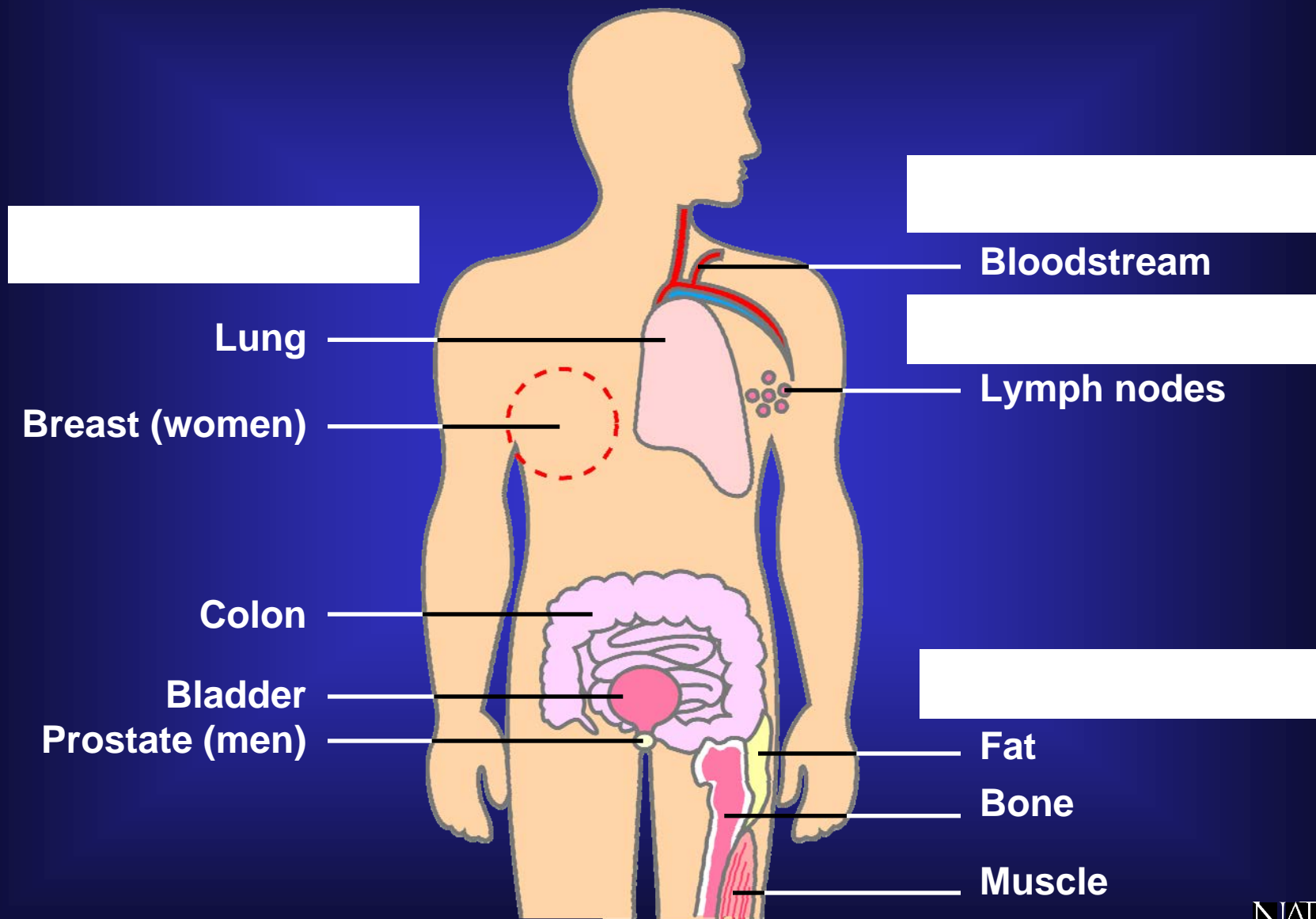


Cancer



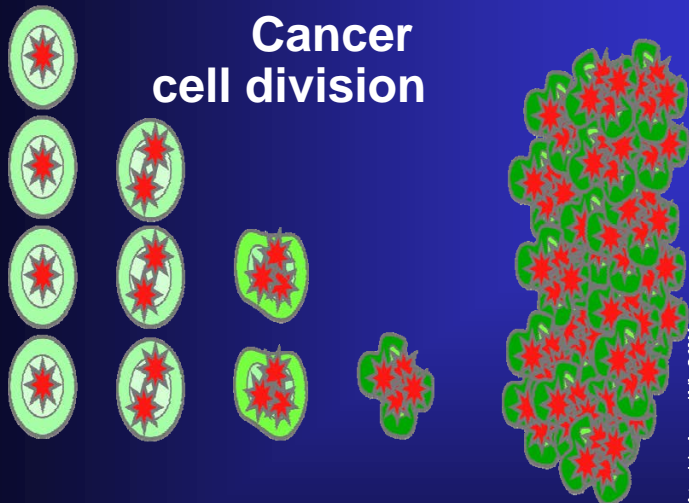
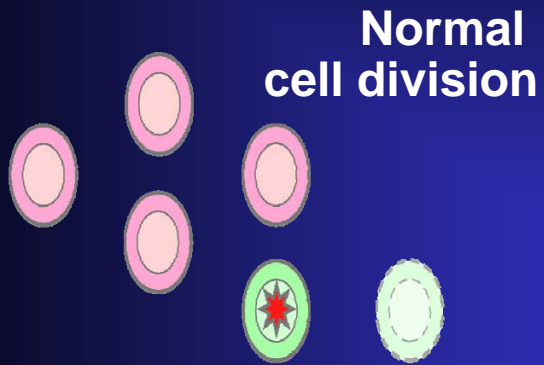
Artwork by Jeanne Kelly, © 2004.

What are some different kinds of cancer?

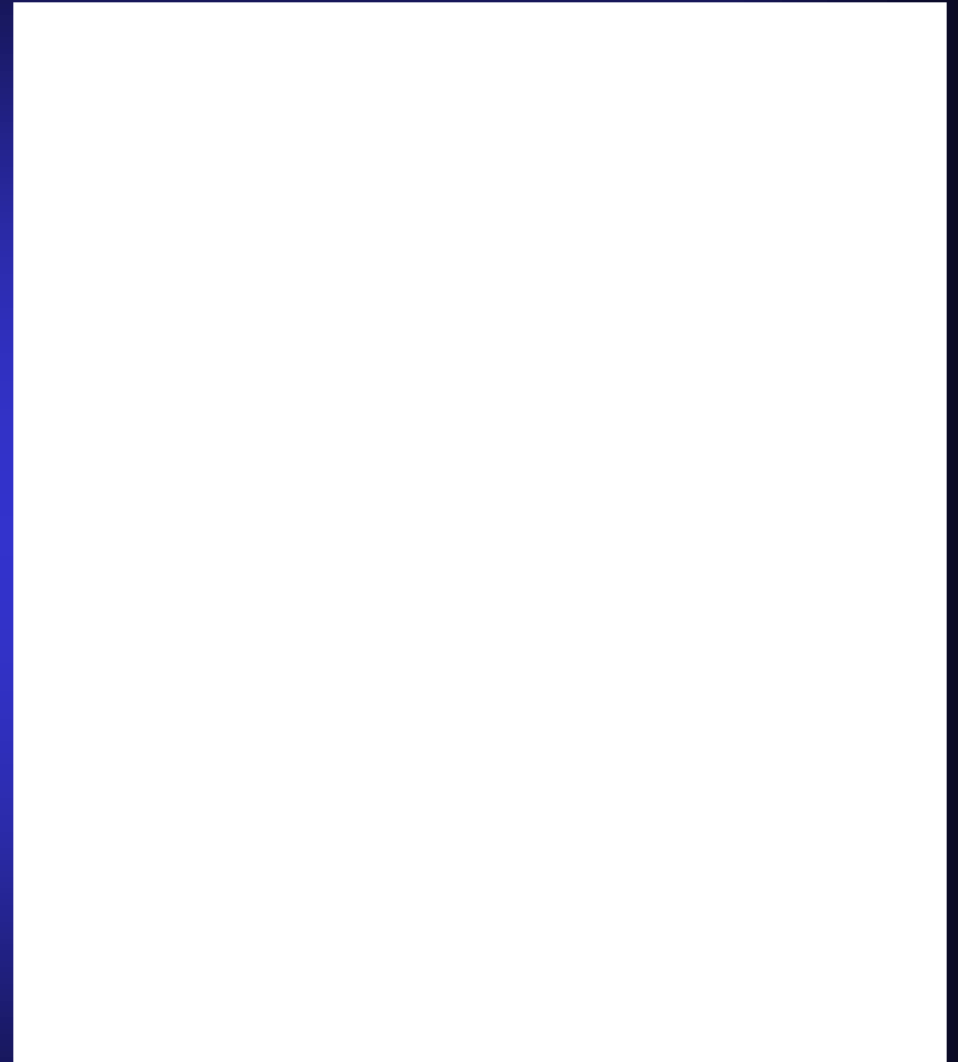
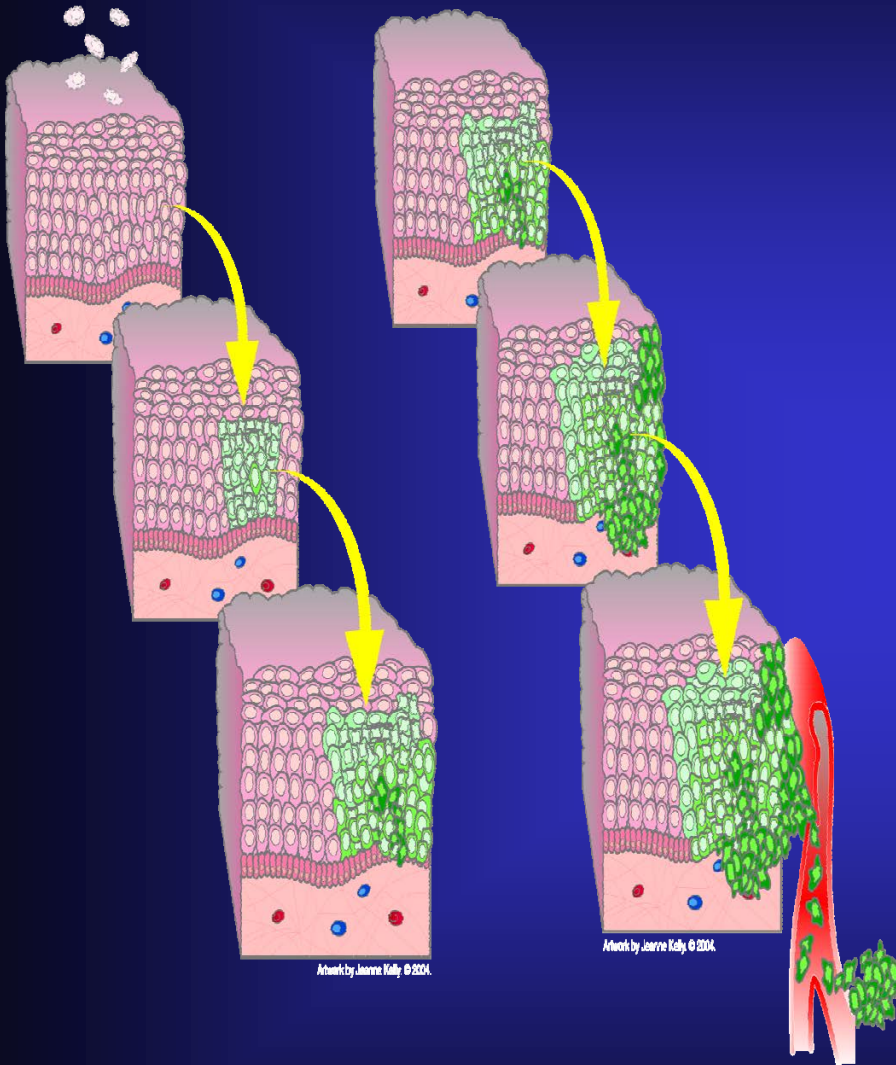


Artwork by Joanna Kelly. © 2004.

How are Normal and Cancer Cell Division Different?



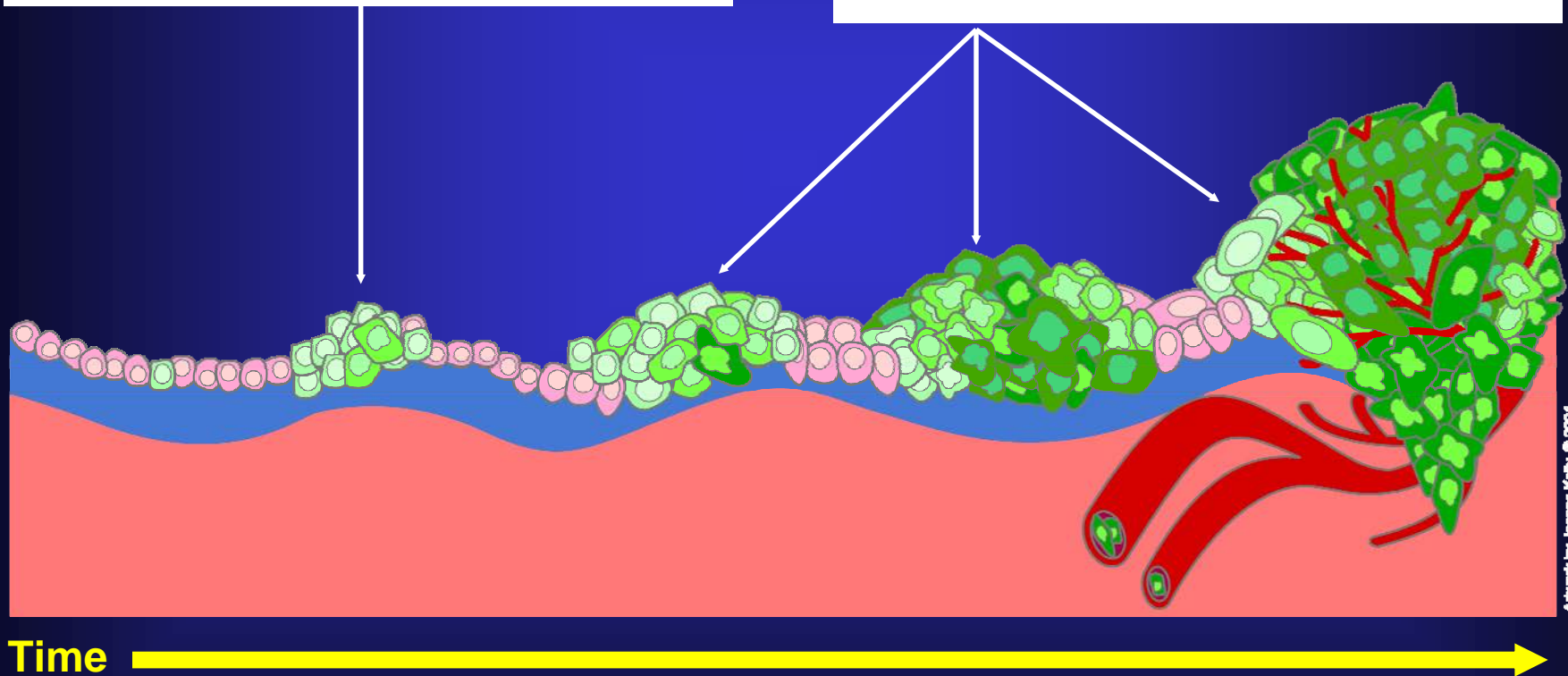
How are normal and cancer growth different?



What is the difference between a benign tumor and a malignant tumor?

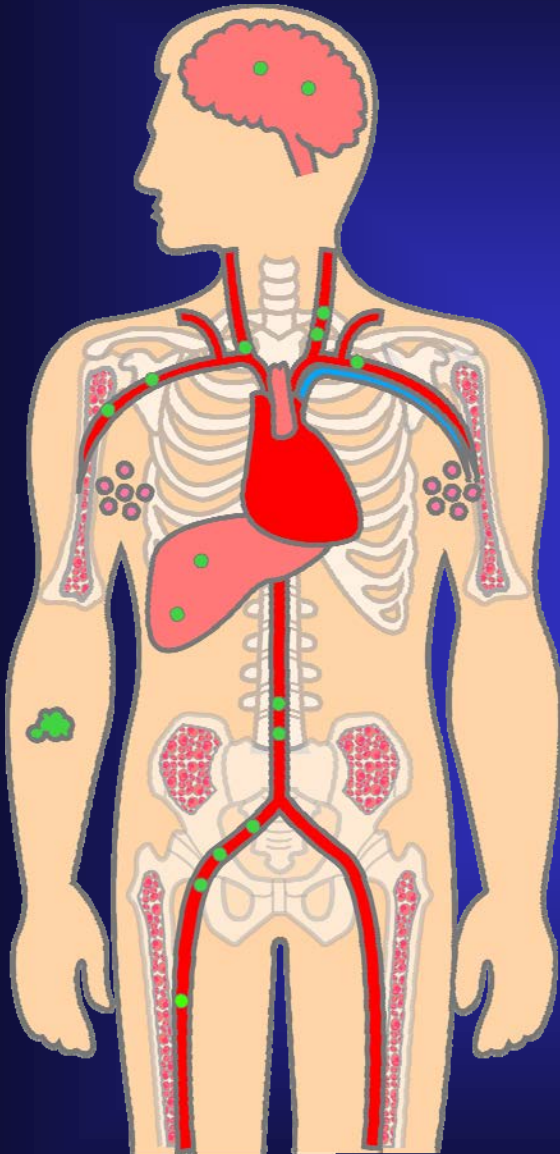
Benign

Malignant



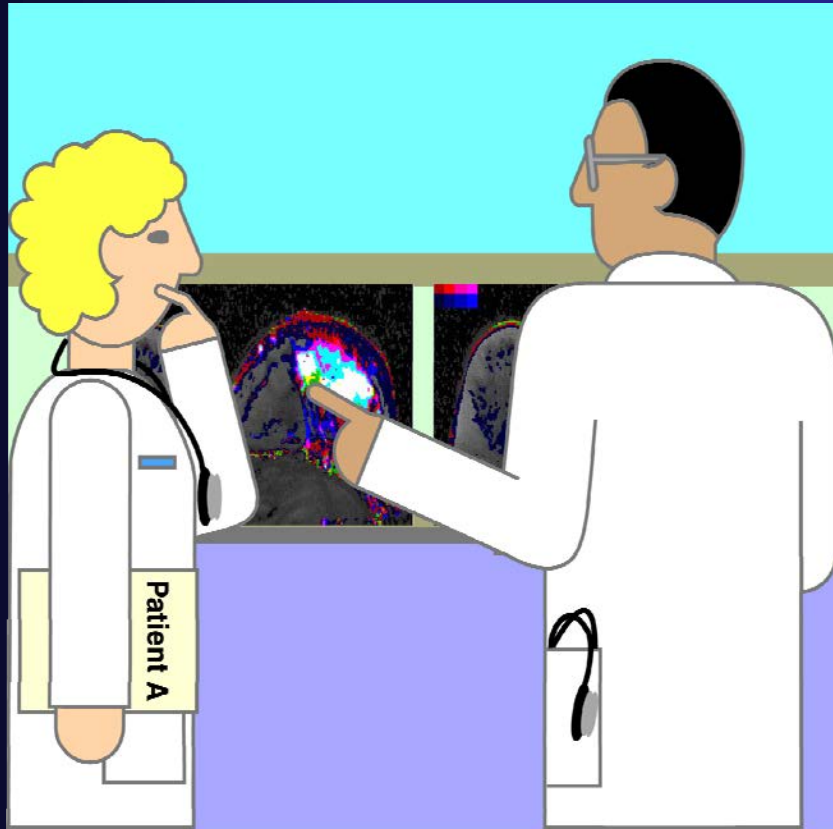
Adapted by Joanna Kelly, © 2004.

Why are malignant tumors dangerous?

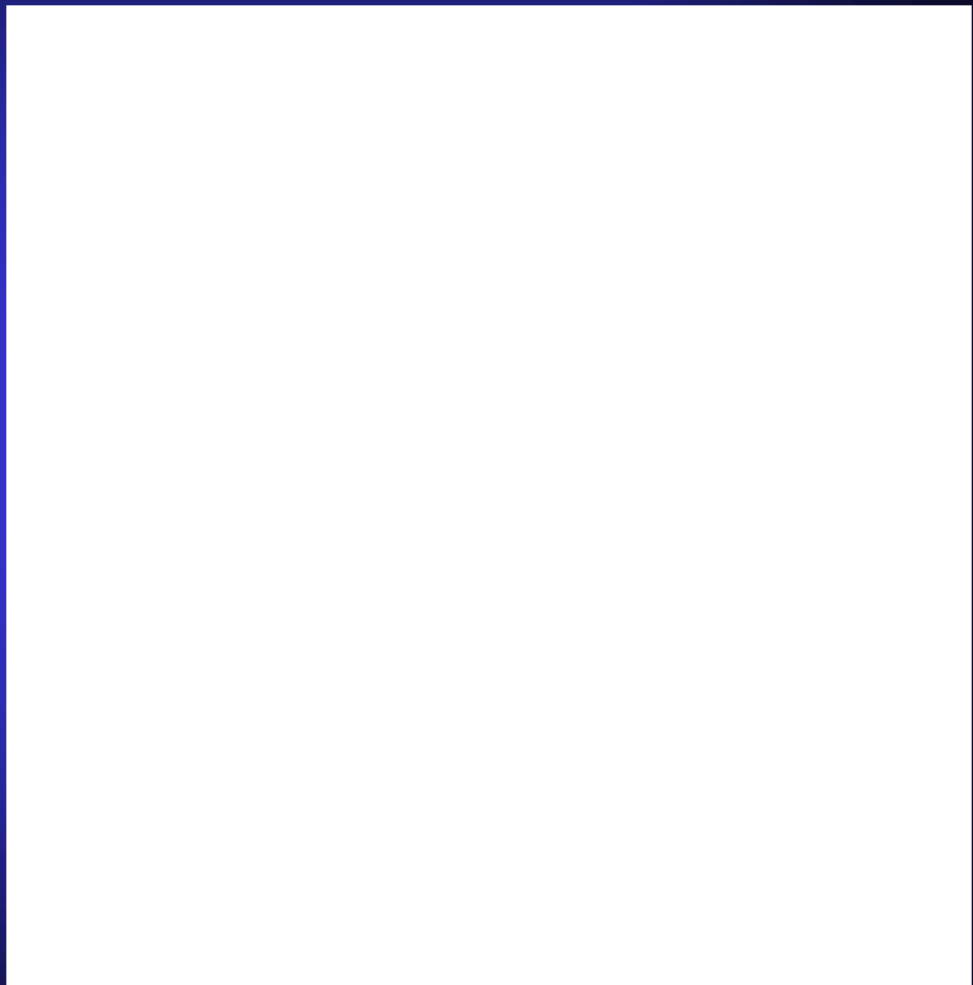


Artwork by Jeanne Kelly. © 2004.

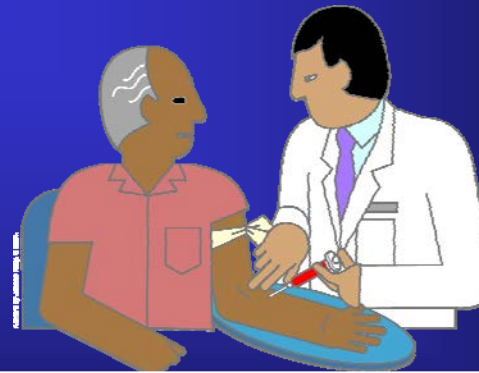
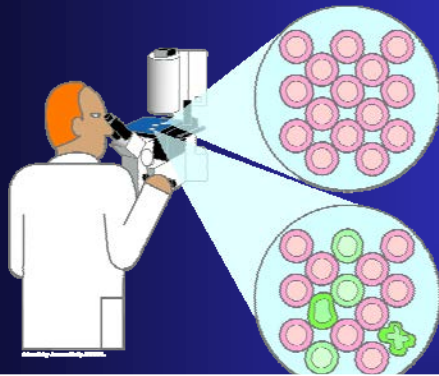
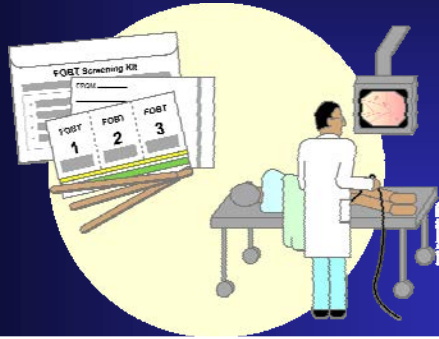
What is cancer screening?



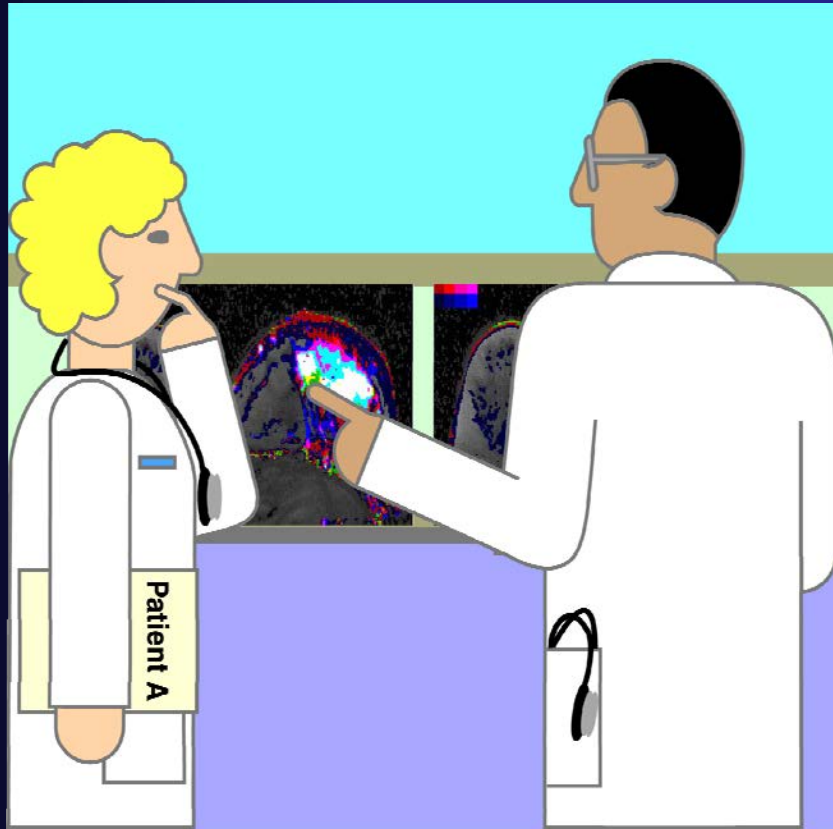
Why is cancer screening important?



What are some types of cancer screening?



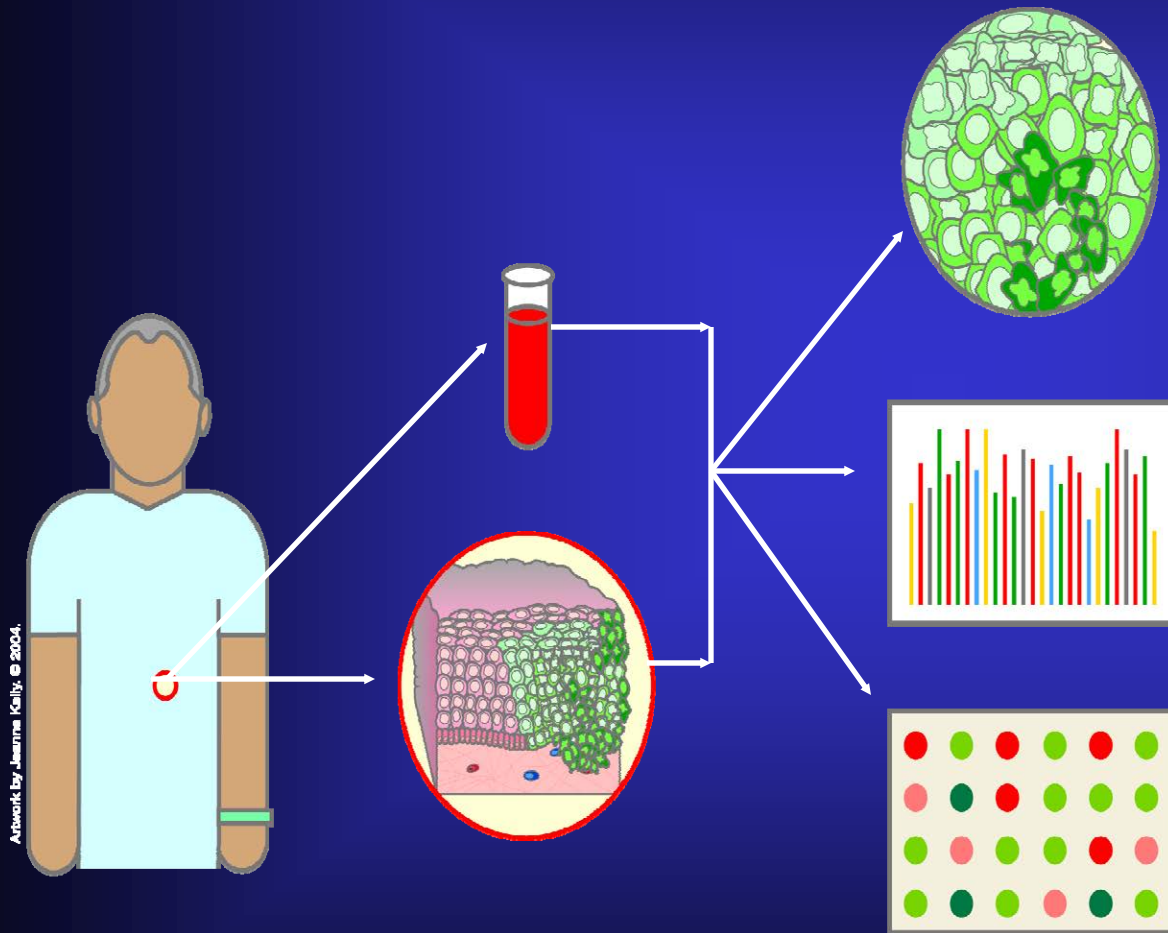
How is cancer diagnosed?



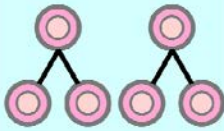










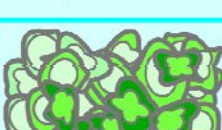
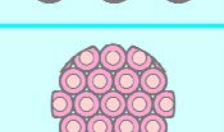
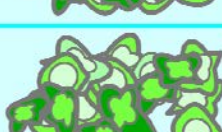
Adapted by Jerome Kelly, © EBCC.

What is a biopsy?

How is the biopsy analyzed?

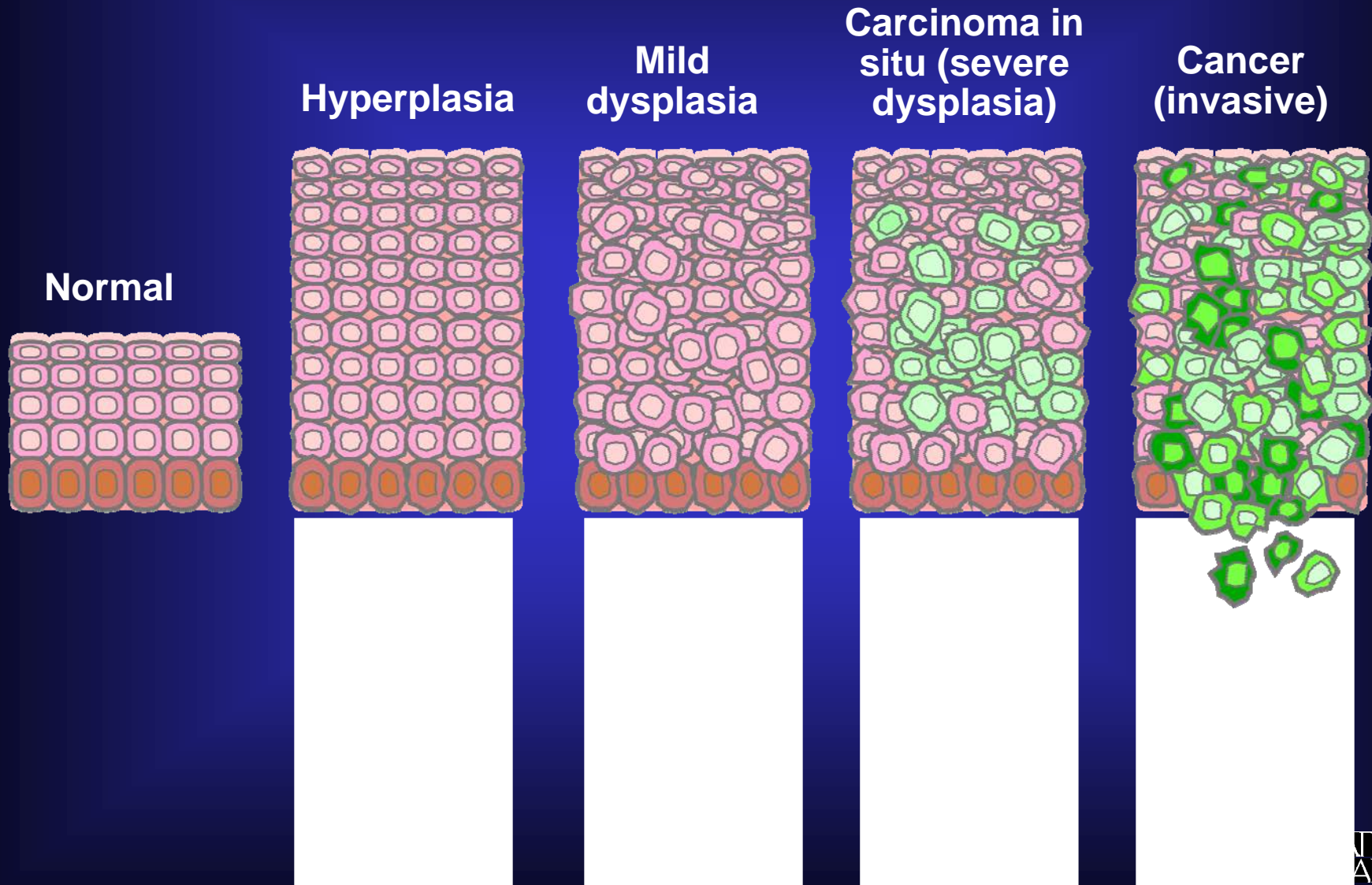


What does a pathologist look for examining biopsy tissue?

Normal	Cancer	
		
		
		
		
		
		
		

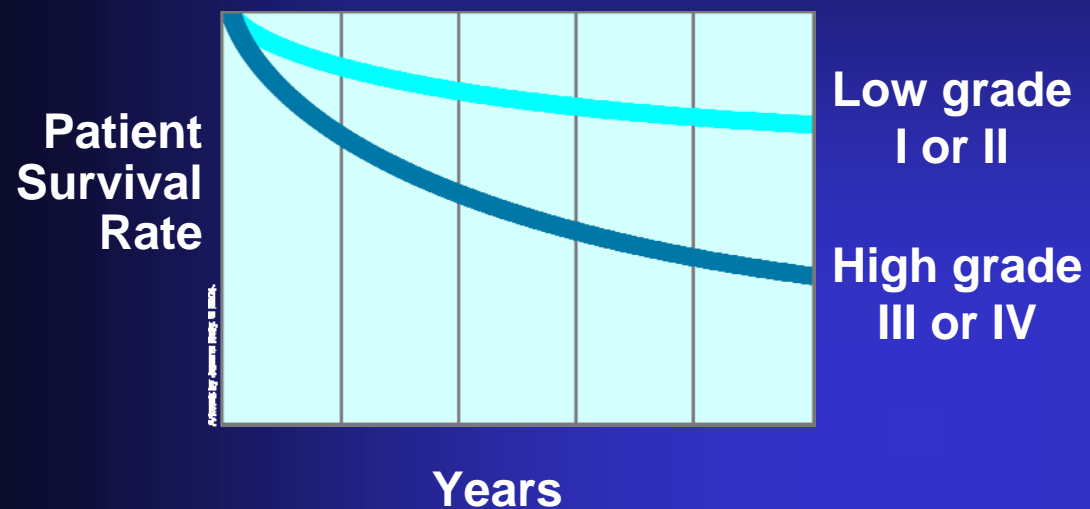
Artwork by Jeanne Kelly © 2004.

What does a pathologist look for when he examines biopsy tissue with a microscope?



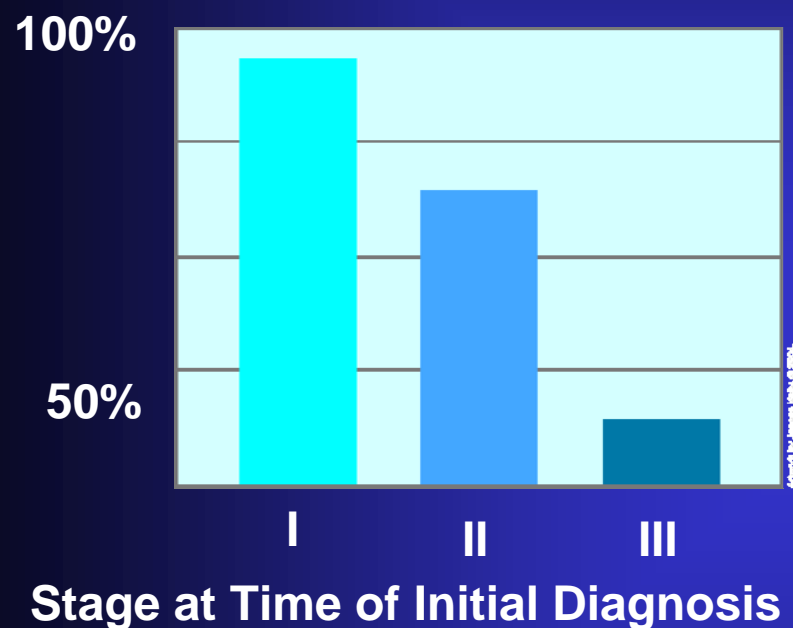
Artwork by Jeanne Kelly © 2004.

What is the relationship between tumor grade and patient prognosis?



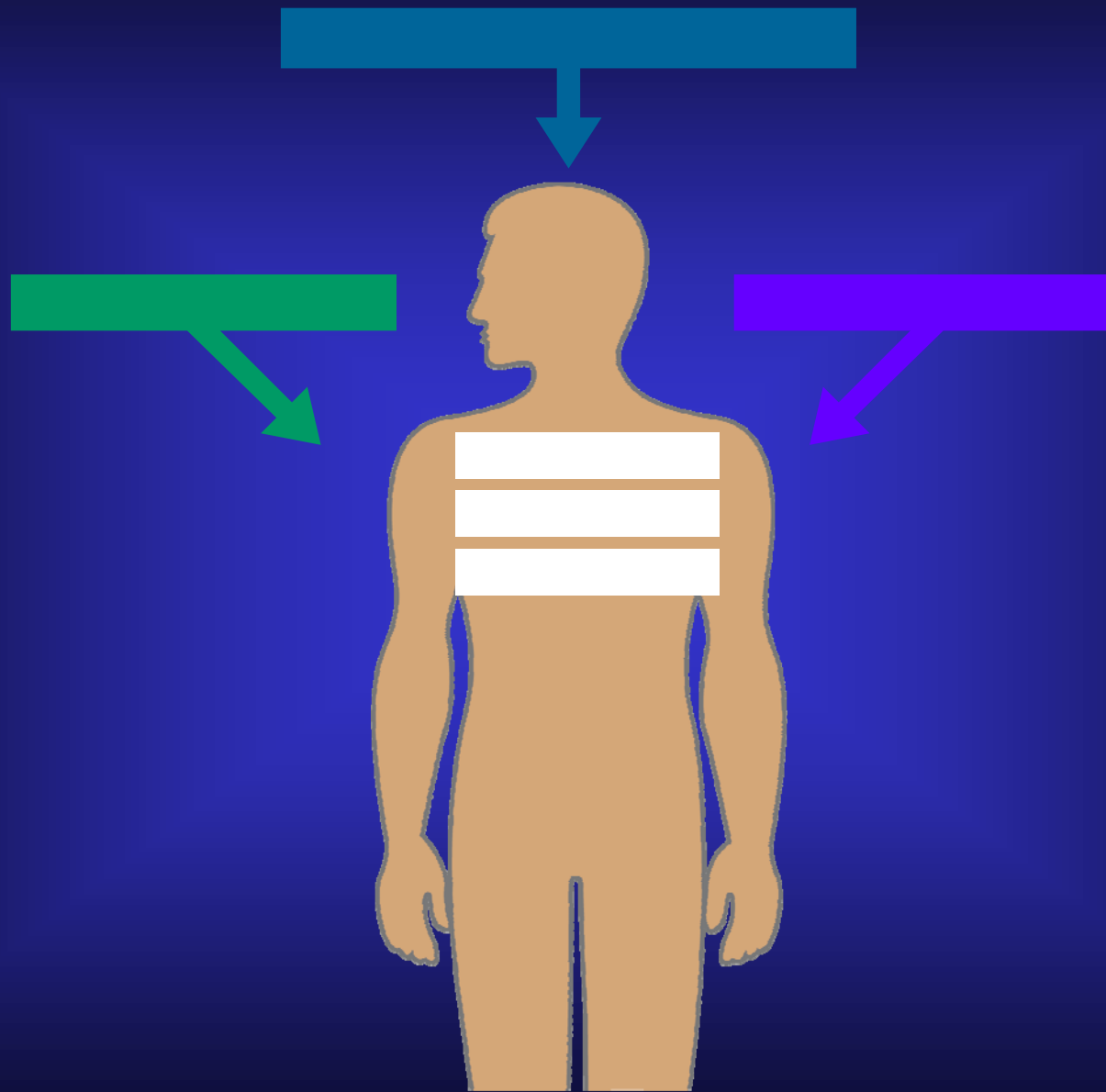
What does Stage III cancer mean?

Five-Year Survival Rates for Patients with Melanoma (by stage)



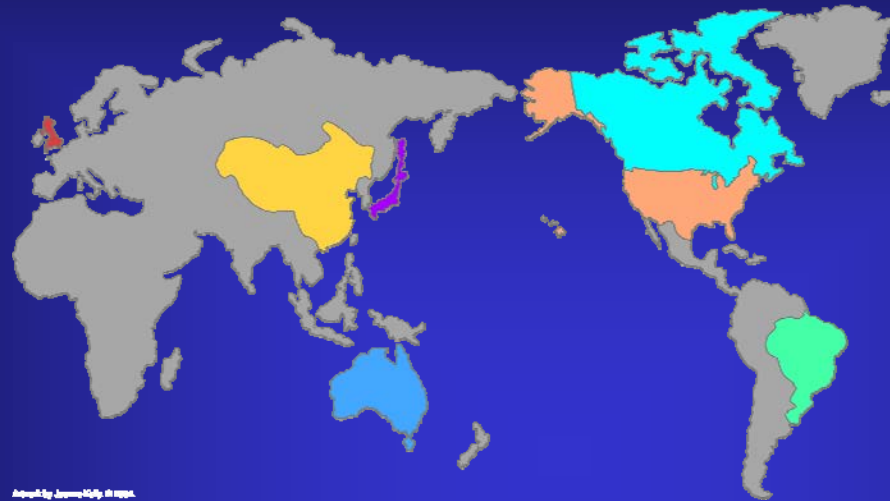
Stage III Cancer

What Causes Cancer?

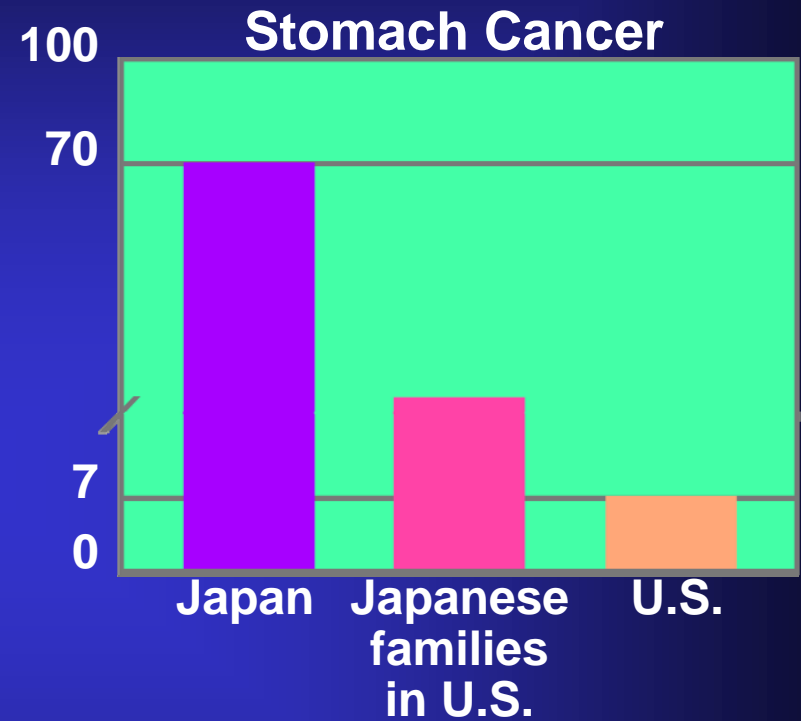
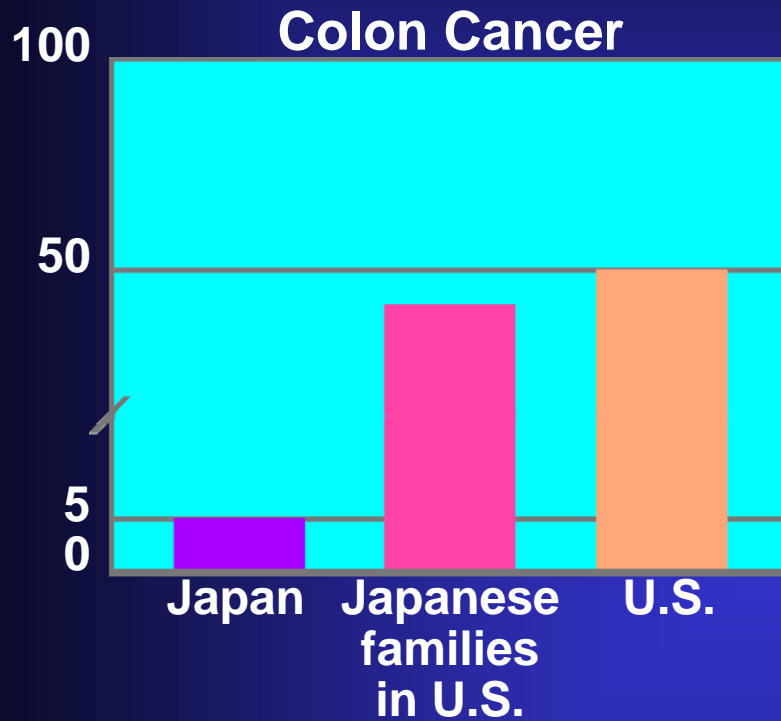


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How could you explain the differences in the cancer incidence in different countries?

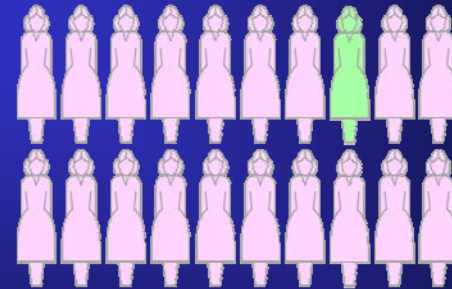
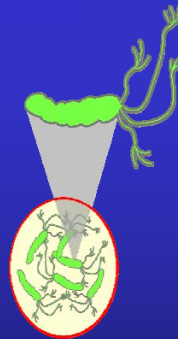
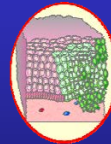
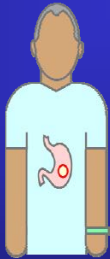
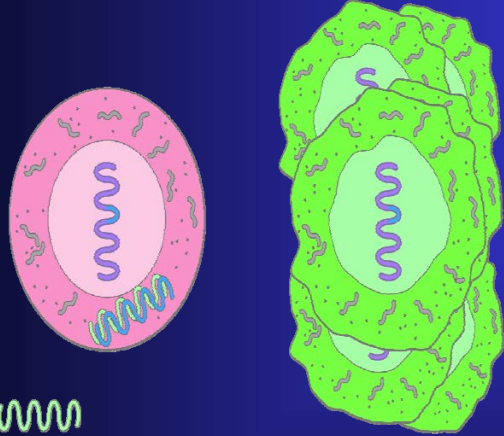
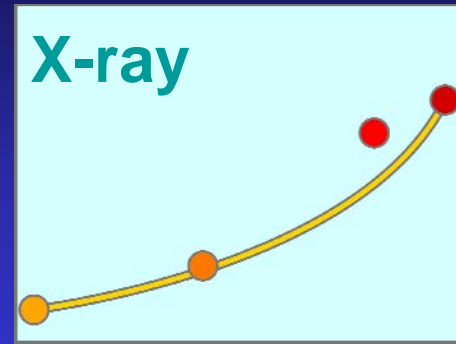
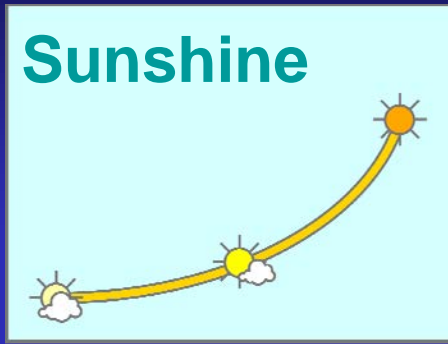


Is the incidence of these cancers due to genes, behavior, or environmental risk?



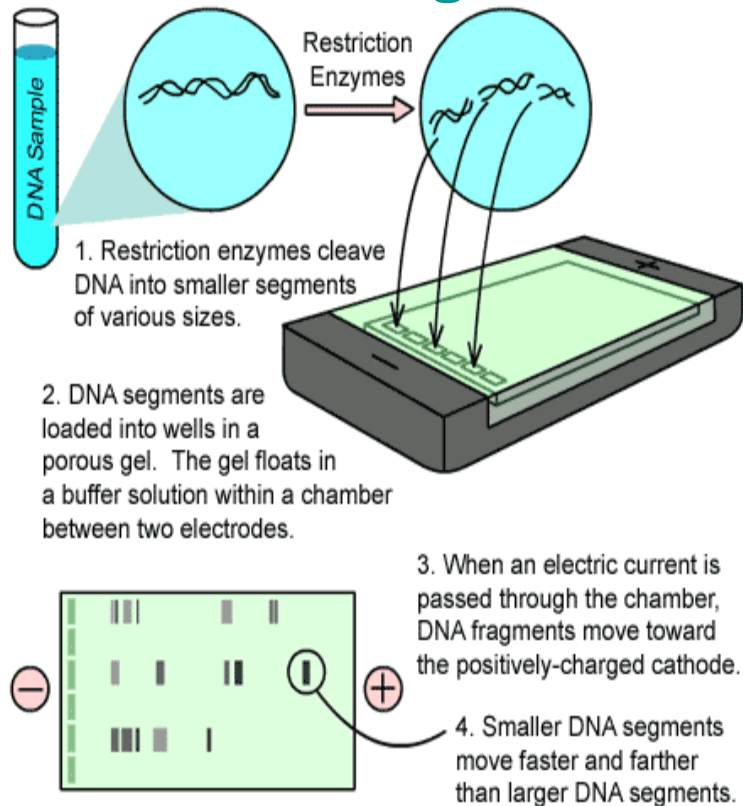
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What increases peoples' risk of cancer?

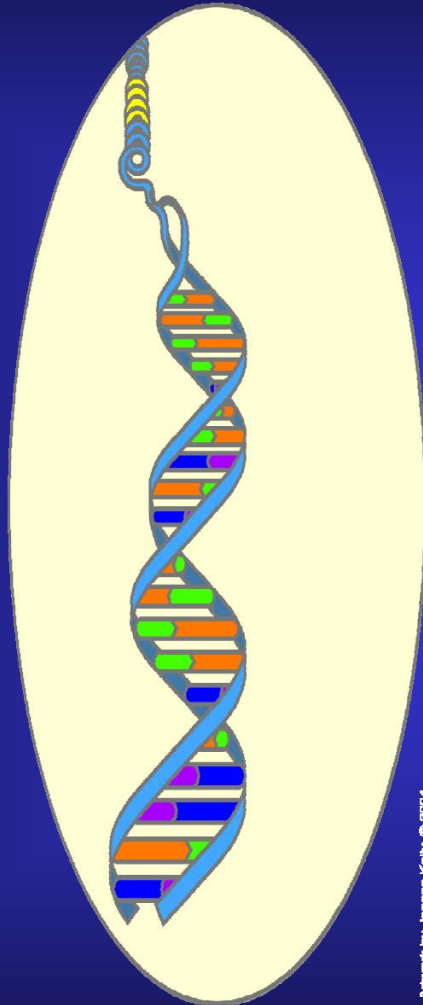
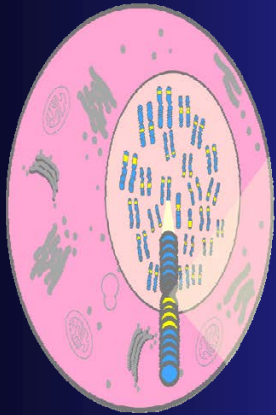


How do you know if you have genes that make getting cancer more likely?

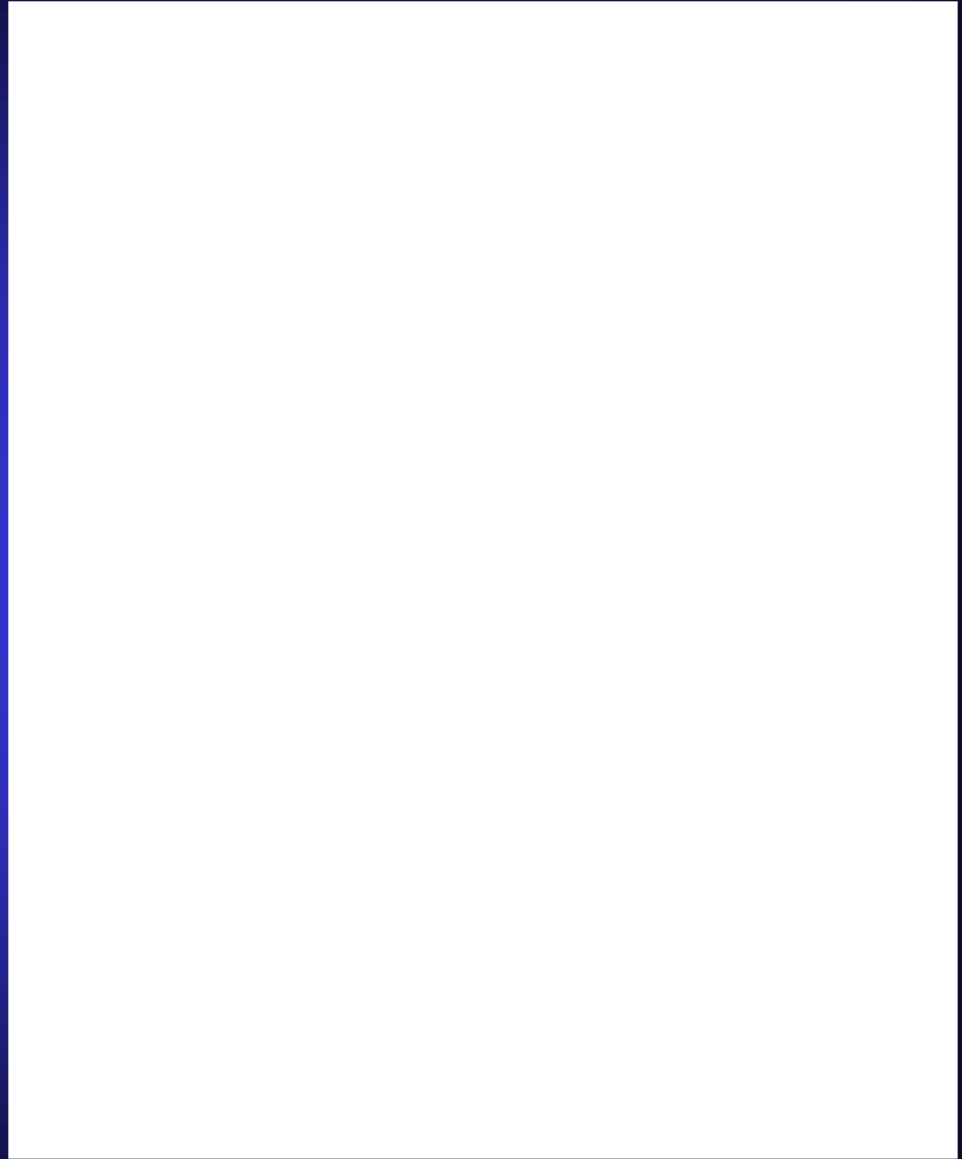
Genetic Testing



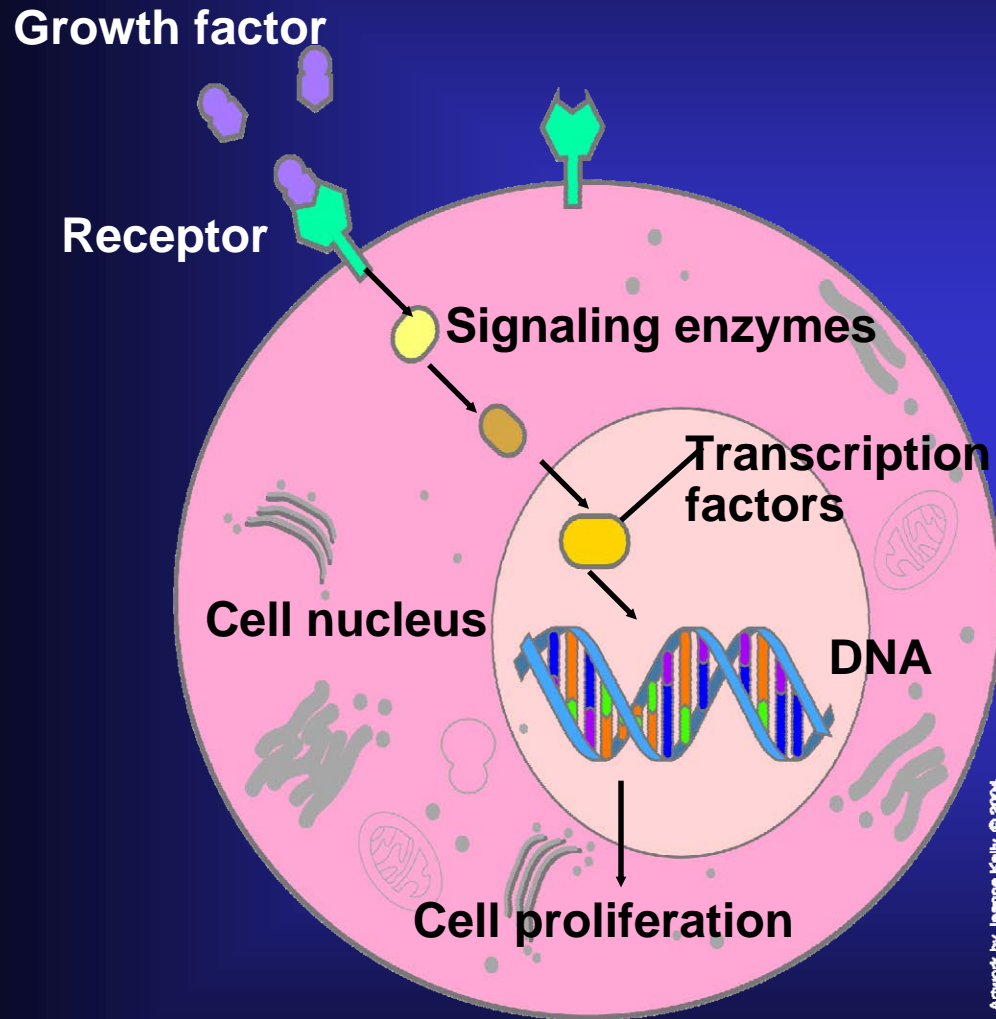
What happens to genes to cause cancer?



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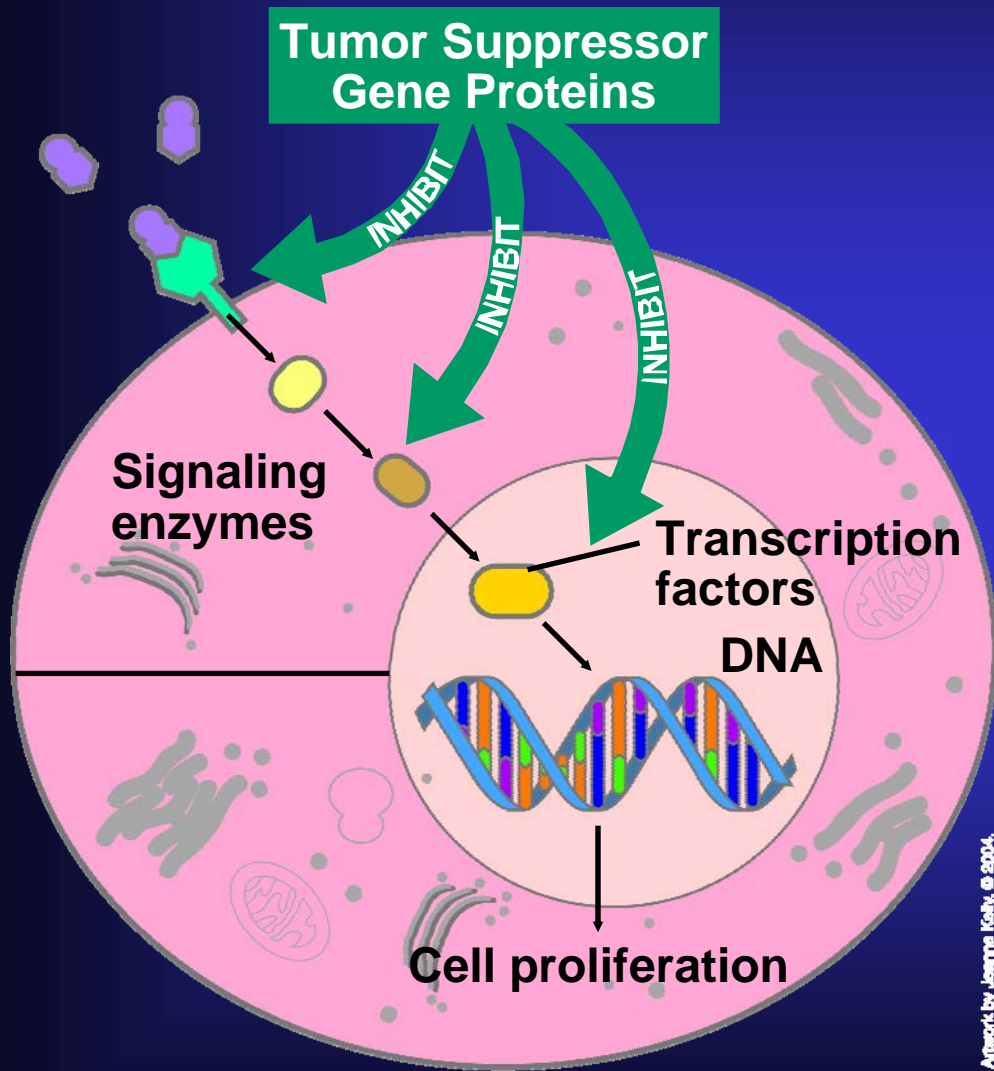


How do mutations in oncogenes lead to cancer?



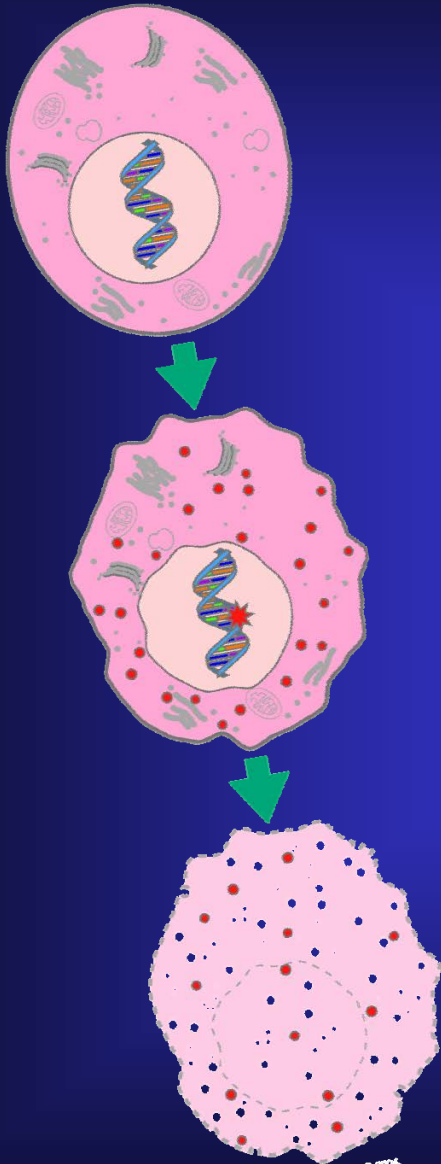
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How do mutations in tumor suppressor genes lead to cancer?



Artwork by Jeanna Kelly, © 2004.

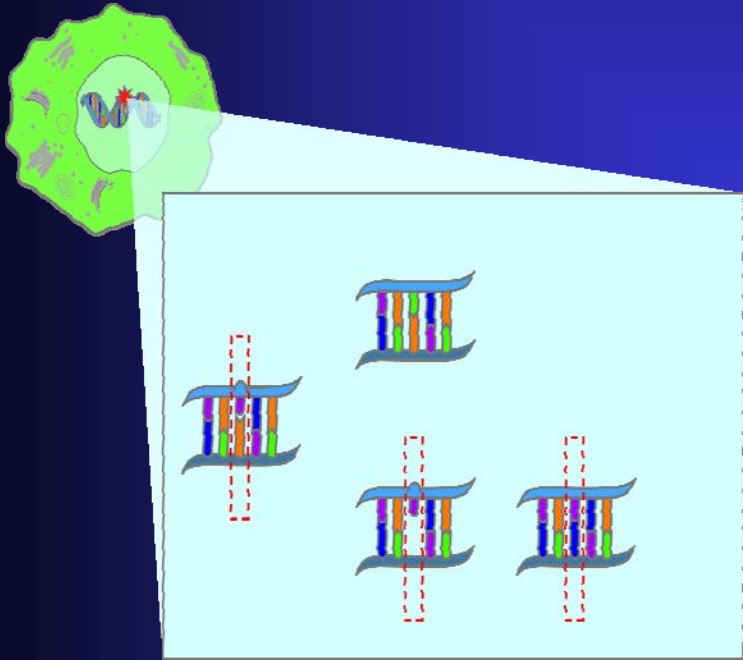
How do mutations in the p53 gene lead to cancer?



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How do mutations in DNA Repair Genes cause cancer?



What other kinds of mutations can lead to cancer?

Genes Implicated in Cancer

The prime suspects

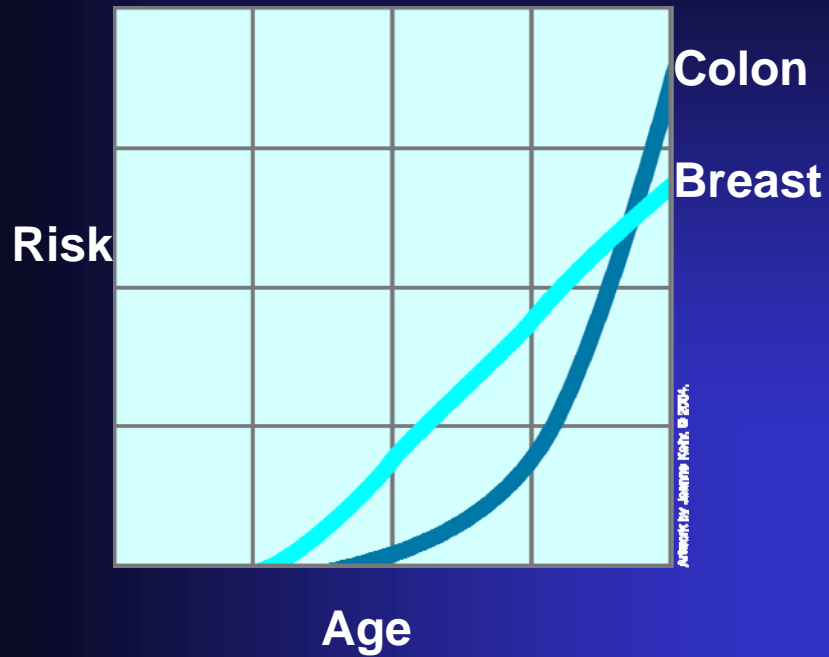
Mutations in:

- Oncogenes
- Tumor suppressor genes
- DNA repair genes

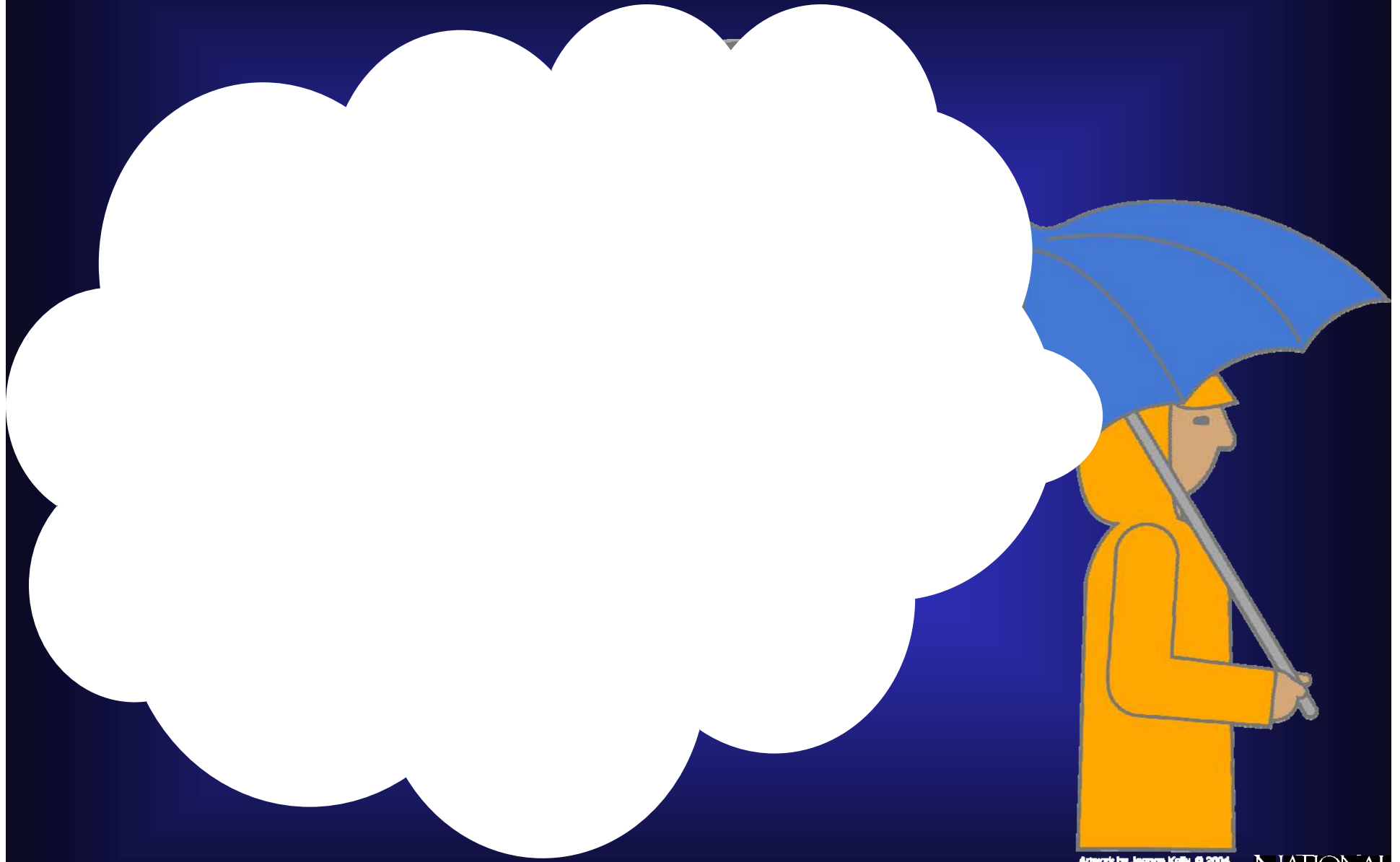
But

Other mutations also occur in:

Why does cancer risk increase with age?



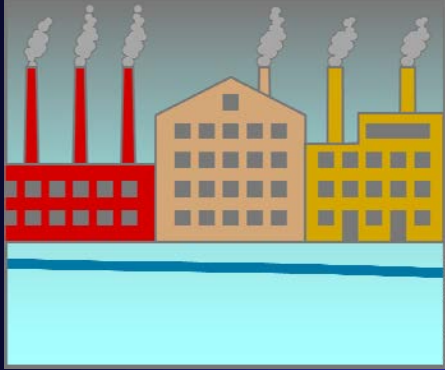
What can people do to prevent cancer?



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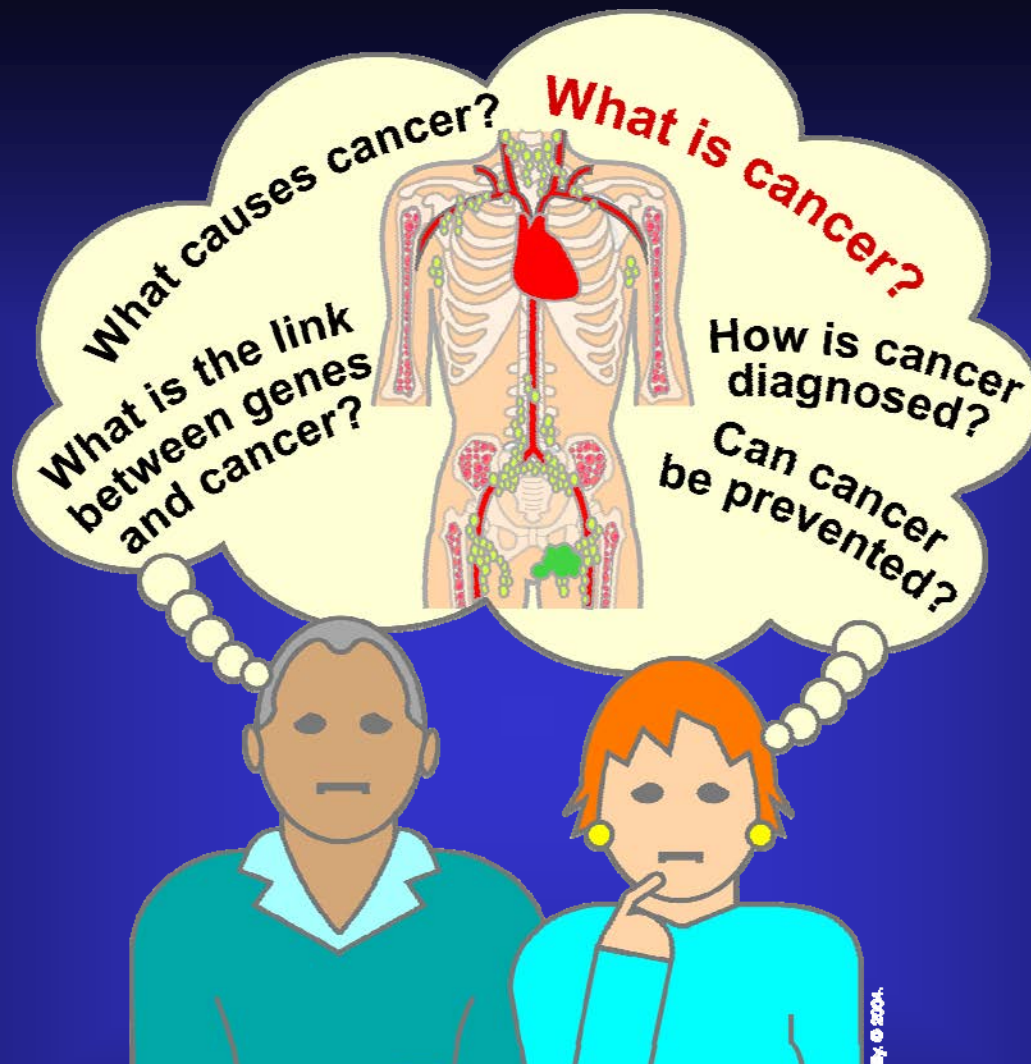
Does industrial pollution cause cancer?



Is There a Cancer "Epidemic"?



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How would you answer each of these questions?