

AMENDED IN SENATE JUNE 13, 2005

AMENDED IN ASSEMBLY MAY 27, 2005

AMENDED IN ASSEMBLY APRIL 25, 2005

AMENDED IN ASSEMBLY APRIL 4, 2005

CALIFORNIA LEGISLATURE—2005—06 REGULAR SESSION

ASSEMBLY BILL

No. 929

Introduced by Assembly Member Oropeza

February 18, 2005

An act to add Article 5 (commencing with Section 114897) to Chapter 6 of Part 9 of Division 104 of the Health and Safety Code, relating to radiation technology.

LEGISLATIVE COUNSEL'S DIGEST

AB 929, as amended, Oropeza. Radiologic technology: radiation exposure.

Under existing law, the State Department of Health Services administers provisions that establish standards for the education, training, and experience of persons who use radiologic technology on human beings. *Existing law also requires the department to adopt registration and certification regulations for mammography equipment.*

~~Existing law provides for the Office of Environmental Health Hazard Assessment.~~

~~Existing law provides for the California Research Bureau in the California State Library, which is responsible for, among other things, conducting various studies.~~

This bill would require the Radiologic Health Branch of the department to ~~conduct a study of best practices in New Jersey that~~

~~have resulted in a reduction of ionizing radiation exposure from radiation-producing machines used for medical diagnosis and to make recommendations for implementing a radiation quality assurance program in California and for improving provider and patient awareness of the benefits and risks of radiation exposure. The bill would require the branch to submit the study and recommendations to the appropriate committees of the Legislature on or before January 1, 2007 adopt regulations that require personnel and facilities using radiation-producing equipment for medical and dental purposes to maintain and implement quality assurance standards that meet or exceed the existing mammography standards for the protection of the public health and safety.~~

Vote: majority. Appropriation: no. Fiscal committee: yes.
State-mandated local program: no.

The people of the State of California do enact as follows:

1 SECTION 1. (a) The Legislature finds and declares all of the
2 following:
3 (1) (A) More than 300,000,000 medical and dental imaging
4 examinations and radiation therapy treatments are administered
5 annually in the United States. Proper use of ionizing radiation is
6 an extremely important life-saving therapy for many cancer
7 patients. Seven out of every 10 Americans undergo a medical or
8 dental imaging examination or radiation therapy treatment every
9 year in the United States.
10 (B) These procedures are useful in the diagnosis of medical
11 conditions. However, the administration of medical and dental
12 imaging examinations and the effect of these procedures on
13 individuals have a substantial and direct effect upon public health
14 and safety.
15 (C) It is in the interest of public health and safety to minimize
16 unnecessary or inappropriate exposure to radiation from medical
17 and dental radiological procedures.
18 (2) In 2005, about 135,000 Californians will be diagnosed
19 with cancer and about 54,000 will die of the disease. Cancer
20 incidence is rising throughout the United States. In the United
21 States, one in three women and one in two men will face cancer
22 during their lifetime. Exposure to radiation such as through
23 X-rays, CT scans, fluoroscopy, and other medical and dental

1 radiological procedures is contributing to the high rates in the
2 United States.

3 (3) In January 2005, the National Toxicology Program
4 classified x-radiation and gamma radiation as known human
5 carcinogens. The report stated that “exposure to these kinds of
6 radiation cause many types of cancer including leukemia and
7 cancers of the thyroid, breast and lung . . . Exposure to
8 x-radiation and gamma radiation has also been shown to cause
9 cancer of the salivary glands, stomach, colon, bladder, ovaries,
10 central nervous system and skin.” Diagnostic radiation is
11 valuable in the practice of medicine and dentistry today.
12 However, patients have a right to know that procedures involving
13 exposure to radiation entail risks as well as benefits.

14 (4) According to a leading scientist with the National Cancer
15 Institute, “More is known about the relationship between
16 radiation dose and cancer risk than any other human carcinogen,
17 and female breast cancer is the best quantified radiation-related
18 cancer.” Breast cancer is the most commonly diagnosed cancer
19 among women in California and in the United States. Each year
20 in California approximately 21,000 women will be diagnosed
21 with the disease and 4,000 will die from it.

22 (5) To reduce the risk of radiation-related cancer, physicians,
23 dentists, other health care providers, technologists, equipment
24 manufacturers, and the government share the responsibility to
25 minimize radiation exposure of patients. Exposures should be as
26 low as reasonably achievable without sacrificing image quality.
27 Studies have shown that often patients are not provided with
28 sufficient information on the merits and potential adverse effects
29 of diagnostic imaging procedures. In addition, the popularity of
30 self-referred whole body CT scans has increased concern among
31 radiologists and cancer specialists. The United States Food and
32 Drug Administration has never approved CT scans for screening
33 any part of the body for any specific disease, let alone for
34 screening the whole body when there are no specific symptoms
35 of a disease. The American College of Radiology states that
36 “there is no evidence that total body CT screening is cost
37 efficient or effective in prolonging life.” Scientists at Columbia
38 University found that a single full-body CT scan exposes a
39 person to a radiation dose nearly 100 times that of a typical
40 mammogram. Improving patient awareness and protection during

1 radiologic imaging is a critical step toward reducing a
2 preventable cause of cancer.

3 (6) According to the National Cancer Institute, children are
4 uniquely vulnerable to harm from radiation exposure because
5 they are more sensitive to radiation than adults. Children have a
6 longer life expectancy after exposure, creating a larger window
7 of opportunity for expressing radiation damage. For example, CT
8 scans deliver a much higher radiation dose than conventional
9 X-rays. Approximately 2 to 3 million CT scan examinations are
10 performed annually on children in the United States. The use of
11 CT scans has increased seven-fold in the past 10 years.

12 (7) In 2001, the State of New Jersey developed and
13 implemented a “Quality Assurance Program” that has led to a
14 reduction in ionizing radiation exposure.

15 (b) It is the intent of the Legislature in enacting this act to
16 promote best practices as a proven means to reduce the exposure
17 to ionizing radiation, and increase and maintain diagnostic image
18 quality.

19 SEC. 2. Article 5 (commencing with Section 114897) is
20 added to Chapter 6 of Part 9 of Division 104 of the Health and
21 Safety Code, to read:

22

23 Article 5. Radiation Exposure

24

25 114897. ~~(a) (1) In order to increase protection to~~ (a) (1) *In*
26 *order to better protect* the public and radiation workers from
27 unnecessary exposure to radiation and to reduce the occurrence
28 of misdiagnosis caused by faulty equipment and operator error,
29 the Radiologic Health Branch within the State Department of
30 Health Services shall ~~research and investigate best practices in~~
31 ~~New Jersey that have resulted in a reduction of ionizing radiation~~
32 ~~exposure from radiation-producing machines used for medical~~
33 ~~diagnosis and make recommendations pursuant to paragraph (2).~~
34 ~~The cost of the study shall not exceed one hundred thousand~~
35 ~~dollars (\$100,000).~~ *adopt regulations that require personnel and*
36 *facilities using radiation-producing equipment for medical and*
37 *dental purposes to maintain and implement quality assurance*
38 *standards that meet or exceed the mammography standards*
39 *outlined in subdivision (e) of Section 115060 for the protection of*
40 *the public health and safety.*

1 ~~(2) The Radiologic Health Branch shall prepare and provide to~~
2 ~~the Radiologic Technology Certification Committee a summary~~
3 ~~of findings from the study and make recommendations on both of~~
4 ~~the following:~~

5 ~~(A) Methods for implementing a Radiation Quality Assurance~~
6 ~~Program in California to help insure that high quality diagnostic~~
7 ~~images are consistently produced while minimizing ionizing~~
8 ~~radiation exposure.~~

9 ~~(B) Methods for improving provider and patient awareness of~~
10 ~~the benefits and risks of radiation exposure.~~

11 ~~(b) On or before January 1, 2007, the Radiologic Health~~
12 ~~Branch shall submit the summary of findings and the~~
13 ~~recommendations to the appropriate policy committees of the~~
14 ~~Legislature.~~