Treating Cancer in Dogs Provides Hope for Humans

When Krista DeZerega-Thomson got the dreaded news that Rohan, the family’s beloved Labrador retriever, had cancer, she was devastated. He had metastatic melanoma—an aggressive form that affects dogs and humans—and was given only two months to live.

Fortunately, Dr. Michael Kent, a radiation oncologist at the school, was able to enroll Rohan in a unique clinical trial in an attempt to extend the length and quality of his life. In collaboration with Dr. Arta Monjazeb, associate professor of radiation oncology at the UC Davis Comprehensive Cancer Center, and others at the veterinary school, Kent was examining the use of a three-pronged approach to treating these types of cancer.

“These are the most challenging cases in cancer medicine—a tumor that has already spread,” said Kent, who also serves as CCAH director.

In addition to radiation treatments, veterinarians injected immune-enhancing drugs into Rohan’s tumor site to stimulate his immune system to mount a local response to the tumor. He also received oral drugs to put a damper on regulatory T-cells that normally lower a body’s immune response—a safeguard that keeps the immune system from recognizing the body as foreign, but also hampers fighting a tumor.

Rohan was given another six months with his family—three times longer than predicted without therapy. Just as importantly, his remaining life was a fun one.

“Every time he came out of treatment, he had more energy,” DeZerega-Thomson said. “We took him to the lake and hiking—he really enjoyed his last months.”

Melanoma, lymphoma, gliomas—all of these types of cancer, to name a few, affect both dogs and people. For that reason, dogs make excellent models for better understanding not only how cancer forms in humans, but also in developing more efficient treatments. Monjazeb said based on the success of the canine clinical trial, he is beginning a safety trial in human patients with metastatic melanoma.

“This collaboration was an excellent example of how physicians and veterinarians can work together to tackle a disease that affects both species,” Kent said. “Now our job is to follow up, refine, and improve the technique so it can be used for both dogs and humans.”

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