Reviewer's report

Title: Topically Applied Tea Extracts to Treat Radiation-induced Skin Toxicity - Involvement of a Caspase-dependent Mechanism

Version: 1 Date: 11 August 2006

Reviewer: Nick D. Morley

Reviewer's report:

General
This well written paper provides a convincing argument of the possible mechanism by which tea extracts attenuate the severity of radiotherapy burns experienced by solid tumour cancer patients.

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

On the whole the methods are well described with the exception of the opening paragraph 'Patients'. I was unable to determine what is the standard skin program and if this included the use of tea extracts. I would also have liked to have more information about the scoring of toxicity by nurses and how this was controlled for subjective bias as the premise of the paper rests on these results.

Again the discussion is well presented but it is my understanding that radiotherapy skin toxicities are complex. Hence whilst inflammation plays a significant role in RTOG2 responses, the authors make a big assumption that the attenuation by tea extracts in-vitro is directly linked to the anti-inflammatory responses determined in-vitro with cell culture. I feel that this may be too big an extrapolation of the results. In effect two investigations were conducted and I would suggest the single conclusion should be toned down.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
Abstract: 'und' is written instead of 'and' (line 2).
I do not understand what is meant by 'tumour control probability' and this should be clarified (line 2).
It is stated that no standard treatment recommendation for skin treatment during radiotherapy exists, but in the UK the Royal College of Radiographers provide guidelines for skin treatment depending upon the severity of reactions (RTOG). It might therefore be that no standard exists in the authors' home nation and this should be clarified or omitted.
The introduction is well presented but epigallocatechin gallate is abbreviated to EGCG without reference at the end.
The results are well presented apart from a missing word (to) in the third sentence of the second subheading 'tea extracts'...

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests