Methodological challenges in epidemiological approach of the etiology research of rare chronic diseases

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Abstract

Epidemiology is used for many purposes, but most often to learn about the etiology of diseases. Epidemiologic studies can be broadly categorized as observational or experimental, respectively descriptive or analytic. For investigating etiology of rare chronic disease, more and more is applied cluster approach. Most cluster investigation focus on cancer etiology. In practice that means more epidemiological challenges like rare health events, vague definitions and/or heterogeneity of cases, lack of population base for rate calculations, weak association and multiple risk factors, long induction periods, multiple comparisons, low level, long term, heterogeneous exposure and resource intensiveness of full investigation.