Imaging of Brain Connectivity in Dementia: clinical implications for diagnosis of its underlying diseases

1. Brain abnormalities in phenocopy frontotemporal dementia (phFTD) strongly suggest that phFTD is a brain disease and may belong to the behavioural variant frontotemporal dementia spectrum. (this thesis)

2. There is a left and right hemispheric distribution of brain connectivity abnormalities between respectively semantic dementia and behavioural variant frontotemporal dementia, underlying differences in symptomatology. (this thesis)

3. White matter and grey matter structures show disease-specific concurrent degeneration in Alzheimer’s disease and behavioural variant frontotemporal dementia. (this thesis)

4. For differential diagnosis of behavioural variant frontotemporal dementia and Alzheimer’s disease, quantitative diffusion tensor imaging is clinically more useful than resting state functional MRI. (this thesis)

5. In both Alzheimer’s disease and behavioural variant frontotemporal dementia, microstructural abnormalities of certain white matter tracts relate not to overall cognitive dysfunction, but to deficits in specific cognitive domains. (this thesis)

6. Goede MRI diagnostiek heeft een andere betekenis voor de patiënt dan voor de neuroradioloog.

7. Music improves mood and behavioural disorders in dementia. (adapted from Chang et al. 2015 J Clin Nurs; McDermott et al. 2012 Int J Geriatr Psychiatry)


9. “Changes in the diffusion-weighted MR signal should not be blindly interpreted as WM integrity changes!” (adapted from Jones et al. 2013 NeuroImage), but should be carefully interpreted within the context of what is being studied.

10. Even though functional connectivity only relies on co-variation of data, it has major potential for increasing insight into brain disease. (adapted from Rogers et al. 2007 MRI; Fox et al. 2007 Nature)

11. All I can do is be me, whoever that is. (Bob Dylan)