Reviewer’s report

Title: The biography of the immune system and the control of cancer: from St Peregrine to contemporary vaccination strategies

Version: 1  
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Reviewer: Robert Andtbacka

Reviewer’s report:

In this manuscript, Krone et al. review the effect of infection, viruses and vaccinations of risk of cancer development. Overall, the manuscript is well written.

Major Compulsory Revisions:

• The first section of the manuscript provides a historical account of the impact of infection on cancer risk. This is well summarized with pertinent examples. Where the manuscript falls short is in the section titled “The FEBIM studies”. This section and subsequent sections are very misleading to the readership, since they do not discuss other risk factor for developing melanoma: ultraviolet exposure, skin type, genetic predisposition, etc. It would be very beneficial to the readership if the authors discussed the infections and vaccinations and risk of melanoma in the context of other risk factors to provide a more complete and balanced presentation of melanoma risks. Some topics that would be of interest to the readership include:
  o UV exposure and risk of infection
  o Interaction between UV exposure and vaccinations
  o Patient responses to vaccinations / infections based on genetic predisposing factors and risk of melanoma development

Minor Essential Revisions:

• Page 11 and Figure 2: Were the patients with clinically node negative disease in the presented study staged with sentinel lymph node biopsy. If not, how did this impact on survival?
• Figure 2: Were the patients stratified by stage? If not, how did the authors ensure that the different patient groups were equivalent with the exception of vaccination status? Please provide a detailed explanation for the readership.

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

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

I declare that I have no competing interests