PREDICTION OF HUMAN PHARMACOKINETICS FOR RADIOPHARMACEUTICALS BASED ON PHARMACOKINETICS IN PRE-CLINICAL ANIMAL MODELS

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Abstract

Recent reports evidence a number of new radiopharmaceuticals for diagnostic and theragnostic purposes. However, they have been only biologically characterized using biodistribution studies. A more detailed information concerning their pharmacokinetic parameters is desirable for radiopharmaceutical's complete characterization. Easy-to-use tools to assist researchers in the assessment of the radiopharmacokinetic parameters are not available in nuclear medicine so far. The overall **goal** of this paper is to show the feasibility of using weight based allometric scaling as a predictive tool to estimate human pharmacokinetic parameters from pre-clinical animal data after application of radiopharmaceuticals. Initially pharmacokinetic data from animal models were used to extrapolate to human though body weight allometric scaling. The impact of adjusting for plasma protein binding and the impact of metabolic

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