Reviewer's report

Title: Cancer Therapy and Cardiotoxicity: The need of serial Doppler-echo ultrasound examination

Version: 1 Date: 7 August 2006

Reviewer: Francesca Frassi

Reviewer's report:

General

A well conceived, updated, comprehensive and clearly written review on a very timely and clinically important topic.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

I have only very minor suggestions which the Authors might wish to address:

1) Title (and also in table 2): â€œDoppler-echo ultrasoundâ€ might perhaps be changed into: â€œDoppler-echocardiographyâ€.

2) When you deal with the pro-ischemic mechanisms of 5-fluorouracil, you do not mention the very peculiar induction of coronary vasospasm in the acute phase â€“ difficult to recognize if you do not think of it (see, for instance: Lestuzzi C et al. Am J Med 2001).

3) On page 14, you mention â€œcomet-tailâ€ (I prefer â€œultrasound lung cometâ€) as a sign of â€œcongestive heart failureâ€ after radiation therapy. Might it be more likely a sign of â€œalveolar-capillary membrane distressâ€ (ARDS-like syndrome) due to acute, deterministic, combined radiation or possibly chemotherapy - damage? (see Camus et al, Br J Cancer 2004 ; Ooi GC et al, Clin Radiol 2000)

4) Please, express the radiation dose (for instance on page 8, line 13) not only in Gy but also in multiples of chest x-rays (20 Gy = 20 Sv = 200 000 chest x-rays).

5) This beautiful article would further improve with 2 new figures: a) a new figure showing the time course (acute, in days, versus long-term in weeks or months or years) of different cardiotoxic cancer therapies: for instance, chemiotherapy requires days, radiotherapy requires decades; b) a second figure showing schematically the different cellular targets of cancer therapy:endotheliaum, smooth muscle cell, cardiomyocyte, etc.

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Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.