

AbstractID: 7941 Title: PET-CT Simulation of Tumors in the Thorax: Pitfalls and Workaround

PET/CT simulation of tumors in the thorax suffers from potential misalignment between the CT and the PET images even though the data are acquired in the same imaging session on the PET/CT scanner. The misalignment was caused by the fast acquisition of the CT images in sub-second temporal resolution and the slow acquisition of the PET data of over several minutes. Current approach of degrading the CT images in spatial resolution does not fix the problem. We will go over the pitfalls resulted from the mismatch of CT and the PET data, and will review a new average CT scan to mitigate this problem, and its potential impact to radiation therapy planning.