

Combining Multiple Studies Discussion

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Approaches to combine epidemiologic evidence

	<u>Advantages</u>	<u>Disadvantages</u>
Meta-analysis	Quantitative, cheap	Assumption on comparability, bias
Pooled analysis	Comparability of data	Expensive, (bias)
Multicenter study	Comparability of data	Complex, expensive

Meta-analyses of cohort studies of coffee drinking and pancreatic cancer

Study	Dong 2011	Turati 2012
Snowdon 1984	X	X
Jacobsen 1986	X	X
Nomura	1986	1981
Whittemore 1983		X
Hiatt 1988	X	X
Mills 1988		X
Zheng 1993	X	X
Shibata 1994		X
Stensvold 1994	X	X
Zheng 1996	X	
Michaud 2001	X	
Harnack 1997		X
Isaksson 2002	X	
Lin 2002	X	X
Stolzenberg-Solomon 2002	X	X
Khan 2004	X	
Luo 2007	X	X
Nilsson 2010		X

- 18 cohort, 19 papers
Dong: 13 papers
Turati: 14 papers
overlap 8 papers (42%)
- RR for 1cpd
Dong: 0.96 (0.90-1.02)
Turati: 1.00 (0.95-1.05)

General considerations

- Few large studies are better than many small studies
- Published meta-analyses are often wrong
- Multicenter studies provide the strongest evidence, feasibility remains an issue
- Pooled analyses may represent an efficient compromise
 - opportunity to conduct ad-hoc pooled analyses