The total number of researchers recruited to Texas during the fiscal year documented by the ratified award slates and Oversight Committee meeting minutes which record these award decisions.</u>
Data Limitations:	<u>None. All data is the result of the number of research recruitment grants awarded to academic institutions.</u>
Calculations Type:	<u>Output</u>
New Measure:	<u>Yes</u>
Desired Performance:	<u>Higher than the target</u>

<b>Output Measure A.1.1.1.</b>	<b><u>Number of Research Grant Awards</u></b>
Short Definition:	Number of research grants made by the Institute.
Purpose/Importance:	This measure indicates the workload of the Institute in awarding grants and managing those grants through their award cycles.
Source/Collection of Data:	Signed research grant awards with the Institute.
Method of Calculation:	The total number of research grant awards issued to grant recipients through signed agreements.
Data Limitations:	None.
Calculations Type:	Explanatory
New Measure:	Yes
Desired Performance:	Higher than the target

<b>Output Measure A.1.1.1.</b>	<b>Number of Entities Relocating to TX for Cancer-Research Related Projects</b>
Short Definition:	The total number of business or research entities which establish new business or research operations in Texas in order to participate in an Institute-funded grant award.
Purpose/Importance:	This measure indicates the level of attraction of cancer research funding to draw new businesses and research entities to Texas.
Source/Collection of Data:	Annual status or other reports from a grant recipient documenting the relocation of a business or research entity due to the research project funded by the Institute.
Method of Calculation:	The total number of business or research entities relocating to Texas documented in status reports from grant award recipients.
Data Limitations:	None.
Calculations Type:	Explanatory
New Measure:	Yes
Desired Performance:	Higher than the target

<b>Efficiency Measure A.1.1.2</b>	<b>Average Cost per Health Care and/or Education Professional Trained</b>
Short Definition:	Total Institute funds expended for the development and implementation of training programs on cancer control for health care and/or education professionals, divided by the number of professionals being trained. Calculation represents a broad variety of training formats and professional disciplines. Duplicate counts of professionals trained may occur if professionals are trained in multiple ways and over multiple days.
Purpose/Importance:	The Institute recognizes the importance of efficiently expending state funds. One measure of that efficiency is low projected average cost of training professionals. To achieve such efficiency either the cost of training is less than projected or more professionals are being trained for the same amount of funding.
Source/Collection of Data:	The average cost of professionals trained is reported in initiative's quarterly reports.
Method of Calculation:	Institute staff verifies the average cost of training professionals for each initiative and creates a cumulative average by dividing the total cost of training for all initiatives by the total number of professionals trained by all initiatives. An initiative includes, but is not limited to, conducting training sessions, developing and distributing training materials, and developing web based training tools. Data is substantiated by Institute records and on-site review of contractor records of audited expenditures and rosters of health care and/or education professionals receiving training.
Data Limitations:	The majority of data reported by the Institute involves work done by grantees and their subcontractors. This can create a lag time in reported data resulting in a need for updating previously reported numbers. Variances in performance from quarter to quarter and year to year are likely to occur due to the variety of work done by Institute funded initiatives. End of year reporting does reflect complete and accurate reporting.
Calculations Type:	Efficiency
New Measure:	No
Desired Performance:	Lower than the target

<b>Explanatory Measure A.1.1.1.</b>	<b>Number of Published Articles on CPRIT-Funded Research Projects</b>
Short Definition:	<u>Number of scientific publications that include articles that result from CPRIT funded research projects.</u>
Purpose/Importance:	<u>This measure indicates the level of success recognized by external research and medical institutions of CPRIT funded projects in the quest to develop breakthroughs in cancer research and prevention services.</u>
Source/Collection of Data:	<u>The number of publications is reported in awardees annual reports.</u>
Method of Calculation:	<u>Institute staff will verify and total the number of publications reported by awardees in their report submissions. Publications are interpreted as articles that include references to actual scientific outcomes from awarded projects.</u>
Data Limitations:	<u>The majority of data reported by the Institute involves work done by grantees and their subcontractors. This can create a lag time in reported data resulting in a need for updating previously reported numbers. Variances in performance from quarter to quarter and year to year are likely to occur due to the variety of work done by Institute funded initiatives.</u>
Calculations Type:	<u>Explanatory</u>
New Measure:	<u>Yes</u>
Desired Performance:	<u>Higher than the target</u>

<b>Explanatory Measure A.1.1.1.</b>	<b>Number of New Jobs Created and Maintained</b>
Short Definition:	<u>An unduplicated count of the number of jobs that were created and maintained (one year) using funds provided by the Institute.</u>
Purpose/Importance:	<u>This measure indicates the impact of Institute funding to preserve and create new jobs; to build human resources stability in the Cancer arena.</u>
Source/Collection of Data:	<u>The number of jobs created and maintained is annually reported in awardees reports.</u>
Method of Calculation:	<u>Institute staff will verify and total the number of jobs created and maintained that are reported by awardees in their report submissions.</u>
Data Limitations:	<u>The majority of data reported by the Institute involves work done by grantees and their subcontractors. This can create a lag time in reported data resulting in a need for updating previously reported numbers. Variances in performance from quarter to quarter and year to year are likely to occur due to the variety of work done by Institute funded initiatives.</u>
Calculations Type:	<u>Explanatory</u>
New Measure:	<u>Yes</u>
Desired Performance:	<u>Higher than the target</u>

<b>Explanatory Measure A.1.1.1.</b>	<b>Average Dollar Amount of Research Grants Awarded</b>
Short Definition:	The average dollar amount of research grant awards made by the Institute.
Purpose/Importance:	This measure indicates the average size of grant awards issued by the Institute.
Source/Collection of Data:	Signed research grant awards with the Institute.
Method of Calculation:	The total dollar amount of research grants divided by the total number of research grants made as documented in signed agreements with the Institute.
Data Limitations:	None.
Calculations Type:	Explanatory
New Measure:	Yes
Desired Performance:	Higher than the target

<b>Explanatory Measure A.1.1.2.</b>	<b>Annual Age-adjusted Cancer Mortality Rate</b>
Short Definition:	Statewide annual age-adjusted cancer mortality rate, as determined by the Cancer Registry Division, Texas Department of State Health Services.
Purpose/Importance:	All of the Institute's activities positively contribute to reducing cancer mortality, as do Texas physicians, hospitals, cancer treatment centers, volunteer organizations and other health care facilities. The Institute recognizes that cancer mortality rate is the ultimate outcome measure for cancer control.
Source/Collection of Data:	The Cancer Registry Division of the Texas Department of State Health Services provides the data reported for this measure.
Method of Calculation:	The calculation age-adjusts cancer death rates to the U.S. 2000 Standard Population, as used by the National Cancer Institute.
Data Limitations:	Age-adjusted mortality rates are relative rates used nationally for comparison purposes. Age-adjusted rates fluctuate when population forecasts change and as the population ages. Cancer rates will be adjusted to the 2000 United States standard. Comparisons with previous mortality rates will require recalculations to the new standards. There is an 8-12 month delay in obtaining cancer mortality data from the Texas Department of State Health Services. A long-term, expensive study would be needed to correlate the impact of the Institute projects with the state mortality rate. Further, the impact of cancer prevention efforts on mortality rates cannot be measured in legislative budget cycles.
Calculations Type:	Explanatory
New Measure:	No
Desired Performance:	Lower than the target

### Overview of Statute, Mission, and Essential Functions

Texas voters overwhelmingly approved a constitutional amendment in 2007 establishing the Cancer Prevention and Research Institute of Texas (CPRIT) and authorizing the state to issue \$3 billion in general obligation bonds over ten years to fund groundbreaking cancer research and prevention programs and services throughout the state. House Bill 14, 80<sup>th</sup> Texas Legislature, is the authorizing statute that charges CPRIT to:

- Create and expedite innovation in the area of cancer research and in enhancing the potential for a medical or scientific breakthrough in the prevention of cancer and cures for cancer;
- Attract, create, or expand research capabilities of public or private institutions of higher education and other public or private entities that will promote a substantial increase in cancer research and in the creation of high-quality new jobs in this state; and
- Develop and implement the *Texas Cancer Plan*.

Under the guidance of the Oversight Committee, CPRIT's governing board, CPRIT accepts applications and awards grants for a wide variety of cancer-related research and for the delivery of cancer prevention programs and services by public and private entities located in Texas. All CPRIT-funded research will be conducted in state by Texas-based scientists and reflect CPRIT's mission to attract and expand the state's research capabilities and create high quality new jobs in Texas.

Since the first appropriation of \$225 million of cancer bond funds became available on September 1, 2009, CPRIT has awarded funds for individual investigator research projects; high-risk innovation research projects; evidence-based prevention programs and services; health promotion and public education prevention programs; company-based research; and professional education programs. CPRIT is awarding funds to academic institutions to recruit outstanding researchers to Texas as *CPRIT Scholars in Cancer Research* and to train exceptional predoctoral and postdoctoral candidates who are committed to pursuing a career in basic, translational, and clinical cancer research to cultivate the next generation of investigators and leaders in the cancer research field in Texas. CPRIT is also focusing a significant amount of funding on community collaborative prevention programs for breast, cervical, and colorectal cancers and on multi-institutional collaborations to enhance the capabilities and infrastructure in Texas to improve the research resources for the future growth of the state's biotechnology industry.

All of the proposals are reviewed by scientists or other experts who live and work outside the State of Texas to ensure the greatest objectivity in the review process. Their advice is used by the Executive Director to develop the cancer research and prevention award slates which are ratified by the Oversight Committee.

CPRIT has 36 budgeted FTEs headed by an Executive Director who oversees five functional areas—Research, Prevention, Commercialization, Operations, and Legal. These functional divisions are necessary to accomplish the essential business functions and duties of the agency. (See the Organizational Chart above)

### ***Agency Workforce***

CPRIT is currently staffed by 21 employees, 2 of which are contract employees. 18 employees are centrally located in Austin, 2 are in the Dallas satellite office and 1 is in the Houston satellite office.

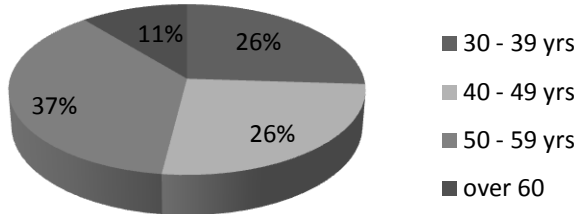
### ***Workforce Demographics***

The following chart profiles CPRIT's total workforce as of May 2010. Seventy-four percent of CPRIT's employees are over the age of 40. CPRIT's workforce is comprised of 74 percent females and 26 percent males.

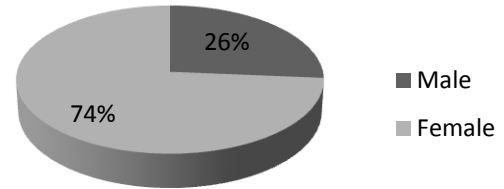
Seventy-four percent of employees have less than 2 years of service with the agency. CPRIT was given authority in January 2010 to hire staff in addition to the 6 full-time employees who transferred from the Texas Cancer Council to CPRIT. With the growth in the number of agency employees from 6 to 21 in little more than 12 months, the proportion of employees with less than two years agency tenure matches the increase in the actual number of employees. Furthermore, 43 percent of the staff have over 10 years of state service. The majority of employees have the potential for continued service with the agency.

## Workforce Breakdown

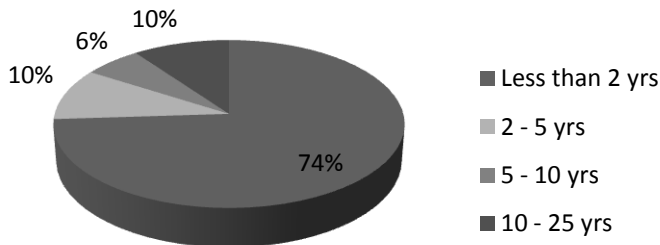
### Age



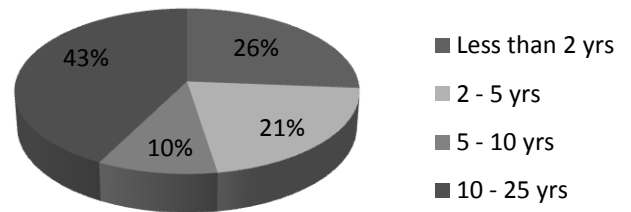
### Gender



### Agency Tenure



### State Tenure



The following table compares the percentage of African American, Hispanic and Female CPRIT employees as of January 2010 to the statewide civilian workforce as reported by the Texas Commission on Human Rights.

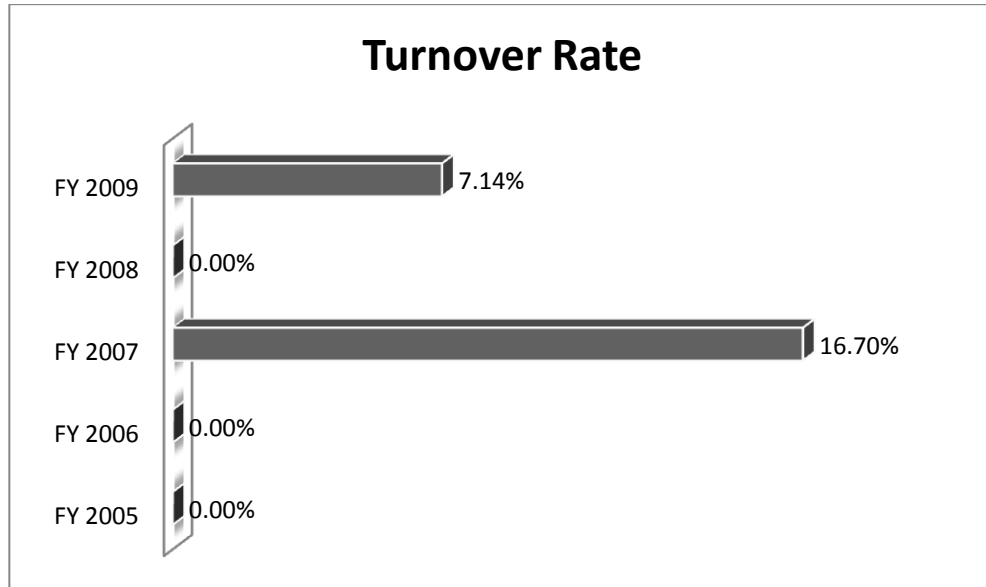
Job Category	African American		Hispanic American		Females	
	CPRIT %	State %	CPRIT %	State %	CPRIT %	State %
Officials, Administration	5.00%	6.00%	10.50%	9.00%	26.30%	29.00%
Professional	5.00%	8.00%	0.00%	9.00%	31.50%	47.00%
Administrative Support	0.00%	23.00%	10.50%	34.00%	15.70%	56.00%

### **Retirement Eligibility**

CPRIT projects that 1 employee will be eligible to retire within the next four years. This represents 5.26 percent of the total workforce.

### **Employee Turnover**

The following chart shows the CPRIT turnover during fiscal years 2005 through 2009. During this period of time, the turnover rate varied from 7.14 percent to 16.70 percent. In general when turnover occurs, it is most commonly among employees who have less than two years of service with the agency.



### **Essential Critical Workforce Skills Necessary for Institute Mission**

CPRIT is fortunate to have a workforce with a broad range of experience. It is essential in a small agency to have staff diverse in skills and experience because it is likely that an employee will perform more than one job function. The agency has highly qualified, dependable employees with skills that allow CPRIT to operate efficiently and effectively. To maintain quality services for Texas and carry out essential functions, the agency will continue to make every effort to hire and retain employees with experience and skills in leadership, management, administration, information technology, financial administration and grant monitoring.

### **Future Workforce Profile (Demand and Gap Analysis)**

A continuing analysis of CPRIT demands will be reviewed to ensure that there is an adequate and effective agency workforce in place. It is estimated that the CPRIT workforce will remain at 26 FTEs.

## ***Strategy Development***

CPRIT has determined that there are no anticipated gaps or surpluses in workforce numbers or skills for the next five years. CPRIT will continue to follow the established recruitment plan and will keep agency policies and procedures documented to ensure knowledge is retained. CPRIT is prepared to recruit and hire the staff necessary to continue to support the agency mission.

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