



LUNG CANCER CANADA

Awareness. Support. Education.

About 22,000 Canadians will be diagnosed with lung cancer this year, and close to 20,000 will die of it. If you have a persistent and worsening cough that lasts for more than a month, don't shrug it off. See your doctor.

Lung cancer

When a cough persists over weeks and months, non-smokers often think, "This virus is hanging on a long time." Smokers are likely to think, for perhaps the thousandth time, "I really have to quit."

But a persistent cough — one that lasts for more than a month, worsens after weeks or is accompanied by blood or a change in phlegm — should be viewed with the same urgency as a fire alarm. It is the primary symptom of lung cancer, still the deadliest cancer in North America and around the world.

Those who think, "I've never smoked, so I don't have to worry," should think again.

According to Lung Cancer Canada, 15 per cent of people who get lung cancer have never smoked.

"About 22,000 Canadians will be diagnosed with lung cancer this year," says Dr. Sunil Verma, medical oncologist at the Sunnybrook Odette Cancer Centre. "Close to 20,000 Canadians will die of lung cancer (in the same period). More people will die of lung cancer than of breast cancer, colon cancer and prostate cancer combined."

Even if you removed all the smokers and ex-smokers who contract lung cancer from the equation, lung cancer remains on the top-10 list of deadliest cancers, says

Dallas Petroff, executive director of Lung Cancer Canada.

Perhaps even more tragically, it doesn't have to be that way. Despite the fact that 20,000 Canadians die every year, there is no co-ordinated strategy for early detection and care. Research, referral protocols, best practices and education for physicians and patients lag those of other diseases. "We have excellent co-ordinated treatment and research models in HIV/AIDS and breast cancer models, but we're about 15 years behind," says Ms. Petroff. "Some doctors argue with me and say we're 20

years behind. The challenge with lung cancer is that we don't have advocates to fight for advances in research and care. About 85 per cent of lung cancer victims are dead within five years of diagnosis. Caregivers who have gone through the lung cancer journey don't have much fight left in them at the end."

One of the reasons for lung cancer's high fatality rate is that most patients are diagnosed when their disease has already spread, says Dr. Verma. "If lung cancer is detected early, it's not always a death sentence. We can do something about it — it is curable."

In addition to a persistent

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cough, or a cough that worsens over a period of weeks, other symptoms associated with lung cancer are chest pain, coughing up blood, shortness of breath or wheezing, hoarseness, swelling in the neck and face, loss of appetite and unintended weight loss.

To reduce the risk, it's important that people eat well, exercise regularly and quit smoking. And for young people, the key message is, "Don't start," says Dr. Verma. "Smoking may appear to be a cool thing to do initially, but its late effects are very uncool. Its late effects can be disastrous for many of our patients." ■

Women top charts in smoking, lung cancer rates

In 2008, lung cancer will continue to be the leading cause of cancer death among women, increasing to an estimated 9,200 deaths. While the mortality rate associated with breast cancer in women between the ages of 50 and 69 has declined by 33 per cent (between 1989 and 2004) lung cancer incidence and deaths among women contin-

ue to rise.

When it comes to lung cancer, women face disproportionately bad odds. They are more susceptible to tobacco carcinogens, and more susceptible to smoking addiction, due in part to the belief that smoking can control weight gain. In a recent NIH-AARP Diet and Health study in eight U.S. states, rates of current smoking

were 12.6 per cent among men; 17.1 per cent among women. About 57 per cent of men were former smokers; 38.8 per cent of women were former smokers. Those figures align with the findings of other research, which established that — even while smoking the same or fewer cigarettes per day than men — women experience more symptoms of

nicotine dependence.

"There is a 20-year lag between smoking rates and the development of lung cancer," says Sunil Verma, medical oncologist at the Sunnybrook Odette Cancer Centre. "The more you smoke, the greater the risk — but that risk doesn't manifest until about 15 to 20 years after the person begins to smoke. In the late '60s, '70s and early '80s, more and more women started smoking. Over the last two decades, we've seen increasing rates of lung cancer. While the incidence rate in males is going down, the rate in females is increasing."

Importantly, there is also a second phenomenon occurring — the rising incidence of lung cancer among women who have never smoked. "It's still puzzling, and there are different theories as to why it may be. Some very high profile women have recently died of this disease, including Christopher Reeve's widow Dana Reeve. We're seeing women who never smoked developing lung cancer, often in their early 40s."

This cancer tends to have specific abnormalities; says Dr. Verma. "Specifically, there's a receptor called EGFR, epidermal growth factor receptor, which is highly expressed in these women."

That is important because some of the treatments currently used for cancer specifically target that receptor.

"Hopefully, this could help these patients. Right now, these drugs are used for people who have advanced forms

of disease, but it is possible that it should be given to these patients earlier. That research is ongoing." ■

A deadly silence

As about 85 per cent of lung cancer is associated with tobacco carcinogens, smoking and lung cancer are rightly linked in the minds of most Canadians. And while that important awareness has meant that fewer people light up and more people quit, there has been a tragic and unintended side-effect: people with lung cancer are dying of embarrassment.

People have very little compassion for victims of lung cancer, says Dallas Petroff, executive director of Lung Cancer Canada. "One of our survivors lost his best friend, because during his treatment, his friend said, 'I think you should pay for your own operation, because you've caused (this disease) yourself.'"

Those who blame the smoker are overlooking the insidious nature of nicotine addiction and the social pressures that encourage people to light up in the first place, says Sunil Verma, medical oncologist at the Sunnybrook Odette Cancer Centre.

The nicotine in tobacco is known to be one of the most intractably addictive sub-

stances, but those who heroically manage to beat their addiction do not entirely escape the risk of lung cancer. "Many people who quit smoking are still at risk of getting the disease," says Dr. Verma. "Quitting smoking is very important as it reduces the risk of developing lung cancer, reducing cardiac disease and improving general lung health, but there is still a slightly increased risk of lung cancer even in those who quit."

While still the most common and deadly cancer worldwide, lung cancer has a relatively low media and research fund-raising profile because not many patients live long enough to become advocates and are unlikely to go public with their disease. Its medical profile may also be fatally low: An article published in the *Journal of Thoracic Oncology* by Dr. Joan Schiller, University of Texas Southwestern Medical Center and the National Lung Cancer Partnership, showed that primary care doctors were "less likely to send lung cancer patients to a cancer specialist than patients with other types of cancer." ■



Women are more susceptible to tobacco carcinogens and to smoking addiction, factors that contribute to high incidence of lung cancer. PHOTO: ISTOCKPHOTO.COM

Early, effective treatment offers hope

While mortality rates have dropped significantly for most common cancers, lung cancer is still fatal for the vast majority of its victims. Early, effective treatment offers the only hope.

The treatment options depend on what stage of lung cancer is diagnosed, says Sunil Verma, medical oncologist at the Sunnybrook Odette Cancer Centre. "There are three main treatments: surgery,

where the goal is to remove the cancer when the patient is diagnosed early; radiation treatment, where the goal is to target the cancer directly by giving focused treatments using X-ray beams; and systemic therapy, when drugs such as chemotherapy are given, which can go throughout the body."

The problem with chemotherapy is there's a lot of collateral damage, says Dr.

Verma. "It may be effective in killing cancer cells, but you also get side-effects such as hair loss, vomiting, fatigue and risk of infection. Increasingly, we're developing treatment that targets the cancer cells directly, focusing on the cancer cells while sparing the patient the additional toxicities."

In order for cancer to develop, changes must take place to the suppressor genes

that normally limit cell growth or the oncogenes that govern cell division. Research has identified specific gene changes that contribute to cancer, and therapies and chemoprevention agents have been developed that may prevent cancerous growth from occurring.

Other drugs known as EGFR (epidermal growth factor receptor) inhibitors, and drugs that work by cutting off

blood supply to the cancer, are currently being reviewed by Health Canada, says Dr. Verma.

"The focus of future treatment for lung cancer will involve multiple disciplines, with radiation and surgery. We need better strategies so we can individualize treatment, tailoring the right treatment to the patient depending on what type of cancer they have. Looking at the genes that

make cancer grow may give us an understanding of the best treatment for each patient.

"We're not quite to the point where we can say, if you have this disease then you're much more likely to respond to this treatment. We're close — in the next three to five years, we may get to the point where we can really individualize and hopefully change the face of lung cancer treatment." ■

November is Lung Cancer Awareness Month. Learn more. Visit www.lungcancercanada.ca