(A) Policy Statement

A quality management program shall be established to provide high confidence that the prescribed radioactive material or radiation from radioactive material will be administered to intended patients only as directed by the authorized user of the material. Each physician who is authorized to use radioactive material will date and sign a written directive prior to the administration of any brachytherapy dose to the appropriately identified patient.

(B) Purpose of Policy

To minimize the possibility of administering the wrong radionuclide, wrong number of sources or source strengths, wrong treatment site, wrong treatment time (or total dose) or administering the material to the wrong patient.

(C) Procedure

1. Prior to the brachytherapy dose administration, an authorized physician will date and sign a written directive which includes the patient's name, date of birth, the radionuclide, the number and strength of the sources, the treatment site and the treatment dose.

2. Prior to the administration, the person performing the administration will verify the identity of the patient by asking the patient's name and by confirming the name and birthdate, or photograph of the patient's face. (A Time Out)

3. Prior to the administration, the person performing the administration will confirm that the radionuclide, the number and strength of the sources, the loading arrangement (if applicable) and the treatment site are in agreement with the written directive. Source strengths may be verified by any appropriate method such as using a dose calibrator, using color-coded sealed sources or using clearly marked storage locations for each source strength.

4. For temporary brachytherapy implants, radiographs or CT images will be used to verify the position of the radioactive sources or "dummy" sources as the basis for calculating exposure time (or total dose). Radiographs may not be necessary for procedures requiring the use of fixed geometry applicators to establish source locations for the purpose of calculating exposure time (or total dose).

5. For permanent brachytherapy implants, radiographs or CT images will be used to verify the position of the radioactive sources as the basis for calculating total dose after implanting the sources. Radiographs may not be necessary for procedures requiring the use of fixed geometry applicators to establish the source locations for the purpose of calculating the total dose.

6. After insertion of temporary implant brachytherapy sources, an authorized user will promptly record the actual loading arrangement and sign a written record of the source loading.

7. After insertion of permanent implant brachytherapy sources, an authorized user will promptly record the actual number of radioactive sources implanted and sign a written record of the implant.
8. An authorized user or qualified person under the supervision of an authorized user, who, whenever possible, did not make the original calculations, will check the dose calculations before the total prescribed brachytherapy dose has been administered. Manual dose calculations will be checked for arithmetic errors; appropriate transfer of data from the written directive, treatment plan, tables and graphs; appropriate use of momograms, and; appropriate use of all pertinent data in the calculations. Computer dose calculations will be checked by verifying on the computer print-out the correct number, location, activity and loading arrangement of the sources. In addition, the brachytherapy dose to a single key point may be manually calculated and compared with the computer dose calculations.

9. After insertion of brachytherapy sources, but prior to completion of the procedure, an authorized user will record the radionuclide, treatment site, source strengths and exposure time (or total dose) and sign a written record of the implant.

10. If an authorized user determines that delaying treatment in order to perform the checks described in item 8 would jeopardize the patient's health because of the emergent nature of the patient's medical condition, the checks should be performed within two working days of the completion of the brachytherapy treatment.