**Venus AND Mars: Helping Women AND Men with Osteoporosis**

Pharmacist Post-test

After completing this continuing education activity, pharmacists will be able to

1. LIST the pathogenesis and classification of osteoporosis in men and women
2. DESCRIBE misconceptions about bisphosphonates and the best ways to dispel myths
3. DETERMINE the components of individualized treatment plans for women, men, and patients who are intolerant to specific treatments
4. USE this information to expand the pharmacist’s role in adherence and monitoring to attain therapeutic treatment goals

**1. A 60-year-old female’s DXA scan reveals T-scores of -1.8 and -2.2 at the spine and total hip, respectively. Her FRAX score indicates a 5%, 10-year probability of a hip fracture and a 12%, 10-year probability of a major osteoporotic fracture. Using the AACE/ACE guidelines, which of the following statements is true?**

1. She is a candidate for osteoporosis treatment based on her T-scores alone.
2. She is a candidate for osteoporosis treatment based on her T-score at the hip and her 10-year probability of a hip fracture.
3. She is a candidate for osteoporosis treatment based on her T-score at the spine and her 10-year probability of a major osteoporotic fracture.

**2. Evidence demonstrates that all bisphosphonates reduce vertebral fracture risk. Which ones also reduce the risk of non-vertebral and hip fractures?**

1. Alendronate, risedronate, and zoledronic acid
2. Alendronate and abaloparatide
3. Ibandronate only

**3. A postmenopausal woman with osteoporosis has been taking alendronate 70 mg PO weekly for the last three years and experienced a vertebral fracture last week. Her doctor wants to switch alendronate to an alternative medication. Which of the following is the best option?**

1. Denosumab
2. Calcitonin
3. Raloxifene

**4. A 70-year-old male experienced a hip fracture. He currently takes amlodipine 10 mg daily, cholecalciferol 1000 units PO daily, and calcium carbonate 500 mg PO twice daily. His testosterone is 320 ng/mL (reference range 264 to 916 ng/dL). Which one of the following is best to recommend initiating for this patient?**

A. Romosozumab

B. Testosterone

C. Zoledronic acid

**5. A 72-year-old male completed a DXA and the result indicates osteoporosis. Which of the following T-scores is classified as osteoporosis?**

A. -1.5

B. -2.0

C. -2.6

**6. A patient at your community pharmacy shares with you that she will start denosumab therapy for osteoporosis treatment. Which of the following counseling points is most important for you to convey to promote adherence and efficacy?**

A. Denosumab is a cost-effective treatment.

B. She shouldn’t delay denosumab therapy.

C. Denosumab is administered subcutaneously by a healthcare provider.

**7. Which one of the following patients with osteoporosis is the Best candidate for romosozumab?**

A. 65-year-old female with a very high risk of fracture who has hypertension.

B. 75-year-old male with a very high risk of fracture who has hypothyroidism.

C. 67-year-old female with a high risk of fracture who had a stroke 6 months ago.

**8. A 58-year-old Asian female (height 62 inches, weight 135 pounds, BMI 24.7 kg/m2) presents to the primary care clinic for her annual wellness visit. Her family history is significant for osteoporosis (mother), COPD (father), and hypertension (mother and father). Her last menstrual period was at age 52. She drinks one glass of wine a few times a week and quit using tobacco 12 years ago. She walks for 20 minutes daily and follows the DASH diet closely. Her past medical history includes rheumatoid arthritis and hypertension. How many risk factors does this patient has for osteoporosis?**

1. 3
2. 6
3. 8

**9. A 62-year-old female presents to your osteoporosis pharmacotherapy clinic today. She had several vertebral fractures in the past and has been receiving romosozumab 210 mg monthly for the past 12 months. She had a repeat DXA last week, which revealed improved bone mineral density from her DXA one year ago. Her renal function, calcium, and vitamin D levels are all appropriate for her age. Which one of the following is best to recommend for this patient?**

1. Continue romosozumab as monotherapy for an additional 12 months.
2. Discontinue romosozumab and initiate alendronate 70 mg PO weekly.
3. Discontinue romosozumab and initiate calcium carbonate 600 mg and vitamin D 400 international units (combination tablet) 1 tablet PO twice daily.

**10. A patient starting an oral bisphosphonate voices concern to you about “jaw issues.” Which of the following is the BEST response?**

A. “I don’t think you should take this medication.”

B. “Don’t worry, ‘jaw issues’ are so rare.”

C. “Let’s talk more about your concern.”