

### Anticipation Guide: “Sniffing Out Cancer”

**Before reading the article**, in the first column, write “A” or “D” to indicate your agreement or disagreement with each statement. **As you read**, compare your opinions with information from the article and write “A” or “D” in the second column to indicate the article’s agreement or disagreement with each statement. **In the space under each statement, cite text from the article that supports or refutes your original opinion.**

Me	Article	Statement
		1. The first report of a dog alerting her owner to a malignant melanoma was published in 2012.
		2. Vapor pressure depends on intermolecular forces.
		3. Substances with high vapor pressure have high boiling points.
		4. Cancerous cells produce different concentrations of volatile organic compounds (VOCs) than healthy cells do.
		5. A dog’s sense of smell is up to 100,000 times better than a human’s sense of smell.
		6. In the future, dogs will go to doctors’ offices to detect cancer.
		7. Cigarette smoke interferes with a dog’s ability to detect lung cancer in a patient’s breath.
		8. Researchers need to know what chemical they are looking for before they can train dogs to detect cancer-related smells.
		9. Artificial noses are being developed that will eventually take over the work of dogs in detecting cancer in humans.
		10. All VOCs in our environment are harmful to human beings.

## Reading Guide: “Sniffing Out Cancer”

*As you read the article*, answer the following questions about VOCs produced in cancer cells, and then compare the use of dogs and machines in detecting cancer in humans.

VOCs	Description or Explanation	
<b>What are they?</b>		
<b>How do reactive oxygen species fit into our understanding of cancer formation?</b>		
<b>How do VOCs produced by cancer cells differ from those produced by normal cells?</b>		
	Dogs	Machines
<b>Advantages</b>		
<b>Disadvantages</b>		
<b>Cancers detected so far</b>		
<b>Other sniffing uses</b>		
<b>Future use in cancer detection</b>		

Summarize three important facts from the article you would share with a friend who is concerned about cancer detection.

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