Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs can not be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Esophagus Cancer Model
20 years latency

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs cannot be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Colon Cancer Model
20 years latency

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution

Age at Diagnosis  
- 40 years
- 50 years

PC (99th percentile) vs. Organ Dose (rem)
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs cannot be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Stomach Cancer Model
20 years latency

Organ Dose (rem)

PC (99th percentile)

Age at Diagnosis

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs can not be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

All digestive Cancer Model
20 years latency

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs can not be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Pancreas Cancer Model
20 years latency

Inputs: Male, One acute exposure, photons $E>250\text{keV}$, Constant distribution

Age at Diagnosis
- 40 years
- 50 years
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs cannot be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Liver Cancer Model
20 years latency

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution

Age at Diagnosis  
- 40 years  
- 50 years

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs can not be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

**Gallbladder Cancer Model**

**20 years latency**

![Graph](image)

**Inputs:** Male, One acute exposure, photons E>250keV, Constant distribution

**Age at Diagnosis**

- Red: 40 years
- Blue: 50 years

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs can not be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Bladder Cancer Model
20 years latency

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs can not be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Urinary organs (excl. Bladder) Cancer Model
20 years latency

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution

Age at Diagnosis  
40 years  
50 years
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs cannot be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

All Male Genitalia (incl. Prostate) Cancer Model
20 years latency

![Graph showing the probability of causation (PC) at the 99th percentile for different organ doses and age at diagnosis for acute exposures to high energy photons.]

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs can not be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Oral Cavity and Pharynx Cancer Model
20 years latency

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution

Age at Diagnosis  40 years  50 years

PC (99th percentile) vs. Organ Dose (rem)
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs can not be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Nervous system Cancer Model
20 years latency

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution

Age at Diagnosis
- 40 years
- 50 years
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs can not be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Lymphoma & multiple myeloma Cancer Model
20 years latency

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs can not be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Breast Cancer Model
20 years latency

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution

Page 14 of 22
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs cannot be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Breast Cancer Model
20 years latency

Inputs: Female, One acute exposure, photons E>250keV, Constant distribution

Age at Diagnosis  
40 years  
50 years

Inputs: Female, One acute exposure, photons E>250keV, Constant distribution
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs can not be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Ovary Cancer Model
20 years latency

Inputs: Female, One acute exposure, photons E>250keV, Constant distribution

Age at Diagnosis  
- 40 years  
- 50 years

Organ Dose (rem)

PC (99th percentile)
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs cannot be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Lung Cancer Model
20 years latency

![Graph showing probability of causation vs. organ dose for different ages at diagnosis.](image)

Age at Diagnosis | 40 years | 50 years

Inputs: Male, Never smoked, One acute exposure, photons E>250keV, Constant distribution
Note: Because there is no adjustment for age at diagnosis for this scenario the two curves overlap.
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs can not be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Lung Cancer Model
20 years latency

Inputs: Male, Former smoker, One acute exposure, photons E>250keV, Constant distribution

PC (99th percentile)

Organ Dose (rem)

Age at Diagnosis  
- 40 years  
- 50 years

Inputs: Male, Former smoker, One acute exposure, photons E>250keV, Constant distribution
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs cannot be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Lung Cancer Model
20 years latency

Organ Dose (rem)

PC (99th percentile)

Age at Diagnosis

Inputs: Male, Current smoker (? cig/day), One acute exposure, photons E>250keV, Constant distribution
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs cannot be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Bone Cancer Model
10 years latency

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution

Age at Diagnosis  
40 years  50 years

Inputs: Male, One acute exposure, photons E>250keV, Constant distribution
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs cannot be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.

Thyroid Cancer Model
10 years latency

Inputs: Male, One acute exposure, photons E>250 keV, Constant distribution
Note: The graph on this page depicts the probability of causation for acute exposures to high energy (i.e., >250 keV) photons. Because radiation exposure types (i.e., alpha, beta or gamma) and exposure scenarios (i.e., chronic vs. acute) vary widely among individuals, these graphs can not be used for estimating the outcome of a specific case. Rather, they are provided to allow one to compare the variability in dose response among the various cancer models employed in IREP.