



Response to Dr. Kameyama's letter to the editor

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We thank Dr. Kameyama and colleagues for their interest in our work. We completely agree that an exponential model of decline in DaT availability is more plausible than a linear decline. However, FP-CIT quantification software manufacturers do implement a linear or bi-linear model, so our objective was to show that this model may not be valid for older adults. Unfortunately, we did not have data from younger adults available as we recruit only older adults into our research studies into degenerative diseases. Data over a much wider age range and with a very large sample would have been required to show any significant difference in goodness of fit between a linear and exponential model. Indeed, in their large meta-analysis, Karrer et al. were unable to show this [1]. However, this was a pooled radioligand study, so it would be interesting to see whether the exponential model is favoured in the Japanese I-123-FP-CIT database. We believe that the similar R^2 values between the linear and

exponential model shown by Karrer et al. are evidence for an exponential model, not against it since as Dr Kameyama points out, a linear model results in a predicted SBR of less than zero in very old age.

Reference

1. Karrer TM, et al. Reduced dopamine receptors and transporters but not synthesis capacity in normal aging adults: a meta-analysis. *Neurobiol Aging*. 2017;57:36–46.

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