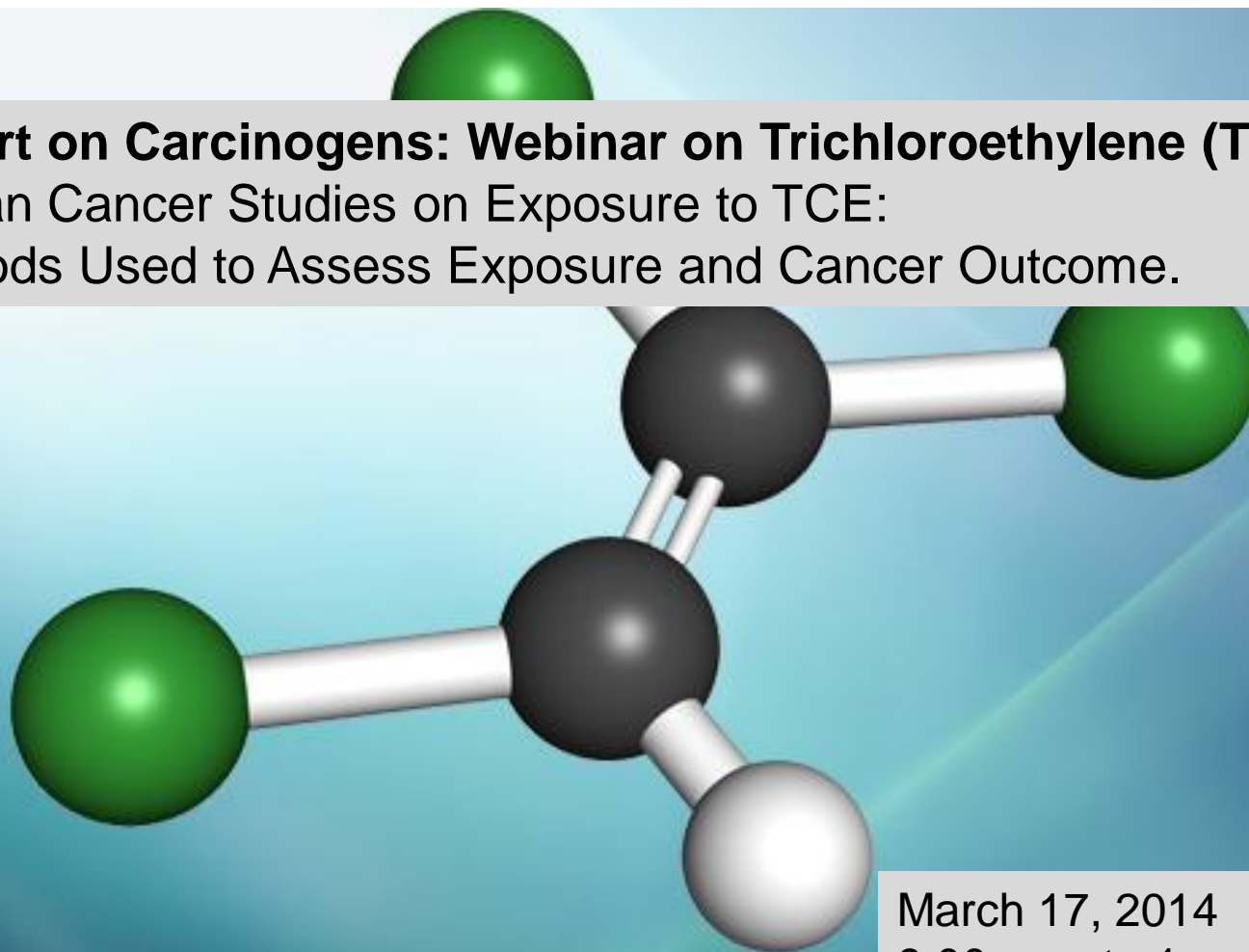




NTP

National Toxicology Program

Report on Carcinogens: Webinar on Trichloroethylene (TCE)
Human Cancer Studies on Exposure to TCE:
Methods Used to Assess Exposure and Cancer Outcome.



March 17, 2014
9:00 a.m. to 1 p.m EDT



Trichloroethylene (TCE) Webinar Agenda

Welcome and Introduction: Mary Wolfe/Ruth Lunn, NTP

Webinar Agenda and Logistics: Cheryl Siegel Scott, U.S. EPA

Seminar Presentations: Cheryl Siegel Scott

- **Methods Used to Assess TCE Exposure Levels, Duration, and Probability in Epidemiologic Studies.**
 - Patricia Stewart, PhD, Stewart Exposure Assessments, LLC
- **Methods Used to Classify Cancer Outcomes – Specifically Lymphohematopoietic Cancers.**
 - Bernard D. Goldstein, MD, Professor Emeritus, University of Pittsburgh
- **Use of Exposure and Outcome Assessments in the Epidemiologic Studies.**
 - Mark Purdue, PhD, National Cancer Institute

Discussion: Neela Guha, International Agency for Research on Cancer

- Topic-Specific Questions
- Public-Initiated Questions

Draft Protocol for Preparing the Draft RoC Monograph on TCE: Ruth Lunn

Next Steps/Closing Remarks: Ruth Lunn/Mary Wolfe

The cancer evaluation for TCE is captured in the draft RoC monograph

- Draft RoC monograph consists of two parts:
 - Cancer evaluation component.
 - Substance profile [proposed for the RoC]: Preliminary listing recommendation and key scientific evidence.
- Cancer evaluation component for TCE*:
 - Focuses on specific cancers: non-Hodgkin lymphoma (and hematopoietic related cancers), kidney, and liver.
 - Assesses the level of evidence of carcinogenicity from human cancer studies
 - Evaluates the evidence from mechanistic and other relevant data.
 - Accepts the current RoC listing's conclusions of carcinogenicity from studies in experimental animals and significant U.S. exposure.
 - Integrates the overall body of evidence and reaches a preliminary listing recommendation for the RoC.
 - Organized by cancer site rather than topic (usual convention).

* Outlined in concept document.

Draft RoC protocol for TCE: Overview

- Discusses methods to prepare the draft RoC monograph on TCE.
- Consists of four parts:
 - Part A: Preliminary outline of the cancer evaluation component.
 - Part B: Methods for evaluating the human cancer studies.
 - Part C: Methods for evaluating other relevant and mechanistic data.
 - Part D: Methods for updating exposure information in the draft substance profile.

Part A: Preliminary outline of cancer evaluation component

ADME/
Toxicokinetics Summary of data on absorption, distribution, and excretion

More detailed discussion on metabolism

Relevant
biological
effects Genetic and related effects

Immune effects

Assessments:
3 cancer sites Human cancer assessment

Evaluation of mechanistic and related data

Final
Conclusions Preliminary level of evidence: Human cancer studies

Preliminary listing recommendation

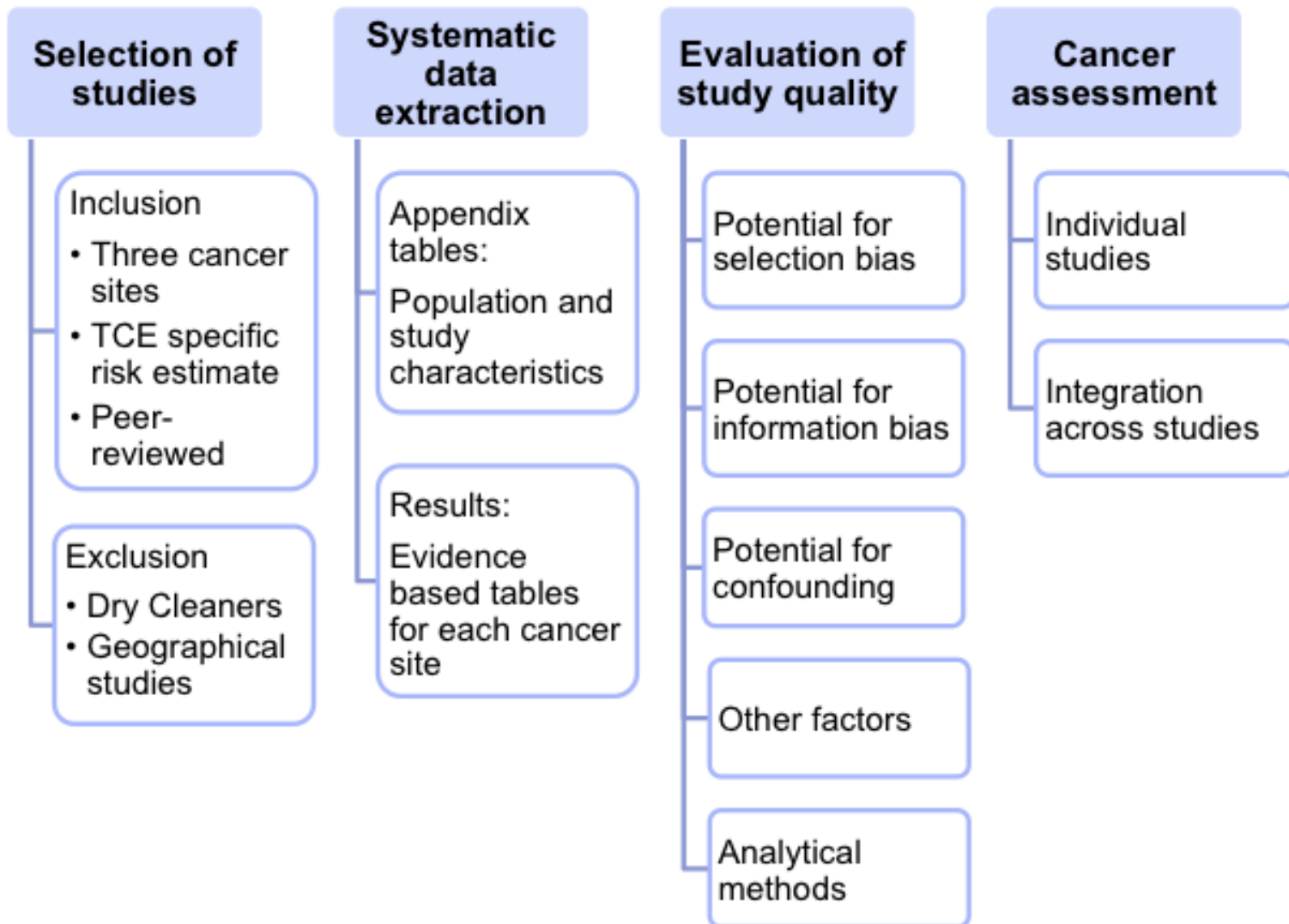
Appendices Literature search strategy

Human cancer studies: Study description/quality evaluation

Evidence-based tables: Genetic and related effects

Evidence-based tables: Immune effects

Part B: Evaluation of human cancer studies



Part B, Section 3: Approach for evaluating study quality and its impact on the study's findings

- Key questions and/or guidelines used to evaluate the following aspects of a study:
 - Potential for selection and information bias.
 - If there is a potential bias, would it likely lead to an overestimate or underestimate of the risk estimate, or is the direction of the bias unknown?
 - Webinar will inform the evaluation of information biases.
 - Quality of the methods to consider confounding.
 - Other factors related to a study's ability to inform the cancer evaluation, such as exposure level, duration and range, length of follow-up, statistical power, and analytical methods.
- Approaches for evaluating impact of confounding in individual studies or across studies.
- The potential for bias or confounding is used to help interpret the study's findings and does not necessarily mean that the study should be disregarded.

Parts C & D: Mechanistic, other relevant data, and exposure sections

- Mechanistic and other relevant data: Cancer evaluation component.
 - Identifies key questions for each section.
 - Outlines the methods for identifying and selecting literature for each section.
 - Literature search strategy.
 - Exclusion/inclusion questions.
 - Discusses the approach for writing the different sections, including the use of authoritative reviews and primary literature.
 - Identifies the proposed modes of action for each cancer site.
- Exposure: Substance profile.
 - Identifies the literature search strategy, sources of exposure information, and types of information to be updated in the profile.

Trichloroethylene



<http://ntp.niehs.nih.gov/go/37899>

Status: Candidate Substance

- Background
 - CAS # 79-01-6
 - Halogenated alkene used mainly as an intermediate for hydrofluorocarbon production (67%) and as a degreaser for metal parts (30%). It is a major ingredient in many consumer products and has been found in food and drinking water, and the environment (ambient air, ground and tap water).
 - Currently listed as *Reasonably Anticipated to be a Human Carcinogen* in the 12th RoC.
- RoC documents related to the scientific review of trichloroethylene
 - [Federal Register Notice \(January 19, 2012\)](#) requesting public comment on nominated substances
 - [Revised Concept Document](#) (December 31, 2013)
 - [Protocol: Methods for preparing the draft RoC monograph on TCE](#) (December 31, 2013)
 - Preliminary literature search and identified citations
 - Draft RoC Monograph
 - Final RoC Monograph
- [Public Comments](#)
- Meetings, Webinars and Listening Sessions
 - [Federal Register Notice \(Nov. 12, 2013\)](#) - requesting nominations of speakers for a proposed TCE webinar
 - [Webinar \(March 17, 2014\)](#) - "Human Cancer Studies on Exposure to Trichloroethylene (TCE): Methods Used to Assess Exposure and Cancer Outcomes"

• **INPUT – provide information** (such as citations or new studies, scientific issues, nomination of experts, or comment on RoC documents)

NTP will communicate via the NTP list serve (<http://ntp.niehs.nih.gov/go/getnews>) when new information is added or current information is updated on this page.