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Timothy Alvin Thornton* (thornton@stat.berkeley.edu), 2456 Hilgard Ave., Apt. 502, Berkeley, CA 94709. *Case-Control Association Testing with Incomplete Genealogy*. Preliminary report.

We consider the problem of using statistical methods to test for an association between a disease and a genetic marker in a case-control design in which some individuals are related. Using related individuals in case-control studies has a number of compelling advantages. When related individuals are included in a genetic study, correlations among relatives must be taken into account to ensure validity of the test. We first give an overview of proposed methods when the genealogy of individuals in a study is completely specified. We then consider the case when the genealogy is incomplete and present a new approach to this problem. (Received September 18, 2007)