

Fact Sheet

**Radon Aspects**  
of the  
**2010 President's Cancer Panel Report: Reducing Environmental Cancer Risks**

William J. Angell<sup>1</sup>, Professor  
University of Minnesota  
[wangell@umn.edu](mailto:wangell@umn.edu)

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**Background**

The President's Cancer Panel stated, "**Cancer continues to shatter and steal the lives of Americans**" (bolding added).

- "Approximately **41 percent of Americans will be diagnosed with cancer** at some point in their lives, and . . . "
- "About **21 percent will die from cancer.**"

The President's Cancer Panel was created in 1971 to monitor and appraise the development and execution of the National Cancer Program and to report directly to the President of the United States on barriers limiting the Program. The Panel generally reports annually.

The most recent President's Cancer Panel report addresses research concerning issues involving environmental influences on cancer risks including exposure to environmental hazards from natural sources. Radon is addressed as the leading environmental cancer hazard.<sup>2</sup>

The President's Cancer Panel report is published by the National Cancer Institute of the National Institutes of Health and is available at:

[http://deainfo.nci.nih.gov/advisory/pcp/pcp08-09rpt/PCP\\_Report\\_08-09\\_508.pdf](http://deainfo.nci.nih.gov/advisory/pcp/pcp08-09rpt/PCP_Report_08-09_508.pdf)

This fact sheet summarizes the radon aspects of the most recent President's Cancer Panel report and includes comments from the author of this fact sheet.

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<sup>1</sup> W.J. Angell is also

- Director of the Midwest Universities Radon Consortium
- President of the American Association of Radon Scientists and Technologists

<sup>2</sup> Other sections of the report include discussion of contaminants from agricultural, industrial, manufacturing, medical, and military sources as well as exposures related to modern lifestyles.





## **Discussion**

Indoors, radon concentrations can increase to levels amplifying the risk of lung cancer. Numerous occupational cohort and residential case-control studies have indicated that indoor radon causes lung cancer. *Comment: The risk of dying from lung cancer from radon in the home is 1:50 for the general U.S. population if exposed to the U.S. Environmental Protection Agency's 4 picocurie/liter (pCi/L) Threshold for Action.*

"The impact of . . . radon exposure may increase as the population ages and exposure to radiation from medical sources escalates." This statement underscores the growing importance of reduce radiation exposure from indoor radon including that in homes.

"Some evidence suggests that . . . protracted radon exposure may increase risks for leukemia, skin, stomach, liver cancers but (further) studies are needed . . ."

Major quotes highlighted in the report were:

- ***Comparative risk assessments by EPA and its Science Advisory Board have consistently ranked radon among the top four environmental risks.***
  - Susan Conrath, MPH, Captain, United States Public Health Services and United States Environmental Protection Agency
- ***About a third of radon-attributed lung cancers are preventable at the current EPA action level.***
  - Jay H. Lubin, PhD, Senior Investigator, National Cancer Institute
- ***Radon is naturally occurring, but in the home it's not naturally occurring; it's enhanced. We can build homes radon resistant. We choose not to do so.***
  - R. William Field, PhD, Professor, College of Public Health, University of Iowa
- ***We have to go beyond a voluntary program (for radon control in new homes) at this point.***
  - R. William Field, PhD, Professor, College of Public Health, University of Iowa

## **Taking Action to Reduce Environmental Cancer Risks: What We Can Do**

The President's Cancer Panel notes that evidence concerning the cancer risks from environmental carcinogens, such as radon, compels action. Based upon testimony presented to the Panel and other data, recommendations were advanced in the Panel's report. These recommendations involving indoor radon were framed in two sets:

- Actions that individuals can take to reduce their risks of cancer; and
- Recommendations for public policy, program, and research actions that can minimize the impact of environmental radon on cancer.

The recommendations relating to radon are summarized on the following page.



### **What Individuals Can Do to Reduce the Risk of Lung Cancer from Indoor Radon**

The President's Cancer Panel notes that individuals can take two actions that can reduce the risk of lung cancer from radon:

- **Periodically check your home radon levels.**
  - *Comments: This recommendation reflects indoor radon concentrations can change over time and therefore, it is wise to retest homes (and daycares, schools, and workplaces) for indoor radon every 2 to 5 years.*
- **Home buyers should conduct a radon test in any homes that is being considered for purchase.**
  - *Comments: This recommendation is consistent with the Center for Disease Control's and U.S. EPA's advice that all homes should be tested including homes that are being considered for purchase.*

### **Policy, Program, and Research Recommendations to Minimize the Impact of Indoor Radon**

The President's Cancer Panel notes that cancer risk attributed to residential radon exposure has been clearly demonstrated and must be better addressed. The Panel found the following policy, program, and research actions are needed:

- **EPA should consider reducing current 4 pCi/L action level.**
  - *Comments: This recommendation is consistent with the new World Health Organization recommendation that, based upon new health risk studies, developed countries should set reference levels for radon mitigation at the equivalent of 2.7 picoCuries/liter (pCi/L).*
- **Public and health care provider education should be developed to raise awareness of radon-related cancer risk.**
- **Improved residential radon testing methods should be developed including those that better assess long-term cumulative exposure (e.g., measurements using glass).**
- **Tax or other incentives should be enacted to encourage radon mitigation in existing homes.**
- **Building code for radon control in new homes should be required.**
  - *Comments: Building code requirements exist in a number of states, counties, and cities. In those areas that do not have a code requirement, new home buyers can make their purchase offer contingent upon a radon test by a licensed or certified professional below a specified radon concentration such as 4 pCi/L.*
- **All day schools, care centers, and workplaces should be testing for radon at regular intervals.**