










# Radiation Dose to Patients From Common Imaging Examinations

Procedure		** Approximate effective radiation dose	Comparable to natural background radiation for	* Estimated lifetime risk of fatal cancer from examination
 <b>ABDOMINAL REGION</b>	Computed Tomography (CT) — Abdomen and Pelvis	10 mSv	3 years	Low
	Computed Tomography (CT) — Abdomen and Pelvis, repeated with and without contrast material	20 mSv	7 years	Moderate
	Computed Tomography (CT) — Colonography	10 mSv	3 years	Low
	Intravenous Pyelogram (IVP)	3 mSv	1 year	Low
	Radiography (X-ray) — Lower GI Tract	8 mSv	3 years	Low
	Radiography (X-ray) — Upper GI Tract	6 mSv	2 years	Low
 <b>BONE</b>	Radiography (X-ray) — Spine	1.5 mSv	6 months	Very Low
	Radiography (X-ray) — Extremity	0.001 mSv	3 hours	Negligible
 <b>CENTRAL NERVOUS SYSTEM</b>	Computed Tomography (CT) — Head	2 mSv	8 months	Very Low
	Computed Tomography (CT) — Head, repeated with and without contrast material	4 mSv	16 months	Low
	Computed Tomography (CT) — Spine	6 mSv	2 years	Low
 <b>CHEST</b>	Computed Tomography (CT) — Chest	7 mSv	2 years	Low
	Computed Tomography (CT) — Lung Cancer Screening	1.5 mSv	6 months	Very Low
	Radiography — Chest	0.1 mSv	10 days	Minimal
 <b>DENTAL</b>	Intraoral X-ray	0.005 mSv	1 day	Negligible
 <b>HEART</b>	Coronary Computed Tomography Angiography (CTA)	12 mSv	4 years	Low
	Cardiac CT for Calcium Scoring	3 mSv	1 year	Low
 <b>MEN'S IMAGING</b>	Bone Densitometry (DEXA)	0.001 mSv	3 hours	Negligible
 <b>NUCLEAR MEDICINE</b>	Positron Emission Tomography — Computed Tomography (PET/CT)	25 mSv	8 years	Moderate
 <b>WOMEN'S IMAGING</b>	Bone Densitometry (DEXA)	0.001 mSv	3 hours	Negligible
	Mammography	0.4 mSv	7 weeks	Very Low

*Risk Level	Negligible	Minimal	Very Low	Low	Moderate
Estimated additional risk of fatal cancer for an adult from examination	Less than 1 in 1,000,000	1 in 1,000,000 to 1 in 100,000	1 in 100,000 to 1 in 10,000	1 in 10,000 to 1 in 1,000	1 in 1,000 to 1 in 500
Note: These risk levels represent very small additions to the 1 in 5 chance we all have of dying from cancer.					

**Important:** Pediatric patients vary in size. Doses given to pediatric patients will vary significantly from those given to adults.

**For the most current information, visit [radiologyinfo.org](http://radiologyinfo.org).**

\*\* The effective doses are typical values for an average-sized adult. The actual dose can vary substantially, depending on a person's size as well as on differences in imaging practices.†

†Mettler, F.A., et al. "Effective doses in radiology and diagnostic nuclear medicine: a catalog." *Radiology*, July 2008; 248(1):254–263.