

Co-morbidities as Quantitative Traits

Abstract: The physiological connections between traits vary from individual to individual in a way that can affect diseases prognosis. The co-occurrence of obesity and its associated morbidities, dyslipidemia, hypertension and insulin resistance, as an example, increases risk of diabetes and coronary heart disease in a way not explained by the individual morbidities alone. In this work, existing methods used to study the genetics of trait correlations will be explored, new methods will be proposed and the disease association to the correlations between obesity and related traits and the genetic architecture of these correlations will be analyzed using human data from the Framingham heart study and data from chromosome substitution strains of mice.