

| Drug | Class/Action | Target | Side Effects | Characteristics |
|-------------------------|----------------------|--|---|--|
| | | | *Underlined and italicized = in PowerPoint | |
| <i>Bleomycin</i> | antibiotic | DNA, RNA | <u>allergic rxns, skin tox (skin thickening and/or stripes and itching, pulm fibrosis, mucositis, alopecia)</u> | Hodgkin's lymphoma Pulm fibrosis can be treated with TNF inhibitors |
| <i>bortezomib</i> | proteasome inhibitor | 26S proteosome | Black/tarry stools, bleeding gums, blood in urine/stool, agitation, back pain, blistering/peeling/loosening of skin | Multiple Myeloma —Bortezomib, lenalidomide, and dexamethasone in combination have 90% response rate |
| <i>crizotinib</i> | small molecule | Inhibits anaplastic large T-cell lymphoma kinase (ALK) | Edema, nausea, decreased appetite, fatigue, liver changes, constipation, dizziness, blurred vision | Anaplastic large T-cell lymphoma |
| <i>venetoclax</i> | small molecule | Inhibits BCL2, inc apoptosis | Bladder pain, N/V/D, dizziness, drowsiness, SOB, pancytopenia, URI | Approved for refractory CLL , pts with 17p deletion, pts w/ prior therapy, some patients with ALL |
| <i>cyclophosphamide</i> | alkylating agents | DNA | <u>Toxic to BM, immunosuppression</u> | used to prevent organ rejection after transplantation, immune suppression. Newer protocol for Non-Hodgkin Lymphoma : cyclophosphamide, doxorubicin, prednisone, vincristine, and rituximab (R-CHOP) |
| <i>dacarbazine</i> | alkylating agents | DNA | <u>Toxic to BM, immunosuppression</u> | used to prevent organ rejection after transplantation, immune suppression (Hodgkin's lymphoma, melanoma, soft tissue sarcoma) PK/PD: modified in the liver through two separate rxns to active form, diazomethane. Enzymes involved are P450 proteins CYP1A1, CYP2E1, and relatively low limit dacarbazine activity in vivo |

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| <i>doxorubicin</i> | anthracycline | topoisomerase II, Effects cells related to G2/S | <u>Cardiac toxicity</u> , fatigue, alopecia, N/V, oral sores | Used for Non-Hodgkin's lymphoma , being in CHOP regimen. Interest in combining with monoAb to receptors |
| <i>gilteritinib</i> | kinase inhibitor | FLT3 receptor tyrosine kinase | Differentiation syndrome, headache, muscle pain, N/V, diarrhea, effects on liver/pancreas | AML |
| <i>Ibrutinib</i> | kinase inhibitor | Bruton's tyrosine kinase | <u>Side effects manageable</u> —diarrhea, Upper respiratory infxn, fatigue, and cardiac side effects | Mantle cell lymphoma and for CLL |
| <i>Imatinib</i> | kinase inhibitor | Bcr-Abl fusion protein | Anxiety, blistering, peeling or loosening of skin, change in vision | Adult CML , causes complete response in ½ of pts, resistance common CML with Abl-T3151 mutation can receive omacetazine and chemo |
| <i>lenalidomide</i> | immune modulator | unclear | Diarrhea, fatigue, joint pain, fever, cough, body aches, abnormal or decreased touch sensation, bloody, blurry vision | Multiple Myeloma —Bortezomib, lenalidomide, and dexamethasone in combination have 90% response rate |
| <i>prednisone</i> | corticosteroid | Binds glucocorticoid receptors | <u>Ankles and feet swelling, moon facies, infection, high blood sugar, HTN</u> | Newer protocol for Non-Hodgkin Lymphoma : cyclophosphamide, doxorubicin, prednisone, vincristine, and rituximab (R-CHOP) |
| <i>rituximab</i> | antibody | Binds CD20, blocking B cell survival | <u>Infection (TB, fungal, bacterial)</u> | Used in combination with CHOP regimen—cyclophosph., doxorubicin, vincristine, and pred. Non-Hodgkin Lymphoma |
| <i>vinblastine</i> | anti-mitotic | microtubule polymerization | <u>Neuropathy</u> , bone pain, constipation, hair loss, stomach pain, N/V | P450 substrate, consider drug interactions Hodgkin's and Non-Hodgkin's Lymphoma |