A Cancer Diagnosis
Is Not a Death Sentence

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Two months earlier, Reese—a 9-year-old male castrated pit bull/mixed breed dog—had been diagnosed with a right-sided anal sac adenocarcinoma by his primary care veterinarian. Reese was also hypercalcemic, a well-documented negative prognostic predictor.

Two weeks later, Reese was evaluated by a boarded medical oncologist, who performed staging diagnostics to determine the severity of the cancer. The oncologist found metastasis to the sublumbar lymph nodes and lungs and initiated oral prednisone therapy for the hypercalcemia and chemotherapy.

Reese became my patient when the oncologist moved across the country. Despite 6 weeks of therapy, he had not improved. His owner reported tenesmus from the large anal sac tumor and the markedly enlarged sublumbar lymph node. Reese had a poor appetite and was being hand fed by his family.

Reese's radiographs were shocking: His chest was filled with wall-to-wall and overlapping pulmonary nodules—often described as a snowstorm or lungs filled with cotton balls. These images explained Reese’s labored breathing and frequent coughing, which occurred throughout the night.

With a low tail wag, Reese slowly walked across my examination room to greet me. I could tell his cancer was taking a toll. Prior to the consultation, I had reviewed his medical record, which told me my patient was a dog with advanced metastatic cancer. While I am often surprised at how well dogs with advanced cancer often appear, Reese was not one of those pets.

Welcome to the first in a series of articles by Dr. Sue Ettinger, head of the Oncology Department at Animal Specialty & Emergency Center in Wappinger Falls, New York. Dr. Ettinger’s mission is to promote awareness and education about cancer in pets. In these articles, she will combine her expertise in oncology with her experiences in practice to detail how clinicians can better care for cancer patients.
Sadly, a dog like Reese has a grim prognosis, typically 1 to 2 months to live from diagnosis, and Reese’s cancer had been identified 2 months ago. What would I say to his family? There were no options. Or were there?

**MOVING BEYOND MISCONCEPTIONS**

*Cancer* is a scary word that is often equated with death. To many, cancer also equals pain and suffering. People sometimes think there is no hope.

Because I am a cancer specialist, people are frequently surprised to hear that I love my job. They assume it must be depressing and hopeless, and that pets could not possibly handle cancer treatment or benefit from it. *Treatment only makes pets more ill, right?*

I disagree. Cancer is not a death sentence. While we all want a cure for cancer, I encourage us to consider many cancers as chronic conditions that may require chronic therapy, such as kidney or heart disease.

There are so many myths and misconceptions about cancer in pets, but one important fact is that treatment is often very well-tolerated. There are treatment options, and a wide range of them, including surgery, radiation, chemotherapy, and palliative and supportive care.

As an oncologist, I recommend treatment when the pet is likely to live longer with it than without it. Thankfully, most pets feel good, if not great, during treatment. My motto is, “Live longer, live well.” My patients need to do both—and they do. That is why I love my job.

There are frustrating and heartbreaking moments, especially when I lose a patient to cancer after sharing months or years working together with the pet and owners. But, most of the time, treating cancer in pets is about providing quality of life to the pet and more quality time to its owners, as well as hope.

Most of my cancer patients are quite healthy and treatment allows them to lead happy lives. Some even live longer and better than expected (see **Speaking of Oprah**).

**BREAKING BAD NEWS**

Being a cancer specialist often means delivering tough news: *The cancer has spread. The cancer has relapsed. The cancer is no longer responding to treatment.*

However, in my opinion, the general practice veterinarian and team have the more difficult job—they have to tell clients that the biopsy or aspirate of the mass is cancerous, or that there is a high suspicion of cancer. They must often say things, such as: *I have bad news about the bone x-rays.*

**Speaking of Oprah**

Like Reese, Oprah—an 8-year-old female spayed Doberman pinscher—also had advanced cancer but, unlike Reese, she was not showing any signs. She was an affectionate, energetic dog referred to my practice for a large cranial mediastinal mass observed on chest radiographs by her primary care veterinarian.

Computed tomography confirmed 2 large thoracic masses (> 8–10 cm), thought to be metastatic lymph nodes, and cytology of the cranial mass confirmed carcinoma. Two additional smaller masses were noted in the pulmonary parenchyma. Oprah had a history of an intermediate-grade mammary carcinoma, which was resected 10 months earlier.

While it was not clear whether the thoracic nodules were metastatic, the presence of multiple masses precluded Oprah from surgery, and conventional chemotherapy is typically not effective for macroscopic disease. I started to feel anxious at the prospect of breaking the bad news—that Oprah had multiple chest masses—to her owner. Oprah’s story continues on page 107.
Talking about cancer is not fun, and it is stressful for clinicians, who carry the burden of responsibility for communicating bad news. When a pet has cancer, the human–animal bond becomes strained and fragile, making communication between the veterinarian and the owner even more challenging than other clinician–client conversations. Yet, this communication is critical to optimal patient care.

Sadly, guidelines and training to help veterinarians broach difficult cancer conversations about diagnosis, prognosis, treatment, and palliative care options are lacking. In addition, training for “cancer communication” in veterinary school varies with regard to content, duration, and methods. There is often a gap between veterinary school curriculum and the acquisition of the skills needed to be successful in practice. As a result, many veterinarians and specialists feel unprepared for these conversations, and most oncologists learn to “break bad news” by observing more experienced colleagues.

I am constantly improving my skills so that I can convey distressing news gently, and I help other veterinarians do this as well. However, in school and my residency I was taught the “data dump” method—delivery of a monologue of information. While owners told me I had done a good job and answered all their questions, I came to realize that we—the veterinary profession—can do a better job when talking about cancer.

Better cancer communication begins by learning the following 3 words and what they represent:

1. **Aware.** Be aware of the challenges both you, as the veterinarian, and the client face.

2. **Where.** Where are you delivering the bad news? Aim for a private location, such as an examination room, and do it in person, not on the phone. Make sure you have sufficient time and attention.

3. **How.** How do you prepare yourself? Ask open-ended questions, be empathetic, use inclusive language, and make it a dialogue—a conversation. Use the “chunks and check” approach: give a chunk of information; then check for understanding.

I have found that these core communication skills save me time and allow more efficient clinician–client interaction. Breaking bad news may not be easy or fun, but we can improve the experience for the veterinary team and the pet owner. Once we break the news, we start to cover the options, such as chemotherapy.

**TREATING WITH CHEMOTHERAPY**

Most pet owners are surprised that dogs and cats do not experience chemotherapeutic side effects. I have watched human friends and family members get extremely sick after chemotherapy, and they are sometimes hospitalized from severe side effects. Thankfully, that is not how pets respond.

The overall toxicity rate is very low in veterinary chemotherapy patients. In my experience, the majority of pets, approximately 80%, have no side effects. Only 15% to 20% experience mild to moderate side effects that last a few days, and side effects are less common in cats than dogs.

Serious complications, such as severe inappetence, dehydration, vomiting, and diarrhea, occur in less than 5% of chemotherapy patients. These patients may require hospitalization for supportive care to address dehydration, infection, or sepsis. In my experience, with a dose reduction and prophylactic medications, most of these patients can successfully receive that same drug again.

Owners are also relieved to learn that most pets do not lose their hair. Alopecia (hair loss) occurs because chemotherapeutic agents target all rapidly dividing cells, including hair follicles. In dogs, some potentially affected breeds—poodles, Scottish terriers, and West Highland white terriers—have continuously growing coats. Alopecia is rare in cats, but they may lose their whiskers.

While undergoing chemotherapy, shaved areas on the pet (eg, for limb catheters, abdominal ultrasound) do tend to grow hair back more slowly. The good news is that hair and whiskers regrow once the treatments have completed. Occasionally, hair grows back a different texture or color and, in cats, the hair coat is typically softer and referred to as a chemo coat.
It is important to remember, and remind clients, that pets do not care about cosmetic side effects, and these effects do not impact quality of life. However, I do recommend advising pet owners about the potential loss of whiskers and hair coat to avoid any unnecessary surprises.

Cancer treatment is not a binding contract. I always encourage clients who are considering chemotherapy to let me administer 1 to 2 doses and see how the pet reacts. Most clients are so pleased that they continue with treatment and I can adjust the dose and other medications to ensure quality of life during treatment.

I cannot tell you how often clients tell me their pets undergoing chemotherapy have more energy than they did 6 months or a year ago—before they had cancer and before they began receiving chemotherapy. I think it is a testament to how well most pets feel during and after chemotherapy.

**LIVING IN THE MOMENT**

Another important aspect in veterinary oncology is to remember that the patients do not “know” they have cancer. Of course, dogs and cats feel pain and do not enjoy feeling unwell but, unlike humans, pets do not deal with the psychological aspect of cancer. Pets live in the moment, and I think “ignorance is bliss” in these situations.

Instead, it’s the pet owners who must absorb all the cancer information—remission rates, survival statistics, treatment options, treatment schedule, and costs. I advise my clients to avoid stressing about their pets’ response to treatment and prognosis because stressing will not change the outcome. And I tell them to let me worry about the disease, treatment, doses, and response.

The client’s role is to give me feedback on how the pet did after treatment and to give the pet its prescribed medications. Clients need to enjoy each day, for each day with a pet is a gift.

**NEW THERAPIES ARE ARRIVING**

It is an exciting time to be an oncologist. New therapies are available and even more are on the horizon.

Newer radiation therapy options, such as stereotactic radiation, can treat some tumors (eg, brain, nasal) in 1 to 3 treatments (rather than 15–20), with fewer anesthesia episodes, side effects, and practice visits. We also now have targeted therapy, such as the tyrosine kinase inhibitor Palladia (toceranib phosphate; zoetisus.com) for canine mast cell tumors and the melanoma vaccine Oncept (merial.com) for canine oral and digit malignant melanoma.

Other new therapeutics are in earlier phases of development and clinical studies and, in some cases, we are waiting for published data on response rates. These include a monoclonal antibody immunotherapy for B-cell lymphoma (aratana.com), a canine lymphoma DNA vaccine (merial.com), and nucleotide prodrug from VetDC for dogs and possibly cats (vet-dc.com).

A canine osteosarcoma vaccine (aratana.com) is being studied at the University of Pennsylvania as an aid to treatment with amputation and chemotherapy. Early results look promising, with an increase in survival times and only mild to moderate adverse effects.

Other supportive medications in the pipeline include Entyce (capromorelin; aratana.com), an appetite stimulant, and Canalevia (crofelemer; jaguaranimalhealth.com), which is for treatment of chemotherapy-induced diarrhea.

It is exciting to know that the near future may hold new tools for our cancer toolbox.
CONTINUED: REESE & OPRAH

During my residency, I was taught that patients with advanced metastatic disease—dogs like Reese—would likely live 1 to 2 months, so I focused on palliative care and pain management. However, I no longer define cancer treatment success by complete remission. Partial response or even stable disease is successful if we improve or maintain a good quality of life.

In dogs and cats with advanced metastatic disease in which maximum tolerated dose (MTD) chemotherapy is no longer effective, metronomic chemotherapy may inhibit tumor growth and, thus, stabilize disease. This “pulse” chemotherapy provides uninterrupted low doses of cytotoxic drugs at regular, continuous, and frequent intervals. Eliminating breaks between dosages reduces or eliminates the ability of the tumor cells to repair damage or alter their microenvironments. Instead of killing cancer cells directly with MTD (high-dose) chemotherapy, this therapy targets blood vessels that allow tumors to grow and metastasize.

This therapeutic approach is what I chose for Reese and Oprah, and both of them received off-label oral Palladia for its anti-angiogenic effects, with low-dose (metronomic) oral cyclophosphamide for its effect on regulatory T cells.

Reese

Two months later, follow-up chest radiographs showed smaller and less defined nodular opacities. More important, Reese’s appetite had improved and his coughing was decreased, resulting in weight gain and great energy.

Even though Reese presented with advanced metastasis, he lived 10 more months. His protocol was well-tolerated, and Reese’s owners were pleased with the quality of life that resulted from therapy.

Oprah

Oprah’s follow-up chest radiographs at 2 months showed stable disease, but I was shocked at her 7-month recheck radiographs—the cranial mass was gone and the caudal one had decreased in size.

Oprah is still my patient today, 2 years and 11 months later. She has had some side effects from the cyclophosphamide, including sterile hemorrhagic cystitis. Most recently she developed idiopathic dilated cardiomyopathy that resulted in heart failure, but monitoring and care by a cardiologist has resulted in improvement.

IN SUMMARY

Today, there are options for pets with cancer, even those with advanced metastatic cancer as demonstrated by Reese and Oprah. These options include new therapeutic modalities and a more preventive approach with treatment, complemented by improved communication about cancer. Do not think cancer is a death sentence. Think hope, think options, and think live longer, live well.

Each Patient is an Individual

A veterinary professional should educate clients that cancer is one name for many different diseases. Lymphoma is different from hemangiosarcoma, oral melanoma, or osteosarcoma. Lymphoma in cats is different from that in dogs. A client may know someone whose dog did not tolerate chemotherapy treatment, such as doxorubicin, but that does not mean his or her newly diagnosed pet will not tolerate the same treatment. The other patient may have had advanced-stage cancer and preexisting conditions that complicated treatment. Remind clients that each pet is an individual.

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