

REDUCING THE CANCER BURDEN IN ARABS AND ARAB AMERICANS

SECTION IX. PRE-CONFERENCE WORKSHOP: REDUCING THE CANCER BURDEN IN ARABS AND ARAB AMERICANS

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INTRODUCTION

Because of the variations in genetics of different ethnic groups and the differences in the exposure of diverse populations to environmental carcinogens, the annual incidence, the relative frequency and the subtypes of various cancers, differ markedly from one country, or population subgroup, to another. Moreover, the availability of particular treatments, as well as patients' tolerance to treatment, varies from one country or population group to another. Thus, an improved ability to control cancer among populations groups, such as Arabs and Arab Americans, and to more efficiently use available resources will only be achieved by performing research in these populations. Yet, the lack of resources—both human and financial—has hindered the optimal design and analysis of translational and clinical studies for these groups. Overcoming these deficiencies represents a challenge to those dedicated to cancer control throughout the world.

The paucity of cancer research in Arab populations is a loss not only to cancer patients in these countries, but to all patients with cancer around the world. The variety of environments, lifestyles and ethnic differences provides a spectrum of opportunities, which, if studied adequately, would lead to a much more rapid increase in our understanding of the causes of cancer and our ability to control cancer.¹

For more than 15 years, the University of Michigan School of Public Health (UMSPH) has engaged in a long-term partnership with the Arab

Community Center for Economic and Social Services (ACCESS) organization. ACCESS is the leading organization providing health, social, economic and educational services to southeastern Michigan's Arab population. This geographic area is home to the largest concentration of people of Arab descent in the United States—a population estimated to be more than 480,000.² ACCESS recently opened a new Community Health and Research Center, housing an extensive array of health services, public health programs, and health research, which could facilitate cancer research, education, and management.

The Collaborative Group of Research on Cancer in Arabs and Arab Americans held a workshop in Dearborn, Michigan during May 8 and May 10, 2006. The specific aims of the workshop included the following:

- 1) to bring together clinical oncologists and cancer researchers from Arab countries and the Arab American community in Michigan to present and discuss their current practices and ongoing or proposed research related to specific cancers;
- 2) to discuss the research experience and results of existing collaborations between the cancer centers and universities in Arab countries and US universities and research institutions, as a model for a broader Arab American coalition;
- 3) to develop possible joint research study proposals between Arab countries, the Arab American community, and research institutions in

Michigan and the United States; and

- 4) to discuss possible comparative migration studies between Arabic populations in different Arab countries and Arab Americans in Michigan.

The 35 workshop participants represented clinicians, scientists, and educators from the following national and international agencies: the National Cancer Institute; the University of Michigan Cancer Center; the University of Michigan College of Medicine; the University of Michigan School of Public Health; the Wayne State University and Karmanos Cancer Institute; the University of Texas MD Anderson Cancer Center and School of Public Health; the World Health Organization (Eastern Mediterranean regional office); the University of Arizona; the University of California-San Francisco County Health Department; the Arab Community Center for Economic and Social Services, Dearborn, Michigan; and cancer researchers from Egypt, Tunisia, Algeria, Morocco, and Kuwait.

The workshop included presentations of current research on clinical issues related to four cancer topics: liver cancer, breast cancer, pancreas cancer, and tobacco smoking in Arab and Arab Americans. Presentations were followed by group discussions. By the end of the sessions, summary and conclusions were outlined and developed into recommendations. Within this article, we present a summary of discussions and recommendations from each breakout group.

LIVER CANCER GROUP

The working group on liver cancer discussed the latest knowledge of liver cancer risk factors. The group reviewed: the International Agency for Research on Cancer (IARC) class 1 carcinogens for hepatocellular carcinoma (HCC); hepatitis B virus (HBV); hepatitis C virus (HCV); aflatoxin; alcohol, and

tobacco affect on liver cancer; HBV vaccine introduction and success in Egypt (1993); and issues related to the fact that Egypt is the epicenter for the HCV epidemic. The group also discussed the gaps in knowledge with respect to liver carcinogenesis pathways and independent or interactive risk factors.

Other discussion topics included host-genetic susceptibility, mathematical modeling as a tool for predicting long-term trends in HCV transmission and chronic liver disease, family clustering of HCV cases. The clustering may suggest the HCV experience in Egypt is quite different from other regions and spatial clustering on a broader scale.

The group recommended that future research should address the following six areas:

1. Investigating HCV epidemiology, with special emphasis on determination of HCV incidence in Egypt. In addition, the definition and characterization of HCV transmission patterns in Egypt and exploring the possibility of implementing HCV vaccine trials in Egypt are also important.
2. Studying a prospective cohort study in Egypt to characterize HCV natural history and additional risk factors/distributions of risk factors for HCV as well as HCC.
3. Quantifying the presence of aflatoxin in food stores to determine its role in HCC etiology in Egypt.
4. Determining the magnitude of HBV/HCV presence in the Arab American community to determine if they have greater risk for liver disease.
5. Performing time-space analyses for HCC and its risk factors in Egypt to see if patterns emerge with respect to time and location.
6. Encouraging further work on population-based registries in Arab countries through:

- a. Improving existing cancer registries;
- b. Encouraging the development of infrastructure for additional registries.

7. Training and educating healthcare workers, as well as the general population, with respect to HCV/HCC risk factors and the importance of utilizing registries.

BREAST CANCER GROUP

This group reviewed the available data on age-specific breast cancer incidence rates in different Arab countries with cancer registries and the need for more information from Arab countries without such data. The group also reviewed the conventional risk factors and recent data on the molecular genetics of inflammatory breast cancer in Egypt. The data were generated by the University of Michigan and included information on estrogen receptor (ER), progesterone receptor (PR), human epidermal growth factor receptor 2 (HER2), and RhoC guanosine triphosphatase. The group also reviewed the possible environmental exposures suspected in the epidemiology of breast cancer and the importance of liver disease, increased endogenous, exogenous estrogens, and genetic polymorphism in modulating breast cancer pathogenesis in Arab women. Discussions also included: the latest knowledge of clinical trials for breast cancer treatment and advanced stage breast cancer diagnosis among Arab and Arab American women; advocacy groups; and palliative care for Arab patients with breast cancer.

The recommendations of the group included:

1. Developing public and professional cancer education programs in Arab communities for improving early detection of breast cancer by utilizing local resources.
2. Determining the incidence of IBC from population-based and hospi-

- tal-based registries. Future research should also address the clinical and molecular characterization of IBC in North Africa.
3. Developing novel clinical trials in different countries using common protocols and surrogate end points of efficacy.
 4. Recognizing palliative care as an important part of breast cancer management, especially when due to late diagnosis.

TOBACCO SMOKING GROUP

This group reviewed the current literature of smoking cigarettes and narghile (water pipe) among Arabs and Arab Americans. Estimates from WHO (2005) showed 45% males and 5% females from the Middle East smoke.³ The group also discussed ways to encourage collaborative activities with the Arab American Centers for Economic Development in the United States to control tobacco smoking among Arab American communities, especially the youth populations.

The group recommended the following:

1. That the United States and all other countries ratify the Framework Convention on Tobacco Control (see Section V for more information on FCTC). The United States and all other countries must share their research and strategies on tobacco industries.
2. Encourage research and education on narghile smoking as follows:
 - a. Acknowledge water pipe smoking as a form of tobacco;
 - b. Utilize the available literature to make policy recommendations;
 - c. Design and implement further education and research studies that address the perceived protective factor of water filtration.

3. Conduct research on culturally appropriate tobacco prevention/control/cessation in Arab countries, including the translation into Arabic.

PANCREATIC CANCER GROUP

The purposes of this group was to provide an outline of the group's current research knowledge of pancreatic cancer, discuss opportunities to extend joint collaborative research, and discuss sources of funding with an ultimate goal of maximizing the understanding of pancreatic cancer in Arab Americans and Americans.

The discussion included description of previous research findings in Egypt, including the early onset of pancreatic cancer in the northeast Nile Delta region of Egypt,⁴ higher serum cadmium level in pancreatic cancer cases than in the control participants in Egypt,⁵ clustering of pancreatic cancer in the northeast Nile delta region,⁶ and differences in molecular pathologic profile between pancreatic cancer tumors from Egypt and the United States.⁷⁻¹⁰

Elizabeth Holly, PhD, MPH, presented her research findings from the San Francisco Bay Area, including studies on the history of allergies, severity of allergic syndromes, duration of allergen exposure, and later onset of allergies in association with reduced risk of pancreatic cancer.¹¹ Other risk factors included higher BMI associated with increased risk of pancreatic cancer in men, but not in women.¹² Other data included the high vegetable consumption, particularly beans, onions and garlic and the association with a reduced risk of pancreatic cancer, whereas high intake of red meat and eggs was associated with an increased risk of pancreatic cancer in the San Francisco, California Bay Area.¹³ Another study found that diabetes was associated with very high risks for

pancreas cancer, whereas long-term history of these diseases did not put study participants at increased risk in the San Francisco, California Bay Area.¹⁴ Family history of pancreatic cancer was not associated with increased risk in this study.

Compared to pancreatic cancer in the United States, diabetes and pancreatitis were also related to higher risk of pancreatic cancer in Egypt, particularly short-term history of these diseases. Family history of pancreatic cancer was low in both American and Egyptian populations. There was no association between pancreatic cancer and allergy or BMI in Egypt as would be expected, given the hygiene hypothesis that states that early exposure to allergens and microbes is good if you live through infancy and early childhood.

The working group on pancreatic cancer recommended the following:

1. Investigating the availability of study populations and pancreatic cancer tissues for possible future studies on the following populations:
 - a. Arab Americans in Michigan, including University of Michigan, Michigan Wayne State University, and Henry Ford Hospital;
 - b. Arab Americans, Egyptian migrants to Los Angeles, California; and
 - c. Cancer registry sites in Middle Eastern countries.
2. Focusing on the importance of future research on potential linkage between samples and large data bases, such as SEER and hospital records, using names and SSN, driver license, and other potential patient identification mechanisms.
3. Investigating the possibilities of conducting migration studies and cohort studies of Arab Americans.
4. Encouraging studies on early detection, improving access to treat-

ment, and investigating the etiology and signature molecular and pathologic characteristics of pancreatic cancer.

5. Developing better strategies for cancer prevention and treatment, based on our knowledge of different risk factors in Arab and Arab American populations.

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