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FOREWORD

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TABLE OF CONTENTS

01.	. Cover page	1
02.	. SF 298	2
03.	. Foreword	3
04.	. Table of content	4
05.	. Introduction	5-6
06.	. Body	6-18
07.	Conclusions	18-19
08.	References	20
09.	Appendices	21-89

INTRODUCTION

This is an annual report regarding our case-control study that aims to examine whether risk factor profiles of breast cancer differ according to the estrogen receptor (ER) status among African-American women ages 20-64. This report covers the period from September, 1996 to August 31, 1997.

It was the first year of this exploratory study. Therefore, tremendous efforts had to be made to set up the study procedures, to make various preparations, to recruit study subjects and to initiate interviews. The award notification from the Department of Grants and Contracts Administration, Meharry Medical College, was given to the principal investigator on September 16, 1996. Upon the receipt of the award notification, the principal investigator, Dr. Zhu, began a series of preparations for the study, such as developing the quality control related procedures, polishing the questionnaire, working on the IRB and budget related issues and hiring research team members. Due to the position-control and employment process and procedures of the Meharry and the selection process, the research specialist (research coordinator) and the research assistants were able to be on board in February, April and May, 1997, respectively. The Research Specialist, Ms. Sandra Hunter has done a lot of coordination and other needed work for the project since she joined the team in February. She performed pre-interviews with selected women to test the questionnaire and gain their feedback and comments. She also handled miscellaneous affairs for the study, including ordering supplies, contacting study field coordinator, contacting doctors and study women, working on various forms and documents needed for the study and helping with hiring research assistants. The research assistants, Ms. Kathleen Payne-Wilks and Ms. Chanel

Roland, joined the preparation process. They received training on the interview skills, knowledge of breast health and study quality control. During the study, they have made great efforts to contact doctors and study subjects and to schedule and conduct interviews.

The project had been going for less than 12 months up to August 31, with the interviewers employed in April and May. During the period, the project has progressed. The research team has done a lot of preliminary work and has done their utmost to increase the participation of doctors and eligible women. Since interviews started only a few months ago, we currently do not have the questionnaire-based results available for this report. The following is the summary of the work done up to August 31, 1997.

BODY

1. Study Hypothesis

Estrogen-related factors, such as nulliparity, age at first full-term pregnancy, age at menarche, and age at menopause, are known to be risk factors for breast cancer [1]. Because estrogen executes its influence on the biological activity and growth rate of breast cells through hormone receptors [2], whether these factors can increase the risk of breast cancer may depend upon the existence of estrogen receptors. Therefore, it is reasonable to hypothesize that risk factor profiles may differ according to estrogen receptor (ER) status of tumor.

2. Study Design

This study uses a case-control design to examine whether risk factor profiles are different between ER-positive and ER-negative tumors among African-American women. Cases consist of about 200 African-American female patients diagnosed with breast cancer during 1995-96 and who lived in Davidson, Shelby and Hamilton counties, Tennessee. All breast cancer patients were histologically confirmed (ICD-O site code C50) [3] and identified through Tennessee Cancer Reporting System (TCRS). Controls are comprised of African-American women without breast cancer who are selected through random-digit telephone dialing and frequency matched to cases by 5-year age range. Information on risk factors is collected through telephone interviews. Tumor tissue samples are collected and pathological reports are reviewed (when necessary) for the determination of estrogen receptor status. In addition, a set of colored pictures of oral contraceptive (OC) pills and a short OC questionnaire are mailed to the study subjects with the pay check to collect detailed information about OC use.

3. Methods And Procedures Implemented

Figure 1 shows the study procedures, which include identifying and selecting cases and controls, getting consent from doctors and eligible women, performing interviews, collecting tumor tissues and reviewing pathological reports when needed. For a high study quality, we need to train interviewers and conduct quality-control procedures.





3.1. Identification of study women

Cases with breast cancer are selected through TCRS. TCRS was established in 1986 and requires hospitals and certain laboratories to report cancer patients within 6 months of their diagnosis. Ms. Becky Jones and Mr. Patrick Turri are TCRS collaborators for the study. Before the start of the study, our research team members had a meeting with TCRS collaborators to discuss the criteria for the eligibility of study subjects and detailed procedures to recruit them. Ms. Jones and Mr. Turri provide us with a list of patients according to the selection criteria on a quarterly basis. They also provide us with a list of all doctors in Tennessee. We match patients with their doctors and send a letter to the doctors for their consent to contact their patients. Patients with a doctor's consent are sent a cover letter introducing the study and a consent form for their participation in the study (appendix 1). The second letter is sent to those who did not respond to the first one. A reminder call (where a telephone is available) is made to women who did not reply to both mailings. Only patients who completed a consent form are used as cases for the study.

Controls are selected using random digit dialing techniques, and frequency matched to cases by 5-year age range. The first step of control selection by random digit dialing (RDD) is to group cases diagnosed in the same calendar year whose telephone area codes and prefixes serve the same residence area, and then form the sampling frame by age distribution of the cases in the area. By randomly selecting one of the telephone prefixes of the cases and adding the last four random-selected digits, a call is made to find an eligible woman according to ethnic background and age range.

For each telephone number called, interviewers determine (1) whether it is a residential or nonresidential (business line, cellular network, fax machine, disconnected, or changed to another number,) number; (2) whether there are any eligible women for a residential number; (3) how many eligible women there are (randomly select one using the last two digits of the telephone number, if more than one eligible women); and (4) whether an eligible woman consents to have an interview. Up to 9 calls over a two week period, including 3 day-time, 3 evening, and 3 weekend calls, are made for a telephone number that has not answered. If an eligible woman is identified, we describe the study purposes and procedures, and ask whether she would accept a telephone interview. For a woman who agrees to participate, a telephone interview is conducted.

To achieve a high response rate, we use a monetary incentive. We mention to eligible women that we will pay them for their time for the study (\$25 for a completed interview) and also provide them an opportunity to be entered in a drawing for an award of \$200.

3.2. Identification of doctors and doctors' consent

TCRS provides us the names and addresses of eligible patients' physicians. We mail the doctors a letter (appendix 2) and a consent form (appendix 3). The letter we send describes the study and asks if we can contact their patients. If a physician does not return the consent form after two mails, one of our staff members calls the physician's office to determine the status of the letter and fax or mail another copy of the letter and consent form

when needed. We recognize that continuing support from doctors is very important for us to recruit patients. To establish a good relationship with doctors, Dr. Zhu writes a thank you card to each doctor who responded to our study.

3.3. Test and revision of questionnaires

Ms. Hunter performed pre-interview test with five African-American women to gain feedback concerning the questionnaire. These women represented the various backgrounds including breast cancer patient, nurse, house wife, engineer and customer service representative. All the participants agreed that the questions are suitable and the women would feel comfortable with the questionnaire. However, they recommended changing the order of the questions for further improvement. They suggested that the questionnaire begin with less sensitive questions (i.e. background, personal habit and lifestyle) and put more direct questions (i.e. medical history) later. Based upon the comments from the pre-interview test, revisions were made to the questionnaire. This helped the subjects feel more at ease with the interview process (appendix 4).

3.4. Training of interviewers

Telephone interviewers were trained on conversation skills on the telephone, general knowledge of breast cancer, and ways to address the concerns a subject may have. They were also trained to improve their performance in reducing under-reporting of information and item non-response, avoiding inductive questioning and evading inferring from an incomplete or

inadequate reply. They were asked to examine completed questionnaires immediately after an interview for any errors, inconsistencies, unusual answers and missing values, and to make corrections or compensations where possible. An overview of interview procedures (appendix 5) and a brief interview guide (appendix 6) were provided to the interviewers

3.5. Data collection

We use telephone interview technique for the information on breast cancer risk factors. Measurement of tumor tissues and medical record review (when needed) will be used for the determination of ER status. Because study women may not be able to recall the use of oral contraceptive pills accurately, we send them a set of colored OC pill pictures and a short form (appendix 7) with a paycheck after the telephone interview. The women are asked to complete the OC form and return it to us using the enclosed stamped envelope.

3.6. Quality control-related work and procedures

A. Evaluating interviews: For the fidelity of interviews, Ms. Sandra Hunter, the supervisor of interviewers, randomly chooses 20% of interviewed women and asks them over the phone six selected questions to make sure that an interview has been made, the questions have been answered and the answers have been accurately recorded.

B. Monitoring and improving RDD calls: All telephone calls and their outcomes are

recorded. Therefore, we can monitor every component of the response rate for RDD, including the number of answering machines, busy line, ineligible women, etc. This information allows us to know the changes over time in non-response and modify maneuvers to improve response.

C. Data editing: A three-step edit process (interview edit, editor edit, and coder edit) is taken. During editing, a completed form is examined for any errors, inconsistencies, unusual answers and missing values. Corrections or compensations by such as calling back to the subject are made when necessary. After data are entered in the computer, another examination is conducted to correct any errors in entering data.

D. Research administration: In addition to day-to-day communications on the research activities, we established a weekly-meeting system. In the meeting, the progress of the past week is summarized. All research members are asked to present and discuss any potential problems and good experiences in communications with study women. To reduce any possible errors in document and data handling, we developed a flowchart for data handling procedures (appendix 8). Mrs. Sandra Hunter arranges all data collection activities and examines and maintains all data to avoid or reduce any overlapping, missing or inaccuracy. In addition, a subject tracking system (appendix 9) was developed to integrate data from the different sources.

4. Current Status Of Study

4.1. Doctors' consent

As the first wave of data, TCRS provided us 187 eligible patients with breast cancer. Out of the patients, 22 had no doctors identified. The common reasons for no doctors identified are that only a resident or hospital rather than a doctor was indicated, or doctor was in rotation. A packet containing a cover letter and a consent form was sent to 79 identified doctors. For doctors who did not respond, we sent the second packet and made a reminder call if they did not respond to the second mail either. A doctor we contacted kindly provided consent for the additional African-American patients she diagnosed in recent three years (n=20)(these patients were included as eligible women and duplicates will be excluded if reported to us again by TRCS in the future). Table 1 summarizes doctors' responses to our letters and remind calls.

Overall, 70% of doctors (n=55) responded to our study with the number of 128 patients (69.2% of all patients with a doctor identified). For these patients, doctor's consent was obtained for 108 of them (84.4%).

			Status	of patients		
	Doctor not	Doctor	with de	octor's respo	onse	
:	responded	responded	Agreed	Agreed Refused		
			to contact	to contact	died	
		,,1.v.=0				
1st mail	54*	25*	54**	8**	5**	
2 nd Mail	41	13	26	0	2	
Domindor call	24	17	28	5	1	ı
Kenninger can	24	1/	20	ر	1	

Table 1. Doctors' responses according to the first mailing, second mailing and reminder call

*, number of doctors; **, number of patients

4.2. Participation of eligible patients and interviews completed

One hundred and eight patients had doctor's consent for us to contact them. We sent the patients a packet including a cover letter and a consent form. A second packet was sent and a reminder call was made (when a phone number is available and there was no response to the second mailing) for women who did not respond. Table 2 shows the outcomes of our first and second mailings and reminder calls.

	Women responded		Women no	ed Total	
:	Agreed to participate	Refused to participate	Unable to locate	Other	
1st mail	14	1	4	89	108
2 nd Mail	17	0	2	74	93
Reminder call	8	8	7	17	40*

Table 2. Patients' responses according to the first mail, second mail and reminder call

*, the number of patients with a telephone number available.

Among patients to whom we contacted, the percentages of women who agreed and refused to participate in the study were 36.1 and 8.3, respectively. The rest of them either did not respond to the study or could not be located. Up to August 31, thirty-three patients have been interviewed and therefore included in the case group. We subsequently mailed to these cases a set of colored pictures of oral contraceptive (OC) pills and a short OC questionnaire with the paycheck. The completed OC questionnaires are being returned to us.

It is known that African-Americans are less likely to participate in clinical trials or other studies [4,5]. Although we paid participants for their time for the study and provided them with an opportunity to win another \$200 and although we have used an intensive procedures to get their responses, the current participation rate of eligible women is still lower than we expected.

4.3. Selection of controls

Random-digit dialing (RDD) for selecting controls was initiated about one week before the end of this report period. Information about the procedure will be available in the next report.

5. Recommendations In Relation To The Statement Of Work

5.1.Determination of ER status

Before data collection began, our other project had been recommended for funding by the Department of Army. This new project will include the patients of this study and collect tumor tissue specimens for the measurement of ER gene methylation status. Because of the availability of tumor tissues, we suggested to determine ER status using laboratory tests instead of medical record reviews where possible. The reasons for doing so are twofold: (1) ER measurement values based on the same laboratory criteria are more comparable than those from medical records that come from different laboratories; and (2) the laboratory results can be compared with the measurements of ER gene from the same tumor tissues. The comparisons may provide very important information for future studies. The Meharry IRB has approved this change.

5.2. Number of subjects

Although our project staff has made tremendous effort to get a high participation rate of eligible women, the current responses from them are below what we hoped. To get a sufficient number of study subjects, therefore, we may need to have a greater pool of patients. We may add patients diagnosed in 1997.

5.3. Timelines

According to the Statement of Work, the time span for data collection should be from the '7th month to the 15th month. Because the research assistants for the project were able to be on board only 3 and 4 months ago, the activities for the selection of subjects and collection of data started later than expected. Therefore, we have to extend our time for the activities. The additional reasons for such an extension are (1) a large number of telephone calls (including RDD) and large amount of preliminary work vs. the limited budget, (2) more effort than expected to get doctors' and patients' consent, (3) a proposed expansion of the patient pool, and (4) proposed laboratory measurements of ER status.

CONCLUSIONS

It was the first year of this exploratory case-control study. The research team members have made tremendous efforts to establish the study field, to identify and select

study subjects, and to make various preparations. During several months from the interviewers' joining the team to August 31, we have contacted 79 doctors and interviewed with 33 patients who had a doctor's consent for us to contact and who agreed to participate in the study. A set of colored pictures of oral contraceptive (OC) pills and a short OC questionnaire have been mailed to these study subjects with the paycheck to collect detailed information about OC use. Random-digit telephone dialing procedures for selecting controls have been started.

Seventy percent of doctors we contacted responded to our study and 36% of patients with a doctor's consent agreed to participate. These rates are lower than we expected. Therefore, we propose adding patients diagnosed in 1997 to have more cases. We also will compare the demographic and disease characteristics between responding and non-responding patients to assess the potential effects of the non-responses, using the information from TCRS.

Although our project staff has made tremendous effort, we were unable to finish sufficient interviews in terms of the Statement of Work because of the late employment of the interviewers and the difficulties in getting consent from doctors and patients. In the coming year, we will increase our patient pool to obtain an adequate number of cases. We will conduct RDD to select controls and start collecting information on ER status. We hope that we can get needed information with an extended period for data collection and through our collective effort and diligence.

REFERENCES

1. Bernstein L, Ross RK. Endogenous hormones and breast cancer risk. Epidemiol Rev 1993;15:48-65.

2. Rayter Z. Steroid receptors in breast cancer. Br J Surg 1991;78:528-35.

3. Percy C, Holten VV, Muir C. International Classification of Diseases for Oncology (2nd edition). Geneva: World Health Organization, 1990.

4. Gorelick PB, Richardson D, Hudson E, Perry C, et al. Establishing a community network for tecruitment of African Americans into a clinical trial. The African-American antiplatelet stroke Prevention Study (AAASPS) experience. J Natl Med Assoc 1996 88;701-4.

5. Harris Y, Gorelick PB, Samuels P, Bempong I. Why African Americans may not be participating in clinical trials. J Natl Med Assoc 1996; 88:630-4.

APPENDICES

- 1. Letter to study subjects
- 2. Letter to doctors
- 3. Consent form for doctors
- 4. Questionnaire
- 5. Overview of interview procedures
- 6 Interview guidelines
- 7. OC charts and OC form
- 8. Flowchart for tracking system
- 9. Flowchart for data handling procedures



MEHARRY MEDICAL COLLEGE

SCHOOL OF MEDICINE 1005 D. B. TODD, JR., BOULEVARD NASHVILLE, TENNESSEE 37208 (615) 327-6572

DEPARTMENT OF FAMILY AND PREVENTIVE MEDICINE

{Date}

{First, Last} {Address} {City, ST, Zip Code}

We are requesting your help for an important study on women's health. The purpose of this study is to evaluate African-American women's health status and related events. Your doctor, {First Last, MD,} has given us permission to contact you for the study.

This study involves a 55-70 minute telephone interview, using a specimen of your tumor tissues stored in your hospital, and reviewing your pathological reports when needed. We realize that your time is important, so we'll pay you \$35 for the study. In addition, we will enter your name into a drawing for \$200.

By spending only 55-70 minutes for participating in the study, You will receive...

\$35 and A chance to win \$200

Your participation in the study is completely voluntary. You can skip any questions and stop the interview any time. Whether or not you choose to participate will have no effects on any future health care from any institution or any other benefits to which you are entitled. All information collected will be kept strictly confidential as required by law. Your name will not appear on any reports that may result from this study. To participate, please sign the enclosed consent forms and the release of information form. Please return to us all copies of the signed forms using the enclosed postage-paid envelope. We will mail a copy of the consent forms back to you for your file. Also, please remember to include your telephone number on the consent forms. We hope you are willing to take part in this important study and help us in improving African-American women's health. If you have any questions, please call Ms. Sandra Hunter, Research Specialist, at (615) 327-6890 between 7:30 a.m. and 4:30 p.m., Monday through Friday. Thank you very much for your time and consideration.

Sincerely,

an

Kangmin Zhu, M.D., Ph. D. Principal Investigator



DEPARTMENT OF FAMILY AND PREVENTIVE MEDICINE

Date

«FirstName»«middle_initials» «LastName»«End_title_initials», M.D. «Address1» «Address2» «City», «State» «PostalCode»

Dear Dr. «LastName»:

I am writing to you to seek your help for our case-control study on Breast Cancer and Risk Factors among African-American Women. This study is funded by the Department of Defense. As you are aware, African-American women have a higher mortality rate and are more likely to develop estrogen receptor-negative tumors that have worse prognosis. This study aims to evaluate whether etiologic profiles are different according to estrogen receptor (ER) status or methylation status of the ER gene of the disease among African-American women. The results of this study will eventually contribute to the prevention of breast cancer.

MEHARRY MEDICAL COLLEGE

SCHOOL OF MEDICINE 1005 D. B. TODD, JR., BOULEVARD NASHVILLE, TENNESSEE 37208 (615) 327-6572

The study involves a 55-70 minute telephone interview with patients who have been diagnosed with breast cancer. The patients are identified through the Tennessee Cancer Reporting System. Before the study, we will seek the patient's consent in writing to participate in the study. We will have a telephone interview with the woman who agrees to participate in the study. We will also collect her tumor tissue specimen obtained from the routine diagnostic or treatment procedure, and review her pathological reports when needed. The patient's participation is completely voluntary. The patients will be informed about their rights as a study subject and they can skip any questions or stop the interview any time. We will be paying the participants \$35.00 for their time for the study.

This study has been approved by the Meharry Medical College Institutional Review Board. Your patient(s) listed are eligible for the study. We would like your permission to contact the patient(s) for this study. Please indicate on the enclosed consent form the patients whom we can contact, sign the form, and mail it back to our office using the enclosed stamped envelope.

Your support for the study is very important since the validity of the study depends on high participation of eligible patients. We hope that you will be able to assist us in this important research effort. If you have any additional questions concerning the study, please contact Ms. Sandra Hunter at (615) 327-6890. Thank you very much for your time and consideration.

Sincerely,

Kangmin Žhu, M.D., Ph. D. Principal Investigator

Return To:

Meharry Medical College Department of Family & Preventive Medicine Attn: Sandra Hunter, Research Specialist 1005 Dr. D.B. Todd Blvd Nashville, TN 37208-3599

> I give my permission to the research staff of Meharry Medical College to contact the patients for the study whose names I have checked. I have also indicated the patients who are deceased and health status is not suitable for your staff to contact. I understand that any information obtained will be held strictly confidential as required by law.

Patient Name	Contact	Do Not Contact	Deceased	Phone# (Desirable)
Print Name	Signa	ture		Date

Study ID:	
Interviewer ID:	
TCRS#	
Date of Interview:	(month/day/year)
Time Interview Begin:	
Time Interview Ended:	:m./p.m.
Reference Date:	
	(mosth/year)

WOMEN'S HEALTH STUDY

(CCS-1)

Meharry Medical College Family & Preventive Medicine

ON THE TELEPHONE:

Hello, my name is (YOUR NAME). I am from Meharry Medical College. I am calling Ms. _____ (NAME OF SUBJECT).

IF THE SUBJECT IS HOME:

How are you, Ms. _____ (NAME OF SUBJECT)? I am (YOUR NAME) from Meharry Medical College. As you have agreed, we would like to interview you for our study on Women's Health. Is this a time convenient for you?

No-SAY, What time is good for you? WRITE DOWN: Time ____ Date ____. SAY, I will call you at that time. Thank you, bye-bye. Yes- GO AHEAD WITH THE INTERVIEW

INTRODUCE THE STUDY AND THE SUBJECT'S RIGHTS AGAIN, AND ARRANGE PRIVATE SETTING FOR INTERVIEW.

TO BEGIN THE INTERVIEW:

Now, Ms. (NAME OF RESPONDENT), I would like to begin asking you questions related to the study. I'd like to repeat that your information will be kept completely confidential as required by law, and you also may refuse to answer any questions.

SECTION A: BACKGROUND INFORMATION

First, I would like to ask some questions about your background.

A1. What is your date of birth?

(month, day, year)

A2. Have you ever been married or lived as married?

No (GO TO A5)0 Yes1

A3. How old were you when you first married or began living as married? _____(age)

A4. How many years have you been married and/or living as married? (years)

A5. What was your marital status when your breast cancer was diagnosed?

Married	1
Separated	2
Divorced	3
Widowed	4
Never married	5

A6. Were you employed when your breast cancer was diagnosed? No0 Yes1 A7. What was the name of the company and your job title where you worked for the longest period before your breast cancer was diagnosed? (industry) (job title) (code) A8. What was your approximate weight when you were 18 years old? Please exclude weight during pregnancy. (pound) A9. What was your approximate weight one or two years before your breast cancer was diagnosed? Please exclude weight during pregnancy. (pound) A10. What is your maximum adult height? (feet, inches)

A11. What is the highest level of school that you completed before your breast cancer was diagnosed?

No school	0
Elementary school	
Middle school	
High school	3
Vocational or technical training school	
Some college or junior college	
College	
Graduate or professional school	
Other (specify)	

SECTION B: PERSONAL HABITS AND LIFESTYLE

B1. Did you ever smoke a total of 100 cigarettes or more before your breast cancer was diagnosed?

		No (GO TO B9)0 Yes1
B2	At what age did you start smoking?	(age)
B3.	Did you smoke when your breast cancer was diagnose	ed?
		No0 Yes (GO TO B5)1
B4 .	How old were you when you quit smoking?	(age)
B5 .	How many total years did you smoke before your brea was diagnosed? Please exclude any years that you qui	st cancer t(years)
B6 .	About how many cigarettes did you usually smoke per before your breast cancer was diagnosed?	day (cigarettes)
B7 .	During periods when you smoked, did you smoke filter non-filter cigarettes?	ror
		Filter
B8 .	When smoking cigarettes, did you usually not inhale at or usually inhale into the chest?	all,
	· .	Not at all
B 9.	Did you drink any alcoholic beverages (beer, wine or lie at least once a month for 6 months or longer before your breast cancer was diagnosed?	quor)
	-	No (GO TO B14)0 Yes1
B 10.	At what age did you start drinking alcoholic beverage?	? (age)

B11. Did you drink alcoholic beverages during six months before your breast cancer was diagnosed? No0 Yes (GO TO B13)1 B12. How old were you when you stopped drinking? (age) B13. How many years did you drink before your breast cancer was diagnosed? Please exclude any years that you quit. (years) B14. During the five years before your breast cancer was diagnosed, how often did you engage in physical activities (job or leisure) for 20 minutes or more a time, to the point where you were out of breath or worked up a sweat? Never0 2 to 4 times per month2 B15. Did you ever use an electric blanket, electric mattress pad, or heated water bed on a regular basis before your breast cancer was diagnosed? No (GO TO C1)0 Yes1 B16. How many total years had you used one before your breast cancer was diagnosed? (years) B17. During the years in which you did use an electric blanket, electric mattress pad, or heated water bed, for how many months per year did you usually use one? (months) B18. When you used the electric blanket, electric mattress pad, or heated water bed, did you leave it turned on most of the time while you slept, or did you use it only to warm the bed before you slept? Warm only1

SECTION C: MENSTRUAL HISTORY

Now, I would like to ask some questions about your menstrual periods.

C	1. How old were you when you had first menstrual perio	d?(age) Never (GO TO D1)00
C2	2. Did you still have your menstrual periods three months before your breast cancer was diagnosed?	S
:		No0 Yes (GO TO C5)1
C3	3. What was the reason you did not have a menstrual per three months before your breast cancer was diagnosed	iod 1?
	Uterus	removed1
	Ovarie	s removed2
	Both u	terus and ovaries removed3
	Natura	1 menopause
	Radiati	on therapy5
	Drug t	herapy6
	Pregna	ncy (GO TO C5)7
	Other (SPECIFY)8
C4.	 At what age did you have your last menstrual period if stopped before your breast cancer was diagnosed? How old were you when your periods became regular, the time from the beginning of one period to the beginn the next did not vary by more than ten days? 	your periods (age) that is, ting of Irregular (GO TO C8)00
C6.	Before your breast cancer was diagnosed, what was the number of days from the start of one period to the start	average of next,
	during times when you had NOT been on "the pill" or u	using an IUD? (days)
C7 .	Before your breast cancer was diagnosed, how many da period usually last, during times when you had NOT-be or using an IUD?	ys did your en on " th e pill" (days)
C8.	Before your breast cancer was diagnosed, has there even since you started menstruating when you have had no p consecutive months or longer? Please exclude pregnan- and use of birth control pills.	r been a time eriods for four cy, nursing
		No0 Yes1
		. 32

· SECTION D: REPRODUCTIVE HISTORY

Now, I would like to ask you some questions about your pregnancy history.

D1. Did you have a pregnancy before your breast cancer was diagnosed, regardless of whether the pregnancy was carried to term?

D2. What is the total number of pregnancies you had before your breast cancer was diagnosed, regardless of whether the pregnancy was carried to term? Please exclude the pregnancy when your breast cancer was diagnosed. _____ (pregnancies)

D3. What was the outcome of your (1st/2nd/etc.) pregnancy? (ASK EACH PREGNANCY SEPARATELY)

Outcome	Pregnancy							
	1	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
A miscarriage (<20 weeks gestation)	1	1	1	1	1	1	1	1
A stillbirth (>20 weeks gestation)	2	2	2	2	2	2	2	ו ר
An induced abortion	3	3	3	3	3	3	2	2
A tubal or ectopic pregnancy	4	4	4	4	4	4	1	1
Multiple births (at least one born live)	5	5	5	5	5	5	5	- -
A single, live birth	6	6	6	6	6	6	6	6

D4. What was your age at your (1st/2nd/etc.) pregnancy?

Pregnancy 1	(age)
Pregnancy 2	(age)
Pregnancy 3	(age)
Pregnancy 4	(age)
Pregnancy 5	(age)
Pregnancy 6	(age)
Pregnancy 7	(age)
Pregnancy 8	$(3\sigma e)$
	("50)

D5. Was there ever a period of 12 months or longer during which you had unprotected intercourse on a regular basis (>3 times per month) but did not become pregnant before your breast cancer was diagnosed?

No)
Yes1	l

No (GO TO D5)0 Yes1

D6. Did you visit a doctor, clinic or hospital for an infertility test?

No	• • • •	•••	 •••	•••	•••				 	 	 				• •	 	0	
Yes	5	•••	 •••	•••	•••	•••	••	• •	 •	 •••	 	• •	•	•	 	 •••	1	

D7. What was found to be the cause or causes?

Nothing found	0
Problem with ovaries	1
Tube blocked	2
Problem with uterus	
Problem with both uterus and ovaries	4
Endometriosis	
Male factor	6
Other (SPECIFY)	7

SECTION E: CONTRACEPTIVE HISTORY

Next, I would like to know the birth control methods you have used and the length of time you used.

E1. I would like to read you a list of birth control methods. Please tell me if you or your partner had ever used any of them before your breast cancer was diagnosed.

None	. 0
Birth control pills	1
Condom, rubber alone	
Foam, alone	3
Condom and foam together	
Jelly, cream, suppository alone	
Diaphragm with jelly or cream	
Diaphragm without jelly or cream	7
Douche	
IUD, loop, coil	9
Female sterilization (tubes tied)	
Male sterilization (vasectomy)	
Rhythm or safe method by temperature or mucous test	
Rhythm or safe method	
Withdrawal/pulling out	
Shots (monthly, bimonthly)	
Other (SPECIFY)	

E2. Please list the birth control methods you used for six months or more before your breast cancer was diagnosed, the approximate length of time used, and age at which you started and stopped using it. (EACH METHOD AND ITS CONTINUOUS TIME SPAN OF USE SHOULD BE A SEPARATE ENTRY—IF THE RESPONDENT HAS USED THE SAME METHOD AT TWO DIFFERENT POINTS IN HER LIFE, TWO SEPARATE ENTRIES SHOULD BE MADE)

	Contraceptive method (USE CODE from E1)	How long had you used it? (years)	At what age did you begin using it?	At what age did you
1.				
2.				
3.			· ·	
4.				
5.				
6.				

IF BIRTH CONTROL PILLS REPORTED (FROM E1), ASK E3, OTHERWISE GO TO F0.

E3. You mentioned that you used the birth control pills. I would like to know if you used any of the following pills, dates started and stopped, and complications.(WRITE DOWN ADDITIONAL TIME SPANS IF THE RESPONDENT USE A BRAND AT MORE THAN ONE POINTS IN HER LIFE)

Birth control pill	Did y it?	'ou use	When did you start?	When did you	Did you have any		
	Yes	No	(month, year)	(month, year)	using it?		
1. Triphasil	1	0	/	/			
2. Ortho-Novum	1	0	/	/			
3. Lo-Ovral	1	0	/	/			
4. Demulen	1	0	/	/			
5. Tri-Levlen	1	0	/				
6. Other (specify)	1	0	/	/			

E4. Did you use any birth control pills within 3 months before the diagnosis of your breast cancer?

No	0
Yes	1

SECTION F: MEDICAL HISTORY

Next, I would like to get some information about your medical history including medical problems, medical examinations, and medical treatments.

F0. How did your breast cancer initially present?

	A lesion palpated in a routine physical examin	ation1
	A lesion palpated in a self-examination	2
	A lesion found in a routine mammography	
	Malignant changes incidentally found in	
	a microscopic examination	4
	Nipple discharge	5
	Enlarged lymph node(s)	
F1 .	 Did you ever have lumps or changes in your breasts that were not malignant before your breast cancer was diagnosed? 	
	Yes)0 1
F2.	2. When was it first noticed?	/ (month, year)
F3.	B. How old were you when you first noticed them?	(age)
F4.	How old were you when they were first diagnosed by a doctor? No diagnosis by	(age) a doctor00
tr c		

F5. What was the diagnosis? (SPECIFY)

F6. Did you have a breast biopsy or lumpectomy related to diagnosing or treating this problem?

No)
Yes	1

F7. Did you have a mammogram in connection with diagnosing or treating this problem?

No0	
Yes1	

36

(code)
F8. Did you have a breast examination performed by a doctor on you for diagnosing this problem?

		N Y	o es	0
F9.	How many mammograms did you of your breasts during five years t diagnosed?	i have as a routine exami before your breast cancer	nation was	
				(mammograms)
				None00
F10	 How many clinical breast examine by a doctor on you as a routine five years before your breast car 	nations have been perform check-up of your breast neer was diagnosed?	ned s during	
				(examinations) None00
F11	How many self-examinations of t	he breasts did you usuall	v have	
	per year during five years before	your breast cancer was c	liagnosed?	(examinations) None00
F12	Did you ever have surgery of any before your breast cancer was dia	type on your breasts one agnosed?	e year	
	, ,	No Yes	(GO TO F 5	16)0 1
F13.	Was this surgery performed for			
	Ir D C R R R	acreasing breast size becreasing breast size hanging breast shape emoving one breast emoving both breasts ther (SPECIFY)		
F14.	How old were you when this surg	ery was performed?		(age)
F15.	Were there any complications dur such as leaking?	ing or after the procedur	e,	
		No Yes		0 1
F16.	Were you ever diagnosed with a c cancer was diagnosed?	ancer <u>not</u> in the breasts b	efore your	breast

37

No (GO TO F19)0 Yes1

F17. What was the	cance	r? (SPE	CIFY)_				(code)
F18. How old were	e you v	vhen yo	ur cance	r was first diag	nosed?		(age)
F19. Were you eve radioactive iso	r treate otope b	ed with efore y	radium, our brea	cobalt or other st cancer was d	iagnosed?		(~60)
:					No Yes		0 1
F20. Did you ever l cancer was dia	nave a s ignosed	surgery 1?	on your	ovaries before	your breast		
					No (GO TC Yes) F23)	0 1
F21. What was the	surgery	? (SPE	CIFY)_			_	(code)
F22. What was the (SPECIFY)	medica	l proble	m that c	aused this surge	ery?		(code)
F23 Before your br such as Premar vaginal creams	east ca in othe or sup	ncer wa r than f positori	s diagno or birth es, also	osed, did you ev control? These injections or sk	ver use estroge could include in patches.	n	_ · · ·
				· .	No ((Yes . Unce	GO TO F26) rtain (GO TO	0 1 F26)9
F24. We'd like to kn cancer was diag	iow sor gnosed,	ne deta accord	ils about ling to ea	the use before ach of the follo	your breast wing forms:		
	Did y gen b in the	ou use efore th form o	estro- lat date f?	How many times a day?	How many days used per month?	At what age did you start?	At what age did you stop?
	Yes	No	N/A				
1. Pills	1	Ð	3				
2. Shots	1	0	3				
3. Creams	1	0	3				
4. Suppositorie	es 1	0	3				

۰,

1

F25. Did you use estrogen within 3 months before the diagnosis of your breast cancer?

No0	
Yes1	

F26. Before your breast cancer was diagnosed, did you ever use progesterone such as Provera, Amen or Aygestin other than for birth control? Progesterone is sometimes used in conjunction with estrogen. These could include vaginal creams or suppositories, also injections or skin patches.

No (GO TO G1)	0
Yes	1
Uncertain (GO TO G1)	9

F27. I would like to know some details about the use according to each of the following forms:

	Did you use pro- gesterone before that date? In the form of?		oro- ore	How many times a day?	How many days used per month?	At what age did you start?	At what age did you stop?
	Yes	No	N/A				
1. Pills	1	0	3				
2. Shots	I	0	3		·		
3. Creams	1	0	3				
4. Suppositories	1	0	3				

F28. I would like to read a number of reasons women are given female hormones. Please tell me if a doctor ever gave you female hormones for any of the following reasons.

To reduce discomfort from a dry vagina	1
- For heavy or irregular or too frequent menstrual periods	s2
To help become pregnant	3
To test to see if you were pregnant	4
To end a pregnancy	5
To prevent a miscarriage	
For difficulty in nursing or to dry up breast milk	
To prevent bone thinning	8
As a skin treatment	9
Other (SPECIFY)	10

SECTION G: FAMILY HISTORY

Now, I would like to ask the history of breast cancer among your family members.

,

GI.	How many full sisters do you have, living an	nd deceased?	N	(full sisters) one00
G2.	How many half sisters do you have on your living and deceased?	father's side,	Ň	(full sisters) one00
G3.	How many half sisters do you have on your living and deceased?	mother's side,	N	(full sisters) one00
G4.	How many daughters do you have, living and	deceased?	No	(daughters)
G5.	Has anyone in your family, that is, your paren sisters, your children, ever been diagnosed as	nts, brothers, an having cancer?	d	
,			No (GO TC Yes) G7) 0 1
G6.	I'd like to know some details about cancer in	the family mem	bers:	
		lst family member	2nd family ⁻ member	3rd family member
	1. Who was diagnosed as having cancer, that is, what is their relationship to you? (INDICATE			
	IF HALF SISTER OR BROTHER)	Relation	Relation	Relation
	2. What type of cancer did (he/she) have?			
		Type of	Type of cancer	Type of cancer
	3. How old was your (FAMILY MEMBER) when (he/she) was diagnosed as having cancer?			

Age

No0

Yes1

Age

No0

Yes1

4. Did (he/she) die of cancer?

40

Age

No0

Yes1

G7. Has any of your grandparents, grandchildren, uncles and aunts ever been diagnosed with cancer?

No (GO TO H1)	0
Yes	1

G8. I would like to know some details about cancer in these relatives:

	1st relative	2nd relative	3rd relative
1. Who was diagnosed as having cancer, that is, what is their relationship to you?			
	Relation	Relation	Relation
2. What type of cancer did (he/she) have?			
· · · · · · · · · · · · · · · · · · ·	Type of cancer	Type of cancer	Type of cancer
3. How old was your (FAMILY MEMBER) when (he/she) was diagnosed as having cancer?			
	Age	Age	Age
4. Did (he/she) die of cancer?	No0 Yes1	No0 Yes1	No0 Yes 1

SECTION H: DIETARY INFORMATION

Next, I would like to ask you some questions about your dietary habits.

H1. About how many times did you go on a diet to lose weight before your breast cancer was diagnosed?

Never	0
1 to 2 times.	1
3 to 5 times	2
6 to 8 times	
9 to 11 times	4
12 or more times	5

H2. During the year before your breast cancer was diagnosed, did you take any vitamins or minerals?

No (GO TO H3)	0
Yes fairly regularly	1
Yes, but not regularly	2

IF YES, how frequently did you take	For how many
(NAME OF EACH VITAMIN)	years?
fairly regularly?	(Less than 1=0
(None=0	1-2 years=1
1-3 weeks=1	3-5 years=2
4-6 weeks=2	6-9 years=3
l per day =3	10 or more=4)
2 per day=4	
3 or more per day=5)	

Multiple Vitamins

Stress-tabs type	(code for frequency)	(code for years)
Therapeutic, Theragran type		
One-a-day type		
Other Vitamins		
Vitamin A		·
Vitamin E		
Calcium or Tums		
Vitamin C		

H3. Before your breast cancer was diagnosed how many units per Vitamin E tablets did you take?

H4. Before your breast cancer was diagnosed how many milligrams per Vitamin C tablets did you take?

None	0
100	. 1
200	2
400	3
1000	
Don't know	9

H5. Did you take pills containing any of the following nutrients before your breast cancer was diagnosed?

.

Iron	0
Beta-carotene	1
Zinc	2
Selenium	
No, or don't know	9

H6. Before your breast cancer was diagnosed, what kinds of the following fat did you usually use in cooking? (to fry, stir-fry or sauté) (MARK ONLY ONE OR TWO)

Lard, fatback, bacon fat	0
Pam or no oil	1
Crisco	2
Stick margarine	3
Butter	4
Soft tub margarine	5
Oil	6
1/2 butter, 1/2 margarine	7
Low calorie margarine	8
Don't know, or don't cook	9

H7. Before your breast cancer was diagnosed, what kinds of fat did you usually add to your vegetables, potatoes, etc.? (MARK ONLY ONE OR TWO)

Lard, fatback, bacon fat	0
Low calorie margarine	1
Stick margarine	2
Soft tub margarine	
1/2 butter, 1/2 margarine	4
Butter	5
Whipped butter	
Crisco	
Don't add fat	9

H8. Before your breast cancer was diagnosed, how often did you eat a low-fat or non-fat version of the following food?

	Always low-fat	Sometimes low-fat	Rarely low-fat
Cheese	0	2 ¹⁰ 1	2
Ice-Cream/Yogurt	0	1	2
Salad Dressing	0	1	2

H9. Did you often add salt to your food before your breast cancer was diagnosed?

Seldom/Never	0
Sometimes	1
Always	2

H10. Did you often add pepper to your food before your breast cancer was diagnosed?

Seldom/Never	0
Sometimes	1
Always	.2

H11. Did you often eat the skin of chicken before your breast cancer was diagnosed?

Seldom/Never	0
Sometimes	1
Always	2

H12. Did you often eat the fat on meat before your breast cancer was diagnosed?

Seldom/Never	0
Sometimes	1
Always	2

H13 Before your breast cancer was diagnosed, how often did you eat the following foods from restaurants or carry-outs? Remember to think about all meals (breakfast, lunch, dinner or snacks).

Restaurant Food	Never in past year	1-4 times past year	5-11 times past year	1-3 times a month	once a week	2-4 times a week	almost every day
Fried Chicken	0	1.	2	3	4	5	6
Burgers	0	1	2	3	4	5	6
Pizza	0	I	2	3	4	5	6
Chinese food	0	1	2	3	4	5	6
Mexican food	0	1	2	3	4	5	6
Fried fish	0	1	2	3	4	5	6

H14. During the past year before your breast cancer was diagnosed, how often did you eat the following foods and what was your usual serving amount size: small, medium or large.
If ______ is medium size (READ MEDIUM SERVING FOR EACH FOOD). REFER TO THE CHARTS ON THE FOLLOWING PAGES.

11 Π Π Г _ 11 Π Π Ξ Ξ your Serving Size 10 Σ 10 10 10 10 10 10 10 10 10 **HOW MUCH** S 6 9 9 6 9 6 9 9 6 6 1 medium or ½ cup 1 medium or 6 ounce glass 1/4 medium 1/4 medium 1/2 medium 1 medium 1 medium Serving Medium ½ cup 1∕2 cup **1** slice per day $^{2+}_{+}$ ∞ œ ∞ œ ø 00 œ ∞ ø 00 per day ----~ 5 5 7 7 5 ~ 7 7 7 week 5-6 per 9 9 9 9 9 9 9 9 9 9 week 3-4 per Ś Ś Ś Ś Ś Ś Ś Ś Ś Ś week per 2 4 4 4 4 4 4 4 4 4 4 week HOW OFTEN per c c e ŝ \mathbf{c} \mathbf{c} ŝ ĉ ĉ c mon 2-3 per 2 2 2 2 2 2 2 2 2 2 mon per -Never or less than once per month 0 0 0 0 0 0 0 0 0 0 Strawberries (in season) Watermelon (in season) Peaches, apricots (fresh Cantaloupe (in season) FRUITS & JUICES Apples, applesauce, Orange or grapefruit Cantaloupe (rest of Type of Food or canned) Grapefruit Bananas Oranges pears year) juice

46

During the past year before your breast cancer was diagnosed, how often did you eat the following foods and what was your usual serving amount size: small, medium or large. If __________ is medium size (READ MEDIUM SERVING FOR EACH FOOD) REFER TO THE CHARTS ON **THE** FOLLOWING PAGES.

11 11 II Π L Ľ [] Π Serving HOW MUCH your Size 10 Σ 10 10 10 10 Σ 10 3 9 9 S 9 Ġ 9 9 1 medium 1 medium 1 medium 1 medium Serving Medium 6 ounce 1/2 cup glass bowl bowl bowl bowl per day 2+ ∞ ∞ ∞ ∞ ∞ ∞ per day 7 ~ 7 5 ~ 7 week 5-6 per 9 9 9 9 9 9 week 3-4 per Ś ŝ Ś Ś Ś Ś week per 2 4 4 4 4 4 4 week HOW OFTEN per ŝ ŝ m \mathbf{c} m c mon 2-3 per 2 2 2 2 2 2 mon per ----------Never or less than once per month 0 0 Ö 0 0 0 Highly fortified cereals, such berries, fruit cocktail, grapes High fiber, bran or granola Other cold cereals, such as Any other fruit, including corn flakes, Rice Krispies **BREAKFAST FOODS** vitamin C, such as Hi-C cereals, shredded wheat Fruit drink with added Cooked cereal, or grits as Total, Just Right or FRUITS & JUICES **Type of Food** Product 19 47

- - -

	your Serving Size	T			0 11	0 11	0 11					0 11
F		S	6			6	6	+	6	6	6	6
	Medium Serving		1∕2 cup	2 teaspoon	1 egg=sm 2 epgs=med	2 slices	2 patties or links		1/2 CUD	1/2 CUD	3/4 cup	3/4 cup
	2+ per day		∞	∞	8	∞	8		8	∞	∞	∞
	1 per day		۲ . ۲	~	2	2	7		7	7	2	2
,	5-6 per week		9	6	6	9	9		6	9	6	9
	3-4 per week			S	S	S S	5		5	5	5	S
	2 per wcek		4	4	4	4	4		4	.4	4	.4
FTEN	l per week		ñ	3	e M		e M		3	e M	3	e E
O M O	2-3 per mon		5	2	2	5	2		2	2	2	5
H	1 per mon		-		1		1	• is.	1	1	1	-
	Never or less than once per month		0	0	0	0	0		0	0	0	0
	Type of Food	BREAKFAST FOODS	Milk on cereal	Sugar added to cereals	Eggs	Bacon	Sausage	VEGETABLES	String or green beans	Peas	Chili with beans	Other beans such as baked beans, pintos, kidney, limas and lentils

11 Π Π 11 Π 11 Ľ 11 Π 11 your Serving Size **HOW MUCH** 10 10 Σ 10 10 10 10 10 10 10 • S 9 9 6 9 9 6 6 6 6 2 tablespoon 1 medium Medium Serving 3/4 cup or 6 oz. ½ cup 1/2 cup ½ cup ½ cup 1/2 cup 1/2 cup glass per day $^{2+}$ ∞ ∞ òÒ ∞ ø œ ∞ ∞ ∞ per day 7 7 7 7 ~ ~ 7 5 5 week 5-6 per 9 9 9 9 9 9 9 9 9 week 3-4 per Ś Ś. S. Ś Ś Ś Ś Ś Ś week per 2 4 4 4 4 4 4 4 4 4 week **HOW OFTEN** per \mathbf{c} \mathbf{c} e m ŝ c ŝ ŝ e nom 2-3 рег 2 2 3 2 2 2 2 2 2 mon per _ **يست**م ***** Never or less than once per month 0 0 0 0 0 0 0 0 0 Tomatoes, tomato juice Cauliflower or brussels Winter squash/baked Red chili sauce, taco sauce, salsa picante Mustard, turnip, or VEGETABLES Spinach (cooked) **Type of Food** Spinach (raw) collard greens Broccoli sprouts squash Com

During the past year before your breast cancer was diagnosed, how often did you eat the following foods and what was your usual serving amount size: small, medium or large. If ________ is medium size (READ MEDIUM SERVING FOR EACH FOOD) REFER TO THE CHARTS ON THE FOLLOWING PAGES.

ĩ

		H	IOW O	FTEN			,							
	Never or		2_2		, ,	,	, ,	 -			MOH -	MUCH		
Type of Food	less than	, Der	L-2	1	7	ې 4	9-0-		2+			your		
	once ner	In our	hon nom	pci	per	per		per		Medium		Serving		
	month			ACCA	MCCK	week	week	dav	per dav	Serving		Size		
VEGETABLES														
Colo eleni - achtere		[2	Σ	L	
cole slaw, cabbage, sauerkraut	Э.	1	7	Ś	4	S	9	2	~	1/2 cup	6	10	11	
Carrots, or mixed vegetables containing carrots	0	1	5	3	4	5	6	2	œ	∿ cup	6	10	11	
Green salad	0	1	5	æ	. 4	5	. 9	7	∞	1 medium	6	10		
	<									IMON				
kegular salad dressing & mayonnaise,	5		7	Ś	4	Ś	9	7	80	2 tablespoon	6	10	11	
including on sandwiches	-												њ ,	
French fries and fried ootatoes	0	1	2	e	4	S	6	7	∞	3/4 serving	. 6	10	-	
Sweet potatoes, yams	0	-	2	3	4	5	6	7	~	16 CHD	0	01	=	i
Other potatoes.	0		, ,					1	, ,			2		
ncluding boiled, baked,	>			n	+	n	0	-	×	1 medium	6	10	11	
nashed & potato salad										or 72 cup				
lice	0	1	5	3	4	5	6	6	×	2/A cura				1
5							,		-	J/4 cup	۲ 	10	11	

		H	10 M O	FTEN			1				MOH	MICH	
Type of Food	Never or less than	1 per	2-3 per	1 per	2 ner	3-4 Der	5-6 ner	1 ner	2+	, Pow		your	
	once per month	uou	mom	week	week	week	week	dav dav	per dav	Serving		Size	
VEGETABLES											s	W	Ĩ
Any cook vegetable, including onions, summer squash	0	-	7	e	4	5	6	2	∞	₩ cup	6	10	
Butter, margarine or other fat added to vegetables etc.	0		2	ĸ	4	5	6	7	∞	2 pats	6	10	11
MEAT, FISH POULTRY, LUNCH ITEMS													
Hamburgers, cheeseburgers, meatloaf, beef burritos, tacos	0	1	3	e	4	S	6	2	∞	1 medium or 4 ounces.	6	10	=
Beef, (steaks, roasts, etc. including sandwiches)	0		2	3	4	S	6	7	∞	4 ounces.	6	10	=
Beef stew or pot pie with carrots or other vegetables	0	-	2	e	4	5	9	7	∞	1 cup	6	10	11

11 Π Π 11 L 11 11 Serving **HOW MUCH** your Size 10 10 Σ 10 10 2 10 S 9 6 9 6 6 6 2 chops or 4 2 small or 1 2 small or 1 large piece 4 ounces or large piece **1** sandwich Medium Serving ounces ounces 1/2 cup 4 per day 2+ ∞ ø ∞ 8 ø ∞ per day 5 ~ 7 ~ 0 ~ week 5-6 per 9 9 9 9 9 9 week 3-4 per Ś Ś Ś Ś Ś Ś per week 2 4 4 4 4 4 4 week **HOW OFTEN** per c c e ŝ c ĉ mon 2-3 per 2 2 2 2 2 2 mon per Never or less than once per month 0 0 0 0 0 0 Liver, including chicken POULTRY, LUNCH Pork, including chops, Funa, tuna salad, or roasted, stewed or Chicken or turkey broiled including Fried fish or fish MEAT, FISH, **Type of Food** Fried chicken sandwiches) sandwich casserole ITEMS roasts livers

Π 1 Π 11 11 11 Π 11 Serving your Size **HOW MUCH** 10 10 Σ 10 10 10 10 10 10 S 9 6 6 9 9 9 6 6 5 pieces, 1/4 2 pieces or 4 5 pieces, 1/4 cup or 3 oz. cup or 3 oz. Serving 2 hot dogs Medium ounces **2** slices **2** slices 1 cup 1 cup per day $^{+}$ ∞ ∞ œ ∞ 00 8 ø ∞ per day 5 7 ~ ~ 5 7 ~ 7 per week 5-6 9 0 9 9 9 0 9 9 week 3-4 per Ś Ś Ś Ś Ś Ś Ś Ś week per 2 4 4 4 4 4 4 4 4 week HOW OFTEN per ŝ c c ĉ ĉ ŝ ŝ c mon 2-3 per 2 2 2 2 2 2 2 2 mon per _ less than . Never or once per month 0 0 0 0 0 0 0 0 Shell fish, (shrimp, crab, Spaghetti, lasagna, other pasta with tomato sauce **POULTRY, LUNCH** Other fish (broiled or macaroni & cheese) Mixed dishes with MEAT, FISH, cheese (such as **Type of Food** lobster, etc) Liverwurst ITEMS Hot dogs Oysters baked) Pizza

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		H	0 M 0	FTEN			,						
Type of Food	Never or less than once per month	1 per mon	2-3 per mon	l per week	2 per week	3-4 per week	5-6 per week	1 per dav	2+ per dav	Medium Serving		your Serving Size	
MEAT, FISH, POULTRY, LUNCH ITEMS								ſ	Ĵ		S	W	• Г
Ham, bologna, salami & other lunch meats	0	1	2	3	4	5	6	7	∞	2 slices or 2 ounces	6	10	=
Vegetable and tomato soups including veg. beef, minestrone	0	-	2	3	4	S	9	7	œ	1 medium bowl	6	10	11
Other soups	0	1	5	3	4	5	9	7	∞	1 med. bowl	6	10	
BREADS, SNACKS, SPREADS												2	=
Biscuits, muffins, (including fast foods)	0	1	2	ε	4	S	6	7	∞	1 medium piece	6	10	11
White bread including sandwiches, bagels, burger rolls, french or italian bread	0	-	7	3	4	Ś	9	٢	∞	2 slices	6	10	=

Π Π Г Π Π 11 1 Serving Size your HOW MUCH Σ 10 10 10 10 10 10 10 ŵ' S 9 9 9 9 9 6 9 **2 handfuls** 2 medium **2 tablesps 2** tablesps Medium Serving **2** Slices or 1 cup pieces 2 pats 2 pats per day $^{2+}$ ∞ ∞ ∞ ∞ œ ∞ ø per day 7 ~ ~ 7 7 1 ~ week 5-6 per 6 0 9 9 9 9 9 week 3-4 per Ś Ś Ś Ś Ś Ś Ś week per 2 4 4 4 4 4 4 4 week HOW OFTEN per ŝ ĉ c ĉ ĉ ĉ m mon 2-3 per 2 2 2 2 2 2 2 mon per -Never or less than once per month 0 0 0 0 0 0 0 pumpernickel (including Gravies made with meat **BREADS, SNACKS,** Peanuts, peanut butter muffins, corn tortillas potato chip, corn chip, Salty snacks, such as Butter on bread/rolls Dark breads such as drippings, or white Corn bread, corn **Type of Food** Margarine on sandwiches) SPREADS wheat, rye, bread/rolls popcom sauce

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		Ĩ	O MOI	FTEN									
Type of Food	Never or less than once per month	1 per mon	2-3 per mon	1 per week	2 per week	3-4 per week	5-6 per week	l per dav	2+ per	Medium Serving		your Serving Size	
DAIRY PRODUCTS								Î	lay		0		
Cottage Cheese	0	1	2	3	4	5	. 9	7	∞	1% cun	2 0	E S	
Other cheeses & cheese spreads	0		2	3	4	5	6	7	×	2 slices or	6	10	=
Flavored or frozen yogurt	0	1	7	m	4	5	9	7	×	1 cup	6	10	=
SWEETS													
lce-Cream	0	1	2	m	4	5	9	L	∞	1 scoop or V, cun	6	10	=
Doughnuts, cookies, cake, pastry	0	-	2	e	4	S	6	7	∞	1 piece or 3 cookies	6	10	
Pumpkin pie, sweet potato pie	0	-	2	<i>с</i>	4	5	9	7	∞	1 medium slices	6	10	
Other pies	0	-	2	3	4	S	6	2	8	1 med. slice	6	10	
Chocolate candy	0		2	3	4	5	9	7	∞	1 small bar or 1 oz	6	10	

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of Food TS andy, jelly, brown sugar brown sugar brown sugar milk & ges with whole of incl. on cereal) k & beverage of incl. on cereal) k & beverage of incl. on the foot all (not incl. on r soft drinks (not	Never or less than once per month 0 0 0 0	H per mon 1 1 1 1	IIperperweek222222	TEN 2-4 per week 3 3 3	5-6 per week 4 4 4	1 per day 5 5 5 5 5	2-3 per 6 6 6 6	4-5 per day 7 7 7	8 8 8 6+ 8 8 8 6+	Medium Serving 3 pieces or 1 tablespoon 8 oz. glass 8 oz. glass or bottle	HOW MU 8 6 6 6 6 6	CH your Serving Size M M 10 10 10 10	
le coolers	0	_	2	3	4	5	6	7	∞	1 medium glass	6	10	11
·	0		2	3	4	5	6	7	∞	1 shot	6	10	11

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. . H15. I would like to ask you some summary questions about your dietary intake. How often did you use fat or oil in cooking in your foods within the year before your breast cancer was diagnosed?

Less than one per week	
1-2 per week	
3-4 per week	3
5-6 per week	
1 per day	5
11/2 per day	6
2 per day	
3 per day	8
4 or more per day	9

H16. Within the year before your breast cancer was diagnosed, about how many servings of vegetables did you eat (not counting salad or potatoes)?

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Less than one per week	
1-2 per week	2
3-4 per week	3
5-6 per week	
1 per day	
11/2 per day	6
2 per day	
3 per day	8
4 or more per day	

H17. Within the year before your breast cancer was diagnosed, about how many servings of fruits did you eat (not counting juices)?

Less than one per week	1
1-2 per week	2
3-4 per week	3
5-6 per week	4
l per day	5
11/2 per day	
2 per day	
3 per day	8
4 or more per day	
-	

H18. Within the year before your breast cancer was diagnosed how many servings of cold cereal did you eat?

Less than one per week	1
1-2 per week	2
3-4 per week	3
5-6 per week	
1 per day	
11/2 per day	6
2 per day	7
3 per day	8
4 or more per day	9
-	

SECTION I: OTHER

Finally, I would like to ask you several additional questions. I would like to remind you that all information you give us is kept strictly confidential and you may refuse any of them. We appreciate your honesty in answering these questions.

11. What was your religious preference when your breast cancer was diagnosed?

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None	0
Protestant	1
Jewish	2
Catholic	
Latter Day Saints	4
Other (specify)	5

I2. What was your household income before taxes in the year before your breast cancer was diagnosed?

Less than \$15,000	1
\$15,000 to \$29,999	
\$30,000 to \$44,999	3
\$45,000 to \$59,999	4
\$60,000 or over	5

I3. How many people living in your household were supported by that income during that year? (persons)

I4. How old were you when you first had sexual intercourse with a male?

15. How old were you when you first had sexual intercourse on a regular basis?

____ (age) Never00 Uncertain99

I6. On the average, how often did you have sexual intercourse with a male before age 20?

Never	
Less than once per month	
One to three times per month	
One to three times per week	
Four or more times per week	
Refused	
Uncertain	9

17. On the average, how often did you have sexual intercourse with a male between age 20 and 29?

Never	0
Less than once per month	1
One to three times per month	2
One to three times per week	
Four or more times per week	4
Refused	
Not available (younger than age 20)	
Uncertain	9

18. On the average, how often did you have sexual intercourse with a male between age 30 and 39?

Never	0
Less than once per month	
One to three times per month	2
One to three times per week	3
Four or more times per week	4
Refused	7
Not available (younger than age 30)	8
Uncertain	9

19. I would like to read a list of genital infections. Please let me know if you had any of them diagnosed by a doctor before your breast cancer was diagnosed. If you had one diagnosed, please tell me the age at which you first had it, and times you had it.

	Were you diagnosed with it?		At what age were you first	How many times did you have it?	
	Yes	No	Uk	diagnosed?	
1. Venereal warts or condylomata	1	0	3		
2. Genital herpes	1	0	3		
3. Syphilis	1	0	3		
4. Gonorrhea	1	0	3		
5. Other sexually- transmitted diseases	1	0	3		

I would like to thank you very much for your participating in this study. We appreciate you for your time and your help. As you know, we will be mailing you a check for \$35.00. Please let me know if you have any questions about this study. this

IF RESPONDENT SAYS "YES", ANSWER THE QUESTION. IF RESPONDENT SAYS "NO", SAY "bye-bye".

SECTION J: INTERVIEWER REMARKS

J1. Respondent's overall cooperation was:

Very good	•••••••••••••••••••••••••••••••••••••••	
Good		
Fair		3
Poor		4

J2. The quality of information obtained from this interview is

Very reliable	
Generally reliable	2
Questionable	3
Unsatisfactory	4

J3. The main reason for unsatisfactory or questionable quality of this interview was that the respondent:

Was physically ill	
Had poor hearing or speech	2
Did not understand or speak English well	3
Was insufficiently knowledgeable	4
Was confused or distracted by frequent interruptions	5
Was inhibited by others around her	6
Was bored or uninterested	
Was upset or depressed	8
Was embarrassed by the subject matter	9
Was emotional unstable	10
Was hostile or uncooperative	11
Other (SPECIFY)	

J4. The interview was conducted with the respondent while she was

Alone	1
With husband present	2
With others present and listening (SPECIFY)	

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Meharry Medical College Women's Health Study

The Interviews' Overview

which the respondent, through a series is the commonest method of collecting An interview is a structured procedure with a scientific purpose by means of of questions is induced to give verbal whether face-to-face or by telephone, information. The personal interview, data on exposure in epidemiological studies..

the Performance of Interviews Four General Ways in Which May Give Rise to Error Asking errors: Omitting questions or changing the wording of questions. Probing errors: Failing to probe when necessary, biased probing, irrelevant probing, inadequate probing.

the Performance of Interviews Four General Ways in Which May Give Rise to Error (cont) Recording errors: Recording something not said, not recording something said, incorrectly recording what was said.

response when a question is not asked I Flagrant cheating: Recording a or answered.

There are Two Types and Styles of Interviews

Structured interview-Is one in which all the interview's tasks, and even words, are set down on the interview questionnaire.

Unstructured interview-A rapport is established with the study subject. The Optimal Circumstances for an Interview Is Time and Place

competing demands on the respondent. Time should be chosen to minimize,

any time are those 65 years and older. The easiest group to find at home at

Day of week is important in determining whether or not a respondent will be available.

The Optimal Circumstances for an Interview Is Time and Place (cont)

afternoons and evenings to be the best evening, Saturday any time & Sunday Research has found that weekday time for an interview.

Choosing the Location for the Interview

The location of the interview should be chosen so that it is away from distractions.

questionnaire), Ideally at a table so that it is easier for the interview to organize facing the respondent, (so that the The interview should be able to sit respondent cannot read the his or her papers.

Securing the Interview

identity by showing an official ID card The interviewer should establish her from the institution conducting the research. The interviewer should adopt a positive manners, assuming that the interview will not be refused.

nly Asked by the	
Questions Commo	Respondent

- Who gave you my name/address? How did you happen to pick me?
- I really don't know anything about this. What's all this about anyway?
 - What good will this do?
- What's the catch?
- What else am I going to have to do?
 - Why do you need my name?
Questions Commonly Asked by the Respondent (cont)

How can I be sure that you won't tell Why do you want to know that? everyone else what I tell you?

What are you going to do with these answers anyway?

When will I get paid?

Avoiding Refusals

If it appears that the respondent is going to refuse to be interviewed, the positive behind the refusal should be answered. As far as possible, a refusal should not restated and any implied questions reasons for participation should be be accepted until it is explicit.

Asking Questions and Obtaining Answers

Questions should be read with correct intonation and emphasis. Questions should be read slowly, about two words a second.

misunderstands a question, it should be When a respondent mishears or repeated in full.

Rules for Asking Questions in Highly Structured Interviews	Read the questions exactly as they are worded in the questionnaire.	Read each question slowly.	 Use correct intonation and emphasis 	 Ask the questions in order they they are 	presenteu III une questionnaire.	Ask every question that applies to the respondent.

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Rules for Asking Questions in Highly Structured Interviews (cont)

- Use response cards when provided.
- Repeat in full question that are misheard or misunderstood.
 - Use only allowable probes.
- Read all linking or transitional
- statements exactly as they are printed.
- for questions unless they are printed in Do not add apologies or explanations the questionnaire.

Acceptable Non-directive Probes

Repeat the question.

The expectant pause.

Repeat the reply.

Neutral questions or comments (for clarification).

Rules for Recording Responses in Interviews

- Make sure that you understand each Make sure that each response is adequate. response.
- Do not answer for the respondent.
- Record all response during the interview Begin writing as soon as the respondent begins talking.

GUIDELINES FOR TELEPHONE INTERVIEW

Purposes of Improving Interview Skills

- 1) To increase the response rate
- 2) To obtain accurate information
- 3) To obtain complete data and reduce missing items

Issues For A Good Interview

- 1) Psychological Preparations
 - Perform an interview as if you have no knowledge of study group
 - Perform an interview as if you have no knowledge of study aims
 - Do not expect whether an interview will be difficult or not
- 2) Interview Time
 - Tell a study subject time length for an interview to ensure sufficient time
 - Convenient for study subjects
 - Make an appointment if necessary
- 3) Speaking on the phone
 - Friendly
 - Nice
- 4) Introduction
 - Read introduction remarks as presented in the questionnaire
- 5) Asking Questions
 - Read a question as it is in the questionnaire
 - In the order presented in the questionnaire
 - Ask all questions needed (skip when indicated)

- Read all linking or transitional statements
- Read slowly and clearly
- Repeat a question, when necessary, in full
- Use non-directive probing
- No inductive questioning and directive probing
- Provide question-by-question feedback
- 7) Recording Answers
 - Record only what has been said by study women
 - Record it correctly
 - Write a note when an answer is not clear
- 8) Editing
 - Check all answers immediately after an interview (missing, unclear,...)
 - Go back immediately to make up



PAGE 2





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• Berlex Berlex в 6 61 60 Tri-Levien® 28 Tablets 792 Choose 791, if you used 21-day regimen †Tri-Levlen⁹ 28 Tablets 7 28-Day Regimen (Each brown tablet contains 0.050 mg levonorgestrel and 0.030 mg ethiny! estradiol. Each while tablet contains 0.075 mg levonorgestrel and 0.040 mg ethinyl estradiol. Each light-yellow tablet contains 0.125 mg levonorgestrel and 0.030 mg ethinyl estradiol. Each light-green tablet is inert.) 794 tLevien® 28 Tablets Choose 192, if you used 28 - day regimen (Each light-orange tablet contains 0.15 mg levonorgestret and 0.03 mg ethinyl estradiol. Each pink tablet is inert.) Also available in 21-day Also available in 21-day regimen 791 793 regimen Choose 793 if you used 21-day Nyimen Mead Johnson Laboratories Mead Johnson Laboratories Choose 794- if you used 28-day regimen (ar (#) 721 722 63 62 (Compact shown not actual size) (Compact shown not actual size) Ovcon®-35 Ovcon®-50

(norethindrone and ethinyl estradiol)

(norethindrone and ethinyl estradioi)

page 5

On the enclosed color pictures, we show various brands of oral contraceptive pills. Please identify the pills you have ever used and put the picture number (in red color) and code number of each brand used in the space on the first column below. Also please write down the dates started and stopped, complications and the reasons for the use. If you have used a brand for more than one time-spans, please indicate each time span of use.

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Birth control pill (the picture number and code number)	When did you start? (month, year)	When did you stop using it? (month, year)	What was the reason to use this pill?	Did you have any complications due to using it?
1 code#	/	/		
2. picture# code#	/	/		<u>.</u>
3 code#	/	/		
4	/	/		
5 picture#_code#	/	/		
6 picture#_code#	/	/		
7. picture# code#	/	/		
.8 code#	/	/		
9 picture# code#	/			
10 picture#_code#	/	/		

Case-Control Study Tracking System (Linked through ID#)



