Acadiana’s Cancer Epidemic

With more African American men suffering from lung cancer here than anywhere else in the world, Acadiana is in the midst of a cancer crisis.

Inside the small white house on the corner of St. Mary Boulevard and Taft Street near USL, the Acadiana Tumor Registry quietly goes about its work. The registry office, distinguished only by a sign in the front yard bearing the cryptic acronym AMRF, is as stark as the reports it routinely issues on the number of new cancer cases diagnosed in Acadiana. AMRF stands for Acadiana Medical Research Foundation, a non-profit organization which has operated the tumor registry since the state registry expanded into Acadiana in 1983.

A computer sitting on a large table in the midst of the near-empty front room of the Acadiana Tumor Registry scrolls through lung cancer patient information as registry director Michelle Crouch prepares a report. Crouch, who has been with the registry for 10 years, is part detective and part number-cruncher. Patient names and information continue to flicker across the computer screen at an alarming rate. Sifting through piles of paperwork, Crouch pulls a bound report from the top of a precariously tall stack of paperwork. Titled Cancer in Louisiana: Cancer Incidence in the Acadiana Region 1988-1992, the report shows that the Acadiana region has the highest incidence of lung cancer in the state, Crouch says. “Scary, isn’t it?”

One out of every three Louisiana residents will contract cancer; nearly 20 percent of those cancers will be lung cancer. The number of lung cancer-related deaths in Louisiana is equivalent to a jetliner crashing every month with 220 Louisiana residents on board. Men, especially black men, are the most affected. White men in Louisiana are diagnosed with lung cancer 30 percent more frequently than the national average. The lung cancer rate for black men is even higher, and in Acadiana, more African American males have lung cancer than anywhere else in Louisiana.

In fact, if Acadiana had been included in a recent study by the World Health Organization, the lung cancer rate among African American men would have been the highest in the world. Acadiana’s numbers were so unique that Vivien Chen, director of the New Orleans-based Louisiana Tumor Registry, tried to submit them for the study, even though the study’s coordinators were only requesting data from urban New Orleans and rural central Louisiana. “Lafayette is just so wild,” says Chen.

But the causes contributing to lung cancer—along with just what makes Acadiana’s lung cancer rate so high—remain largely a mystery. Everyone agrees that cigarette smoking plays a major role, but studies have shown that poor diet and poor exercise...
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cise habits also significantly increase cancer risk. Only recently have researchers begun to investigate the ways these risk factors may be amplified by a person’s environment and genetic make-up.

The social costs of Louisiana’s cancer epidemic are even harder to establish. Public health officials are only beginning to assess the burden this places on the state’s health care system. In terms of lower quality of life for many of its residents, Louisiana pays a high price.

Compiling cancer rates is time-consuming and labor-intensive. Crouch collects data concerning cancer patients from area hospitals, physicians, pathology laboratories and radiation therapy centers, all of which are legally required to provide cancer data to the registry. She is also responsible for tracking down cases of local patients diagnosed out of state to ensure that the registry’s database and reports present a complete picture of the incidence of cancer in Acadiana. Records are then compiled into detailed reports which are provided to hospitals, researchers and public health agencies.

The tumor registry’s 1996 report represented the first time that cancer incidence rates put medical professionals on the trail of information about how many people die from cancer to how many people contract the disease in the first place.

Tracking the number of newly diagnosed cancer cases is a better indicator of a population’s risk of developing cancer since mortality rates measure not only the risk of contracting a disease but also the chances of surviving a disease, researchers say. Tracking cancer incidence rates puts medical professionals on the trail of information about the cancer itself, while mortality rates help examine issues like late diagnosis and treatment success.

According to the report, the eight-parish Acadiana region experiences more lung cancer cases than the national average. Unlike with some other cancers, there is no form of early detection for lung cancer, according to the American Cancer Society. By the time lung cancer is detected, it is often in an advanced stage with limited treatment possibilities—a fact that makes Acadiana’s high incidence of lung cancer even more alarming.

For women, the numbers are slightly higher than the national averages—troublesome but not nearly as alarming as the numbers for males. White males are diagnosed with lung cancer at a rate of 117 per 100,000 in population. African American males dominate Acadiana’s lung cancer statistics, with 158 cases per 100,000.

“We're No. 1 in the state—and probably the world,” says Dr. John Rainey, a practicing oncologist in Lafayette and AMRF co-founder and director. “New Zealand and New Orleans usually switch off No. 1 and No. 2. Then there’s us—we’d probably knock them both out.”

Acadiana’s top-in-the-world ranking is all but certain, but no direct numerical comparison has yet been made. Since the incidence of cancer within a population increases with the age of that population, statistics must be age-adjusted before any direct comparisons can be made. For example, when world reports are compiled, data for the United States relatively older population must be adjusted before it can be compared with the younger populations of most African countries. The New Orleans data on lung cancer among black men was age-adjusted to be included in the WHO report; the data ranked New Orleans highest in the world. While not age-adjusted for world comparison, the incidence of lung cancer in black men in Acadiana is already higher than New Orleans’ numbers. “And New Orleans is the highest in the book, so we know Lafayette would be the highest by inference,” says Chen.

Having rates of cancer available for comparison is the first step toward conducting more meticulous studies that go to the underlying causes of cancer. Lung cancer is not the only form of cancer found in a disproportionate number of Louisiana patients. The rates of pancreatic, stomach,

Acadiana Lung Cancer Incidence per 100,000 1988-1992

116.9
45.7
48.4
White Males
White Females
Black Males
Black Females

Source: Cancer in Louisiana, Volume 8.

or cancer researchers and public health officials struggling to understand the full implications of these grim statistics, determining the causes and effects of this lung cancer epidemic is no easy matter.

Oncologists agree that nine out of 10 lung cancer cases are directly related to cigarette smoking and that the cases diagnosed today are largely the result of the popularity of smoking from World War II until the 1970s. Louisiana has more than its fair share of smokers, particularly among African American males. The Health Protection and Disease Prevention Division of the Louisiana Office of Public Health estimated in 1994 that 28 percent of white males, 34 percent of white females and 18 percent of African American females smoked, while nearly 36 percent of African American males were currently smokers. On average, 25 percent of Louisiana adults smoked, matching the current national average.

“I think one reason why Acadiana has a large incidence of lung cancer is that it has to do with ‘laissez les bons temps rouler’ which includes in many ways a lot of smoking,” says Dr. Andrew Harwood of Romagoza Radiation Oncology Center. “We need to change it to ‘laissez les bons temps rouler but no fumer.’”

While today’s tobacco use statistics are disturbingly high, they are not the smoking gun for this current epidemic; rather, they are the seeds of a continuing problem. “You have to remember it takes 20 years of smoking,” says Harwood. “You don’t get cancer after your first cigarette.”

This lag time is why the medical community is currently seeing a gradual climb in the number of women diagnosed with lung cancer. 20 to 30 years ago, as women began to enter the work force, more and more began smoking. “When I look at the numbers, it reminds me of the ad, ‘You’ve come a long way, baby,’” says Rainey.

So while the number of adult smokers nationally continues to decline, the high lung cancer incidence seen today is the result of decades-old behavior, the costly legacy of a time when smoking was widespread and up to 42 percent of all adult Americans smoked.

But smoking isn’t the only element of the ‘bon temps’ lifestyle that puts Acadiana at high risk, and the list of other discernible cancer risk factors—like lifestyle, environment and genetics—reads like a guide to the south Louisiana way of life. A

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high cholesterol. high-fat diet does not provide the vitamins and anti-oxidants needed to adequately protect the body from cancer. "We eat rice and gravy; we eat a lot of meat," says Rainey. "We don't eat a lot of uncooked vegetables."

According to the National Cancer Institute, consumption of fresh fruits and vegetables has been proven to reduce lung cancer risk by as much as 50 percent. Combined with high alcohol consumption and low levels of physical exertion, a poor diet only increases cancer risk.

Smoking, diet, alcohol consumption, exercise—these are what are called "modifiable risk factors," dangers individuals can actively guard against. One potentially fertile area of research is the interplay among those various risk factors.

Researchers like LSU's Dr. Terry Fontham wonder about the things we can't control or the things we don't even know about yet. "We've found some of the key risk factors, but we probably haven't fully accounted for the 25 percent excess incidence we see here," says Fontham, who chairs the Department of Public Health and Preventive Medicine.

She cites a pair of statistics: Nine out of 10 lung cancer patients were smokers, but only one out of 10 smokers contracts lung cancer (though smokers spared can look forward to heart disease, vascular problems and other forms of cancer). What this tells Fontham is that a number of factors other than smoking alone have to be in place for a person to contract lung cancer—from environmental concerns to genetics.

Demonstrating a direct link with air pollution, a long suspected cause of lung cancer, has been difficult. Initial lab experiments and animal testing indicating that regular doses of beta-carotene would lower lung cancer risk turned up unreliable when human study participants began taking beta-carotene. Researchers discovered the beta-carotene actually increased their risk. And these are just the areas that researchers have been able to look into.

Fontham is embarking on a study of genetic susceptibility. "We all have an array of genes that control how we react when we are exposed to food, chemicals, the works," explains Fontham. "But even when the same dose is administered, people don't always get the same exposure. Some people detoxify efficiently, some people don't."

By looking at a person's tobacco use, dietary history, familial cancer history, residential history and occupational history in the context of how five or six specific enzymes contained in an individual's genetic code react to and break down carcinogens, Fontham hopes to discover how various combinations of these components increase an individual's susceptibility to cancer.

"There is never a single cause for any single case. Risk factors are all pieces of the pie," Fontham says. "For any one person, it's having every piece of the pie, and that's what we have to look at in terms of Louisiana's higher incidence of lung cancer."

Analyzing the registry numbers is an effective tool for generating new hypotheses about cancer causes, care and prevention, says Fontham. "The value of the tumor registry information is not that it answers questions, but that is poses questions," says Fontham. "It serves as a report card on how well we're doing."

Fontham hopes her study on the susceptibility of individuals will lend itself to future studies on the susceptibility of different ethnic groups, a largely untapped area of cancer research that could be of special interest in explaining the cancer rate among black men. More study still needs to be done on cigarette smoking patterns—if starting younger is more dangerous and if smoking more heavily puts an individual at higher risk.

"Looking and finding takes money," says Rainey. "It's hard to justify spending money on research when we still don't have the money to treat the people who are sick."

Public health officials are grappling with the consequences of Louisiana's cancer epidemic and its still undetermined impact on the state's health care system.

Just how much money is spent annually to treat those suffering from lung cancer, for example, is unknown. Public health officials have only recently begun to develop a database that will monitor the contributions of different diseases to overall health care costs, according to Dr. Rebecca Meriwether, director of the Health Protection and Disease Prevention Division of the Louisiana Office of Public Health.

But what is known is the financial impact of cigarette smoking. Louisiana incurred nearly $1.5 billion in smoking-attributable costs in 1994 alone, according to a report issued by the Louisiana Office of Public Health. Approximately $1 billion...
was in indirect costs stemming from estimated lost productivity due to premature deaths and smoking-related illnesses.

According to the report, more people on Medicaid and with no health insurance smoke than people who have private health insurance. Since almost half of all Louisiana residents are on Medicaid or are uninsured, public health officials estimate that the state bears close to half of all direct tobacco-related medical care costs, which totaled $500 million in 1994, the report shows. Direct costs are those associated with smoking-related illnesses—hospitalization, medications, nursing home services.

“Our folks are less healthy,” says Meriwether, “so, yes, as a society, our health care costs are higher, but to the extent that we can change our behaviors and make sure we receive preventive and primary care we can decrease those costs.”

The African American community—disproportionately poor and with less access to preventive care and educational material—has been hardest hit by the cancer epidemic in Louisiana.

“You can’t find many systematic studies, but it’s in every family, every neighborhood, every community,” says the Rev. James Hill, president of the New Orleans-based Injured United Black Smokers of America Inc., a nationwide organization representing individual black smokers and hoping to procure a portion of the proposed $368.5 million tobacco settlement currently stalled in Congress. “Everybody in the black community knows someone who has died from lung cancer.”

Researchers hope that the results of studies of cancer rates will provide the impetus needed to address cancer issues and to generate more research. “It is my hope that this wealth of data can be used to better understand the cancer problem in the state, to develop appropriate cancer control programs and to stimulate future research partnerships and teamwork among all institutions—all sharing the common goal of combating and reducing the cancer burden in our state,” says the tumor registry’s Chen.

The best way to reduce Louisiana’s frequency of lung cancer is to educate people about the dangers of smoking—getting current smokers to stop and keeping children from picking up the smoking habit, say public health officials. Successfully targeting young people will not yield immediate results, but will eventually drive Acadiana’s astronomically high lung cancer rates down. “If we can stop cigarette smoking, we can get rid of 90 percent of lung cancer cases, and then work on the other 10 percent,” says Chen.