Drug addiction:

Motor diseases: Parkinson’s (Dopamine producing cells)

Psych disease: Schizophrenia (Too much dopamine - Auditory / Visual)

Normal dopamine/tracer -🡪 how much A

Flush all dopamine then inject tracer 🡪 B

Ct

K2

K1

Ca

dCt/dt = K1.Ca(t) – K2.Ct(t)

Steady state dCt/dt = 0

Ct = K1/K2.Ca = lamda.Ca

Integrate assuming Ct(0) = 0

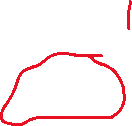
Ct(t) =

Divide by K2.Ct(t)

=

We don’t have Ca(t’), so use same way as project5, compare with a reference region with no dopamine

Thus



where is the Distribution Volume Ratio (DVR)



