

Bladder Cancer and the Brave: Occupational Risk and Agent Orange

Meet our Presenters

Dr. Richard Clapp: An epidemiologist with over 40 years of experience, Dr. Dick Clapp is a professor emeritus of environmental health in the Boston University School of Public Health. He's an adjunct professor at the University of Massachusetts Lowell. He has an MPH from Harvard School of Public Health and a doctor of science in epidemiology from Boston University School of Public Health. He served as a director of the Massachusetts Cancer Registry and an associate editor of Environmental Health Perspectives. His research has included studies of cancer around nuclear facilities, cancer and other diseases in military veterans, occupational causes of cancer, including breast cancer, among other topics.

Dr. Mathew Mossanen: Dr. Mossanen completed his college and medical training at UCLA. He completed his urologic oncology fellowship in the Harvard urologic oncology program at Brigham Women's Hospital and Mass General Hospital. He's also obtaining a masters in public health at Harvard. As a faculty member at Brigham Women and Dana Farber Institute, one of his main clinical and research focuses is on improving the quality of care for patients with bladder cancer. In 2017, Dr. Mossanen wrote a review article on exposure to Agent Orange and the increased mortality due to bladder cancer.

Introduction

Welcome everybody to Bladder Cancer and the Brave, Occupational and Environmental Risks for the US Military. This is a patient insight webinar from the Bladder Cancer Advocacy Network.



BCAN is a proud member of the Cancer Free Economy Network and we're very pleased to be able to partner with them on this program. The network facilitates collaborations among cancer focused organizations, environmental health experts, and cancer researchers and others to prevent people from developing cancer from harmful chemicals in the places where they live and work. We're especially grateful to the faculty and staff from three CFEN partner organizations, the University of Massachusetts Lowell Center for

Sustainable Production, Silent Spring Institute, and the Children's Environmental Health Network, who've worked very closely with BCAN over the last two years to help us provide the bladder cancer community with information about the science that links environmental exposures to bladder cancer and the actions that they can take. For more information or to join, please visit cancerfreeeconomy.org, and they'd like to thank the Garfield Foundation, the Passport Foundation, and The Heinz Endowment for support of their programming, such as this.

Bladder cancer is a devastating disease, with an estimated 80,000 plus new cases expected to be diagnosed this year alone. It's a health concern to the military and veteran populations because bladder cancer is approximately three times more common in men than women and the majority of the military and veteran populations are men. Tobacco smoking is the primary exposure linked to this diagnosis, and it's been shown that 68% of military personnel are active or past smokers. These factors contribute to bladder cancer being the fourth most common cancer diagnosed in the VA Health System. This program is specifically designed to discuss the occupational and environmental risks of bladder cancer in the US military population. We are not able to talk specifically about VA claims or policy issues. Please contact your national or local veterans representative for that information. You can call the National Call Center for the VA, their number is 800-827-1000, or visit them on the web. To learn more about research studies and military exposures, you can visit this website. Again, these will be available when you receive the recording.

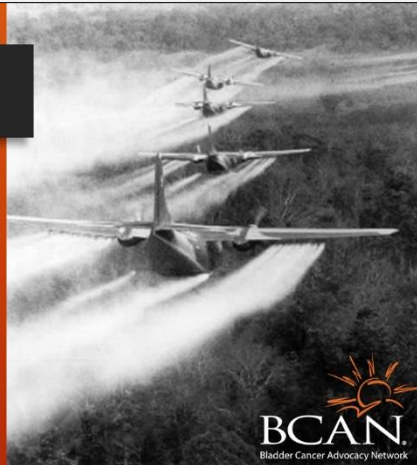
My name is Stephanie Chisolm and I'm the director of education and research at the Bladder Cancer Advocacy Network, and I'm delighted to be joined today by two experts, epidemiologist Dr. Richard Clapp and urologist Dr. Matthew Mossanen, who'll be discussing what we know about the environmental and occupational exposures in bladder cancer in the military community. Welcome.

Dr. Mossanen: Thank you very much, Stephanie. It's really an honor to be able to share a little bit of this work. This is some work that came out of a review that I did, and I think that there are a couple of important lessons that we can take away from this. This was an article where we looked at all of the available data involving Agent Orange exposure. A lot of these studies are based on the background that during the Vietnam War a lot of veterans were exposed to Agent Orange, which is a chemical defoliant. What that means is it would often be sprayed across areas that are rich in vegetation, like you can see in

the picture. It would make the leaves fall down to improve visibility for the troops and the incoming military. The defoliant itself had varying levels of dioxin, which is something that can be toxic. A lot of papers have looked at the impact that Agent Orange and the chemicals within it on the health of veterans, not only immediately after the conflict but many years later. One of the interesting things I wanted to do is see what data is available, looking at bladder cancer. We'll go to the next slide.

Review Article: Exploring Exposure to Agent Orange and Increased Mortality Due to Bladder Cancer

- Background During the Vietnam war many veterans were exposed to Agent Orange
 - Chemical defoliant containing varying levels of dioxin
 - Impact of Agent Orange and health impacts have been studied in detail




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One of the important caveats to all of this is that the data that looks at the link between Agent Orange and bladder cancer has some limitations, and we'll talk a little bit about what some of those might be. If you take all of the data in totality, it suggests that there is actually a link between exposure to Agent Orange and an increased mortality to bladder cancer. Now, while we do think that there is probably an increased link, there are some challenges to looking at this data.

Review Article: Exploring Exposure to Agent Orange and Increased Mortality Due to Bladder Cancer

- Data evaluating link between Agent Orange and bladder cancer is limited but several studies suggest a link between Agent Orange exposure and increased mortality due to bladder cancer.
 - Challenges: historical data, quantifying exposure, concentration vary



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For one, a lot of it is historical data, which relies on sometimes handwritten records. Another challenge is that actually quantifying the amount of Agent Orange exposure is difficult for a number of reasons. One because it's sort of splayed in areas and there's a variable amount of time from which an area is blanketed with the Agent Orange and then the military comes in. Depending on how long you wait before you enter that area, the amount of

exposure can vary. Also, even if you could hold that constant, another challenge is that even the individual barrels of Agent Orange have varying concentrations of the different compounds. You can begin to see that there's a lot of variables that go into the equation when you're trying to really show a connection between Agent Orange exposure and bladder cancer down the road. That being said, there is a large study that looked at a lot of veterans from Korea that did show there was an increased risk in

mortality from bladder cancer for those people that were exposed to Agent Orange. We'll go to the next slide.

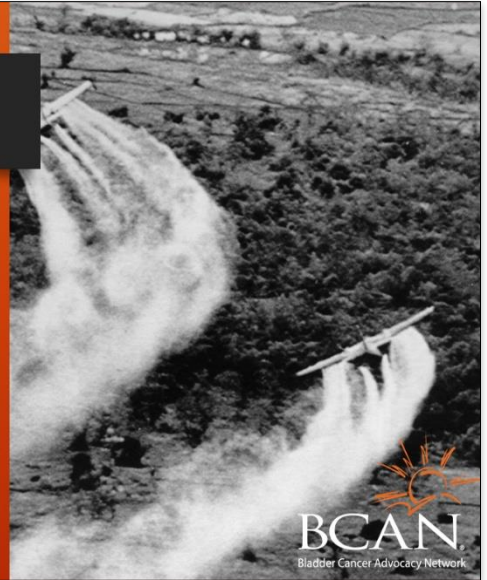
While the data itself does have limitations, I do think there is an important takeaway point. If you are taking care of a veteran that does have Agent Orange exposure and does have bladder cancer, at the very least it's reasonable to

consider more vigilant surveillance. That might be in the form of cystoscopies, perhaps on the more regular side than on the more lax side, or patients might need more aggressive therapy, be it intravesical or surgical, if they have bladder cancer and a history of exposure. Definitely more work needs to be done examining this link, and there's a lot of important health policy implications regarding how much coverage veterans will get for bladder cancer if they do in fact have a history of exposure. But, I think at the very least, raising awareness that this is an issue for many veterans and that there is a link is an important first step, so I want to thank Stephanie and everyone at BCAN for letting me get a few minutes to talk about this.

Stephanie C.: Thank you so much, Dr. Mossanen. As far as the military and accepting the presumed exposure to Agent Orange and bladder cancer, there has been no definitive statement made at this time, although it is in an Institute of Medicine report and we're eagerly waiting for the Department of Defense to make a decision on that. So, that is something that we won't be able to answer. I'm going to turn this over now to Dr. Clapp.

Review Article: Exploring Exposure to Agent Orange and Increased Mortality Due to Bladder Cancer

- May consider increased frequency of cystoscopic surveillance or more aggressive therapy for those with bladder cancer and a history of exposure
- More work needs to be done examining the link
 - Important health policy implications



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