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USAMRMC ltr, 1 Jun 2001.

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GRANT NUMBER DAMD17-94-J-4437

TITLE: Cancer Prevention and Control Research Manpower Development

PRINCIPAL INVESTIGATOR: Dr. Samuel J. Shacks

CONTRACTING ORGANIZATION: Drew/Meharry/Morehouse Consortium Cancer Center
Los Angeles, California 90061

REPORT DATE: September 1998

TYPE OF REPORT: Annual

PREPARED FOR: Commander
U.S. Army Medical Research and Materiel Command
Fort Detrick, Frederick, Maryland 21702-5012

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Patricia Alladice 8/9/99

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Dr. Samuel J. Shacks

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Drew/Meharry/Morehouse Consortium Cancer Center
Los Angeles, California 90061

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Fort Detrick, Frederick, Maryland 21702-5012

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13. ABSTRACT *(Maximum 200*

Overall aim of this four-year grant is to provide training in breast cancer research of postdoctoral fellows. Primary aims of year four of the study was for third year fellows to submit manuscripts to peer review journal and for second year fellow to apply for extramural findings. An unexpected objective in year four of the project was to recruit another student in order to fill a vacant position that resulted from the unexpected loss of the second year fellow.

Vanessa Parker, Ph.D., and Ling Wu, Ph.D. are the third year fellows. Carolyn Rowley is the second year fellow. Ida-lean Davis is the first year fellow. Drs. Davis, Parker, and Ms. Rowley are being mentored by Susan Robinson, M.D., M.P.H. and Samuel Shacks, Ph.D., M.D. at Charles R. Drew University. Dr. Wu is working with Kofi Semenya, Ph.D. of Meharry Medical College. Curriculum vitae of Meharry Medical College, Curriculum vitae of fellows and their mentors are in appendix A.

The fellows have made measurable progress during year four. Dr. Parker has prepared and submitted a research application for extramural funding, unfortunately it was not funded. She intends to continue revising and applying for funding. Dr. Wu prepared and submitted articles to peer-reviewed journals. One of them was published in a peer-review journal. Ms. Carolyn Rowley prepared and submitted one grant application. It was not funded. She resigned from the program in 1998. Dr. Davis joined the project in March 1998. She filled a position that was vacated unexpectedly and is developing a research protocol.

14. SUBJECT TERMS	15. NUMBER OF PAGES
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FOREWORD

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____ For the protection of human subjects, the investigator(s) adhered to policies of applicable Federal Law 45 CFR 46.

AJA In conducting research utilizing recombinant DNA technology, the investigator(s) adhered to current guidelines promulgated by the National Institutes of Health.

AJA In the conduct of research utilizing recombinant DNA, the investigator(s) adhered to the NIH Guidelines for Research Involving Recombinant DNA Molecules.

AJA In the conduct of research involving hazardous organisms, the investigator(s) adhered to the CDC-NIH Guide for Biosafety in Microbiological and Biomedical Laboratories.

Samuel J. Shacks 9/29/98

PI - Signature Date

TABLE OF CONTENTS

Introduction

Breast cancer is a leading cause of morbidity and mortality in American women. African-American women have higher mortality rates for this disease compared to white women. To address this issue, efforts to increase minority representation in cancer research have been made by the National Institute of Medicine. Success of these activities has been limited, and the pool of minority investigators remains small.

The purpose of this project is to expand the pool of minority cancer control and prevention investigators. The overall aim of this four-year study is to provide training in breast cancer prevention and control research for six post-doctoral graduates. The ultimate goal is to create independent investigators who will obtain extramural funding upon completion of the fellowship. The hypothesis to be tested is that with "protected time" and appropriate mentors, doctoral graduates in social science and public health disciplines can achieve independent extramural funding for breast cancer research within three years. Fellows are paired with faculty mentors from one of three Cancer Centers; Drew University of Medicine and Science in Los Angeles, California, Meharry Medical College in Nashville Tennessee and Morehouse School of Medicine in Atlanta Georgia.

Body

Overall aim of this four-year grant is to provide training in breast cancer research for postdoctoral fellows. Primary aims of year four of the study was for third year fellows to submit manuscripts to peer review journal and for second year fellow to apply for extramural funding. An unexpected objective in year four of the project was to recruit another student, Ida-Jean Davis, in order to fill a vacant position that resulted from the unexpected loss of the second year fellow. Curriculum vitae of fellows and their mentors are in Appendix A. A description of each fellow's progress from October 1, 1997 until September 30, 1998 is summarized below.

Ida-Jean Davis, D.C., a Ph.D. candidate in preventive care, is the most recent fellow. She joined the program in 1998, after a fellow resigned from the program. She is being mentored by Susan B. Robinson, M.D., M.P.H. and Samuel Shacks, Ph.D., M.D. at Charles R. Drew university. She is developing an educational intervention aimed at increasing awareness of breast health among low-income populations. She has developed a preliminary intervention and survey instrument (See Appendix B1 and B2). She intends to complete a Ph.D. program in preventive care and will not remain in the program beyond September 30, 1998.

Vanessa Parker, Ph.D., a preventive health researcher, has completed three years of the fellowship. She is being mentored by Susan B. Robinson, M.D., M.P.H. and Samuel Shacks, Ph.D., M.D. at Charles R. Drew University. During year four, Dr. Parker has revised a research application and plans to submit it for extramural funding (see Appendix C). Dr. Parker is a board member of the American Cancer Society Unit in South-Central Los Angeles. She will end her fellowship in September 30, 1998. She intends to pursue a career in prevention and control research.

Carolyn Rowley, a Ph.D. candidate in psychology joined the program in 1997. She was being mentored by Susan B. Robinson, M.D., M.P.H. and Samuel Shacks, Ph.D., M.D. at Charles R. Drew University. She submitted a proposal, Quality of Life among African-American Breast Cancer Survivors to Susan G. Komen Foundation. It was not funded. She resigned from the fellowship earlier this year in order to complete a PhD program.

Ling Wu, Ph.D. has completed approxiemately two and one-quarter years of the fellowship. He is working with Kofi Semenya, Ph.D. at Meharry Medical College. During year four, his manuscript, "Cancer Rate Differentials Between Blacks and Whites in Three Metropolitan Areas: A 10-Year Comparison" was published in the Journal of National Medical Association (See Appendix D1). In addition, Dr. Wu is preparing another manuscript, "Recent Trends in Breast Cancer Incidence Patterns Between Black and White Women in Tennessee, 1989-1995" (See Appendix D2). He is currently writing a proposal for extramural funding. He intends to receive the full three years of mentoring andplans to pursue a carreer in cancer prevention research at Meharry Medical College.

Conclusion

Year four of this grant had measurable progress. The third year fellow, Dr. Parker has been preparing and submitting research applications for extramural funding. She had already recieved extramural funding during years two of the project. Dr. Wu, a third year fellow, has preapred two manuscripts. One of them was published this year in a peer-reviw jounral.Dr. Wu intends to continue working in breast cancer research. Both are proceeding toward becoming independent investigators, which is the primary purpose of the grant.

Appendices

APPENDIX A

BIOGRAPHICAL SKETCH

Give the following information for the key personnel and consultants and collaborators. Begin with the principal investigator/program director. Photocopy this page for each person.

NAME	POSITION TITLE
IDA JEAN DAVIS, BA, PA, BS, DC, PhD (c)	CANCER PREVENTION & CONTROLRESEARCH MANPOWER DEVELOPMENT: DOD FELLOWSHIP

EDUCATION *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE	YEAR CONFERRED	FIELD OF STUDY
UNIVERSITY OF CALIFORNIA AT RIVERSIDE	B.A.	1975	PSYCHOBIOLOGY
CHARLES R. DREW UNIVERSITY	P.A.	1977	FAMILY MEDICINE
CLEVELAND CHIROPRACTIC COLLEGE	B.S.	1982	HUMAN BIOLOGY
CLEVELAND CHIROPRACTIC COLLEGE	D.C.	1984	CHIROPRACTIC MEDICINE
UNIVERSITY OS SOUTHERN CALIFORNIA	Ph.D.	PENDING	PREVENTIVE MEDICINE

RESEARCH AND PROFESSIONAL EXPERIENCE: Concluding with present position, list, in chronological order, previous employment, experience, and honors. Key personnel include the principal investigator and any other individuals who participate in the scientific development or execution of the project. Key personnel typically will include all individuals with doctoral or other professional degrees, but in some projects will include individuals at the masters or baccalaureate level provided they contribute in a substantive way to the scientific development or execution of the project. Include present membership on any Federal Government public advisory committee. List, in chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. DO NOT EXCEED TWO PAGES.

PROFESSIONAL WORK EXPERIENCE:

1975-1976 CHEMISTRY LABORATORY ASSISTANT
KAISER FOUNDATION, NORTH HOLLYWOOD, CA

1977 PHYSICIAN ASSISTANT PRECEPTORSHIP
KAISER FOUNDATION, INGLEWOOD, CA

1977-Present PRACTICING PHYSICIAN ASSISTANT

1984-1985 CHIROPRACTIC CLINICIAN
CLEVELAND CHIROPRACTIC COLLEGE, LOS ANGELES, CA

1984-1985 ASSOCIATE PROFESSOR
CLEVELAND CHIROPRACTIC COLLEGE, L.A., CA

1986-1996 CHIROPRACTIC DIRECTOR: CHIRO-MED WEST, L.A., CA

1986-1996 PHYSICAL MEDICINE CONSULTANT: U.H.P., DOTSON MEDICAL GROUP, L.A., CA

1988-1994 ASSISTANT PROFESSOR: CHARLES DREW UNIVERSITY OF MEDICINE AND SCIENCE, COLLEGE OF ALLIED HEALTH; L.A., CA

1991-1996 RESEARCH ASSISTANT: U.S.C., SCHOOL OF MEDICINE, INSTITUTE OF PREVENTION AND RESEARCH, JAMES DWYER Ph.D., L.A., CA

1994-Present ASSOCIATE PROFESSOR: CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE, COLLEGE ALLIED HEALTH; L.A., CA

1994-1996 PRINCIPLE INVESTIGATOR/ DIRECTOR, CENTER FOR THE ADVANCEMENT OF ALLIED HEALTH EDUCATION: CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE, COLLEGE ALLIED HEALTH, L.A.., CA

1994-1996 CO-INVESTIGATOR/ FITNESS FUNATICS: CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE, COLLEGE ALLIED HEALTH, L.A.., CA

1995-1996 ACTING DIRECTOR, COMMUNITY SERVICE AND CONTINUING EDUCATION PROGRAM: CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE, COLLEGE OF ALLIED HEALTH, L.A., CA

1995-1997 AFRICAN AMERICAN HIV/AIDS INSTRUCTOR
BASIC HIV/AIDS INSTRUCTOR

1995 PROVIDER EDUCATION CONSULTANT
BREAST CANCER EARLY DETECTION PROGRAM

1995-1997 REGIONAL DIRECTOR, NATIONAL BLACK LEADERSHIP INITIATIVE ON CANCER: CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE

1995-Present TRAINING SPECIALIST, AIDS EDUCATION AND TRAINING CENTER
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE

1996 PRINCIPLE INVESTIGATOR/ DIRECTOR, HIV/STD PREVENTION PROGRAM: CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE, COLLEGE ALLIED HEALTH, L.A.., CA

1996-1997 PROGRAM RESEARCH COORDINATOR, URBAN HEALTH INITIATIVE
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE

1997- 1998 DEPUTY DIRECTOR, COMMUNITY TOBACCO CONTROL PROGRAM
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE

1997-1998 PRINCIPLE INVESTIGATOR/ DIRECTOR, STD/HIV/AIDS INFORMATION TRANSFER PROGRAM FOR COMMUNITY BASED ORGANIZATIONS: CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE, COLLEGE ALLIED HEALTH, L.A.., CA

1998 CANDIDATE, DEAN: COLLEGE OF ALLIED HEALTH
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE

POST-GRADUATE PROGRAM FELLOWSHIPS:

1991 EPIDEMIOLOGY GRADUATE PROGRAM: JOHNS HOPKINS: UNIVERSITY BALTIMORE, MD.

1992 FELLOWSHIP: AMERICAN HEART ASSOCIATION:EPIDEMIOLOGY & PREVENTION OF CARDIOVASCULAR DISEASE

1996 HIV/AIDS PRIMARY CARE RESIDENCY PROGRAM
PACIFIC AIDS EDUCATION &TRAINING CENTER: USC MEDICAL CENTER

1998 FELLOWSHIP: CANCER PREVENTION & CONTROL RESEARCH MANPOWER DEVELOPMENT
CHARLES R. DREW UNIVERSITY OF MEDICAL & SCIENCE

POSTGRADUATE AWARDS:

1991 NHLBI RESEARCH SUPPLEMENT AWARD

1992 NIH PREVENTION CARDIOLOGY ACADEMIC AWARD

1993 TRDRP RESEARCH & TRAINING AWARD

1994 NHLBI RESEARCH SUPPLEMENT AWARD

PUBLICATIONS

DAVIS IJ, BROWN CP, ALLEN FC, DAVIS T, WALDRON D. AFRICAN AMERICAN MYTHS AND HEALTH CARE. JOURNAL OF THE NATIONAL MEDICALASSOCIATION. NOVEMBER 1995.

DWYER JH, DWYER KM, SCRIBNER R, SUN P, LI L, NICHOLSON L, DAVIS IJ, HOHN A. CALCIU SUPPLEMENTATION AND BLOOD PRESSURE IN BLACK YOUTH. CIRCULATION 1996; 93:625. PAPER PRESENTED AT 36th ANNUAL CONFERENCE ON CARDIOVASCULAR DISEASE EPIDEMIOLOGY & PREVENTION. SAN FRANCISCO, CA.

DAVIS IJ, LI L, DWYER KM, DWYER JH, NICHOLSON L. THE EFFECTS OF CALCIUM ON MEAN AMBULATORY BLOOD PRESSURE IN AFRICAN AMERICAN ADOLESCENTS. JOURNAL OF THE NATIONAL MEDICAL ASSOCIATION. DECEMBER 1996.

DWYER JH, DWYER KM, SCRIBNER RA, PING S, LI L, NICHOLSON LM, DAVIS IJ, HOHN AR. CALCIUM SUPPLEMENTATION AND BLOOD PRESSURE IN AFRICAN AMERICAN YOUTH. LANCET MAGAZINE. SUBMITTED.

DAVIS IJ., PARROTT F. BREAST & PROSTATE CANCER IN THE AFRICAN AMERICAN COMMUNITY. FREEDOM JOURNAL. OCTOBER 1997.

HEJAZI-BAZARGAN S, HOVELL M, BROWN CP, DAVIS, IJ DAVIS DT, TOWNS AB, BAZARGAN M. NONADHERENCE TO TB: AN ECOLOGICAL MODEL. JOURNAL OF PREVENTIVE MEDICINE. SUBMITTED.

ARTICLES IN PREPARATION

DAVIS IJ, DWYER JH, DWYER KM. THE RELATIONSHIP OF CARDIOVASCULAR RISK FACTORS AND COMMON CAROTID ARTERY INTIMAL MEDIA THICKNESS: A MEASURE OF ATHEROSCLEROSIS.

DAVIS IJ, ROBINSON S, SHACKS S. BREAST CANCER, HEALTH DISPARITY IN THE AFRICAN AMERICAN COMMUNITY

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed on Form Page 2.
Photocopy this page or follow this format for each person.

NAME	POSITION TITLE
Vanessa C. Parker	Department of Preventive Medicine

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
University of California - Sand Diego, San Diego, CA	B.S.	1982	Microbiology
California State University, Dominguez Hills, CA	M.A.	1989	Behavioral Sciences
University of Southern California	Ph.D.	1995	Preventive Medicine

RESEARCH AND PROFESSIONAL EXPERIENCE: Concluding with present position, list, in chronological order, previous employment, experience, and honors. Include present membership on any Federal Government public advisory committee. List, in chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. If the list of publications in the last three years exceeds two pages, select the most pertinent publications. DO NOT EXCEED TWO PAGES.

PROFESSIONAL EXPERIENCE:

11/93-Present Graduate Research Assistant, Drug Use and HIV-Risk Sexual Behaviors in Homeless Youth, Childrens Hospital Los Angeles, Division of Adolescent Medicine

07/93-Present Co-Principal Investigator, Adolescent Condom-Use Efficacy Among Urban Minorities, Charles R. Drew University of Medicine and Science

05/93-12/93 Project Manager, Gang Violence Prevention and Suppression Project, High-Risk Youth Project, Childrens Hospital-Division of Adolescent Medicine

06/92-12/93 Graduate Research Assistant, KCET/USC African American Smoking Prevention Project, University of Southern California

06/92-10/93 Sr. Research Associate, Women & HIV/AIDS Research Project, Charles R. Drew University of Medicine and Science

09/91-06/92 Graduate Research Assistant, Day One Community Partnership, University of Southern California

09/90-06/92 Program Manager, Tobacco Control Program, King-Drew Medical Center, Los Angeles, California

12/88-01/91 Staff Research Associate, California Heterosexual Partner' Study, University of California, San Francisco

10/88-11/89 Program Manager, People Who Care Youth Center AIDS Education Project, Los Angeles, California

02/88-11/88 Medical Assistant Instructor, Watterson Career College, Los Angeles, California

05/88-09-88 Peer Ethnographic Interviewer, California State University, Long Beach, AIDS Education and Prevention Project, Long Beach, California

08/87-08/88 Minority Aids Educator, Long Beach Health Department, Aids Education and Prevention Project, Long Beach, California

06/86-09/87 Research Assistant, Cancer Research Consortium, Charles R. Drew University of Medicine and Science, Los Angeles, California

10/84-11/85 Medical Consultant, W.E. Thompson and Associates, Attorneys-at-Law, Washington, D.C.

HONORS AND MEMBERSHIPS:

Distinguished Young Women of America, 1987
Certificate of Appreciation, County of Los Angeles, Department of Health Services, Sexually Transmitted Disease Program, November 1989
Certificate of Appreciation, Los Angeles Southwest College Women's Center, October 1989
Certificate of Appreciation, County of Los Angeles, Department of Health Services, Sexually Transmitted Disease Program

SELECTED PUBLICATIONS:

1. Sussman, S., Parker, V., Crippens, D., Scholl, D., Elder P. "Empirical Development of Brief Smoking Prevention Videotapes Which Target African American Adolescents". International Journal of Additions 1995:30(9):1141-1164.
2. Rohrbach, L., Fishkin, S., Mansergh, G., Parker, V., Johnson, C.A. "A Survey of Substance Use and Related Issues in Pasadena and Altadena, California". Technical Report, August 1994.
3. Parker, V., Montgomery, S., Kipe, MD, O'Guynn, S. "Tracking Homeless/Runaway Youth", Technical Report, March 1995.
4. Parker, V., Sussman, S., Herring, D., Crippens, D., et al. "Qualitative Development of Smoking Prevention Programming for Minority Youth" (Under Review)
5. Parker V., Sussman, S., "Cigarette Smoking Among Family and Friends of Urban African American Youth" (Under Review)
6. Parker, V., Sussman, S., Herring, D., Crippens, D., et al. "The relations of Ethnic Identification With Smoking Among Ethnic Minority Youth" (Under Review)
7. Parker, V., Montgomery, S., Kipke, M., O'Guynn, S., "Longitudinal Follow-up of Urban Homeless/Runaway Youth: Methodology" (In Preparation)
8. Parker, V., Ashley, M., Montgomery, S., "Sexual and Condom Use Behaviors Among African American Adolescents Living In An Inner-City Public Housing Development" (In Preparation)
9. Parker, V., Rabinovitz, S., Kipke, M., "The Practice of Violence Among Urban Homeless/Runaway Youth" (In Preparation)

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed on Form Page 2.
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NAME	POSITION TITLE
Susan B. Robinson, M.D., M.P.H.	Physician

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Dillard University New Orleans, LA	BS	1985	Chemistry
University of Pittsburgh Pittsburgh, PA	M.D.	1990	Medicine
Loma Linda School of Public Health, Loma Linda, CA	M.P.H.	1993	Environmental and Epi.
Drew/Meharry/Morehouse Cancer Center, LA, CA	fellowship	1994	Cancer Prevention and Control

RESEARCH AND PROFESSIONAL EXPERIENCE: Concluding with present position, list, in chronological order, previous employment, experience, and honors. Include present membership on any Federal Government public advisory committee. List, in chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. If the list of publications in the last three years exceeds two pages, select the most pertinent publications. **DO NOT EXCEED TWO PAGES.**

PROFESSIONAL EXPERIENCE

1990-1991 Internship in Internal Medicine at Loma Linda Medical Center; Loma Linda, CA
1991-1993 Residency in Preventive Medicine at Loma Linda University; Loma Linda, CA
1994-present Assistant Professor in the Department of Internal Medicine at Drew University; Los Angeles, CA
1994-1996 Medical Director, Drew Daniel Freeman Primary Care; Los Angeles, CA
1996-present Medical Director,Westchester Wellness Center; Los Angeles, CA

RESEARCH EXPERIENCE

1992-1993 Research Associate, Dopamine Receptors in Nicotine Addiction, (PI) David Comings, MD City of Hope, Durate, CA
1992-1993 Research Associate, Buproprion as an Adjunct to Smoking Cessation, (PI) Linda Ferry, MD, M.P.H. at Loma Linda University, Loma Linda, CA
1993-1996 Co-Investigator, Cancer Prevention and Control in Underserved Populations, (PI) Mary Ashley, RN Drew University
1995-1997 Co-Principal Investigator, Cancer and Fatigue, (PI) Marcia Grant, Ph.D. at City of Hope, Duarte, CA
1996-present Director, Translational Research; Drew/Meharry/ Morehouse Consortium Cancer Center, (PI) Margaret Hargreaves, Ph.D., Meharry Medical School
1996-present Co-Principal Investigator, Cancer Prevention and Control Manpower Development, (PI) Samuel Shacks, Ph.D., MD, Drew University
1997-present Principal Investigator, Using Breast Cancer Survivors to Increase Mammography Use Drew University

PUBLICATIONS

Robinson S, Comings D and Ferry L. "Dopamine Receptors in Nicotine Addiction" Journal of Addictive Diseases. 1993; 12 (4); 174.

Robinson S, Ashley M, and Haynes A. "Attitudes Among African-American Regarding Prostate Cancer Screening Trial"s. JNMA, 1996;88 (4); 241-248.

Robinson S, Ashley M, and Haynes A. "Attitudes Among African-American Regarding Prostate Cancer Clinical Trials" J Comm Health.1996;21(2);77-87.

Robinson S, Ashley M and Haynes. "Attitudes of African-Americans toward Participating in Prostate Cancer Prevention Trials " Accepted with revisions.

Wu L, Semenya K, Hardy R, Hargreaves M, Robinson, Pederson L, and Sung J. "Cancer Rate Differentials Between Blacks and Whites of Three Metropolitan Areas". In Press.

Haynes and Robinson. " Excess Cancer Mortality among Californians." In preparation

Grant M, Ferrel B, Dean G, Robinson S et al." Fatigue and Cancer: A multicultural approach" Submitted

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed on Form Page 2.
Photocopy this page or follow this format for each person.

NAME	POSITION TITLE
Ling Y. Wu	Assistant Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training).*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
East China Normal University, Shanghai, China	Pre-university program	1974-76	Mathematics
Shanghai Medical University, Shanghai, China	B.M.,M.D.	1977-83	Medicine
University of California, Berkeley, CA	M.P.H.	1991-92	Maternal & Child Health
The Johns Hopkins University (JHU), Baltimore, MD	Ph.D	1992-96	Reproductive Epidemiology

RESEARCH AND PROFESSIONAL EXPERIENCE: Concluding with present position, list, in chronological order, previous employment, experience, and honors. Include present membership on any Federal Government public advisory committee. List, in chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. If the list of publications in the last three years exceeds two pages, select the most pertinent publications. **DO NOT EXCEED TWO PAGES.**

RESEARCH AND PROFESSIONAL EXPERIENCE

October 1997 - Present	Assistant Professor	Internal Medicine, Meharry Medical College, Nashville, TN.
August 1996-Present	Epidemiologist & Research Fellow	Cancer Control Research Unit, Meharry Medical College. Nashville, TN.
1992-1996	Research Assistant	JHU School of Hygiene and Public Health. Baltimore, MD.
1995 Summer	Project Designer	Family Health International, Epidemiology Division. Triangle Park, NC.
1992 Summer	Visiting Physician	Family Planning Clinic of Grady Hospital. Atlanta, GA.
1983-1991	Physician, Director	Shanghai Public Health Center. Shanghai, China.
1976-1978	Mathematics Teacher	Local High School.

PEER-REVIEWED PUBLICATIONS PERTINENT TO THIS APPLICATION

1. Wu LY. Risk Factors of Breast Cancer among Shanghai Women. *J Shanghai Medical University* 1983.
2. Wu LY, Semenya K, Hardy R, et al. Cancer Rate Differentials Between Blacks and Whites of Three Metropolitan Areas: A Ten Year Comparison. Accepted by *J National Medical Association*.

RELEVANT RESEARCH PROJECTS DURING THE LAST 5 YEARS

1. Year 1997
Title: Recent Trends in Incidence of Breast Cancer among Black and White Women in Tennessee State, 1989-1993.
Funding source: US Army Medical Research Acquisition Activity "Cancer Prevention and Control Research Manpower Development" funding new investigators and researchers in breast and cervical cancer research.
Role on project: Everything, from data collection to paper writing.
2. Year 1996
Title: Cancer Rate Differentials Between Blacks and Whites of Three Metropolitan Areas: A Ten Year Comparison.
Funding source: As above.
Role on project: As above.
3. Year 1995
Title: The Effect of Oral Contraceptive Use on Gynecologic Cancers: Years of Life Lost.
Funding source: Hewlett Foundation for JHU PhD program.
Role on project: Project Designer.

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed on Form Page 2.
Photocopy this page or follow this format for each person.

NAME	POSITION TITLE
Samuel J. Shacks, Ph.D., M.D.	Associate Profesoor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Arkansas State AM&N College, Pine Bluff, Ark.	B.S.	1960	Biology/Chemistry
University of California, Irvine, CA	Ph.D.	1972	Biology
University of California, Irvine, CA	M.D.	1977	Medicine
Harbor/UCLA Medical Center, Torrance, CA	Fellowship	1981-1983	Innunology/Allergy

RESEARCH AND PROFESSIONAL EXPERIENCE: Concluding with present position, list, in chronological order, previous employment, experience, and honors. Include present membership on any Federal Government public advisory committee. List, in chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. If the list of publications in the last three years exceeds two pages, select the most pertinent publications. **DO NOT EXCEED TWO PAGES.**

Appointments/Positions:

1972-1973 Research Fellow, Medicine, Robert B. Brigham Hospital, Harvard Medical School, Boston, Massachusetts.

1973-1974 Research Fellow in Immunology, Department of Microbiology and Immunology, University of California, Los Angeles, School of Medicine.

1977-1980 Pediatrics Residency, Martin Luther King, Jr. General Hospital, Los Angeles, California.

1980-1992 Assistant Professor, Charles R. Drew University of Medicine and Science, Martin Luther King, Jr., General Hospital, Department of Pediatrics, Los Angeles, California.

1981-1983 MARC Faculty Fellowship in Pediatric Immunology, Division of Immunology and Allergy, Harbor-UCLA Medical Center, Torrance, California.

1991-Present Chief, Pediatric Immunology/Rheumatology, Department of Pediatrics, King/Drew Medical Center, Los Angeles, California.

1992-1995 Associate Professor I, Charles R. Drew University of Medicine and Science, Martin Luther King, Jr., General Hospital, Department of Pediatrics, Los Angeles, California.

1995-Present Associate Professor II, Charles R. Drew University of Medicine and Science, Martin Luther King, Jr., General Hospital, Department of Pediatrics, Los Angeles, California.

Experiences:

1983-1987 MARC Review Committee, NIH/NIGMS, Bethesda, Maryland.

1984-1997 Director, MARC Program, Charles R. Drew University of Medicine & Science, Los Angeles, California.

1984-Present Director, MBRS Program, Charles R. Drew University of Medicine & Science, Los Angeles, California

1986-1996 Comprehensive Sickle Cell Centers Parent Review Committee, NIH/NHLBI, Bethesda, Maryland.

1987-1992 Associate Dean for Research, Charles R. Drew University of Medicine and Science, Los Angeles, California.

1987-Present Association of Minority Health Professions Schools (AMHPS), Washington, D.C.

1987-1992 Liaison/Coordinator for AMHPS/NIH Initiatives, National Cancer Institute, National Institutes of Health, Bethesda, Maryland.

1987-Present Liaison Officer, Department of Defense, National Association for Equal Opportunity in Higher Education, Washington, D.C.

1989 Their Committee: State of the Nation's Health Research Facilities Infrastructure, National Academy of Science, Washington, D.C.

1990-1997 Consumer Representative, Immunology Devices Panel Food & Drug Administration, Rockville, MD.

1990-1991 Member, Sickle Cell Disease Task Force for the National Health, Lung, and Blood Institute (NHLBI) National Institutes of Health, Bethesda, Maryland.

1990-Present Member, Executive Board of Directors, National Cancer Control Research Network, Inc., National Cancer Institute, NIH, Bethesda, Maryland.

1990-1991 Partnership Member, NSF-Alliances for Minority Participation Program, California State University Dominguez Hills, Los Angeles, California (Planning Grant).

1990-1991 Member, Health Technology Study Section, Agency for Health Care Policy and Research/ DHHS/PHS, Rockville, Maryland.

Honors:

1989 Chair, Research Group, Association of Minority Health Professions Schools, Washington, D.C.

Publications:

1. Granger, G.A., Shacks, S.J., Williams, T.W. and Kolb, W.P.: Lymphocyte In Vitro Cytotoxicity; Specific Release of Lymphotoxin like Materials from Tuberlin Sensitive Lymphoid Cells. Nature 211:115-7, 1969.
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15. Taylor, S.C., Shacks, S.J., Mitchell, R.A.: Mononuclear Cell Profiles in Sickle Cell Disease: Regional Meetings-American Federation for Clinical Research, Carmel, CA, February 8-11, 1995.
16. Taylor, S.C.,Shacks,S.J.,Mitchell,Ralph, and Banks, Aaron: Serum Interleukin-6 Levels in the Steady State of Sickle Cell Disease, Journal of Interferon and Cytokine Research, Vol. 15, Issue 12: 1061-1064, 1995.
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APPENDIX B

Appendix B1

Breast Cancer Education Awareness Program

I. Purpose

The purpose of the intervention is to provide culturally specific education and information which will create an understanding and awareness in the African-American female, about breast cancer, methods being used in detection of breast cancer and appropriate medical referral.

II. Goal

To effect a positive change in behavior with regard to performing self-breast examinations (SBE), receiving clinical breast examinations (CBE) and mammography.

III. Breast Cancer Facts

A. What is Breast Cancer?

Breast cancer is the growth of abnormal cells in the breast known as a malignant tumor. Breast cancer is one of the most common and treatable cancers.

In 1997, approximately 182,000 new cases of breast cancer will be diagnosed, and 46,000 women will die from the disease in the United States. Non-Hispanic White women develop breast cancer at higher rates than African American women do. However, African American women die of breast cancer at a higher rate. Nationwide, breast cancer in the leading cause of cancer death for African American women, between the ages 35-54.

Women with localized breast cancer have 96% five-year relative cancer survival rate as compared to 20% of those diagnosed after the cancer has metastasized (spread beyond the original site of the cancer). Breast cancer is often detected in African American women at a more advanced stage than in other populations of women.

Reasons African American women cite for not following early detection guidelines include:

having no family history of breast cancer
having no breast cancer symptoms
unable to afford health care
getting embarrassed by someone touching their breast or being uncomfortable touching their own breasts
having to deal with male physicians who are insensitive to their needs

Breast cancer should not be confused with other breast cancer conditions. The most common breast cancer condition confused with breast cancer is fibrocystic change. The presentation for this change includes lumps and irregularities detected by breast examination or mammography. The lumps are fluid filled cysts. The differential diagnosis must be concluded by a histology evaluation.

B. Risk Factors?

Two main risk factors for getting breast cancer are being a woman and getting older. Over 80% of women who develop breast cancer have no family history of breast cancer. Breast cancer age specific incidence rates climb sharply from young adulthood until about age 50, around the age of menopause. Early onset of menstruation and later age at menopause are both associated with higher risk for breast cancer. Women who have their first child later in life or who never have a child are at higher risk of breast cancer than those who have children at younger ages. High body weight after menopause is associated with increased risk of breast cancer. Diet, especially dietary fat, alcohol consumption, birth control pills, hormone replacement therapy and therapeutic abortion, are being studied as possible risk factors for breast cancer.

Men do get breast cancer, but it is quite rare.

IV. Anatomy and Function of the Breast

A. What is the beast and what does the breast do?

The breast are located in the anterior plane of the thoracic region. The mammary gland (breast) is composed of glandular tissue within a dense fibroareolar stroma. The glandular tissue consists of approximately 20 lobes, each of which terminates in a separate excretory duct in the nipple. The biological function of the breast is lactation.

V. Early Breast Cancer Detection, Screening Guidelines and Tests

A. What are the signs and symptoms?

There are no warning signs for breast cancer, in the early stages. The later stage warning signs include: breast lumps and/or thickening, bleeding from the nipple, skin irritation and skin retraction.

B. What are methods used to screen for breast cancer?

Breast cancer is one of the few tumors for which there is conclusive evidence that screening will decrease morality. The methods used to screen for breast cancer include Self Breast Examination, Clinical Breast Examination, and Mammography.

Self Breast Examination

Women ages 20 and over should perform self breast examinations (SBE) every month, following the instructions from a health care provider. The SBE should be done 2-3 days after the end of the menstrual period. After menopause, the SBE should be done on the same day every month.

Clinical Breast Examination

Women ages 20-40 should have a clinical breast examination (CBE) performed by a health care provider every 3 years. Women ages 40 and over should have a CBE performed by a health care provider every year.

Mammography

Women ages 40-9 years should have mammography every 1-2 years. Women ages 50 and over should have a mammography every year. Screening mammography can detect breast cancer when it is in its earliest, most treatable stages, up to two years before a lump can be felt.

VI. Stages of Breast Cancer

A. What are the stages of breast cancer?

The definition of the primary tumor (T) are the same for clinical and pathological staging.

TX Primary tumor can not be assessed.
TO No evidence of primary tumor
Tis Carcinoma in situ, intraductal carcinoma, lobular carcinoma in situ, or Paget's disease of the nipple with no tumor
T1 Tumor 2 cm or less in greatest dimension
T1a 0.5 cm or less in greater dimension
T1B More than 0.5 cm but not more than 1 cm in greater dimension
T1c More than 1 cm but not more than 2 cm in greater dimension
T2 Tumor more than 2 cm but not more than 5 cm in greatest dimension
T3 Tumor more than 5 cm in greatest dimension
T4 Tumor of any size with direct extension to chest wall or skin
T4a Extension to chest wall
T4b Edema (including peau d'orange) or ulceration of the skin of the breast of satellite skin nodules confined to the same breast
T4c Both (T4a and T4b)
T4d Inflammatory carcinoma

Regional Lymph Nodes (N) are classified from NX: Regional lymph nodes cannot be assessed to N3: Metastasis to ipsilateral internal mammary lymph node(s).

A careful description of the cancer histology, a precise measurement of the tumor size and tumor margin, with a statement of the number of positive histological lymph nodes will provide a more accurate description of staging than the use of numerical classification.

VII. Treatment Options

Breast cancer may present without symptomatology. It can therefore, be undiagnosed for years. Not all persons with breast cancer will require aggressive treatment. Once a diagnosis is made, you will need to go over treatment options carefully with your health care provider. The health care provider should discuss with you the various treatment choices based on their expertise and a careful evaluation of your general health, your age and most importantly, the stage of your cancer.

Surgery, radiation and/or chemotherapy are options for the treatment of breast cancer.

Early stage diagnosis options include local removal with radiation therapy or mastectomy.

Adjuvant therapy may include hormones and/or combination chemotherapy.

Late stage diagnosis treatment options include combination chemotherapy or hormone therapy and radiation therapy for selected clinical problems.

VIII. Nutrition and Physical Activity

A. Low fat dietary intake

B. Fruits and vegetables

C. Obesity

D. Physical Activity

IX. Summary

An overview of the program w/ information transfer

X. Resources

A. The following agencies and organizations are recommended for contacting to provide resources:

Local Health Departments
Local Medical Social
Local Urology Society
Local ACS
Local Oncologist
Local Hospitals
Local Social Services (Welfare)
Local Female Clubs and Organizations
Other Local Agencies
National Cancer Institute

B. Support Groups

C. Screening Facilities

XI. Teaching Aids

A. Transparencies/Slides

B. Brochures

C. Breast models

Appendix B2

I.D. # _____

Women's Breast Health Survey

1. What is your marital status?

   a. Never married 1

   b. Married 2

   c. Living together as married 3

   d. Separated 4

   e. Divorced 5

   f. Widowed 6

   g. Refused response 9

   h. Other (Specify) _____

2. What is the highest level of school (or schooling) that you've completed?

   a. Did not complete high school (**highest grade completed**) _____ 0-11

   b. High School graduate or GED 12

   c. Some college or (**technical, vocational training**) 13

   d. College graduate 14

   e. Refused response 99

3. Which of the following describes your work history? (**PLEASE READ EACH RESPONSE**)

   a. Currently employed (**full-time**) 1

   b. Currently employed (**part-time**) 2

   c. Currently unemployed (**SKIP TO Q-6**) 3

   d. Self-Employed 4

   e. Homemaker 5

   f. Retired (**SKIP TO Q-5**) 6

   g. Student (**SKIP TO Q-7**) 7

   h. Never employed (**SKIP TO Q-7**) 10

   i. Refused response (**SKIP TO Q-7**) 9

4. How long have you been working at your current job?

a. Less than a year 1

b. One year or more 2

c. Three years or more 3

d. Refused response 9

e. Other (**Specify**) _____

5. If retired, how long did you work with your last employer? (**IF NOT RETIRED, GO TO Q-6**)

a. Less than six months 1

b. 6 months to 11 months 2

c. 1 to 2 years 3

d. 3 to 5 years 4

e. 6 to 10 years 5

f. 11 to 20 years 6

g. More than 20 years 7

h. Refused response 9

6. What is/was your occupation/job?

a. Secretary 1

b. Housekeeping 2

c. Construction Worker 3

d. Janitorial 4

e. Salesperson 5

f. Refused response 9

g. Other (**Specify**) _____

7. What would you say is the most important thing in your life right now? **(PLEASE CIRCLE ONLY ONE RESPONSE)**

a. God/Religion 1

b. Family 2

c. Parent(s) 3

d. Friend (s) 4

e. Money 5

f. Health 6

g. Self 7

h. Job 10

i. Don't know/Not sure 8

j. Refused response 9

k. Other **(Specify)** _____

8. What was the total income of all persons living in your household in the last year (1995), that is, considering all sources: salaries, wages, unemployment compensation, profits, and interest?

a. Less than $5,000 1

b. $5,000 - $10,000 2

c. $10,001 - $15,000 3

d. $15,001 - $25,000 4

e. $25,001 - $40,000 5

f. More than $40,000 6

g. Don't know/Not sure 8

h. Refused response 9

9. Compared to others your age, would you say that your physical health is: **(PLEASE READ EACH RESPONSE)**

a. Excellent 1

b. Good 2

c. Fair 3

d. Poor 4

e. Don't know/Not sure 5

f. Refused response 6

10. If a relative has had breast cancer, what is the relationship? **(IF "NO" SKIP TO Q-11). (PLEASE READ EACH RESPONSE) "Y" = Yes "N" = No "DK" = Don't Know**

a. Mother ..... [1] Y [2] N [8] DK [9] Refused

b. Sister (s) ..... [1] Y [2] N [8] DK [9] Refused

c. Daughter (s) ..... [1] Y [2] N [8] DK [9] Refused

d. Other (specify) _____

11. How many pregnancies have you had in your lifetime?

a. 0 **(SKIP TO Q-15)** 1

b. 1 2

c. 2 3

d. 3 4

e. 4 or more 5

f. Refused response 9

12. How old were you when you had your first pregnancy?

a. less than 15 years 1

b. 15-19 years 2

c. 20-24 years 3

d. 25-29 years 4

e. 30-34 years 5

f. 35 years and older 6

g. Refused response 9

13. Was your first pregnancy a full term delivery? (In other words, did you carry the pregnancy for nine months)

a. Yes 1

b. No 2

c. Don't Know/Not sure 3

d. Refused response 4

e. Other (**Specify**) _____

14. Did you breast feed any of your children?

a. Yes 1

b. No 2

c. Refused response 9

15. How old were you when you had your first menstrual cycle?

a. Before age 12 1

b. Age 12 and above 2

c. Don't know/Not sure 8

d. Refused response 9

16. How old were you when you first started going through menopause (**The Change of Life**)?

a. Before age 50 1

b. Age 50 and older 2

c. Has not gone through menopause yet 3

d. Don't know/ Not sure 8

e. Refuse response 9

17. Have you had a hysterectomy (**Surgical removal of the uterus/womb/sex organs**)?

a. Yes 1

b. No 2

c. Don't know/ Not sure 8

d. Refuse response 9

18. When you are physically sick, where do you go for medical care or treatment?

a. Private doctor 1

b. Emergency Room 2

c. Clinic (**Specify**) _____

d. Refuse response 9

e. Other (**Specify**) _____

19. Are there persons other than your doctor you can trust to turn to for medical advice when you feel bad or sick?

a. Yes, (**Specify**)_____

b. No 2

c. Refused response 9

20. During the past month, did you participate in any physical activities or exercises (such as running, aerobics, golf, gardening, walking, basketball, etc.)?

a. Yes 1

b. No **(SKIP TO Q-23)** 2

c. Don't know/ Not sure **(SKIP TO Q-23)** 8

d. Refused response 9

21. How many times per week in the last month did you take part in this activity?

a. 3 or more times per week 1

b. 2 times per week 2

c. Once per week 3

d. Don't know/ Not sure 8

e. Refused response 9

22. And when you took part in this activity, for how many minutes did you usually keep at it?

a. Less than 20 minutes 1

b. Between 20 & 30 minutes 2

c. Between 31-40 minutes 3

d. More than 40 minutes 4

e. Don't know/ Not sure 8

f. Refused response 9

23. Now I am going to read a list of factors that may or may not be associated with breast cancer. What factors do you think can possibly be associated with breast cancer? **(PLEASE READ EACH ITEM) "Y" = YES "N" = NO "DK" = Don't Know EF" = Refused response**

a. Age 40 years or older ..... [1] Y [2] N [8] DK [9] Refused

b. Bruising of bumping the breast ..... [1] Y [2] N [8] DK [9] Refused

c. Having a mother/daughter/sister who had breast cancer [1] Y [2] N [8] DK [9] Refused

d. Being overweight ..... [1] Y [2] N [8] DK [9] Refused

e. Being around someone who has breast cancer ..... [1] Y [2] N [8] DK [9] Refused

f. Having a first child after age 30 ..... [1] Y [2] N [8] DK [9] Refused

g. Menopause (change of life) after age 50 ..... [1] Y [2] N [8] DK [9] Refused

h. Onset of the menstrual cycle before age 12 ..... [1] Y [2] N [8] DK [9] Refused

i. Stress ..... [1] Y [2] N [8] DK [9] Refused

j. High fat diet ..... [1] Y [2] N [8] DK [9] Refused

k. Cigarette smoking ..... [1] Y [2] N [8] DK [9] Refused

l. Other **(Specify)** _____

24. In your opinion can breast cancer be prevented?

a. Yes 1

b. No 2

c. Sometimes 3

d. Don't know/Not sure 8

e. Refused Response 9

25. In your opinion can breast cancer be controlled?

a. Yes 1

b. No 2

c. Sometimes 3

d. Don't know/Not sure 8

e. Refused Response 9

26. In your opinion can breast cancer be cured?

a. Yes 1

b. No 2

c. Sometimes 3

d. Don't know/Not sure 8

e. Refused Response 9

27. Which of the following examinations can be done to find breast cancer in its very early stages? **(PLEASE READ EACH RESPONSE) "Y" = YES "N" = NO "DK" = DON'T KNOW**

a. Women examining their own breast ..... [1] Y [2] N [8] DK [9] Refused

b. Pap Smear ..... [1] Y [2] N [8] DK [9] Refused

c. Doctors or nurses examining the breast ..... [1] Y [2] N [8] DK [9] Refused

d. Chest X-Ray ..... [1] Y [2] N [8] DK [9] Refused

e. X-Ray examination/mammography for the breast ... [1] Y [2] N [8] DK [9] Refused

f. Other **(Specify)** _____

28. For the following statements about breast cancer, please tell me if you agree, disagree or don't know. **(PLEASE READ EACH RESPONSE)**

1a. It is silly for a woman to have her breast examined when she is feeling fine and is not having any problems.

a. Agree 1

b. Disagree 2

c. Don't Know 8

d. Refused Response 9

2b. It is not a good idea for women to talk about breast cancer to each other.

a. Agree 1

b. Disagree 2

c. Don't Know 8

d. Refused Response 9

3c. Breast Cancer can be detected or found at an early stage.

a. Agree 1

b. Disagree 2

c. Don't Know 8

d. Refused Response 9

4d. Finding and treating breast cancer very early in a woman can save her life.

a. Agree 1

b. Disagree 2

c. Don't Know 8

d. Refused Response 9

29. What do think your chances are of getting breast cancer? **(PLEASE READ EACH RESPONSE)** **(If you are a breast cancer survivor, go to Q-34)**

a. Very likely 1

b. Likely 2

c. Not likely 3

d. Very unlikely 4

e. Don't know/ Not sure 8

f. Refused Response 9

30. Have you had a breast exam by a doctor or another health care provider?

a. Yes, by a doctor 1

b. Yes, by another health care provider **(Specify)** _____

c. No **(SKIP TO Q-33)** 2

d. Don't know/ Not sure **(SKIP TO Q-34)** 8

e. Refused response **(SKIP TO Q-34)** 9

31. During what month and year did you have your last breast exam by a doctor or another health care provider?

a. _____month _____year

b. Don't know/ Not sure 8

c. Refused response 9

32. Was your last breast exam done as part of a routine checkup, because of a breast problem, or because you've already had breast cancer?

a. Routine checkup 1

b. Breast problem 2

c. Had breast cancer 3

d. Don't know/Not sure 8

e. Refused response..... 9

33. **(FOR WOMEN WHO HAVE HAD A BREAST EXAM)** What is the reason you did not have a breast exam by a doctor or another health care provider? **(PLEASE PRINT CLEARLY)**

_____

_____

34. How often do you think a woman you age should have a breast exam by a doctor or another health care provider?

a. Monthly 1

b. Yearly 2

c. Whenever the doctor says so 3

d. Never 4

e. Don't know/ Not sure..... 8

f. Refused response..... 9

g. Other **(Specify)** _____

35. How often do you perform breast self-exams? **(examining your breast for lumps)**

a. More than once per month 1

b. Once per month 2

c. Less than once per month 3

d. Never **(SKIP TO Q-37)** 4

e. Refused response **(SKIP TO Q-38)** 8

36. How did you learn to do breast self-examination? **(PLEASE READ EACH RESPONSE)**
"Y" = YES "N" = NO "DK" = Don't Know

a. Physician ..... [1] Y [2] N [8] DK [9] Refused

b. Nurse ..... [1] Y [2] N [8] DK [9] Refused

c. Mother, sister or other relative ..... [1] Y [2] N [8] DK [9] Refused

d. Friend ..... [1] Y [2] N [8] DK [9] Refused

e. Self-taught (besides pamphlet/magazine) ..... [1] Y [2] N [8] DK [9] Refused

f. Learned from a pamphlet or magazine ..... [1] Y [2] N [8] DK [9] Refused

g. TV ..... [1] Y [2] N [8] DK [9] Refused

h. Workshop ..... [1] Y [2] N [8] DK [9] Refused

i. Other **(Specify)** _____

37. **(FOR WOMEN WHO DO NOT PERFORM BREAST SELF EXAMS)** What is the main reason that women do not perform breast self-exams on a regular basis?

a. I forget 1

b. I do not trust my ability 2

c. I do not know how 3

d. I do not believe it increases my chance of survival 4

e. I am afraid 5

f. Don't Know/ Not sure 8

g. Refused response 9

h. Other **(Specify)** _____

38. How often do think a woman your age should perform a breast self- exams?

a. Monthly 1

b. Yearly 2

c. Whenever the doctor says so 3

d. Never 4

e. Don't know/Not sure 8

f. Refused response 9

g. Other amount of time **(Specify)** _____

39. Have you ever heard of a mammogram? **(If you are a Breast Cancer survivor go to Q-42)**

a. Yes 1

b. No 2

c. Don't know/ Not sure 8

d. Refused response 9

40. Have you ever had a mammogram (A mammogram is an X-ray of the breast to look for abnormalities or to screen for cancer)?

a. Yes 1

b. No **(SKIP TO Q-44)** 2

c. Don't know/ Not sure **(SKIP TO Q-45)** 8

d. Refused response **(SKIP TO Q-45)** 9

41. During what month and year did you have your last mammogram?

a. _____month _____year

b. Don't know/Not sure 8

c. Refused response 9

42. Was your mammogram done as a part of a routine checkup, because of a breast problem, or because you've already had breast cancer?

a. Routine checkup 1

b. Breast problem 2

c. Had breast cancer 3

d. Don't know/ Not sure 8

e. Refused response 9

43. Who encouraged you to get your last mammogram?

a. Respondent's idea 1

b. Health Care Providers 2

c. Media (TV, Radio, Newspaper etc.) 3

d. Relative 4

e. Friend 5

f. Don't know/Not sure 8

g. Refused response 9

h. Other **(Specify)** _____

44. **(FOR WOMEN WHO HAVE NOT HAD A MAMMOGRAM)** What is the reason you did not have a mammogram? **(PLEASE PRINT CLEARLY)**

---

45. How often do you think a woman your age should have a mammogram?

a. Monthly 1

b. Yearly 2

c. Whenever the doctor says so 3

d. Never 5

e. Don't know/ Not sure 8

f. Refused response 9

g. Other **(Specify)** _____

46. **(FOR WOMEN WHO ARE BREAST CANCER SURVIORS)** How was your breast cancer first detected?

a. A lump was found by self breast examination 1

b. A lump was found by my spouse 2

c. A lump was found by my health care provider during a breast examination. 3

d. A lump was found by a mammogram 4

e. Don't know/ Not sure 8

f. Refused response 9

g. Other **(Specify)** _____

47. Did you receive counseling before and/or following the your diagnosis?

a. I received adequate counseling 1

b. I received adequate counseling before my diagnosis 2

c. I received adequate counseling after diagnosis 3

e. I received no counseling 4

f. Don't know/ Not sure 8

f. Refused response 9

g. Other **(Specify)** _____

48. Did you receive education/information on different types of available treatment?

a. I received adequate education/information 1

b. I received inadequate education/information 2

c. I received incorrect education/information 3

b. I received no education/information 4

c. Don't know/ Not sure 8

f. Refused response 9

h. Other **(Specify)** _____

49. Did you seek alternative/complementary medical care? **(IF NO SKIP TO Q-50)**

a. Yes, I saw a Nutritionist 1

b. Yes, I saw a Chiropractic Physician 2

c. Yes, I saw a Homeopathic Physician 3

d. Don't know/ Not sure 8

f. Refused response 9

i. Other **(Specify)** _____

50. What was your support system?

a. My family and friends provided social support for me 1

b. My health care provider recommended a support group to me 2

c. I found a breast cancer support group 3

d. I have no social support 4

e. Don't know/ Not sure 8

f. Refused response 9

j. Other **(Specify)** _____

APPENDIX C

THE INFLUENCE OF HEALTHCARE PROVIDER PRETREATMENT PREPARATION ON SEXUAL SIDE EFFECTS OF BREAST CANCER TREATMENTS EXPERIENCED BY AFRICAN AMERICAN WOMEN

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ABSTRACT

INFLUENCE OF HEALTHCARE PROVIDER PRETREATMENT PREPARATION FOR SEXUAL SIDE EFFECTS OF BREAST CANCER TREATMENTS AMONG AFRICAN AMERICAN WOMEN

Principal Investigator: **Vanessa C. Parker, Ph.D., M.A., CHES**

Key Words: Breast Cancer, African American, Posttreatment Psychosexual Morbidity, Healthcare Provider, Sexual Side Effects

Nationwide, breast cancer has been ranked first among the five most common cancer sites for African American women, and it is the leading cause of cancer death for African American women between the ages of 35-54 years. Across all ages, African American women have a lower incidence rate of breast cancer than white women (101.0 versus 113.1 per 100,000, respectively). Nevertheless, African American women are more likely than their white counterparts to die of breast cancer (31.2 deaths versus 26.0 deaths per 100,000, respectively). The disparity in breast cancer survival rates has been attributed to late-stage diagnosis of cancer, poverty, and limited access to quality care. All current treatments for breast cancer can have serious sexual side effects, including decreased libido, negative body image, decreased self-esteem, decreased self-confidence, decreased or absent orgasmic function, and decreased or absent vaginal muscle tone and lubrication. However, treatment-induced sexual side effects is a subject of rare discussion or investigation within in the medical and scientific communities. No studies have been published examining treatment-induced sexual side effects among African American women. A longitudinal panel study design with repeated measures will be used to examine the influence of pretreatment healthcare provider preparation of African American women for the potential sexual side effects of breast cancer treatments. Specifically, this study will determine whether treatment choice is influenced by the level of pretreatment preparation from healthcare providers about potential sexual side effects of breast cancer treatment;longitudinally examine pre/post-treatment changes in sexual functioning among women who undergo surgery (lumpectomy, mastectomy-with or without reconstruction), radiotherapy, chemotherapy, or combinations thereof; compare pre/post-treatment changes in sexual functioning, within and between treatment modalities; assess whether the level of posttreatment sexual morbidity is mediated by the level of healthcare provider pretreatment preparation for the potential sexual side effects of breast cancer treatment modalities, within and between modalities; and assess whether a woman's socioeconomic status influences the quality of healthcare provider pretreatment preparation for the potential sexual side effects of breast cancer treatment. It is hypothesized that (1) across and within treatment modalities, women who report pretreatment preparation about treatment-induced sexual side effects will report less psychosexual morbidity than women who did receive pretreatment preparation; (2) healthcare provider pretreatment preparation for treatment-induced sexual side effects will mediate the relationship between treatment modality and psychosexual morbidity; (3) the application, complexity, and intensity of pretreatment preparation for treatment-induced sexual side effects will differ across socioeconomic status (SES), such that women of lower SES will report a lower frequency receipt, less complex, and lower intensive pretreatment preparation than their higher SES counterparts; and (4) women with clinical stages I or II breast cancer who are provided pretreatment preparation about the sexual side effects of breast cancer treatments are more likely to undergo breast-sparing surgery than women who are not provided pretreatment preparation. Data collection will be facilitated through a combination of focus groups and interview surveys. Baseline and follow-up, face-to-face, structured interviews will be conducted with study participants at four times over a period of 36 months, the scheduling of which will be treatment-dependent (breast-sparing, with or without reconstruction versus mastectomy). Analyses of association, regression analyses, analysis of variance, and t-tests will be used to test hypotheses.

PROPOSAL RELEVANCE STATEMENT

For rehabilitation to be complete in a cured cancer patient, or for therapy to be fully comprehensible beyond cure, it is essential that attention be devoted to the problems associated with the sexual dysfunction that arises out of cancer therapy. The proposed prospective behavioral research study is innovative in that it will be the first to investigate the influence of pretreatment patient-provider interaction on psychosexual outcomes of breast cancer treatments. Findings from this study will make a unique and significant contribution to the medical and scientific communities about the expression of treatment-induced sexual side effects among African American female patients.

To date, the few studies that have been published on treatment-induced sexual side effects are based on data collected from primarily white cohorts of breast cancer patients. No studies have been published investigating the sexual side effects of breast cancer treatment modalities among African American women. The medical and scientific communities are ignorant of how breast cancer treatments affect the psychosexual health of African American women. Notwithstanding the data indicating a disproportionate representation of African American women among the morbidity and mortality breast cancer statistics, it is critical to address this issue which assuredly impacts the quality of life of this population of cancer survivors. Without knowing how treatment-induced sexual side effects manifest among African American women, healthcare providers of all disciplines cannot begin to adequately assess, prepare or address the posttreatment rehabilitation needs of these women. Armed with the information promised from this study, the edcuational, medical, and scientific communities can make a significant contribution in the quality of lives of these survivors of breast cancer. This study will serve as the first attempt to document the expression of breast cancer treatment-induced psychosexual morbidity among African American women.

African American women with the diagnosis of early breast cancer should be educated about treatment-induced sexual side effects, in a context that is linguistically appropriate and culturally competent. This education will empower them so that they can actively engage in decision-making about treatment options, and reduce the level posttreatment psychosexual morbidity. Data from this study will inform the framework for the development of multi-media interventions to: (1) increase the awareness and educate African American breast cancer patients and their providers about the phemonology of treatment-induced psychosexual side effects and their management; and (2) encourage healthcare provider-initiated pre-treatment education about and post-treatment follow-up on treatment-induced psychosexual side effects.

AIMS The broad objective of the proposed study is to examine the impact of healthcare provider pretreatment preparation on the potential psychosexual morbidity accompanying breast cancer treatment modalities on the level of posttreatment sexual functioning among African American women. The specific aims of this proposal are to:

1. Determine whether treatment choice is influenced by the level of pretreatment preparation from healthcare providers about potential sexual side effects of breast cancer treatment;
2. Longitudinally examine pre/post-treatment changes in sexual functioning among women who undergo surgery (lumpectomy, mastectomy-with or without reconstruction), radiotherapy, chemotherapy, or combinations thereof;
3. Compare pre/post-treatment changes in sexual functioning, within and between treatment modalities;
4. Assess whether the level of posttreatment sexual morbidity is mediated by the level of healthcare provider pretreatment preparation for the potential sexual side effects of breast cancer treatment modalities, within and between modalities;
5. Assess whether a woman's socioeconomic status influences the quality of healthcare provider pretreatment preparation for the potential sexual side effects of breast cancer treatment.

HYPOTHESES The specific hypotheses that will be tested with the study data include:

1. Across and within treatment modalities, women who report pretreatment preparation about treatment-induced sexual side effects will report less psychosexual morbidity than women who did receive pretreatment preparation.
2. Healthcare provider pretreatment preparation for treatment-induced sexual side effects will mediate the relationship between treatment modality and psychosexual morbidity.
3. The application, complexity, and intensity of pretreatment preparation for treatment-induced sexual side effects will differ across socioeconomic status (SES), such that women of lower SES will report a lower frequency receipt, less complex, and lower intensive pretreatment preparation than their higher SES counterparts.
4. Women with clinical stages I or II breast cancer who are provided pretreatment preparation about the sexual side effects of breast cancer treatments are more likely to undergo breast-sparing surgery than women who are not provided pretreatment preparation.

BACKGROUND AND SIGNIFICANCE Breast cancer is a major health problem in the United States.[1] Breast cancer is the most commonly diagnosed cancer among U.S. women [2] who have a 1 in 8 lifetime risk of developing breast cancer, and a 1 in 28 lifetime risk of dying from breast cancer.[3] In California, current data indicates that, annually, breast cancer accounts for nearly one in every three new invasive cancers diagnosed among women and one in every six cancer-related deaths.[4] In Los Angeles County, between 1972 and 1987, breast cancer incidence accounted for 28% of the cancer incidence and 20% of the cancer mortality for females of all ages and races.[5]

Nationwide, breast cancer has been ranked first among the five most common cancer sites for African American women, and it is the leading cause of cancer death for African American women between the ages of 35-54 years.[3] Across all ages, African American women have a lower incidence rate of breast cancer than white women (101.0 versus 113.1 per 100,000, respectively). Nevertheless, African American women are more likely than their white counterparts to die of breast cancer (31.2 deaths versus 26.0 deaths per 100,000, respectively).[6] Current data inform that African American women experience a 5-year survival rate that is 10-15% lower than that of their white counterparts across all disease stages.[1] The disparity in breast cancer survival rates has been attributed to late-stage diagnosis of cancer, poverty, and limited access to quality care.[3] In California, African American women are at least 10% more likely than white women to be diagnosed with advanced stage, which contributes to their higher mortality rates.[4] After controlling for age and SES, African American women usually suffer a poorer prognosis and are exposed to more complex treatment regimens, in comparison to their white counterparts.

The staging for breast cancer ranges from I to IV. A stage I breast cancer is a small breast cancer that is confined to the breast. A stage II breast cancer is a larger breast cancer that may have already involved the axillary lymph nodes on the same side as the breast cancer. A stage III breast cancer is a much farther advanced cancer that may have spread into the skin or into the chest wall ad may have much more extensive lymph node involvement, and stage IV breast cancer is one that has metastasized or spread into organs outside of the breast. Stages I and II breast cancers are considered curable by surgery. Stage III breast cancer requires surgery, chemotherapy, and radiotherapy. Stage IV breast cancer is inoperable. Current treatments for operable breast cancer include mastectomy (radical or modified radical) or lumpectomy with or without radiation and axillary node resection (breast conservation), adjuvant radiotherapy or chemotherapy, and anti-estrogen treatments. All current treatments for breast cancer can have serious sexual side effects,[7] including decreased libido, negative body image, decreased self-esteem, decreased self-confidence, decreased or absent orgasmic function, and decreased or absent vaginal muscle tone and lubrication. Additionally, fatigue, nausea, vomiting, hair loss, hot flashes, and weight gain are the common, non-sexual side effects that exact tremendous influence on sexuality. Treatment-induced sexual side effects is a subject of rare discussion or investigation within in the medical and scientific communities. A recent telephone poll of 12 Los Angeles area breast cancer education/treatment centers conducted by this investigator found **only one** agency with information available for dissemination to breast cancer patients about treatment-induced sexual side effects, and that was in the form of a pamphlet. Other agencies indicated they refer patients for counseling *if it seems necessary*.

The female breast has historically been glamorized, idealized, and sensationalized. In a society where a woman's breasts are valued as symbols of sexuality and nurturance, the possibility of mastectomy or any physical change of the breast is perceived as an assault on the women's self-image and self-esteem.[8,9] A diagnosis of breast cancer typically creates a condition of emotional vulnerability, where women are often more afraid of losing their husbands or lovers, or, if single, of not being able to attract new partners, than they are about the possibility of facing a cruel and untimely death.[10] The psychosexual morbidity of breast cancer is an outgrowth of the woman's stage of life, stage of disease at diagnosis, the type(s) of treatment she must undergo, the psychologic makeup, and her repertoire of coping strategies.[8]

Body image is a mental picture of the physical self and includes attitudes and perceptions regarding one's physical appearance, state of health, skills, and sexuality.[1,7,11] An understanding of body image as a component of self-concept, provides a framework for studying the responses of women to treatment for breast cancer, as these responses reflect the importance of the female breast as a symbol of womanliness, sexual attractiveness, and nurturance.[12] It is imperative for any woman to understand the degree to which she considers her breasts as essential to her self-esteem, sense of worth, and overall sexual gratification. Studies investigating factors influencing options in breast cancer treatment among white women have found that breasts are an important source for women to be able feminine in a physical sense, see themselves as being attractive, being able to feel sexually desirable.[13] Preservation of sexual attractiveness and function may be a causative factor in women choosing breast-sparing procedures.[8] On the other hand, a review of the handful of studies investigating sexuality among healthy African American women reveals that, in general, these women view sexuality as natural and positive, sexual satisfaction is as important to them as it is to their partners,[14] and dissatisfaction with body image and weight does not exert an overwhelming negative influence on their sexual activity.[15] This study will examine the value African American women assign to their breasts and its influence on selecting treatment options.

Clinical trials have demonstrated that breast-conserving surgery followed by radiotherapy is as effective as modified radical mastectomy in treating women with localized breast cancer.[16] In the majority of patients so treated, the breast is usually minimally changed from its previous state of appearance, touch, and tactile sensation.[13] Women diagnosed with early breast cancer can opt for breast-conserving surgery, which reduces the physical and psychological morbidity associated with mastectomy.[17] Trend analyses indicate a significant increase in the use of breast-conserving surgery, even if there is a slight statistical increase in the risk of recurrence.[7] Study findings remain inconclusive about racial differences in the use of breast-conserving surgery. While some studies have found no demographic differences in the use of this treatment modality,[18] others report

African American women less likely than white women to undergo breast-conserving surgery,[1,7,19] and other studies report that African American women are more likely than white women to have breast-conserving surgery

A mastectomy has not been found to impact the female sexual response cycle;[12] however, many patients and their partners do experience some sexual difficulties because of the adverse emotional consequences. Some women fear their partners being appalled by the sight of their breastless bodies and/or scars/burns, and a fear of rejection manifests as a pattern of sexual avoidance and decrease in kissing activity.[12] Studies have found that women with mastectomies felt more much more negative about their nude appearance, much more self-conscious in groups of women, less sexually desirable, and more dissatisfied with their body images, as compared to women with lumpectomies.[1,13,20]

Postmastectomy breast reconstruction surgery is available to an increasing number of patients, with over 40,000 such reconstructions being performed annually.[21] Reconstructed women may be less negative about their bodies, less anxious sexually, and more open to responding to sexual stimuli, than their mastectomy counterparts.$_x$ Available data indicates that African American women have not embraced cosmetic and reconstructive surgery with the same enthusiasm as their white counterparts, and that they are less likely than white women to be referred for postmastectomy rehabilitation.[22] This study represents the first attempt to examine postmastectomy sexual functioning among African American women who undergo breast reconstruction.

Adjuvant chemotherapy can be much more destructive to a womans' sexuality than surgery. The side effects of commonly used adjuvant chemotherapeutic agents and regimens often include fatigue, lethargy, depression, nausea, vomiting, hair loss, susceptibility to infection, weight gain, and many others. A woman who is fatigued, has lost her hair, and has become overweight does not feel sexually desirable, especially when this happens a few weeks after she has lost her breast(s).[7] The chemotherapeutic agents used to treat breast cancer destroy ovarian functioning which produces premature menopause. In addition, chemotherapy results in estrogen and testosterone deficiencies which impair the physiology of the excitement phase of the female sexual response cycle,[23,24] and the global loss of sexual desire with diminished sexual pleasure and fantasy,^{x} respectively. An examination of over 36,000 cases of breast cancer diagnosed between 1978-1992 found that African American women are more likely than whites to be treated non-surgically or have no cancer-directed therapy, after controlling for age, stage, and histology.[25]

METHODOLOGY

Study Design. The proposed study is a longitudinal panel design with repeated measures. Data collection will be facilitated through a face-to-face structured interview administered to each woman four times over a period of 24 months. The four stages of data collection will consist of a baseline/intake interview and three follow-up interviews. The scheduling of the baseline and follow-up interviews will be treatment-dependent. Women choosing breast conservation will receive a baseline interview at 6-8 weeks posttreatment, and their first, second, and third follow-up interviews 6-8 months after radiation/chemotherapy, and at two successive approximate 6-month intervals, respectively. Women choosing a mastectomy will receive their baseline interview 6-8 weeks after surgery. Mastectomy patients selecting reconstruction will be administered follow-up interviews according to the following schedule: 1st at 4-6 weeks after surgery (3-5 months postmastectomy), 2nd at one month after the last course of chemotherapy (8-10 months postmastectomy), and 3rd at 24-26 months postmastectomy. Mastectomy patients electing to not have reconstructive surgery will be administered the 1st, 2nd, and 3rd follow-up interviews at 3-5 months postmastectomy, 8-10 months postmastectomy, and 24-26 months postmastecomy, respectively. This prospective study design is diagramed in Addendum x. The study will be completed in 36 months, with an anticipated start date of 10/01/98 and the completion date of 09/30/01.

Study Population

Inclusion criteria Eligibility in the study is limited to African American women who are between 35-70 years of age, diagnosed with Stage 1 or II breast cancer, report sexual activity for the six months prior to cancer diagnosis, have not less than two months and no greater than three months post surgery (mastectomy or lumpectomy), and who are free of recurrences at the time of entry into the study.

Sample Size. Power refers to the probability of accepting a true null hypothesis. Power analysis indicated that

for a one-tailed test at a p=0.05 level of significance, a sample size of 88 is adequate to detect a minimum correlation of 0.30. This will provide a power of 0.80.[26]

Subject recruitment. As a recognized, active volunteer with two Southern California cancer organizations (American Cancer Society (ACS) and BCEDP), and as the current Chairperson of the Breast Health Task Force of the Central Los Angeles Division ACS, the principal investigator has developed ongoing collaborative relationships with many breast cancer service providers, and feels confident in being able to access these resources for recruitment purposes. Recruitment for the study will be ongoing until the desired sample size is accomplished. Study personnel will recruit women into the study by employing, but not limited to, the following strategies: (1) placement of print and radio public service announcements placed in newspapers and radio spots that have a predominantly African American audience; (2) placement of information bulletin in Southern California Cancer Calendar; (3) conduct presentations at breast cancer support groups, churches, club meetings (e.g,. Greek sororities, lesbian service organizations, professional organizations), waiting rooms of breast cancer clinics (inreach); (4) distribution of information flyers/bulletins at health fairs, health clubs, grocery stores, laundromats, churches, hair and nail salons and spas, breast treatment centers, breast-focused conferences and meetings; (5) word-of-mouth referral by participants; (6) collaborate with health clinics and practitioners who are partners in the California Department of Health Services' Breast Cancer Early Detection Program (BCEDP) and Breast and Cervical Cancer Control Program (BCCP) for referrals. Addendum x contains a partial listing of agencies, treatment centers, and media that will be engaged for study recruitment. Participation in the study will be voluntary. Women interested in participating will be asked to contact the study office where they will be screened for eligibility. Eligible women will be consented and enrolled into the study. Ineligible women will be thanked for their interest and mailed/pickup a $5 grocery coupon for their time. The most current available CSP data will be used to examine the representativeness of the volunteer study sample for African American women with stages 1 and 2 breast cancer.

Subject attrition threatens the external validity of a study[x]. The nature of this study predisposes a high risk for attrition. Strategies that will be employed to minimize subject attrition include, the maintenance of current locator information, implementation of an exhaustive tracking system, oversampling by 40-50% (n=123-132), and providing subjects with a gradient of incentives, ranging in cash value from $75 to $150, for maintenance of participation through follow-up. Point interviews with African American breast cancer survivors and focus group data will inform the appropriate incentives that will create some buy-in for the study subjects. The investigator has a successful track record locating hard-to-reach populations for longitudinal panel designs (see Addendum x, "Tracking Protocol").

Data Collection. A combination of **focus groups** and **interview surveys** will be use to assess the pre/post breast cancer treatment changes in sexual functioning, and the influence of healthcare provider pre-treatment preparation for these changes. Focus groups. Information gathered from the focus groups will be used to inform the content, linguistics, context, and scope of the interview survey. Two to four groups of 6-10 women will be conducted at venues and times convenient for the participants. The groups will meet for approximately 90 minutes, refreshments will be provided, and participants will receive $25 gift certificates. The proceedings of the focus groups will be audiotaped, transcribed, and content coded. The focus groups will explore and the experiences of breast cancer survivors and cancer-free women for the personal significance of their breasts, definition of femininity, gender roles, factors involved in breast cancer treatment, expectations of healthcare providers in preparing women for treatment-induced sexual side effects, suggestions for educational materials. Prior to the focus group, participants will be asked to complete a short, self-administered survey assessing demographics, breast cancer KABP's, stage of disease, types of treatment, level of sexual activity, sexual practices, the level of sexual functioning along the desire, arousal, and release phases of the sexual cycle, perceived body image. Upon concluding the group, another survey will be administered for the evaluation of the focus group, and to examine changes in breast cancer KABP's, and other constructs which may have been facilitated by the focus group process.

Interview surveys. Face-to-face structured confidential interview surveys will be used for data collection. The

surveys will contain open- and closed-ended items. The baseline and follow-up surveys will be designed to require no more than 90 and 45 minutes for administration, respectively. All interviews will be conducted in English. Interviews will be conducted at venues convenient for participants (i.e., clinics, homes, coffee shops). If a direct interview is not possible, a telephone interview will be conducted. Survey content will reflect items developed from a review of the literature, validated scales, and focus group data. The follow-up surveys will contain a subset of the baseline survey items.The following is a sampling of the constructs proposed for measurement, the final content of the survey will be informed by results of pilot testing: *Demographics* (age, ethnic identification, marital status, educational attainment, employment and insurance status, annual income, number of children, number of rooms in house, group memberships); *Breast Health* (date of diagnosis, date and type of first treatment, perceived outcome of treatment, familial history of breast cancer, breast cancer screening practices);*Pretreatment Preparation by Healthcare Provider* (items will be developed to assess perception and expectations of healthcare provider's effectiveness in preparing subject for the general and sexual side effects of her cancer); *Reproductive History* (use of contraceptives, protective methods for sexual intercourse, gravida/para, age at first pregnancy, number of children, ages of menses and menopause, pre/posttreatment changes in vaginal physiology);*Sexual Practices* (The Sexual Activities Scale from the Derogatis Sexual Functioning Inventory[x] to assess the range and frequency of pre/posttreatment sexual activities);*Sexual Response Cycle* (items from Sexual Arousal Inventory[x] and the Masters and Johnson's survey[x] to assess the pre/posttreatment changes in each of the three phases of the sexual response cycle); *Sexual Satisfaction-Global Sexual Evaluation* (Andersen and Jochimsen's GLOBE scale[x] to assess pre/posttreatment perception of and level of satisfaction with sexual life);*Body Image* (Derogatis & Melisaratos's Body Image Scale [x] to assess pre/posttreatment beliefs about body and appearance);*Perceived Support from Sex Partner* (items will be generated to assess the pre/posttreatment emotional, physical, and financial support from sex partner(s);*Marital Adjustment* (Spanier's Dyadic Adjustment Scale[x] to assess areas of possible pre/posttreatment disagreement, satisfaction, and a global evaluation of the relationship with partner. *Self-Esteem and Coping Skills* (scales for these constructs which have been validated on African Americans will be identified and used for these assessments).

DATA ANALYSIS

The project manager will review surveys for completeness. Data entry, cleaning, and analyses will be performed using SAS for Windows, version 6.1. Psychometric analyses: will be performed to assess the reliability and validity of the interview instruments, and will allow for the elimination of those items which do not contribute to the measurement of desired outcomes. Computation of Cronbach alpha coefficients will be used to determine the internal consistency of survey items. Univariate analyses: will be performed to obtained a preliminary descriptive analysis. Chi-square and correlational analyses will be performed to determine associations between independent and outcome variables, independent and mediating variables, and mediating and outcome variables. Repeated measures will be analyzed using ANOVA. Factor analyses may be employed to create additional constructs. Indices of some constructs will be created when appropriate and used in analyses.

Some interactions are expected to occur (e.g., pre-treatment preparation x posttreatment sexual satisfaction), and the significance of such interaction terms will be entered into multivariate analyses, if so indicated. Multivariate analyses:Small sample sizes preclude the use of multivariate logistic regression analyses. T-test will be use to measure between- and within-group pre/posttreatment mean percentage change in sexual functioning. Attrition analyses: T-tests will be used to compare those participants who remained in the study with those who dropped out and never returned at any point after the baseline interview.

Confidentiality. In order to insure for confidentiality, each participant will be assigned a unique identifier. This identifier will be composed of a 9-digit number representing the last, middle and first initials of the subject's name, and the subject's date of diagnosis. The unique identifiers will be appended to all data collection materials, including, the consent forms, the biographical data sheets and surveys. Data will be kept in a locked storage file located in the locked office of the investigators, and will only be accessible to the investigators. Data will be analyzed and reported in aggregate form; no data will be reported individually.

APPENDIX D

APPENDIX D1

Cancer Rate Differentials Between Blacks and Whites in Three Metropolitan Areas: A 10-Year Comparison

Ling Y. Wu, MD, PhD, Kofi A. Semenya, PhD, R.E. Hardy, MD, MPH, Margaret K. Hargreaves, PhD, Susan B. Robinson, MD, MPH, Linda Pederson, PhD, John F. Sung, PhD, and M. Alfred Haynes, MD, MPH

Nashville, Tennessee; Los Angeles, California; and Atlanta, Georgia

This article compares cancer rate differentials for 1989-1993 and 1979-1981 between black and whites in Los Angeles, Nashville, and Atlanta. In Los Angeles and Atlanta, the black/white relative risk of lung cancer incidence has increased. While the relative risk for prostate cancer has decreased, blacks still show an excess incidence. White women still show a higher incidence of breast cancer, but the relative risk is closer to one. In all three cities, the excesses of black male lung cancer and female breast cancer mortalities have increased. The excess of black prostate cancer mortality increased in Atlanta and Nashville but decreased in Los Angeles. The excess of black cervical cancer mortality fell in Los Angeles and Atlanta but rose in Nashville. These results indicate a continuing need to develop and implement culturally sensitive interventions targeted at the black population. (*J Natl Med Assoc.* 1998;90:410-416.)

Key words: cancer ◆ blacks

Recent data have demonstrated that in the general population, black men continue to have the highest overall cancer incidence and mortality rates, largely due to excess prostate and lung cancer.[1] While the overall cancer incidence rate among women is higher in non-Hispanic whites, the excess risk of cancer mortality among black women still exists. Indeed, among both male and female blacks, there is an excess in cancer mortality when compared with their white counterparts. However, no comparisons have been made between the excess risks over time. Also, while white women still have an excess incidence of breast cancer, black women have had a more rapid increase in breast cancer in the past decade.[2]

Ten years ago, Haynes et al[3] published an article comparing the cancer incidence and mortality rate differentials and survival between blacks and whites in Los Angeles, Atlanta, and Nashville. These three cities are the service areas of the Drew-Meharry-Morehouse Consortium Cancer Center, which was founded in 1986 and focuses on the prevention and control of cancers among African Americans. This article examines the cancer rate differentials and survival between blacks and whites in the same cities 10 years later to determine whether the differentials have changed in that time.

MATERIALS AND METHODS

Data for the three cities came from two sources.

rom the Drew-Meharry-Morehouse Consortium Cancer Center at Meharry Medical College, Nashville, Tennessee; Drew University of Medicine and Science, Los Angeles, California; and Morehouse School of Medicine, Atlanta, Georgia. Requests for reprints should be addressed to Dr Kofi A. Semenya, Drew-Meharry-Morehouse Consortium Cancer Ctr, Meharry Medical College, 1005 D.B. Todd Blvd, Nashville, TN 37208.

Table 1. Average Annual Age-Adjusted Cancer Incidence Rates By Sex, Primary Site, Race, and Geographic Area, 1989-1993*

	Male				Female			
	Lung Cancer		Prostate Cancer		Breast Cancer		Cervical Cancer	
Geographic Area	Black	White	Black	White	Black	White	Black	White
Los Angeles	109.9	68.1	198.2	138.0	93.8	107.3	12.6	11.7
Atlanta	121.5	93.9	224.6	168.1	96.4	111.3	12.9	7.8
Nashville	119.7	101.9	142.9	123.2	86.3	114.4	17.4	8.3
SEER (total)	122.1	79.2	211.7	150.7	97.3	112.8	12.6	7.9

Abbreviations: SEER=Surveillance, Epidemiology, and End Results Program.
*Incidence rates per 100,000 population.

The Nashville data were collected from the Tennessee State Department of Health, while the Los Angeles and Atlanta data came from the NCI's Surveillance, Epidemiology, and End Results (SEER) Program.[4] For comparison with the earlier study,[3] four cancers were selected: lung, prostate, breast, and cervix.

The Nashville data were raw data, from which average annual incidence and mortality rates were derived by age and race (white and black) for the years 1989 to 1993. These rates were age-adjusted using the 1970 US population as the standard population to make comparisons with the data from SEER. Because the SEER data were already presented as 5-year (1989 to 1993) average annual age-adjusted rates, the Nashville data also were processed to match the same time period. The percentage change of age-adjusted incidence and mortality rates were calculated for blacks and whites to compare the rates of change between them. Finally, the relative risks of cancer over the 10-year period were compared to estimate the change in black-white risks.

The age-adjusted incidence also is included for the total study population in the SEER program, which covers about 14% of the overall US population. The age-related mortality rates for the total US population came from the National Center for Health Statistics (NCHS).

RESULTS

Incidence

Table 1 shows the average annual age-adjusted cancer incidence rates for 1989-1993. For lung and prostate cancers, black men had higher rates than white men in all three cities. Black women had higher rates of cervical cancer, while white women had a higher incidence of breast cancer in all three cities. The statistical results from the total SEER population also showed a higher rate of lung and prostate cancers among black men, and a higher rate of cervical cancer and a lower rate of breast cancer among black women.

Table 2 presents black/white relative risk. Confidence intervals on the relative risks show no statistical significant difference between blacks and whites for lung and prostate cancer in Nashville, and breast and cervical cancers in Los Angeles and Atlanta.

Table 3 presents the percent change in average annual age-adjusted cancer incidence rates between 1979-1981 and 1989-1993 in Los Angeles and Atlanta. Nashville is not presented because there was no incidence data registry until 1987. For lung cancer, the data show that white men had a decline in incidence while black men experienced an increase; Los Angeles experienced the greatest relative decline. For prostate cancer, both white and black men had increases in incidence in all cities; however, white men had a greater relative increase than black men in each city. For breast cancer, although the incidence had risen for both white and black women, black women had a more rapid increase than white women. For cervical cancer, both white and black women showed a decline in incidence rates compared to 10 years ago except in Los Angeles where white women showed a 30% relative increase. The percentage changes in age-adjusted incidence of the four cancers among the total SEER population showed the same trends as

Table 2. Relative Risks (RR)* of Cancer Between Blacks and Whites

	Male				Female			
	Lung Cancer		Prostate Cancer		Breast Cancer		Cervical Cancer	
Geographic Area	1979-1981	1989-1993 (95% CI)	1979-1981	1989-1993 (95% CI)	1979-1981	1989-1993 (95% CI)	1979-1981	1989-1993 (95% CI)
Los Angeles	1.35	1.61† (1.36-1.93)	1.66	1.44† (1.27-1.63)	0.76	0.87 (0.74-1.03)	1.82	1.08 (0.68-1.70)
Atlanta	1.14	1.29† (1.11-1.51)	1.65	1.34† (1.19-1.50)	0.76	0.87 (0.74-1.01)	2.04	1.65 (0.67-3.92)
Nashville	—	1.18 (0.99-1.36)	—	1.16 (0.99-1.33)	—	0.75† (0.64-0.89)	—	2.10† (1.01-4.92)
SEER (total)	1.47	1.54	1.60	1.41	0.84	0.86	2.30	1.59

Abbreviations: SEER=Surveillance, Epidemiology, and End Results Program.
*RR=black to white ratio of average annual age-adjusted incidence rates. The 1978-1981 data and SEER data did not have statistical tests for the above RRs.
†Statistically significant.

Table 3. Percentage Change in Annual Average Age-Adjusted Cancer Incidence Rates Between 1979-1981 and 1989-1993*

	Male				Female			
	Lung Cancer		Prostate Cancer		Breast Cancer		Cervical Cancer	
Geographic Area	Black	White	Black	White	Black	White	Black	White
Los Angeles	1.7	−15.3	65.7	91.1	25.7	9.0	−23.2	30.0
Atlanta	9.8	−3.2	79.8	121.5	46.5	29.4	−35.5	−20.4
SEER (total)	2.6	−2.2	76.0	100.7	35.3	31.8	−37.6	−9.1

Abbreviations: SEER=Surveillance, Epidemiology, and End Results Program.
*Data for Nashville are not presented because there was no incidence data registry until 1987.

the two cities during the past 10 years except for cervical cancer among white women in Los Angeles (Table 3).

Due to the differences in the rates of change incidence over the past 10 years, the gap between blacks and whites also has changed (Table 2). The relative risk of having lung cancer increased among black men over the past 10 years. Although the relative risks of getting prostate and cervical cancers between blacks and whites decreased in the past decade, blacks still had higher risks of having these two cancers. In Los Angeles and Atlanta, the black/white incidence ratio for breast cancer from 1989-1993 was closer to 1 (0.87) than 10 years ago (0.76), which is a reflection of the fact that in recent years black women have experienced a more rapid rise in breast cancer incidence than white women in the two cities.

Mortality

Table 4 shows the average annual age-adjusted cancer mortality rates from 1989-1993. For all four cancers, blacks had higher mortality rates than whites in all three cities. For prostate and cervical cancers, black mortality rates were more than twice those of whites. The national data (NCHS) showed similar results.

The percentage change in the average age-adjust-

Table 4. Average Annual Age-Adjusted Cancer Mortality Rates* By Sex, Primary Site, Race, and Geographic Area, 1989-1993

Geographic Area	Male				Female			
	Lung Cancer		Prostate Cancer		Breast Cancer		Cervical Cancer	
	Black	White	Black	White	Black	White	Black	White
Los Angeles	91.8	55.4	45.8	22.5	32.1	27.6	5.2	3.2
Atlanta	106.6	76.3	66.3	26.1	31.3	25.0	5.1	1.7
Nashville†	138.7	91.5	67.0	24.8	36.0	25.4	8.9	2.4
NCHS (total)	104.7	72.0	54.7	24.3	31.3	26.6	6.6	2.5

Abbreviations: NCHS=National Center for Health Statistics.
*Age-adjusted mortality rates per 100,000 population.
†Standard population for Nashville: 1970 US population.

Table 5. Percentage Change in Annual Average Age-Adjusted Cancer Mortality Rates Between1979-1981 and 1989-1993*

Geographic Area	Male				Female			
	Lung Cancer		Prostate Cancer		Breast Cancer		Cervical Cancer	
	Black	White	Black	White	Black	White	Black	White
Los Angeles	9.4	−2.2	2.9	17.2	0.6	−13.8	−45.8	−15.8
Atlanta	26.5	−6.8	40.8	23.1	20.4	−3.5	−40.7	−37.0
Nashville*	14.6	−1.9	30.6	0.8	22.9	8.5	18.7	−29.4
NCHS (total)	14.6	3.9	24.6	15.7	19.0	0.0	−25.0	−21.9

Abbreviations: NCHS=National Center for Health Statistics.
*Standard population for Nashville: 1970 US population

ed mortality rates of the three cities from 1979-1981 and 1989-1993 are presented in Table 5. Lung cancer mortality increased among black men but decreased among white men. Prostate cancer mortality rose in both black and white men. Breast cancer mortality increased among black women, especially in Atlanta and Nashville, but decreased among white women in Los Angeles and Atlanta. Cervical cancer mortality decreased in both white and black women with the exception of Nashville black women, who had an increased risk of death from cervical cancer. The NCHS data also showed similar trends in mortality.

Compared with the previous 10 years, almost all of the relative risks of death from cancers between blacks and whites increased except for prostate cancer in Los Angeles, and from cervical cancer in Los Angeles and Atlanta (Table 6). In general, in the three cities, blacks still had a higher risk of death from all four kinds of cancers. The NCHS data also demonstrated similar trends.

DISCUSSION

Ten years ago, the Drew-Meharry-Morehouse Consortium Cancer Center studied lung, prostate, breast, and cervical cancer incidence and mortality rate differentials between blacks and whites in three metropolitan areas. Their findings revealed excess incidence and mortality rates among blacks compared with whites. The study was done to define regional cancer needs to develop appropriate interventions to reduce the excess cancer risks in blacks.

Table 6. Relative Risks* (RR) of Deaths From Cancers Between Blacks and Whites

	Male				Female			
	Lung Cancer		Prostate Cancer		Breast Cancer		Cervical Cancer	
Geographic Area	1979-1981	1989-1993 (95% CI)	1979-1981	1989-1993 (95% CI)	1979-1981	1989-1993 (95% CI)	1979-1981	1989-1993 (95% CI)
Los Angeles	1.48	1.66† (1.37-2.01)	2.32	2.04† (1.52-2.72)	1.00	1.16 (0.87-1.56)	2.53	1.63 (0.73-3.63)
Atlanta	1.03	1.40† (1.18-1.67)	2.22	2.54† (1.96-3.30)	1.00	1.25 (0.92-3.30)	3.19	3.00† (1.10-8.17)
Nashville	1.30	1.52† (1.30-1.77)	2.09	2.70† (2.07-3.52)	1.25	1.42† (1.06-1.90)	2.21	3.71† (1.63-8.44)
NCHS (total)	1.32	1.45	2.09	2.25	0.99	1.18	2.75	2.64

Abbreviations: NCHS=National Center for Health Statistics.
*RR=Black to white ratio of average annual age-adjusted mortality rates. The 1979-1981 data and SEER data did not have statistical tests for the above RRs.
†Statistically significant.

While the excess deaths have decreased for cervical cancer, the excess rates for most of the other cancers have continued to increase.

Cervical Cancer

The relative risk of having cervical cancer decreased by about 40% between black and white women in Los Angeles and by approximately 20% in Atlanta (Table 2). The SEER data also showed an approximately 30% decline in the relative risk of cervical cancer between black and white women during the same period.

In the past decade, the age-adjusted incidence of cervical cancer declined among black women in Los Angeles and in Atlanta. Among white women, the incidence increased in Los Angeles and declined in Atlanta. Ten years ago, a black woman's risk of having cervical cancer was almost double that of a white woman (Table 2). During the years 1989-1993, the relative risk between black and white women decreased to 1.08 in Los Angeles, 1.65 in Atlanta, and 2.10 in Nashville. The main reason is that the incidence of cervical cancer in black women declined more quickly than in white women in Los Angeles and Atlanta (Table 2), and probably in the whole country based on the SEER data. In the United States, both incidence and mortality for invasive cervical cancer have declined about 40% since the early 1970s.[4] Data from SEER showed that the age-adjusted incidence declined about 38% among black women and about 9% among white women (Table 3).

The observed decline in cervical cancer incidence and mortality in both black and white women is probably due to the increased use of Pap smears in both groups.[5] Previously, black women and other high-risk groups have underused preventive health services including pap smears. Black women experienced a greater decline in their rates compared with whites due to their greater change in screening behaviors during the past decade.[5] National data over the past decade show that older women and black women have had the largest increases in Pap smear utilization, the results of which may only now have become apparent.[5] Some of these changes may be due in part to secular changes as well as intervention efforts initiated within these communities. While the general trend is encouraging, it is of concern that there was an increase in cervical cancer mortality within one of the metropolitan areas (Nashville) and an increase in incidence in another (Los Angeles). Appropriate studies using state data will be initiated to determine the reasons for the findings and to subsequently develop appropriate effective interventions.

Lung Cancer

Over the 10-year period examined, there was an

increase in lung cancer incidence among black men and a decrease among white men. Incidence data for Los Angeles show a larger decline (15.3%). Mortality rates for lung cancer decreased in white men but increased in black men in the Metropolitan areas. National statistics (NCHS) indicate a modest increase (3.9%) in mortality for white men but a large increase (14.6%) for black men.

It is well-known that smoking accounts for approximately 90% of all lung cancer and passive smoking contributes to lung cancer in nonsmokers.[6] These results also support the reported differences between black and white Americans in smoking habits, smoking cessation patterns, and smoking cessation rates.[7-11] The results also suggest that smoking prevention and cessation programs may have been successful among white men and that such programs may have been less successful among black men. These findings indicate a need for more culturally sensitive interventions targeted at black men.

Breast Cancer

Breast cancer is the most common nonskin cancer among women in the United States. Our results mirror national trends in which incidence rates have risen in the past two decades.[4] The incidence rate for black women, however, show a greater rate of increase than for white women, 35.3% versus 31.8% respectively (Table 3). In addition, this increase in recent years is mainly reflected among postmenopausal women (age $\geq$50 years).[4] Consequently, the 1989-1993 average age-adjusted incidence rates for black women are similar to those of white women.

Should this differential rate of increase continue, in the near future, the annual age-adjusted incidence for breast cancer among black women will inevitably surpass that among white women. A number of studies have suggested that recent increases in breast cancer incidence is mainly due to breast cancer screening and detection.[4,5,12-15] However, despite a substantial rise in breast cancer screening since 1987, breast clinical examination and mammography are still underused by women of older ages, low income levels, and lower educational levels as well as those who live in rural areas or lack health insurance.[14-16] Black women are disproportionately represented among all of these groups. Moreover, there is ample evidence that black women, especially black elderly women, use breast screening services to a lesser extent than do white women. While there has been an increase in screening behavior of these women, an increase in breast screening alone probably does not explain all of the recent increase in breast cancer incidence among black and white women. The reason for the more rapid increase in black women, especially older black women, compared with whites is unknown and is an important issue for future investigation.

Prostate Cancer

Prostate cancer is the most commonly diagnosed cancer among American men, and black Americans are known to have the highest rates in the world. In keeping with national statistics, rates from the three metropolitan areas show rising incidence and mortality rates for prostate cancer for both black and white men. Moreover, the gap in the incidence rates between the two races diminished because of a more rapid increase in incidence among white men compared with black men.

However, the gap between mortality rates has increased between the two time periods. The rather large variation in the percentage increase in prostate cancer mortality among the three cities is curious. While there is no obvious explanation for this variation, it is important to note that according to NCHS data, from 1980 to 1990, the age-adjusted mortality rates for prostate cancer increased by 23% and 15% among black and white men, respectively. While a percentage increase of 40.8% for black men in Atlanta appears rather large, this is an average annual percentage increase of 4%. This figure is consistent with data reported by the American Cancer Society.[17]

The increase in prostate cancer mortality may reflect an "attribution bias," whereby some deaths attributed to prostate cancer should have been assigned to other causes in the absence of widespread screening in the past, particularly among elderly men. The diminishing gap in incidence rates and the concomitant increase in the gap in mortality rates between black and white men may be explained by a greater use of screening and early detection services by white men compared with black men. Recent cancer awareness intervention programs in Nashville demonstrate the difficulty in reaching black men with programs to change screening behavior.

CONCLUSION

The findings in this study show a continuing need

to develop and implement culturally sensitive interventions targeting the black population. Reaching the black male for intervention continues to be a major challenge.

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APPENDIX D2

Recent Trends in Breast Cancer Incidence Patterns Between Black and White Women in Tennessee, 1989-1995

Ling Wu, MD, PhD, Robert Hardy, MD, Margaret Hargreaves, PhD, Kofi Semenya, PhD

Context.–Breast cancer age adjusted incidence is higher among white women than among black women in the United States, but recent years black women have a more rapid increase in breast cancer incidence than white women. Breast cancer incidence patterns between black and white women can be changing.

Objective.–To examine recent trends in breast cancer incidence among white and black women in the state of Tennessee between 1989 and 1995.

Design.–Annual breast cancer incidence rate reported by the Health Department of the state of Tennessee from 1989 to 1995.

Setting.–State wide in Tennessee.

Subjects.–All breast cancer patients reported by the Health Department of the state of Tennessee from 1989 to 1995.

Main Outcome Measures.–Age-adjusted breast cancer incidence rate.

Results.–During the 6 year period (1989-1995), black women's age-adjusted incidence increased 57.2% while white women's rose by 36.3%. For all ages, white women had increased age-adjusted incidence rates between years 1989 and 1992, but this upward trend ceased in year 1993. Thus, before 1993 white women still showed higher age-adjusted incidence rates than black women. However, during the same time period, black women showed larger percentage increases than white women and in 1993 black women surpassed white women in age-adjusted rates, for all ages, before age 50 and after age 50. In year 1994, white women regained a higher increase than black women, but again in 1995, the black women's incidence rose more rapidly than white women.

Conclusions.--In recent years in Tennessee, the age-adjusted breast cancer incidence rate of black women is close to that of white women. It is likely that the age-adjusted breast cancer incidence rate to be similar for white and black women in the near future.

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