

When Should You Start Oncological Screenings for Your Dog?

Tumors and other malignant conditions are the No. 1 cause of death in fully grown dogs, but when should screening start? Considering the factors that affect age at diagnosis, such as your pet's breed, gender and how much he weighs, a 'one age fits all' approach doesn't work.

Analysis by Dr. Karen Shaw Becker

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STORY AT-A-GLANCE

- To find out the optimal age to initiate cancer screening in dogs, researchers analyzed data from 3,452 dogs with cancer
- The median age at cancer diagnosis was 8.8 years
- Males tended to be diagnosed at younger ages than females, and neutered dogs tended to be diagnosed when they were significantly older than intact dogs
- Weight was inversely associated with age at cancer diagnosis, so the heavier the dog, the earlier they were diagnosed
- The team suggested starting cancer screening for all dogs at 7 years, but starting at age 4 for dog breeds that tend to be diagnosed at an earlier age

Cancer is the No. 1 cause of death in adult dogs, but little guidance exists on the optimal time to begin cancer screenings in canines. Typically, cancer screening occurs at your pet's annual wellness visits, when your veterinarian should check for any unusual lumps or growths and conduct certain blood and urine tests.

For instance, a urine test known as the CADET (CAncer DETection) BRAF Mutation Detection Assay can detect bladder cancer with as few as 10 cancer cells in the urine, making it useful for early detection before symptoms appear.¹

However, cancer risk varies considerably by breed and age, leading researchers with PetDx in La Jolla, California, to delve into when is the best time to begin non-invasive cancer screenings on dogs. It turns out it may depend on your dog's breed, size and sex.

Age, Sex and Breed Affect Age at Cancer Diagnosis

In breeds such as water spaniels and flat-coated retrievers, cancer may be the cause of 50% of deaths. Other breeds, including shih tzus and dachshunds have a much lower cancer mortality rate of 15% to 20%.²

Despite cancer's prevalence in dogs, and the differences in risk among breeds, no formal screening guidelines exist for canines the way they do for humans. This, however, may change with the advent of more non-invasive screening options. Researchers explained in PLOS One:³

“Liquid biopsy using next-generation sequencing of cell-free DNA has been introduced as a novel, non-invasive option for cancer screening in dogs. With the availability of a blood-based cancer test, the question of how to screen dogs for cancer may soon shift to when to start screening dogs for cancer.

A “one age fits all” approach to the initiation of screening is unlikely to be appropriate for dogs, given the strong role of both genetic and environmental factors in the development of cancer and the great diversity of canine breeds and sizes.”

To find out the optimal age to initiate cancer screening in dogs, researchers analyzed data from 3,452 dogs with cancer. The median age at diagnosis was 8.8 years. Males tended to be diagnosed at younger ages than females, and neutered dogs tended to be diagnosed when they were significantly older than intact dogs.

Weight was inversely associated with age at cancer diagnosis, so the heavier the dog, the earlier they were diagnosed. “Many of the breeds with younger ages at cancer diagnosis were large- and giant-breed dogs,” the team noted. Purebred dogs also tended to be significantly younger when they were diagnosed compared to mixed-breed dogs.

Start Cancer Screening for All Dogs at Age 7 — With Caveats

The team suggested that annual cancer screening should start two years before the median age of cancer diagnosis for dogs of similar breed and weight. Using this as a baseline, they suggested starting cancer screening for all dogs at 7 years, but starting at age 4 for dog breeds that tend to be diagnosed at an earlier age.

“In particular, Bulldogs, Boxers, Vizslas, French Bulldogs, and Boston Terriers had median ages at cancer diagnosis ≥ 2 years younger than the weight-predicted ages. This suggests that genetics may play a stronger role in cancer onset in certain breeds, resulting in younger ages at diagnosis,” the team explained. Among the dogs in the study, 58.3% were diagnosed with cancer at age 9 or before. Specifically:⁴

- Mastiffs, Saint Bernards, Great Danes and bulldogs had a median diagnosis age of 6 years
- Vizslas and Bernese mountain dogs had median diagnosis ages of 6.1 to 7 years
- Bichon Frises had a median diagnosis age of 11.5 years

What Influences Your Dog’s Cancer Risk?

It’s important to remember that these are just averages and don’t dictate a timeline for your individual dog. Many factors influence healthspan and disease processes in any given dog. In terms of cancer, lifestyle and environmental factors are often involved.

Obesity and overweight in pets can increase cancer risk, as body fat produces inflammation that can promote tumor development. Diet is another important factor, as an inflammatory diet, such as kibble or other highly processed pet foods, will fuel cancer in the body.

Exposure to toxins, including pesticides such as flea and tick preventives, lawn chemicals, flame retardants, unnecessary vaccinations and tobacco smoke, may also increase cancer risk. The timing of neutering and spaying also matters, and I recommend looking into alternative ways to sterilize your pet without upsetting his or her important

hormone balance for this reason, including hysterectomy and vasectomy.

How to Reduce Your Dog's Cancer Risk

Regular wellness visits are also essential so your pet can get screened for cancer at least annually — and twice a year if your dog is a senior. However, the following five steps are also important to reducing your dog's cancer risk. Following these throughout your pet's life can help keep him healthy and disease-free:

- Maintain a healthy weight
- Feed a minimally processed, anti-inflammatory diet, avoiding highly processed pet foods with large quantities of starch (grains, legumes, corn, etc.)
- Reduce exposure to toxins, such as household pesticides, chemical lawn treatments and chemical flea and tick preventives
- Wait to spay or neuter your pet until the age of 18 months to 2 years, especially for large or giant breeds; better yet, **sterilize your pet without desexing**
- Refuse unnecessary vaccinations (ask your vet to check vaccine antibody titers before automatically giving more vaccines)

Sources and References

¹ [AKC October 14, 2016](#)

^{2, 3} [PLoS ONE 18\(2\): e0280795](#)

⁴ [Phys.org February 1, 2023](#)
