Patient Setup and Verification for IMRT
The Quality Assurance Program at Sacred Heart Hospital

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The Nomos IMRT system allows only for dose verification using a film phantom box; there are no built-in methods for verifying positional accuracy or collision. We present our program for quality assurance in the delivery of Intensity Modulated Radiation Therapy (IMRT), including patient setup, positional verification, and dose verification. Examples of our "dry run" worksheets, treatment planning setup, port films, and dose verification printouts will be shown. Patient setup involves a dry run previous to the first treatment where each arc's table positions are recorded, possible collisions determined, and films taken. We have adapted our methods to allow a comparison of the setup isocenter as determined in conventional simulation to the isocenter as determined by the planning system and, finally, to the treatment delivery isocenter. Port films are taken with the MIMiC in the fully open position and the table is indexed to create a matched set of exposures. Anterior-posterior films are taken with the film on the table, lateral films are taken with the film attached to the table using a table mounted x-ray holder. These methods have allowed us to verify patient safety and setup accuracy as well as dose accuracy.