

List of abbreviations

		Symbols		
2-D	2 dimensional			
3-D	3 dimensional			
		A		
AUC	area under the curve			
		B		
BSA	body surface area			
BW	body weight			
		C		
C_P	concentration of tracer in arterial plasma			
C_S	concentration of specifically bound tracer			
C_T	tumour concentration			
C_{ND}	concentration of non-displaceable tracer in tissue			
cm	centimeter			
COPD	chronic obstructive lung disease			
COV	coefficient of variation			
CT	computed tomography			
		D		
D	administered dose			
DNA	deoxyribonucleic acid			
		E		
EGFR	epidermal growth factor receptor			
EORTC	European Organization for Research and Treatment of Cancer			
		F		
FBP	filtered backprojection			
FCM	fuzzy C-means			
FDG	fluoro-2-deoxy-D-glucose			
FLAB	fuzzy locally adaptive Bayesian			
FLT	3'-fluoro-3'-deoxy-L-thymidine			
FWHM	full-width at half-maximum			
		G		
Ge	Germanium			
GI	gastrointestinal cancer			
Grad ^{WT}	gradient-based watershed delineation method			
GTV	gross tumour volume			
		H		
H ₂ O	dihydrogen monoxide (water)			
HU	Hounsfield unit			

List of abbreviations

		I		
IDIF		image-derived input function		
		K		
K_1		delivery (pharmacokinetic parameter)		
K_i		influx rate constant		
kBq		kilobecquerel		
keV		kiloelectron volt		
kg		kilogram		
		L		
LBM		lean body mass		
LOR		line-of-response		
		M		
MBq		megabecquerel		
min		minute		
ml		milliliter		
mm		millimeter		
mmol/l		millimole per liter		
MR_{Glu}		metabolic rate of glucose		
MRI		magnetic resonance imaging		
		N		
n		number		
nAUC		normalized AUC		
NEMA		National Electrical Manufacturers Association		
NLR		nonlinear regression		
ns		nanosecond		
NSCLC		non-small cell lung cancer		
		O		
O		oxygen		
OSEM		ordered subsets expectation maximization		
		P		
PET		positron emission tomography		
PSF		point spread function		
		R		
R^2		squared Pearson's correlation coefficient		
RTL		relative threshold level		
		S		
s		second		
SBR		signal to background ratio		
SD		standard deviation		
SE		standard error		
SKM		simplified kinetic method		
SUV		standardized uptake value		

SUV ^{2.5}	absolute SUV of 2.5 delineation method
SUV _{BSAg}	SUV normalised by body surface area and corrected for glucose
SUV _{BSA}	SUV normalised by body surface area
SUV _{BWg}	SUV normalised by body weight and corrected for glucose
SUV _{BW}	SUV normalised by body weight
SUV _{LBMg}	SUV normalised by lean body mass and corrected for glucose
SUV _{LBM}	SUV normalised by lean body mass
SUV _{max}	maximum SUV value
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T	
TAC	time-activity curve
TBR	tumour to background ratio
TOF	time-of-flight
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V	
VOI	volume of interest
VOI ⁵⁰	fixed threshold delineation method using 50% of maximum voxel value within a tumour
VOI ^{A50}	adaptive (correcting for the local background value) threshold delineation method using 50% of maximum voxel value within a tumour
VOI ^{RTL}	RTL delineation method
VOI ^{Schaefer}	contrast-orientated delineation method implemented by Schaefer et al.
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W	
WT	watershed transform

