Other reports indicate that Ga-67 uptake may be seen in fractures, but they do not specify the age or type of fracture. (*1*, *4*)

Since the above case, a second gallium-positive stress fracture was observed in a 19-yr-old male jogger. We find Ga-67 uptake also in routine fractures, bone-grafted fractures, and bone-graft donor sites. The mechanism of uptake is not clear, but gallium is a bone seeker and it seems logical to anticipate increased uptake in an area with accelerated bone metabolism, as in a healing fracture. Unlike Lisbona and Rosenthal (*4*), we find that considerable uptake of Ga-67 may occur at fracture sites, though the distribution tends to be more diffuse than that seen with technetium phosphate agents (Figs. 1 and 2). There is no agreement in the literature as to whether the presence or absence of a hematoma affects uptake (*2*). It is well established that increased Ga-67 uptake occurs in inflammatory and neoplastic lesions of bone, but it is not generally appreciated that it can also occur in fractures.

We feel that this possibility should receive attention, lest an erroneous suspicion should lead to prolonged and unnecessary therapy for osteomyelitis, to an unnecessary biopsy for suspected malignancy, or even to a misguided amputation (*5*).

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Re: What Promise the Preliminary Tests of Coronary Artery Disease?

The analysis by Dr. J. C. Sisson in relation to the benefit of preliminary tests of coronary artery disease is very impressive, particularly with regard to the method used (decision analysis) and his conclusions (*1*).

I draw attention to the statement: "Promises, even when earnest, sometimes cannot be kept." Actually, the main hypothesis of the author is not explicitly specified: the decision maker is, according to H. Raiffa's notation (*2*), the expected monetary value type (EMV), i.e., his indifference curve is a straight line. As Raiffa observes, this is a good approximation of a non-EMV type when, in the matter under discussion, the decision maker is not risk aversive. My feeling is that when you are betting on life and death, you should be highly risk aversive. This situation implies that your indifference curve must be concave, and the straight line approximation will not hold. For example, if in Fig. 1 a highly concave indifference curve means new utilities values of 500 and 1000 for the EMV of 130 and 650, respectively, the argument is reversed: 293 units for the preliminary test branch and 299 for the angiogram branch.

Decision analysis is a modeling technique and, as such, great care must be given to the hypothesis; the rest is simply an algorithm. Maybe the straight line is a good approximation, maybe not. "But, in terms of life alone, the best decision is to" discuss this matter with more detail.

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Reply

The point of my article, "What Promise the Preliminary Tests of Coronary Artery Disease," was that tests of coronary disease preliminary to angiography were attractive because they promised accurate, safe, and probably cheaper methods of medical practice compared with moving from the clinical data (primarily a history of chest pain) directly to angiography (*1*). The promises were reasonable and made in earnest, but were not kept. The hypothesis was: the use of preliminary tests would be safer in terms of life. The hypothesis, however, was rejected by the analysis.

I believe that Dr. Vergara has concluded that my decision analysis was evaluating all types of health-related values (EMV = expected monetary value). If that were true, Dr. Vergara would be correct; for as the possible outcomes for a decision incur greater risk to life (as compared with loss of money), the values (or losses) consequent to the decision change more rapidly than when the risk to life is small and submerged in the other considerations.

My calculations, however, dealt only with life (and death); the other factors bearing on health were relegated to minor or equal roles within the individual decisions. Thus, unless one believes, philosophically, that years of life are more or less valuable at age 50 compared with those at age 60, losses, based on death, must be linear with the probability of death. Inflections in the lines of correlation between losses and *a priori* probability of coronary artery disease (Fig. 2 of the article) relate to different probabilities of death for the lower *a priori* probabilities of coronary artery disease.

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REFERENCE

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Re: What Promise the Preliminary Tests of Coronary Artery Disease?

Theory and clinical medicine should be considered complementary. Sometimes theory paves the way for clinical success, sometimes it is misleading. On the basis of his decision analysis tree, Dr. Sisson (*1*) came to several conclusions, out of which one is remarkable: Tl-201 myocardial scintigraphy—a test with 90% sensitivity and 80% specificity—would cost almost 3 mo more life than the more immediate selection of angiography for men aged