Department of Veterans Affairs

Agent Orange Brief

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AGENT ORANGE AND PROSTATE CANCER

Why are Vietnam veterans worried about prostate cancer?

Prostate cancer is one of the most common cancers among men. Incidence varies dramatically by age and race. The risk increases fivefold between the ages of 45-49 and 50-54 years, and nearly triples between 50-54 and 55-59. African-American men have the highest recorded incidence of prostate cancer in the world. Their risk is approximately double that of white men. The causes of prostate cancer are uncertain. Risk factors other than race and age include a family history of the disease and a diet high in fats. Prostate cancer is expected to account for about 29 percent of new diagnoses and 13 percent of cancer death per year.

Some Vietnam veterans have already joined, while many are approaching, the age groups when prostate cancer is typically detected. Since prostate cancer is a slow-growing tumor, many in this population will die *with* the disease *but* from other causes. Prostate cancer is the second leading cause of death in men. It is estimate that more than 200,000 cases of prostate cancer (including about 10,000 veterans) will be diagnosed annually with an approximately 40,000 death. A problem with prostate cancer is that about 40 percent of the tumors have spread beyond the prostate before it is diagnosed.

How is prostate cancer detected?

There are currently three methods of screening: (1) digital rectal examination, (2) transrectal ultrasound, and (3) prostate specific antigen (a blood test to measure a protein found only in prostate tissue). Unfortunately, there are significant problems with each of these screening techniques. For each cancer detected, there are many false positives that may incorrectly diagnose a patient as having prostate cancer.

What treatments are available?

Since prostate cancer is a relatively slow-growing tumor compared to other cancers, the paradox in managing it is the need to intervene early to stop the disease and also being cautious about using the major treatment, radical prostatectomy. This is a serious procedure with significant complications. From 25 to 75 percent of patients will be impotent and 2 to 6 percent severely incontinent after the surgery.

In addition to surgery, current treatments for prostate cancer include radiation therapy, which has some unpleasant side effects, and male hormone (androgen) deprivation. Chemical or surgical deprivation or administration of estrogen is effective in relieving pain, reducing urinary obstruction, and improving general well-being. Endocrine therapy delays disease progression, but has not been shown to prolong survival.

A relatively new approach to treatment is known as "expectant management," which means following the patient and giving hormonal or surgical treatment as necessary. This approach is reasonable because the progression of the tumor for each patient is uncertain, the treatment effectiveness is uncertain, and many patients with prostate cancer die of other causes.

What did the National Academy of Sciences (NAS) conclude about the relationship between exposure to herbicides and the development of prostate cancer in its 1993 report, entitled Veterans and Agent Orange - Health Effects of Herbicides Used in Vietnam?

The NAS reviewers observed that most of the agricultural studies they examined indicate "some elevated risk" of prostate cancer. Furthermore, one large well-done study in farmers showed an increased risk, and subanalyses in this study indicate that the increased risk specifically associated with herbicide exposure. The three major production worker studies reviewed by the NAS all show a small, but *not* statistically significant, elevation in risk. The NAS report noted that most of the associations seen in the studies reviewed are "relatively weak." The NAS added that Vietnam veterans have "not yet reached the age when this cancer tends to appear." In the report released in July 1993, the NAS concluded that there is "limited/suggestive evidence" of an association between exposure to herbicides used in Vietnam and prostate cancer.

What action did VA take in response to this NAS finding?

In its July 1993 report, the NAS placed three health outcomes in its category two (limited/suggestive evidence of an association): multiple myeloma, respiratory cancers, and prostate cancer. After careful review, Secretary Brown concluded that while the credible scientific evidence for an association is equal to or outweighs the evidence against an association between exposure to herbicides used in Vietnam and the development of multiple myeloma and of respiratory cancers, the evidence for an association between these herbicides and prostate cancers failed to reach that standard.

In January 1994, VA published a notice in the Federal Register that Secretary Brown has determined that a presumption of service connection based on exposure to herbicides used in Vietnam is not warranted for a long list of conditions identified in the NAS report. Prostate cancer was included in this list. (See 59 Fed. Reg. 341, January 4, 1994).

VA asked the NAS, in its follow-up report, to further consider the relationship between exposure to herbicides and the subsequent development of prostate cancer.

What did the 1996 NAS update conclude about prostate cancer?

Citing additional studies, the NAS report concluded that there is "limited/suggestive evidence" of an association between exposure to herbicides used in Vietnam and prostate cancer.

What was VA's response to the NAS 1996 finding regarding prostate cancer?

Secretary Brown found that the credible evidence for an association equals or outweighs the evidence against an association between exposure to herbicides used in Vietnam and prostate cancer. He concluded that prostate cancer should be added to the list of conditions recognized for presumption of service connection for Vietnam veterans based on exposure to herbicides. President Clinton announced this, along with other decisions, on May 28, 1996. The proposed rule to implement this decision was published for public comment in the Federal Register in August 1996. (See 61 Fed. Reg. 41368, August 8, 1996). The final rule was published in the Federal Register in November 1996. (See 61 Fed. Reg. 57587, November 7, 1996).

What did the 1998 NAS update conclude about prostate cancer?

The 1998 report concludes that there is limited/suggestive evidence of an association between exposure to the herbicides used in Vietnam and prostate cancer. The report includes the following statement:

> Although the associations are not large, a number of studies provide evidence that is suggestive of a slight increase in either morbidity or mortality from prostate cancer. The evidence regarding association is drawn from occupational studies in which subjects were exposed to a variety of herbicides and herbicide components and is also based on data from studies of Vietnam veterans. An important consideration is the fact that prostate cancer tends not to be fatal; thus, mortality studies have lower statistical power to detect a comparable effect than a similar-sized morbidity study would have.

Where can a veteran get additional information about prostate cancer?

Information regarding prostate cancer and related matters can be obtained at VA medical center libraries, from the Registry Physicians at every VA medical center, or from the Environmental Agents Service (131), Department of Veterans Affairs, 810 Vermont Avenue, N.W., Washington, DC 20420.