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Conflict of Interest Statement

I declare no financial interests related to the subject matter of my presentation.

Session 3 Science Topic:

Use of 2-stage carcinogenicity bioassays



2: Integrate findings overall evaluations

The IARC Monographs Evaluations: A Two-Step Process

Cancer in humans

- Sufficient evidence
- Limited evidence
- Inadequate evidence
- Evidence suggesting lack of carcinogenicity

Cancer in experimental animals

- Sufficient evidence
- Limited evidence
- Inadequate evidence
- Evidence suggesting lack of carcinogenicity

Mechanistic and other relevant data

- "Weak," "moderate," or "strong" evidence?
- Does this— or can it occur in humans?



Overall evaluation

- Group 1 Carcinogenic to humans (118)
- Group 2A Probably carcinogenic to humans (80)
- Group 2B Possibly carcinogenic to humans (289)
- Group 3 Not classifiable as to its carcinogenicity to humans (502)
- Group 4 Probably not carcinogenic to humans (1)

Interpational Agency for Research on Cancer

Organization

Cancer in Experimental Animals: Categories of Evidence

Cancer in humans

Cancer in experimental animals

— Preamble Part B, Section 6(b)

Mechanistic and other relevant data

Sufficient evidence

Causal relationship has been <u>established</u> through either:

- Multiple positive results (2 species, studies, sexes of GLP)
- <u>Single unusual result</u> (incidence, site/type, age, multi-site)

Limited evidence

Data <u>suggest</u> a carcinogenic effect but: (e.g.) single study, design ?s, benign tumours only, promoting activity only

Inadequate evidence

Studies permit <u>no conclusion</u> about a carcinogenic effect

Evidence suggesting

lack of carcinogenicity

Agency for Research on Cancer

Adequate studies in at least two species show that the agent is not carcinogenic

Conclusion is limited to the species, tumour sites, age at exposure, and conditions and levels of exposure studied



Internation

Cancer in Experimental Animals: Limited Evidence

Cancer in humans

Cancer in experimental animals

— Preamble Part B, Section 6(b)

Mechanistic and other relevant data

The data suggest a carcinogenic effect but are limited for making a definitive evaluation because, e.g.:

- (a) the evidence of carcinogenicity is restricted to a single experiment;
- (b) there are unresolved questions regarding the adequacy of the design, conduct or interpretation of the studies;
- (c) the agent increases the incidence only of benign neoplasms or lesions of uncertain neoplastic potential; or
- (d) the evidence of carcinogenicity is restricted to studies that demonstrate only promoting activity in a narrow range of tissues or organs.

