

**Miller, Diane M.**

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**From:** Alexandre Klementiev [aklementiev@tpchd.org]  
**Sent:** Monday, October 29, 2001 4:31 PM  
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**Subject:** PC



TomFoulds2.doc

**Please see attachment.**

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October 29, 2001

Dear Sir/Madam,

It is stated in [FR66, page 50968] that

*"... a member of the Special Cohort seeking compensation for a specified cancer, is eligible for compensation only if DOL determines that the cancer was "at least as likely as not" (a 50% or greater probability) caused by radiation doses. ..."*

To calculate the probability of causation (PC), the following formula is offered:

$$*) \quad PC = 100\% \times \text{RadRisk} / (\text{RadRisk} + \text{BasRisk}),$$

where RadRisk is defined in [FR66, page 50968] as

*"... risk of cancer attributable to radiation exposure"*

and BasRisk is

*"the baseline risk of cancer to the general population".*

I have the following questions relating to the definition of the terms in formula \*).

1) Is the risk of cancer attributable to radiation exposure defined as

$$**) \quad \text{RadRisk} = (\text{RR} - 1) / \text{RR}$$

where RR stands for the relative risk defined as the ratio of the incidence rate for exposed  $\text{IR}_{\text{ex}}$  to unexposed  $\text{IR}_{\text{unex}}$ :

$$***) \quad \text{RR} = \text{IR}_{\text{ex}} / \text{IR}_{\text{unex}}$$

2) If the answer to 1) is YES, does the  $\text{IR}_{\text{unex}}$  account for the background radiation?

2a) If the answer to 1) is NO, can you give me the correct definition of RadRisk.

3) Is BasRisk is also defined as attributable risk?

4) If the answer to 3) is YES, please explain what risk the BasRisk is attributable for?

5) If the answer to 3) is NO please give the formal definition of BasRisk.

6) Please give me any example of calculating PC with the use of \*).

7) Can you give me a reference to any publication where the concept of PC as it is used in [FR66] is explained in details.

Thank you in advance

Alex Klementiev  
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#### References

[FR66] Federal Register/ Vol. 66, No. 194/Friday, October 5, 2001/Proposed Rules. 42 CFR Part 81 RIN 0920-ZA01 Guidelines for determining the probability of causation under the energy employees occupational illness compensation program act of 2000; Notice of proposed rulemaking.  
<http://www.cdc.gov/niosh/ocas/81cf.txt.html>