**Cancer in Non-Smokers: Who, What, Why and How to Treat**

**Pharmacist Post-test Questions**

**Pharmacist Learning Objectives:**

1. Describe NSCLC’s pathogenesis in nonsmokers
2. List the abnormalities in growth stimulatory signaling pathways in NSCLC
3. Describe the components of individualized treatment plans for EGFR mutation positive NSCLC
4. Review new and emerging treatment options in EGFR T790M mutation positive patients
5. Maximize the pharmacist’s contribution in improving treatment adherence and ongoing monitoring to attain therapeutic treatment goals
6. **The most common histology observed in NSCLC in never-smokers is**

A. Adenocarcinoma

B. Squamous cell carcinoma

C. Large cell carcinoma

1. **Never-smokers with NSCLC are likely to have the following mutation**

A. L858R

B. KRAS

C. RAS

1. **Mr. Sawyer is at the pharmacy to pick up his specialty medication, erlotinib. He wants your advice on OTC acid-reducing medications. Which of the following would be the most appropriate recommendation?**
2. Omeprazole
3. Lansoprazole
4. Famotidine
5. **Mr. Sawyer calls the pharmacy in a week, he complains of severe side effects of diarrhea, nausea, and vomiting from the medication. He takes all his medications after food. What is a likely cause for his increased adverse effects?**

A. The dose of erlotinib is high and his oncologist needs to reduce the dose promptly

B. Administration with food increases bioavailability and can increase adverse effects

C. The patient is allergic to erlotinib and all TKIs in the first generation

1. **Mr. Sawyer is back at the pharmacy to pick up a new medication, afatinib. The oncology nurse told him to purchase an OTC anti-diarrheal medication. Which of the following is true?**

A. Hydration is sufficient to manage diarrhea from afatinib

B. Anti-diarrheal medications are by prescription only

C.Loperamide (up to 20 mg per day) is appropriate

1. **What is a possible option for Mr. Sawyer if he develops resistance to afatinib therapy because of a T790M gatekeeper mutation?**

A. Gefitinib

B. Osimertinib

C. Dacomitinib

1. **In clinical trials, patients on osimertinib experienced higher rates of one adverse effect than patients treated with first generation TKIs. What adverse effect was it?**

A. Diarrhea

B. Nausea

C. QT prolongation

1. **Patients who are treated with oral TKIs sometimes develop severe dry eye. If they are contact lens wearers, what should you advise them?**

A. Don’t wear contact lenses

B. Wear contact lenses for less than 12 hours

C. Wear only use soft lenses

1. **Mrs. Byrne comes to the pharmacy a week after starting a TKI. She shows you a rash and is very concerned. She had been advised that she may develop a rash, but she was so concerned about the cancer diagnosis that she didn’t listen well. What do you counsel her to do?**

A. Stop taking the TKI and make an appointment at the same-day walk-in clinic

B. Use over the counter acne medications and oral erythromycin for rash

C. Describe appropriate emollients, sunscreens, and skincare for affected areas

1. **Non-adherence to oral oncology medications can result in**

A. Insurance denials

B. Increased adverse effects

C. Treatment resistance