

College of Medicine

Department of Medical Education

Curriculum Development Unit

Template for a lecture summary

Year 1

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| Title of the lecture: Lectures Three & Four: Etiology of Tumors and Carcinogenesis. |

Lecturer’s name : Prof. Ammar Al-Rikabi and Dr. Amany Fathaddin

Department : Pathology

Block / week : Foundation block/week 11

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Objectives of the lecture:

(Please write the objectives in 5-6 bullet points. Use action verbs such as (interpret, analyze, correlate, compare, identify, explain, justify views etc).

* Understand that incidence of cancer varies with age, race, geographic and genetic factor.
* Explain the categories of genetic predisposition to cancer.
* Identify the precancerous conditions.
* Know the concept of chemical, radiation and microbioloical carcinogenesis.
* Know that carcinogenesis is a multistep process resulting from accumulation of multiple genetic alteration.
* Understand the different mechanisms by which cancer associated genes disturb the normal cell Physiology.

Background:

(3-4 lines a summarizing of the background, prior knowledge and how the lecture builds on what the student already know).

* In the previous lecture, the student learned about the properties of benign and malignant tumors. In this lecture, they will learn about the different factors involved in the pathogenesis of cancer and the different carcinogenic agents. They will learn the different genetic alteration that involved in carcinogenesis.

Main concepts in the lecture:

(Summarize the key points in the lecture of their learning issues)

The incidence of cancer varies with age, race, geographic factors and genetic background. Most cancers are sporadic but some are familial. Predisposition to hereditary cancers may be autosomal dominant or autosomal recessive. Some acquired disease (preneoplastic disorders) are known to be associated with an increased risk of cancer.

Three classes of carcinogenic agents have been identified:

1. Chemicals.
2. Radiation therapy.
3. Microbial agents.

They produce multiple genetic abnormalities. Tumor cells may acquire mutation through several means. Carcinogenesis is a multistep process resulting from accumulation of multiple genetic alterations. Cancer associated genes disturb the normal cell physiology by different mechanisms.

Conclusion:

(3-4 lines summary of the important point)

By the end of this lecture, the students should know the different factors affecting the incidence of cancer, the precancerous disorders and the classes of carcinogenic agents. Students should know that carcinogenesis is a multistep process and genetic damage lies at the heart of it.

Take home messages:

(Please write 4-5 bullet point about key needed points that the learning need to focus on).

* Incidence of cancer is influenced by different factors.
* Most cancers are sporadic but some are familial.
* Chemicals, radiation energy and microbiological agents can produce genetic abnormalities characteristic of neoplastic cells.
* Carcinogenesis is a multistep process, mutation lies at the heart of it.

Further reading:

(2-3 reference for recommended textbooks in the course. Please write down the page number and chapter of the books).

Robbins Basic Pathology, 9th edition, chapter 5 page (169-204).