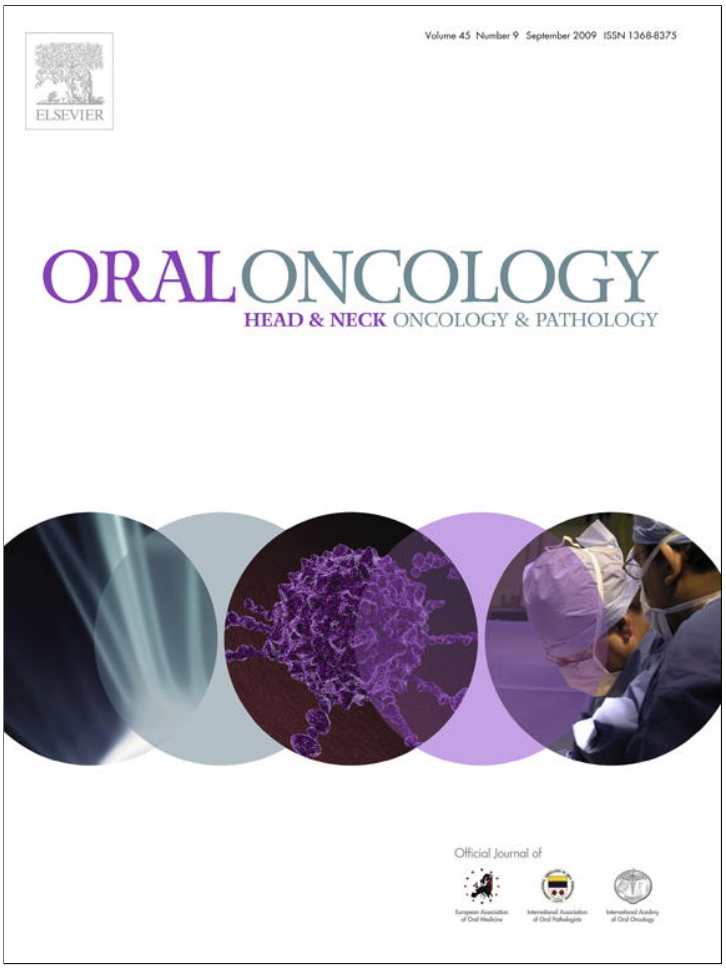

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Reply

To the Editor

Thank you very much for Dr. Stephen Sonis' interest to our recent article published in Oral Oncology.[1] We appreciate the valuable comment raised by Dr. Stephen Sonis and would like to reply as below.

The high energy linear accelerator (6 MeV) employed in our experimental trial is an important issue to explain why radiation mucositis has not been induced in our experiment. Using this radiation source, high energy electron beam can be produced not only within a pre-set radiation field but also the high penetrating photon beam can be accurately delivered to the targeted tumor area causing minimal radiation effect to normal tissues. On the other hand, radiation was generated with a low energy 160 kVp X-ray source for the experiment of Ara et al.[2] and radiation mucositis should be expected.

Therefore, we partly concur to Dr Stephen Sonis' suggestion that the dosing schedule implemented by us (7 Gy administered twice weekly)[1] might not satisfactorily stomatotoxic to produce radiation mucositis when using high energy linear accelerator. It is most likely that with optimal dosing regimen as indicated by Dr Stephen Sonis in his letter to editor would generate radiation mucositis in the hamster buccal pouch if a low energy X-ray source is used. It is unfortunately that the critical publication of Ara et al.[2] related to the radiation mucositis on the hamster buccal pouch model has not been read because their paper appeared almost simultaneously to our article published in Oral Oncology.[1] Otherwise, we would make a constructive discussion by comparing our results with their findings.[1,2]

Furthermore, the primary aim of our article is to establish a useful animal model to study the therapeutic effect of fractionated radiation on oral squamous cell carcinomas. Therefore, the radiation source employed is for therapeutic usage. In fact, prior to our published experiment[1], we have performed a pilot study to establish the fractionated dosing regimen: 7 Gy was administered twice weekly to normal hamster pouch with accumulated doses to be 21, 28, 35 and 42 Gy respectively. We discovered that normal hamster pouch could withstand an accumulated dose up to 42 Gy (Fig. 1) and all the hamsters were survived without obvious weight loss. Indeed, we expect that normal hamster pouch can tolerate to an accumulated dose higher than 42 Gy but we note also that 42 Gy has already shown acceptable therapeutic effect. Therefore, we choose the fractionated radiation regimen with accumulated doses of 21 and 42 Gy, respectively, in our final published experiment.[1]

References

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2. Ara G, Watkins BA, Zhong H, et al. Velaferim (rhFGF-20) reduces the severity and duration of hamster cheek pouch mucositis induced by fractionated radiation. *Int J Radiat Biol* 2008;**84**:401–12.

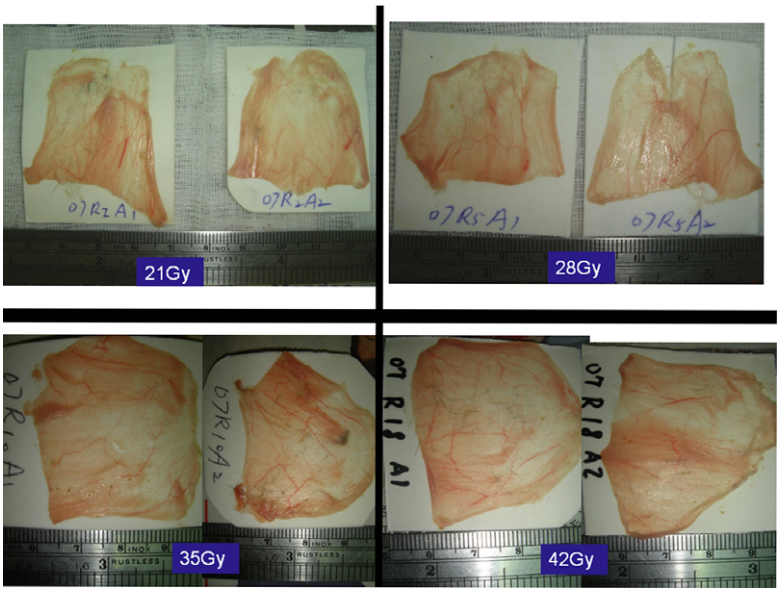

Figure 1 Normal hamster pouches irradiated with a fractionated dosing regimen (7 Gy administered twice weekly) with accumulated doses to be 21, 28, 35 and 42 Gy respectively were grossly flat and tumor-free without visual signs of mucositis.

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