

Dogs join fight against bone cancer

May 15 2014, by Dennis Thompson, Healthday Reporter



Photo: Robin Foster

FDA-approved drugs to be tested on canines with bone cancer that also affects humans

(HealthDay)—Man's best friend will be part of an effort to find better treatments for a type of bone cancer in children and young adults, researchers report.

Dogs who are suffering from [osteosarcoma](#) will be treated with drugs that are already approved by the U.S. Food and Drug Administration for other uses, to see how well these medications battle the bone cancer, said Dr. Joy Fulbright, a pediatric oncologist with Children's Mercy Hospital in Kansas City, Mo.

"This is one of the cancers that is the same type of cancer in both dogs and humans, and dogs tend to be able to process drugs similarly to how

humans do," Fulbright said. "Ideally, we'd like to find an agent that's not as toxic as the chemotherapy we currently use."

Doctors are hoping that they'll find drugs that are effective against osteosarcoma in both dogs and humans. And, because these medications are already FDA-approved, they should be able to put them to use very quickly.

"It usually takes up to 15 years to get a drug from bench side to patient," Fulbright said. "We're hoping to decrease that time if we can find a drug that's already FDA-approved."

Finding new treatments for osteosarcoma has been a challenge because it's an uncommon cancer in humans. Only about 800 people are diagnosed with the disease each year, about 400 of those are in children and teens, according to the American Cancer Society.

The five-year survival rates for people diagnosed with osteosarcoma before it has spread can be as high as 80 percent. If the cancer has spread, five-year survival rates drop to between 15 percent and 40 percent, according to the cancer society.

"We haven't improved the survival rate in the last 20 years," Fulbright said.

However, osteosarcoma is far more common in dogs than it is in people. About 10,000 cases are diagnosed each year, according to the study authors.

Currently, the researchers are pre-testing drugs in the laboratory using osteosarcoma cells taken from both humans and canines.

The most promising [drug](#) candidates from this phase will then be tested

in dogs that have been diagnosed with bone cancer, to see which work best with the least side effects. Vets at the Colorado State University College of Veterinary Medicine will identify canine candidates for the study and treat them with the drugs selected by researchers. No dogs will be given cancer for this study; the dogs must have naturally occurring osteosarcoma.

After identifying drugs that work for dogs, doctors hope to move on to human trials using the same medications.

Canines are commonly used in medical research, said Nicole Duffee, director of education and scientific affairs for the American Association for Laboratory Animal Science.

Their use in this study makes sense because osteosarcoma "is a naturally occurring condition in dogs, especially in large dogs," Duffee said.

Duffee noted that while the study is focused on a human treatment for osteosarcoma, it could also lead to improved [bone cancer](#) treatments for [dogs](#).

The study is being funded with a \$500,000 grant from the Midwest Cancer Alliance.

More information: Visit the [American Cancer Society](#) for more on osteosarcoma.

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Citation: Dogs join fight against bone cancer (2014, May 15) retrieved 5 May 2024 from <https://medicalxpress.com/news/2014-05-dogs-bone-cancer.html>

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