

AbstractID: 4019 Title: Regulatory Update for Brachytherapy

In the past ten years significant changes occurred in brachytherapy and its governing regulations. The professor reviews the use of the world-wide-web Internet to disseminate regulations, discusses changes in types of brachytherapy procedures, considers concerns about by-product material security, and reviews recent federal codes and their implementation by agreement states. Current web addresses are presented for international organizations that make recommendations that become the basis of subsequent federal regulations made by federal agencies. National trends (increases in “seed” implants and HDR treatments; declines in traditional gynecological treatments and intravascular use, etc.) in brachytherapy are reviewed. Do you know where your sources are? *Who else knows?* Security of byproduct sources, small multiple millicurie quantities of long-lived byproduct materials (^{137}Cs , ^{60}Co , etc.), in medical facilities is a new international and national concern that will likely will lead to new national and state regulations requiring greater security for radioactive sources. Unchanged regulations, *10 CFR 19 (Notices, Instructions, and Reports to Workers; Inspections)*, *10 CFR20 (Standards for Protection Against Radiation)* are reviewed, as well as changes in *10 CFR20 (Standards for Protection Against Radiation)*, *10CFR32 (Specific... Material)*. As time permits, 126 sections of *10CFR35 (Medical Use of Byproduct Material)* applicable to all forms of forms of radiation, manual brachytherapy, and photon-emitting remote afterloaders are discussed. If you haven't read the “new” (4-24-02) USNRC 10 CFR 20, 32 and 35 Regulations, this limited presentation (NB: “Regulations Lite”) reviews the cogent details of regulations that did not change as well as those that did. Authorized Medical Physicist (AMP), and the training thereof, is defined, as well as types (LDR, PDR, HDR) of remote afterloading units (RAU), including medium dose rate (MDR) and mobile services. Roles of management, the radiation safety officer (RSO), and authorized users (AU) supervision of individuals are explained. Dose prescriptions, or written directives (WD) details and procedures are enumerated. Source inventories are now at 6-month intervals; there are new release criteria for patients as well as rules for decay-in-storage of RAM. Record retention and medical events reporting requirements are explained. Bulletins, Directives, Guidance's, Informational Notices, News Letters, and Regulatory Summaries for Brachytherapy are described, and recent NRC activities discussed. Understanding codes, regulations, and license conditions has to be the least exciting part of a medical physicist job! Federal codes are the basis for state codes, but state codes are not identical to federal codes, even in agreement states. Compliance with myriad regulations and license conditions is a challenge. By knowing the origin of codes and regulations an AMP can write a better license! So, if you are an AMP who wants to your AU to write a proper WD to avoid an ME on your RAU during HDR, attend this lecture! (If you don't understand this last sentence, you particularly need to attend!)