PHARMACOLOGY WEEKLY
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anti-NEO PLASTIC man

Common Toxicities with Traditional Chemotherapeutic Medications

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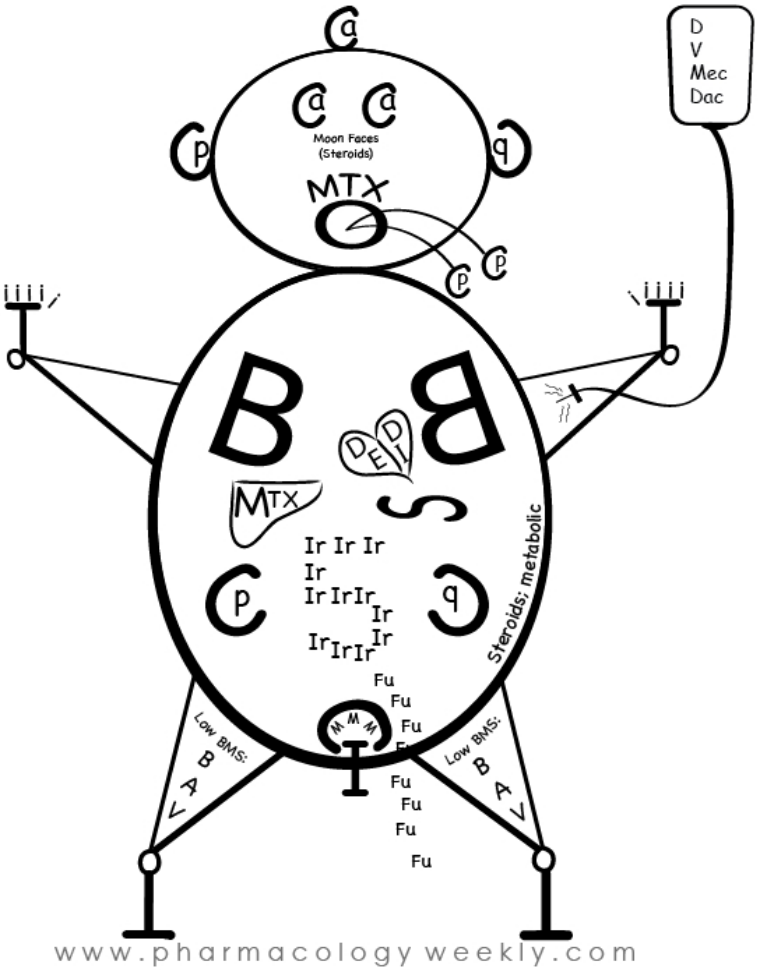

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Legend for anti-NEO PLASTIC man

Common Toxicities with Traditional Chemotherapeutic Medications

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	Body Part	Drug Names Represented	Toxicity Reflected
5-FU	Intestines (in shape of "5")	5-FU; fluorouracil (Adrucil)	GI & diarrhea (note the FU is leaving the bowel to note diarrhea)
A	Bone Marrow	Asparaginase (Elspar)	Low risk for BMS
B	Lungs	Bleomycin (Blenoxane) Busulfan (Busulfex)	Pulmonary fibrosis; SOB; hyperpigmentation of skin
C	Bladder	Cyclophosphamide (Cytoxan)	Metabolized to acrolein causes hemorrhagic cystitis at doses > 1g/m^2; give mesna with cyclophosphamide doses of >1g/m^2
Ca	Eyes Head (CNS)	Cytarabine (ara-C)	Keratitis, conjunctivitis; severe CNS toxicity in doses >1g/m^2
Cp	Ears (hearing)/CNS Mouth (coming out) Kidneys	Cisplatin (Platinol)	Ototoxicity & CNS toxicity; Acute & delayed emesis; Nephrotoxicity (less with carbo; give fluids or amifostine)
D D E I	Heart IV Bag	Daunorubicin (Cerubidine) Doxorubicin (Adriamycin) Epirubicin (Ellence) Idarubicin (Idamycin)	Cardiac toxicity if cumulative doses >400 mg/m^2 for daun/dox but less for idarubicin and more for epirubicin; extravasation risk; "D" can also be reminder to consider dexrazoxane to prevent cardiac toxicity or treat extravasation
Dac	IV Bag	Dactinomycin (Cosmegen)	Extravasation risk
FU	Intestines (part of intestines)	5-FU; fluorouracil (Adrucil)	GI & diarrhea (note the FU is leaving the bowel to note diarrhea)
i	Fingers (extremities)	Ixabepilone (Ixempra)	Peripheral neuropathy
I	Urethra (bladder)	Ifosfamide (Ifex)	Metabolized to acrolein causes hemorrhagic cystitis; give mesna
Ir	Intestines	Irinotecan (Camptosar; CPT11)	Severe acute & delayed diarrhea
M	Coating Inside of the Bladder	Mesna (Mesnex)	Used to treat cyclophosphamide & ifosfamide hemorrhagic cystitis
Mtx	Mustache (mouth) Liver	Methotrexate	Mucositis; liver toxicity/fibrosis; leucovorin can be used for toxicity
Mec	IV Bag	Mechlorethamine (Mustargen)	Extravasation risk
O	Mouth Elbows & Knees (joints)	Oxaliplatin (Eloxatin)	Oral pharyngeal paraesthesia; Peripheral neuropathy; avoid exposure to cold stimulus to avoid exacerbation
S	Pancreas	Streptozocin (Zanosar) Steroids	Streptozocin: insulin dependent diabetes; historically used to treat pancreatic cancer Steroids: ↑ glucose
T	Hands & Feet (extremities)	Taxanes: Docetaxel (Taxotere) Paclitaxel (Taxol) Thalidomide (Thalomid)	Peripheral neuropathy (mainly paclitaxel); edema/fluid retention (mainly with docetaxel); Thalidomide: teratogenicity (dysmelia); neuropathy
V	Arms & Legs (extremities) Bone Marrow IV Bag	Vinca Alkaloids: Vinblastine (Velban) Vincristine (Oncovin) Vinorelbine (Navelbine)	Peripheral neuropathy (vincristine >> vinblastine); extravasation risk; Vincristine less BMS

Notes:

- IV Bag: reflects those chemotherapeutic drugs that do not require bioactivation and can cause extravasation if IV infiltrates tissue. Consider treatment with dexrazoxane (Totect) or dimethyl sulfoxide (DMSO).
- Steroids: can cause moon faces if used chronically and in steroids with more mineralocorticoid activity such as prednisone; least likely to occur with dexamethasone.
- All or most chemotherapeutic drugs cause bone marrow suppression (BMS) but bleomycin, asparaginase and vincristine are the least likely.

This is not an exhaustive list of all chemotherapeutic agents. This represents many of their side effects and/or toxicities. It is important to recognize that many chemotherapeutic agents can cause several of these side effects, but some will do it more than others.

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