



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

## **The Promise of Cancer Prevention & Control in an NCI-Designated Cancer Center**

*Association of Cancer Executives*

*Charleston, South Carolina*

*January 28, 2019*

Ernest Hawk, MD, MPH  
Vice President & Head,  
Division of Cancer Prevention and Population Sciences

## Outline

### Cancer prevention

- An achievable aspiration
- The ultimate form of 'cancer care'

NCI-designated cancer centers – innovators, translators, change agents

The University of Texas MD Anderson Cancer Center as a 'prevention delivery model'

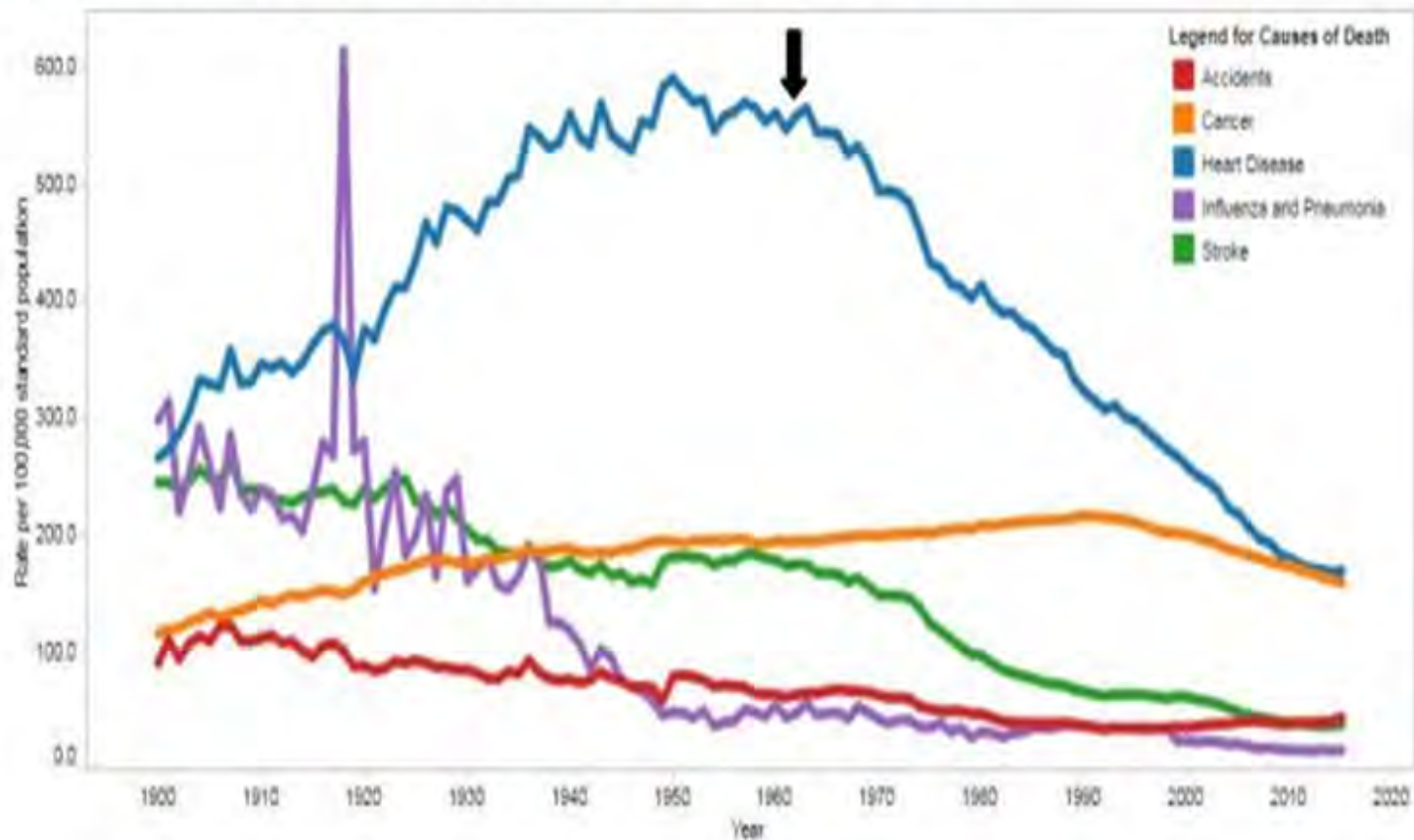
- At a personal level
- At the population level

Goal - Promoting health and, if necessary, healthcare

# Changes in U.S. Death Rates: 1900 - 2015

## Cardiovascular Disease & Infectious Disease vs. Cancer

Age-adjusted Death Rates† for Selected Major Causes of Death: United States, 1900-2015‡‡‡



† Age-adjusted death rates (deaths per 100,000) after 1998 are calculated based on the 2000 U.S. standard population. Populations used for computing death rates for 2013-2015 are postcensal estimates based on the 2010 census, estimated as of July 1, 2010. Rates for census years are based on populations enumerated in the corresponding censuses. Rates for noncensus years between 2000 and 2010 are revised using updated intercensal population estimates and may differ from rates previously published. Data on age-adjusted death rates prior to 1999 are taken from historical data.

‡‡‡ Revisions to the International Classification of Diseases (ICD) over time may result in discontinuities in cause-of-death trends.

SOURCES: CDC/NCHS, National Vital Statistics System, historical data, 1900-1998 (see [https://www.cdc.gov/nchs/nvss/mortality\\_historical\\_data.htm](https://www.cdc.gov/nchs/nvss/mortality_historical_data.htm)); CDC/NCHS, National Vital Statistics System, mortality data (see <http://www.cdc.gov/nchs/deaths.htm>); and CDC WONDER (see <http://wonder.cdc.gov>).

# Cancer Deaths Attributed to Modifiable Risks

## Guide to the Figure

- Size - cancer-specific incidence
- Colors - SEER 5-yr relative survival
  - Red – deadly
  - Blue - curable
- Top – preventable deaths
- Bottom – unpreventable deaths
- Right – frequent deaths
- Left – 'less frequent' deaths
- Top right – common preventable deaths
- Top left – less common, but preventable deaths

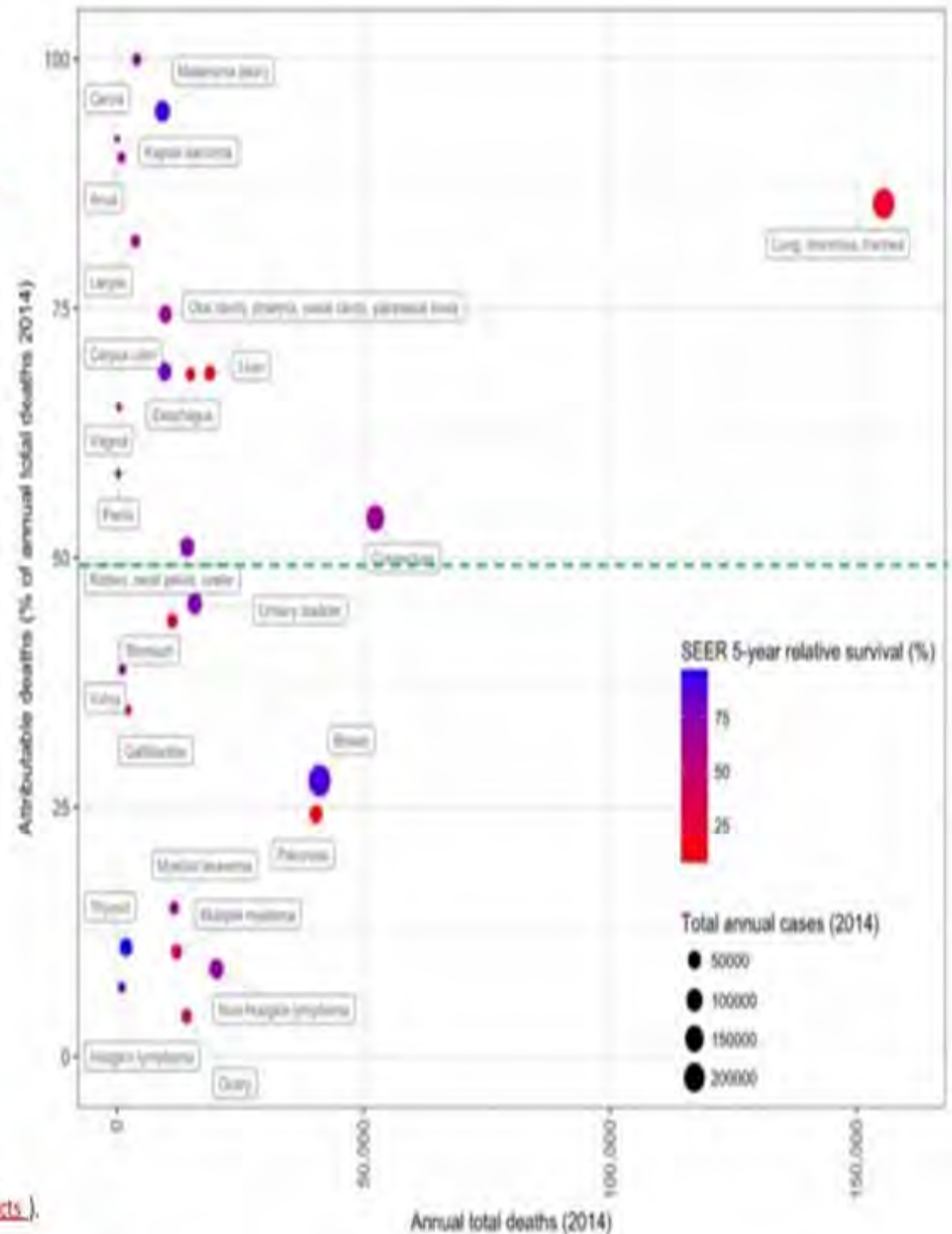


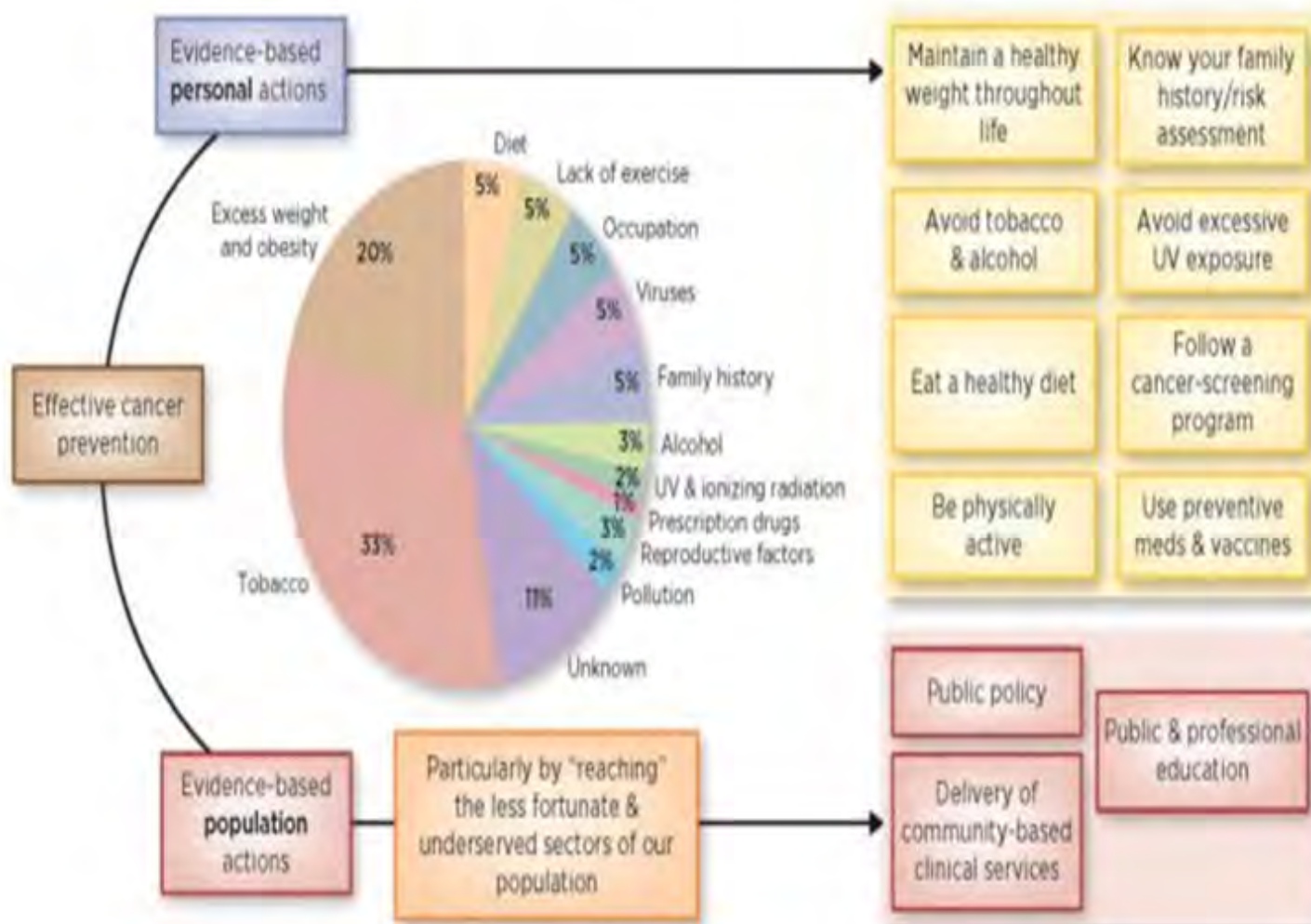
Figure from Golemis, et al., *Genes & Development*, 2018; 32:868-902.  
 Data from Islami, et al. (2017) and SEER (<https://seer.cancer.gov/statfacts/>).

# One-Third to One-Half of Cancer Deaths are Preventable in Western Populations

## *Effective Cancer Prevention is Applied in Two Domains Across the Lifespan*

### The Promise of Prevention

One-third to one-half of cancer deaths are preventable in western populations  
*Effective cancer prevention is applied in two domains across the lifespan*



# NCI-Designated Cancer Centers

## *Mission*

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“To foster excellence in research across a broad spectrum of scientific and medical concerns relevant to cancer”

### **Cancer Center**

- Depth & breadth in one or two domains

&

### **Comprehensive Cancer Center**

- Depth & breadth across three domains

“to extend the benefits of research to patients, their families, and the general public through clinical care, outreach, and education.”

# Seventy Current NCI-Designated Cancer Centers

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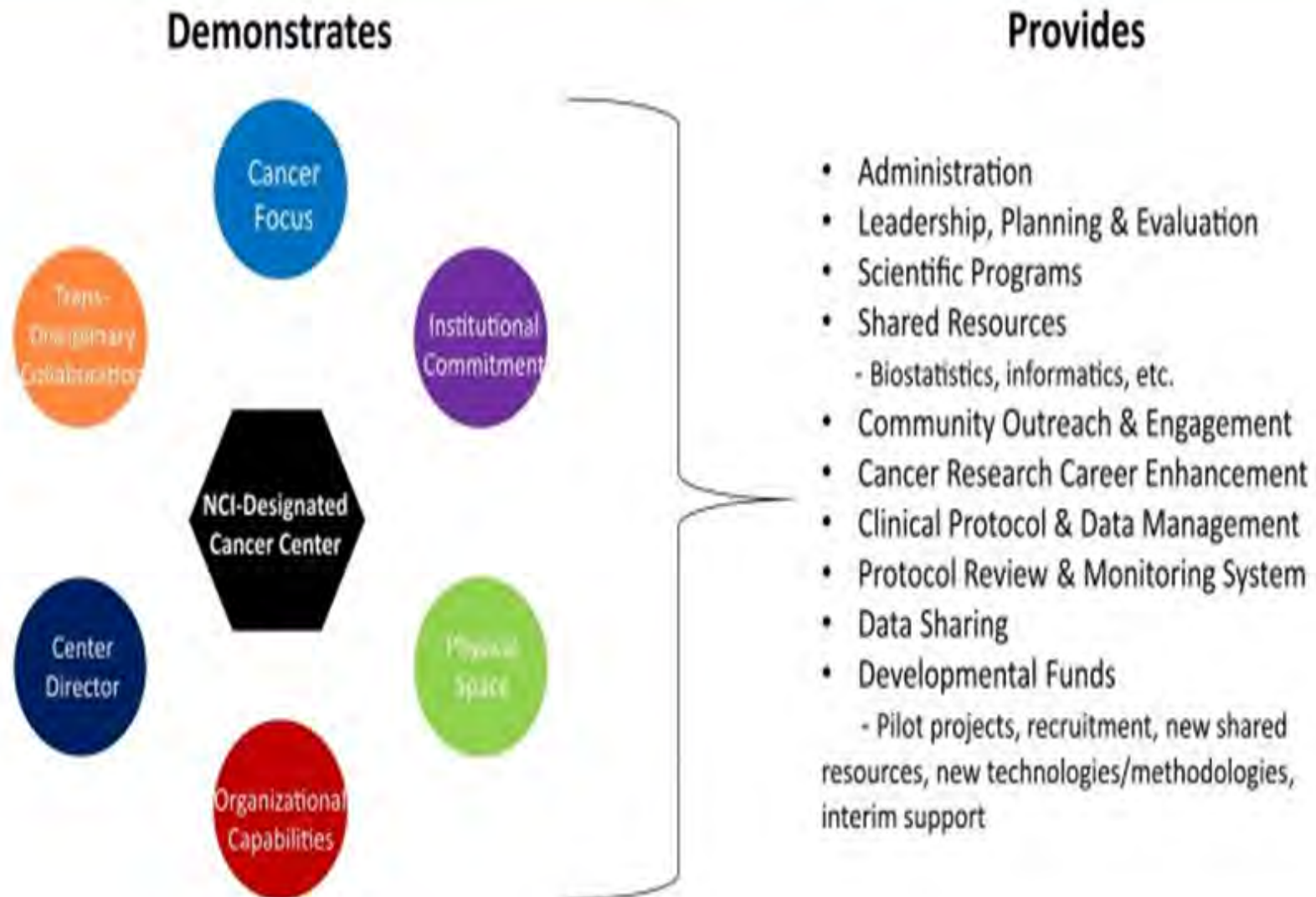
● CANCER CENTER 14      ● COMPREHENSIVE CANCER CENTER 49      ● BASIC LABORATORY 7

Source: <https://www.cancer.gov/research/nci-role/cancer-centers/find>

# NCI-Designated Cancer Centers

## *Characteristics & Components*

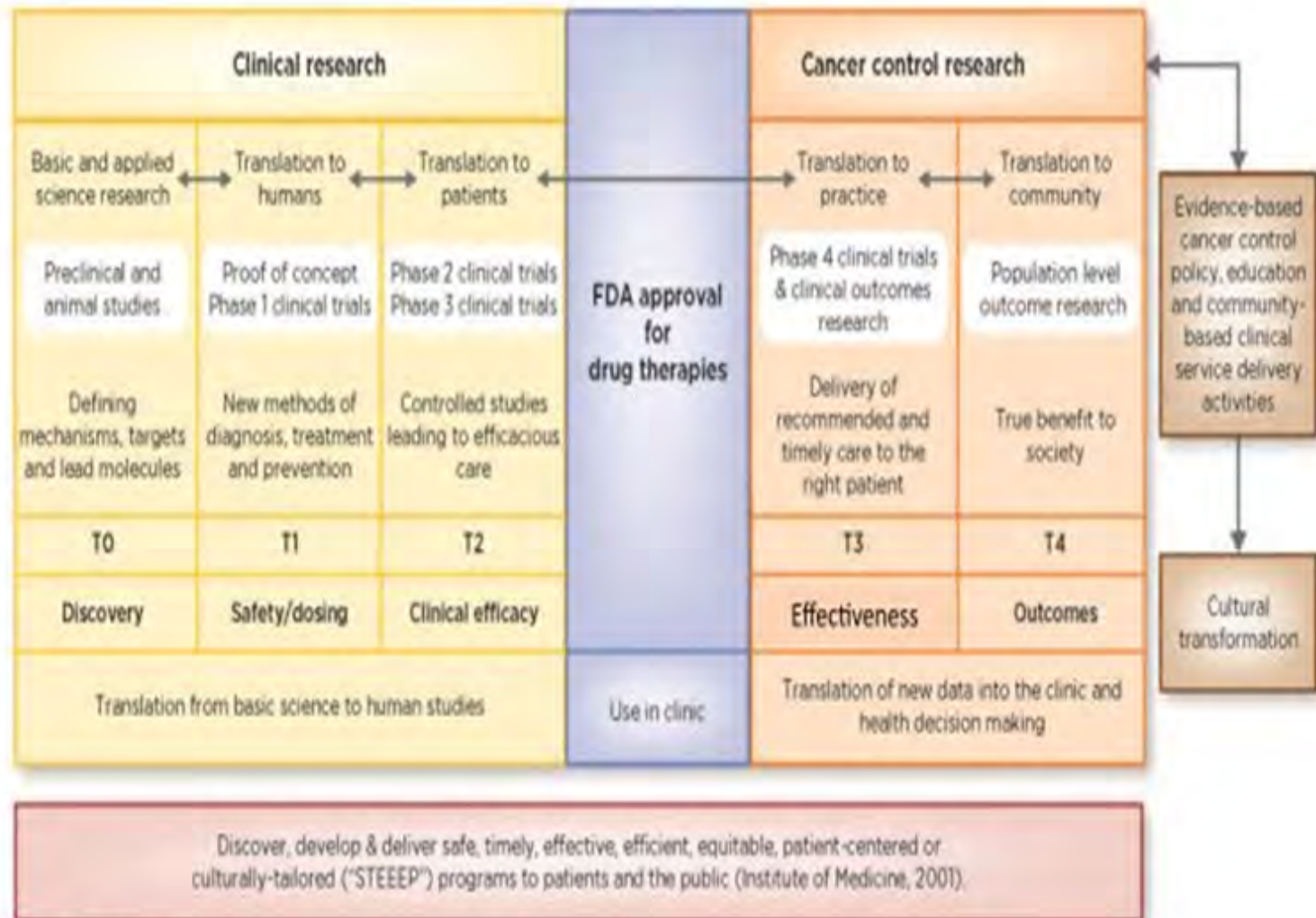
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# The T0 - T4 Translational Research to Evidence-based Cancer Control Paradigm

Translational Research Phases Resulting in Evidence-Based Clinical and Public Health Actions to Result in Impactful Cancer Control  
(Based in part on a drug-approval paradigm)



# The University of Texas MD Anderson's Four Mission Areas – 1980



RESEARCH



CLINICAL CARE  
*Individuals*



EDUCATION & TRAINING  
*Future generations*



PREVENTION & CONTROL  
*Communities*



## 2019 CCSG Prevention/Population Sciences Programs



Scheet



Shete



Hanash



Giordano

### Risk, Detection & Outcomes (RDO)

48 members

\$11.8M



Brown



Basen-Engquist



Cincirpini

### Cancer Prevention Program (CP)

49 members

\$12.8M

Association • Observational  
Germline • Population & Computational

Causation • Experimental/Interventional  
Somatic • Cells, Animal Models, & Humans

Cross-Cutting Theme: Disparities

### Examples of RDO/CP Inter-programmatic Research

- Lung Screening & Tobacco Cessation
- Characterization of the Pre-Malignant Genome
- Genetics of Addiction to Tailor Interventions
- Evaluation of Lung Screening Capacity

#### Funding

R01CA207078 R21CA208461  
CPRIT RP130123 R01CA219463

#### Publications

Can Prev Res. 2016. PMC4941624  
Bioinformatics. 2016. PMC5039922  
JAMA Intern Med. 2017. PMC5893328

Can Prev Res. 2017. PMC5626617  
Ann Oncol. 2018. PMC6225810

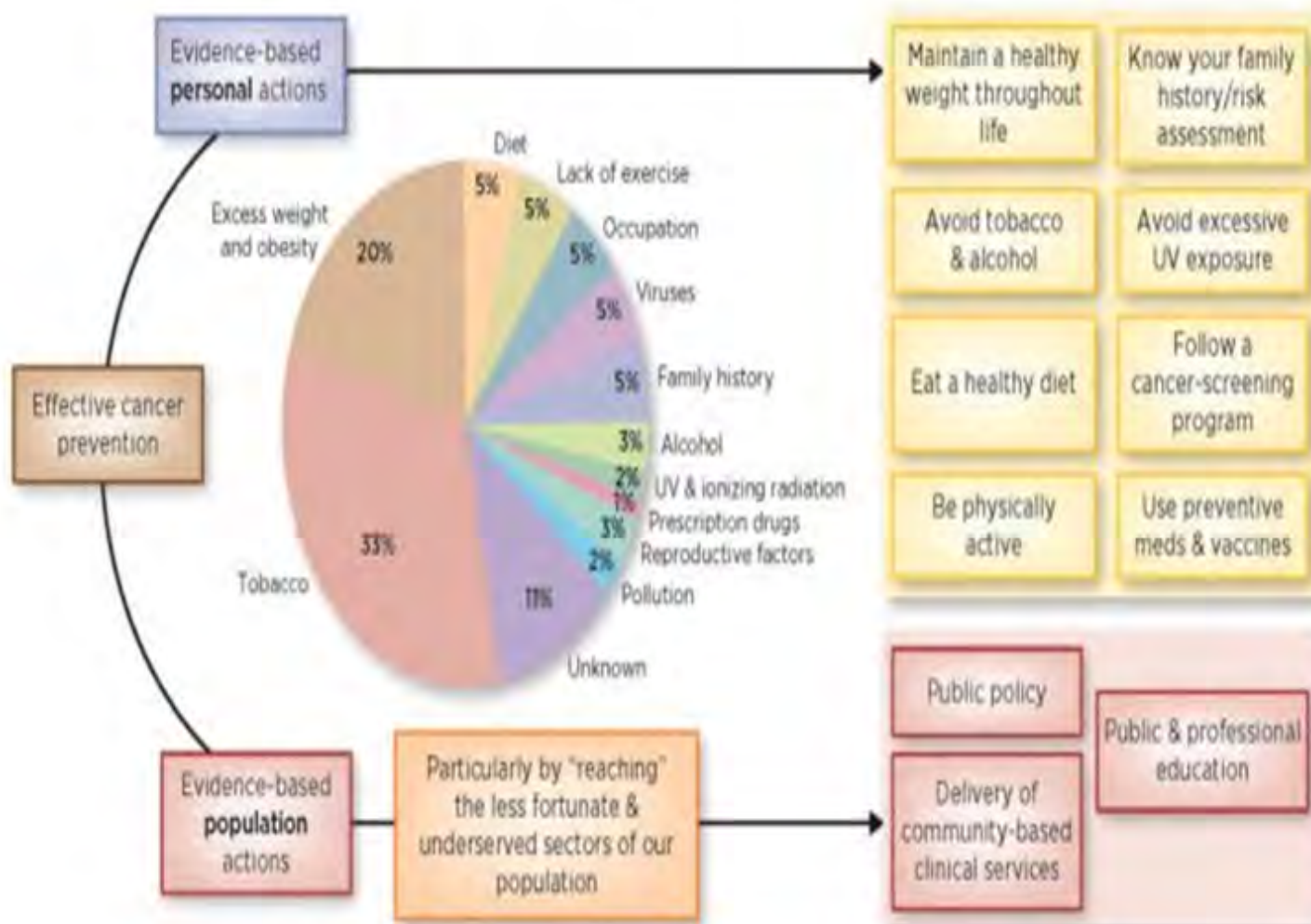
Mol Can Ther. 2014. PMC4341901  
JAMA Oncol. 2018. PMC6087485

# One-Third to One-Half of Cancer Deaths are Preventable in Western Populations

## *Effective Cancer Prevention is Applied in Two Domains Across the Lifespan*

### The Promise of Prevention

One-third to one-half of cancer deaths are preventable in western populations  
*Effective cancer prevention is applied in two domains across the lifespan*





## **Evidence-Based Personal Actions**



# The Lyda Hill Cancer Prevention Center at The University of Texas MD Anderson Cancer Center



## • Prevention Services

- Cancer risk assessment
  - Genetic testing
- Screening
  - Breast (15-20% ↓)
  - Colon (15-70% ↓)
  - Cervix (80-90% ↓)
  - Lung (20% ↓)
  - Prostate
  - Skin

## • Risk Reduction Recommendations

- Personal preventive therapy
  - Hepatitis C Rx (70-90% ↓)
- Lifestyle interventions ("Healthy living")
- Healthy Heart Program

## • Diagnostic Services

- Undiagnosed Breast
  - Abnormal mammograms or breast lesions
- Undiagnosed Derm
  - Abnormal skin lesions
- Undiagnosed Gyn
  - Abnormal Pap test and/or HPV test

## • Survivorship

- Breast, Thyroid, GI (colorectal, anal), Gyn



Total "billable" visits =  
51,000+ in FY18

# Clinical Assessment in the Lyda Hill Cancer Prevention Center

- Helps both patients & providers assess if meeting 'healthy living' recommendations
- Pilot on-going
- Plans to roll out to all CPC providers

## MD Anderson Health Index

Up to half of cancer cases in the United States could be prevented through healthy lifestyle behaviors. The Health Index helps assess those behaviors so our medical team can help you make any changes or needed.



1.) I have a healthy body weight.  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_



2.) I am making the best diet choices (plant-based diet, limiting red meat and sugary beverages, etc.).  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_



3.) I know the alcohol consumption guidelines.  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_



4.) I am getting the recommended amount of physical activity each week.  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_



5.) I am a non-smoker and have not used any form of tobacco in the last 12 months.  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_



6.) I know my heart health numbers (cholesterol, blood pressure, glucose).  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_



7.) I am up-to-date on all of my cancer screening exams.  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_



8.) I protect myself from the sun.  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_



9.) The children in my family are vaccinated against HPV.  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_ Not Applicable \_\_\_\_\_



10.) I know if I am at risk for Hepatitis B or C.  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_



11.) I know my family history of cancer.  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

For Provider Use Only

Your Health Index Score \_\_\_\_\_

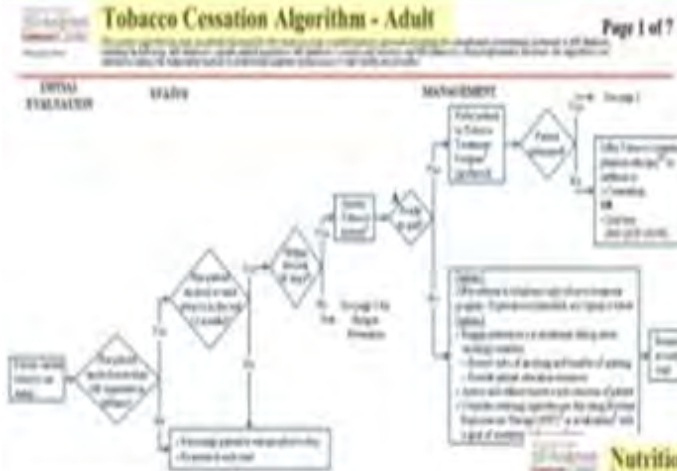


Name \_\_\_\_\_

MRN \_\_\_\_\_

Date \_\_\_\_\_

# Implementing 'Healthy Lifestyle' Algorithms in MD Anderson's Clinical Care



- Program Components:**
- Systematic evaluation
  - Defined trigger
  - Motivational interviewing & monitoring
  - Assessment



<https://www.mdanderson.org/for-physicians/clinical-tools-resources/clinical-practice-algorithms/cancer-screening-algorithms.html> &  
<https://www.mdanderson.org/for-physicians/clinical-tools-resources/clinical-practice-algorithms/cancer-screening-algorithms.html>



# MD Anderson's Tobacco Treatment Program

May 2017 – April 2018

Average patient is 57 y.o., smoked 14 cigs / day for 33+ yrs  
46% of patients meet criteria for 1 or more co-morbid psychiatric diagnoses  
11% report a form of hazardous drinking behavior



# Adherence to Prevention Recommendations Reduces Cancer Incidence & Mortality (as well as Cardiovascular & Overall Mortality)

- Several prospective cohort studies & a systematic review demonstrate significant benefits for adherence to ACS cancer prevention guidelines, beyond tobacco avoidance
  - Each study computed scores to reflect adherence to ACS or AICR guidelines regarding: BMI, physical activity, diet, & alcohol intake

Study	Cohort	No. of Individuals	Follow-up Time	Reduction In All-Cancer Incidence	Reduction In All-Cancer Mortality	Reduction in CVD Mortality	Reduction In All-Cause Mortality
Cancer Prevention Study-II	50-74 y.o.	111,966	14 y	N/A	Women-24% Men-30%	Women-58% Men-48%	42% (Same in men & women)
NIH-AARP Diet & Health Study	50-71 y.o.	476,396	10.5 y – 13.6 y	10-19%	Women-24% Men-25%	N/A	Women-33% Men-26%
Systematic Review	8 studies in 7 cohorts	1,154,986	6 y – 14 y	4-45%	20-61%	N/A	N/A

Kabat, et al.  
Am J Clin Nutr, 2015  
McCullough, et al. CEBP, 2011  
Kohler, et al.  
CEBP, 2016



## **Evidence-Based Population Actions**

# NCI-Designated Cancer Centers

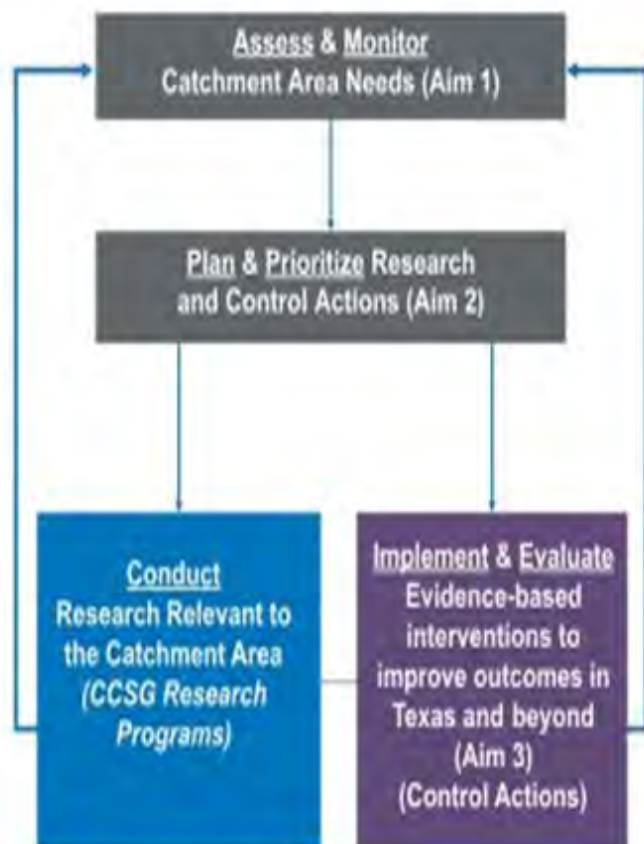
## *New Community Outreach & Engagement Criteria*

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1. How appropriately does the Center **define** its catchment area?
2. How well does the Center **identify** the cancer research issues relevant to its catchment area?
3. How well has the Center taken advantage of its catchment area to **address** challenging questions in cancer research?
4. How well has the Center **developed processes** for including underserved populations in its programmatic research?
5. As applicable, are the Center plans for **extending its reach** within and beyond the catchment area, reasonable?
6. How well is the Center taking advantage of appropriate **relationships with networks and affiliates**?

# Community Outreach and Engagement

## Framework for Action to Promote Health, Beyond Healthcare



### Criteria that Guide the Prioritization of Cancer Control Actions and Research Opportunities

- **Adequate data** across time
- **Significance** of burden/risk factor
- **Evidence-based strategies**
- **Feasibility**
- **Alignment** with community/state priorities
- **Potential** for meaningful impact

### Evidence-based Products in Three Domains

- **Policy**  
Inform, impact and implement worksite, government and public policies
- **Education**  
Develop and deliver community- and school-based programs, media campaigns. Improve health professional knowledge through CME programs and telemedicine
- **Services**  
Improve professional practice and delivery of community-based screening & prevention services

Internal Contributors

EndTobacco  
in 100 Countries

CATCH

Be Well Communities™

Colorectal Cancer Screening

Cervical Cancer Screening



HARRIS HEALTH LBJ

CCETR



Survivorship

# MD Anderson Internal Contributors

## Division of Cancer Prevention and Population Sciences

Division Head and Vice President: Ernest Hawk

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Advances the fields of cancer prevention and population sciences through clinical services; laboratory, clinical, and community-based research; education; and cancer control

## Governmental Relations

Vice President: Mark Moreno

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Serves as the liaison between MD Anderson and the Texas Legislature on budget and policy issues that affect health care

## Office of Health Policy

Vice President: Lewis Foxhall

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Oversees several initiatives at MD Anderson in the areas of community education, outreach, medical care, and partnerships

## Center for Community-Engaged Translational Research

Director: Lorna McNeill

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Helps investigators implement their research in community settings and supports the recruitment of minorities and women in clinical trials

## Community Relations and Education

Director: Stephanie Kim

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Educates people about healthy behaviors to lower cancer risk and increases MD Anderson's visibility in the community

## Cancer Prevention and Control Platform

Executive Director: Michael Walsh, Jr.

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Accelerates the development, dissemination, and amplification of evidence-based strategies, community services, policy interventions, and knowledge at a population level



## Aim 1: MD Anderson's Primary Catchment Area - Texas



### Rationale

- State charter & support
- Patient population - 58% Texan
- Primary commitment to the health of Texans

### Texas Pop. (2018)<sup>1</sup>

28.7M pop.  
42.0% non-Hispanic White  
39.4% Hispanic  
12.7% African American  
5.0% Asian  
0.9% Other

} 58.0%

### Newly Dx Cancer Cases (2015)<sup>2</sup>

107.3K pop.  
62.9% non-Hispanic White  
22.2% Hispanic  
11.5% African American  
2.4% Asian  
1.0% Other

} 37.1%

### Data are monitored annually at the:

- **Local** (*Health of Houston Survey, Community Needs Assessments*),
- **Regional** (*The Health Status of Northeast Texas, CCSG Funded Texas Health Screening Questionnaire*),
- **State** (*Texas BRFSS, Texas YBRFSS, Texas Cancer Registry, The Health Status of Texas*), and
- **National** levels (*Cancer Statistics, American Cancer Society [ACS]*)

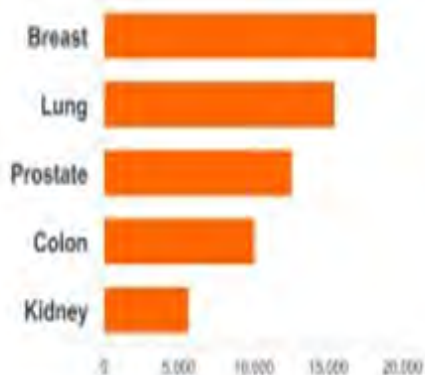
1. US Census Bureau. Quick Facts: Texas. <http://www.census.gov/quickfacts/texas>. Accessed 1/7/2019.

2. Texas Cancer Registry. Accessed 1/7/2019.

# Aim 1: Cancer Incidence, Mortality, Trends, & Unique Concerns

## 2018 Estimated Cancer Incidence<sup>1</sup>

**122K** New Cases\*



## 2018 Estimated Cancer Mortality<sup>1</sup>

**41K** Deaths\*



\*2018 Estimated

## Unique Concerns

**↑ 31%** Cervical cancer mortality in South Texas border counties

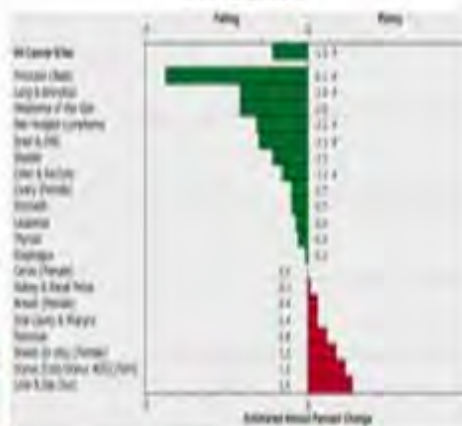
**#1** South Texas Hispanic HCC incidence in U.S.<sup>3,4,5</sup>



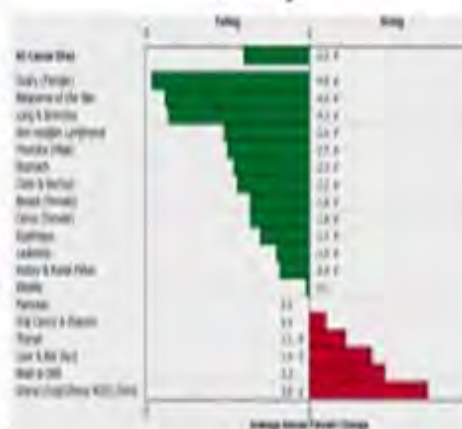
1. ACS Cancer Facts & Figures 2018
2. Statecancerprofiles.cancer.gov. Accessed 1/7/2019.
3. <https://www.ncbi.nlm.nih.gov/pubmed/22532102>
4. <http://www.cancer-rates.info/>
5. JAMA. 2017;317(4):385-406. doi:10.1001/jama.2016.20324

## 5-Year Trends 2011-2015<sup>2</sup>

### Incidence



### Mortality





## Aim 1: Cancer Risk Factors



### Tobacco Use<sup>1</sup> – 42<sup>nd</sup>\*

MOST PREVENTABLE CAUSE OF DEATH

- 3.3M Adult smokers<sup>1</sup> (15.7%)
- 10.4K New youth smokers/yr<sup>1</sup> (7.4%)
- 28K Adult smoking deaths/yr<sup>1</sup>



### Obesity Prevalence<sup>2</sup> – 14<sup>th</sup>\*

Adults

- 6.3M Obese<sup>3</sup> (33.7%)
- 7.1M Overweight<sup>3</sup> (34.8%)

Adolescents

- 316K Obese<sup>3</sup> (18.6%)
- 305K Overweight<sup>3</sup> (18.0%)



### HPV Vaccination Rates<sup>4</sup> – 47<sup>th</sup>\*

- 39.7% Adolescents vaccinated per recommendations<sup>4</sup>
- 2,900 HPV-associated cancers/yr<sup>5</sup>

#### \*U.S. Ranking

1. <https://www.tobaccofreekids.org/issues/factsheets/0178.pdf>. Accessed 1/11/2019.
2. <https://obesity.com/statistics/>. Accessed 1/7/2019.
3. CDC Division of Nutrition, Physical Activity and Obesity's Data, Trends and Maps online tool. Accessed 1/7/2019.
4. <https://www.cdc.gov/mmwr/preview/mmwrhtml/aa6111a1.htm>. Accessed 1/8/2019.
5. <https://www.cdc.gov/cancer/hpv/cancer-associated-cancers-podfocoe-us-state-2010-2014-006.pdf>. Accessed 1/7/2019.

## Aim 2: Our Prioritization Process



### Input

- **Assessments** (Aim 1)
- **Internal/External Content Experts**
  - Leadership Teams
  - Workgroups
  - EABs
- **Community Stakeholders**
  - Cancer Control Advisory Group
  - CCETR
  - Community Scientists
  - Community Steering Committees
- **Plans**
  - Texas Cancer Plan
  - UT Pop Health Strategic Plan



### Criteria

- **Adequate data** across time
- **Significance** of burden/risk factor
- **Evidence-based strategies**
- **Feasibility**
- **Alignment** with community/state priorities
- **Potential** for meaningful impact



### 7 Prioritized Areas

- Tobacco
- Obesity
- UVR exposure
- HPV vaccinations
- Cervical screening
- Colorectal screening
- Hepatocellular cancer

## Aim 2: Commit Resources and Relationships



## Aim 2: Resources and Relationships Directly Engaging Underserved Communities



### Research Infrastructure

- Center for Community-Engaged Translational Research (CCETR)
- Community Scientist Program
- Faith, Health and Family Collaborative (R13)
- National Outreach Network Community Health Educators. (CCSG Supplement)
- Mano a Mano. *n* = 26,780 MAs from 18,892 families
- Project CHURCH. *n* = 2,500 AAs from 88 faith-based partners

Over 30 peer-reviewed research studies in minority and underserved populations

Funding R13HC080934  
P30CA016672-40S2

### Partnerships

- UHAND (NCI P20). UH/MDACC collaboration
- Partnership for Excellence in Cancer Research (U54). UPR/MDACC collaboration
- Engaging Asian Stakeholders to Create a Shared Understanding of Cancer Risk (PCORI)
- LBJ Hospital. Harris Health/MDACC collaboration
- FQHC/MDACC partnerships (DSRIP)
- UT HSC San Antonio. UT System collaboration
- UT Northeast. UT System collaboration

Funding  
P20CA221895  
U54CA096297





Texas Adult  
Cigarette Use  
Prevalence  
2011 – 19.2%  
2017 – 15.7%

## Aim 3: Tobacco Control

*Tobacco is the leading cause of preventable death in Texas*

### Research Goal: Advance personalized treatments

#### Understand Mechanisms

- Neurobiological processes, genes, biomarkers (R01, CPRIT RP)

#### Optimize Treatment

- Rx for first quit attempts, rescue/combo therapies (R01, CPRIT RP)

#### Disseminate Treatment

- Rx algorithms, smart-phone technology (R01), cost-effectiveness (R01)

### Control Goal: Reduce the prevalence of cigarette use by at least 2% over 5 years

#### Prevent Tobacco Initiation

- K-12, college/young adult, Tobacco21

#### Reduce Second-Hand Smoke

- Smoke-free policies, college campuses, ballparks

#### Increase Cessation Success

- TTP algorithms, CTTTP, Project ECHO

#### Funding

NCI R01CA207078 NCI R01CA184781  
NIDA R01DA042520 CPRIT RP140262  
NIDA R01DA034709 CPRIT RP150226  
NIDA U01DA020690 CPRIT RP150123  
NIDA R01DA033289 NIAAA R01AA019720  
NIDA R01DA042520

#### Publications

J Natl Compr Care Netw. 2016. PMC5906631  
J Natl Compr Care Netw. 2016. PMID: 27756513  
N Engl J Med. 2015. PMC442660  
Cognit Med. 2016. PMC6197484  
J Am Coll Health. 2016. PMID: 2662736



UT System tobacco-free in May 2017 (14 institutions, 221,000 students and 100,000 staff)

San Antonio – first Texas city to adopt T21 (Oct 2018)

Fort Worth adopts smoke-free policy (March 2018)

CTTTP delivered 6,300+ in-person hrs of education to 210 providers

TEACH disseminated best practices to 300+ providers via 116 ECHO sessions



# Aim 3: Hepatocellular Cancer

*Texas HCC incidence rates highest in U.S.*

**Research Goals: Identify high risk individuals and institute effective surveillance**

### Risk Stratification

- Identify risk factors in Hispanics of South Texas (R01x2)
- Implement largest genomic study of HCC's association with NAFLD, diabetes and obesity (R01)

### Early Detection

- Identify and validate novel/existing blood markers (R01, CPRIT RP)



**Control Goal: Reduce incidence and mortality**

### Improve Service Delivery

- Online screening algorithm
- ASCO Clinical Opinion Update – Treatment of Hep B in cancer patients before treatments
- Assist partners (Helping Texans Prevent Liver Cancer)



### Funding

NCI R01CA120719 NCI R01CA195524  
 CPRIT RP150587 NCI R01CA186566  
 NCI R01CA204665 NCI R21CA190945

### Publications

Hepatology. 2016. PMC4764447  
 Epidemiol Infect. 2016. PMC5013540  
 Cancer Prev Res. 2016. PMC5010922  
 Cancer Prev Res. 2017. PMC5811405  
 PLoS One. 2016. PMC4780538

SPOR Under Review

CPRIT Collaborative Action Center Application

## Aim 3: Cervical Cancer

*Texas ranks 47<sup>th</sup> in HPV vaccination completion and 7<sup>th</sup> in cervical cancer incidence rates*

### Research Goal: Increase access for underserved populations

#### Innovate Healthcare Delivery

- Develop low-cost screening & dx'ic technologies (HRME) for 'See & Treat' approach (UH3)
- Intra-nasal vaccine (CPRIT RP)

### Control Goal: Eliminate cervical cancer

#### Policy

- Texas HPV Strategic Plan, Economic Impact Assessment

#### Education

- Media campaign, NCI Centers' Endorsement, engaged survivors

#### Service

- HPV - Environmental scan (P30 suppl), MDA vax clinic, vax QI
- Screening - Hands-on colposcopy/LEEP/surgical training, telementoring (CPRIT PP)

#### Funding

NIH/NCI UH3CA188910  
CPRIT RP180472  
CCSG P30 HPV Supplement  
CPRIT PP150012

#### Publications

J Surg Oncol. 2017. PMID: 28165717  
Proc Natl Acad Sci U S A. 2016. PMID: 27821464  
Gyn Onc. 2017 PMID: 28196673  
Proc Natl Acad Sci USA. 2015. PMC4508888  
J Comm Health. 2017. PMID: 27473752



Published 3 joint NCI Center HPV vax endorsements

Delivered 43M impressions back-to-school media campaign

Trained 650+ FQHC providers and increased vax rates (QI)

Fostered Su Clinica's screening of 16,132 women

# Cervical Cancer Screening

In high-resource regions, cervical cancer incidence and mortality rates have decreased by approximately 70% over the last 70 years due to the successful implementation of screening and early diagnosis programs. Low and middle-income countries (LMICs) and medically-underserved areas of the US have been unable to achieve similar declines in cervical cancer rates. About 85% of the cervical cancer cases globally are concentrated in LMICs.

Delivered **157** ECHO telementoring sessions to expand the skills of

**220** Healthcare providers | **12** Countries

Provided hands-on training to

**300** providers | **6** Countries | **12** Courses

to increase the number of local providers able to perform LEEP and colposcopy

Partnered with organizations across

 **4** Continents

to develop and test technology to support diagnosis and treatment in low-resource settings





# NCI-Designated Cancer Centers Collaboratively Address Cancer-Related Population Health Issues

**First** Joint Statement Released January 27, 2016

Urge HPV Vaccination for 'Cancer Prevention'

**Second** Joint Statement Released January 11, 2017

Endorse Updated HPV Recommendations – Two Dose

**Third** Joint Statement Released June 7, 2018

Endorse an Ambitious Goal – 'Eliminate' HPV-Related Cancers

## NCI-Designated Cancer Centers Endorse Goal of Eliminating HPV-Related Cancers

Cancers caused by the human papillomavirus (HPV) are a significant public health problem. The National Cancer Institute (NCI) Alignment centers actively endorse the goal of eliminating cancers caused by HPV through genital HPV vaccination and evidence-based cancer screening. These practices offer a rare opportunity to prevent 12,000 cases of cancers and nearly 40,000 other HPV-related cancers (cervical, anal, penile, vulvar, and vaginal cancer) among men and women annually in the United States.

An effective and safe vaccine is available that promises the large majority of cancer-causing HPV infections. In addition, healthcare providers can use proven methods to screen for and treat cervical pre-cancers.

Unfortunately, HPV vaccination completion rates across the U.S. remain low. According to the Centers for Disease Control and Prevention (CDC), 49% of girls and only 15% percent of boys, ages 13-17 years, in the U.S. completed the vaccine series in 2016. These rates are significantly lower than those for other recommended adolescent vaccines and fall well below the nation's goal of 80 percent coverage by the end of the decade (U.S. Department of Health and Human Services Healthy People 2020 objective).

Increased HPV vaccination rates combined with appropriate cervical cancer screening measures could soon eliminate cervical cancer, with other HPV-related cancers in men and women to follow. Therefore, as national leaders in cancer research and cancer care, we issue the following Call to Action in alignment with the nation's Healthy People 2020 goals:

- Vaccinate at least two 40 percent of males and females ages 13-17 by 2020.
- Screen 90 percent of age-eligible females for cervical cancer by 2020 and
- Provide prompt follow up and proper treatment of females who screen positive for high grade cervical pre-cancerous lesions.

In addition, we strongly encourage:

- Using cost and insurance up to age 19, who were not previously vaccinated, to complete the recommended HPV vaccine series.
- Health care providers to make clear and strong recommendations for HPV vaccination and cervical cancer screening and
- The health care community to educate parents, providers, community members, and colleagues about the goal of eliminating cancers caused by HPV in the US.

High HPV vaccination rates combined with cervical cancer screening and treatment will result in the elimination of cervical cancer by the year 2030 and elimination of other HPV-related cancers thereafter.

The HPV vaccine PREVENTS CANCER. Make sure your loved ones are vaccinated and protected. More information is available from the CDC.

This statement is supported by the American Cancer Society (ACS), the American Association for Cancer Research (AACR), the American Society for Clinical Oncology (ASCO), the Prostate Cancer Foundation, the American Society for Prevention of Oncology (ASPO) and the Association of American Cancer Institutes (AACI).



# CATCH<sup>®</sup>

GLOBAL FOUNDATION

CATCH aims to improve children's health by developing and disseminating cancer risk reduction programming to students and their families.

As a founding member, MD Anderson:

- expanded content
- digitized curricula
- amplified the breadth of CATCH's reach
- prioritized dissemination in underserved schools and communities

In partnership with



Expanded content and digitized curricula of MD Anderson's Ray and the Sunbeatables and CATCH my Breath. Leveraged CATCH's reach in

 **50%** of Texas Schools



Reached children and their families in Texas and across the nation

**11,000**

educational settings nationwide

**2.5M** children

annually through the comprehensive K-8 grade health program



Identified and intervened in high-need priority school districts through CATCH Promise

**689**

schools

**16**

districts

**8**

states



# Be Well Communities™

Mobilizes communities to promote wellness and prevent cancer by uniting stakeholders to carry out community-led solutions to make positive, long-lasting change.

In Be Well™ Baytown, our inaugural community, MD Anderson collaborated with 14 community organizations to deliver diet, physical activity and sun safety programs.

Sponsored by

**ExxonMobil**

and others

In partnership with



Reached

**47,258**

students with CATCH and other school-based health programs



In a pilot of 700, significantly increased fruit and vegetable consumption 3 or more times per day, respectively, by

**6% | 8%**

Demonstrated 18% increase in students reporting playing on at least one sports team

Served

**445,604**

pounds of fresh produce to

**32,992 families**



# Colorectal Cancer Screening

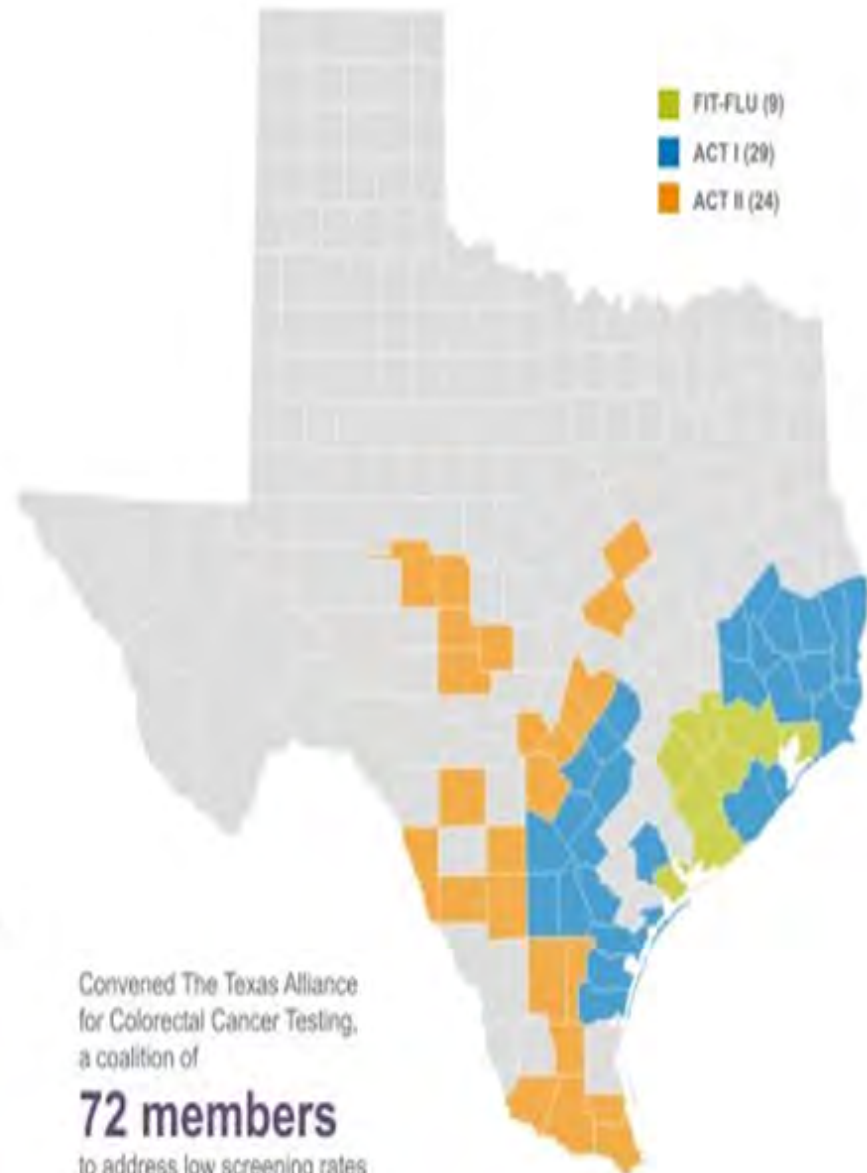
Texas ranks 41st nationally in colorectal cancer screening. To address the needs of those at greatest risk, MD Anderson established partnerships with Federally Qualified Health Centers (FQHCs) to enhance access to colorectal cancer screening for low-income individuals.

Distributed over  
**21,000 FIT tests**  
to underserved populations in  
**9 Texas counties**  
including Harris County through  
Medicaid 1115 Waiver from  
**2013 - 2018**

Developed additional partnerships  
to expand FIT-Based CRCS Initiatives  
to an additional **29** counties and

 **72 FQHCs**

with a total reach of  
**38 Texas counties** in **2016**  
**62 Texas counties** in **2018**



Convened The Texas Alliance  
for Colorectal Cancer Testing,  
a coalition of  
**72 members**  
to address low screening rates  
across Texas



# Learning How to Better Promote Equity

MD Anderson aims to address and, ultimately, eliminate cancer health disparities through the development of clinical, research, outreach, and educational activities in partnership with minority-serving institutions.



Developed partnership in

**2001**

Funded by NCI U54

Trains

 **12 to 15**

**undergraduates  
& medical students**

annually in the Summer  
Research Program

Increased number of cancer  
researchers in Puerto Rico from



**5 in 2003**

**over 30 in 2018**

## UHAND

A partnership to address cancer disparities



Developed partnership in

**2017**

Funded by NCI P20

Provided 2-year mentored  
research experiences for

**5 undergraduates**

**3 doctoral students**

**1 postdoctoral fellow**

from the University of Houston

Provided community outreach and  
education to approximately



**2,000 individuals**

since October 2017



# The Disease Prevention Paradox

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## Reasons that Prevention is Difficult

1. Success is invisible
2. Lack of drama
3. Statistical lives
4. Delayed rewards
5. Benefits do not accrue to payer
6. Advice changes as evidence grows
7. Persistent behavior change required
8. Bias against errors of commission
9. Acceptance of avoidable harm is norm
10. Double standard in evaluation of prevention & treatment
11. Commercial conflicts of interest
12. Conflicts with personal, cultural beliefs

## Strategies to Overcome Obstacles to Prevention

1. Pay for prevention
2. Make prevention cheaper than free
3. Involve employers
4. Re-engineer to reduce need for individual action
5. Use policy to make the 'right' choices easier
6. Use multiple channels to educate, reframe, & elicit positive change



# Promoting Health... Beyond Healthcare

