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Health & Medicine

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Therapy uses heat to treat cancer patients

The sessions are timed to coincide with chemotherapy

By PATRICK KURP

Lying in the tent, waiting for the heat to come on, Janie Allison had the chilling thought that she was on display in a coffin.

"That's what it feels like, at least until the sedative kicks in and it starts getting hot. Then I forget about everything," said Allison, 48, an employment recruiter for a stockbroker in Houston.

Allison is a subject in a clinical trial testing the effectiveness of treating certain cancer patients undergoing chemotherapy with prolonged, closely regulated doses of heat. Leading the study is Dr. Joan Bull, professor of oncology at the University of Texas Medical School at Houston and director of its Center for Thermal Therapy Cancer Treatment.

"I've been studying this for more than 20 years. This is not 'alternative medicine.' We are inducing a fever, as though we were giving the patient malaria or a bad case of the flu," Bull said.

RESOURCES

MORE INFORMATION ONLINE

Patients interested in leaning more about the trial or in enrolling in one can visit the Web site http://www.uth.tmc.edu/or call 713-500-6502.

Pressure inside tumor

Here's the reasoning behind thermal therapy (known as hyperthermia, not to be confused with hypothermia), and an explanation for its apparent effectiveness: Heat decreases the pressure inside a tumor, enabling more cancer-fighting medication to enter its cells. The tumor also is less able to repair the damage done by chemotherapy.

And because it mimics the fever induced by infection, clinically applied heat rallies the body's defenses and increases the production of white blood cells.

"Both strategies are important," Bull said. "We know this works. We are often dealing with critically ill patients, and anything that enables them to live longer, even a matter of months, is what we hope to achieve."

Thermal therapy sessions are timed to coincide with the patient's chemotherapy. After being sedated and wrapped in insulation, patients lie in a tentlike structure fitted with an infrared radiant heat device. The interior temperature is raised to 104 degrees Fahrenheit, and patients remain inside for eight hours.

"It's not exactly a piece of cake, but I've had tetanus shots that felt more uncomfortable," Allison said.

A familiar story

Her cancer story is a familiar one. She developed a persistent cough last fall and consulted her family doctor. A chest X-ray revealed a spot on one of her lungs, and a biopsy confirmed it was cancer. Tumors also were found in her lymph nodes. Allison, who started smoking when she was 20, gave it up promptly after the diagnosis.

Thus far, she has undergone three thermal therapy sessions, coupled with chemotherapy, and examinations show the lung tumor has grown smaller. After each session, she felt thirsty and light-headed, and slept for nearly 24 hours.

Bull is operating two clinical trials, both funded by the National Cancer Institute. The one in which Allison is enrolled is devoted to patients with melanoma, inoperable or metastatic neuroendocrine

tumors, or cancers of the gastric system, small bowel, lung, head or neck.

The other involves patients with advanced pancreatic cancer.

"We're not hitting home runs. We're not curing people, but we're extending lives," Bull said.

For questions or comments on the Health & Medicine page, contact matthew.schwartz@chron.com*.*