

QUESTION 3

A woman who is 10 weeks pregnant has been experiencing extreme chronic hip pain and her physician wants to conduct an x-ray study to aid in the diagnosis. The x-ray procedure is expected to result in a dose of approximately 2 rem to her abdominal area. As the health physicist at a large medical center you have been asked for your professional opinion.

POINTS

- 12 A The physician is trying to weigh the risks versus benefit of the procedure. Provide two reasons that support the decision to conduct the x-ray study, and two reasons that support the decision not to conduct the study.
Number your responses. Only the first two for each will be graded.
- 8 B What would you recommend to the physician? Why?
- 15 C The physician has asked you to counsel the patient, who wants to know what the possible effects on the fetus are, and whether or not she should have a therapeutic abortion if she has the x-ray procedure.
1. List 3 possible effects of in-utero exposure at this stage of gestation, and whether these effects would be expected at this dose level. **Number your responses. Only the first three will be graded.**
 2. On the basis of the potential for health effects in the developing fetus, would you recommend a therapeutic abortion? Why or why not?
- 15 D What are the dose limits for the fetus that are recommended by the NCRP? Is the NCRP recommendation pertinent to this case?