1. The agent below is an example of what type of anticancer agent? Explain (using sentences) the mechanism of this type of anticancer agent? It is no longer on the market but it is presently being studied for an interesting cancer use. What is this use and what is its value?
2. The agent below is another useful macrolide antibiotic. It can generate reactive oxygen species (ROS), yet it does not contain a quinone or hydroquinone structure. Explain how it generates ROS.
3. The agent below (Enzalutamide) was recently approved (in 2012) for prostate cancer, specifically metastatic castrate resistant prostate cancer (mCRPC). Explain its mechanism(s) of action. It is generally well tolerated, but does have a unique and worrisome toxicity. What is this toxicity?

![Enzalutamide structure](image)

4. Tamoxifen, shown below, is an old but still useful anti-estrogen agent. It can be metabolized to an important metabolite that is active. What is the name of this metabolite? What enzyme is most important to its formation? With an arrow, show the site of this important metabolism.

![Tamoxifen structure](image)
5. The tyrosine kinase (TK) inhibitor shown below was very recently approved (in 2012) for Ph+ leukemias. Name the agent. It appears to lack an important toxicity common to TK inhibitors. Name this toxicity. Finally, can this agent be used to treat patients whose tumors have the T315-I mutation? (Yes or No)

![Chemical Structure]

6. Explain the mechanism of action of bevacizumab. How is it different than most other antibodies used to treat cancer? What is it commonly used to treat? Would you expect a HAMA response and why or why not?