

Louisville resident Rosana Dropkin certified to train dogs to detect cancer

By Rachel Totten rachel.totten@thedailytimes.com | Posted: Wednesday, December 14, 2016 12:00 am

Local dog trainer Rosana Dropkin traveled to Northern California last month to learn more about how pet dogs can be taught to detect early stages of cancer through methods established by the In Situ Foundation in Chico, Calif.

Dropkin is now one of few people in the country who have completed the six-day course to become certified in the foundation's newly developed canine cancer detection protocol.

"Several years ago, nobody wanted to give out their methods," said Dropkin, a Louisville resident who teaches canine nose work at the Oak Ridge Kennel Club. "Part of the thing that will make this a success is that we're all wanting to help each other."

While training dogs to detect cancer is not a new thing, Dropkin explained that because various research labs all train dogs in different ways, the ultimate goal is to collaborate with local universities and hospitals using In Situ's standardized protocols, so that all researchers and trainers are collecting the same results.

Then, the data will be brought to the U.S. Food and Drug Administration for clearance.

"It's amazing what a dog can do. ... A lot of people have said that dogs found cancer on them," she said, noting the 300 million scent receptors in a dog's nose, compared to the 5 million found in a human nose. "Dogs can smell the equivalent of humans seeing all the way to California."

With scent being their strongest sense due to an extra organ in the canine's nose, Dropkin added that dogs can easily detect one rotten apple in a barrel of 2 million.

"Scent is very important for them for their survival, but they smell so differently than we do," she said, explaining that smells enter a dog's nose through the Jacobson's organ, which carries the scent directly to the brain. "When they smell pizza, they smell the meat, the flour, the yeast. They smell every ingredient at a molecular level, which is why they can smell cancer."



Rosana Dropkin talks about medical detection dogs

Rosana Dropkin talks about medical detection dogs and how they can be used to detect early stages of different types of cancer.

Although there aren't any reliable methods to detect cancer before its third stage, Dropkin said that dogs have detected the disease as early as stage one, with some dogs able to detect stage zero.

"So many people screened have gotten a hit that was tracked and monitored and detected way earlier," she said. "It can certainly cure more people, and that's what we're aiming to do."

Collaboration

While dogs can be trained to detect cancer smells in about 16 weeks, the clinical trials can take anywhere from a year to a year-and-a-half, Dropkin said. However, much of the process is in the data research and collection.

"The goal is to get the word out so local oncologists know I'm here," she said. "I'd love to be able to collaborate with them to get clinical trials running."

In addition to collaborating with oncologists, hospitals and universities, Dropkin said that she would also like to form a group of three to five dogs to compile more positive identifications.

"We're trying to get a group to do this," she explained. "It will help get information a lot quicker."

With cancer detectable in urine, plasma and breath samples, Dropkin said that the first step in training pet dogs to detect cancer smells is to train them using a variety of samples. Because "everybody's cancer smells differently," dogs are then taught to generalize those scents.

"They learn the common scent and how to be able to detect it," she said.

Through trials performed at the University of California-Davis, Dropkin said dogs have proven to be 99 percent accurate in detecting prostate cancer in urine samples; 99 percent accurate in detecting the earliest stages of lung cancer; and 88 percent accurate at the early detection of breast cancer.

"But a lot has to do with the drive of the dog," she said.

While dogs don't have to be especially physical to be trained to detect cancer, Dropkin added that herding breeds, such as Australian and German shepherds, have been consistently successful at both training and detecting.

Demonstration

Demonstrating the process with her dog Baron, Dropkin set up a row of five boxes, and placed three swabs with the wintergreen scent — a very light smell — in a tin box, which was then put in one of the larger cardboard boxes.

"They cheat and start using their eyes," she said, shaking the box containing the wintergreen scent before shuffling the row. "This reminds them, 'No, you've got to use your nose.'"

Wearing a special nose work collar that alerts him when to start smelling, Baron found the wintergreen box in only about three seconds.

"Nose work really changed my life," said Dropkin, who lost her mother to cancer at age 10. "Dogs have such a good time and the owners enjoy it, too."