

**Information Notice Number 33  
(January 2022)**

**For Florida Radiation Machine Registrants  
Department of Health, Bureau of Radiation Control**

**GONADAL SHIELDING**

Section 64E-5.502 (1)(a)5, Florida Administrative Code (FAC), states:

“Gonad shields of not less than 0.25 millimeter lead equivalent shall be used for patients who have not passed the reproductive age, during radiographic procedures in which the gonads are in the useful beam, except for cases in which this would interfere with the diagnostic procedure.”

This is the only instance in Chapter 64E-5, FAC, that requires shielding on patients during procedures involving radiation machines. In all other cases, it is the licensed practitioner using their professional judgement that determines the necessity and appropriateness of patient shielding

This information notice is in response to the April of 2019 position paper by the American Association of Physicists in Medicine (AAPM) on gonadal shielding and reasons for limiting its routine use in medical imaging. Since that time, the following organizations have endorsed and/or issued additional guidance in support of the AAPM position statement: American College of Radiology (ACR), the Canadian Organization of Medical Physics (COMP), the Health Physics Society (HPS), the Canadian Association of Radiologists (CAR), the Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM), the Image Gently Alliance and The National Council on Radiation Protection and Measurements (NCRP).

As the information on the applicability of gonad shielding has disseminated through the health care industry, the Bureau of Radiation Control has received requests for clarification on the department's position and any planned changes to section 64E-5.502 (1)(a)5., FAC.

The language in section 64E-5.502 (1)(a)5., FAC, provides a licensed practitioner with significant flexibility and leeway in implementing gonad shielding in routine imaging practices. While the original intent was related to shielding that interferes with the field of view and obscures the part of the body requiring imaging, the language can also apply to any negative impact that gonad shielding causes on the diagnostic procedure. For example, Florida Statutes section 404.056(7)(b) states:

“(7) Radiation machines that are used to intentionally expose a human being to the useful beam: ...

(b) Must be operated at the lowest exposure that will achieve the intended purpose of the exposure;...”

As gonadal shielding can change the tube output and increase the dose to exposed tissues when an imaging device uses automatic exposure control, the use of gonadal shielding with such machines can be considered an interference with the diagnostic procedure. In this case, the licensed practitioner could determine that the gonad shielding is inappropriate.

It is in the Bureau's opinion that the current language provides a licensed practitioner with the authority to determine the appropriate implementation of gonad shielding to ensure the goal of obtaining optimal imaging at lowest achievable dose. Guidance from AAPM, NCRP, ACR and other associations that address radiation safety in medicine is available to assist licensed practitioners in making that determination.

Questions on this information notice may be directed to the Bureau of Radiation Control, Radiation Machine Section at the address below.

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