

# University of Chicago Cancer Research Center

## *In the News: Our Members in the Media*

The University of Chicago Cancer Research Center (UCCRC) publishes this newsletter periodically to provide its members, University of Chicago Cancer Research Foundation members, and other associates with informative articles or press releases regarding cancer and research by our members. If you wish to include a media story in the next issue, please e-mail us at [pbutera@medicine.bsd.uchicago.edu](mailto:pbutera@medicine.bsd.uchicago.edu).

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## Partnership Targets Women Who Need Assistance to Cope With Breast Cancer

**Chicago Chronicle**  
**May 14, 2009**

African American women in Chicago are 116 percent more likely to die of breast cancer than their white counterparts. This stunning fact came out of a study that the Metropolitan Chicago Breast Cancer Task Force undertook in 2008, as did the finding that this shocking disparity is increasing every year.

These findings motivated Olufunmilayo Olopade, MBBS, FACP, a breast cancer specialist who has been working with patients at the University Medical Center since 1987, and Rachel Lindsey, Dean of arts and sciences at Chicago State University, to coordinate a conference titled "Uniting to Address Breast Cancer Disparities in Chicago: Past Progress, Future Direction."

The conference, which convened Friday, April 24 at Chicago State University, aimed to get the word out about the latest information, training and research in one of the South Side communities whose residents have experienced the effects of this disparity most keenly.

One way to improve outcomes is to talk about battling this disease in the communities that are disproportionately affected, and to attempt to address the particular needs of the women living in those neighborhoods. "The University of Chicago Medical Center is committed to the South Side, and we see a lot of women in our neighborhood affected by this disease," said Olopade.

One important factor of the disparity in mortality rates among women in Chicago is that women of color often find it harder to access quality, preventive medical care. "The city of Chicago is still very segregated.

There are huge gaps in resources among different parts of the city, and we have found that there also are knowledge gaps among providers in terms of where specialists might be located," said Olopade. "That's why the University of Chicago Medical Center wanted to reach out to other institutions of higher learning on the South Side."

Lindsey, who has survived breast cancer, was enthusiastic about partnering with Olopade because she is impressed with the approaches to prevention and the treatment of breast cancer that the University's Center for Interdisciplinary Health Disparities Research has taken. "Because I've had breast cancer, I'm very particular about the ways I think women with the disease should be treated. I have found that very few people really address the concerns women have, especially women of color."

Lindsey noted, "All women who get this disease have a terrible time grappling with its dimensions, but I have noticed that women of color often have a harder time because they are less likely to have good health insurance, which affects how you feel you can cope."

Recalling her fight against cancer, Lindsey said: "I had good health insurance and knew I was getting quality care, so I could focus on my mental outlook, diet and lifestyle adjustments. If you're worried about the cost of basic care, that kind of reflection can seem like a luxury." However, psychological health and lifestyle changes are an essential part of "helping women heal," said Lindsey.


In order to facilitate this multi-dimensional healing process, Olopade said it's important to combine three elements: community information and



**Olufunmilayo Olopade,**  
**MBBS, FACP**

access, academic research into better treatment options, and increased communication between community leaders, doctors, patients and other caregivers.

"We have to unite to combat these disparities," said Olopade, and "a part of making that kind of partnership work is effectively translating the latest research into information that ordinary people can use."

Drawing on the diverse talent present in the community of physicians, scientists, nurses, social workers and other caregivers, the conference produced what Olopade calls, "the beginning of a great and ongoing conversation, in which we came up with creative ideas for how to better share information with each other, which is key to reducing this disparity." 

# Ginger Found to Ease Nausea of Cancer Treatment



**New York Times**  
**May 14, 2009**

Grandma was right when she recommended ginger for an upset stomach — at least for cancer patients.

A randomized clinical trial has confirmed what many people suspect — that ginger can decrease nausea caused by chemotherapy. The effect goes beyond that provided by standard anti-vomiting drugs.

The results will be presented at the annual meeting of the American Society of Clinical Oncology (ASCO), which begins May 29 in Orlando, Fla.

The trial, financed by the National Cancer Institute, involved 644 patients, mostly women with breast cancer, who were undergoing chemotherapy at 23 oncology practices in the United States.

All patients took a standard anti-vomiting drug on each day of chemotherapy. They also took specially made capsules containing either extracts of ginger root or a placebo for six days, starting three days before each round of chemotherapy.

They then rated the severity of their nausea four times a day. Those taking the ginger had a reduction of about 45 percent in severity compared with a previous round of chemotherapy in which they did not take the ginger. Those on the placebo had almost no change, said Julie L. Ryan of the University of Rochester, the lead author of the study.

Previous studies have yielded inconsistent results. Dr. Ryan said the new study might have succeeded because the ginger was given before chemotherapy.

The best results corresponded to a quarter to a half teaspoon of ground ginger, she said. She added that either the ginger that comes in spice bottles or the ginger capsules sold in health food stores would probably work.

Another study showed that a new type of treatment that helps the immune system “see” a tumor helped children with neuroblastoma, a rare but deadly cancer of the nervous system that strikes mainly toddlers.

After two years, about 66 percent of the children who received the new treatment were alive without a relapse of their cancer, compared with 46 percent of those who received only the standard treatment, according to Dr. Alice Yu of the University of California, San Diego, the lead author. And 86 percent of the children who got the new treatment were alive after two years, compared with 75 percent of those getting the conventional treatment.

However, side effects like pain and fluid accumulation in the body were more severe with the new treatment.

The new therapy is an antibody that blocks the functioning of a molecule called GD2 on the surface of neuroblastoma cells. GD2 is thought to help conceal the tumor from the patient’s immune system, so blocking it with the antibody opens the cancer to attack. In the trial, which was sponsored by the National Cancer Institute and involved 226 children, the antibody was given along with two proteins that stimulated the immune system.

In another study, researchers developed a test that may allow some patients with early-stage colon cancer to forgo chemotherapy.


Nearly 80 percent of patients with Stage 2 colon cancer do not suffer a relapse after surgery, said Dr. David J. Kerr of the University of Oxford, the lead investigator. But doctors cannot identify those patients, so many needlessly undergo chemotherapy, with its costs and side effects, in hopes of keeping the cancer from coming back. The test measures the activity levels of

various genes in the tumor and computes a score showing the risk of recurrence. In the study, the test was performed on tumor samples from a trial that took place several years ago, so it was already known which patients suffered relapses.

About 10 percent of the patients with the lowest scores had a recurrence in three years, Dr. Kerr said, compared with 25 percent for those with the highest scores. He said those at the low risk might not want chemotherapy.

But a separate score aimed at predicting which patients would actually benefit from chemotherapy did not succeed. That could limit usefulness of the test, some analysts have said. So could the fact that the recurrence risk for a high score was not much greater than for a low score.

“Perhaps it is not as good as we might like in predicting who is at very high risk,” said Dr. Richard L. Schilsky, a Professor at the University of Chicago who is President of ASCO.

The test was developed by Genomic Health, a California biotechnology company that sells a similar test called Oncotype Dx for women with breast cancer. The company said it planned to start selling the colon cancer test next year. The price has not been set; the breast cancer test sells for nearly \$4,000. 

## **EDITOR’S NOTES:**

*This issue of "In the News" highlights the important contributions our members are making in all phases of cancer research and outreach.*

*On page 1, Olufunmilayo Olopade, MBBS, FACP, Professor of Hematology/Oncology, is featured in a story about breast cancer disparities in Chicago.*

*On page 2, Richard Schilsky, MD, Professor of Hematology/Oncology, is quoted about identifying patients in need of chemotherapy after Stage 2 colon cancer surgery.*

*On page 3, a story written by Michael Vannier, MD, Professor of Radiology, is featured.*

*On page 4, Ezra Cohen, MD, Associate Professor of Medicine, is quoted on a test that could be used for squamous cell carcinoma of the head and neck.*

# Computed Tomography Scanning of Meresamun

APIE.org  
May 18, 2009

We recently obtained two sets of computed tomography (CT) scans of the Meresamun mummy, which had been present at the Oriental Institute since the 1920s but was never opened. In July 2008, we decided to obtain an up-to-date CT scan, in anticipation of a new exhibit featuring Meresamun. The mummy had been scanned at the University of Chicago in 1991 with a single-slice CT scanner, so it was not clear what kind of 'new' information, if any, could be extracted. On the basis of an extensive review of the literature on mummy-CT scanning, we are aware of only one paper in which a multidetector row-CT scanner featuring more than 16 channels was used, and then only to examine the mummy's head.

We used a 64-channel Philips Brilliance 64 clinical scanner to acquire a set of spiral-CT scans after the mummy had been crated and transported to the University of Chicago Medical Center's radiology department. All mummy handling was performed by museum staff, supervised by curators and conservators. The mummy's casket was carefully placed on the scanner table. Both full-body and local scans were obtained, the latter of the head and shoulders, torso, lower extremities, and feet. Each of these data sets was post-processed using a Philips Brilliance version 3 workstation to generate multiplanar reconstructions (MPRs) and 3D images. The data were archived on CDs and DVDs, and analyzed using an Apple MacBook running the Osirix open-source operating system.

Based on our experience with the 64-slice scanner, approximately 5000 slices were created, which were used to generate 1000 reconstruction images and sequences. Inspection of the results revealed many previously unrecognized details, including subtle post-mortem fractures of the upper skeleton, dental features, jewelry, radiodense inclusions in the casket, and degenerative changes in the spine.

In September 2008, a 256-slice CT scanner was installed in the radiology department. The newly constructed room required inspection by the Illinois Department of Public Health

for conformance to safety standards. In the meantime, the mummy was crated and returned to the radiology department for a second set of scans and became the first 'patient' to be examined with the new scanner. We acquired seven data sets of the head and neck, torso, whole casket, lower extremities, and feet. The raw projection data sets were saved (~30Gb), together with approximately 25,000 reconstruction axial images. Subsequently, we repeatedly reconstructed the raw projection data by varying the relevant parameters (e.g., center, magnification, filters, thickness, and matrix size), thus yielding about 100,000 axial slices.

Using a Philips Brilliance 4.0 workstation (a major upgrade and better suited to the very large data sets acquired with the 256-slice scanner), we generated MPRs and 3D views, and made numerous movie sequences. Post-processing has yielded edited files of the disarticulated skeleton, local and regional organ studies, overlays, and solid models. We also generated stereolithography files to enable life-size modeling. The results of the 256-slice CT scans far exceeded our expectations, and to date this mummy may have been studied more exhaustively with CT than any other. Although numerous books, journal articles, reports, and news articles discuss CT scanning of mummies, no compa-

table examination exists in terms of the details found, number of images generated, technical specifications of the imaging system, and computer-graphics results.

The announcement of the new Meresamun exhibit excited significant media interest and resulted in numerous news reports (e.g., on CNN), magazine articles (most notably in *Archaeology*, which also created a dedicated website), and many other outlets. A special monograph, authored by numerous experts and edited by world-leading authorities in Egyptology, was developed to complement and catalog the exhibit.

There are several unusual aspects to this study. Most important, all experts who worked on this project agreed to freely share all data obtained, which will be made available online. To those who do not have access to a 256-channel CT scanner and unopened mummy in a casket, this therefore offers a unique opportunity to continue and expand our studies.

*Michael Vannier is Professor of Radiology and a pioneer in 3D biomedical computer graphics and visualization. He is Editor in Chief of the International Journal of Computer Assisted Radiology and Surgery. He is a fellow of both the American College of Radiology and the American Institute of Medical and Biological Engineering.*



# ***New Biodesix Announces VeriStrat Data in Head and Neck Cancer to be Presented at ASCO***

**PR Newswire  
May 14, 2009**

Data on VeriStrat, a blood-based, proteomic test currently used for patients with advanced stage non-small-cell lung cancer (NSCLC), will be presented by Christine Chung, MD, Assistant Professor of Medicine at Vanderbilt University on Monday, June 1st at the 45th Annual Meeting of the American Society of Clinical Oncology (ASCO). Results from a 314 patient study indicate that VeriStrat is predictive of survival benefit in patients with squamous cell carcinoma of the head and neck (SCCHN) treated with epidermal growth factor inhibitors (EGFRIs). According to the data, VeriStrat provides information to help oncologists identify patients most likely to benefit from EGFRi therapy.

In the study, VeriStrat was used to classify outcomes in patients with SCCHN who were treated with gefitinib (G), erlotinib and bevacizumab (E/B), cetuximab (C), or palliative chemotherapy (PC). Gefitinib, erlotinib and cetuximab are EGFRIs with activity in SCCHN. Results from the study show that among patients treated with EGFRIs, VeriStrat predicted an overall survival benefit (G: p=0.007, HR 0.41; E/B: p=0.02, HR 0.20; C: p=0.06, HR-0.26). VeriStrat did not classify survival outcomes in patients treated with pal-

lative chemotherapy (PC: p=0.76, HR 0.88).

"At present, there are no validated diagnostic tests to guide therapy selection for patients with SCCHN. Having a blood test that provides results which will help oncologists decide whether or not to treat head and neck cancer patients with anti-EGFR agents would be a major advancement in the treatment of this disease," stated Ezra Cohen, MD, Associate Professor of Medicine at the University of Chicago and a study investigator.

The data support previous study results in which VeriStrat effectively identified patients with NSCLC who were likely to have good or poor outcomes following treatment with EGFRIs (*J Natl Cancer Inst.* 2007;99 (11):838-46). Additional studies are underway to further validate the test.


A study reporting results evaluating the association of VeriStrat status and genetic features with survival after treatment with erlotinib in patients with NSCLC will also be presented on Saturday, May 30th.

"The data to be presented at ASCO validate our molecular profiling approach to identify patient populations who are most likely to benefit from targeted therapies as well as those who are unlikely to receive any benefit," said Heinrich Roder, Chief



**Ezra Cohen, MD**

Technical Officer at Biodesix.

"The data from ASCO, coupled with our previous research, show that VeriStrat is effective at predicting outcomes to therapeutics affecting the EGFR pathway, independent of their specific mode of action, and for tumor types where this is a targeted pathway. This brings us one step closer to a healthcare model that is highly personalized." 

## ***Tests May Help Predict If colon Cancer Will Recur***

**Chicago Daily Herald  
May 18, 2009**

A new gene test might help predict which colon cancer patients are at higher or lower risk of having their cancer return after surgery, doctors report, but whether it is useful enough to justify its likely high price remains to be seen.

The experimental test mirrors the Oncotype DX test widely used now to predict recurrence risk in breast cancer patients and whether they are more likely to benefit from chemotherapy or hormone treatments.

The new test is aimed at the nearly 40,000 Americans each year diagnosed with colon tumors that are large but have not spread. The majority are cured by surgery alone, but

there's no sure way to tell who won't be.

Chemotherapy improves survival only modestly for this group as a whole, so doctors hesitate to recommend it. Approximately 30 percent of patients receive it now.

"We're probably not giving the therapy to all of the appropriate people and we're giving it to some people who will experience little benefit," said Dr. Durado Brooks of the American Cancer Society.

A California-based company, Genomic Health Inc., developed an 18-gene test using tumor samples from thousands of patients, then looked to see if it could predict risk in nearly 1,500 other patients. The test gave individual odds ranging from

about 10 percent to about 25 percent of having a recurrence in the next three years, said study leader Dr. David Kerr of the University of Oxford in Great Britain. He consults for the company.

That separation of risk is "not quite as good as we might like," but still gives patients one more bit of information to ponder in deciding whether to have chemo, said Dr. Richard Schilsky, a cancer specialist at the University of Chicago and President of the American Society of Clinical Oncology.

However, a second part of the study found the test couldn't predict which patients would benefit from chemotherapy. That means the test only predicts recurrence risk without informing what to do about it. 