1. Antonio is hit in the face with a football during practice. An x-ray reveals multiple fractures of the bones around an orbit. Name the bones that form margins of the orbit.

2. Mrs. Bruno, a woman in her 80s, is brought to the clinic with a fractured hip. X-rays reveal compression fractures in her lower vertebral column and extremely low bone density in her vertebrae, hipbones, and femurs. What are the condition, cause, and treatment?

3. Jack, a young man is treated at the clinic for an accident in which he hit his forehead. When he returns for a checkup, he complains that he can’t smell anything. A hurried x-ray of his head reveals a fracture. What part of which bone was fractured to cause his loss of smell?

4. A middle-aged woman comes to the clinic complaining of stiff, painful joints, and increasing immobility of her finger joints. A glance at her hands reveals knobby, deformed knuckles. For what condition will she be tested?

5. At his 94th birthday party, James was complimented on how good he looked and was asked about his health. He replied, “I feel good most of the time, but some of my joints ache and are stiff, especially my knee, hips, and lower back, and especially in the morning when I wake up.” A series of x-rays and an MRI scan taken a few weeks earlier had revealed that the articular cartilages of these joints were rough and flaking off, and bone spurs (overgrowths) were present at the ends of some of James’s bones. What is James’s probable condition?
6. Janet, a 10-year-old girl, is brought to the clinic after falling out of a tree. An x-ray shows she has small fractures of the transverse process of T3 to T5 on the right side. Janet will be watched for what abnormal spinal curvature over the next several years?

7. The serving arm of many tennis players is often significantly larger (thicker) than the other arm. Explain this phenomenon.

8. Jerry is giving cardiopulmonary resuscitation to Ms. Jackson, an elderly woman who has been rescued from the waters of Cape Cod Bay. What bone is he compressing?

9. Rita’s bone density scan revealed she has osteoporosis. Her physician prescribed a drug that inhibits osteoclast activity. Explain this treatment.