

# Letters to the Editor

## The promise of precision medicine

We were encouraged to read “Tailoring medicine by reading the code for life”<sup>1</sup> by Greg Cima in the January 1, 2022, issue of *JAVMA*. The points put forward in the article were timely, clear, and well reasoned. They made it obvious that the explosion of precision medicine tools available in human medicine has begun to allow veterinary medicine to adopt analogous tools. We think it critical to also emphasize one of the most impactful and common applications of precision medicine in humans: the use of genomic diagnostics in oncology. A genomic understanding of human cancer has played a major role in the 29% reduction in overall cancer death rates that has occurred over the past 20 years. Since 1 in 4 dogs will develop cancer, there should be eager anticipation for precision medicine tools that will transform the diagnosis and treatment of pets with cancer. While this article highlighted important future applications of precision veterinary medicine, it is also important to acknowledge the growing number of options

already available in veterinary cancer genomic diagnostics.

Cancer genomic diagnostics have been available to veterinarians for several years—from relatively simple mutation detection, like KIT mutations in mast cell disease, to a lymphoma diagnostic called PCR for Antigen Receptor Rearrangement, to a genomic tumor profiling test, SearchLight DNA, offered by our company that evaluates 3 types of mutations in the 120 genes most relevant to both canine and human cancers.

While cancer’s genetic basis is increasingly understood, we still rely on approaches to diagnose and treat cancer that are, in most cases, decades old with treatments that nonselectively attack every rapidly dividing cell instead of targeting the cancer cells specifically. This is the fundamental promise of precision medicine: to understand an individual’s cancer so completely that we are able to abandon the “best-chance” treat-

ments for a disease and instead treat the specific disease-causing changes that are present in the animal in front of us.

We clearly do not know everything we need to know to bring precision medicine to every patient today. But we do know much more than many realize, and the options available to veterinarians treating cancer patients are rapidly expanding. We commend the authors and editors of *JAVMA* for bringing these exciting advancements to your readers and look forward to playing a part in making them widely available to our profession.

**David Haworth, DVM, PhD**  
**Will Hendricks, PhD**  
**Derick Whitley, DVM, DACVP**  
**Vidium Animal Health**  
**Phoenix, Arizona**

1. Cima G. Tailoring medicine by reading the code for life. *J Am Vet Med Assoc.* 2022;260(1):8–11. doi:10.2460/javma.260.01.07

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