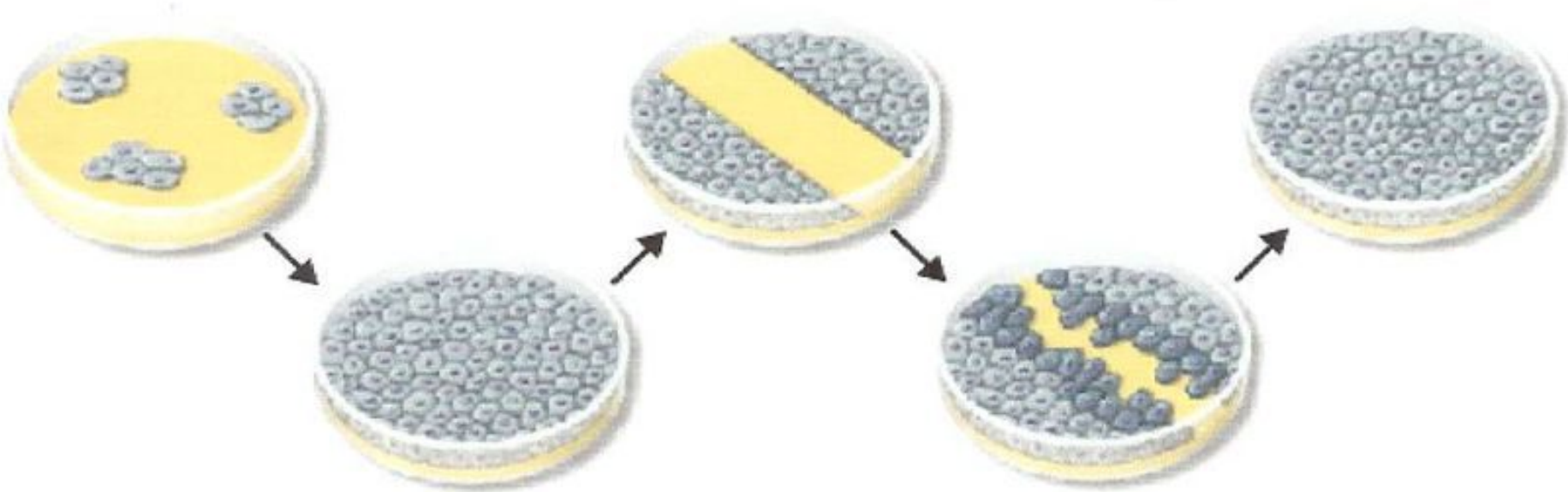
10.3 Controls on Cell Division



Cyclin: a protein which regulates the timing of cell growth

The health of an organism depends on cells not exceeding their lifespan.

What happens when a cell loses the ability to control its growth?

Cancer: a disorder in which the body's own cells lose the ability to control growth creating tumors.

Life Spans of Various Human Cells

Cell Type	Life Span	Cell Division
Lining of esophagus	2–3 days	Can divide
Lining of small intestine	1–2 days	Can divide
Lining of large intestine	6 days	Can divide
Red blood cells	Less than 120 days	Cannot divide
White blood cells	10 hours to decades	Many do not divide
Smooth muscle	Long-lived	Can divide
Cardiac (heart) muscle	Long-lived	Cannot divide
Skeletal muscle	Long-lived	Cannot divide
Neuron (nerve cell)	Long-lived	Most do not divide

What is Cancer?