SUBTYPING OF SCHIZOPHRENIA BASED ON GENOME AND PATHOLOGY

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Technology Description

Researchers in Igor Zwir's lab at Washington University have developed a diagnostic system to categorize patients with schizophrenia into 8 sub-groups. The system recommends a sub-group based on both genetic and psychopathology data and provides clinicians with a knowledge base surrounding the classification. Each subgroup is associated with distinct underlying genetics, clinical symptoms, and severity of illness, potentially requiring different clinical intervention.
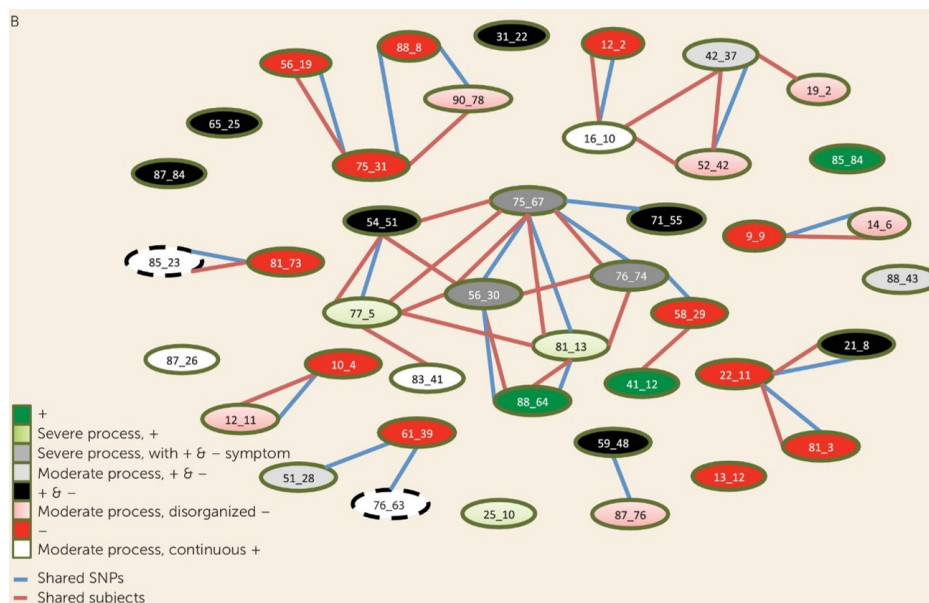

Figure showing the classes of schizophrenia mapped to the disease architecture. Phenotypic features resulting from GWAS analysis were clustered using non-negative matrix factorization.

Stage of Research

The researchers established the 8 sub-groups using analysis of three independent genome-wide association studies. They then developed algorithms to classify patients based on their genetic and psychopathology data.

Publications

- Arnedo J, Svrakic DM, del Val C, … Zwir I. (2015). Uncovering the hidden risk architecture of the schizophrenias: confirmation in three independent genome-wide association studies. *American Journal of Psychiatry*, 172(2): 139-153.

Applications

- Schizophrenia

Key Advantages

- Allows accurate classification of patients

Patents: US20190057186

Related Web Links: Zwir [Profile](#)