**Immunologic agents** (p)

**Active immunity agents:** vaccines, toxoids: exposure to infectious organism, body fights it off and creates immunity. Can be natural or artificial

**Artificially:** killed (attenuated) or weakened antigen formation (flu), require periodic booster injections (children’s vaccine schedule) add additional dose to boost immunity

**Adverse effects vaccines and toxoids**
- Chills, fever
- Muscular aches and pains
- Rashes
- Hypersensitivity

**Contraindications**
- Currently sick with a fever
- Leukemia/lymphoma
- Immunosuppressive illness/drug therapy
- Non-localized cancer/metastasised cancer

**Interactions**
- Salicylate: increased risk for rye syndrome

**Passive immunity agents:** immune globulins, antivenins, administration, breast feeding or blood crossing the placenta, injection of ready made antibodies found in serum of individuals or animals (IVIG) (post transplant, chemo)
- Immediate immunity and short acting

**Cell mediated response:** T cell response to an antigen

**Humoral response:** B lymphocytes are sent out to bind to antigens, Antigen/antibody

**CMI:** reduced in acquired immunodeficiency, the body is unable to protect against viral and fungal and bacterial infections.

**Western Blot:** Dx HIV/AIDS

**Vaccines and Toxoids:**
- Routine immunizations
- Immunization against tetanus
- Adults at high risk for certain diseases
- Immunization of prepubertal girls or non pregnant women against rubella

**Immune globulins and antivenins**

Antivenin protects: from toxic effects of bites by spiders and snakes

Immune globulins: from human or animals blood containing antibodies formed by specific antigens
Chapter 50
Antineoplastics (cancer drugs)

Antimetabolites: interfere with synthesis of RNA and DNA (cells do not replicate)
Tx: leukemia, lymphoma, solid tumors, autoimmune disease

Cell cycle: Plant alkaloids, taxaines, podophyllotoxins, vinca cell cycle specific

non cell cycle:

Non specific (alkaliding (changes ph to stop growth) agent and antineoplastic antibiotic)

Blood cell stimulating drugs

Adverse reactions
Nausea and vomiting, highly irritating to veins and tissues (pt usually has a pic line or port) (continuous monitoring) could cause necrosis to vein/skin, bone marrow suppression, stomatitis, hair loss, fertility issues
Leukopenia and thrombocytopenia may cause cycles to be delayed until blood counts are raised

Contraindications
Pregnancy leukopenia thrombocytopenia

Few different classes work differently, know side effects, nursing diagnoses.
Chapter 51
Immunostimulants
Anemia and bleeding prevention of infection

Red
White
Platelets

*Colony stimulating drugs*

Wbc stimulants

"Stim" stimulates maturation, proliferation and differentiation

Filgrastim; used after chemo

Pegfilgrastim: single dose between chemotherapy

Sagramostin: used following bMT and induction chemotherapy used with leukemia and to stimulate stem cell for harvest

Adverse reactions
Bone pain
Htn
Alopecia

Contraindications
Can stimulate cancer growth

Erythropoietin
RBC

Iron, folic acid b12 (just replace)

*Drugs used to stimulate platelets*
Stimulates thrombopoiesis
Reduces need for platelet transfusion (Risk for allergic reactions)
Used to treat or prevent thrombocytopenia associated with chemo therapy for solid tumors could be given with colony stimulants

Adverse reactions
Bleeding due to decrease clotting factor
Drugs that treat anemia with chronic illness

Epoetin alfa: drug that stimulates erythropoiesis

Used to treat anemia associated with chronic renal failure

Darbapoeiten alfa: used to treat anemia stimulates erythropoiesis stimulating hormone

Sub q injection

Adverse reactions
Reactions at injection site, headache

Iron deficiency anemia
Iron prep: act by elevating serum iron
Parental or oral
Parental due to needing it quickly or gi upset form oral

Adverse reactions
Can cause black tar stools , constipation

Vit c can increase the absorption of iron

Folic acid deficiency
Treats megaloblastic anemia
For women of childbearing age to decrease neural tube defects

Vit B12 deficiency anemia
Pernicious anemia ( b12 deficit) also used to perform the schilling test ( absorption test)

Usually and injection

52
Skin disorder topical drugs

Enzyme Santyil: removes necrotic tissue