Division of Cancer Prevention and Population Sciences

“The function of protecting and developing health must rank even above that of restoring it when it is impaired.” Hippocrates
A Message from the Vice President

Dear Colleagues and Friends,

I am honored to present the 2012 Report for the Division of Cancer Prevention and Population Sciences representing the work of nearly 500 employees, 81 faculty and over 180 research trainees in the division. Cancer prevention as a discipline has moved at unimagined speed in the last half century. We owe much to the early pioneers who dedicated untold time and effort into unlocking the earliest clues that cancer is a late step within a chronic disease process taking years to develop and could therefore be blunted in its earliest and most curable stages. They had a collective wisdom to challenge conventional thinking and it is on their shoulders that we stand.

We owe a particular debt to Dr. Charles LeMaistre, the second president of this institution, under whose leadership the Division of Cancer Prevention was formed. And to Dr. Bernard Levin, my predecessor, who led the growth of the division from a modest number of employees in 1994 to one of the largest and most successful cancer prevention programs in the nation, renamed the Division of Cancer Prevention and Population Sciences in 2004. Across our departments, centers and the Duncan Family Institute, we utilize evidence-based data to help guide public policy, educational initiatives and our clinical and community-based cancer prevention services to improve public health.

In these challenging economic times, it is encouraging to report that our fiscal operations are robust due in no small measure to the generous support of our donors, successful acquisition of peer-reviewed grant funding by our talented faculty and brisk activity in our Cancer Prevention Center which offers a wide array of cancer prevention and survivorship services. Our faculty contribute substantially to the scientific literature by authoring collectively over 200 publications each year in highly respected journals. Our Cancer Prevention Research Training Program is one of the oldest and largest programs of its type in the nation offering unprecedented opportunities for undergraduate students, graduate research assistants and postdoctoral fellows to learn from mentors who are recognized leaders in the field. We join our colleagues in Health Policy Research and Governmental Relations to advance the institution’s efforts in cancer control to address a range of priorities in our community. You’ll learn more about all of this ongoing work and newer emerging initiatives in the following pages. The contributions of many are reflected in this report and I am grateful to all of them, but perhaps most especially to our study participants and patients who have been our greatest teachers.

Sincerely,

Ernest Hawk, M.D., M.P.H.
Ernest Hawk, M.D., M.P.H. is vice president and division head. Dr. Hawk joined MD Anderson in late 2007 after nearly 15 years of service at the National Cancer Institute, including a fellowship in cancer prevention. He received his M.D. from Wayne State University in Detroit, Michigan and trained as a gastrointestinal medical oncologist. He received his M.P.H. in 1994 from Johns Hopkins University. His research interests are in cancer chemoprevention, preventive drug development and trial design and in improving the participation of minority and underserved populations in clinical research. Dr. Hawk holds the Boone Pickens Distinguished Chair for the Early Prevention of Cancer and is a professor in the Department of Clinical Cancer Prevention.

Martha Salas, M.S.W., M.B.A. is the division administrator. She works closely with Dr. Hawk to plan, direct and implement the financial, personnel, patient care, research and operational activities of the Division. She also provides leadership to the divisional departments and the Cancer Prevention Center. She was appointed division administrator in 2012 after serving as the department administrator in Genitourinary Medical Oncology. Ms. Salas received a M.S.W. from University of Houston School of Social Work and an M.B.A. from the University Of Houston Bauer College Of Medicine.

Jennifer Tektiridis, M.S., C.P.A. is the executive director for research planning and development in the division. She is responsible for developing and implementing new divisional research initiatives, including the Duncan Family Institute for Cancer Prevention and Risk Assessment. Ms. Tektiridis joined MD Anderson in 2002 as the first executive director for the Gulf Coast Consortia. Prior to her current role, she was the administrative leader for the MD Anderson Cancer Center Support Grant. Ms. Tektiridis earned a B.S. in Geology and Spanish from Dickinson College, an M.S. degree in Business from Rollins College and has been admitted to candidacy in the Ph.D. program in Health Management at the UT School of Public Health – Houston campus.

Sherri Patterson, is the director for research planning in the division. She manages research information, supports cancer control programs and drafts manuscripts, grants and presentations to support the division’s cancer prevention mission. Ms. Patterson joined MD Anderson in 1997 in GI Medical Oncology and was recruited to Clinical Cancer Prevention as administrative director in 2004. In 2008, she joined the division office. Prior to joining MD Anderson, Sherri was a bench scientist and research lab supervisor at Bristol-Myers Squibb in Princeton, NJ. She is board-certified in medical technology and cytotechnology, received a B.A. in Biology with a minor in Chemistry from Rider University and is completing the M.P.H. degree requirements from the UT School of Public Health.
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OVERVIEW
“…to advance the fields of cancer prevention and population sciences and eliminate health disparities in cancer…”

DCPPS is home to one of the largest and most developed cancer prevention programs in the nation. It comprises five departments, multiple centers and two institutes. It is also home to one of the oldest and most successful cancer prevention research training programs in the country. Our departments and centers are briefly described here:

**Behavioral Science**, chaired by Ellen R. Gritz, Ph.D., conducts behavioral research on cancer risk behaviors, including developing a behavioral science knowledge base; and develops, implements, evaluates, and disseminates interventions that contribute to preventing and reducing cancer incidence, mortality and morbidity.

**Clinical Cancer Prevention** (CCP), chaired by Powel Brown, M.D., Ph.D., seeks to reduce cancer incidence and mortality through multidisciplinary cancer prevention programs focused on translational and clinical research, patient care, and education.

**Epidemiology**, chaired by Xifeng Wu, M.D., Ph.D., conducts epidemiologic research to assess the distribution and determinants of cancer with the aim of identifying preventive measures through traditional, molecular, and clinical epidemiology.

**Health Disparities Research** (HDR), chaired by David Wetter, Ph.D., seeks to reduce, and ultimately eliminate disparities in cancer incidence, morbidity and mortality and cancer-related behavior through research and education addressing the determinants of disparities as well as interventions and policies designed to eliminate disparities.

Our newest department, **Health Services Research** (HSR), was established this past year. Sharon Giordano, M.D., M.P.H., associate professor in Breast Medical Oncology, serves as its founding chair. The department studies the delivery of cancer care to improve its quality as determined by practitioners, researchers and patients.
The Cancer Prevention Center (CPC) provides evidence-based cancer screening and personalized risk-reduction services, as well as housing the Undiagnosed Breast, Undiagnosed Dermatology and Undiagnosed Gynecology clinics to assess and diagnose abnormal mammograms, skin lesions and Pap smears. The CPC is one of the only centers of its kind in the U.S.

Dorothy I. Height Center for Health Equity & Evaluation Research (DH-CHEER) seeks to reduce and eventually eliminate the prevalence of health disparities in ethnic minority and medically underserved populations through feasible community-based, innovative, and integrated biopsychosocial approaches. DH-CHEER is a joint collaboration with the University of Houston, the first of its kind for MD Anderson.

The Behavioral Research and Treatment Center (BRTC) supports population-based research studies in behavioral science, health disparities, and integrative medicine. The studies and clinical trials conducted in the center are specifically related to tobacco cessation, exercise before, during, and after cancer treatment, and behaviors and emotions associated with cancer and cancer-forming habits. The BRTC is the central headquarters to as many as 45 clinical trials and research studies including the Tobacco Treatment Program, MD Anderson’s institution-wide tobacco cessation and relapse prevention program.

The Duncan Family Institute (DFI) was established in 2008 through a generous gift from the Duncan Family to foster collaboration among scientists, clinicians and community practitioners committed to advancing the science and practice of cancer prevention. The Institute allocates funds to various research programs, three centers and supports the development of research infrastructure and develops the next generation of cancer prevention leaders through seed funding, mentored faculty fellowships, and seminars involving leading experts in the field.
PEOPLE
FY12 saw a number of important changes to the division. Martha Salas, M.B.A., M.S.W., joined as our new division administrator. Samir Hanash, M.D., Ph.D., a recent recruit to our faculty, was given leadership of the Red & Charline McCombs Institute for the Early Detection and Treatment of Cancer. The third major change has been the addition of the DFI-supported Center for Energy Balance in Cancer Prevention and Survivorship led by Karen Basen-Engquist, Ph.D., M.P.H. and colleagues from Behavioral Science. And the fourth change which has occurred over the last year was the planning and development for the Department of Health Services Research. Sharon Giordano, M.D., M.P.H. was named founding chair of the department.
In previous years, we have had a predominantly senior faculty base. However, in FY12 a rebalancing occurred as several senior faculty ascended to leadership roles in cancer prevention at other institutions including Baylor College of Medicine and Dartmouth University. Currently the division has more individuals early in their careers, a much more traditional distribution for an academic institution. Of the 81 full-time faculty within the DCPPS, nearly 60% are female. Approximately 25-30% of the faculty are trained as clinicians.
The Division welcomed ten new faculty members this past year as well as a new endowed professor, bringing the total number of endowed professorships across the Division to seven. FY12 philanthropic donations to DCCPS exceeded $5.2 million and nearly $5 million in tobacco settlement funds supported numerous programs, students, post-doctoral fellows, instructors, and faculty members.

New DCPPS Tenured or Tenure-Track Faculty

**Behavioral Science**

- Susan Schembre, Ph.D., R.D.
  Assistant Professor

**Clinical Cancer Prevention**

- Samir Hanash, M.D., Ph.D.
  Professor

- Tunghi May Pini, M.D., M.P.H.
  Assistant Professor

- Eduardo Vilar-Sanchez, M.D., Ph.D.
  Assistant Professor

- Xiangwei Wu, Ph.D.
  Associate Professor

**Epidemiology**

- Wong-Ho Chow, Ph.D.
  Professor

- Chad Huff, Ph.D.
  Assistant Professor

- Carrie Daniel-MacDougall, Ph.D.
  Assistant Professor

- Hua Zhao, Ph.D.
  Associate Professor

**Health Disparities Research**

- Christopher Fagundes, Ph.D.
  Assistant Professor (1/1/13)

New Endowed Professorships

- Paul Cinciripini, Ph.D.
  Professor, Behavioral Science
  Annie Laurie Howard Research Distinguished Professorship
The inaugural *Charles A. LeMaistre Lecture in Oncology & Cancer Prevention* was delivered by Michael Thun, M.D., M.S. on May 4, 2012.

Dr. Thun is Vice President, Emeritus, Surveillance and Epidemiology Research, American Cancer Society. He is an internationally recognized leader in cancer control, having dedicated his career to translational research on cancer prevention. His research interests have focused on the changing design of cigarettes and lung cancer as well as aspirin and cancer prevention. He is also renowned for applying epidemiologic tools to addressing scientific questions on the prevention of cancer.

The lecturership is made possible through a generous donation from the Minnie Underwood Foundation and is named in honor of Dr. Charles A. LeMaistre, the second president of MD Anderson Cancer Center. It was under his tenure that the Division of Cancer Prevention and Population Sciences was established.

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**“The Role of Aspirin in Cancer Prevention: Is It Ready for Prime Time?”**

*May 4th, 2012*

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At right, Dr. Charles LeMaistre is pictured (rear, center) flanked by the 2012 Selection Committee:

Dr. Xiaochun Xu, Dr. Michael Thun, Dr. Ernest Hawk and Dr. Randa El-Zein, with Dr. Jennifer Irvin Vidrine and Dr. Susan Peterson (seated).
Some examples of our science and prevention messages extending beyond our walls are depicted below. The information has captured the attention of national media further allowing us an opportunity to share cancer prevention messaging.
RESEARCH
Research – Laying a Foundation for Cancer Prevention Practices in the Clinic and Community

Cancer Prevention research is broad, encompassing laboratory, clinical, and population-based research methods. Research within DCPPS reflects this breadth and is advanced by a culture of trans-disciplinary collaboration, innovative discovery science, and translation of discoveries into clinical and public policy changes. Our work focuses on the identification of factors that underlie the risk, incidence and mortality of cancer, as well as the mitigation of their effects through laboratory, clinical and population research. Here we present an overall picture of DCPPS research in FY12, highlighting the many research accomplishments of our faculty and staff.

Research Portfolio

The Division had 160 funded grants and contracts in FY12, totaling nearly $26M in force. Our research encompasses numerous study populations: healthy adults, at-risk populations, cancer patients and survivors. Table 1 provides a snapshot of the DCPPS FY12 research portfolio.

**Table 1: DCPPS FY12 Research Portfolio.**

<table>
<thead>
<tr>
<th><strong># FUNDED GRANTS &amp; CONTRACTS</strong></th>
<th>160</th>
</tr>
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<tbody>
<tr>
<td><strong>PROTOCOLS IN FORCE</strong></td>
<td>250</td>
</tr>
<tr>
<td><strong>GRANTS &amp; CONTRACTS IN FORCE</strong></td>
<td>$25,705,364</td>
</tr>
<tr>
<td><strong>ORGANS</strong></td>
<td>BREAST  &lt;br&gt;GI: GASTRIC, COLORECTAL, ESOPHAGEAL, PANCREATIC &lt;br&gt;GU :PROSTATE, BLADDER &lt;br&gt;GYN : CERVICAL, OVARIAN &lt;br&gt;THORACIC/H&amp;N – LUNG, H&amp;N &lt;br&gt;OTHER: CARDIAC, SKIN,</td>
</tr>
<tr>
<td><strong>EXAMPLES OF STUDY POPULATIONS</strong></td>
<td>CANCER PATIENTS  &lt;br&gt;SURVIVORS  &lt;br&gt;HEALTHY ADULTS  &lt;br&gt;SMOKERS  &lt;br&gt;PRE &amp; POST-MENOPAUSAL WOMEN</td>
</tr>
<tr>
<td><strong>EXAMPLES OF INTERVENTIONS/STUDIES</strong></td>
<td>LIFESTYLE: EXERCISE, WEIGHT CONTROL, TOBACCO CESSION, SUN EXPOSURE  &lt;br&gt;QOL: SWALLOWING, BODY IMAGE, SEXUAL FUNCTION  &lt;br&gt;RISK COMMUNICATION &amp; PREDICTION MODELS  &lt;br&gt;GENOME WIDE ASSOCIATION STUDIES  &lt;br&gt;STATINS (Colon, Breast)  &lt;br&gt;VITAMINS SUPPLEMENTATION (Breast)  &lt;br&gt;FINASTERIDE (Prostate)  &lt;br&gt;POLYPHENON E (Breast, esophagus)</td>
</tr>
</tbody>
</table>
Ten new grants awarded in FY12 focused on breast cancer and, of new grants addressing a particular risk factor(s), most addressed genetic risk factors. Figure 2 displays the number of new DCPPS grants awarded in FY12 by disease site and risk factor. Of note, Powel Brown, M.D., Ph.D., and his team successfully re-competed the Phase I/Phase II Clinical Trials of Cancer Chemoprevention Agents contract with the National Cancer Institute to conduct early phase studies to assess agents for their cancer prevention potential.

Figure 2. The Number of New Grants Awarded in FY12 by (A) Disease Site and (B) Risk Factor. The greatest number of grants awarded focused on breast cancer research and genetic risk factors were most often addressed among the new grants.
At the time of this report, DCPPS faculty members submitted 16 applications with a value of approximately $80 million in direct costs. Figure 3 displays the total dollar amount of submitted grants by department. Noteworthy is a large P50 grant submitted by David Wetter, Ph.D., chair of Health Disparities Research, and his colleagues to generate data regarding point of sale marketing of tobacco products to vulnerable populations to be used by the Federal Drug Administration in developing regulatory policies around the marketing and sale of tobacco products. If awarded, this grant would support important T3-T4 translational research and facilitate making the Division’s science impactful within the broader community.

**Figure 3. FY12 Submitted DCPPS Grants.** A total of 16 grants were submitted for $80 million in direct costs.

Along with actively pursuing external research funding, DCPPS faculty published over 200 articles in numerous scientific journals. Figure 4 shows the distribution of these publications by journal impact factor. Nine articles were published in journals with an impact factor greater than 15. These journals were Nature Cell Biology (1), The Lancet (2), Nature Genetics (3), and the Journal of Clinical Oncology (3).

**Figure 4: FY12 DCPPS Publications by Journal Impact Factor.** A total of 236 articles were published by DCPPS faculty in FY12.
Behavioral Science Research Highlights

Eliminating Secondhand Smoke from Mexican-American Households: Outcomes from Project Clean Air-Safe Air (CASA)


- Enrolled 91 Mexican-American households with one child <18 y/o and two adults, one of whom was a smoker;
- Received either culturally-appropriate fotonovelas & comic book (intervention) or ACS booklet (control);
- Decreased ambient nicotine levels, increased knowledge of health effects of second-hand smoke and health vulnerability in intervention group compared to control group.

The Effects of Varenicline and Bupropion-SR Use Plus Intensive Smoking Cessation Counseling on Prolonged Abstinence from Smoking and on Depression, Negative Affect and Other Symptoms of Nicotine Withdrawal

Cinciripini PM, Robinson JD, Karam-Hage M, Minnix JA, Lam CY, Versace F, Brown VL, Engelmann JM, Wetter DW

- Smokers (N=294) treated with Varenicline, Bupropion-SR, or placebo plus intensive smoking cessation counseling;
- Both medications increased concentration, decreased cravings, negative affect & sadness compared to placebo;
- Significant differences in abstinence for both drugs at end of treatment and 3 months post-quit;
- Varenicline continued to exert robust and favorable impact at 6 months.
Efficacy of Cell Phone–Delivered Smoking Cessation Counseling for Persons Living With HIV/AIDS: 3-Month Outcomes

Vidrine DJ, Marks RM, Adruino RC, Gritz ER

- HIV+ (N=474) smokers randomized to cell phone intervention vs. usual care;
- Abstinence rate was significantly higher in the cell phone group: OR=4.3 (p<.0001);
- Results provide efficacy evidence for the cell phone intervention approach.

A Randomized Trial of Internet-Based Versus Traditional Sexual Counseling for Couples After Localized Prostate Cancer Treatment

Schover LR, Canada AL, Yuan Y, Sui D, Neese L, Jenkins R, Rhodes MM

- Randomized trial comparing traditional or internet-based sexual counseling with waitlist control;
- Both treatment formats produced significantly better self-reported sexual outcomes than the waitlist; improvements remained significant at 1-year follow-up;
- Expanded & upgraded version of the web site is being tested in the Sexual Medicine Clinic in a new trial.
The Combination of Tamoxifen and the Rexinoid LG100268 Prevents ER-Positive and ER-Negative Mammary Tumors in P53-Null Mammary Gland Mice


- LG100268 prevents ER-negative breast cancer;
- Tamoxifen prevents ER-positive breast cancer;
- Combining LG100268 and tamoxifen is more effective in preventing breast cancer than either alone in mouse models.

Association between Contralateral Prophylactic Mastectomy and Breast Cancer Outcomes by Hormone Receptor Status

Brewster AM, Bedrosian I, Parker PA, Dong W, Peterson SK, Cantor SB, Crosby M, Shen Y

- Breast cancer patients (N=3,889) treated at MDACC;
- Compared association between contralateral prophylactic mastectomy, breast cancer disease-free (DFS) and overall survival;
- Contralateral prophylactic mastectomy was associated with improved DFS for some patients with hormone-receptor negative breast cancer.

Phase IB Randomized, Double-Blinded, Placebo-Controlled, Dose Escalation Study of Polyphenon E in Women with Hormone Receptor-Negative Breast Cancer


- Phase I study of EGCG (green tea catechin) in ER-negative breast cancer survivors;
- Defined maximum tolerated dose (600mg B.I.D.);
- Drug was well-tolerated and it achieved pharmacologic levels in urine.
Hepatocellular Carcinoma Risk Prediction Model for the General Population: The Predictive Power of Transaminases


- A prospective cohort of 428,584 Taiwanese individuals followed over 8.5 years for hepatocellular carcinoma;
- A total of 1668 cases occurred;
- Simple risk prediction models based on clinically available data were developed;
- Models with transaminase data were best able to predict hepatocellular carcinoma risk even among subjects with unknown or HBV- or HCV- negative infection status.

Haplotype-based Profiling of Subtle Allelic Imbalance with SNP Arrays

Vattathil S and Scheet P
Genome Res. 2013 1:152-8.

- Methods to detect tumor-associated allelic imbalance break down at aberrant cell proportions of 10% to 15%;
- Developed an approach to detect low proportions of cells with aberrant allelic ratio among non-aberrant cells;
- Approach serves as a new paradigm for genomic profiling of heterogeneous samples.

Racial Disparity in Renal Cell Carcinoma Patient Survival According to Demographic and Clinical Characteristics

Chow WH, Shuch B, Linehan WM, Devesa SS

- Identified Caucasian and African-American patients (N=40,000) with invasive RCC from 1992-2007 in SEER;
- Relative survival rates were calculated using the actuarial method;
- Caucasian patients with RCC consistently demonstrated a survival advantage over African-Americans, regardless of age, gender, tumor stage or size, histological subtype, or surgical treatment.
The Effect of Tobacco Outlet Density and Proximity on Smoking Cessation


- Examined environmental influences on smoking cessation;
- Studied the relationships of tobacco outlet density and proximity with biochemically verified continuous abstinence across weeks 1, 2, 4, and 26 after quitting among 414 adult smokers from Houston, TX;
- Residential proximity to, but not density of, tobacco outlets influences smoking cessation.

Density and proximity of fast food restaurants and body mass index among African-Americans

Reitzel LR, Regan SD, Nguyen N, Cromley EK, Strong LL, Wetter DW, McNeill LH

Am J Public Health May 16, 2013. [Epub ahead of print]

- Studied the relationships of fast food restaurant proximity and density with body mass index in African-Americans in Houston, TX;
- The moderating effect of household income on relationships was also examined;
- Residential proximity to fast food restaurants is associated with higher BMI, particularly among those with lower incomes.

Associations Between Health Literacy and Established Predictors of Smoking Cessation


Am J Public Health May 16, 2013. [Epub ahead of print]

- First in literature to examine association between health literacy and established predictors of smoking cessation;
- Poorer health literacy was significantly and independently associated with well-established predictors of poor smoking cessation outcomes.
During FY12, the Duncan Family Institute (DFI) invested 55% of its funding into two research programs, a Seed-Funding program and a Strategic Research Initiatives program. The Institute’s Seed-Funding program is designed to provide financial support to innovative investigators working to develop preliminary data into full-fledged, hypothesis-driven investigations. A recent article in the prestigious journal *Nature* highlighted the Institute’s Seed Funding program (Figure 5). A summary of seed funding activity through year 4 of the DFI is provided in Figure 6. The Strategic Research Initiatives program is a set of high-priority research areas determined by the Executive Committee of the DFI. An additional 35% of the DFI’s FY12 budget was invested into building critical research infrastructure components and cutting-edge technologies, which are often not funded through traditional grant mechanisms. Finally, 10% of the DFI’s budget this past year was devoted to activities to develop future generations of cancer prevention researchers, to support the current generation and to assure quality of the Institute’s programs through its governance and administrative management.

Accomplishments of the DFI in FY12 include:

- Establishing the *Center for Energy Balance in Cancer Prevention and Survivorship*, led by Karen Basen-Engquist, Ph.D., M.P.H., professor in Behavioral Science;
- Funding its sixth strategic research initiative, *Navigating Familial Cancer Risk in Hereditary Colorectal Cancer Syndromes*;
- Awarding nine new awards as part of its Seed-Funding program and awarding two new Mentored Junior Faculty Fellowships;
- Expanding the Executive Committee from nine to 11 members, with the additions of Dr. Karen Basen-Engquist and Hua Zhao, Ph.D., associate professor in Epidemiology.

![Figure 6: Summary of Duncan Family Institute seed funding through year 4.](image)
Dorothy I. Height Center for Health Equity & Evaluation Research

During FY12, the Center for Health Equity and Evaluation Research became the Dorothy I Height Center for Health Equity and Evaluation Research (DH-CHEER). DH-CHEER is led by Lovell Jones, Ph.D., professor in Health Disparities Research, and is the first formal collaborative center between the University of Houston and MD Anderson Cancer Center in the history of either institution. The Center is an expanded collaborative effort of the former Center for Research in Minority Health. DH-CHEER strives to eliminate disparities in cancer among ethnic minorities in Texas and the nation through an integrated approach that combines basic, applied and clinical research along with educational and community outreach programs.

As part of its educational and outreach activities, DH-CHEER hosts the Biennial Symposium on Minorities, the Medically Underserved, & Health Equity in conjunction with the Intercultural Cancer Council (ICC). This past year marked the 25th anniversary of the symposium and its topic was particularly timely, Empowering Communities in the Era of Health Care Reform. The Symposium featured numerous speakers, panel discussions, capacity-building workshops, and numerous opportunities to advance collaborative efforts in reducing health disparities and improving health equity. In conjunction with this symposium, DH-CHEER and the ICC also hosted the 10th Annual Summer Workshop on Disparities in Health in America. Both events featured opportunities for academic and non-academic/professional credit.

Cancer Center Support Grant Programs

<table>
<thead>
<tr>
<th>Year</th>
<th>Peer-Reviewed Funding</th>
<th>Members</th>
<th>Total Publications (5 year interval)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>$7,343,478* (127%)</td>
<td>42* (140%)</td>
<td>906 (171%)</td>
</tr>
<tr>
<td>2007</td>
<td>$5,767,121</td>
<td>30</td>
<td>529</td>
</tr>
</tbody>
</table>

*Updated since grant submission

**Epidemiology Program**
X Wu / A Futreal

**Behavioral & Health Disparities Research Program**
E Gritz / D Wetter

**Clinical Cancer Prevention Program**
P Brown / S Hanash

Towards the end of FY12, the Division began actively planning for the CCSG re-competition in February of FY13. DCPPS is home to three Cancer Center Support Grant (CCSG) Programs. Membership in each program has increased over the five-year period, with Epidemiology demonstrating the largest increase (40%) in membership since the last CCSG renewal. Total publications for each program have also increased substantially, with Clinical Cancer Prevention Program more than doubling their publications over the last five years. Overall, the three CCSG programs within DCPPS demonstrate great health and continued progress and significant collaborations.
CLINICAL SERVICES
The Cancer Prevention Center (CPC), directed by Therese Bevers, M.D., professor in Clinical Cancer Prevention, provides clinical services to healthy individuals, those at risk of cancer, and cancer survivors. It is one of the few centers across the nation dedicated to providing cancer preventive health services in a single facility. The CPC offers prevention and survivor services, including cancer risk assessment, genetic testing, screening, tobacco cessation services, and wellness education; personal preventive therapy, such as tamoxifen and raloxifene for those at increased risk of breast cancer; and diagnostic services for abnormal mammograms, skin lesions, and pap smears and HPV tests.

In FY11, based on findings from the National Lung Screening Trial (NLST), a lung cancer screening program was launched in collaboration with Diagnostic Imaging. Using low-dose spiral computed tomography (CT), the program aims to screen current or former smokers 50 years of age and older who have smoked one pack per day for at least 30 years. In FY12, 75 patients completed screening. Current smokers who are screened are referred to the smoking cessation services provided by the Tobacco Treatment Program within the CPC.

In addition to the new lung cancer screening program, the CPC has also expanded its colon cancer screening in collaboration with clinicians from the department of Gastroenterology Hepatology & Nutrition and Diagnostic Radiology. Services have expanded to include CT colonography in addition to optical colonoscopy. In FY11, over 1200 GI consults were performed (107 per month) in the CPC, and this increased by 28% in FY12, to over 1600 consults (137 per month).

Patient visits to the CPC reached 36,000 in FY12, an increase of 11% from the previous year. We appreciate and recognize the many providers from across the institution who serve the patients of the CPC.

### CPC Patient Visits by Clinic for FY05-FY12.

![Graph showing patient visits by clinic from FY05 to FY12.](image)

<table>
<thead>
<tr>
<th>Clinic</th>
<th>Visits FY12</th>
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<tbody>
<tr>
<td>Thyroid Survivorship</td>
<td>316</td>
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<tr>
<td>GI Consult</td>
<td>314</td>
</tr>
<tr>
<td>Breast Survivorship</td>
<td>733</td>
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<tr>
<td>Undx Derm Clinic</td>
<td>313</td>
</tr>
<tr>
<td>Undx Breast Clinic</td>
<td>312</td>
</tr>
<tr>
<td>Genetics/Nutrition Clinic</td>
<td>311</td>
</tr>
<tr>
<td>Cancer Prevention Center</td>
<td>310</td>
</tr>
</tbody>
</table>

### Prevention
- Cancer Risk Assessment
- Genetic Testing
- Screening / Surveillance: mammography, colonoscopy, skin, lung, prostate, gynecological

### Personal Preventive Therapy
- Cancer risk-reducing drugs for those at increased risk

### Diagnostic Services
- Undiagnosed breast, skin, and gynecological cancers

### CPC Providers from across the institution.

<table>
<thead>
<tr>
<th>Provider Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Therese Bevers</td>
<td>Dermatology</td>
</tr>
<tr>
<td>Dr. Elise Cook</td>
<td>Dr. Anna Ciurea</td>
</tr>
<tr>
<td>Dr. Lonzetta Newman</td>
<td>Dr. Karen Chen</td>
</tr>
<tr>
<td>Marita Lazarro, MS, ANP</td>
<td>Dr. Susan Chon</td>
</tr>
<tr>
<td>Suzanne Day, MS, FNP</td>
<td>Dr. Carol Drucker</td>
</tr>
<tr>
<td>Robin Coyne, MS, FNP</td>
<td>Jennifer Woodward, MSN, NP</td>
</tr>
<tr>
<td>Titi Ninan, MSN, ANP</td>
<td>Gi</td>
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<tr>
<td>Ana Nelson, MSN, FNP</td>
<td>Dr. Marta Davila</td>
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<td>Helen Monroe, MS, BSN</td>
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<td>PEPEP</td>
<td>Tanya Whitlow, MSPA, PAC</td>
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<tr>
<td>Joyce Daines, MSN, JD, DRPH</td>
<td>L. Kelly Kain, PA</td>
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<td>Carol Vreeland Dallard, MSN</td>
<td>Joyce Lehmann, PAC</td>
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<td>Cheryl Karian, PA, PAC</td>
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<td>Dr. Mouhammed Habra</td>
<td>Breast Survivorship</td>
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<td>Sherrie Flores, MS, ANP, NP</td>
<td>Dr. Amal Melham-Bortradt</td>
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<td>Maricruz Guzman, MSN, ANP</td>
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<td>Genetics</td>
<td>Anderson, L. Ashley, MS, BSN</td>
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<td>Dr. Louise Strong</td>
<td>Christi Bowe, MSN, ANP, NP</td>
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Largely through support of the Duncan Family Institute for Cancer Prevention and Risk Assessment, the Division’s Integrative Health (IH) initiative made significant progress in FY12. This program is co-led by Drs. Hawk and Bevers from Clinical Cancer Prevention, and Lorenzo Cohen, M.D., professor in General Oncology and Richard Lee, M.D., assistant professor in General Oncology, from the Division of Cancer Medicine’s Integrative Medicine Program. Based upon collaborative contributions from numerous cross-institutional colleagues, the MD Anderson IH initiative provides evidence-driven, personalized services in five lifestyle-associated areas: tobacco cessation, nutritional counseling, exercise counseling, psychosocial support, and complementary modalities to at-risk and survivor populations in the CPC, as well as patients undergoing active therapy in the Integrative Medicine Center. These services permit MD Anderson to provide a comprehensive model of cancer care and prevention, focused on broad patient needs and interests.

The IH initiative has four phases and pilot programs in phase two are currently being implemented. These include the incorporation of a dietician, an exercise physiologist, and a physical therapist into usual care algorithms, based on specific needs. A health education specialist was also hired in FY12, and appointments are now being accepted for nutrition and exercise counseling. It is anticipated that the IH initiative will serve as a model for other clinical care centers within MD Anderson, and more broadly.

The Tobacco Treatment Program (TTP), directed by Paul Cinciripini, Ph.D., professor and deputy chair of Behavioral Science, has been providing its clinical services in the area of tobacco treatment and cessation since 2006. Its mission is to evaluate and treat all MD Anderson Cancer Center patients and their cohabitants, employees, employee spouses, and their dependents who self-report as current tobacco users or recent quitters. Its services include in-person counseling, psychiatric consultation, pharmacotherapy, telephone and in-person follow-up, and EMR documentation and physician notification.

In FY12, the TTP grew by 12% following a 5% increase in FY11. It served 618 new patients and conducted 7,324 appointments of all types. At the end of FY12, the TTP had served 3,715 patients and conducted 41,456 appointments since its inception in January 2006. Additionally, the program served patients from more than 50 MD Anderson clinical departments this past year.

The TTP boasts an excellent long-term abstinence rate. At nine months after their initial consult in the TTP, 33-46% of patients remain smoke-free. This compares favorably with abstinence rates of 24-35%, depending on the type of pharmacotherapy used, in a population of highly motivated healthy smokers.

Future plans of the TTP include expanding into the Regional Care Centers and expanding the delivery of counseling services into patient homes, both through videoconferencing; and the continued development of a computer-assisted smoking cessation intervention to be delivered via the web, handheld computers and cell phones. The TTP expects to increase its growth rate to at least 15% in FY13, based on recent performance and its planned expansion into the Regional Care Centers.
EDUCATION
Education – Focused Training in Cancer Prevention Research

The Cancer Prevention Research Training Program (CPRTP) is administered through the Office of the Vice President and engages undergraduate and graduate students, as well as post-doctoral fellows, from a wide variety of disciplines to provide focused training in the field of cancer prevention.

The mission of MD Anderson’s Cancer Prevention Research Training Program (CPRTP) is to immerse trainees in cutting-edge cross-disciplinary research in cancer prevention, preparing them to launch as principal investigators earlier in their careers. The program, founded by Robert Chamberlain, Ph.D., is now led by Shine Chang, Ph.D., professor in Epidemiology, and co-led by Carrie Cameron, Ph.D., assistant professor in Epidemiology. It is among the oldest and largest academic cancer prevention research training programs in the nation and has been continuously supported by the National Cancer Institute (NCI) for over 20 years. The multi-disciplinary training of the CPRTP is accomplished through specific graduate courses, a seminar series, and by participation in ongoing peer-reviewed, mentored research.

The CPRTP has steadily grown since its inception in 1992. Typically eight pre-doctoral students (3-year appointments) and eight post-doctoral fellows (2-year appointments) are supported annually by an R25T grant and another eight trainees (generally college students, graduate research assistants and/or research interns) are supported by an R25E grant, both from the NCI. There were a total of 187 CPRTP trainees in FY12. The cumulative number of trainees by funding mechanism is shown in Figure 7.

In addition to the support provided by the NCI through the CPRTP, the division has two donor-funded training fellowships: The Halliburton Employees Fellowship in Cancer Prevention supported through employees and matching funds of Halliburton and The Janice Davis Gordon Memorial Fellowship established by Board of Visitor member Mr. Steve Gordon, in honor of his late wife.

Figure 7 The cumulative number of trainees by funding mechanism. (A) The cumulative number of pre- and post-doctoral fellows supported by the R25T education and training program since 1992. (B) The cumulative number of trainees supported by the R25E education and training program since 1992.
Six current or former postdoctoral fellows who have recently accepted faculty positions are shown:

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<th>Fellow</th>
<th>Primary Mentor</th>
<th>Academic Institution</th>
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<tr>
<td>Claire Adams</td>
<td>DW Wetter</td>
<td>Catholic University Washington, DC</td>
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<tr>
<td>Whitney Heppner</td>
<td>DW Wetter</td>
<td>Georgia College &amp; State University Milledgeville, Georgia</td>
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<tr>
<td>Jan Eberth</td>
<td>L Elting</td>
<td>University of South Carolina - Arnold School of Public Health</td>
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<td>Columbia, South Carolina</td>
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<tr>
<td>Jeffrey Engelmann</td>
<td>P Cinciripini</td>
<td>MD Anderson Cancer Center, Behavioral Science (K01 awardee)</td>
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<tr>
<td>Faith Fletcher</td>
<td>D Vidrine</td>
<td>University of Illinois Chicago, Illinois</td>
</tr>
<tr>
<td>Dianren Xia</td>
<td>R DuBois</td>
<td>MD Anderson Cancer Center, Thoracic Head &amp; Neck Medical Oncology (Heymach Lab)</td>
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CANCER CONTROL
Comprehensive Cancer Control – Reducing the Cancer Burden in the Community

Efforts led by Lewis Foxhall, M.D., Vice President for Health Policy, and Dr. Hawk have re-defined cancer control within MD Anderson and led to the coordination of disparate individual cancer-control activities into an organized, cohesive and formal comprehensive cancer control (CCC) plan to measurably impact the cancer burden in surrounding communities.

The CCC program complements MD Anderson’s robust cancer treatment and research programs by extending our focus to the community-at-large. The ultimate goal of the CCC plan is to measurably impact the cancer burden within the Houston metropolitan area. The CCC plan originally consisted of seven specific goals, with the addition of an eighth goal during FY12 (Figure 8). These goals are targeted towards specific cancers and risk factors, and were selected based on a host of criteria, including the significance of the cancer or risk factor within the Houston metropolitan population; the availability of accurate, reliable and serially-measurable data; and the potential for meaningful impact. Working groups are organized around each goal and led by those with expertise in the relevant area (Figure 9). Each group is charged with developing, implementing and monitoring plans to address their particular goal. To date, plans have been developed for all eight goals and are in the process of implementation.

A number of important events in Cancer Control occurred during FY12. Aside from the addition of an eighth goal to the plan, the CCC plan served as a conceptual framework for the American Cancer Society’s national cancer control agenda and as a model for the Texas Cancer Control Plan. Importantly, a Board of Visitors sub-committee on cancer control was also established to provide external guidance to the CCC program. Finally, the Division is actively pursuing external funding in this area. Jennifer Irvin Vidrine, Ph.D., associate professor in the department of Health Disparities, was awarded a CPRIT Prevention Services grant to implement an automated EMR system to connect smokers in Harris County Hospital District with smoking cessation services. A second CPRIT Prevention Services grant was also awarded to David Vining, M.D., professor in Diagnostic Radiology, Division of Diagnostic Imaging, with Dr. Hawk as co-director, to implement a unique colon cancer screening intervention to increase screening rates in the Houston metropolitan area in partnership with federally-qualified health centers (FQHCs) and community health centers.

Figure 8: The Eight CCC Goals

1. Reduce the prevalence of smoking in the Houston MSA.
2. Increase physical activity and proportion of population with a healthy body weight, and improve the quality of diet in the Houston MSA.
3. Reduce the incidence and mortality of colorectal cancer in the Houston MSA.
4. Reduce the incidence and mortality of cervical cancer in the Houston MSA.
5. Reduce the mortality due to breast cancer in the Houston MSA.
6. Reduce the incidence and mortality of liver cancer in the Houston MSA.
7. Reduce or prevent morbidity and improve quality of life among cancer survivors in the Houston MSA.
8. Reduce the incidence and mortality of skin cancer in the Houston MSA.
Figure 9: Organization of the Comprehensive Cancer Control (CCC) Program. The eight workgroups, organized around the eight goals of the CCC plan, are shown with their respective leaders.
New, Continuing and Expanding DCPPS Initiatives

FY12 presented the Division with a number of opportunities for growth into new areas, including the establishment of a new department, the continued growth of the Cancer Prevention Center, and the development of a novel platform to support the Moon Shots program.

Health Services Research

A new department of Health Services Research (HSR), which had long been in the planning phase, has now been established within the Division. A long-range goal of HSR is to promote the Institute of Medicine’s “six elements of quality care” applied to the delivery of cancer prevention and cancer care services: safety, timeliness, enhanced effectiveness, efficiency, equity and patient-centeredness (STEEEP). The founding chair of this department will be Sharon Giordano, M.D., M.P.H., associate professor in Breast Medical Oncology. Dr. Giordano is a recognized leader in oncology-specific health services research, particularly with regard to breast cancer outcomes. The Division is confident that Dr. Giordano’s leadership will greatly accelerate institutional efforts in HSR.

Cancer Prevention Center

An additional continuing initiative with the Division is the growth and expansion of the Cancer Prevention Center (CPC). During FY12, Gelb Group, an independent consulting firm, conducted a survey of CPC patients and developed a set of recommendations based on patient responses. These recommendations will be used to guide the growth and expansion of the CPC as it implements its Breast Spa and Undiagnosed Breast Clinic. Additionally, the CPC is considering plans to expand into MD Anderson’s regional care centers and to implement a global CPC program. This will assure greater integration and coordination of prevention and survivorship services as well as needed clinical radiology and endoscopy services together oriented towards wellness and health maintenance.
Cancer Prevention & Control Platform: Moving From Research to Reality

Finally, many from across the Division contributed to the conceptualization and development of the Cancer Prevention and Control Platform, a new initiative within DCPPS. The Cancer Prevention and Control Platform was selected as one of 12 platforms to support the six inaugural moonshots. The platform builds upon existing CCC efforts and will be led by Dr. Hawk and Mark Moreno, Vice-President for Government Relations.

The mission of the Cancer Prevention & Control Platform is to develop and deliver comprehensive evidence-based strategies in cancer prevention, screening, early detection and survivorship, to achieve a measurable and lasting reduction in the cancer burden, especially among those most vulnerable – the underserved. The Platform will deliver products in three domains: policy, professional and public education and community-based services.

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<tr>
<th>Name</th>
<th>Position</th>
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<tr>
<td>Ernest Hawk, M.D., M.P.H.</td>
<td>VP and Head, Division of Cancer Prevention &amp; Population Sciences</td>
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<tr>
<td>Mark Moreno</td>
<td>VP, Government Relations</td>
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<tr>
<td>Lewis Foxhall, M.D.</td>
<td>VP, Health Policy</td>
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<tr>
<td>Jo Ann Ward, M.P.H.</td>
<td>AVP, Public Affairs – Public Education Office</td>
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<tr>
<td>David Wetter, Ph.D.</td>
<td>Chair, Dept. of Health Disparities Research</td>
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<tr>
<td>Jenny Tektiridis, M.S., C.P.A.</td>
<td>Ex. Dir., Research Planning &amp; Development</td>
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<tr>
<td>Martha Salas, M.S.W., M.B.A.</td>
<td>Division Administrator</td>
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Product development will rely upon a structured, milestone-driven process consisting of nine steps, as outlined in Figure 10. Although the Platform is still under development, a number of projects have been proposed and are in various stages of development. The Platform and its initial projects will continue to develop and mature over the coming year.

Figure 10: The Product Development Process of the Cancer Prevention & Control Platform.
“More than half of the cancer occurring today is preventable by applying knowledge that we already have... to achieve maximal possible cancer prevention, we will need better ways to implement what we know and improved infrastructure that will better incentivize and support transdisciplinary, multilevel research and successful intervention.”

Colditz et al, Science Translational Medicine, 2012

“Prevention equals extension of healthy lives.”

Ernest Hawk, M.D., M.P.H.
LOCATION
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If you would like more information on supporting the Division of Cancer Prevention and Population Sciences, please contact Ernest Hawk, M.D., M.P.H., vice president and division head, at 713-792-3900, or visit the Division Internet site at
www.mdanderson.org/cancerpreventiondivision

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