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Disparate cellular networks of tau vs TDP-43 proteinopathies in frontotemporal dementia

Network analyses of inform complex systems such as human brain connectivity, but this approach is seldom applied to study the complex cellular processes associated with tau and TDP-43 proteinopathies. Thus, novel analytical tools and approaches are needed to apply network analyses to gold-standard histopathology data directly. This talk will summarize new data on cellular patterns of tau and TDP-43 pathology using novel image analysis and informatic approaches to model FTLD pathology in the human brain. We find evidence for distinct cellular patterns of tau and TDP-43 pathology in grey matter cortical layers and adjacent WM within clinical syndromes of bvFTD and PPA. This data can be used to develop and validate in vivo imaging metrics sensitive directly to tau and TDP-43 pathology.

