

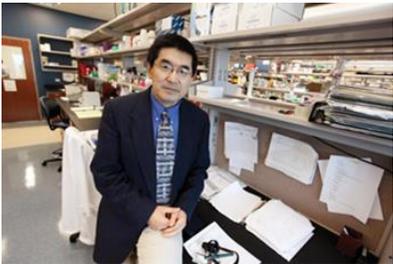


Director's Update

June 2, 2017

NCI Designation Update

Message from Ming You, MD, PhD, Director of the MCW Cancer Center



Hello again and welcome to the latest edition of the Director's Update newsletter.

We visited the NCI on May 9th to discuss the MCW Cancer Center's plan for NCI designation submission. We met with Drs. Henry Ciolino and Krzysztof Ptak. Dr. Ciolino is the director of the NCI's cancer center program and Dr. Ptak is the associate director and the NCI program director assigned to support the MCW CCSG submission process.

The Associate Directors of the cancer center (Drs. Egede, Rui, Silverstein, Stolley, Thomas and Marilyn Larson), Dr. Mary Horowitz and myself attended the meeting in Maryland. We put a lot of preparation into this visit, including pulling all data for cancer-related funding and publications. The presentations included the Director's Overview, research programs, CIBMTR, clinical trials office and community outreach and engagement.

The meeting was a great success, and a significant step for every cancer center pursuing designation.

The key takeaway from the meeting was an adjustment to the submission timeline as suggested by Drs. Ciolino and Ptak. Under the new NCI funding guidelines, submissions for all new cancer centers are now evaluated at the same time each year, regardless of which date the center submits. For example, all new cancer centers will be reviewed in June of 2019 for grants submitted at the January, May or September 2018 deadlines.

Therefore, the NCI suggested that we submit in September 2018, instead of January 2018

giving us another eight months for recruitment, large grant development and, most importantly, NCI R01 submissions. We will be able to submit a better grant with a higher likelihood for success.

In preparation for this NCI visit we took a long and hard look at the organization of our research programs, membership and program leadership. Significant changes were made to program structure, aims and leadership to strengthen our cancer center for designation.

We are still moving forward with a three-program structure, and have adjusted that structure as follows:

Program 1 Cancer Biology (CB)

Program Leaders, Drs. Williams and Kalyanaraman
Program Themes:

1. Oncogenic Signaling Cascades
2. Mitochondria and Redox Biology

This program remained essentially the same apart from moving some members.

Program 2 Discovery & Developmental Therapeutics (DDT)

Program Leaders, Drs. Drobyski and Urrutia
Program Themes:

1. Immunology & Transplantation
2. Cancer Therapeutics

This program is strengthened by adding a solid tumor therapeutics group to our strong Hematologic Malignancy and Immunotherapy program.

Program 3 Cancer Prevention & Outcomes (CPO)

Program Leaders, Drs. Nattinger and Shaker
Program Themes:

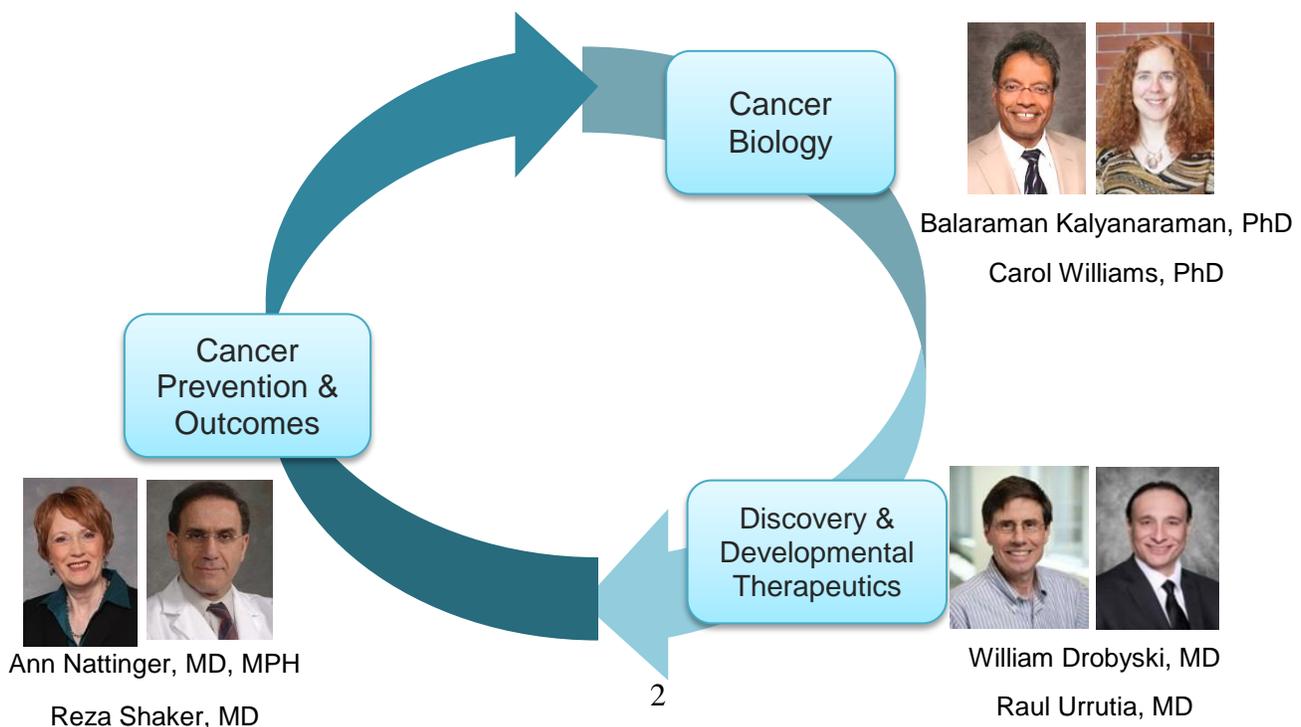
1. Develop and test strategies to reduce cancer in high-risk populations
2. Improve cancer outcomes and reduce cancer disparities

We added strong research in the biology of cancer prevention, including work to prevent and treat GERD and Barrett's Esophagus by Dr. Shaker and his team.

In addition, we have key faculty research leaders, such as Dr. Mike Dwinell and Dr. Joan Neuner, who provide strong direction to the cancer center and who will continue to play a key role through submission and beyond. I want to thank all our program leaders, shared resource directors, associate directors, executive committee members and the many others who make this process possible.

Some other key takeaways from the visit to the NCI include:

- Our NCI R01 funding is still relatively low. It was recommended that all our programs need to meet a minimum of \$2M in NCI funding before we submit by next September.
- We urgently need more collaborative multi-PI NCI grants and joint cancer publications to clearly demonstrate strong collaborations exist among the members both within a research program (intra-programmatic) and with members from another program (inter-programmatic).
- When we submit, we will need to present three to four strong examples of basic science projects that were developed through to human trials. We must be able to show how we've impacted cancer care.



This feedback is the basis of our strategy for the next 18 months and will help us prioritize our resources and effort.

Often researchers and physician scientists at MCW ask me how they can help support NCI designation. Here are some direct actions you can take:

- Cancer center members can help us by adding the word "Cancer," "Chemo," "Onco," or other cancer-related words to the title, aims and abstracts of their cancer-related grants. Then the grant will show up on the government "footprint" for cancer funding, and the NCI will consider it the equivalent of NCI funding, even if it's from another NIH agency.
- Each member should, at least, establish a productive collaboration with one member within his/her program and with another member outside the program. Most importantly, we need to demonstrate the results of these collaborations in the form of new joint grants and publications in the CCSG submission.
- Members can also help by adding a co-PI or at least co-I (who are cancer center

members) to all of their grant submissions. Multi-PI grants are held in higher regard in the submission process.

- If you have submitted an NCI R01 that was not funded, please take advantage of the grant support available from the cancer center to help you resubmit a successful grant. Please contact Kitty Marquardt to learn more about how we can help. The bottom line is that we will not become designated without more NCI funding, so let's convert the low-hanging fruit instead of starting from scratch.

I am invigorated and motivated by our visit to the NCI and by the feedback we were given.

We stand on the verge of a successful designation submission; bringing MCW into the elite ranks of the NCI designated centers in the U.S. who are working to make cancer, as we know it, a thing of the past. Now that we're in the home stretch, I ask that you continue this fight with me.

I am happy to answer any questions about the visit, our submission strategy or the new research program organization. Please reach out to me at any time, my door is always open.



Dr. Tom Tucker, Associate Director of Cancer Prevention & Control, UK Markey Cancer Center, Stresses Importance of Basic and Clinical Research Correlatives and Understanding of Behaviors and Attitudes to Address Cancer Disparities

Melinda Stolley, PhD, and Anne Mathias, Communications & Community Relations Manager, spoke with Tom Tucker, PhD, Markey's Cancer Center Associate Director of Cancer Prevention and Control about his cancer prevention story and strategies to address the catchment area.

MCW Cancer Center: Thank you for reviewing our most recent CCSG draft for the Cancer Control & Outcomes research program. Can we get your overall thoughts?

Dr. Tucker: To me, it looks like you guys have everything in place and all the pieces there to submit, at least from a cancer control standpoint. Your outcomes work is very strong.

MCW Cancer Center: Our ESAB has commented that we don't have enough going on in our catchment area. We are doing strong ground work and formative research, but have limited peer-review funding in cancer disparities and work directly impacting our catchment area.

Dr. Tucker: I think for cancer prevention and control, it's always a challenge. It's difficult to develop the right aims/themes/goals. It's difficult to form those and then line up the research happening in the community. At Kentucky, we tend to take the research we have and then develop the themes around those members.

For example, we have a very strong behavioral science program. There are two major elements – 1) modifiable risk factors and 2) designing intervention studies and testing those. Our final theme is designing and developing new tools for population science.

The way we developed NCI funding in that theme was to partner closely with basic

scientists who have written R01s and R21s – for every single one of those grants, there are funds for cancer control involvement to do the measurements and create new tools.

For example, working with the basic scientists, we developed a virtual tissue repository that is population based. We can go to those labs and get those tissues, serving as the honest broker. Information never leaves the registry. We use a research lab, not a clinical lab to process those tissues. So, we then can provide anonymous tissue samples to researchers around the country.

So, that type of work really reaches across all of our programs – cell biology, cancer prevention and control, developmental therapeutics. The coin of the realm is inter-programmatic collaboration. They expect your programs to be strong, but what they want to see is the transdisciplinary teams working together.

MCW Cancer Center: How did you define your catchment area and then focus in on specific cancer issues?

Dr. Tucker: Our entire catchment area is the state of Kentucky, but our primary research focus is eastern Kentucky, the Appalachian area. Poverty and low education are almost unmatched anywhere else in the country. So, we went in, identified the modifiable risk factors that were specific to that area and used that information to develop interventions to decrease the burden of cancer.

I would suggest that you do the same. ID the modifiable risk factors that are unique to your specific population. This level of specificity will allow you to get some quick wins. I would also caution you that you probably already know the modifiable risk factors, at least the big

ones, but what you may not yet know are the behaviors that drive those risk factors. What you're looking for are things that can be modified to facilitate screening, early diagnosis, wellness.

MCW Cancer Center: What were some of those attitudes and behaviors that drove modifiable risk factors in your catchment area?

Dr. Tucker: This is a population with a uniquely strong fatalism. Those kind of thought processes, if we don't understand that and take these into account, we're not going to go forward and things won't get better.

It was also critical to find candid individuals in the community who are trusted leaders to be your partners and navigators.

MCW Cancer Center: How do we position the formative work we're doing now that isn't yet funded?

Dr. Tucker: Use your current formative and local work to springboard national, NCI funded grants. Once you truly understand the

behaviors and attitudes in your area, and then understand how to remove barriers and implement interventions that work, we can translate that work nationally to other areas of the county with similar risk factors, behaviors and attitudes. Your catchment area is your "lab" and then you can apply that research to the same population around the country. However, you can also translate the other way, so take your national outcomes work and then apply that to your specific populations in your catchment area.

MCW Cancer Center: Anything else you'd like to share?

Dr. Tucker: Just to say that recruitment is really challenging in cancer prevention and control. Disparities research is a very important component of fighting cancer, but it's tough to find people, and even tougher to find funded projects that can move with the recruits. One thing that might work is to target faculty who are from your area and ask them to come back to help address the issues in their hometown.

“NCI designation will bring us more research opportunities, and more treatment options for our cancer patients. This will be a huge win for Wisconsin residents – almost everyone has a relative or close friend who has been touched by this disease.”

Dr. Ann Nattinger
Senior Associate Dean for Research
Medical College of Wisconsin

MPS Students Use art, Creativity to Address Cancer Prevention and Health Disparities

Over 500 students have participated in service learning partnership involving MPS' Milwaukee High School of the Arts, the Medical College of Wisconsin Cancer Center, the American Cancer Society and Kohl's Healthy Families

Families and community members are invited to learn more about cancer prevention, ways to improve health and cancer-related racial disparities from students and experts as Milwaukee Public Schools' Milwaukee High School of the Arts (MHSA) hosts their fourth health fair on **Saturday, June 3rd from 10 a.m. to noon.**

This service learning project, directed by MCW Cancer Center Associate Director of Population Health, Melinda Stolley, PhD, has involved more than 500 students at the school. The project is happening thanks to a grant from the American Cancer Society and Kohl's Healthy Families to the Medical College of Wisconsin (MCW) Cancer Center. Through the grant, MHSA students have been studying cancer and related racial disparities in Milwaukee and hearing from MCW guest speakers. The students' experience culminates in the health fairs, which feature everything from detailed scientific presentations to spoken word about cancer disparities.

Cancer and cancer-related mortality affect a disproportionate number of African Americans in the region, including higher incidence and mortality rates for lung, liver and colon cancers and a higher breast cancer mortality rate for African-

American women. Prostate cancer rates among African-American men are double those in the general population.

"After I began the service learning project and learned more about treatment options, I regained hope,"
-- Shenika Jackson,
Milwaukee High School of the Arts

The project also helps address the fear and fatalism that many people experience when faced with cancer. Among the MHSA students who participated is Shenika Jackson, who learned a family member was diagnosed with cancer just as she started the project.

"At first, I didn't know how to feel or what to think or do," she recalled. "After I began the service learning project and learned more about treatment options, I regained hope," Shenika said.





The project is the brainchild of State Senator Lena Taylor and other members of the MCWCC's Community Advisory Board. The CAB members took the idea to staff at the American Cancer Society, who worked with Kohl's to find funding for the program.

"Through the Kohl's Healthy Families program, which provides local families with resources to help prevent cancer and cope with a diagnosis, we're proud to support this project at Milwaukee High School of the Arts," said Beth Brunner, Health Systems Manager at the American Cancer Society. "By educating these students, we create hundreds of cancer health ambassadors who take the message of prevention, screening and

early diagnosis to areas of our community that aren't always reached."

The partnership is also one part of the Medical College of Wisconsin's work to expand awareness of cancer disparities and career opportunities in cancer research.

"We know that people who come from underserved communities face issues such as access to care, poverty, segregation – all of which are associated with risk factors such as smoking, obesity and sedentary activity," said Dr. Stolley. "As one of the largest institutions in Milwaukee, we have a responsibility to our community to create a southeastern Wisconsin that is healthier and more equitable."

MCW Cancer Center Health Geographer Paints a Picture of Cancer Disparities in Southeastern Wisconsin

Maps lead to targeted cancer prevention project in Milwaukee and a new NCI R01 for Dr. Beyer.

The MCW Cancer Center (MCWCC) is committed to understanding, addressing and reducing cancer disparities in southeastern Wisconsin, and throughout the region and country. The primary research catchment area for the MCWCC includes more than 2 million residents within the following seven counties: Milwaukee, Kenosha, Ozaukee, Racine, Walworth, Washington and Waukesha.

As the region's only academic medical center, MCW offers research-driven, multidisciplinary care for numerous cancers and has developed the groundwork to minimize cancer disparities. In this way, MCWCC serves as a vital link to the catchment area's large underserved minority populations, which have significant

cancer incidence and outcome disparities.

"We first had to ask ourselves if we really understood the scope of and exactly where cancer disparities exist in our region," said Ming You, MD, PhD, Director of the MCW Cancer Center. "We had high level data on cancer rates by race and ethnicity, but that didn't really tell us the full story."



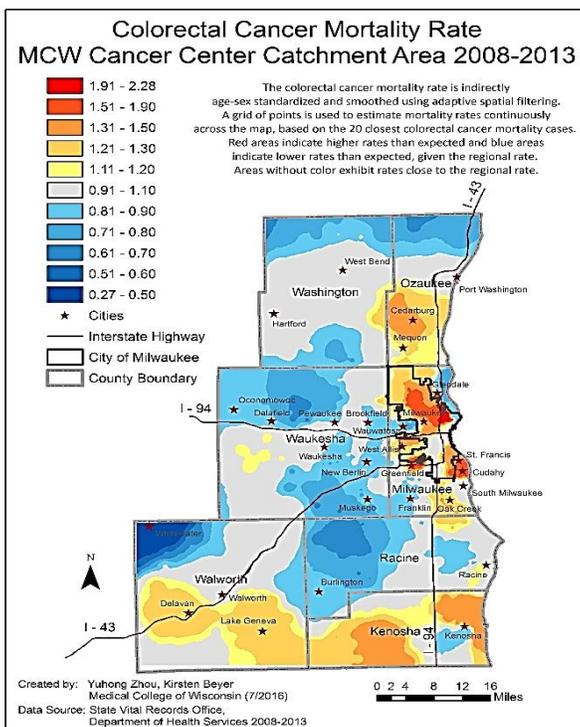
The MCW Cancer Center is fortunate to have an experienced cancer health geographer in faculty member Kirsten Beyer, PhD, MPH. Dr. Beyer has previously mapped cancer disparities in Iowa, using an innovative

approach to mapping cancer over geographic areas that has informed efforts to reduce cancer burdens in that state.

Dr. Beyer and her team examined breast, colorectal, lung and prostate cancer incidence, late-stage incidence and mortality in the seven-county region surrounding MCWCC, using data from the Wisconsin cancer registry.

"Most maps about cancer show average cancer rates by county (or zip code), with the counties color-coded to indicate the average rate for the population within those county lines. This can be very misleading," explained Dr. Beyer. "Within that county, there may be quite a bit of geographic variation in rates by neighborhoods, for instance. More detailed information is needed to make good decisions about targeting efforts and resources to areas with the greatest need, to make a real impact in reducing disparities."

Dr. Beyer creates cancer maps using adaptive spatial filtering, a disease mapping method. In adaptive spatial filtering, a grid of points is placed over the study area, and for each grid point a rate is calculated, using a circular filter that expands, based on a



threshold specified by the user, to obtain data from multiple locations until enough observations are gathered to calculate a stable rate. The resulting maps display disease rates as a smooth surface.

Dr. Beyer's analysis showed significant disparities in cancer incidence, late-stage incidence and mortality for lung, prostate, breast and colorectal cancer by race, ethnicity and geography in southeastern Wisconsin. Additional work from her research group showed that Black/African American and Hispanic/Latina women experience poorer survival than White individuals for breast cancer, and that Black/African Americans experience poorer colorectal cancer survival than Whites in southeastern Wisconsin.

"These maps can absolutely have an 'X marks the spot' type of impact," said Dr. Beyer. "The implications are clear – there is a great need for resources to reduce cancer burdens in Milwaukee's north side African American communities. For specific cancers, resources are also needed in Milwaukee's south side Hispanic communities, in Racine, and in some rural communities in southeastern Wisconsin. Finally, the maps reveal the extent of racial and ethnic segregation in the Milwaukee metropolitan area – a factor that likely affects both health care delivery and social determinants of health."

Dr. Beyer's adaptive spatial filtering maps for cancer incidence, late-stage incidence and mortality are available on the [MCW Cancer Center website](#).

"After Dr. Beyer published and shared these maps, we started receiving multiple requests each week from researchers, public health workers and community organizers throughout our area," said Anne Mathias, Communications and Community relations Manager at the MCW Cancer Center. "We knew that it was important to disseminate and provide public access to these

resources, so we published the maps on our website. We hope that anyone seeking support for cancer disparities work in southeastern Wisconsin will use these maps to make their case, and we look forward to partnering in these efforts."

Real Results

Dr. Beyer's maps were used to target 10 Milwaukee zip codes and inform the **SisterPact** project, which uses a unique grassroots media approach to create accountability for breast cancer screening, and more importantly, follow-up care.



In addition, **Dr. Beyer was awarded a new NCI R01 (CA214805)** to study institutionalized racism (measured by mortgage redlining) and cancer outcomes disparities.

Dr. Beyer and her team continue to create cancer maps and are starting a project to plot cancer risk factors and screening rates using a similar methodology. Once these maps are done, the MCW Cancer Center will work with Dr. Beyer to create an interactive web portal for all the maps, with the ability to layer different cancers, cancer screening rates and risk factors.

You can access the maps [here](#) and contact [Dr. Beyer](#) with questions about this resource or to engage her team for projects.