



Imaging Systems, Inc.

I-CAT Volumetric CT Radiation Dosage Comparison

I-CAT 20 second scan: 68 μ Sv

Exposure is in "Pulsed" mode, actual exposure time is about 3.5 seconds for a 20 second scan

I-CAT 10 second scan: 34 μ Sv

Daily background: 8 μ Sv

Panoramic (Average): 10-15 μ Sv

Digital Panoramic 4.7 – 14.9 μ Sv

Highest Film Pan 26 μ Sv

Full mouth series: 150 μ Sv

Medical CT 1200-3300 μ Sv*

The above courtesy of:

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Related information:

"Radiation quantities and units - ...Recently, new units for dose equivalent were introduced into the metric system. The new unit of dose equivalent is the sievert (Sv, 1 Sv = 100 rem). These new units are coming into widespread use and will be used in this report. In dental radiology, doses are quite small and are generally expressed in millirads (1 mrad = 0.001 rad) or micrograys (1 μ Gy = 0.000001 Gy). For conversion, 1 mrad is equal to 10 μ Gy. Similarly, 1 mrem is equal to 10 μ Sv."

"A Radiation Unit for the Public"

"It is easy to use the new unit. You have to remember that natural radiation background is about 3 mSv or 300 mrem per year. . . . Radiation that strikes only part of the body, such as medical x-rays, is not as hazardous as the same amount of radiation to the whole body. Typical BERT's (Background Equivalent Radiation Time) of ionizing radiation from medical x-rays are: a dental bitewing, about one week; a chest x-ray about ten days; a mammogram, about three months; and a barium enema x-ray study, about one year."

Cameron, J. R., *American Academy of Oral & Maxillofacial Radiology Newsletter*, Vol. 24, No. 3, Summer, 1997, pg. 17.