



Chemotherapy:

**General principles of
chemotherapy**



CHEMOTHERAPY:

- The use of drug (chemical entity/substance derived from micro-organism) with selective toxicity against infections/ viruses, bacteria, protozoa , fungi and helminths is called as chemotherapy
- **ANTIBIOTICS:** Antibiotics are substances produced by micro-organism which selectively suppress the growth of or kill other micro-organism at very low concentration
- **Antimicrobials (chemotherapeutic agent + antibiotics) :** any substance of natural, synthetic or semisynthetic origin which at low concentration kill or inhibits the growth of micro-organism but causes little or no effect on host

Basic principle of chemotherapy:

- **Diagnosis:** *site of infection, responsible organism*
- **Selection of drug:** *specificity (spectrum of activity, microbial activity of drug) , pharmacokinetic factors (physiochemical properties of the drug), patient related factors, (allergy, renal disease)*
- **Frequency and duration of drug administration:** *inadequate dose may develop resistance, intermediate dose may not cure infection*
- **Continue therapy :** *acute infection treated for 5 -10 days, but some bacterial infection typhoid fever, Tb therapy have been continued in order to avoid relapse*
- **Test for cure:** *after therapy , symptoms & sign may disappear before eradication of pathogens*
- **Prophylactic chemotherapy :** *to avoid surgical site infections*

CLASSIFICATION:

- **A. Chemical structure**
- **B. Mechanism of action**
- **C. Type of organisms against which primarily active**
- **D. Spectrum of activity**
- **E. Type of action**
- **F. Antibiotics are obtained from:**



A. Chemical structure

