

# Cancer Risk Assessment Tools

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# NCI Radiation Risk Assessment Tool

**Enter Input Information Manually.**

Run Identifier [optional]

Gender

Birth Year

Number of Dose Entries

Dose Input Information

Modify Advanced Settings

**Enter Input Information using a File:**

**Calculate Results:**

[About Calculator](#) [View Model Details](#) [Restart](#)

	1	2	3	4	5	6	7	8
Year of Exposure	1980	1981	1982	1983	1984	1985	1986	1987
Distribution	'Constant'	'Constant'	'Constant'	'Constant'	'Constant'	'Constant'	'Constant'	'Constant'
Parameter 1	4.5	7.8	3.2	4.5	4.5	4.5	9	1
Parameter 2	0	0	0	0	0	0	0	0
Parameter 3	0	0	0	0	0	0	0	0
Exposure Rate	'a'	'a'	'a'	'a'	'a'	'a'	'a'	'a'

# NCI RadRAT Methodology

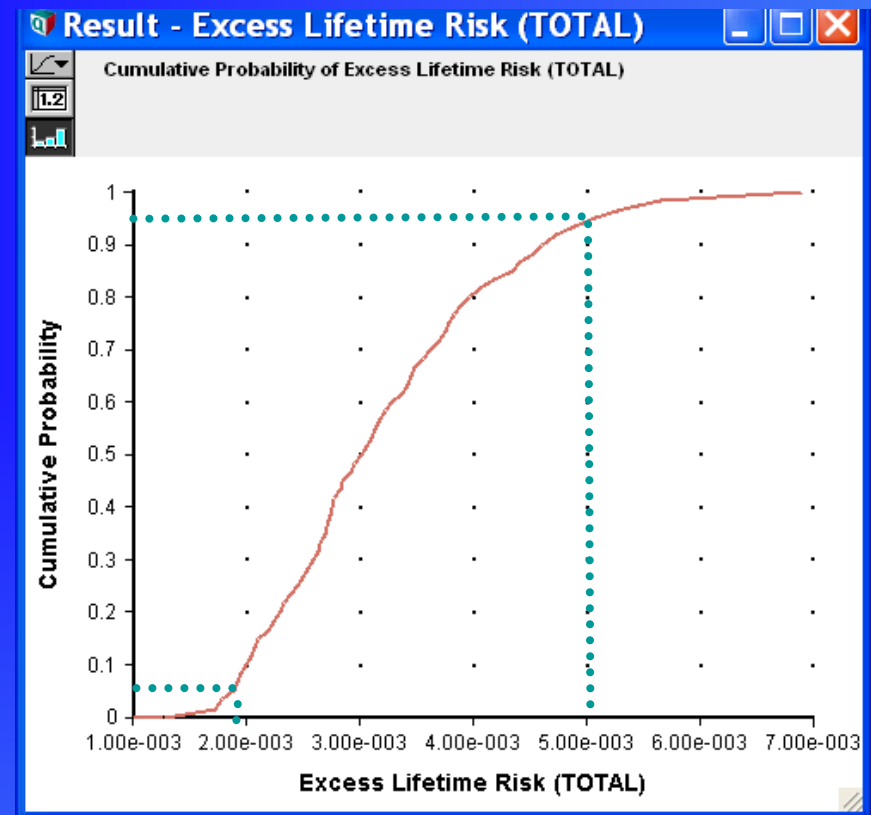
- Organ-specific risk models
  - Based on NAS BEIR VII (2006)
  - 11 site-specific cancer models
  - Japanese atomic bomb survivors
  - Medical exposure studies
    - Breast and thyroid cancer
- 7 Additional models
  - Oral, esophagus, rectum, pancreas, gallbladder, kidney, brain/CNS

The screenshot shows the NCI Radiation Risk Calculator (NCI RadRisk v.3.6.1) web interface. The page is titled "NCI Radiation Risk Calculator" and "NCI RadRisk v.3.6.1". It features a navigation bar with links for "home", "about NCI", "cancer information", "clinical trials", "statistics", "research programs", and "research funding". There are also links for "dictionary", "site map", and "search". The main content area is divided into three sections: "Enter Input Information Manually:", "Enter Input Information using a File:", and "Calculate Results:". The "Enter Input Information Manually:" section includes fields for "Run Identifier [optional]" (Run 1), "Gender" (Male), "Birth Year" (1950), "Number of Dose Entries" (1), "Dose Input Information" (Enter Doses), and "Modify Advanced Settings" (Adv Settings). The "Enter Input Information using a File:" section includes an "Upload Page" button. The "Calculate Results:" section includes an "Estimate Risk" button. At the bottom of the page, there are links for "About Calculator", "View Model Details", and "Restart".

# NCI RadRAT - Uncertainty Intervals

## Monte Carlo simulations

- Subjective uncertainties
  - Transfer risks
  - DDREF
- Statistical uncertainties
  - Model parameters





FAQ of the Month

? [Do cell phones cause cancer?](#)

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## Risk Calculator

? Help

### Plain Films (x-rays)

- [Chest x-ray \(2 views\)](#)
- [Abdomen x-rays](#)
- [Pelvis x-rays](#)
- [Hip x-rays \(unilateral\)](#)
- [Neck x-rays](#)
- [Upper Back x-rays](#)
- [Lower Back x-rays](#)
- [Extremity x-rays \(Arm, Leg, etc\)](#)
- [Mammogram \(unilateral\)](#)
- [Dental x-ray \(panoramic\)](#)
- [Skull x-rays](#)
- [DEXA Scan \(Bone Density\)](#)

Dose is based on multiple views

### CT Scans

### Fluoroscopy

### Nuclear Medicine

### Interventional Procedures

Please see [Glossary](#) for description of different studies.

**Study:**

**Gender:** Male  Female

**Age at Time of Study:**  (years)

**Number of Exams:**

**Average Dose:**  (mSv)

**DLP (Optional for CT):**  (mGy · cm)

Calculate

**Total Effective Dose:**  (mSv)

**Additional Cancer Risk:**  (%)

**Baseline Cancer Risk:**  (%)

**Baseline + Additional Risk:**  (%)

Add This Exam to your Report

To learn more about how these calculations are made, see the [About](#) page.

### Your X-ray Risk Report

Study	Gender	Age	# of exams	Dose (mSv)	Additional Cancer Risk(%)
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