

## **[<sup>11</sup>C]PE2I ratio-method**

Assuming that reference tissue, in this case cerebellum, represents free tracer concentration in all other regions, the binding potential can be calculated as (ROI-REF)/REF at the peak time of (ROI-CER) curve (pseudo-equilibrium). These curves are shown below for the three subjects. The BP values calculated using SRTM are shown as lines with the ratio curves.

The BP values achieved from ratio curves and from SRTM are similar at the time of bound curve maximum. In practise, it is difficult to determine the maximum of bound curves, and even a small inaccuracy in the peak time and value will lead to relatively large error in BP estimate. Peak times are different in different subjects and brain structures, which prevents using a preset time range of ratio calculation. Peak times would be changed also in occupation studies.

Therefore, static imaging cannot be used for quantitative estimation of BP. Ratio method is not recommended for analysis of dynamic studies.





