



UNIVERSITY OF HAWAII
CANCER CENTER



USC University of
Southern California

*A Newsletter for the Participants
of the Multiethnic Cohort Study*

Multiethnic BULLETIN

VOL 23 FALL 2023

Multiethnic Cohort Update

We are happy to share that the funding for the Multiethnic Cohort Study (MEC) – now in its 30th year – was renewed last Fall by the National Cancer Institute for another five years. Thanks to your generous and continuing participation in this valuable and unique study, we have gained significant knowledge on risk factors for cancer and other chronic diseases, and how the risk for these diseases differ across racial and ethnic groups. To highlight a few numbers:

- ▶ MEC researchers have published over 1,000 scientific articles. Many of these articles are routinely cited by other researchers worldwide.
- ▶ The data and specimens that you have provided have resulted in a large number of spin-off studies that have involved researchers from over 100 academic institutions in the US and around the world.
- ▶ The MEC has been used for the training of over 130 students of various scientific disciplines. Many have moved on to take independent faculty and research positions.

These are just a few examples of how your participation has had far-reaching impact over the years. Thank you so much and we look forward to our continued partnership for many more years to come!


NEW STUDY

Body Imaging Study 2

In 2013-2016, about 1,860 MEC participants took part in the Body Imaging Study 1 (BIS1). Obesity or excess adiposity is recognized as the number one risk factor for many cancers and other chronic diseases. The BIS1 was designed to study body fat in depth. BIS1 participants visited the study centers at UH and USC and underwent a whole-body DEXA (i.e., bone density test) and an abdominal MRI scan. We learned how the distribution of fat in the body tends to differ by one's race and ethnicity and how important for one's health it is to have low amounts of fat in the intra-abdominal area, and especially the liver – regardless of body weight. Over one-third of US adults have obesity-related fatty liver disease (a risk factor for liver cancer), including some with a normal body weight. Hawai'i ranks 2nd, and California 3rd, among 50 states in terms of liver cancer occurrence. We are starting a new study, BIS2, funded by the National Institutes of Health, to re-examine some of the BIS1 participants for their liver health after 10 years. If you participated in BIS1 and live on O'ahu, you may be re-contacted for BIS2. This study involves an abdominal MRI scan and a blood and stool sample collection. We aim to study how liver fat changes over time, what drives liver fibrosis (scarring) among people with fatty liver, how some aspects of diet hasten or slow these changes, and how gut bacteria are involved in this process.




If you have recently moved or have a new phone number, please call us at
1-800-786-3538 (Toll free in California) • (808) 586-2996 (O'ahu) • 1-877-415-8323 (Toll free in Hawai'i)
or visit our website at www.uhcancercenter.org/mec



Are plant-based diets effective in cancer prevention?

Plant-based diets are defined by a low consumption of animal foods. There are many types of plant-based diets. Vegetarian or vegan diet excludes most or all animal foods. Lacto-(ovo)-vegetarians or pesco-vegetarians consume dairy foods, eggs, or fish. However, vegan or vegetarian diets are not necessarily of good nutritional quality because not all plant foods are healthy. For instance, some plant foods, such as refined grains, sweets, and sugar-sweetened beverages, are linked to the risk of chronic diseases.

Three plant-based diet indices (or scores) have been developed by nutritionists to assess intakes of both plant and animal foods, considering the quality of plant foods: the *overall plant-based diet index (PDI)*, the *healthful plant-based diet index (hPDI)*, and the *unhealthful plant-based diet index (uPDI)*. For all of these indices, higher scores mean lower intake of animal foods (animal fat, dairy, eggs, fish or seafood, meat). Higher hPDI scores represent more consumption of healthy plant foods (whole grains, fruits, vegetables, vegetable oils, nuts, legumes, tea and coffee) and less consumption of less healthy plant foods (refined grains, fruit juices, potatoes, added sugars). The opposite is true for uPDI. Previous studies have found that PDI and hPDI were associated with lower risk of cardiovascular disease and type 2



"The plant-based dietary patterns were linked to a reduced risk of colorectal cancer and liver cancer."

diabetes and that uPDI was associated with a higher risk of these diseases.

MEC investigators calculated the three indices for cohort members from their diet questionnaires and studied their relationships to cancer risk. The plant-based dietary patterns were linked to a reduced risk of colorectal cancer and liver cancer. Men in the top 20% of the PDI and hPDI scores had a 21% to 24% lower risk of colorectal cancer, compared to those in the bottom 20%. No risk reduction was found among women for colorectal cancer. Higher PDI and hPDI scores were also associated with reduced liver cancer risk by 19% to 23%, for men and women. These findings provide important evidence that improving the quality of plant foods and reducing animal food consumption can help prevent colorectal and liver cancer.

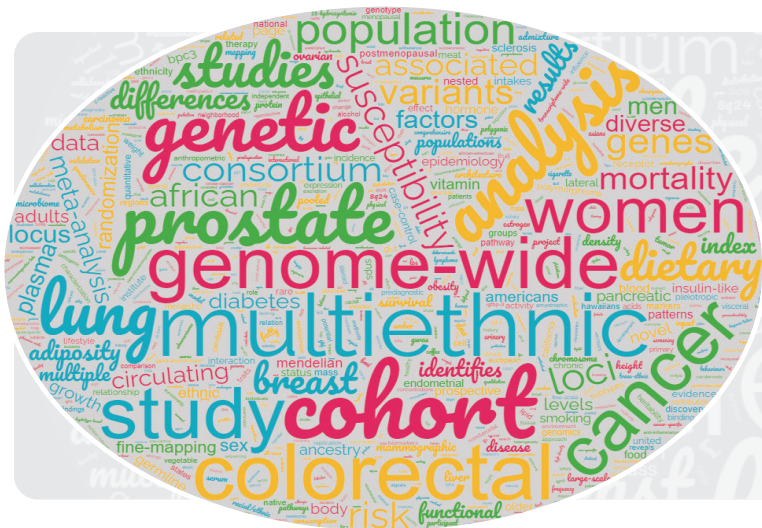
TRAINING THE

The MEC is an invaluable research resource. In addition, the MEC is providing a rich training ground for the next generation of cancer researchers. In 2019, the University of Hawai'i Cancer Center (UHCC) and the University of Southern California Norris Comprehensive Cancer Center (USC/NCCC) were awarded a T32 training

grant by the National Cancer Institute. This program trains junior investigators to research lifestyle, environmental and biological risk factors for cancer among racial/ethnic minorities using the MEC and to turn these findings into ways to reduce disparities in cancer risk and outcomes.

Since the beginning of the grant, 15 postdocs were recruited into the program for 2-year appointments.

CURRENT T32 POSTDOCTORAL FELLOWS



fun fact

The bigger and bolder a word appears in this word cloud, the more often it appears in the 1,000+ MEC publication titles.



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*It is with deep sadness and heavy hearts that
we share with you the unexpected passing of*

Clara Richards (in 2020) & Naomi Hee (in 2023)

who were respected Research Associates for the MEC for over twenty years. Many of you in Hawai'i have spoken with them over the phone to complete the health research surveys. Clara and Naomi were genuine and caring individuals who were passionate about their work. They will always remain in our hearts and be fondly remembered as valued colleagues and precious friends. We miss them both, more than words can express.

*The faces behind the voices ...
Many of you may remember their
warm greetings over the phone.*



CLARA RICHARDS



NAOMI HEE