

# **Total-Body PET Kinetic Modeling and Parametric Imaging with EXPLORER**

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The uEXPLORER total-body PET system provides a very high level of detection sensitivity and simultaneous coverage of the entire body for dynamic imaging. This brings several potential benefits for tracer kinetic modeling and parametric imaging, including more reliable estimation of tracer kinetics for clinical use, non-invasive derivation of blood input function, and total-body parametric imaging of micro kinetic parameters. Along with its attractive properties, total-body kinetic modeling also brings significant challenges, such as the large scale of total-body dynamic PET data and the need for organ and tissue appropriate input functions and kinetic models. In this talk, I will discuss the potential benefits, technical challenges, and examples of ongoing research applications of total-body kinetic modeling and parametric imaging.

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