



Nevada State Health Division Technical Bulletin



Topic: Review of American Cancer Society study

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TO: Nevada Dental Practitioners

Date: May 3, 2012

As a result of a recent study published by the American Cancer Society, the American Dental Association (ADA) has taken an active role in reducing the radiation exposure risk to the public by making recommendations to make use of fast film speeds if not using digital imaging systems, shielding, and minimal exposure time per film. Historically, the machines were not as well manufactured, certification standards by the FDA were not as strict, the X-ray beam was not as well shielded and the film used was not as fast in speed as the current film used, requiring a longer exposure time to the client. Since that time, the FDA has imposed stricter standards for all X-ray machines, including dental and digital imaging systems currently in use to reduce the radiation exposure to approximately one third to one fourth of that received with the film in the dental setting.

The study linked dental X-rays to an increased risk of development of a common brain tumor, a meningioma. This report was reviewed by the ADA and several flaws were pointed out. The report contained what is described as "recall bias" which is when the participants in the study were asked to describe the dental X-rays that they were exposed to decades in the past. Memory is not always accurate.

In the dental arts and science, the use of radiographic studies is of paramount importance. They are used under the direction of a licensed practitioner, as needed, in the treatment planning for patients with oral health issues. There is always the risk versus benefit scenario for any examination in the radiological realm. The information obtained by the dental radiography for treatment purposes generally outweighs the risk of the radiation exposure involved; particularly when appropriate measures are applied such as the ADA recommended shielding of the patient with a lead apron and the use of the leaded thyroid collar.

It is the goal of the ADA, and all dental professionals, to treat oral pathology as soon as it is discovered. These new advances both reduce the exposure of radiation to the patient as well as provide an earlier diagnosis of pathology. The ADA encourages patients to open dialogue with their dental professional concerning this or any issues prior to treatment. The ADA continues to provide research and recommendations for patient safety.

Should you have any questions concerning dental X-ray safety, please contact the Nevada State Health Division, Radiation Control Program at 1.775.687.7550.

A handwritten signature in blue ink that reads "Karen K. Beckley".

SIGNATURE

May 3, 2012

DATE

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