

## A Routine Quality Assurance Program for IMRT with Dynamic Multileaf Collimator

We have developed a simple QA program for verifying both delivered dose and intensity pattern for fixed-gantry IMRT treatments. The treatment-plan is verified by comparing the dose at a reference point to phantom measurements with a 0.125 cc ion chamber. For each fixed-gantry field, phantom material is stacked on top of the ion chamber to match the depth of the reference point under isocentric conditions. The field is delivered as per the treatment plan. The tolerance for dose comparisons is set to 5%. To verify the intensity pattern, a verification film is taken of each field during the first week of treatment. The relative intensities on the verification film are compared to a density map from the treatment-planning system. This simple QA method does not require a separate verification plan, or any additional phantom material to what is used for routine machine QA. This simple QA approach has been used to verify plans for over fifteen patients.