

Cancer: Cell Division Going Wrong

**Expectations**

**B1.2** assess the importance to human health and/or society of medical imaging technologies

**B1.3** describe public health strategies related to systems biology

**B2.5** investigate the rate of cell division in cancerous and non-cancerous cells, using pictures, videos, or images

**Part A:** Read pages 48-55 in your text and answer the following questions in full sentences. Your mark will be reduced if you do not.

1. How is the behaviour of cancer cells different from that of normal cells?

2. A) Is cancer inherited, caused by environmental factors or both? Explain.

B) Can you catch cancer from a person who has cancer?

3. A) What is a carcinogen?

B) Name three known carcinogens. If you can link the carcinogen to the cancer for some, that is best.

4. a) Why might it be easy to overlook cancer in its early stages?

b) Briefly describe the cancer screening a woman should do.

c) Briefly describe the cancer screening a man should do.

d) Briefly describe the cancer screening anyone should do.

5. a) List 5 imaging techniques that can diagnose cancer.

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b) Briefly describe 2 of them.

6. Briefly describe the three main conventional methods of treating cancer.

Criteria	Level 1	Level 2	Level 3	Level 4
<b>K &amp; U</b> All questions must be attempted for best marks	Demonstrates <b>limited</b> understanding of cancer and cancer treatment	Demonstrates <b>some</b> understanding of cancer and cancer treatment	Demonstrates <b>considerable</b> understanding of cancer and cancer treatment	Demonstrates a <b>thorough</b> understanding of cancer and cancer treatment

7. Why might a doctor be concerned to find cancer cells in a patient's blood?

8. Identify at least three simple lifestyle changes that you can do to reduce your chance of developing cancer.

9. Why might there be a risk of cancer recurring, even when surgery is performed to remove a malignant tumour?

**Part B:** Using the Microviewers, review the Cancer Slides and answer the following questions.

1. What did you observe about the organization of the normal cells compared to the cancer cells?

2. Describe any differences between the size and shape of the two types of cells.

Criteria	Level 1	Level 2	Level 3	Level 4
<b>Application</b> All questions must be attempted for best marks.	Demonstrates <b>limited</b> understanding of how cancer cells behave <u>and</u> affect us.	Demonstrates <b>some</b> understanding how cancer cells behave <u>and</u> affect us.	Demonstrates <b>considerable</b> understanding of how cancer cells behave <u>and</u> affect us	Demonstrates a <b>thorough</b> understanding of how cancer cells behave <u>and</u> affect us