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# New foe to attack lung cancer

640 patients across Canada will be recruited for combined-drug therapy

**BY PAUL TAYLOR**  
**Medical Reporter**

A diagnosis of lung cancer is often a death sentence. Even if the tumour is detected early and removed surgically, the cancer can reappear elsewhere in the body.

Fewer than half of these patients are still alive five years after surgery.

But now, Canadian researchers hope to increase the survival odds of lung-cancer patients with a new combined-drug therapy. At medical centres across Canada, researchers plan to recruit a total 640 lung-cancer patients for a major study of the experimental approach.

"We want to see a cure – not just making them live six or seven months longer," said Dr. Frances Shepherd, chairwoman of the lung-cancer committee of the National Cancer Institute of Canada's clinical-trials group.

The \$3-million, four-year study is being organized by the National Cancer Institute, and is financed largely by pharmaceutical company Burroughs Wellcome Inc.

Dr. Shepherd explained that lung cancer is extremely difficult to treat, partly because cancerous cells can break off from the main tumour and then can be carried to other parts of the body through the blood vessels that run through the lungs.

Surgeons cut out the visible tumour, but there's no way of knowing whether a microscopic cancerous cell already has broken away. To counter this threat, doctors have tried to destroy any lingering cancer cells with powerful drugs.

This chemotherapy has met with only limited success because the anti-lung-cancer drugs are so toxic many patients can't tolerate them. Simply put, many patients can't stay on the drugs long enough for them to have an effect.

But Canadian researchers think that a new drug combination – involving vinorelbine and cisplatin – can overcome this obstacle to effective treatment.

Vinorelbine, marketed by Burroughs under the brand name Navelbine, is a new drug that appears to produce less nausea and vomiting than other anticancer medications.

Cisplatin has a proven record in fighting lung cancer, but it is not well tolerated by most patients.

By giving the two drugs in alternating periods, doctors hope they will be able to have a treatment that combines the best aspects of both.

"Not only does it have to work, it has to be tolerated by patients," said Dr. Jean Viallet, director of the department of oncology at Montreal General Hospital and principal researcher of the project. "And there is reason to believe from other work that this form of chemotherapy can have an impact."

Dr. Shepherd agreed. She noted that the vinorelbine-cisplatin combination has been given to patients in advanced stages of the disease, and it increased their survival by several months. The researchers hope to do even better in patients in the early stages of lung cancer.

"Can we cure all of them?" asked Dr.

Shepherd, director of medical oncology at Toronto Hospital. "We have to be honest: probably not. But if we can cure 10 per cent more, that translates into thousands and thousands of lives saved."

Patients recruited for the study will be divided into two groups, with only one receiving the experimental drug treatment, which will last for 16 weeks. The researchers will then observe the long-term survival rates of the two groups.

All the patients who take part in the study will have been diagnosed with early-stage, non-small-cell lung cancer. This is the most common type, accounting for 75 to 80 per cent of all cases. Of these cases, 85 per cent result from smoking.

Last year, 11,000 men and 5,600 women died of lung cancer in Canada. With more women smoking, their death rates from the disease are expected to rise.

As part of the study, the researchers also will be creating a "tumour bank" for further work on the impact of genetic mutations in lung cancer. In particular, they will be looking for the presence of a genetic defect known as the ras mutation. Earlier genetic research has suggested that people with this mutation have a higher risk of the disease returning after treatment. Many of them are dead within a year.

"Can we alter that dreadful course for that group of patients?" Dr. Shepherd asked. "We don't know the answer, but in five years we hope we will."

The article EM9502 reprinted above is used in Chapter 10 of the STAT 231 Course Materials.