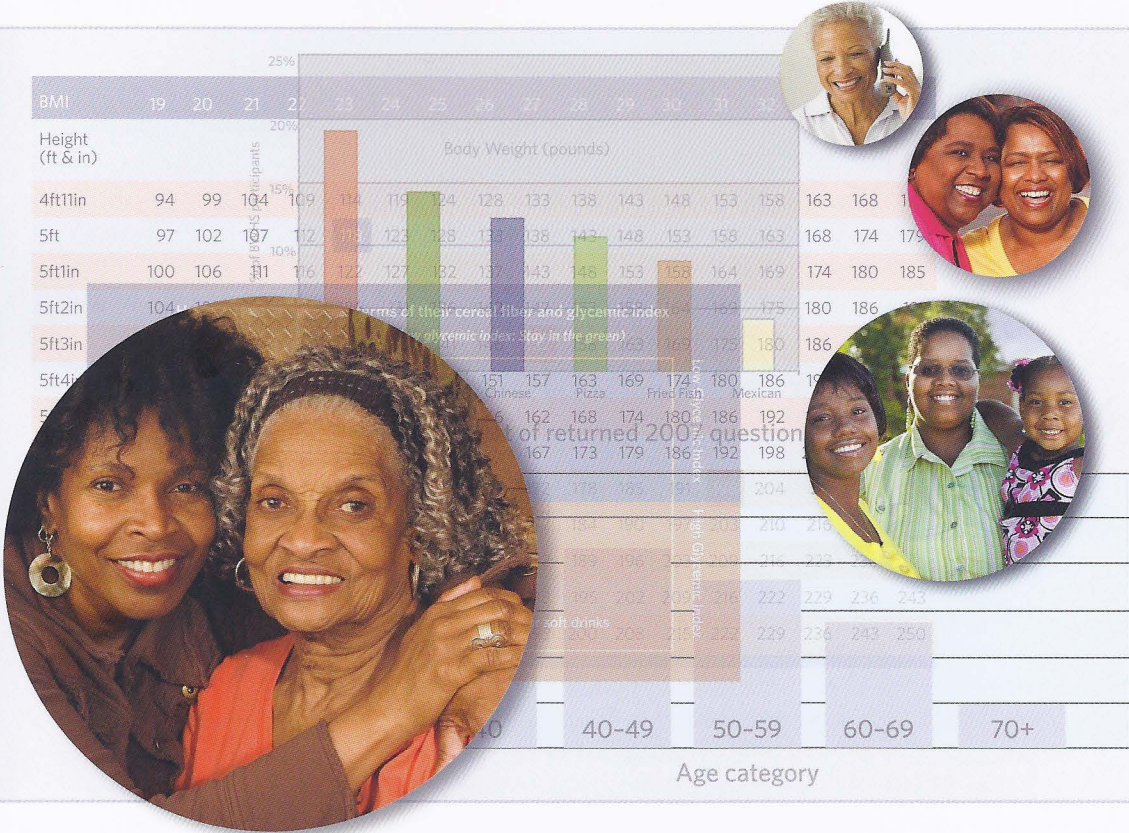




BLACK WOMEN'S HEALTH STUDY



*Working together
to improve the health of
black women*

INSIDE:

- BWHS to Study Triple Negative Breast Cancer
- Recent BWHS Research Findings
- A New Investigator Joins the BWHS

www.bu.edu/bwhs

THE BWHS IN 2012



Another year has flown by. We hope 2012 will be healthy and prosperous for you and your family.

BWHS research now covers a very wide range of important health issues. This newsletter describes published results on how breastfeeding affects risk of breast cancer, risk factors for glaucoma, genes associated with a higher risk of lupus, and how body size affects the risk of dying. The BWHS is also currently carrying out studies of lung cancer, colon cancer and colon polyps, asthma, diabetes, uterine fibroids, hypertension, sarcoidosis, quality of life, and many other aspects of health and illness. We'll report our results to you and—as always—you can read about research findings on the BWHS website (www.bu.edu/bwhs). BWHS results have appeared in many respected medical and scientific journals, so your doctors and other health care providers can learn about them that way as well.

We're excited about a large new project in which BWHS will play a key role. It should result in important new information about causes of triple negative breast cancer, an aggressive type of breast cancer that affects black women more than other women (see pages 3 and 4 of this newsletter).

We are very pleased to welcome a promising young investigator to the BWHS team—you can read about Dr. Traci Bethea on page 7.

Finally, the 2011/2012 health update is in progress; we have mailed 2011/2012 health surveys to all of you. You can complete the survey online at the BWHS website (www.bu.edu/bwhs) if you prefer that to filling out the paper survey. Thank you to the 15,000 BWHS participants who have already filled out their surveys online and the 18,000 participants who have filled out the paper version. If you need us to send you a survey, please let us know by calling 800-786-0814 or 617-734-6006 or email (bwhs@bu.edu). If you haven't yet filled out a 2011/2012 health survey, we hope you will take ten minutes to do so. Thank you.

CONTACT INFORMATION

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NEW BWHS RESEARCH PROJECT

BWHS TO STUDY TRIPLE NEGATIVE BREAST CANCER

Not all breast cancers are the same—perhaps you’ve heard about “triple negative” breast cancer, a subtype of breast cancer that has a poorer prognosis than other subtypes and occurs more commonly among African American women. WHY? The BWHS will try to answer this and other key questions in an important new research project.

These days, the tumors of women diagnosed with breast cancer are tested for whether there are receptors for the hormones estrogen and progesterone; the cancers are then classified as estrogen-receptor positive or estrogen-receptor negative. Tests can also be carried out for a “molecular marker” called HER2. Based on these three tests, some breast cancers are classified as “triple negative”—negative for estrogen, progesterone, and HER2. Triple negative breast cancers can be further subdivided—and the “basal-like” subtype has the worst prognosis of all subtypes. Unfortunately, triple negative and basal-like cancers occur more commonly in African Americans.

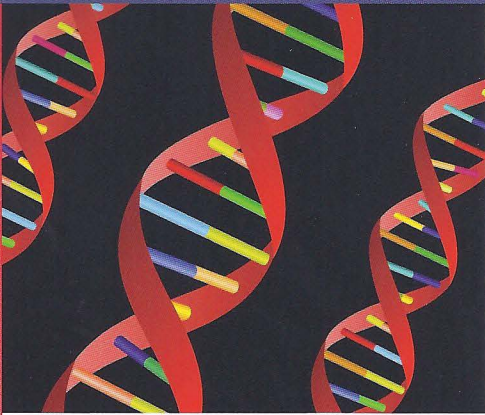
No study is large enough to study triple negative or basal-like breast cancer alone. For that reason, the BWHS has joined forces with several other studies that have data on African American women. With funding from the National Cancer Institute for a five-year study, there will be large enough numbers of the sub-

types with poorer prognosis—estrogen-receptor negative, triple negative, and basal-like—for meaningful research. The research will be led by cancer epidemiologists from three centers: the Black Women’s Health Study at Boston University; the Roswell Park Cancer Institute in Buffalo, NY; and the Lineberger Cancer Center at the University of North Carolina. Dr. Julie Palmer of the BWHS is the Boston University lead investigator.

In order to classify the breast cancers, we will test for molecular markers in breast tissue removed at the time of breast cancer surgery. In the BWHS and the other studies, each woman who reports breast cancer will be asked for permission for a small sample to be taken from the tumor tissue blocks that are stored at the hospital where she had her breast cancer surgery. If she agrees, study staff will contact the hospital to request the tissue blocks for sampling. The original block will be returned to the hospital. The tissue will be tested for molecular markers at our laboratory and classified as to the subtype.

The first few years of the study will be devoted to collecting tumor tissue and classifying breast cancers by subtype; the later years will be devoted to analyzing nongenetic and genetic risk factors for these subtypes. Each center will have a particular focus—the BWHS team will examine how various forms of physical activity, reproductive factors such as breastfeeding, and body size and shape

NEW BWHS RESEARCH PROJECT *(continued)*



influence the risk of subtypes of breast cancer, alone and together with genetic risk factors.

Dr. Palmer will be in charge of combining questionnaire information and genetic data from all the studies so that the combined data can be analyzed. Information from each study will be identified by an ID number. There will be no information such as a name or birthdate included that could identify an individual person. All the research that the BWHS and

other centers carry out requires review by institutional review boards that include scientists, experts in ethics, and community members. The boards reviewed the study at each center and determined that the investigators are respecting the rights of the participants and that all information is kept confidential and identified by number only. Every year, the study at each center will be reviewed by the board.

This new project will be the first to develop comprehensive models for the role of genetic and nongenetic risk factors for breast cancer subtypes in African American women. As Dr. Julie Palmer points out, "We've known about these disparities for years, but not what's causing them. Our effort to identify risk factors can ultimately lead to prevention of these deadly types of breast cancer." BWHS participants can call Dr. Palmer or other BWHS staff at our toll-free number (800-786-0814) to discuss questions or concerns.

Extra Newsletters Available

We often have extra newsletters left after we mail them to BWHS participants, so if you'd like a small quantity for a health fair or a meeting, please contact us. We will send some if we can!

Are you receiving all of your BWHS emails?

Remember to add bwhs@bu.edu to your contacts list so that our emails don't automatically go into your spam or trash folders—we use email to notify you of important happenings in the study and to give you an early-bird notification when a new web questionnaire is available so you can reduce your paper mail from us.

NEW BWHS RESEARCH FINDINGS



Breastfeeding and estrogen-receptor negative breast cancer.

BWHS research has helped to identify a potential way to prevent estrogen-receptor (ER) negative breast cancer, a subtype of breast cancer that is more

aggressive and more often results in death than other subtypes, such as ER-positive cancer. ER-negative cancer affects black women more than other women; why this is so is not understood. A BWHS study found that participants who had several children developed ER-negative breast cancer more often than women with few or no children,

but only if they hadn't breastfed; there was no increase in risk of ER-negative cancer for women who breastfed their babies. The results suggest that breastfeeding is a possible way to reduce the risk of developing ER-negative breast cancer. If the results are confirmed, the next step is for scientists to figure out why breastfeeding has this effect. The BWHS study also found that women who had children were at decreased risk of developing ER-positive breast cancer. Confusing? It has become clear that breast cancer is not a single disease, and that different subtypes can have different causes.

(JR Palmer et al., "Parity and lactation in relation to estrogen receptor negative breast cancer in African American women." CancerEpidemiolBiomarkersPrevention 2011; 20(9): 1883-91)

Diabetes and glaucoma.

Glaucoma is a leading cause of blindness worldwide. Because the condition can occur without any symptoms, it is important to get regular eye checkups; if glaucoma is caught early, it can be treated with drops or surgery. A BWHS study found that women who had type 2 diabetes ("adult onset" diabetes) developed glaucoma more often than women who did not have diabetes. Sometimes it is easier to identify risk factors for an illness by studying younger people. Among BWHS participants who were younger than 50 (which is young to develop glaucoma), type 2 diabetes was associated



with double the glaucoma risk. Another factor associated with higher risk among younger women was long-term smoking. These results suggest that efforts to reduce the occurrence of type 2 diabetes and cigarette smoking could result in a reduction in the risk of glaucoma. Weight loss can be an effective way to prevent or even reverse type 2 diabetes.

(LA Wise et al., "A prospective study of diabetes, lifestyle factors, and glaucoma in African-American women." Ann Epidemiol 2011; 21(6): 430-9)

NEW BWHS RESEARCH FINDINGS

Genes and lupus. Lupus is an autoimmune disease in which the body's immune system attacks its own tissues, resulting in inflammation of the joints, skin, or other parts of the body. Relatives of people with lupus have an increased risk of developing the disease, suggesting that genes may play a role. Human beings have 23 pairs of chromosomes, which contain thousands of genes. The BWHS investigated genes on chromosome 6 because some of the genetic variants on this chromosome have been found to be more common among people with other autoimmune diseases (the BWHS study was based on DNA from saliva-mouth-wash samples provided by participants). Four genetic variants were more com-

mon among participants with lupus than among women without the condition. We also confirmed that three genetic variants that had been reported in studies of Chinese- and European-ancestry populations were also more common among the women with lupus. Thus, in addition to identifying four new genetic variants that are associated with lupus in African Americans, the BWHS study shows that Europeans and Chinese share some genetic risk factors for lupus with African Americans. Better understanding of exactly how these genetic variants affect risk—the mechanisms—should eventually lead to ways to prevent or cure lupus.

(EA Ruiz-Narváez et al., "MHC region and risk of systemic lupus erythematosus in African-American women." Hum Genet 2011; 130: 807-15)

Body size and risk of dying. The BWHS study of the relation of body size to risk of dying ends a controversy about the effect of body size on the risk of dying among African American women. As is often the case, the effect of body size on death had been much studied in white populations. It was clear that as weight increased, the risk of dying increased as well. However, some small studies had indicated that this might not be so for African American women. The BWHS has now ended that uncertainty. In the BWHS study, the risk of dying increased as body size increased. Women who had



a healthy body mass index (which measures the ratio of weight to height) had the lowest risk and the heaviest women had the highest risk. Overweight had the greatest effect on risk of death from heart disease. This was not surprising since overweight increases the risk of developing high blood pressure and diabetes, both of which increase the risk of developing heart disease. Fortunately, BWHS data from another study indicate that exercise is a good way to keep weight down, and that brisk walking may help to accomplish that goal.

(DA Boggs et al., "General and abdominal obesity and risk of death among black women." NEnglJMed 2011; 365: 901-8)

NEW INVESTIGATOR JOINS THE BWHS TEAM

Every study needs new ideas and new people, and every new investigator needs experience and training. The BWHS and Dr. Traci Nicole Bethea are a perfect match. Traci has joined the BWHS team as a postdoctoral fellow. She grew up in Greensboro, North Carolina, majored in environmental studies and economics at Duke University, earned a master's in environmental science policy at Columbia University, and completed a doctorate at Boston University, studying risk factors for head and neck cancer.



Q. Traci, why did you go into health research?

A. I have always been interested in the relation between people and the environment. The more I learned, the more I found questions that needed answers.

Q. Why did you want to work on the BWHS?

A. I worked here as a student intern and found out that BWHS research offers the chance to study multiple factors that affect health.

Q. What environmental factors might be worth studying in the BWHS?

A. I am interested in air pollution and neighborhood characteristics such as built environment, safety, and stress.

A warm welcome to Dr. Traci Bethea!



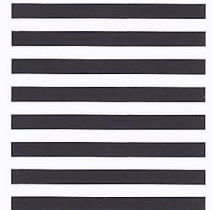
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