Addendum to:
An Occupational Health Investigation of Cancer Among Fire Fighters in Anne Arundel County, Maryland

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Data collection methodology

A first step in investigation of any cancer cluster involves the characterization of the cluster to be addressed. To assure that the cluster was well-defined we obtained information concerning the cluster-defining cases through a questionnaire administered via telephone.

To ensure the anonymity of fire fighters and families, a decision was made with the Committee on Human Research (termed Institutional Review Board at other research centers) to obtain information without collecting identifiers. The most practical and feasible manner in which to do this was to disseminate information about the investigation through various outlets and allow individuals who wanted to take part in the investigation to call the JHU team to answer answers. The Johns Hopkins team collaborated with fire fighter union representatives (Anne Arundel County Professional Fire Fighters Local 1563, Anne Arundel County Retired Fire Fighters Association, Anne Arundel Volunteer Fire Fighters Association, and Professional Fire Fighters of Maryland) to inform fire fighters and/or their families to contact the Hopkins investigators to complete the questionnaire (see attachment). Information was disseminated by the union representatives in emails and at various organizational meetings held by the union groups. Information was further relayed at the open forum meeting held at Old Mill High School in Anne Arundel County on October 18, 2004. Fire fighters participated in dissemination of information by alerting their friends and colleagues to the effort by the Johns Hopkins team to collect occupational and cancer history of exposed individuals. Individuals interested in completing the questionnaire called a Johns Hopkins investigator and answered questions posed by the investigator. Information collected fell into three
categories: demographic, occupational, and medical. Responses were collected from November, 2004 to May, 2005.

Twenty-five fire fighters called to answer the questionnaire with seventeen fire fighters (all male) reporting a diagnosis of at least one form of cancer. Eight fire fighters without a diagnosis of cancer called to answer the questionnaire. Fire fighters with cancer who called ranged in age from approximately 30 to 70 years. Fire fighters who were fully vested in the pension system had an average of 27 years of firefighting experience before retirement. Primary cancer sites reported include bladder, brain, colon, leukemia or lymphoma (Hodgkin’s or non-Hodgkin’s), lung, prostate, and skin. Skin cancer was the most commonly reported cancer, representing 47% of the cancers. With exclusion of skin cancer, leukemia/lymphoma (n=3) and brain cancer (n=2) were the most common forms of cancer at 33% and 22%, respectively.

Though every effort was made to inform fire fighters about the questionnaire, a relatively small number answered the questionnaire. A limitation of this method of dissemination is the inability to estimate the number of people made aware of the questionnaire. Without this information, we can not calculate a response rate. To the extent that some fire fighters with cancer chose not to respond, we do not have information indicating why.
The Johns Hopkins Bloomberg School of Public Health
Committees on Human Research

ORAL CONSENT FORM / NEW RESEARCH PROJECT

Title of Research Project: Anne Arundel County Firefighter Cancer Cluster Investigation

Principal Investigator: Jonathan Samet, MD, MS

CHR# 1

Hello, my name is Nrupen Bhavsar and I am a public health researcher at the Johns Hopkins Bloomberg School of Public Health. Today I am going to ask you questions about your experience as a firefighter and the cancers that may have formed due to exposure you may have received as a firefighter. Before I begin, I’ll give you a brief background into the project and then ask you to agree to participate.

The purpose of this project is to investigate a possible cancer cluster among firefighters in Anne Arundel County. We are attempting to better understand this cluster and possible causes.

I will ask you questions concerning exposure that you may have experienced as a firefighter. There will also be questions related to the cancer that developed. Please answer the questions to the best of your knowledge.

Though we do not anticipate causing you any discomfort, in the process of participating in the study, it might cause you some concern to know that firefighters may be at risk for cancer. Your participation in this research is completely voluntary and you have the right to withdraw from this study at any time.

If you have any questions at any time, please feel free to ask. If you have a question after we are done speaking, you can contact me at 410-614-4962 or through email at nbhavsar@jhsph.edu.

At this time, do I have your permission to begin the questionnaire? Y / N

CERTIFIED EXEMPT BY THE
COMMITIES ON HUMAN RESEARCH

CHR #: H-34-05-10-03-AX
Demographic Information:

Name: _________________________________

Birthdate: Month_______ Day________ Year________

Gender: M  /  F

What county and state are you currently residing in? ____________________________

Training Information:

Were you ever a student at the Anne Arundel County Fire Training Academy?  Y  /  N

If yes, what training class were you in? ______________

If yes, during what years did you train at the Academy?____________

As a student, did you participate in live fire training at the Academy?  Y  /  N

As a student, how many times did you participate in live fire training at the Academy?

______<5  ______26-50
______6-25  ______>50

If yes, what type of material was used in the live fires?

Propane_________ Excelsior ____________________
Oil_____________ Don’t know___________________
Pallets__________ Other________________________

Were you ever an instructor at the Academy? Y / N

If yes, what classes did you teach? ________________

During what years were you an instructor? ______________________

As an instructor, did you participate in live fire training at the Academy? Y / N

As an instructor, how many times did you participate in live fire training at the Academy?

______<5  ______26-50
______6-25  ______>50

If yes, what type of material was used in the live fires?

Propane_________ Don’t know___________________
Oil_____________ Other________________________
Pallets__________
Occupational Information:

Have you ever worked as a firefighter? Y / N

Starting with your first experience as a firefighter, were you a volunteer or career firefighter? ___

Where were you a firefighter? __________________

Start date __________  Stop date __________

What was your rank? __________________

Firefighter experience #2:  Volunteer Career

Location: __________________

Start date: __________  Stop date: __________

Rank: __________

Firefighter experience #3:  Volunteer Career

Location: __________________

Start date: __________  Stop date: __________

Rank: __________

Firefighter experience #4:  Volunteer Career

Location: __________________

Start date: __________  Stop date: __________

Rank: __________

During your time as a firefighter, have you ever been taken to the hospital for smoke inhalation? Y / N

If yes, how many times? __________
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What is your current status as a firefighter?

Volunteer_______
Career_________
Retired_______

If retired, reason for retirement:

Attaining years of service for a regular (length of service) retirement: _____________
# years served as firefighter before regular retirement: _________________

Retirement due to disability: ___________
Type of disability: ____________________________
# years served as firefighter before disability retirement: _________________

Are you currently employed in an occupation outside of being a firefighter? Y/N

If yes, what is your occupation? __________
How long have you held this position? __________

Have you ever been employed in an occupation outside of being a firefighter for greater than 6 months?  Y /  N

If yes, what was your occupation? __________

Please list the date that you started and stopped working? _______________

Occupation #2: _____________________
Start date: ____________  Stop date: ____________

Occupation #3: _____________________
Start date: ____________  Stop date: ____________

Occupation #4: _____________________
Start date: ____________  Stop date: ____________
Medical Information:

Have you ever been diagnosed with a form of cancer?  Y / N

If yes, what type of cancer were you first diagnosed with? _________________

What year was the diagnosis? _________________

Where were you treated? _____________________________________________

If you answered yes to the previous question, have you been diagnosed with any other form of cancer(s)?  Y / N

If yes, what type of cancer(s)? ____________________________

What year was the diagnosis for each cancer? ________________

Where were you treated? _____________________________________________