(Almost) Everything You Wanted to Know about what we Measure with PET – but were Afraid to Ask (A special didactic PET Talk)

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Monday June 25, 2012   12 noon
Brady Auditorium, 310 Cedar St.
(serving of lunch starts at 11:45am)

Abstract: This presentation will introduce basic concepts in PET imaging, focusing primarily on the basic ideas behind typical PET data analyses. It will explain the standard study endpoints for receptor-ligand imaging and compare the standard study designs that produce those endpoints. The presentation will develop modeling and analysis concepts in qualitative but intuitive ways. It will conclude with designs and results of different study types drawing examples from ongoing brain imaging studies of addiction at the Yale PET Center.

PET is a powerful high resolution in vivo imaging technique with unparalleled molecular specificity. The high resolution owes much to the physics of PET and the specificity derives from PET chemistry. But the full power of PET would remain unrealized were it not for proper kinetic modeling of the emission images to yield “images of physiology”.

The talk is appropriate for anyone who has struggled to read a PET paper, contemplated acquiring some PET data of their own … or seeks greater insight into the data they already have.