

Radiation Dosage Chart for CS 8100 3D Family

Radiation Source	Effective dose ^A (μSv)	Lifetime increase in cancer risk ^B (per million exams)	Background equivalency ^C
Airport security scan	0.1		18 min
CS 8100 3D Pediatric Lateral Cephalometric (18 x 18 cm)[†]	1.4	0.1	4 hours
CS 8100 3D Lateral Cephalometric (26 x 24 cm)[†]	2.1	0.1	6 hours
CS 8100 3D Pediatric Low Dose CBCT (4 x 4 cm)[†]	5	0.3	0.5 days
CS 8100 3D Adult Low Dose CBCT (5 x 5 cm)[†]	5	0.3	0.5 days
Daily background dose (cosmic radiation) [‡]	8-10		1 day
Single PA or Bitewing (round collimation) [‡]	9.5	0.5	1 day
CS 8100 3D Panoramic exam (pediatric)[†]	12	0.7	1.5 days
CS 8100 3D Dual Jaw Low Dose CBCT (8 x 9 cm)[†]	19	1.1	2 days
CS 8100 3D Panoramic exam (adult)[†]	29	1.7	3.5 days
4 Bitewings (round collimation) [‡]	38	2	4 days
Flight from NY to LA	40		5 days
CS 8100 3D EndoHD CBCT (5 x 5 cm)[†]	58	3.5	7 days
CS 8100 3D Maxillary CBCT (8 x 5 cm)[†]	70	4.2	8 days
CS 8100 3D Dual Jaw Flash scan CBCT (8 x 9 cm)[†]	72	4.3	8 days
Full mouth series (digital) [‡]	171	9	21 days
Full mouth series (D-speed film) [‡]	388	21	47 days
Mammogram	400	24	48 days
Maxillo-mandibular MDCT [‡]	2,100	153	256 days
Background dose received per year [‡]	3,000-3,500		1 year

[†] Based on studies conducted by John Ludlow, University of North Carolina, School of Dentistry, utilizing the CS 8100 3D dose protocol (Aug 2014, Nov 2015, May 2017).

[‡] Jamali, J., Kolokythas, A. and Miloro, M., 2015. Clinical Applications of Digital Dental Technology, pp.6-8.

Effective dose calculations based on the revised guidelines given by the International Commission on Radiological Protection (ICRP 103).

A. Effective dose measured in microSieverts (μSv) describes the effect on the body's various tissues when exposed by radiation from various sources. Different types of tissues in our body all have different sensitivity to radiation.

B. According to the American Cancer Society, the average person (male or female) in the U.S. has a 20% chance of developing a fatal cancer during his or her lifetime

(or 200,000 per million people). The table above shows that if a million people had a panoramic exam (adult), the total cancer rate would change from 200,000 per million to 200,001.7 per million, or a 0.00085% increased risk of developing cancer.

C. The average person in the U.S. receives approximately 8-10 μSv of effective dose of ionizing radiation per day.