

AIDS:

- 1) Initial treatment: NNRTI + 2 NRTIs or PI + 2 NRTIs
 - 2) NRTIs:
 - i) MOA: interfere with HIV viral RNA-dependent DNA polymerase, resulting in chain termination & inhibition of viral replication
 - ii) Class toxicities:
 - (1) Lactic acidosis, severe hepatomegaly with steatosis
 - iii) Most require renal dosing (except abacavir)
 - iv) Do not use lamivudine & emtricitabine together (chemically similar)
 - v) Do not use zidovudine with stavudine together (both require thymidine for activation)
 - vi) Do not use didanosine with stavudine during pregnancy (increased risk of lactic acidosis & liver damage)
 - vii) The "D" drugs cause pancreatitis & peripheral neuropathy & lactic acidosis
 - (1) ddl (didanosine), d4T (stavudine), ddC (zalcitabine)
 - viii) Low pill burden
 - ix) All are prodrugs requiring 2-3 phosphorylations for activation
 - b) Zidovudine (Retrovir): AZT, ZDV
 - i) SE: bone marrow suppression, GI intolerance
 - ii) Dosage forms available: IV, 200 mg (10 mg/mL); syrup 50 mg/5 mL in 240 mL; capsule, 100 mg & tablet 300 mg
 - c) Lamivudine (Epivir): 3TC
 - i) Minimal toxicity
 - d) Abacavir (Ziagen): ABC
 - i) SE: hypersensitivity reaction that can be fatal with rechallenge
 - e) Didanosine (Videx, Videx EC): ddl
 - i) Take ½ hour before or 2 hours after meals (empty stomach)
 - ii) SE: pancreatitis, peripheral neuropathy
 - f) Stavudine (Zerit): D4T
 - i) SE: pancreatitis, peripheral neuropathy
 - g) Zalcitabine (Hivid): ddC
 - i) SE: pancreatitis, peripheral neuropathy
 - h) Tenofovir (Viread): TDF
 - i) SE: renal insufficiency, Fanconi syndrome
 - i) Emtricitabine (Emtriva): FTC
 - i) Minimal toxicity
 - j) Combination products:
 - i) Zidovudine 300 mg + lamivudine 150 mg (Combivir)
 - ii) Zidovudine 300 mg + lamivudine 150 mg + abacavir 300 mg (Trizivir)
 - iii) Tenofovir 300 mg + emtricitabine 200 mg (Truvada)
 - iv) Lamivudine 300 mg + abacavir 600 mg (Epzicom)
- 3) NNRTIs:
 - i) MOA: bind to reverse transcriptase at a different site than the NRTIs, resulting in inhibition of HIV replication
 - ii) Class toxicities: rash & hepatotoxicity
 - iii) All should be dosed for hepatic impairment
 - iv) Most are affected by food (except efavirenz)
 - v) Efavirenz is CI in pregnancy
- b) Efavirenz (Sustiva): EFV
 - i) Take on an empty stomach
 - ii) SE: CNS side effect; false + cannabinoid test
- c) Nevirapine (Viramune): NVP
 - i) Autoinducer
 - ii) SE: rash, symptomatic hepatitis, including fatal hepatic necrosis
- d) Delavirdine (Rescriptor): DLV
 - i) SE: rash, increased LFTs
- 4) PIs:
 - i) MOA: inhibit protease, which then prevents the cleavage of HIV polyproteins & subsequently induces the formation of immature noninfectious viral particles
 - ii) All should be dosed for hepatic impairment

- (1) MOA: appears to directly bind to DNA & inhibit DNA repair (via topoisomerase II inhibition) resulting in the blockade of DNA & RNA synthesis & fragmentation of DNA
- (2) Turns urine & all other body fluids red
- (3) SE: myelosuppression, cardiotoxicity, extravasation
- (4) Decrease dose in renal impairment
- iii) Daunorubicin (Cerubidine)
- iv) Idarubicin (Idamycin)
- v) Mitoxantrone (Novantrone)
 - (1) AE: myelosuppression
- b) Other:
 - i) Mitomycin C (Mutamycin)
 - ii) Bleomycin (Blenoxane)
- 8) Heavy Metals:
 - i) Cisplatin (Platinol)
 - ii) Carboplatin (Paraplatin)
 - iii) Oxaliplatin (Eloxatin)
 - (1) AE: myelosuppression, neuropathy
- 9) Antiandrogens: inhibit uptake & binding of testosterone & dihydrotestosterone in prostatic tissue
 - i) Flutamide (Eulexin)
 - ii) Bicalutamide (Casodex)
 - iii) Nilutamide (Nilandron)
 - (1) AE: diarrhea
- 10) Progestins: suppress release of LH & increase estrogen metabolism (decrease available estrogen for estrogen-dependent tumors)
 - i) Megestrol (Megase): also used to stimulate appetite
 - ii) Medroxyprogesterone (Provera)
- 11) Estrogens: estramustine is combination of estrogen plus nitrogen mustard; estrogen facilitates uptake, nitrogen mustard released to alkylate cancer cells
 - a) Estramustine (Emcyt)
- 12) Antiestrogens: bind to estrogen receptor in breast tissue, preventing binding by estrogen & thereby reducing estrogen-stimulated tumor growth
 - a) Tamoxifen (Nolvadex): can cause bone pain
 - b) Toremifine (Fareston)
- 13) Gonadotropin-releasing hormone analogs: turn off negative-feedback release of FSH & LH, reducing testosterone & estrogen production in testes & ovaries
 - a) Leuprolide (Lupron (breast/prostate); Eligard (prostate); Viadur (prostate))
 - (1) MOA: potent inhibitor of gonadotropin secretion; continuous daily administration results in suppression of ovarian & testicular steroidogenesis due to decreased levels of FSH & LH with subsequent decreases in testosterone & estrogen levels
 - b) Goserelin (Zoladex)
- 14) Aromatase inhibitors: blocks enzyme responsible for conversion of circulating androgens to estrogens
 - a) Anastrozole (Arimidex):
 - i) For breast cancer
 - ii) Can increase LDL
 - iii) Cannot use with Tamoxifen
 - iv) AE: vasodilation, headache, pain, depression, hot flashes, HTN, osteoporosis
 - b) Letrozole (Femara)
 - i) AE: diarrhea
- 15) Other miscellaneous agents for cancer:
 - a) Asparaginase (Elspar)
 - b) Hydroxyurea (Hydrea)
 - c) Tyrosine kinase inhibitors:
 - i) Imatinib mesylate (Gleevec)
 - ii) Erlotinib (Tarceva)
 - iii) Gefitinib (Iressa)
 - d) 26S Proteasome inhibitor:
 - i) Bortezomib (Velcade)
 - e) Biological Response Modifiers
 - i) Immune therapies:

- (5) Use if liver impairment
- b) Enoxaparin (Lovenox):
 - i) Low molecular weight heparin
 - ii) MOA: inhibits factor Xa greater than IIa
 - iii) Dosing:
 - (1) DVT prophylaxis: 40 mg QD or 30 mg BID
 - (2) DVT treatment: 1 mg/Kg/dose Q12 hours or 1.5 mg/Kg/dose QD
 - iv) Monitor: anti-Xa, platelets
- c) Heparin:
 - i) MOA: potentiates the action of antithrombin III & prevents the conversion of fibrinogen to fibrin
 - ii) Dosing:
 - (1) DVT prophylaxis: 5000 units SQ Q8-12 hours
 - (2) IV infusion: 10-30 units/Kg/hr
 - (3) Line flushing: 10 units/mL for infants (<10 Kg); 100 units/mL for older infants, children & adults
 - iii) Monitor: PTT (1.5-2X the upper limit of control; 50-70 sec), platelets
- d) Warfarin (Coumadin, Jantoven)
 - i) MOA: inhibits reduction of vitamin K to its active form; leads to depletion of vitamin K-dependent clotting factors II, VII, IX, X & protein C & S
 - ii) Requires 4-5 days before full anticoagulation effect is achieved
 - iii) Recommended starting dose: 5 mg po QD
 - iv) Strengths/Dosage forms:
 - (1) Injection: 5 mg
 - (2) Tablets: 1, 2, 2.5, 3, 4, 5, 6, 7.5, 10 mg
 - v) Most indications want an INR in the 2.0-3.0 range
 - vi) Mechanical valves require a higher level of anticoagulation (INR 2.5-3.5)
 - vii) Minor bleeding or elevated INR: hold warfarin dose or decrease dose until INR returns to appropriate range
 - viii) Purple Toe Syndrome may occur due to cholesterol microembolization
 - ix) Acetaminophen is usually a good antipyretic & analgesic choice for patients taking oral anticoagulants
- e) Risk factors for DVTs:
 - i) >40 years old; prolonged immobility; major surgery involving the abdomen, pelvis, & lower extremities; trauma, especially fractures of the hips, pelvis, & lower extremities; malignancy; pregnancy; previous venous thromboembolism; CHF or cardiomyopathy; stroke. Acute MI; indwelling central venous catheter; hypercoagulability; estrogen therapy; varicose veins; obesity; IBD; nephrotic syndrome; myeloproliferative disease; smoking
- 6) Antiplatelet Drugs:
 - a) Thienopyridines:
 - i) MOA: block adenosine diphosphate (ADP)-mediated activation of platelets by selectively & irreversibly blocking ADP activation of the glycoprotein IIb/IIIa complex
 - ii) Clopidogrel (Plavix):
 - (1) Use: reduce atherosclerotic events (MI, stroke, vascular deaths)
 - (2) MOA: irreversibly blocks the ADP receptors, which prevents fibrinogen binding at that site & thereby reducing the possibility of platelet adhesion & aggregation
 - (3) AE: chest pain, headache, dizziness, abdominal pain, vomiting, diarrhea, arthralgia, back pain, upper respiratory infections
 - iii) Ticlopidine (Ticlid):
 - (1) Maintenance dose: 250 mg BID
 - (2) DC if the ANC drops to <1200 or platelet count drops to <80,000
 - (3) AE: rash, nausea, dyspepsia, diarrhea, neutropenia, thrombotic thrombocytopenic purpura
 - (4) Dosage form: 250 mg tablet
 - (5) CI: active bleed, severe liver disease, ticlopidine: neutropenia, thrombocytopenia
 - b) Glycoprotein IIb/IIIa inhibitors:
 - i) Abciximab (Reopro)
 - (1) No renal dosing adjustment required
 - ii) Eptifibatid (Integrilin)
 - iii) Tirofiban (Aggrastat)
 - (1) Storage: room temperature, protect from light
- 7) Angiotensin Receptor Blockers (ARBs):

- 3) Angle-closure (narrow angle) glaucoma:
 - a) Primary glaucoma
 - b) Shallow anterior chamber & narrow angle; filtration of aqueous humor is compromised as a result of the iris blocking the angle
 - c) Therapy:
 - i) α -adrenergic antagonists:
 - (1) MOA: decrease in aqueous humor formation with slight increase in outflow
 - ii) (beta selective)
 - (1) Often DOC for open-angle glaucoma
 - (2) AE: cardiac effects, worsening pulmonary effects, depression, dizziness
 - iii) Nonselective:
 - (1) Timolol (Timoptic)
 - (2) Carteolol (Ocupress)
 - (3) Levobunolol (Betagen)
 - (4) Metipranolol (OptiPranolol)
 - d) Selective:
 - i) Betaxolol (Betoptic)
 - ii) Levobexaxolol (Betaxon)
 - e) Carbonic anhydrase inhibitors:
 - i) MOA: decrease in aqueous humor formation
 - ii) AE: lethargy, decreased appetite, GI upset, urinary frequency
 - iii) Do not use with sulfa allergy
 - iv) Acetazolamide (Diamox)
 - (1) Tablets, capsules
 - v) Dorzolamide (Trusopt)
 - vi) Brinzolamide (Azopt)
 - vii) Methazolamide (Neptazane)
 - (1) Tablets
 - f) Prostaglandin analogs:
 - i) MOA: increased uveoscleral outflow without effect on aqueous humor formation
 - ii) Also used as 1st line agents or in combination with beta blockers
 - iii) AE: iris pigmentation, eyelid darkening, macular edema
 - iv) Latanoprost (Xalatan)
 - (1) Administer 1 drop at bedtime
 - (2) Refrigerate
 - (3) Can change blue eyes to brown
 - v) Bimatoprost (Lumigan)
 - (1) Can cause darkening of eyelids & eye lashes
 - vi) Travoprost (Travatan)
 - (1) Frequent ocular hyperemia
 - vii) Unoprostone (Rescula)
- 4) α -2 adrenergic agonists:
 - a) MOA: decrease in aqueous humor formation
 - b) AE: tachycardia, dry mouth, eyelid elevation, CNS effects in the old & young
 - c) Brimonidine (Alphagan)
 - i) Wait at least 15 minutes after using before placing soft contacts
- 5) Other α -adrenergic agonists:
 - a) MOA: increase in aqueous humor outflow
 - b) AE: tachycardia, increased BP, allergic responses
 - c) Dipivefrin (Propine)
 - i) Prodrug of epinephrine
 - d) Pilocarpine (Pilocar)
 - i) Once weekly dose form called Ocuserts
 - ii) Miotic agent
- 6) Combination:
 - a) Timolol & dorzolamide (Cosopt)
 - b) Hydroxypropyl methylcellulose added to decrease burning

Gout:

- 1) Treatment of acute attack:
 - a) Colchicine:

- ii) Antifungal agent for the treatment of susceptible cutaneous, mucocutaneous, & oral cavity fungal infections caused by the Candida species
- iii) MOA: binds to sterols in fungal cell membrane, changing the cell wall permeability allowing for leakage of cellular contents
- iv) Systemic relief in 24-72 hours from candidiasis
- v) Oral: poorly absorbed
- vi) Available dosage forms: cream, lozenge (DSC), ointment, powder for compounding, suspension, tablet, vaginal tablet
- vii) Mycolog cream contains a corticosteroid (triamcinolone) as well as an antifungal (nystatin)
 - (1) Could be used for a patient with an ileostomy pouch
 - (2) Would also treat the inflammation that can occur from what are basically "tape burns"
- f) Quinupristin/dalfopristin (Syncerid):
 - i) Indicated for vancomycin-resistant Enterococcus faecium & serious bacterial skin infections
 - ii) MOA: inhibits bacterial protein synthesis by binding to different sites on the 50S bacterial ribosomal subunit thereby inhibiting protein synthesis
 - iii) Strengths/dosage forms:
 - (1) Injection, powder for reconstitution:
 - (a) 500 mg: quinupristin 150 mg & dalfopristin 350 mg
 - (b) 600 mg: quinupristin 180 mg & dalfopristin 420 mg
- g) Vancomycin (Vanocin, Vancole):
 - i) MOA: inhibits bacterial cell wall synthesis by blocking glycopeptide polymerization through binding tightly to D-alanyl-D-alanine portion of cell wall precursor
 - ii) Alternative to other antimicrobials, including penicillins & cephalosporins for serious gram + infections (resistant strains of strep, MRSA)
 - iii) Watch for ototoxicity
 - iv) Red man's syndrome: rapid drop in BP accompanied by maculopapular rash in neck or chest area often associated with rapid IV infusion
 - v) Should be infused slowly >60 mins
 - vi) Draw peak 1 hour after infusion has completed; draw trough just before next dose
 - (1) Therapeutic peak: 25-40 mcg/mL (>80 toxic)
 - (2) Therapeutic trough: 5-12 mcg/mL

21) Otitis media:

- a) 1st line drugs: ampicillin, amoxicillin, bacampicillin
- b) Augmentin: (> 3 months & < 40 kg) 90 mg/Kg/day divided Q12 hours X 10 days
- c) 2nd generation cephalosporin (cefaclor- Ceclor, cefuroxime- Cefdinir, cefprozil-Cefzil, loracarbef-Lorabid)
- d) Zithromax (treat recurrent OM), Biaxin, Bactrim
- e) Most common causative organisms: Streptococcus pneumoniae (pneumococcus), H. flu, moraxella catarrhalis, pseudomonas, klebsiella
- f) Rocephin can be used to treat: 50 mg/Kg in a single dose or for relapsing: 50 mg/Kg QD X 3 days

22) P. acne:

- a) Clindamycin, erythromycin, & tetracycline are effective
- b) Erythromycin & benzoyl peroxide (Benzamycin):
 - i) Apply BID
 - ii) This product contains benzoyl peroxide which may bleach or stain clothing
 - iii) Available as a topical gel or Benzamycin Pak (supplied with diluent containing alcohol)

23) Penicillins:

- a) Resistance to PCN is caused by beta lactamase enzyme production & alteration of PCN-binding proteins

24) Pseudomembranous enterocolitis (PE): Clostridium difficile overgrowth

- a) Caused by clindamycin & lincomycin
- b) Treat PE with fluid & electrolyte replenishment, oral metronidazole (IV if patient cannot take po), &/or vancomycin (oral only)

25) Pseudomonas:

- a) Aerobic, gram - bacillus
- b) Treatment:
 - i) Antipseudomonal PCN (mezlocillin, piperacillin, carbenicillin, ticarcillin)
 - ii) Ceftazidime (Fortaz, Tazidime, Tazicef), Cefepime (Maxipime) + aminoglycoside
 - iii) Quinolone + imipenem

(a) Interferes with ACEIs, ARBs, & diuretics

- 5) Conversions:
 - a) Usual ratio is Morphine 8 to dilaudid 1
 - b) Methadone 10 mg = hydromorphone 7.5 mg (po) & 1.5 mg (IM)

Parkinson's:

- 1) A chronic progressive neurologic disorder with symptoms that present as a variable combination of rigidity, tremor, bradykinesia, & changes in posture & ambulation
- 2) Primary Parkinson's- no identified cause
- 3) Secondary Parkinson's- may be the result of drug use (i.e. reserpine, metoclopramide, antipsychotics), infections, trauma, or toxins
- 4) Progressive degeneration of the substantia nigra in the brain with a decrease in dopaminergic cells
- 5) Drug therapy:
 - a) Want medications that will increase dopamine or dopamine activity by directly stimulating dopamine receptors or by blocking acetylcholine activity, which results in increased dopamine effects
 - b) Carbidopa-levodopa (Sinemet):
 - i) MOA; levodopa increases DA; carbidopa prevents metabolism of levodopa allowing more to enter the blood brain barrier
 - ii) Take on an empty stomach & eat shortly after to prevent N/V
 - iii) Direct stimulation of DA receptors:
 - c) Bromocriptine (Parlodel)
 - d) Pergolide (Permax)
 - e) Pramipexole (Mirapex)
 - f) Ropinirole (Requip)
 - g) Selegiline (Eldepryl, Carbox, Atapryl, Selpak):
 - i) MOA: inhibits MAOB; increases DA & 5-HT
 - ii) Inhibits COMT; increases DA:
 - h) Entacapone (Comtan)
 - i) Tolcapone (Tasmar)
 - j) Amantadine (Symmetrel):
 - i) MOA: may increase presynaptic release of DA, blocks reuptake
 - ii) Blocks acetylcholine, may balance DA:
 - k) Benztropine (Cogentin)
 - l) Trihexyphenidyl (Artane)
 - m) Vitamin E- antioxidant; mixed results

Pediatrics:

- 1) EES ointment given in neonate to prevent gonorrhea infection in the eyes
- 2) Vitamin K is given to babies until they can produce their own
- 3) Beractant (Survanta):
 - a) Lung surfactant
 - b) Prevention & treatment of respiratory distress syndrome in premature infants
 - c) If <1250 g: at risk for developing or with evidence of surfactant deficiency
 - d) Given within 15 minutes of birth
- 4) Colfosceril (Exosurf): respiratory surfactant
 - a) Administered intratracheally
 - b) Respiratory distress syndrome in the newborn: 5 mL (67.5 mg) per kg birthweight INTRATRACHEALLY Q 12 hr for 3 doses
 - c) MOA: colfosceril, cetyl alcohol, & tyloxapol combination, when used as a replacement for deficient endogenous lung surfactant, is effective in reducing the surface tension of pulmonary fluids, thereby increasing lung compliance properties in RDS to prevent alveolar collapse & decrease work in breathing
 - d) The possibility exists that it may also improve ventilation/perfusion matching, independent of its direct effect on lung compliance
- 5) Neural tube defects are a result of a decrease in folic acid (while pregnant)
- 6) Acetaminophen:
 - a) <12 years: 10-15 mg/Kg/dose Q 4-6 hours prn (NMT 5 doses: 2.6 g in 24 hours)
- 7) Ibuprofen:
 - a) 6 months – 12 years

- 2) Median: the middle value in a set of measurement
- 3) Mode: the value that appears most frequently
- 4) Statistically significant: the likelihood (probability) of obtaining a given result by chance
 - a) $p < 0.05$
- 5) Standard deviation: statistical index of the degree of deviation from central tendency, namely, of the variability within a distribution
- 6) T Test: used to compare two groups

Tests:

- 1) Blood glucose kits:
 - a) Testing without pricking finger: Clinitest Tabs & TesTap- used to test urine sugar then correlate to blood sugar
- 2) Cholesterol Kits
 - a) Advanced cholesterol test kit
 - b) Need to avoid for at least 4 hours prior to testing: iron, prozac, vitamin c, APAP
- 3) Heme guaiac exam:
 - a) Vitamin C (antioxidant) can interfere with test
 - b) Visual limitations can limit test
 - c) Hemorrhoids (blood would cause a false +)
 - d) Example test: EZ detector
- 4) Patient with a high PTT & receiving heparin:
 - a) Could hold it then restart it at a lower dose
- 5) Patient on lovenox & warfarin:
 - a) Appropriate to monitor:
 - i) APTT (no)
 - ii) PT (yes for warfarin)
 - iii) INR (yes for warfarin)
- 6) Ovulation tests:
 - a) Test a rise in leutinizing hormone (LH) as an indicator for ovulation
 - b) Examples include: First Response, Ovutime, Q-Test
- 7) Pregnancy tests:
 - a) Measure a rise in the level of chorionic gonadotropin (HCG, CG) that begins the 2nd week of pregnancy & peaks at about 8 weeks
 - b) Detect contraception 2 weeks after last missed period
 - c) Take first thing in the AM
- 8) Taking BP:
 - a) Patients should refrain from smoking or caffeine ingestion for 30 min
 - b) Measurement should begin after being seating at least 5-min
 - c) Proper size cuff should be used
 - d) The bladder should encircle at least 80% of the arm & the width of the cuff should be at least 2/3 the length of the upper arm
 - e) Position cuff 1 inch above antecubital crease
 - f) Ask patient about previous readings
 - g) Inflate cuff rapidly to approximately 30 mm Hg above previous readings
 - h) Deflate slowly & listen for Korotkoff sounds
 - i) Wait 1-2 minutes before repeating
 - j) Fluctuation of BP by 10 mm Hg from morning to night is normal
- 9) Urine glucose test kits:
 - a) Clinitest tabs
 - i) Test method: copper sulfate
 - (1) Urine & water mix in test tube, add reduction method tablet, wait for reaction end, see resulting color on chart
 - b) Chemstrip-uG
 - i) Test method: glucose oxidase
 - (1) Dip stick into urine and wait for color to develop, then read on chart
 - c) Clinistix, Diastix, TesTape
 - i) Test method: glucose oxidase
 - (1) Dip stick in urine read color change on chart; dextrose only
 - d) The copper sulfate method is better quantitatively but is subject to more interferences
 - e) (false +)
 - f) The glucose oxidase method is less subject to interferences but is less accurate

- i) Oily spotting; fecal incontinence
- ii) Absorption of fat soluble vitamins may be decreased
- iii) Strength: 120 mg capsule

Wilson's Disease:

- 1) An autosomal recessive disorder that results in progressive copper overload
- 2) The average age at presentation of liver dysfunction is 10-15 years
- 3) Neuropsychiatric disorders can manifest later
- 4) Treatment:
 - a) Copper-chelating agents:
 - i) Penicillamine (Cuprimine, Depen)
 - (1) MOA: chelates with lead, copper, mercury, & other heavy metals to form stable, soluble complexes that are excreted in urine
 - ii) Trientine (Syprine):
 - (1) MOA: an oral chelating agent structurally dissimilar from penicillamine & other available chelating agents
 - iii) Zinc salts

Women's Health:

- 1) Birth Control:
 - a) Sunday start for BC pills means: start the pack on the Sunday after the period starts
 - b) Estrogen:
 - i) Prevent development of a dominant follicle by suppression of FSH; does not block ovulation
 - ii) SE: breast tenderness, heavy bleeding, headache
 - c) Progestin:
 - i) Blocks ovulation; contributes to production of thick & impermeable cervical mucus; contributes to involution & atrophy of endometrium
 - ii) SE: depression, headache, irritability
 - d) Progesterone: decreases the risk of endometrial cancer
 - i) Progestin-only (minipill):
 - ii) Appropriate for use in breastfeeding women
 - iii) Efficacy is less than that of combined oral contraceptives
 - iv) Free of cardiovascular risks associated with estrogen-containing products
 - v) Ortho Micronor, Errin, Nor-QD, Nora-BE, Camila, Ovrette
 - e) Biphasic oral contraceptives: Ortho-Novum 10/11, Necon 10/11
 - f) Yasmin:
 - i) Ethinyl estradiol & drospirenone
 - (1) Drospirenone is a spironolactone analogue with antiminerlocorticoid & antiandrogenic activity
- 2) PMS:
 - a) Symptoms: depressed mood, mood swings, irritability, difficulty concentrating, fatigue, edema, breast tenderness, headaches, sleep disturbances
- 3) Postmenopausal hormone replacement therapy:
 - a) Women with an intact uterus must be treated with estrogen + progestin
 - b) Women with out a uterus- estrogen only
 - c) Ingredients in PremPro or Premphase: conjugated estrogen & medroxyprogesterone
 - d) Medroxyprogesterone (Provera) is with ERT to decrease the risk of endometrial cancer
- 4) Levonorgestrel (Plan B, Mirena-intrauterine system):
 - a) For emergency contraception: 1 tablet (0.75 mg) asap within 72 hours of unprotected sexual intercourse; a 2 nd tablet (0.75 mg) should be taken 12 hours after the 1st dose; can be used at any time during the menstrual cycle

Zollinger-Ellison Syndrome:

- 1) A triad of:
 - a) Markedly elevate gastric acid secretion
 - b) Peptic ulcer disease
 - c) A gastrinoma or non-beta islet cell tumor of the pancreas or duodenal wall which produces gastrin