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ERRATUM

Erratum to: Radiation dosimetry of *N*-([^{11}C]methyl)benperidol as determined by whole-body PET imaging of primates

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The units for radiation doses were incorrectly reported as mGy/kBq where it should have been μGy/MBq. There was also an incorrect notation for effective dose in units of mSv/kBq where it should be in μSv/MBq. The incorrect notations were in the abstract and in Table 4, both of which are given in corrected form here.

The authors regret the confusion caused.

The online version of the original article can be found at the http://dx.doi.org/10.1007/s00259-007-0644-6.

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Abstract
Purpose N-([^{11}C]Methyl)benperidol ([^{11}C]NMB) can be used for PET measurements of D_2-like dopamine receptor binding in vivo. We report the absorbed radiation dosimetry of i.v.-administered [^{11}C]NMB, a critical step prior to applying this radioligand to imaging studies in humans.
Materials and methods Whole-body PET imaging with a CTI/Siemens ECAT 953B scanner was done in a male and a female baboon. Following i.v. injection of 370-555 kBq of [^{11}C]NMB, sequential images taken from the head to the pelvis were collected for three hours. Volumes of interest (VOIs) were identified that entirely encompassed small organs (whole brain, striatum, eyes, and myocardium). Large organs (liver, lungs, kidneys, lower large intestine, and urinary bladder) were sampled by drawing representative regions within the organ volume. Time-activity curves for each VOI were extracted from the PET and organ residence times were calculated by analytical integration of a multi-exponential fit of the time-activity curves. Human radiation doses were estimated using OLINDA/EXM 1.0 and the standard human model.
Results Highest retention was observed in the blood and liver, each with total residence times of 1.5 min. The highest absorbed radiation doses were to the heart (10.5 μGy/MBq) and kidney (9.10 μGy/MBq), making these the critical organs for [^{11}C]NMB. A heart absorption of 0.5 μGy would result from an injected dose of 4847 kBq [^{11}C]NMB.
Conclusions Thus, up to 3700 kBq of [^{11}C]NMB can be safely administered to human subjects for PET studies. Total body dose and effective dose for [^{11}C]NMB are 2.8 μGy/MBq and 3.7 μSv/MBq, respectively.

Table 4 Absorbed dose estimates from [^{11}C]NMB based on whole-body imaging of primates

Target organ	Dose estimate (μGy/MBq)
Adrenals	3.13±0.22
Brain	3.04±0.62
Breasts	2.24±0.21
Gallbladder wall	3.41±0.24
Lower large intestine wall	8.99±0.97
Small intestine	3.04±0.33
Stomach wall	3.00±0.27
Upper large intestine wall	6.86±0.6
Heart wall	10.5±1.71
Kidneys	9.19±1.27
Liver	5.07±0.58
Lungs	2.48±0.16
Muscle	0.26±0.24
Ovaries	3.04±0.33
Pancreas	3.25±0.24
Red marrow	2.54±0.21
Osteogenic cells	3.82±0.38
Skin	2.10±0.22
Spleen	3.31±0.54
Testes	2.52±0.27
Thymus	2.74±0.24
Thyroid	2.60±0.27
Urinary bladder wall	2.95±0.30
Uterus	3.14±0.33
Total body	2.82±0.22
Effective dose equivalent	4.38 μSv/MBq
Effective dose	3.70 μSv/MBq