

CANCER SNIFFING DOGS

might be so excited that she can't calmly communicate which sample she has identified. Her general happy desire to bark and paw the ground needs to be trained to be exhibited only when ready to identify the target. Certain breeds of dogs like Labrador Retrievers and German Shepherds are a great combination of great sniffers and easily trained workers that co-operate well with humans.

technology is incapable of detecting it. Another thing is that it provides a less invasive method of screening. A typical procedure to diagnose cancer is to do a biopsy which involves removing tissue from a suspected tumor or cancerous area. This procedure can be painful and sometimes even a bit risky. A third reason is that it is much cheaper than using costly medical equipment and expertise.

(6) What is the benefit of using a cancer sniffing dog over other methods of cancer detection? For one thing, a dog's sense of smell can be so sensitive that they can detect cancer even at the earliest stages when medical

(7) If dogs can smell cancer, what other medical conditions can they detect? Currently, research is being done on the ability of dogs to detect the onset of seizures and to detect a drop in blood sugar levels of diabetics.

Article Questions

- 1) What makes a dog a great animal for detecting scents? How do they compare to humans in their ability to detect scents?

Dogs have a great sense of smell. While the average human has 5 million olfactory receptors, a dog has 200 million or more.(1)

- 2) How is a sample of breath from a patient capable of revealing that the patient has cancer?

Cancer cells produce certain alkanes and aromatic compounds that healthy cells don't produce. These compounds can be detected in a sample of the patient's breath.(2)

- 3) What is the main difficulty in getting a dog to recognize the target cancer smells?

The dog has to learn to identify a few target smells (the alkanes and aromatic compounds) among thousands of other smells.(3)

- 4) What are the three arguments for using cancer sniffing dogs to detect cancer as opposed to using the current medical technologies?

- 1) They can detect cancer at earlier stages than the current technology can detect.
- 2) Using dogs is less painful and risky than performing biopsies to collect potentially cancerous tissues for testing.
- 3) They are cheaper.(6)

- 5) Besides detecting cancer, what other things can a dog detect for or find with its nose?

They can find escaped prisoners, foxes and hidden drugs.(1) They can also possibly detect the onset of seizures and low blood glucose levels for diabetics.(7)