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REPORT TO PHYSICIANS

JANUARY 2003 Vol. 48, No. 1

Oncology

03-452
RECD SEP 12 2003

Putting an End to the Waiting: Diagnosis Clinic Finds Answers for Patients When Cancer Is Suspected

by David Galloway

Linda Bracks understands the fear of the unknown. When a routine mammogram in 2001 showed a suspicious spot, Bracks, a registered nurse, was stunned. She was told another mammogram would be needed, but the next available appointment was in four months. "I thought, 'Four months? No way!'" she said.

She began making calls until she found a place where it could be done within a week. But even waiting a week was taking a toll on her. "You're consumed every day," she said. "Even though you're working, this is always there. It's turning in your mind." The spot turned out to be nothing, but Bracks will always remember that week of uncertainty.

It is appropriate, then, that Bracks now works in the Cancer Diagnosis Clinic at The University of Texas M. D. Anderson Cancer Center, seeing patients who have a suspicion of cancer but no definitive diagnosis.

"I understand a little bit of what they go through while they're waiting," Bracks said.

Before the diagnosis

There are two possible scenarios when a patient or referring physician calls to get an appointment at M. D. Anderson. (Continued on next page)



Linda Bracks, R.N., a clinical nurse in the Cancer Diagnosis Clinic, helps to lighten the mood of patient **James Robertson**.

THE UNIVERSITY OF TEXAS
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Cancer Diagnosis Clinic Finds Answers

(Continued from page 1.)

If a diagnosis has already been made, it's simple. The patient or referring physician says the problem is breast cancer or leukemia or pancreatic cancer, and the staff in the New Patient Referral Office knows which specialist to call.

On the other hand, if the patient doesn't know what the problem is ("I have this mass in my abdomen, and my doctor says it looks like cancer"), things are more complicated. In the past, such a patient frequently was told to go back to his or her primary care physician for a biopsy. Once the type of cancer was identified, the patient then could be referred to the appropriate cancer specialist.

"There were problems with that," said Mary Ann Weiser, M.D., Ph.D., an associate professor in the Department of General Internal Medicine, Ambulatory Treatment, and Emergency Care. "Maybe the doctor didn't want to do the biopsy because it was in a difficult place, or this was a really sick patient, or it was too risky." Often, doctors far from a major medical center do not have access to the state-of-the-art equipment necessary for performing difficult biopsies. Others feel that their own experience has not fully prepared them for certain procedures, such as exploring deep in the abdomen to take tissue from pancreatic lesions.

Patient services coordinator **Tina Bartie-Perkins** schedules tests and appointments to expedite the evaluation of patients in the Cancer Diagnosis Clinic.

Often, doctors far from a major medical center do not have access to the state-of-the-art equipment necessary for performing difficult biopsies.

The birth of a clinic

Dr. Weiser discussed the problem with Carmen Escalante, M.D., F.A.C.P., who then was section chief and now is chair (ad interim) of the Department of General Internal Medicine, Ambulatory Treatment, and Emergency Care, and with Rena Sellin, M.D., a professor in the Department of Endocrine Neoplasia and Hormonal Disorders. From those conversations arose the realization that there was a niche that needed to be filled.

"And then it was just a matter of calling the New Patient Referral Office and asking them, 'Do you ever have patients like this who call and say they think they have cancer, or do you have physicians trying to send patients who have a mass that really looks like it's a

malignancy, but they don't have a tissue diagnosis?'" Dr. Weiser said. "And their answer was, 'All the time.'

And so I said,

'Well, I would like to see those patients.'"

The response was immediate. "Patients just started coming in on a regular basis right from the very beginning," Dr. Weiser said.

The Cancer Diagnosis Clinic began as a pilot program in 2000 and continues as a permanent part of the institution. Nearly 300 patients have been diagnosed in the clinic, with a typical week bringing in two to five new patients. Dr. Weiser has seen about 95% of the patients herself, but when she is on vacation, other physicians in the department fill in for her.

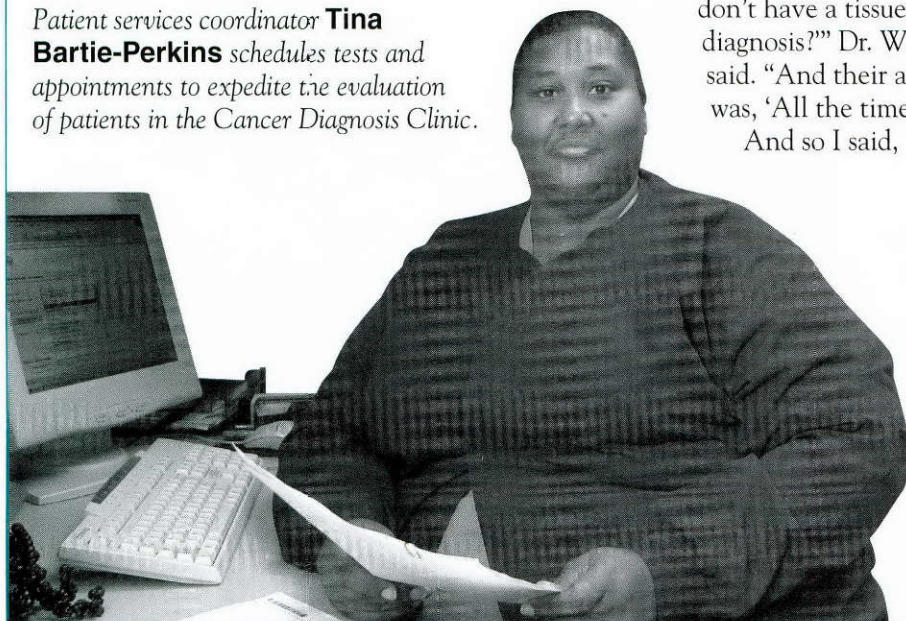
"Occasionally, I have covered for her in that clinic and have asked, 'When are you coming back?'" Dr. Escalante said. "Because it requires skills that I don't often use, and she [Dr. Weiser] has learned some of the subtleties of what tests to order for some of these very tough cases. She gets a lot of cases that are not your obvious breast cancer or your obvious colon cancer. It is these subtle ones, like the pancreatic and neuroendocrine tumors and that sort."

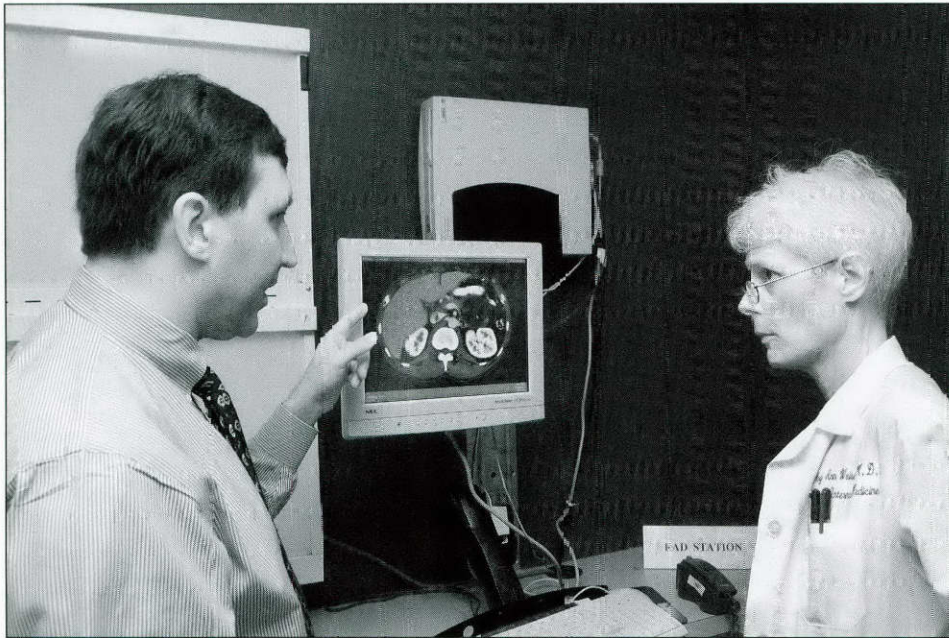
Identifying those subtle cancers takes practice that most physicians never get. "It is very time-consuming, trying to be the detective, so to speak," Dr. Escalante said.

Dr. Weiser is glad to have the resources available to do that detective work. "We have the capability to do all the unusual kinds of biopsies and procedures," she said. "And if these patients have other medical problems—diabetes, high blood pressure, and anything else—they can see a general internist up front, and the general internist can keep seeing the patient and managing these other medical problems."

The diagnostic process

Once a patient is in the Cancer Diagnosis Clinic, things start moving at a rapid pace. Patients are asked to have any recent x-ray films with them at their first appointment. After taking the patient's medical history and doing





As part of the diagnostic evaluation of a patient in the Cancer Diagnosis Clinic, **Dr. Mary Ann Weiser** reviews a computed tomography scan with **Dr. Eric Tamm**, an assistant professor in the Department of Diagnostic Radiology. Dr. Weiser, who directs the clinic, is an associate professor in the Department of General Internal Medicine, Ambulatory Treatment, and Emergency Care.

a physical examination, Dr. Weiser and a radiologist study the films brought by the patient and decide on a course of action. Naturally, that course varies tremendously, depending on the findings.

Frequently, radiographic studies need to be repeated to better define the problem. To prevent delays in the initial evaluation, the patients are scheduled for these tests before seeing Dr. Weiser. In most cases, a biopsy is needed to establish a firm diagnosis. Patients who have lesions that are located deep in the body or near critical structures are often referred to the Section of Vascular and Interventional Radiology in the Department of Diagnostic Radiology for image-guided biopsy procedures. Others may require referral to the FNA (fine-needle aspiration) Clinic for a biopsy or to the Department of Gastrointestinal Medicine and Nutrition for biopsy using endoscopy with ultrasound (EUS).

"We use the GI department quite a bit for diagnosis, because the fact is that most of the patients who are referred to me have something in their abdomen," Dr. Weiser said. "I've also asked them to perform biopsies on lesions in the

mediastinum, because with this ultrasound probe, they can actually see areas around the esophagus and trachea."

EUS and computed tomography (CT)-guided needle biopsies often take the place of exploratory surgery, helping to ensure that, as much as possible, such invasive procedures are used for treatment rather than for diagnosis.

The whole diagnostic process usually takes about five to seven working days. If a cancer is found, Dr. Weiser refers the patient to the proper oncology department. She might also arrange consultations with other specialists, ranging from endocrinologists to ophthalmologists to psychiatrists.

When it is not cancer

In the first 263 patients evaluated in the Cancer Diagnosis Clinic, 166 cases of cancer were diagnosed: 29% were pancreatic cancer, 14% were other gastrointestinal malignancies (colon, gall bladder, duodenal, esophageal, and rectal cancers), and 14% were lymphoma. Thirty-seven percent of patients ended up not having cancer at all.

Among the conditions that can mimic cancer are autoimmune disorders, chronic fatigue syndrome, nonspecific adenopathy, fibrous dysplasia, Paget's disease, and nonmalignant cysts or hemangiomas. Also, sarcoidosis can cause adenopathy that looks like lymphoma on radiographs, Dr. Weiser said, and other unusual infectious processes can masquerade as cancer.

So, what does a cancer center do with these patients?

"For the most part, we send them back home," Dr. Weiser said.

The exception to that rule would be a patient with a mass in a location that made a biopsy unusually difficult or dangerous. If the mass was not obviously malignant, such a patient would be followed up radiologically.

Whether a patient goes home with a diagnosis of "no cancer" in the mass for which they were referred or leaves the clinic to begin cancer treatments, the waiting is over. But the Cancer Diagnosis Clinic does more than relieve patient anxiety.

"I think it has served the institution, because we have brought in patients who might not have been seen here," Dr. Escalante said. "It has served the physician community, because we have been able to help them treat patients, many with not-as-common cancers. And the patients likely benefit from oncologists and radiation therapists and other cancer care providers we have here, and they can go onto protocols or other specialty-type treatments that may not be offered in the community." ●

To refer a patient to the Cancer Diagnosis Clinic, physicians should call the New Patient Referral Office between 8 a.m. and 5 p.m. Central time, Monday through Friday. The telephone number is (800) 392-1611, or (713) 792-6161 in the Houston area or outside the United States. The fax number is (713) 792-2504.

FOR MORE INFORMATION, contact Dr. Weiser at (713) 792-2352.

The Center for Research on Minority Health: Working with the Community to End Health Disparities

by Stephanie Deming

I'm tired of reports," said Lovell Jones, Ph.D., referring to the flood of articles confirming that minority populations in the United States suffer from a disproportionate burden of certain cancers. For more than a decade, Dr. Jones, who directs the Center for Research on Minority Health at The University of Texas M. D. Anderson Cancer Center, has been challenging the health-care community to move beyond tabulating disparities to investigating their underlying causes.

Barriers to access are a major and well-documented source of health disparities, and Dr. Jones argues passionately about the need for social changes—such as an end to subtle racial discrimination in the health-care system and the removal of financial barriers—to make health care equally accessible to all members of society. However, he said, "Access is part of the problem, but I don't think it's the whole problem." Other factors that Center investigators are studying for their potential role in health disparities include environmental, cultural, and biological influences.

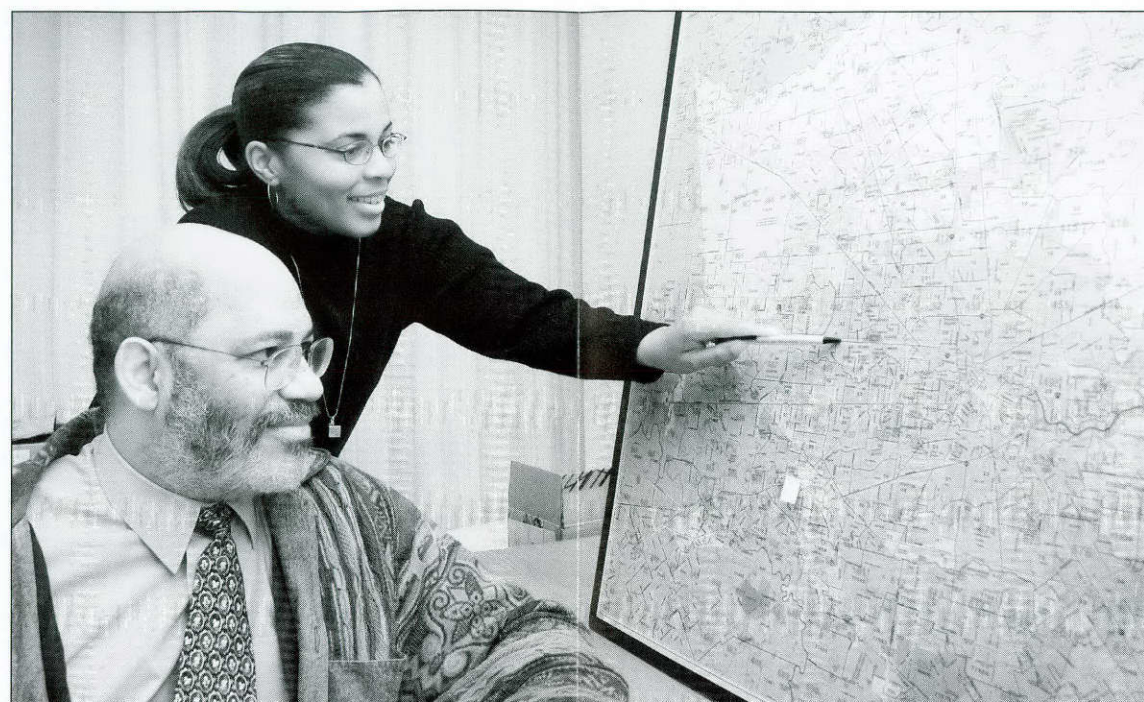
Collaboration with the minority communities that it studies is a core value of the Center for Research on Minority Health, which is currently part of M. D. Anderson's Office of Institutional Diversity. "It's a two-way street," said Dr. Jones. The Center has worked hard to develop and maintain strong relationships with minority communities throughout the Houston area, through the efforts of outreach representatives to the African-American, Asian-American, and Hispanic communities.

Through these outreach programs, Dr. Jones explained, "you begin to build relationships in the community and involve them in not only the implementation of the study but also the study design." And, he pointed out, the relationships benefit both the community and the Center. "One of the things that [traditionally] happens with research grants," said Dr. Jones, "is that you receive a grant, you build up a network, and then when the grant goes away, the network goes away. The Center is a stable force that maintains those connections and contacts with the various populations we work with."

Asian-American Health Needs Assessment

"We have here in Houston one of the largest and fastest-growing Asian-American communities in the nation," noted Beverly Gor, Ed.D., associate director of community relations and Asian-American outreach representative for the Center, "but no one has ever looked at health needs [in this community] on a comprehensive basis." To address this problem, Dr. Gor is heading up the Asian-American Health Needs Assessment, a project designed to gather comprehensive data on health-related behaviors and attitudes among Asian Americans living in Harris, Brazoria, Fort Bend, and Galveston counties in Texas.

After they conceived the idea for this study, Dr. Gor and her colleagues from the Center met with the Texas Department of Health, which conducts an annual random-digit-dialing telephone survey of Texas residents called the Behavioral Risk Factors Surveillance System (BRFSS) survey. The Texas Department of Health enthusiastically supported the Center's proposed project and helped Center staff adapt the BRFSS survey for their specialized study. Dr. Gor and her colleagues added questions about cancer knowledge and cancer screening behaviors, environmental exposures (evidence suggests that some environmental exposures might be related to cancer rates), and degree of accultura-



Danielle Baham, M.S., and Dr. Lovell Jones study a map showing the demographics of the Houston area by zip code. Baham and Dr. Jones, who directs the Center for Research on Minority Health at M. D. Anderson, are studying the effects of diet and exercise on breast cancer risk in premenopausal African-American women.

tion. They also had the questionnaire translated into Chinese and Vietnamese to allow non-English-speaking households to participate.

To determine whether the survey questions were culturally sensitive and would be interpreted by the target population as the researchers intended, Center staff presented the modified questionnaire to a focus group of Chinese Americans and Vietnamese Americans. The feedback was sometimes surprising. "We had a lot of discussion on the mental health question," said Dr. Gor. "We found out that in Vietnamese, when you translate that question literally, it's 'are you sane or are you crazy?' So that was a real eye-opener." The focus group participants also pointed out potential problems with questions about alcohol abuse and with having male interviewers ask women about mammography and breast self-examination.

Preliminary field-testing of the questionnaires is complete, and re-

searchers hope to complete telephone interviews with 400 Chinese-American and 400 Vietnamese-American households by the spring of 2003. The data gathered through the surveys will be analyzed and shared with the Asian-American community and with the Texas Department of Health and other health-care organizations. The results should reveal what types of health education programs are needed and suggest areas for further research. Having the baseline data should also, according to Dr. Gor, make it easier for community groups to gain funding for health-related research.

A NU LIFE

Studies consistently show that the incidence of premenopausal breast cancer is significantly higher in African-American women than in white women. Researchers in the Center for Research on Minority Health, led by Drs. Jones and Gor along with Danielle Baham, M.S., have designed a trial to investi-

Collaboration between M. D. Anderson, University of Puerto Rico to Address Cancer in Minority Populations

by Heather Russell

The University of Texas M. D. Anderson Cancer Center and The University of Puerto Rico Cancer Center are joining forces in a collaborative research program to study cancer in Hispanic populations. A five-year, \$15 million grant awarded by the National Cancer Institute and the Minority Institution Cancer Center Partnership will fund research as well as diversity training, physician education, and community outreach. The first research projects will address the molecular epidemiology of head and neck cancer, breast cancer, and acute promyelocytic leukemia.

"These activities will enhance our cancer research capability and address the burden of cancer in minority populations, particularly Hispanics," said Gabriel Lopez-Berestein, M.D., principal investigator and professor of bioimmunotherapy at M. D. Anderson. "Findings from this research may enable us to develop ethnic-specific cancer prevention strategies in addition to allowing minority fellows and graduate students from both institutions the opportunity to be involved in multidisciplinary research."

Researchers from M. D. Anderson and Puerto Rico will travel to each center to present ideas for potential projects. Colleagues with similar

interests will then team up to address a particular disparity. Researchers will communicate through regular videoconferences to offer updates, implement new strategies, and stimulate additional project ideas. One of the goals of this comprehensive cross-training program is to increase the number of Hispanic students interested in research careers.

"By learning from physicians already treating patients in Hispanic populations, we will increase our own sensitivity to minority needs," said Harry R. Gibbs, M.D., vice president of institutional diversity at M. D. Anderson. "It is our hope that this collaboration will not only improve our level of patient care but also be the beginning of many long-term partnerships with cancer centers across the nation and the world."

Developing partnerships with institutions who work with underserved patients is just one of the many goals outlined by the Office of Institutional Diversity at M. D. Anderson. The office also is dedicated to increasing the recruitment of minority and female applicants, working with high schools and colleges to encourage women and minorities to pursue science careers, and offering mentoring, employee forums, and other activities designed to promote the advantages of a diverse workforce. ●

to the study diet by periodically asking participants to describe their food intake during the previous 24 hours and by performing anthropometric measurements. A NU LIFE is funded by the American Cancer Society. The first participants will be enrolled in early 2003, and the target enrollment is 200 African-American women. To be eligible, women must be premenopausal, be between 25 and 45 years of age, and have no personal history of cancer, diabetes, or heart disease. Participants in the trial

will monitor adherence

(Continued on page 6)

Center for Research on Minority Health

(Continued from page 5)

will attend classes on nutrition over the course of a year and will be encouraged to consume a low-fat, high-fiber diet and to exercise regularly. To gather baseline information for use in developing the nutrition and exercise curriculum, Baham and the other NU LIFE research staff conducted focus-group sessions with African-American women in the community.

According to Dr. Jones, the study's combination of behavioral and molecular basic science research made obtaining funding a challenge. "It took a number of years to get the research reviewers to buy into the concept," he said, noting that more than one person suggested he split the study into two separate parts. But Dr. Jones held his ground. "We need to eliminate the lines that have been artificially established between the so-called hard and soft sciences," he insisted. He advocates what he terms "holistic" or "biopsychosocial" research (a concept he credits nurses with pioneering)—research that examines disease in terms of molecular biology; cultural, psychosocial, and behavioral factors; and socially determined conditions, such as the environment, housing, employment, and insurance. "Unless we change our approach," he said, "we're not going to be able to address the issues."



Maria Schettino, M.S., a researcher in the Center for Research on Minority Health, talks with *Ayudando a Latinas* participant **Marisol Mendoza**.

Compañeras Sanas and Ayudando a Latinas

Other research programs in the Center for Research on Minority Health include *Compañeras Sanas* (healthy friends) and *Ayudando a Latinas* (helping Latinas), both of which were designed to prevent breast cancer in healthy postmenopausal Hispanic women through changes in diet. Maria Schettino, M.S., helped recruit participants for the *Compañeras Sanas* trial. "It took a lot of effort," she said. Researchers recruited through a media campaign on Spanish-language television stations and visits to community centers and churches. They encountered "a lot of fear and misunderstanding about what research is about," said Schettino, as well as cultural barriers to participation. However, thanks to culturally appropriate recruitment techniques and strong ties to the community established during the *Compañeras Sanas* study, those barriers are beginning to disappear. When Schettino received funding for the second study, *Ayudando a Latinas*, "I went back to the same health centers and sites to offer my program, and it was very welcome," she said.

Shoulder To Shoulder

Houston's ethnic diversity has even made it possible for researchers in the Center to study a population of Nigerian women, Dr. Jones said. The Shoulder To Shoulder project is the first of its kind to seek to identify potential risk factors for breast cancer among Nigerian women.

"Houston has one of the largest—if not the largest—Nigerian populations in the United States," said Dr. Jones. "This sizeable population offers us the opportunity to make discoveries about breast cancer in young African and African-American women, who are disproportionately affected by this disease."

"Breast cancer among Nigerian women is an unusually aggressive and progressive disease, just as it is in African-American women," said Janice Allen Chilton, D.P.H., instructor and director of the Center's Education Core. "The long-term goal [of Shoulder to Shoulder] is to begin to form a health link between the two cultures, based on the belief that each culture can and will inform the other, and ultimately to increase our understanding of breast cancer in both populations."

The project, still in the community-assessment stage, has garnered the attention of researchers at other institutions who will serve as collaborators and consultants.

Disparities in Health in America: Working Toward Social Justice

In addition to its research and community outreach activities, the Center for Research on Minority Health is trying to increase the visibility of health-disparities research and attract new physicians and scientists to this field. Toward this goal, in the fall of 2002, the Center—along with Rice University, Texas Southern University, and the University of Houston—sponsored a course at the University of Houston titled "Disparities in Health in America: Working Toward Social Justice." The consortium has since been expanded to include Prairie View A&M University and The University of Texas School of Public Health. A workshop similar to the original course will be held this summer, and the course will be repeated this fall at Rice University.

Referring to the changing terminology surrounding the disparities issue, Dr. Jones noted, "We've gone from 'poor' to 'disadvantaged' to 'health disparities,' and the problem hasn't gone away. I'm trying to anchor the title so that we can do something about the problem." ●

FOR MORE INFORMATION, contact the Center for Research on Minority Health at (713) 794-5550.



Diagnostic Imaging Tests: How They Work and What to Expect

Most suspected cancers are not on the surface of the body, where doctors can get a direct look at them. That is why diagnostic imaging is so important. Imaging technology allows radiologists to “see” inside organs, bones, and other tissues. In the alphabet soup of medicine, a patient might hear about a CT scan, MRI, or PET scan. These are among the most common techniques used in modern cancer diagnosis.

Computed Tomography CT

This scan produces cross-sectional or three-dimensional images of areas inside the body.

How it works: A “contrast agent” is used to highlight certain areas of the internal anatomy. Then, x-ray images are processed and reconstructed using a computer.

Getting ready: Most of the time, patients are asked not to eat for several hours before a CT scan, but most medications should be taken as usual. One exception is metformin (Glucophage) for diabetes. (Usually, the doctor will tell the patient not to take it for two days before and two days after the scan.) Any allergies or asthma should be discussed with the doctor beforehand.

What to expect: Depending on the area being examined, the contrast agent may be given orally, by injection, or by enema. Some patients can have allergic reactions to the contrast agent, resulting in a rash, hives, or a feeling of warmth throughout the body. The average scan takes between 30 and 90 minutes.

In all of these imaging scans, the patient will lie on a flat table, which will move through the scanner.

It is important for patients to

- lie as still as possible to ensure clear images (avoiding caffeine may help them relax) and
- tell the doctor if they are claustrophobic or if they cannot lie on their backs for a long time.

Magnetic Resonance Imaging MRI

MRI technology provides the clearest images of internal anatomy.

How it works: A strong magnetic field and radio waves produce images.

Getting ready: Patients don’t need to do anything special unless the doctor orders it. Usually, eating and taking medications before the test are OK. Patients should tell the doctor if they are pregnant or breastfeeding; if they have had previous surgeries; if they have pacemakers, aneurysmal clips in the brain, or other implanted medical devices; or if they have any other metal objects inside their bodies. MRI examinations should not be performed in patients who have a cardiac pacemaker.

What to expect: A loud knocking sound is produced during the MRI procedure. This sound can cause discomfort, which is reduced by using earplugs or listening to a favorite radio station, if the scanner is equipped for it. Patients can usually wear their own clothing, as long as it doesn’t have any metal snaps or zippers. Depending on the area being examined, some patients will receive an injection of a contrast agent similar to that used in a CT scan. (The contrast agent used for MRIs can be given to patients who are allergic to the CT contrast agent.) The test typically lasts 40 minutes to an hour. Since no radiation is involved, a family member often is allowed in the room with the patient during the scan.

Positron Emission Tomography PET

Unlike other imaging techniques, which show only anatomic structures, the PET scan shows changes related to metabolism, which can help to identify cancers early.

How it works: The patient receives an injection of a safe, radioactive sugar solution, which is absorbed by many tissues but is especially attractive to cancer cells. The scan shows the distribution of this solution throughout the body, allowing the radiologist to see which areas have absorbed the most.

Getting ready: The patient should not eat anything and should drink only water for four to six hours before the scan. If the patient routinely takes medications, the doctor should decide whether they can be taken before the PET scan, and the last meal prior to the scan should be low in carbohydrates and high in protein, which minimizes the amount of tracer solution in the heart muscle. Most patients wear their own clothing during the scan, but some wear hospital gowns. Patients should advise the doctor if they have diabetes, if they are nursing, or if they are pregnant or think they might be pregnant.

What to expect: The injection is given about an hour before the scan to allow the solution to spread throughout the body. The scan usually takes 45 minutes to an hour, but some can last as long as two hours. ●

For more information, contact your physician or contact the M. D. Anderson Information Line:

☎ (800) 392-1611 within the United States, or

☎ (713) 792-6161 in Houston and outside the United States.

January 2003

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Staff Publications in January

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Published by the Department of Scientific Publications-234, The University of Texas M. D. Anderson Cancer Center, 1515 Holcombe Boulevard, Houston, Texas 77030, 713-792-3305.

Made possible in part by a gift from the late Mrs. Harry C. Wiess. Not printed at state expense.