

# Classification of antineoplastic Agents

<u>S.No.</u>	<u>Class</u>	<u>Drugs</u>
1	<u>Alkylating Agents</u>	
(a)	Mustards	Mechlorethamine, Mephalan, Cyclophosphamide and chlorambucil.
(b)	Methanesulphonates	Busulfan
(c)	Ethylenimines	Triethylenemelamine, Triethylenethio Phosphoramide (Thiotepa)
(d)	Nitrosoureas	Carbimustine and Lomustine
(e)	Triazines	Procarbazine, dacarbazine, temozolomide
2.	<u>Antimetabolites</u>	
(a)	Antifolic acid compounds	Methotrexate, pemetrexed
(b)	Analogues of Purines	Mercaptopurine, Azathiopurine, pentostatin, cladribine
(c)	Analogues of pyrimidines	Fluorouracil and Cytarabine.
(d)	Amino acid antagonists	Azaserine
3.	<u>Antibiotics</u>	Dactinomycin, Daunorubicin, Doxorubicin, Bleomycin.
4.	<u>Plant products</u>	
(a)	Imides and Amides	Colchicine, Narciclerin
(b)	Tertiary Amines	Vinblastine, Vincristine, Cryptolepine, Thalidomine, Thalidasine.
(c)	Heterocyclic Amines	Camptothecin, Hydroxycamptothecin and Methoxycamptothecin
(d)	Lactones	Podophyllotoxin and deoxypodophyllotoxin
(e)	Glycosides	Mithramycin (Aureolic acid) and $\beta$ -Solanamine
(f)	Enzymes	L-asparaginase
5.	<u>Hormones</u>	
(a)	Corticosteroids	Prednisolone, prednisone.
(b)	Anti-estrogens	SERMs (tamoxifen, toremifene) aromatase inhibitors (amaglutethimide; formestane, exemestane, anastrozole, vorozole, letrozole).
(c)	Progestins	Medroxyprogesterone acetate
(d)	Estrogens	Diethylstilbestrol, ethinyl estradiol
(e)	Androgens.	Testosterone

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(F)	Antiandrogens	Flutamide
(g)	GnRH analogs:	Leuprolide, goserelin, nafarelin, bus urelin, histerelein.
(h)	GnRH analogs antagonist:	Cetorelix, ganirelix, abarelix
6.	<u>Immunotherapy</u>	Interferon Alfa
7.	<u>Platinum Compounds</u>	Cisplatin, carboplatin, oxaliplatin.
8.	<u>Miscellaneous Agents</u>	
(a)	Biological response modifiers	Recombinant IL-2 (aldesleukin), GM-CSF (sargramostim), G-CSF (filgrastim), monoclonal antibodies (rituximab, trastuzumab etc)
(b)	Substituted urea	Hydroxyurea
(c)	Adrenal cortex suppressant	Mitotane
(d)	Tyrosine kinase inhibitors:	Imatinib, gefitinib, erlotinib.
(e)	Retinoids;	Isotretinoin
(F)	Arsenic Compounds:	As <sub>2</sub> O <sub>3</sub>
(g)	Adenosine deaminase inhibitor	Pentostatin