

## APPENDICES

## **APPENDIX A**

### **Consent Form**

**CONSENT TO ACT AS A SUBJECT IN AN EXPERIMENTAL STUDY**

**TITLE:** Bone Density and Coronary Calcification in Older Men

**INVESTIGATORS:**

Jane A. Cauley, Dr.P.H.  
Associate Professor  
Department of Epidemiology  
University of Pittsburgh  
(412) 624-0218

Daniel Edmundowicz, M.D.  
Assistant Professor of Medicine  
Director, Electron Beam CT Program  
University of Pittsburgh Medical center  
Division of Cardiology  
(412) 647-7718

Anne E. Newman, M.D, M.P.H.  
Associate Professor  
Department of Epidemiology  
Graduate School of Public Health  
Department of Geriatrics  
School of Medicine  
University of Pittsburgh  
(412) 624 – 4012

Miryoung Lee, M.P.H.  
Research Assistant  
Department of Epidemiology  
Graduate School of Public Health  
University of Pittsburgh  
(624) 624-3009

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**Description of Study:** As a participant in the Study of Osteoporotic Risk in Men (STORM), I have been asked to return to participate in an additional examination. The purpose of this study is to examine the occurrence of calcification in the heart as measured by Ultrafast CT (EBCT), and to investigate the association between heart disease and osteoporosis in a population of adult men who may be at risk for calcification development at coronary arteries. 150 men from the Study of Osteoporotic Risk in Men (STORM) are being invited to participate in this study. I have been invited to participate because I am a participant in STORM. The information gained through this study may help researchers obtain a better understanding of the association between osteoporosis and heart disease in older men.

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Initials

**Description of Clinic Visit:** During the clinic visit I will be asked to complete questionnaires about my medical history, and to have the Ultrafast CT (EBCT) scan of the chest.

The EBCT scan involves taking a series of electron beam X-rays of the chest to measure the amount of calcium accumulation in the coronary arteries. Three small electrode patches will be placed on my chest by the technologist for the purpose of monitoring my heart rhythm during the EBCT. I will be asked to lie on my back on the scanner table and follow breathing instructions given by the technologist as the table is moved through a ring that emits and detects X-rays. I will be asked to hold my breath twice for approximately 20-30 seconds each time. The exam will take approximately 10 minutes. The EBCT scan will be performed at the University of Pittsburgh Preventive Heart Care Center located at 120 Lytton Ave, Suite 302 in Oakland.

**Risks and Benefits:** Participation in this research study involves exposure to radiation from the EBCT scan. The amount of radiation exposure received from the scanning procedure is approximately 0.407 rem to the chest for the coronary artery, with moderate exposure to other areas of the body. This is a small fraction of the annual radiation exposure limit to the lungs (40rem) or abdominal tissue (50rem) allowed for radiation workers by federal regulations. There is no known minimum level of radiation exposure that is recognized as being totally free of the risk of causing genetic defects (cellular abnormalities) or cancer. However, the risk associated with the radiation dose that I will receive from this study is considered to be moderate and comparable to other everyday risks. I will receive the result from my EBCT scan, and my physician will be informed if I request it.

I will not directly benefit from participation in this research study, but the results of this study may lead to an improved understanding of the relationship between osteoporosis and heart disease in older men.

\*\*\*\*\*

**RIGHT TO WITHDRAW:** I am free to refuse to participate, or to withdraw from this study at any time. This will not affect my care at this institution, or cause a loss of any benefits to which I am entitled. My refusal to participate will not affect my participation in the study.

**NEW INFORMATION:** If new information, either good or bad, about this study comes to the attention of the Investigators during the course of this study which may relate to my willingness to participate, it will be provided to me or my representative.

**COMPENSATION FOR ILLNESS OR INJURY:** The University of Pittsburgh and the Investigators of this study recognize the importance of my voluntary participation in this study. These individuals and their staff persons will make reasonable efforts to minimize, control, and treat any injuries that may arise as a result of this research. If I believe that I am injured as the result of the research procedures being performed, I will contact immediately Dr. Jane Cauley at (412) 624-0218 or the University of Pittsburgh

Institutional Review Board (412) 578-3424. Emergency medical treatment for injuries solely and directly relating to my participation in this research will be provided to me by hospitals of the UPMC Health System. If my research-related injury requires medical care beyond this emergency treatment, I will be responsible for the costs of this follow-up care unless otherwise specifically stated below. I will not receive monetary payment for, or associated with, any injury that I suffer in relation to this research.

**COSTS AND PAYMENTS:** I will not be charged for my participation in this study. Transportation to the clinic will be provided to me if I request. I will be compensated in the amount of \$25 if I complete the clinic visit.

**CONFIDENTIALITY:** I understand that any information about me obtained from this research, including answers to questionnaires and laboratory data, will be kept strictly confidential. The information, which will carry personal identifying material, will be kept in locked files for five years after I complete the study. I understand that my research records, just like hospital records, may be subpoenaed by court order and that federal regulatory agents may have access to my records. It has been explained to me that my identity will not be revealed in any description or publication of this research. Therefore, I consent to such publication for scientific purposes.

**VOLUNTARY CONSENT:** I certify that I have read the proceeding, or that it has been read to me, and that I understand its contents. Any questions I have pertaining to the study will be answered by Dr. Jane Cauley at (412) 624-3057. Any questions I may have regarding my rights as a research subject will be answered by Institutional Review Board Office at (412) 578-3424. A copy of this consent form will be given to me.

I consent to participate in this study. I understand the nature, purpose, potential risks and benefits associated with participation, and all of my questions have been answered.

By signing this form, I freely agree to participate in this research study.

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Participant Signature

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Date

I certify that I have explained to the above individual the nature and purpose, the potential benefits, and possible risks associated with participating in this research study, have answered any questions that have been raised, and have witnessed the above signature.

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Witness Signature

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Date

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Investigator's Signature

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Date

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Initials

## **APPENDIX B**

### **Study Questionnaire**

ID No. _____
Name Code _____
Date _____

**STUDY OF OSTEOPOROTIC RISK IN MEN**

**Clinic Self-Administered Questionnaire**

3/6/00  
ver.

Dear STORM participants

Your dedication and participation in STORM study have made it extremely successful. You are the foundation upon which we continue to expand our knowledge and understanding of osteoporosis and the aging process in men. We couldn't do it without you – we thank you!

By participating in this ancillary study visit, you will contribute greatly to our ability to better understand osteoporosis and its relation to coronary artery diseases that prevail in men. The information that you provided will be unique and exceedingly important in enhancing our understanding of men's health. At this visit, we will ask you about behaviors and health related to cardiovascular disease, and will take a heart scan on your chest using new imaging techniques.

Your contribution to the STORM study is very important. We know that your participation in this study, filling out the questionnaires and coming to the clinic, takes time and thought. We really appreciate you in advance for taking the time to participate.

***Thank you very much!***

The STORM Staff



Appointment date: \_\_\_\_\_ Time: \_\_\_\_\_ A.M./P.M.

In preparation for your visit, please follow these instructions:

1. **What to bring to your appointment**

- Fill out the questionnaire forms as completely as you can and bring them with you.
- You do not need to fill it out all at once and you can get help if you want. If any parts of the questionnaires are confusing, leave them blank and they will be reviewed with you during your clinic visit
- Please bring to the clinic the bottles or containers for all medicines you've taken in the past 30 days
- Please bring eyeglasses and hearing aids if you use them.

2. **What to wear to your appointment**

- Please wear shirt that you can easily take off for the heart scanning.

Information obtained for this study is strictly confidential and will be used only for research purposes.

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**What we're asking you to do :**

- Please answer the questions on the following pages as completely as you can.
- Take your time. You may get help if needed.
- Some questions have arrows that will help you find the next question.

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**EXAMPLE**

SINCE YOU LAST COMPLETED A QUESTIONNAIRE FOR OUR STUDY (ABOUT 12 MONTHS AGO), have you fainted, blacked out, or lost consciousness?

Yes  No  Don't know

PLEASE GO TO NEXT QUESTION

IF YES, how many times has this happened to you in the past 12 months?

One  Two or three  Four or more

ID No. \_\_\_\_\_  
Name Code \_\_\_\_\_

Information obtained for this study is strictly confidential and will be used only for research purposes.

1a. Please check the information below for accuracy. Make any corrections, changes or additions in the space provided.

b. Corrections, changes, additions

Name \_\_\_\_\_  
First Middle Initial Last

Address \_\_\_\_\_  
Number Street Apt/Room Number  
\_\_\_\_\_  
City State Zip code

Telephone \_\_\_\_\_ ) \_\_\_\_\_  
Area Code

2. Do you expect to move or have a different mailing address in the next year?

Yes  No  Don't know



**PLEASE GO TO QUESTION 3**



If you know your new address, please write it below

New address:

Address \_\_\_\_\_  
Number Street Apt/Room Number  
\_\_\_\_\_  
City State Zip code

Telephone \_\_\_\_\_ ) \_\_\_\_\_  
Area Code

permanent address  winter address  other (please describe)

\_\_\_\_\_

3. Who is your next of kin?

a. Name \_\_\_\_\_  
First Middle Initial Last

Address \_\_\_\_\_  
Number Street Apt/Room Number  
\_\_\_\_\_  
City State Zip code

Telephone \_\_\_\_\_ ) \_\_\_\_\_  
Area Code

b. How is this person related to you?

- |   |  |
|---|--|
| My son or daughter <input type="checkbox"/>   | my grandchild <input type="checkbox"/>   |
| My brother or sister <input type="checkbox"/> | friend/neighbor <input type="checkbox"/> |
| My niece or nephew <input type="checkbox"/>   | someone else <input type="checkbox"/>    |
- ↓

Please say how related: \_\_\_\_\_

4. Please write down the names, addresses and phone numbers of a person who do not live with you and who would know how to reach you in case we are unable to get in touch with you. A local person is preferred.

**Contact Person:**

a. Name \_\_\_\_\_  
First Middle Initial Last

Address \_\_\_\_\_  
Number Street Apt/Room Number  
\_\_\_\_\_  
City State Zip code

Telephone \_\_\_\_\_ ) \_\_\_\_\_  
Area Code

b. How is this person related to you?  
\_\_\_\_\_

### Health Care

5. Do you have a doctor or place that you usually go to for health care or advice about your health care?

Yes

No

PLEASE GO TO QUESTION 6

**IF YES**, please write down the name, address and telephone number of the doctor or place that you go to now for your health care.

Name \_\_\_\_\_  
First Middle Initial Last

Address \_\_\_\_\_  
Number Street Apt/Room Number

\_\_\_\_\_  
City State Zip code

Telephone \_\_\_\_\_ ) \_\_\_\_\_  
Area Code

6. Do you want your EBCT results sent to your physician ?

Yes

No

PLEASE GO TO QUESTION 7

**IF YES**, please write down the name, address and telephone number of the doctor or place that you go to now for your health care.

a. Same as above

b. Name \_\_\_\_\_  
First Middle Initial Last

Address \_\_\_\_\_  
Number Street Apt/Room Number

\_\_\_\_\_  
City State Zip code

Telephone \_\_\_\_\_ ) \_\_\_\_\_  
Area Code

## Smoking

7. Do you currently smoke cigarettes?

Yes

No

Don't know

PLEASE GO TO QUESTION 8

**IF YES**, on average about how many cigarettes a day do you smoke?

\_\_\_\_\_ cigarettes ( less than one cigarette a day = 0.5)

**HISTORY OF BROKEN BONES AND FRACTURES**

8. **SINCE YOU LAST COMPLETED A QUESTIONNAIRE FOR THE STUDY,** ( ) has a doctor told that you had a broken or fractured bone?

Yes       No       Don't know

↓                      ↓  
**PLEASE GO TO QUESTION 9**

IF YES, please write down the names of all the bones you have broken (for example, "wrist" or "spine") ?

Broken Bone	Date
_____	_____
_____	_____
_____	_____
_____	_____

9. **SINCE YOU LAST COMPLETED A QUESTIONNAIRE FOR THE STUDY,** ( ) has a doctor told that you had a osteoporosis, sometimes called thin or brittle bone ?

Yes       No       Don't know

## HEART CONDITIONS

10. Has a doctor **EVER** told you that you had:

a. Heart attack or myocardial infarction?

Yes  No  Don't know  Refused



IF YES,  
are you currently  
being treated for  
this condition by  
a doctor?

Yes  No

b. Angina pectoris or chest pain due to heart disease?

Yes  No  Don't know  Refused



Yes  No

c. Congestive heart failure?

Yes  No  Don't know  Refused



Yes  No

c. Intermittent claudication or pain in your legs  
from a blockage of the arteries?

Yes  No  Don't know  Refused



Yes  No

e. TIA, transient ischemic attack, or mini-stroke?

Yes  No  Don't know  Refused



Yes  No

f. Stroke, CVA, or cerebrovascular accident?

Yes  No  Don't know  Refused



Yes  No

g. Rheumatic heart disease or valvular heart disease?

Yes  No  Don't know  Refused



Yes  No

h. Hypertension or high blood pressure?

Yes  No  Don't know  Refused



Yes  No

i. Heart murmur?

Yes  No  Don't know  Refused



Yes  No

## CARDIOVASCULAR HISTORY

11. Have you **EVER** had any medical or surgical procedure to your heart, neck or vessels such as an angioplasty or bypass surgery?

- Yes    No    Don't know    Refused

PLEASE GO TO QUESTION 12

*Have you ever had any of the following medical or surgical procedures...?*

- a. Coronary bypass surgery, heart bypass, or CABG?  
 Yes    No    Don't know    Refused
- b. Angioplasty of coronary arteries, which is a dilation of arteries of the heart with a balloon?  
 Yes    No    Don't know    Refused
- c. Carotid endarterectomy, which is surgery on the blood vessels in your neck?  
 Yes    No    Don't know    Refused
- d. Bypass procedure on the arteries of your legs?  
 Yes    No    Don't know    Refused
- e. Angioplasty of lower extremity arteries which is dilation of arteries of the leg with a balloon?  
 Yes    No    Don't know    Refused
- f. Pacemaker implant?  
 Yes    No    Don't know    Refused
- g. Repair of an aortic aneurysm?  
 Yes    No    Don't know    Refused
- h. Replacement of a heart valve?  
 Yes    No    Don't know    Refused

## CARDIOVASCULAR HISTORY

12. Have you ever had any pain or discomfort in your chest?

- Yes    No    Don't know    Refused

13. Do you get it when you walk up hill or hurry?

- Yes    No    Never hurry or walk uphill    Don't know    Refused

14. Do you get it when you walk at an ordinary pace on a level surface?

- Yes    No    Don't know    Refused



15. What do you do if you get it while you are walking? Do you....
- Stop or slow down, or continue at same pace after taking nitroglycerin
  - Continue at same pace
  - Don't know
  - Refused

16. If you stand still, what happens to it? Is it relieved or not relieved?

- Relived     Not relieved     Don't know     Refused

**PLEASE GO TO QUESTION 18**

How soon is it relived?

- 10 minutes or less
- More than 10 minutes
- Don't know

**CLINIC USE:**

17. Where do you feel this pain or discomfort?

- 1 Sternum, upper or middle
- 2 Sternum, lower
- 3 Left anterior chest
- 4 Left arm
- 5 Other (Please specify) \_\_\_\_\_
- Don't know
- Refused

18. Have you ever had a severe pain across the front of your chest lasting for half an hour or more?

- Yes     No     Don't know     Refused

**PLEASE GO TO QUESTION 19**

a. Did you see a doctor because of this pain?

- Yes     No     Don't know / don't remember

b. What did your doctor say it was?

- Angina
- Heart attack
- Other (Please specify)
- Don't know/ don't remember

19. Do you get a pain or discomfort in your leg(s) when you walk?

- Yes    No    Don't know    Refused

**PLEASE GO TO QUESTION 20**

a. Does this pain ever begin when you are standing still or sitting?

- Yes    No    Don't know

b. Do you get it if you walk uphill or hurry?

- Yes    No    Don't know

c. Do you get it when you walk at an ordinary pace on a level surface?

- Yes    No    Don't know

d. Does the pain ever disappear while your are walking?

- Yes    No    Don't know

e. What do you do if you get it when you are walking?

- Stop or slow down  
 Carry on

f. What happens to it if you stand still?

- Usually continues more than 10 minutes  
 Usually disappears in 10 minutes or less  
 Don't know

g. Do you get this pain in your calf (or calves)?

- Yes    No    Don't know

h. Were you hospitalized for this problem in your legs?

- Yes    No    Don't know

## FAMILY HISTORY OF CARDIOVASCULAR DISEASE

20. Did your **biological father** ever have heart disease?

- Yes     No     Don't know     Not that I know of

PLEASE GO TO QUESTION 21

a. **IF YES**, please look at the list of heart disease, and check the diseases your father had?

- HEART ATTACK, OR MYOCARDIAL INFARCTION
- ANGINA PECTORIS OR CHEST PAIN
- CONGESTIVE HEART FAILURE
- TIA, TRANSIENT ISCHEMIC ATTACK, OR MINI-STROKE
- STROKE
- HYPERTENSION
- RHEUMATIC HEART DISEASE
- DEEP VEIN THROMBOSIS (blood clot in leg)
- PERIPHERAL VASCULAR DISEASE (blocked arteries in legs, abdomen)
- Any other diseases

b. Did he have heart disease before his age 50?

- Yes     No     Don't know

21. Did your **biological mother** ever have heart disease?

- Yes    No    Don't know    Not that I know of

PLEASE GO TO QUESTION 22

a. **IF YES**, please look at the list of heart disease, and check the diseases your mother had?

- HEART ATTACK, OR MYOCARDIAL INFARCTION
- ANGINA PECTORIS OR CHEST PAIN
- CONGESTIVE HEART FAILURE
- TIA, TRANSIENT ISCHEMIC ATTACK, OR MINI-STROKE
- STROKE
- HYPERTENSION
- RHEUMATIC HEART DISEASE
- DEEP VEIN THROMBOSIS (blood clot in leg)
- PERIPHERAL VASCULAR DISEASE (blocked arteries in legs, abdomen)
- Any other diseases

b. Did she have heart disease before her age 50?

- Yes    No    Don't know

22. How many biological brothers related by blood, if any, did you have?

- None

PLEASE GO TO QUESTION 23

- One or More biological brothers

a. **IF YES**, DID any of your biological brothers ever have heart disease?

- Yes    No    Don't know    Not that I know of

b. Did he or they have heart disease before his age 50?

- Yes    No    Don't know

23. How many biological sisters related by blood, if any, did you have?

None

↓  
**PLEASE GO TO QUESTION 24**

One or More biological sisters

↓  
a. **IF YES**, DID any of your biological sisters ever have heart disease?

Yes    No    Don't know    Not that I know of

b. Did she or they have heart disease before her age 50?

Yes    No    Don't know

### MEDICATIONS

24. **SINCE YOU LAST COMPLETED A QUESTIONNAIRE FOR THE STUDY,**(      )  
HAVE YOU TAKEN any medications for osteoporosis?

Yes

No

Don't know

↓      ↓  
**PLEASE GO TO QUESTION 25**

↓  
IF YES, please look at the list of medications, and write down name(s) of these medications .

Sodium Fluoride (Fluoride)  
Calcitonin injections or nasal spray  
Etidronate (Didronel)  
Bisphosphonate (Foxamax)  
Any Other medication

Name(s)	Pill size (milligrams or grams)	Number of pills per day or week
_____	_____	_____
_____	_____	_____

25. **HAVE YOU EVER TAKEN** any medicines to lower your blood cholesterol level?

Yes

No

Don't know

**PLEASE GO TO QUESTION 26**

a. IF YES, Are you currently taking medications?

Yes

No

Don't know

b. PLEASE write down names of these Medications

Name(s)

Pill size  
(milligrams  
or grams)

Number of pills  
per day or week

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

26. **SINCE YOU LAST COMPLETED A QUESTIONNAIRE FOR THE STUDY, ( )**  
HAVE YOU TAKEN any diuretic (water) pills?

Yes       No       Don't know

PLEASE GO TO QUESTION 27

IF YES, please write down name(s) of these medications .

Name(s)	Pill size (milligrams or grams)	Number of pills per day or week
_____	_____	_____
_____	_____	_____

27. **SINCE YOU LAST COMPLETED A QUESTIONNAIRE FOR THE STUDY, ( )**  
HAVE YOU TAKEN any predisone pills, cortisone pills, or other steroid pills?

Yes       No       Don't know

PLEASE GO TO QUESTION 28

IF YES, please write down name(s) of these medications .

Name(s)	Pill size (milligrams or grams)	Number of pills per day or week
_____	_____	_____
_____	_____	_____

**28. SINCE YOU LAST COMPLETED A QUESTIONNAIRE FOR THE STUDY, ( )**  
HAVE YOU TAKEN any medications for pain, arthritis, headaches?

Yes       No       Don't know



a. IF YES, please write down name(s) of these medications .

Name(s)	Pill size (milligrams or grams)	Number of pills per day or week
_____	_____	_____
_____	_____	_____

b. Have you taken any of the medications every day or almost every day for a year or longer?

Yes       No       Don't know



This ends the questionnaire.  
Thank you for your time and effort!

**PLEASE BRING YOUR MEDICATION BOTTLES  
WITH YOU TO YOUR CLINIC APPOINTMENT**

***PLEASE BRING THIS QUESTIONNAIRES WITH YOU TO YOUR CLINIC APPOINTMENT***

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