

AbstractID: 14365 Title: The Use of Novel Radiotracers In PET - Potential Applications for Dose Painting

The aim of this presentation will be discuss the potential of PET imaging methods to define the biological characteristics of tumors. The talk will cover radiotracers whose selectively are based on tumor metabolism (FDG), hypoxia (FMISO), cellular proliferation (FLT) and finally specific tumor receptor (radiolabeled hormones and antibodies). The clinical acquisition protocols will be discussed with regards to single time point static imaging versus dynamic PET imaging strategies. Such images can provide useful supplemental data which when combined with the anatomical definition of the tumor may provide the basis for further treatment optimization.

Learning Objectives:

1. Understand the mechanism by different radiotracers are entrapped by cancer cells.
2. Understand how PET images can be acquired, and provide information useful to determine the radiobiology of the cancer.
3. Understand how to obtain and process dynamic image data sets and how they relate to single static time point imaging.