

Image guided brachytherapy techniques increase the efficacy and convenience of implant procedures. This is particularly evident with ultrasound guided prostate implants. Several techniques are being used to optimally implant the prostate. After a brief review of the pertinent literature, this refresher course will review the basics of prostate implant physics as contained in the report of Task Group 64. Particular attention will be paid to: equipment selection, source preparation, source calibration, preplanning philosophies, seed insertion methods, post implant dosimetry, time of post implant dosimetry, NIST seed strength definition changes, and prostate implant dose evaluation. The advantages and disadvantages of each philosophy and method will be highlighted. The impact ultrasound guided prostate implant programs have on the medical physicist will be discussed.

Educational Objectives:

- 1) To learn about the equipment and supplies available for ultrasound guided prostate implants and ways in which they are used.
- 2) To learn the various philosophies used to plan, perform and evaluate prostate implants.
- 3) To highlight the impact medical physicists have on the treatment of prostate implant patients with an emphasis on future developments.