

Table 1. Characteristics of some study designs for exploring gene-environment interactions in cancer (from Goldstein and Andrieu, 1999)

Study design	Factor for which risk estimate is available			Exposure information needed for control subjects		
	Genetic	Environmental	Interaction	Related controls		Unrelated
				Affected	Unaffected	
Case only	No	No	Yes	-	-	-
Incomplete-data-case-control	Yes	Yes*	Yes	-	-	Yes*
Case-control						
Unrelated controls	Yes	Yes	Yes	-	-	Yes
Two-stage	Yes	Yes	Yes	-	-	Yes
Related controls	Yes	Yes	Yes	-	Yes	-
Unaffected sibs	Yes	Yes	Yes	Yes	Yes	-
Parents	Yes	No	Yes**	-	Yes	-
Family study	Yes	Yes	Yes	Yes	Yes	-

*Only environmental exposure or only genotype data collected on control subjects. Main effect(s) can be assessed if genotype or environmental exposure data are collected on control subjects (see text).

**Differences across strata not restricted to those resulting only from gene-environment interaction.