

Ethics Assignment #4: Therac-25
Due: Tuesday, 10.11.22, by 1:00 pm

Background

The lecture on Tuesday is the second of two lectures on critical reasoning which we'll use to construct and evaluate structured arguments. We'll consider problems with the Therac-25 which is a famous case study and one of the earliest examples of software failures that led to deaths.

Learning Goals

By the end of the lecture, you should be able to:

- distinguish between sound and unsound arguments
- distinguish between inductive and fallacious arguments
- distinguish between different forms of fallacious arguments
- apply a seven-step strategy for evaluating arguments

Assignment

1. Watch the 15-minute video at: www.youtube.com/watch?v=-7gVqBY52MY
Read the article at: ccnr.org/fatal_dose.html (It's dated, but it's more complete than most of the articles I found except for a long journal article.)
2. In your opinion, what was one of AECL's first mistakes? Can you think of something AECL could have done which was relatively simple and which may have saved at least one life? In your opinion, were there any "heroes" involved in the whole situation; if so, who?
3. Recall that an argument is *valid* when all premises are assumed to be true and lead to a conclusion that has no counter example. Also recall that a valid argument is not necessarily a strong argument.
 - (a) Construct a valid argument in structured form (as shown in class) which leads to the conclusion: "AECL responded correctly by not informing others of previous incidents with the Therac-25."
 - (b) Construct a valid argument in structured form which leads to the conclusion: "AECL should have informed others of previous incidents with the Therac-25."

Create a pdf file of your answers to the questions. Submit your pdf via Canvas by 1:00 pm on Tuesday, 10.11.22.
