

**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[DM 0124]**

**JANUARY 2024**

**Sub. Code :1301**

**D.M. – MEDICAL ONCOLOGY**

**PAPER I – BASIC SCIENCES**

**(RADIATION PHYSICS TUMOUR BIOLOGY, BIOCHEMISTRY,  
BIOMETRY IMMUNOLOGY & PHARMACOLOGY)**

***Q.P. Code: 161301***

**Time: Three Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 15 = 30)**

1. Describe in detail about the various phases of clinical trials, its designs and uses.
2. Describe various Molecular diagnostic methods in cancer and discuss in detail about various types of NGS (Next Generation Sequencing) testing platforms and its uses.

**II. Write notes on:**

**(10 x 7 = 70)**

1. Describe the various sampling methods in clinical trials.
2. Geriatric risk assessment scores for cancer chemotherapy.
3. Hospital based Cancer registries in India
4. HPV in pathogenesis of cervical cancer and HPV vaccines.
5. Describe alpha error, beta error, p value and power in statistics.
6. Various designs used in Phase II Clinical trials.
7. Knudson's two hit hypothesis.
8. Real time Quantitative Polymerase chain reaction methods and its applications in Oncology.
9. COTPA Act 2003 (Cigarettes and Other Tobacco Products Act).
10. Inflammation and Cancer.

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