

# Atomic 'depth charges' fight cancer

by Hugh Westrup

A team of scientists in Vancouver is developing a new cancer therapy that kills tumours by bombarding them with atomic "depth charges".

This new form of treatment is the most recent advance in radiation therapy, a technique that has saved countless lives but still has major limitations. One limitation is that radiation damages healthy tissue as well as cancerous tissue.

Dr. Gabriel Lam, who heads the Vancouver project, explains that conventional radiation therapy "works like a cannonball. It bores a hole into the body with radiation to get at the tumour." To overcome this flaw, Dr. Lam and his co-workers are working with a more

surgical form of radiation called a pion meson, or pion for short.

A pion is a tiny particle, smaller than an atom, that destroys matter by "exploding" when it becomes unstable. Pions are fired in a beam and travel for a certain distance before they "blow up". In this way, pions are similar to depth charges used in warfare to destroy submarines. Just as depth charges detonate when they sink to a certain distance beneath the water, pions detonate at a given distance from their point of firing.

In the Vancouver treatment centre, scientists calculate exactly where pions will detonate after they are discharged from a generator. A patient is then put in the path of the pion beam at this

calculated point of destruction. The treatment is so precise that the patient can be positioned so that the pions will become destructive exactly when they hit the location of the tumour, which is determined with a scanner. The pions pass right through the patient's skin and healthy tissue, doing much less harm than conventional radiation.

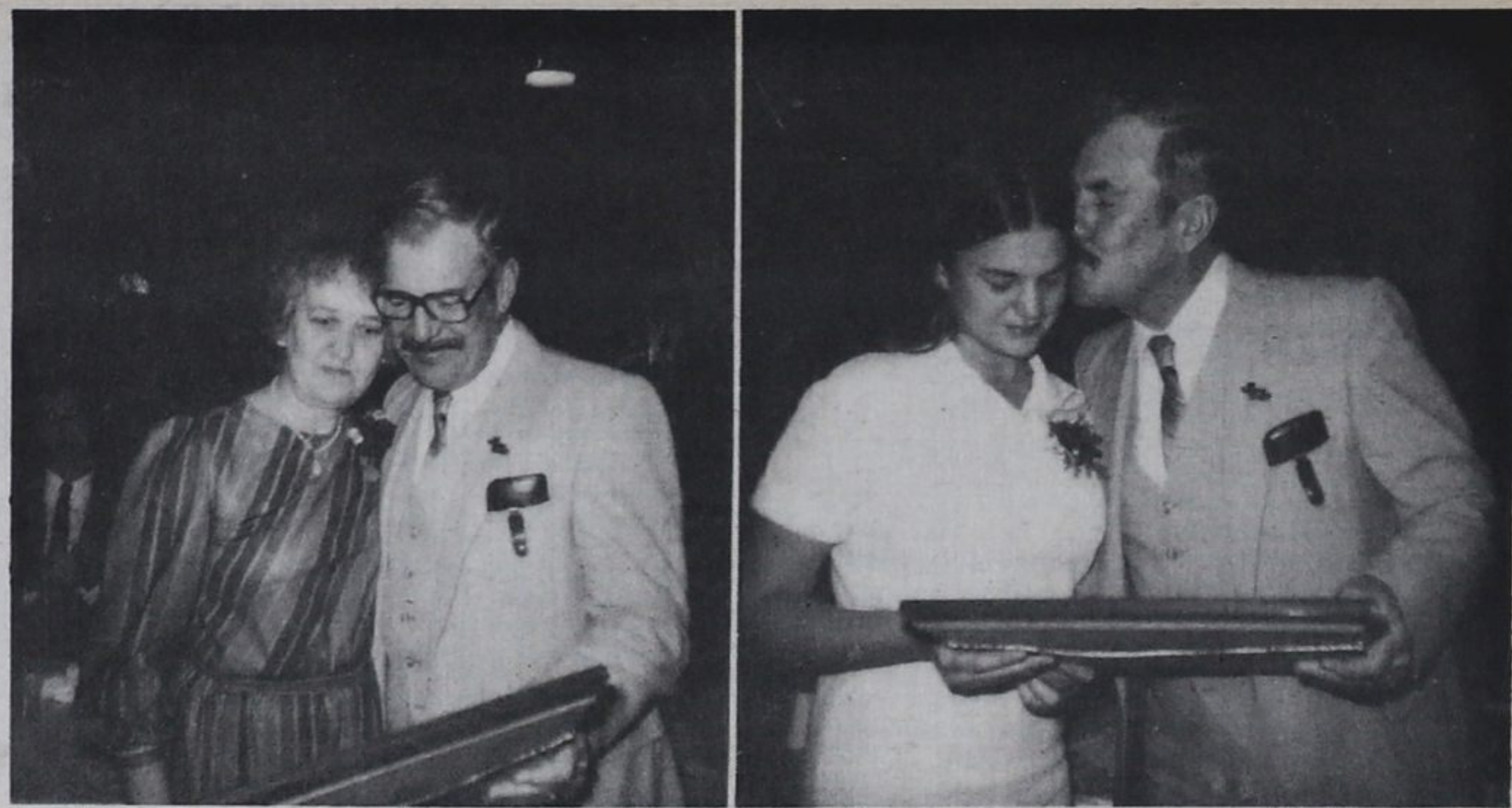
Apparently, pion therapy is not only safer, but more powerful, says Dr. Lam. Conventional radiation therapy attacking a cancer cell shoots the cell's DNA into pieces. Unfortunately, the CNA pieces can sometimes join together again and make new cells.

Pions, on the other hand, are far more destructive. When they become unstable, the pions are absorbed into nearby atoms. This causes a very small nuclear explosion with a force that completely annihilates the DNA, making it impossible for the harmful cells to reproduce.

Pion therapy may be especially useful in treating brain cancer, which is among the most deadly forms of the disease and the most difficult to treat. Chemotherapy works poorly against brain cancer because the brain is protected by a sensitive barrier which blocks almost any chemical from entering. Conventional radiation treatment does not work well either, because it cannot penetrate inside the brain without exposing the head to dangerously high doses of radiation.

Since word of Dr. Lam's work first got out, he has received hundreds of anxious phone calls from people requesting pion treatments. But up to now he has been testing the treatment with volunteers; it will not come into general practice for some years.

Dr. Lam's project, at the University of British Columbia, is funded by the Cancer Control Agency of B.C., the National Cancer Institute, and the B. C. Cancer Foundation.



## Honoured for their bravery

Shirley, left, and Kathy, right, wife and daughter of Tay Township Fire Chief Tom O'Hara were honoured last Friday during the township's annual Christmas Party and Awards Night. Doing the honours is Reeve Bruce Tinney. The O'Hara gals were given Awards of Merit for Bravery. They

were instrumental earlier this year in saving a Waubaushene man from certain death after the man's clothing caught fire while he was burning leaves across from the O'Hara's home in the hamlet.

# Canada's forgotten war

one of two war films Dec. 15

Two films with different perspectives on fighting men will be telecast on the CBC Dec. 15 at 9 p.m.: a half-hour documentary on the history of the Gurkhas, and a half-hour film on Canada's Forgotten War-Korea.

Producer-director Vic Sarin's story of the unique contribution to the British Army of Himalayans who for generations formed the special Brigade of Gurkhas follows the history of these fighting men, told in their own words. The Gurkhas, who could not be beaten by the British, who fought them in the early part of the 19th century, formed an alliance with the British Army during Queen Victoria's reign, and have fought in every major conflict alongside the British from Waterloo to the recent Falklands campaign.

Shot in Britain and Nepal, the film shows that for all their tremendous fighting spirit in battle, these hillmen are a gentle and peace loving people at home in their villages in Nepal.

Canada's Forgotten War, a CBC Ottawa production by Robert D. Clark, looks at what the

politicians called a police action, which to the veterans who recall their part in the Korean conflict of the early 1950s was unquestionably a war.

Among those who describe what happened to them on duty in Korea from 1950-1952 are: Maj. Don Holmes, 1st Battalion, Royal Canadian Regiment; Lt. Ed Mastranardi of the 2nd Battalion; Squadron

Leader A. MacKenzie, RCAF, who was a prisoner of war from 1952 to 1954; Able Seaman R. Moses of HMCS Iroquois; Cpl. Claude Boudrais, Royal 22nd Regiment; M.W.O. Montcalm Latreille, Royal 22nd Regiment; and historian Dr. W.A.B. Douglas.

The documentary includes some scenes of life in dugouts in Canadian sectors in

Korea, shot by amateurs; and scenes of Korea today, still divided but thriving in the South, where automobile production and the manufacturing of electronic goods are billion dollar industries.

Canada's Forgotten War is narrated by George McLean and is dedicated to the 26,791 men and women who served in Korea, and to the 516 who died there.

## Wise and otherwise

**KITCHEN**  
When cooking, try to keep tasters, snoopers, sniffers and toddlers out of the kitchen. If you can't, turn pot handles in, pull up appliance cords so they won't dangle, and put sharp knives, matches, household cleaners out of reach, says the Ontario Safety League.

Be cautious when removing lids or pouring liquids from steaming pots. Pot-holders should be amply heat-resistant. Check your kitchen fire extinguisher to make sure it's in good working order before the feasting season begins. Wipe up spills right away. Use a stepladder

or step-stool for reaching high shelves. Close cupboard doors.

**DECORATIONS**  
Despite some traditions, using candles and pine branches is flirting with danger. The Ontario Safety League reminds you to keep open flames away from trees, fir table decorations and garlands.

## fashion how about coin jewellery?

The magical glitter of gold has fascinated men and women since the beginning of time. For one 12 year-old boy growing up in a country far from the Canada he now calls home, the allure was irresistible. In his native Greece, Socrates Reppas apprenticed himself to a master goldsmith who had a strong reputation and stern teaching methods.

Socrates became deft and creative at his craft and decided to go looking for adventure in Canada. Yet, when he arrived in Canada, his considerable skill as a designer and jeweller did not initially open any golden opportunities for him in his adopted country.

"I couldn't yet speak English," he explains, "and I had no money to invest in a shop or supplies of gold and silver."

In fact Socrates landed in Toronto with only three dollars and some change in one pocket and his jewellers tools in the other. In his head and hands, however, he possessed the knowledge and skill gleaned from six years of study with one of Greece's foremost goldsmiths, the jeweller who made wedding bands for the former King of Greece, Constantine II.

He took whatever work he could find. "I washed dishes for a few months until I learned English. After that I worked making jewellery for other people for several years, until I had saved some money. Then I opened my own shop," says Socrates.

Today Socrates designs and produces by hand most of the jewellery he sells at Marquis Jewellers in Toronto. One of his favourite subjects is gold coin jewellery using the Krugerrand, the world's most popular way to wear gold.

The Krugerrand contains exactly one troy ounce of pure gold and is available in three smaller versions as well, containing 1/2 oz, 1/4 oz and 1/10 oz pure gold each. These fractional Krugerrands are a true fashion investment and lend themselves to a variety of jewellery treatments.

Socrates uses the 1/10 oz for cuff links and earrings. Rings for both men and women are popular items, he says, as are pendants, necklaces and bracelets.

Socrates' profession has a long and venerable history. Goldsmiths have been inspired to display fine gold coins for at least 2,000 years. Since the days of the Roman Empire, when gold coins were the universal standard of value, people have worn them proudly.

Today the value of Krugerrand gold coin jewellery is based on the worth of the investment coin as well as the sentiment beautiful jewellery carries with it.

According to Socrates, Christmas is always a popular time for purchasing jewellery. "What better way to show love for a friend, lover or spouse than with Krugerrand gold coin jewellery?" asks Socrates.

## "STELLA'S" LOOK OF TODAY

We would like to introduce you to a fascinating new concept in fashion colour draping coordination. Stella is an "Established" Consultant. Colour Analysis is what all fashion conscious people are excited about today. We can accommodate groups, clubs and "Gentlemen. A special gift certificate for your special Lady to have her colour done will solve your shopping Christmas gift giving.

Call for further information

549-3625

Stella Quesnelle

# LOANS

FROM

# 11%

Rates subject to change  
Minimum Amount: \$2,500

**STERLING**  
STERLING TRUST CORPORATION

270 King St. 526-3768

Member Canada Deposit Insurance Corporation  
Member Canadian Payments Association