Outline: Osteoporosis Defined

I.   Introduction
    A.   Background information
        1.   key characteristics
            a.   structural deterioration of bone tissue
            b.   consequence: increased risk of fracture
        2.   various forms of disease, e.g.
            a.   secondary osteoporosis: causes =
                i.   cause: medication, e.g. corticosteroids/immunusuppressants
                ii.   underlying medical disorder, e.g. hyperthyroidism/diabetes
            b.   osteogenesis imperfecta: cause = genetic origin
        3.   incidence information
            a.   10 million Americans have
                i.   8 million women
                ii.   2 million men
            b.   highest incidence: post-menopausal women
            c.   can strike at any age
    B.   Thesis statement

II.   Diagnosis = BMD (bone mineral density test)
    A.   uses x-rays
    B.   most reliable detection method
    C.   measures patients' vs. young adults' bone mass
    D.   4 diagnostic categories
        1.   normal
        2.   osteopenia/low bone mass (some bone mass loss)
        3.   osteoporosis
        4.   severe/established osteoporosis
    E.   limitation: only can detect bone loss over 30%

III.   Treatment
    A.   no cure
    B.   medications, e.g.
        1.   bisphospohonates and Calcitonin
            a.   stop bone loss
            b.   increase bone strength
        2.   hormone replacement therapy (may cause cancer, so not RX;d often)
        3.   pain management: lower back pain
            a.   ice packs
            b.   heating pads
                i.   helps relax surrounding muscles
                ii.   reduces inflammation
    C.   physical therapy and exercise
        1.   increased flexibility
        2.   increased strength
        3.   improves posture
        4.   helps provide more energy
    D.   alternative therapies
        1.   massage
        2.   acupressure
            a.   controls pain
            b.   can be self-administered

IV.   Conclusion
    A.   Restatement of thesis
    B.   Causes: different ➔ different forms of disease
    C.   Diagnosis: BMD measures bone density
    D.   Treatment (no cure): medication, physical therapy/exercise, alt medicine

Model: Osteoporosis Mini-Practice (*only 2 aspects*)

A Definition of Osteoporosis

Osteoporosis is a condition involving structural deteriation of bone tissue which results in an increased risk of fracture. There are various forms of the disease. These include osteogenesis imperfecta and secondary osteoporosis. The former is genetic in origin and the latter is caused by medications such as corticosteroids and immunosuppressants. Underlying medical disorders, e.g. hyperthyroidism and diabetes, can also give rise to secondary osteoporosis. Out of the 10 million American who have been diagnosed with osteoporosis, 8 million are women and 2 million are men. While the disease can strike at any age, its incidence is highest among post-menopausal women. Understanding more about how osteoporosis is diagnosed, treated, and prevented is useful to people who suspect they may have the disease as well as the public in general.

Osteoporosis is diagnosed by the bone mineral density test. This test, in which x-rays are used, measures patients' vs. young adults' bone mass; based on results, patients can be placed into four diagnostic categories. These are normal, osteopenia/low bone mass, which is characterized by some loss of bone mass, osteoporosis, and severe or established osteoporosis. However, despite the fact that it is considered the most reliable diagnostic method, the test can only detect loss of bone mass over 30%.

While osteoporosis cannot be cured, it can be treated. Medications such as bisphosphonates and Calcitonin are frequently prescribed in order to stop bone loss and increase bone strength. Hormone replacement therapy is another option; however, since it may cause cancer, it is not often prescribed. Lower back pain can be relieved with ice packs or heating pads, the latter of which help relax surrounding muscles and reduce inflammation. Physical therapy and exercise are still another form of treatment; these both increase flexibility and strength, improve posture, and help provide more energy. Finally, alternative therapies such as massage and acupressure are recommended. An advantage of acupressure, which controls pain, is that is can be self-administered.

To summarize, osteoporosis can be defined with regard to its diagnosis and treatment. BMD, which measures bone density, is the sole diagnostic tool. Treatment, which will not cure the disease, involves medication as well as physical therapy and exercise. Alternative medicine offers additional treatment options.