

# The cell cycle and cancer

[Science](#), [Biology](#)



The cell cycle and cancer Cell cycle is the process by which cells divide or replicate leading to maturity of cells and organs and renewal of worn out cells. This paper seeks to discuss the cell cycle and cancer cell to identify the phase at which, in case of lost control, cancer cells grow. The paper also identifies difference between cancer cell cycle and normal cell cycle.

The cell cycle is organized into distinct phases in which specific activities occurs towards cell division or replication. The first phase, called the G<sub>0</sub>, is an inert phase that follows a previous cell cycle. G<sub>1</sub> phase, where synthesis of “ RNA, protein, and organelle” takes place is the second phase that precedes the S phase (Dudek, 2006, p. 123). At the S phase, DNA molecules synthesizes before “ ATP synthesis” at the G<sub>2</sub> phase (Dudek, 2006, p. 123). The last phase of the cell cycle is the M phase. It is the stage at which cells divide and consists of a number of stages, “ prophase, prometaphase, metaphase, anaphase, telophase, and cytokinesis” (Dudek, 2006, p. 123). A change in regulation in the cell cycle, leading to cancer, is therefore most likely to occur at the M phase of the cell cycle. This is because cancer cells results from uncontrollable cell division, yet cell division at the M phase (Hacker, Messer and Benchmann, 2009).

There exist a number of differences between normal cell cycle and cancer cell cycle. Normal cell cycle is for example regulated by cell environmental factors while cancer cell cycle is independent. Unlike cancer cell cycle, normal cell cycle is limited to available space. The normal cells also die, unlike cancer cells (Annenberg Foundation, n. d.).

## References

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