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QUESTIONNAIRE

1. *Age*
(between 40 and 90 years) or Date of Birth
Age: 88 Date of Birth: Y: M: D:
2. *Sex* Male: ○ Female: ◉
3. *Weight(kg)* 50
4. *Height(cm)* 165
5. *Previous fracture* No: ○ Yes: ◉
6. *Parent fractured hip* No: ○ Yes: ◉
7. *Current smoking* No: ◉ Yes: ○
8. *Glucocorticoids* No: ◉ Yes: ○
9. *Rheumatoid Arthritis* No: ◉ Yes: ○
10. *Secondary osteoporosis* No: ◉ Yes: ○
11. *Alcohol* No: ◉ Yes: ○
(3 or more units per day)
12. *Femoral neck BMD (g/cm²)*

BMI 18.4
The ten year probability of fracture (%)
without BMD

Major osteoporotic	**59**
Hip fracture	**54**

**Sample WHO Fracture Risk Assessment Tool*

Breast CA Prevention

Analysis of a number of large Womenôs Health Initiative (WHI) studies suggests that bisphosphonates (Fosamax®, Actonel® and Didronel®) can prevent breast cancer. These separate studies involved over 151,000 women, 2,216 of whom were taking a drug from the bisphosphonate class.

Amongst the bisphosphonate group, there was a 32% reduction in the development of invasive breast cancer. A similar, smaller study in Israel found a 34% reduction in breast cancer occurrence in women taking these drugs. In that study, 2,368 women with breast cancer were compared to a ñcontrolò group of women who did not have breast cancer. Bisphosphonate use was much higher in the control group, again suggesting that these drugs had a protective effect.

These results are very interesting. Controlled clinical trials will be required to confirm this preventative effect. One day, women may use these drugs for both breast cancer and fracture prevention.

FRAX for Fracture Risk

We are all aware that the risk of osteoporotic fracture increases as we age. The *World Health Organization (WHO)* has developed a tool to quantify that risk. The *Fracture Risk Assessment Tool (FRAX)* can help us to determine how aggressively to treat vulnerable residents. You may even want to try it with your own personal data.

The first step is to go to www.shef.ac.uk/FRAX/, the *FRAX* website. Point the cursor at ñcalculation toolò, and select your country of origin and race. For those born in Canada or other unlisted countries select ñUSò.

In the first four sections, age, sex, weight and height are entered. Greater age, female gender, and low weight relative to height (low BMI) increase fracture risk. Affirmative answers to any of the remaining questions will show a greater calculated fracture risk.

Previous fracture refers to unexpected fractures with little or no trauma. An example of this would be compression fractures of the spinal column. These may not be recognized, with a loss of height often being the only outward feature.

Parental hip fracture is a major risk for hip fracture in the subject. Smoking, use of steroids, typically prednisone (for more than three months), rheumatoid arthritis, osteoporosis secondary to hormonal irregularities and excessive alcohol consumption are also risk factors. If the subject has had a bone scan, the result is inserted into #12 and the probability calculation becomes even more accurate.

The end result is the calculated risk of major osteoporotic fracture (spine, forearm or shoulder) over the next ten years. The risk of the most serious fracture, that of the hip, is also calculated. Based on the result, the family and health care team may decide that treatment is unnecessary, vitamin D and calcium should be supplemented, or a bisphosphonate medication is required.

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