A virtual reality game for cancer prevention: Malignancy VR

**Background:** Skin cancer is preventable, however young adults in Australia still get regularly sunburnt. Our challenge is to develop new, innovative and creative ways to reach people.

**Objective:** The aim of this study was to develop a virtual reality (VR) game containing preventative skin cancer messaging, and to assess safety and satisfaction.

**Methods:** Using a two-phase design approach, we created a prototype VR game that immersed the player inside the human body while being confronted with growing cancer cells (Fig-1). The first design phase involved defining the problem, identifying stakeholders, choosing the technology platform, brainstorming and designing aesthetic elements. In the second design phase, we tested the prototype VR experience with stakeholders and end users in focus groups with feedback incorporated into refining and improving the design.

**Results:** Qualitative feedback indicated high levels of satisfaction with all participants reporting the VR game as ‘engaging’ (Fig-2). Regarding safety, two participants (11.1%) reported a side effect of feeling nauseous during the experience. The end user focus groups identified game improvements, suggesting an extended multi-stage experience with visual transitions to other environments and interactions involving cancer causation.

**Conclusions:** This design approach could be applied to other health prevention programs in the future.

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