Common and Divergent Features of Resting-State Connectivity in Autism and Schizophrenia

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Presentation Abstract Summary A number of studies using resting state fMRI have shown that machine learning algorithms can distinguish between healthy controls and individuals diagnosed with either autism spectrum disorder or schizophrenia. However, autism and schizophrenia share overlapping genetic etiology, common changes in brain structure and common cognitive deficits and it is not known whether machine learning algorithms can be used to distinguish between the two disorders. Using a linear support vector machine, we identified features that are most diagnostic for each disorder. Common connectivity differences were identified in the salience and motor systems as well as within the default mode network. We also identify features that distinguish autism from schizophrenia. Understanding the common and divergent connectivity changes associated with these disorders may provide a framework for understanding their shared cognitive deficits.

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