

DOES LISTENING TO A PERSONAL MUSIC PLAYER OR READING A BOOK DURING THE UPTAKE PERIOD OF A PET-CT ONCOLOGY SCAN CAUSE EXTRA ¹⁸F-FLUORODEOXYGLUCOSE (¹⁸FDG) ACTIVITY IN SKELETAL MUSCLES. Major V, ^A de Souza, ^*Vivian G.

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Purpose:

To enhance the patient experience, patients were allowed to read or listen to music during the rest period before their oncology PET-CT scan, since the uptake period can be stressful and boring. The potential for (¹⁸FDG) to be absorbed by the skeletal muscles instead of the rest of the body needed to be investigated.

Method

At booking PET/CT patients are asked to bring a book or personal music player with them to the appointment if they wish. Patients with Head & Neck pathology are excluded from listening to music or reading. The radiographers noted on the acquisition sheets whether or not patients have been listening to music or reading. The retrospective study reviewed non Head & Neck patients who either listened to music or read a book and compared them to a control group who had not listened to music or read a book during the uptake period.

2 radiologists reviewed the images blindly and marked on a 5 point scale (1=low, 5=high) the level of uptake in the neck, shoulders, upper arms and legs. Patients were matched for age and gender.

Results

Reporters

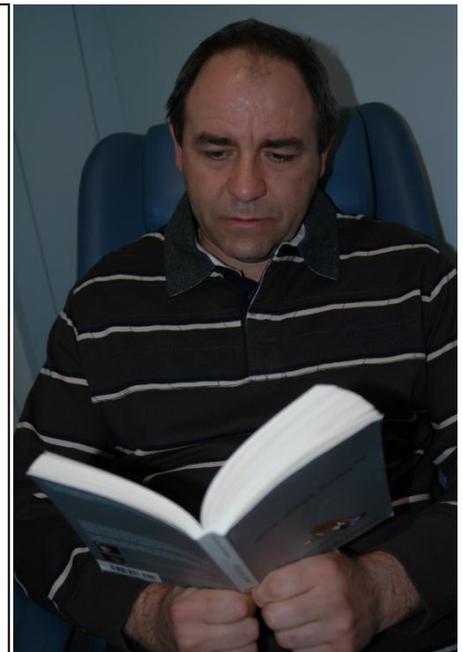
The images blindly and marked on a 5 point scale (1=low, 5=high)
 Overall the reporters fully agreed on 128/160, 80%, of all images. The difference between reporters was 1 for a further 27/160, 17%, of images. Hence there were just 5/160, 3%, of images where the disparity between reporters was more than 1. There was no evidence of reporter bias.

Patients

The concordance between left and right images of the same body location was high with 82% full agreement, 16% with discrepancy of 1 rating point and just 2% with discrepancy greater than 1 rating point. Consequently, the effects of patient group and location were collapsed over both reporters and body side for all analyses of patient group and location.

The group difference was significant both for leg $\chi^2(2) = 18.9, p < .0005$ and for shoulder $\chi^2(2) = 8.9, p = .010$, for both locations there are fewer high glucose uptake ratings in the reading/listening group than the controls. The group effect for legs was present for both reporters separately, but the group effect for shoulder just failed to reach the 95% confidence criterion, $\chi^2(2) = 4.5, p = .106$.

Overall glucose uptake is lower in the listening/reading group (39/160 = 24.5% of images with uptake ratings greater than 1), than the control group (60/160 = 37.8% of images with ratings greater than 1).



Conclusions:

The results of this initial study indicate that patients can safely listen to music and read without any deleterious effect on glucose uptake. Reading or listening to music group had fewer high glucose uptake scores than the control group, the differences were strongly evident in the legs and the shoulders indicating that reading or listening to music could enhance the patient experience and the image quality.

With special thanks to **Professor Diana Kornbrot** for her statistical analysis.