



NTP

National Toxicology Program

Systematic Review & Evidence Integration by OHAT: Next Steps

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Next Steps and Updates

- Evaluation of systemic review framework in case-studies
- Update on data warehousing and information management activities
- Develop framework for considering *in vitro* and high throughput screening data
- Re-visit “level of concern” framework

Evaluation of Systematic Review Framework in Case-Studies

- Track performance metrics:
 - Time to complete, e.g., weeks/months of different phases, staff hours
 - Consistency across evaluation team, e.g., data extraction, risk of bias, confidence ratings
- Ease of implementing, clarity of language, alternative ways to approach when needed
- Consider issues identified in public and interagency comments
- Public webinar to discuss lessons learned during case studies
- Complete case studies during next calendar year

Information Management Update: DRAGON

- Continue to use DistillerSR for screening but moving to different software tool for data extraction (DRAGON)
 - DistillerSR is proprietary, DRAGON is a free data extraction tool being developed by ICF International
- Facilitates harmonized data collection and public sharing of data
- DRAGON has modules for human and animal studies - *in vitro* module coming soon



***ICF DRAGON Development Team:** Dr. Cara Henning, Kristen Marin, Josh Cleland, AJ Overton, Pam Ross, Audrey Turley

DRAGON Features

- Microsoft Access user interface, SQL backend
- Collection of extensive data extraction elements, including dose conversion tools
- Quality control workflow
- Ability to manage assignments and monitor progress
- Analysis modules
 - Benchmark dose for quantitative risk assessment
 - Statistical power assessment
 - Effect size conversion tools
- Create reports automatically e.g., appendix tables, evidence tables, Meta Data Viewer data files
- Multiple users can access at the same time

Promotes Common Vocabulary

Search for Endpoints

- By category
- By text

DRAGON Study Data

Assessment: DEHP, Study: Moore et al., 2001

Save Changes Undo C



Viewing Dose Regimen

Study Dashboard | Study Protocol | Measured Endpoints | Results | Analysis

Select Endpoint Category All Endpoints Search:

Double click a single endpoint, or select multiple and click "Add selected endpoints"

[Add endpoints from existing dose regimen](#)

Select Endpoints

[Add selected endpoints](#)

[Clear All](#)

Endpoint	Example
adrenal gland: absolute weight	
adrenal gland: gross pathology	
adrenal gland: neoplastic lesions	
adrenal gland: nonneoplastic lesions	
adrenal gland: relative weight	
Age of sexual maturation	
alanine aminotransferase (ALT)	This can also be called glutamic pyruvic transaminase or GPT
albumin	
alkaline phosphatase (ALP)	This is sometimes also abbreviated ALK, but is not generally called another name

Select Endpoint

Measured Endpoints

<input type="checkbox"/> View/Edit	System	Endpoint	Name in Study	ObsTime	Time Units	Not Reporte	Not Includer	Endpoint Notes
View/Edit	female reproductive system	implantations	Implantation sites per dam	PND 0	days	<input type="checkbox"/>	<input type="checkbox"/>	N = number of dams per group
View/Edit	development	parturition	Incidence of parturition	PND 0	days	<input type="checkbox"/>	<input type="checkbox"/>	Incidence provided as % incidence of parturition
View/Edit	development	undescended testes	Undescended testes per rat	PND 21	days	<input type="checkbox"/>	<input type="checkbox"/>	Data were digitized using GetData Graph Digitiz

Add Details

- Name in study
- Notes
- View/Edit more

Framework for Considering *In Vitro* and High Throughput Screening (HTS) Data

- Framework for reaching confidence ratings and hazard identification
- Process
 - NTP-wide collaboration
 - Engage federal partners and other stakeholders
 - Public meetings
- Timeline
 - 2-3 years for initial draft framework
 - Framework will be “evergreen”

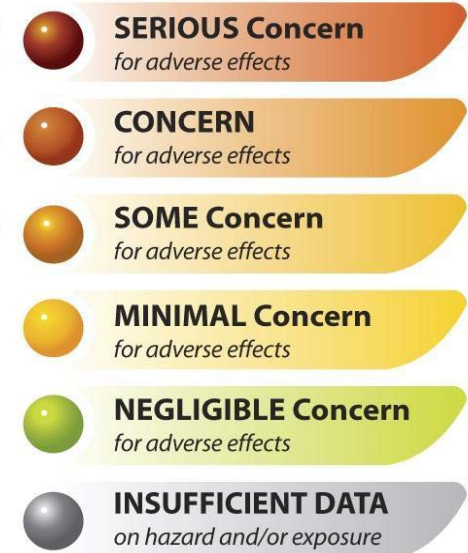
Re-Visit NTP Level of Concern Conclusions

- Formal NTP opinion based on an OHAT evaluation

Hazard ID label + **Extent of human exposure and other factors** = **Level of concern**

- Known
- Presumed
- Suspected
- Not classifiable

5 category scale + category for insufficient data



*May express different levels of concern for different health outcomes, age groups, or based on level or nature of exposure

Re-Visit NTP Level of Concern Conclusions

- Categories need better description
- Will remain narrative, i.e., not quantitative risk assessment
- Too many categories?
- Consider expressing confidence in level of concern conclusion?
- Gather input from technical advisors and focus groups
- Consideration of *in vitro* and HTS data

