

Honoring Paul F. Engstrom, MD: A Pioneer of Cancer Prevention

Margie L. Clapper and Carolyn Y. Fang



See all articles in this Special Collection Honoring Paul F. Engstrom, MD, Champion of Cancer Prevention



Paul F. Engstrom

The following collection of review articles and perspective pieces is dedicated to the lifetime achievements of our dear friend and colleague Paul F. Engstrom, MD, an inspirational pioneer in the area of cancer prevention and control. After a lifetime of serving and caring for others, Dr. Engstrom retired from Fox Chase Cancer Center (FCCC, Philadelphia, PA) in December 2018. Dr. Engstrom's vision shaped the cancer prevention field and

led to the establishment of one of the nation's first cancer prevention and control programs at Fox Chase Cancer Center. His scientific achievements have uniquely had a major impact on the care of patients across the cancer continuum, from prevention and early detection to cancer treatment and community-based interventions (Fig. 1). His compassion as a medical oncologist and mentor has touched the lives of thousands. This collection celebrates Dr. Engstrom's career, highlighting the various prevention-related fields in which he worked, and follows a symposium held in his honor by Fox Chase Cancer Center upon his retirement.

Growing up as the son of the only physician in a small town in rural Minnesota, Dr. Engstrom spent his early years assisting his father in his medical practice and seemed destined for a career in medicine. He received his MD from the University of Minnesota Medical School (Minneapolis, MN) in 1962. During his medical training and residency at the same institution, he gravitated toward treating those patients who were most afflicted with disease. While on active duty at Tripler Army Medical Center in Hawaii, he was the only hematologist/

oncologist on staff and thus cared for all patients with cancer. Honolulu's medical school was newly established at the time, and it provided an avenue for Dr. Engstrom to supplement his clinical duties with teaching. Inspired by his clinical experience in the Army, Dr. Engstrom subsequently sought a position at a cancer center and joined American Oncologic Hospital in Philadelphia, the current home of Fox Chase Cancer Center, in 1970. As an attending physician, he soon became frustrated with the slow pace at which new chemotherapies were being developed and decided instead to focus on cancer screening, establishing one of the nation's first cancer prevention and control programs. The mere concept that cancer could be prevented was not well-accepted at that time. Because intervening early was key, Dr. Engstrom envisioned that it would require patients to be seen outside of the traditional cancer center setting. With grants in-hand, he began establishing relationships with community hospitals to gain access to patients well in advance of their presentation with late-stage disease. The success of this approach was ensured by not only his tenacity, but also his intent to understand the barriers faced by community physicians and the general population. Dr. Engstrom remained steadfast in his mission to provide all populations with access to cancer preventive services by attenuating potential barriers to screening.

With the advent of new challenges and as vice president for Cancer Control at Fox Chase Cancer Center, Dr. Engstrom began to explore opportunities to extend his existing program to include other cancer prevention and control activities—a blueprint that other institutions would later follow. Intent on understanding how genetic variation and environmental exposures predispose individuals to cancer, Dr. Engstrom recruited Mary Daly, MD, PhD in 1989 to establish one of the nation's first risk assessment programs at Fox Chase Cancer Center. The program has continued to flourish with a focus on quantifying an individual's personal and familial risk of cancer and implementing surveillance and prevention strategies to reduce risk. The impact this life-saving program has had on over 12,000 individuals over the past several decades is immeasurable. Research findings from the program have not only advanced our understanding of the genetic basis of cancer risk, but have also revealed new challenges in health communication. The featured article by Daly beginning on page 219 discusses the current dilemma of obtaining research results that could be highly informative in establishing surveillance plans for high-risk subjects but are not traditionally shared with these individuals (1). Dr. Engstrom's vision to advance the field of cancer prevention by testing the capability of natural and synthetic agents to prevent cancer was enhanced with the

Cancer Prevention and Control Program, Fox Chase Cancer Center, Philadelphia, Pennsylvania.

Corresponding Author: Margie L. Clapper, Fox Chase Cancer Center, 333 Cottman Avenue, Philadelphia, PA 19111. Phone: 215-728-4301; Fax: 215-214-1622; E-mail: margie.clapper@fccc.edu

Cancer Prev Res 2020;13:215-8

doi: 10.1158/1940-6207.CAPR-20-0041

©2020 American Association for Cancer Research.

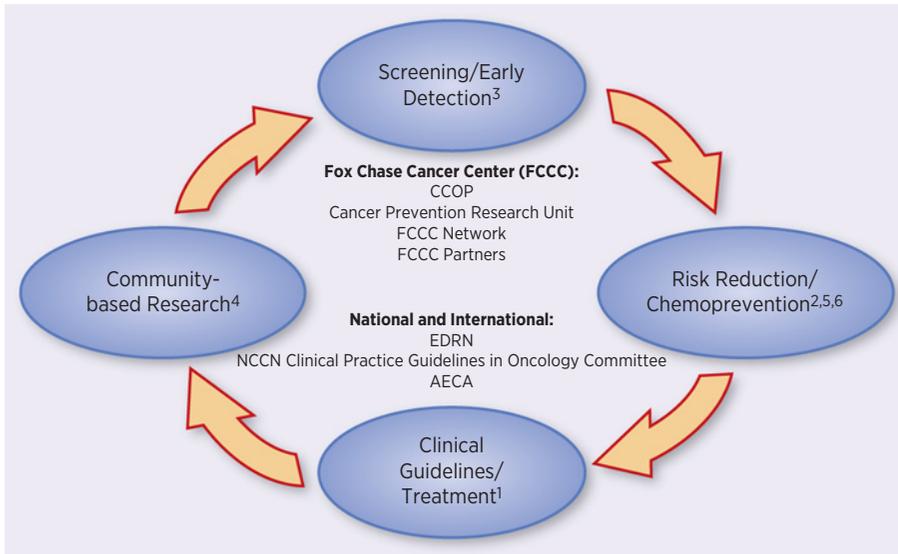


Figure 1.

A visual overview of Dr. Engstrom's significant contributions to the field of cancer research. Dr. Engstrom's career has uniquely impacted each phase of the cancer continuum (blue circles). His contributions have shaped cancer research in general, and cancer prevention research in particular, at the institutional, national, and international levels through his pioneering efforts to create and provide expert guidance for various programs, departments, networks, and alliances (diagram center). Each piece in this collection focuses on one of these areas of cancer research, with the aim of paying tribute to Dr. Engstrom's diverse contributions to the field: Trinidad and colleagues (3) centers on screening/early detection; Clapper and colleagues (2), Paskett and colleagues (5), and Siegel and colleagues (6) on risk reduction/chemoprevention; Daly (1) on clinical guidelines/treatment; and Fang and colleagues (4) on community-based research.

recruitment of Margie Clapper, PhD and led to the establishment of one of the nation's first basic research programs in chemoprevention. Several clinical trials and associated mechanistic studies were launched to assess the ability of chemopreventive interventions to modulate cancer risk. The featured article by Clapper and colleagues, beginning on page 229, supports the use of dysplastic aberrant crypt foci as early biomarkers of colon cancer risk and therapeutic response. This article serves as a tribute to numerous studies over the years that focused on developing novel strategies to detect disease at its earliest stages and establishing preventive interventions for individuals at highest risk of cancer. Dr. Engstrom's success in distinguishing Fox Chase Cancer Center as a Clinical Epidemiology and Validation Center of the NCI's Early Detection Research Network (EDRN) fueled the development of biomarkers with which to identify women at high risk for breast cancer and inform subsequent therapy. As principal investigator and in collaboration with Andrew Godwin, PhD, he developed a rich biobank of highly annotated biospecimens from patients with cancer. This resource continues to support a wide range of cancer biomarker discovery and validation studies. Building on this work, Trinidad and colleagues describe promising approaches to improve the early detection of epithelial forms of ovarian cancer using liquid-based platforms, as summarized in the featured article beginning on page 241 (3).

Importantly, Dr. Engstrom recognized that there was a critical need for prevention and early detection strategies to be widely disseminated across diverse communities and neighborhoods. To address this need, the Community Clinical Oncology Program (CCOP) at Fox Chase Cancer Center, of which Dr. Engstrom was principal investigator, proved to be an essential and valuable avenue for implementing novel interventions and conducting community-based research to enhance cancer screening and prevention strategies. The featured article by Fang and colleagues, beginning on page 253,

summarizes current progress in promoting participation in evidence-based cancer screening among U.S. immigrants, a population that experiences persistent disparities in cancer prevention, early detection, and treatment. Although the barriers to cancer care can be complex and may vary with race, ethnicity, and socioeconomic status, Dr. Engstrom's commitment to addressing community concerns remained unwavering. The work conducted by Paskett and colleagues (5), described in a featured article beginning on page 223, reflects this steadfast commitment to reduce the cancer burden of underserved populations. In this article, Paskett and colleagues describe the development of a multi-level model for characterizing disparities in Appalachia, with a focus on implementing innovative practice-based interventions to reduce cervical cancer-related morbidity and mortality among women in this geographic region.

It is noteworthy that Dr. Engstrom's contributions extend far beyond the nation's borders. Although his early work focused on promoting smoking cessation in the United States, the impact of these efforts has been felt across the world. For 3 years he participated, along with Robbie Schnoll, PhD, in the American Eurasian Cancer Alliance (AECA), a consortium of American and formerly Soviet Russian institutes engaged in cancer research, education, and training. As part of AECA, Dr. Engstrom conducted an NIH-supported joint research project that studied the prevalence and correlates of tobacco use among Russian patients with cancer and conducted formative research to help design smoking cessation treatment strategies for oncologists. These efforts were instrumental in encouraging Russian officials to adopt more stringent evidence-based nonsmoking policies. Dr. Engstrom's long-term goal of reducing smoking rates are being realized by current research in the development and validation of a genetically-informed biomarker of individual differences in nicotine metabolism, which can be used to personalize

treatments for smoking cessation, as described in the featured article by Siegel and colleagues (6) beginning on page 261.

As Dr. Engstrom's reputation grew, so did his influence. As a member of the boards of several national cancer organizations, he helped write the clinical care and treatment guidelines followed today by physicians around the world. He is a founding member of the National Comprehensive Cancer Network (NCCN) Clinical Practice Guidelines Committee, and has served the NCCN as Chair and a member of several committees since 1994. He has also held leadership positions on the cancer prevention and screening boards of the NCI for almost three decades. Finally, Dr. Engstrom held prominent roles in the American Society of Clinical Oncology and the American Cancer Society.

Dr. Engstrom's vision to create Fox Chase Cancer Center Partners, a network of regional hospitals in Pennsylvania and southeastern New Jersey, not only brought cancer treatment closer to home for many patients but also facilitated an assessment of medical oncology office practices for quality improvement regarding the benefits of breast and colon cancer screening. This was uniquely accomplished while maintaining a close connection to a leading academic cancer center.

While advancing the field of cancer prevention and control with his pioneering efforts, Dr. Engstrom maintained an active practice in medical oncology. For most of his career, Dr. Engstrom's clinical practice focused primarily on gastro-

intestinal malignancies. Over time, he became intrigued by the complexity of neuroendocrine tumors. The elusive nature of these malignancies that can arise anywhere in the endocrine and nervous systems makes treatment most challenging. Because many primary care doctors may see only one such case in their lifetime, patients with neuroendocrine tumors came to Fox Chase Cancer Center from around the world to be treated by the expert, Dr. Engstrom.

The publication of these pieces in *Cancer Prevention Research* is particularly fitting and significant given Dr. Engstrom's long-time editorship with the journal. Dr. Engstrom's dedication to *Cancer Prevention Research* as a senior editor was tremendous. His breadth of expertise and experience, paired with his willingness to lend it at every turn, served the journal immensely from its launch in 2008 until his retirement in 2018. Dr. Engstrom oversaw consideration of hundreds of manuscripts during his tenure and improved each with his personal touch. The journal extends its gratitude to him for his service through this collection.

Disclosure of Potential Conflicts of Interest

No potential conflicts of interest were disclosed.

Received January 27, 2020; accepted January 28, 2020; published first March 4, 2020.

References

- Daly MB. Navigating the intersection between genomic research and clinical practice. *Cancer Prev Res* 2020;13:219–22.
- Clapper ML, Chang WL, Cooper HS. Dysplastic aberrant crypt foci: biomarkers of early colorectal neoplasia and response to preventive intervention. *Cancer Prev Res* 2020;13:229–39.
- Trinidad CV, Tetlow AL, Bantis LE, Godwin AK. Reducing ovarian cancer mortality through early detection: approaches using circulating biomarkers. *Cancer Prev Res* 2020;13:241–52.
- Fang CY, Ragin CC. Addressing disparities in cancer screening among US immigrants: progress and opportunities. *Cancer Prev Res* 2020;13:253–9.
- Paskett ED, Pennell ML, Ruffin MT, Weghorst CM, Lu B, Hade EM, et al. A multi-level model to understand cervical cancer disparities in Appalachia. *Cancer Prev Res* 2020;13:223–8.
- Siegel SD, Lerman C, Flitter A, Schnoll RA. The use of the nicotine metabolite ratio as a biomarker to personalize smoking cessation treatment: current evidence and future directions. *Cancer Prev Res* 2020;13:261–72.

Cancer Prevention Research

Honoring Paul F. Engstrom, MD: A Pioneer of Cancer Prevention

Margie L. Clapper and Carolyn Y. Fang

Cancer Prev Res 2020;13:215-218.

Updated version Access the most recent version of this article at:
<http://cancerpreventionresearch.aacrjournals.org/content/13/3/215>

Cited articles This article cites 6 articles, 6 of which you can access for free at:
<http://cancerpreventionresearch.aacrjournals.org/content/13/3/215.full#ref-list-1>

E-mail alerts [Sign up to receive free email-alerts](#) related to this article or journal.

Reprints and Subscriptions To order reprints of this article or to subscribe to the journal, contact the AACR Publications Department at pubs@aacr.org.

Permissions To request permission to re-use all or part of this article, use this link
<http://cancerpreventionresearch.aacrjournals.org/content/13/3/215>.
Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.