



**IAEA -
April 5, 2018**

Communication and Advocacy through Real Estate



North Carolina Radiation Protection Section

Our Mission:

To Reduce radiation exposure to the citizens and occupational workers of North Carolina (NC); reduce radiation contamination to the environment and to protect all from radiation hazards by ensuring the existence of a preeminent radiation safety culture.

The NC Radon Program is under the direction of the NC Radiation Protection Section, NC Department of Health and Human Services



Basis of this Educational Program

- **In the early 1990's, the U.S. Environmental Protection Agency (US EPA) recognized indoor radon as an issue and encouraged testing. Twenty-five years later, there are many more homes with radon mitigation systems, some of them aging.**
- **There are currently no laws in North Carolina (NC) requiring radon mitigators to be certified or to adhere to standards and protocols for mitigation of homes. Additionally, there are currently no rules in NC which require disclosure or inspection of these systems.**
- **Our goal is to see every homeowner test their home in NC every 2 to 5 years**



Why are we encouraging testing for Radon?

- Radon is the leading environmental cause of lung cancer
- Elevated radon levels are found throughout North Carolina
- All residential building types are subject to elevated radon levels
- Construction materials may contain uranium and thus could be the source of elevated radon levels in a building



Education

Elevated radon levels are found throughout North Carolina

Purple color indicates that a high level has been measured in that zip code



Target Audience – NC Real Estate Brokers

- **NC Real Estate Commission**
 - Manages the Licenses of over 100,000+ Real Estate statewide
- **Real Estate Brokers have the greatest opportunity to influence home owners and buyers**
- **There were an estimated 500,000+ homes sold in NC in 2017**
- **There are approximately 4.5 million housing units in North Carolina (2016 data)**



Target Audience – NC Real Estate Brokers

NC Residential Disclosure Statement

This is a required North Carolina government document used by real estate brokers during the purchase of homes in North Carolina

	<u>Yes</u>	<u>No</u>	<u>Representation</u>
21. Is there any problem with present infestation of the dwelling, or damage from past infestation of wood destroying insects or organisms which has not been repaired?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Is there any problem, malfunction or defect with the drainage, grading or soil stability of the property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Are there any structural additions or other structural or mechanical changes to the dwelling(s) to be conveyed with the property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Is the property to be conveyed in violation of any local zoning ordinances, restrictive covenants, or other land-use restrictions, or building codes (including the failure to obtain proper permits for room additions or other changes/improvements)?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Are there any hazardous or toxic substances, materials, or products (such as asbestos, formaldehyde, radon gas, methane gas, lead-based paint) which exceed government safety standards, any debris (whether buried or covered) or underground storage tanks, or any environmentally hazardous conditions (such as contaminated soil or water, or other environmental contamination) which affect the property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



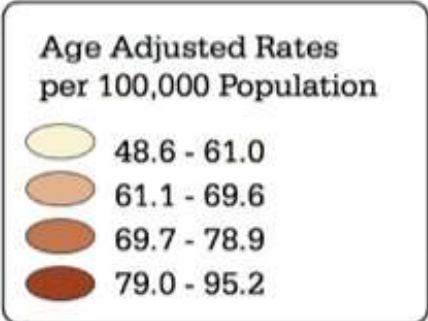
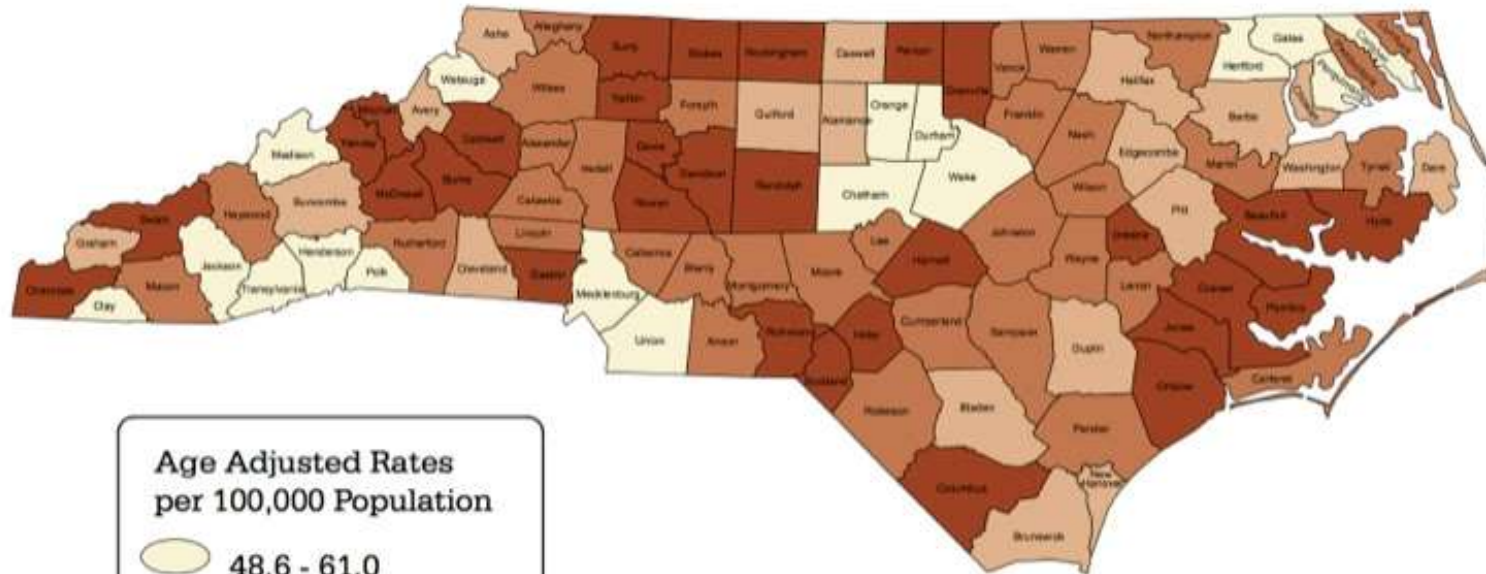
Who partnered with us?

- **NC Cancer Control Branch**
 - **Manages the NC Advisory Committee on Cancer Coordination and Control**
 - **Identifies the priority cancer programs and efforts for the state of NC**
 - **Legislatively mandated committee comprised of 34 members**
 - **Appointments by the Governor and engages legislators as members of the Committee**
 - **Medical Schools, NC Hospital Association, NC Local Health Directors, Medical Directors, etc.**



NC Cancer Priority Issues Document

**N.C. Lung Cancer Incidence Rates
2010-2014**

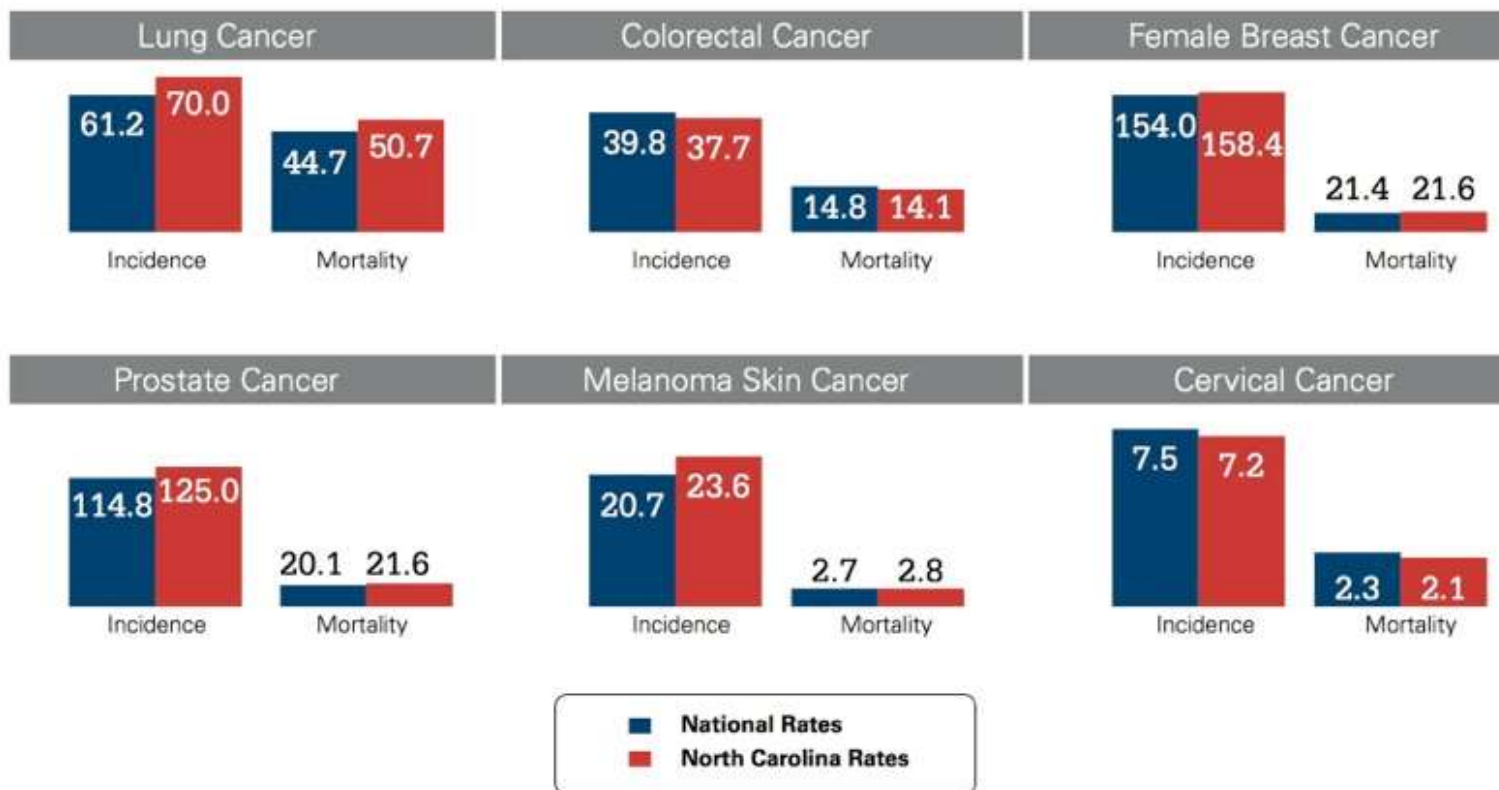


North Carolina Resident Data
Map provided by North Carolina State Center for Health Statistics



NC Cancer Priority Issues Document

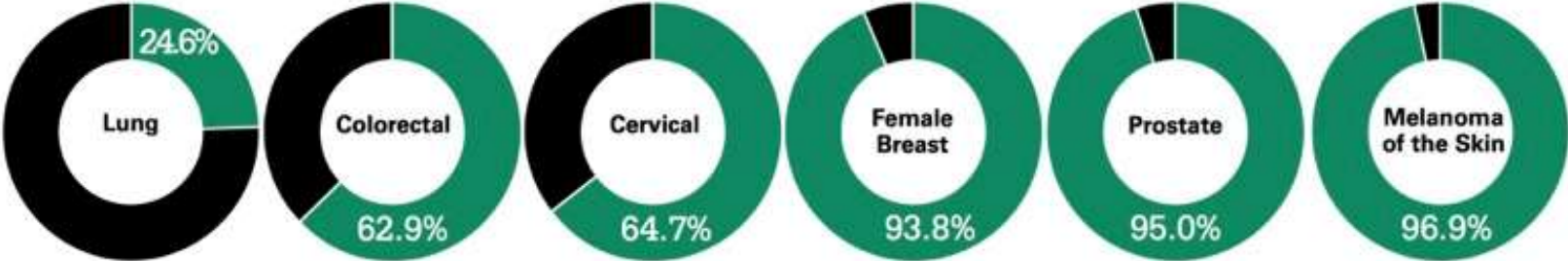
2010-2014 North Carolina and National Incidence and Mortality Rates
Age-adjusted rates per 100,000 population



NC Cancer Priority Issues Document

North Carolina Cumulative Relative 5-Year Survival Rate By Cancer from 2010-2014

Survival Rate is in Green



Cumulative relative survival rate refers to the percentage of patients who would be expected to survive the effects of their cancer.



NC Cancer Priority Issues Document

- Work with local builders and real estate companies to make them aware of the dangers of radon and to encourage them to build and offer radon-free buildings and homes.

Intervention: Reduce exposure to radon in new or existing construction.



NC Cancer Priority Issues Document

- Support messaging campaigns about radon as a lung cancer risk factor.
- Provide and/or sponsor educational opportunities and outreach efforts to promote testing homes for radon and the importance of mitigating homes with high radon levels.

Intervention: Proven techniques to test for, prevent or reduce exposure to high radon levels.



Continuing Education Requirements for Real Estate Brokers in North Carolina

Welcome to the North Carolina Real Estate Commission

📞 919-875-3700 📞 Regulatory Affairs 919-719-9180 🕒 8:30am - 5:00pm (Mon-Fri) ✉️ ncrec@ncrec.gov

Have you taken CE, yet? All active licensees are required to take 8 hours of CE: 4-hour Update course & a 4-hour Elective course. Deadline is June 10th.



NC Real Estate Commission Education

- NC Real Estate Brokers are required every year to take a 4 hour general update course.
- The educational year begins on July 1 every year and ends on June 30 every year.
- On July 1, 2017 every real estate broker received one hour of education dedicated to radon – this was part of their 4 hour general update
- The training manual now has new information including a two page document they can download from the Real Estate Commission website – to be given to their clients



Target Audience – NC Real Estate Brokers

Safe at Home: Preventing Lung Cancer

BY REDUCING RADON IN THE HOME

What is radon? Radon is a gas that you cannot see, smell or taste. It comes from the decay of radioactive elements (such as uranium, thorium and radium) in soil and groundwater.

What are your chances for getting lung cancer from radon? Each one of the following influences your risk:

1. Level of radon in your home;
2. The amount of time you spend in your home;
3. If you are a smoker of tobacco or have ever smoked tobacco;



Why should I be concerned about radon?

Breathing in radon is the second leading cause of lung cancer after smoking. Radon is the likely cause of more than 21,000 lung cancer deaths each year in the U.S. In 2015, lung cancer was the leading cause of cancer deaths in N.C.



How does radon cause lung cancer?

Radon gas decays into radioactive particles that can get trapped in your lungs when you breathe. These particles break down and release small bursts of energy. This can damage lung tissue and



Target Audience – NC Real Estate Brokers



Is radon only measured in homes? No. Radon can get into any type of building. You and your family are most likely to be exposed at home because you spend most of your time there.

What is considered a high level of radon in the home? The amount of radon in the air is measured in "picocuries per liter of air," or "pCi/L." A radon level in the home between 2 and 4 pCi/L is considered moderate risk and over 4 pCi/L is considered high risk for your health.

I am buying/selling a home. How do I get a property tested for radon? There are no laws in N.C. regarding

How do I fix my home if the test shows there is a high level of radon in water? The N.C. Division of Public Health recommends testing well water for radon. Its experts say you should fix well water that tests high for radon. If the radon level is high in the well water, a second test for other types of radioactive particles like uranium and radium should be done. Select a contractor who is trained to fix radon problems. Contact your county health department's environmental health program for more information.

What will fixing my home cost me? In 2017, the average cost for fixing a radon problem in an existing home was



Follow up efforts

- There is only one radon program phone number for all of North Carolina receiving calls from anyone, including real estate brokers, to assist in resolving issues or answering questions
- The NC Radon Program offers to visit Real Estate businesses (firms) and private free training where they can ask questions of state officials
- Dedicated website where we provide follow up videos, documents, research, and guidance on industry representatives who can assist with testing and mitigating radon



How Do We Measure Success?

- **Behavioral Risk Factor Surveillance System (BRFSS)**
 - U.S. Centers for Disease Control and Prevention
 - Largest continuously conducted phone health survey system in the world
 - Every other year the NC Radon Program purchases three questions (\$5,000 each)
- **Record required attendance of NC Real Estate Brokers**
 - Training is required by NC Real Estate Commission
 - Training material is mandated by the NC Real Estate Commission
- **Providing follow up training to real estate firms**
- **Evaluate the number of radon tests conducted at zip code level**



What are our future ways to measure success of the program?

- BRFSS – longitudinal data on knowledge of radon from general public
- Survey NC Real Estate Brokers about their knowledge on radon
- Personal engagement with NC Real Estate Brokers during trainings at real estate firms
- Continue to examine the number of tests conducted in state – data provided by the test kit companies





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