

## Medica search: The

PART II By Lynne Taylor CANCER

Cancer is the second leading cause of death in the United States, but there is a great deal of variation in incidence and survival rates for different types of cancer. For example, African American men have the highest rates of cancers of the prostate and lung. Native American women have the highest incidence of cervical cancer. Japanese Americans have a rate of stomach cancer 3-to-4 times higher than whites and Chinese Americans have a higher rate of mouth and throat cancers (U.S. Department of Health and Human Services).

Cancer research is now being directed at metabolic and genetic explanations for these varying diseases rates. Differences in genes involved in breaking down carcinogens are one possibility. A mutation in one such gene, CYPIA 1, has been associated with lung cancer risk in Asians in a number of recent studies (HHS). American Health Foundation research (1994) found that African Americans metabolize chemicals from cigarette smoke differently than white Americans, which may be

a key to their high rates of lung cancer. In the realm of breast cancer,

separate research performed at the University of Texas, Louisiana State University and George Washington University has shed new light on the reasons that African American, and to a lesser degree Latino women, die sooner from breast cancer than white women. The largest of the studies, at the University of Texas Health Sciences Center, examined 6600 breast cancer cases. Study results showed that after breast cancerdiagnosis and treatment, white women lived an average of 166 months, Latino women lived 156 months, while African American women lived only 117 months. Dr. C. Kent Osborne, one of the study's chief researchers, says that when seeking explanations for these differences in survival rates, "there is room for everything." Rather than dismissing casual factors like poverty and a lack of access to care, this research says that "in addition to socioeconomic factors, there are differences in the tumors of these women...it's multi-factorial," Dr. Osborne explains. The study found that African American and

Latino women were more likely to get the disease before age 45. In addition, their tumors grew faster and were less responsive to estrogen and therefore less likely to respond to drug taxoxifen and some other breast cancer treatments. And, while the variations in survival statistics may seem small, Dr. Osborne pointed out that "even a small percentage difference still effects thousands and thousands of women, because so many women have breast cancer."

One of the same problems - more aggressive tumors exist for African American men suffering from prostate cancer. African American men have the highest rates of prostate cancer in the world (National Cancer Institute).

An Eastern Virginia Medical School study found that African American men suffered from more aggressive forms of the disease even when the disease was diagnosed at stages similar to those of white patients. Studies at Norris Comprehensive Cancer Center are shedding light on possible causes for this difference. Work comparing levels of testosterone and 15alpha reductase, which are both implacable in the growth of prostate tumors in Japanese American, white and African American men found that African Americans had high levels of both substances, while white and Japanese patients had high levels of either 5-alpha reductase or testosterone. Japanese men, incidentally, have very low rates of prostate cancer.

New research at the University of Southern California has also shown radical differences in the gene coding for the receptor that blinds testosterone. "We saw clear differences between Asians, whites and blacks which correlate exactly with their relative risks of the disease," said Dr. Gerhard Goetzee.

To Be Continued

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compared to males in the shortest group (5 foot 7 or less).

"This does not give tall men carte blanche to engage in unhealthy lifestyle habits. Sixfooters still need to avoid smoking, eat properly, exercise regularly, and watch their blood pressure, just as everyone should to lower cardiac risk. But our finding on the association between heart attacks and height is nevertheless important for several reasons," said Patricia R. Hebert, Ph.D., the study's lead researcher.

Subjects in the trial, ages 40 to 84 years, were all participants in the Physician's Health Study, which began in 1982.

The primary objective of the study was to determine the effects of aspirin and betacarotene (a vitamin A derivative) on cardiovascular disease and cancer. The aspirin component of the study ended early, offering the current investigators data to conduct their research.

In looking for a tie between height and heart attack risk in the physicians' trial, Hebert and her associates also analyzed whether a connection between stature and cardiac deaths and stroke existed. Subjects were tracked for an average of five vears.

Although no strong link between height and stroke emerged, "we found quite a

carotene intake, as well as actual risk factors for heart disease. the tallest males were 35 percent less likely to have experienced a heart attack, compared to shortest subjects. In addition, generally speaking, for each extra inch of height, there was a 2 to 3 percent reduction in risk.

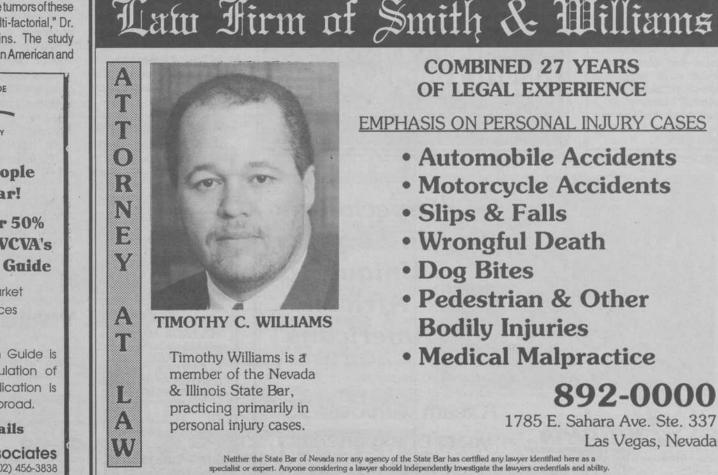
Experts are not certain why tallness lowers men's likelihood of a heart attack, although it could be that height serves as a physiological marker for another measure that could affect the performance of the heart, for example, lung function. Or it may be that stunting of fetal or infant growth influences future heart attack risk, the researchers contend.

In the meantime, however, these findings may be used to help assess heart disease risk. Further, added Hebert, they may help encourage positive lifestyle changes for some people, especially short men with proven coronary liabilities, such as highblood cholesterol or hypertension.



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