

**GENERAL INTERNAL MEDICINE & HEALTH SERVICES RESEARCH CASE  
CONFERENCE TEACHING MODULE**

**Osteoporosis  
Carolyn J. Crandall, MD, MS  
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**CASE 1:**

**H.C. is a 69-year-old Caucasian woman who visits you for routine health care maintenance. She has no medical problems except for hypertension controlled with low-dose hydrochlorothiazide.**

1. Is bone density testing indicated?
2. How would your testing strategy be different if she were a 61-year-old postmenopausal woman? A man?

**You order a DXA test. Her femoral neck T score is -1.9.**

3. How would you explain what a T score is, and how is a T score different from a Z score? What does “low bone density” mean?
4. Is a work-up for secondary causes of osteoporosis indicated *prior to therapy* for everyone with low bone mineral density or minimal-trauma fracture?
5. What is the recommended bone density threshold for pharmacologic therapy? Does she meet criteria based on her bone density?
6. With her history, and her T-score being above -2.5, are you finished evaluating her for osteoporosis?
7. She weighs 145 lbs and is 60 inches tall. She has not experienced a fracture before, her father had a hip fracture, and she does not smoke. She only rarely drinks alcohol. What is her estimated 10-year risk or hip fracture?
8. Does she meet guideline criteria for pharmacotherapy?
9. Which class of FDA-approved osteoporosis medications is the only class to be definitively proven to decrease hip fracture risk among people with osteoporosis?

**Suppose she decides she wants to hold off on treatment for now and just monitor bone density.**

10. Because she is electing not to have pharmacologic therapy, how often should she undergo DXA testing?
11. How much calcium and vitamin D should she be getting?

**CASE 2:**

**A 46-year-old premenopausal woman has been exposed to multiple courses of corticosteroids for inflammatory bowel disease.**

12. Should we use T-scores to diagnosis osteoporosis in premenopausal women?
13. What dosing/durations of corticosteroid use is of concern with regard to osteoporosis?