Organ Sites with Neoplasia Guided Search Help

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Function

The Organ Sites with Neoplasia search allows users to browse a list of organ sites to see the number of test articles that produced positive, clear, or some evidence of carcinogenic activity. Users can also use a search feature to find test articles that meet user defined criteria for sex, species, route of exposure, level of evidence of carcinogenic activity, organ site or tumor type.

This tutorial details how to use the Organ Sites with Neoplasia search to:

- 1. <u>Browse</u> the number of test articles which produce positive, clear or some evidence of carcinogenic activity in specific organs, species and sexes; or
- Search for test articles with user defined levels of evidence for carcinogenic activity.
 User specifies search criteria: sex, species, route, level of evidence, organ, or tumor type(s)

The NTP's Definition of Carcinogenicity Results (level of evidence) are available here.

From the <u>CEBS Homepage</u>, select the 'Organ Sites with Neoplasia' icon under Guided Searches to open the 'Organ Sites with Neoplasia' search home page. From this page, options to Browse and Search are available.

1) Browse

- The Browse tab is the default Organ Sites with Neoplasia search home page.
- Browse opens to a list of organs with counts of test articles for each species and sex where positive, clear or some evidence of carcinogenicity activity was reported.
- To view neoplastic findings for a specific organ, click on the organ name.
- A table is displayed that shows a list of test articles and metadata for the selected organ.

Note: The table can be sorted on any column by clicking the column header.

a) Browse Results (Restricted Columns)

Description of Columns in Browse Results Table:

Field	Description
Publication No.	NTP publication number
CASRN	Chemical Abstract Service Registry Number
Test Article Name	Name of test article administered to test subjects
Species	Species of test subject
Sex	Gender of test subject
Route	Route of test article administration
Organ	Organ name
Level of Evidence	NTP level of evidence call for the organ/tumor type
	(<u>Definition of Carcinogenicity Results</u>)
Tumor Type/Incidence	Tumor type and incidence per group for the specified finding
Finding Type	Neoplastic Lesions: The test article is directly associated with positive, clear or some evidence of neoplasia for the species, sex, organ and tumor type selected May Have Been Related: The test article may have been associated with evidence of neoplasia in the species, sex, organ and tumor type selected producing an Equivocal level of evidence Blank (null): Negative evidence of neoplasia in the species, sex and organs selected

b) Browse Results Options

From the browse results page, several options exist:

• View Matched or All Results in Selected TRs: Choose to view Matched or All results for the NTP Technical Reports (TRs) listed under 'Publication No.' by selecting the radio button beside the desired option located below the [Download] button.

- Matched Results in TRs: Displays only results that exactly match the Organ and Levels of Evidence shown in the filters (boxes) above the table.
- All Results in Selected TRs: Displays results for all organs and levels of evidence for each TR listed, not just the selected organ site and levels of evidence (rows showing Matched results are indicated by a bullet in the left-hand column).

Note: The [Download] option downloads the data shown in the table for the view (All or Matched Results in TR) selected (see <u>Additional Instructions</u>).

- **View Other Results**: The Organ and/or Level of Evidence filter shown in the boxes above the table can be removed to view additional data.
 - All Organs: Remove the Organ filter by clicking the x inside the box to view results for all organs in the publications listed with a Level of Evidence shown in the filter.
 - All Levels of Evidence: Remove the Level of Evidence filter by clicking the x inside the box to view results in the publications for the specified organ and all Levels of Evidence reported.
 - All Results from All Publications: Remove both filters to view results for all organs and all levels of evidence from all publications in the database.
- **View Abstract:** Click any Publication No. to open a new tab and display the abstract for the NTP publication.
- Download Results: Download and save data in the current table view by selecting the [Download] button above the table (upper right).

Note: For download instructions, see Additional Instructions.

• **Return to Browse Page**: Click the [Back] button (beside Download button) or 'Organ Sites with Neoplasia' in the bread-crumbs to return to the Browse page and select a new organ.

2) Search

- Select the Search option from the Home page to open the search feature and select search criteria: Sex, Species, Route, Level of Evidence, and/or Organ/Site or Tumor Type.
- Additional data columns can be added to the results table by selecting data of interest from the 'Available Data' list, e.g., Study Number, Publication Title, Review Date, Testing Status URL, and more.
- Click [Submit] after all search criteria have been selected to display the results table, or click [Clear Selections] to reset search criteria and start a new search.

a) Select Data

Define the search criteria by selecting from the options provided in 'Select Data' section.

- **Sex:** Gender of test subject (Female, Male, Both)
- **Species:** Species of test subject (Fish, Hamsters, Mice, Rats)
- Route: Route of test article administration (e.g. Dosed-Feed, Gavage, Inhalation)
- Level of Evidence: NTP level of evidence (Definition of Carcinogenicity Results)
 - o Positive
 - Clear Evidence
 - o Some Evidence
 - o Equivocal Evidence
 - Inadequate Study
 - Negative/No Evidence

Note: Selecting 'Inadequate Study' or 'Negative/No Evidence' disables organ and/or tumor types because no organs or tumor types are related to these calls.

- **Search by: Organ/Site or Tumor Type:** Select either 'Organ/Site' or 'Tumor Type' radio button to see a list of Organs or Tumors for which data is of interest.
- **Clear selections**: Click the [Clear Selections] button at the bottom of the page to reset the page and start a new search.

Note: If nothing is selected in a given field, all options in that field are included in the search; If nothing is selected in any of the fields and [Submit] is clicked, a table of all results in the database is generated.

The section entitled 'Additional Data to Include in Results' allows selection of additional data columns to include in the results table.

- **Available Data**: A list of data types that are available for inclusion in the results table is given below. Selections are added to the search results as additional columns.
 - Description: Known test article uses as defined by the NTP
 - o **Exposure:** Dose administration description
 - o **Publication Title:** Title of the NTP publication
 - Study No.: Unique study identification number
 - o Test Article No.: Unique NTP test article identification number
 - o **Testing Status URL**: URL to the NTP Testing Status page for the test article
 - o Lab: Laboratory where the studies were performed
 - Peer review date: Date of peer review approval for the NTP publication

b) Single vs. Multiple Selections

Single or multiple selections can be made in all available data fields; for multiple selections use the Shift key or the Ctrl key on a PC and Command key on a Mac.

c) Search Results (Configure Data Display Table Options Included)

Once all search parameters are chosen and [Submit] is selected, the search results are displayed in a table that is organized by test article name.

Description of Columns in Search Results Table:

etald	Description
Field	Description
Publication No.	NTP publication number
CASRN	Chemical Abstract Service Registry Number
Test Article Name	Name of test article administered to test subjects
Species	Species of test subject
Sex	Gender of test subject
Route	Route of test article administration
Organ	Organ name
Level of Evidence	NTP level of evidence call for the organ/tumor type
	(Definition of Carcinogenicity Results)
Tumor Type/Incidence	Tumor type and incidence per group for the specified finding
Finding Type	Neoplastic Lesions: The test article is directly associated with
	positive, clear or some evidence of neoplasia for the species, sex,
	organ and tumor type selected
	May Have Been Related: The test article may have been
	associated with evidence of neoplasia in the species, sex, organ
	and tumor type selected producing an Equivocal level of evidence
	Blank (null): Negative evidence of neoplasia in the species, sex and
	organs selected
Additional Data Columns (If Selected)	
Description	Known test article uses as defined by the NTP
Exposure	Dose administration description
Lab	Laboratory where the studies were performed
Peer review date	Date of peer review approval for the NTP publication
Publication Title	Title of the NTP publication
Study No.	Unique study identification number
Test Article No.	Unique NTP test article identification number
Testing Status URL	URL to the NTP Testing Status page for the test article or NTP
	project

3) Examples

Below are example searches that can be performed using the Organ Sites with Neoplasia Brows feature. To see what types of questions can be answered using this guided search, follow along with the steps in these examples.

a) Browse Example

We are interested in browsing for test articles that had positive, clear or some evidence of carcinogenicity in the testis as well as any other notable findings reported in the technical reports (TRs) for the test articles identified.

- 1) The Organ Sites with Neoplasia search opens to the Browse page.
- 2) We are looking for data for the testis, so scroll down to the 'Testis' row. The number of findings for each sex of mice and rats is shown. Click on 'Testis' to display a table of results found for the testis (results are shown alphabetically by 'Test Article Name').
- 3) The results table shows the Publication No., CASRN, Test Article Name, Species, Sex, Route, Organ, Level of Evidence, Tumor Type/Incidence and Finding Type. The browse criteria (**Organ**: Testis and **Level of Evidence**: Positive, Clear or Some Evidence) are shown in filter boxes above the table. By default, the 'Matched Results in TRs' radio button is selected.
- 4) We can view other findings reported in the TRs by selecting the 'All Results in selected TRs' radio button. The number of results displayed will increase. To change your selections, use the [Back] button at the top right of the page.
- 5) To open the abstract for any of the TRs listed, click the TR number and you will be linked to the abstract page in a new browser tab.
- 6) Use the [Download] button to download the results table to your computer as a delimited text file. For full download instructions, see <u>Additional Instructions</u>.

b) Search Example

In this example, we will search for test articles in TRs for rat studies that produced clear, positive, some, or equivocal evidence of carcinogenicity in the brain of males or females. We also want to include a link to the NTP testing status page in the results table.

- 1) Select the Search feature beside Browse on the home page.
- 2) First select the specific data we want to see using the options in the Select Data section. Click Both under Sex and Rats under Species. We are interested in all routes, so no selection is needed for Route.
- 3) We want to select multiple options under Level of Evidence. Hold down the Ctrl key (for PC) or Command key (for Mac) and click on 'Clear Evidence', 'Equivocal Evidence', 'Positive', and 'Some Evidence'. Your selections will be highlighted. To

- unselect an item, click on it again or use the [Clear Selections] button (**Note**: this will clear all selections not just Level of Evidence).
- 4) Click 'Organ/Site' in Search By section to display a list of organs available for selection. Click Brain to select and highlight.
- 5) To add the testing status pages for these results, we will need to add it to the display option. Under Additional Data to Include in Results, click 'Testing Status URL' to highlight and select it.
- 6) Click the [Submit] button at the bottom of the page to display search results that include Publication No., CASRN, Test Article Name, Testing Status URL, Species, Sex, Route, Organ, Level of Evidence, and Tumor Type/Incidence. The search criteria (Organ: Brain, Level of Evidence: Positive, Clear or Some Evidence, Sex: Both, and Species: Rats) are shown in filter boxes above the table. By default, the 'Matched Results in TRs' radio button is selected.
- 7) Click the [Download] button to save the results table to your computer as a delimited text file. For full download instructions, see Additional Instructions..

4) Additional Instructions/Information

- 1) Downloading and displaying data in Excel
 - By default [Download] will save a delimited text file to your download folder with the file name formatted as 'yyyy-mm-dd'-site_data.txt.
 - o To access the data, go the download folder where the data was saved
 - You can rename the file as needed
 - Open the file in Notepad or your favorite text editor (Note: don't open with Excel directly as some data, such as CASRN, may be reformatted)
 - Select all by choosing Ctrl + A (PC) or Command + A (Mac) which will highlight the entire document
 - o Right click your mouse and select copy
 - Open Excel, select all cells and format as text to insure all data retains original format
 - Right click your mouse and select paste
 - Save as an Excel document
 - To add options for filtering by data headers, navigate to the Data Tab in Excel and select Filter
- 2) CEBS data may be cited by navigating to the CEBS Support page, and selecting the <u>Citing</u> <u>CEBS</u> document under FAQs.