The Radiological Physics Center (RPC) provides radiotherapy dosimetry quality assurance (QA) for NCI-funded inter-institutional cooperative clinical trials. The RPC is presently monitoring 1,200 megavoltage therapy facilities, which are actively participating in one or more NCI sponsored cooperative groups. The RPC has a priority scheme for site visits based on problem indicators and the numbers of protocol patients treated. The on-site dosimetry review is a labor-intensive component of the QA program; therefore, the large number of institutions monitored precludes frequent on-site visits. In addition to the traditional TLD program to monitor machine output calibrations, the RPC is presently implementing new remote tools to provide a baseline quality audit of dosimetry data and dose calculation algorithms for all institutions it monitors. The institutions are asked to complete information forms, submit copies of dosimetry data, and calculate machine mu settings for several benchmark treatments. The Institution's data and benchmark cases are compared against RPC "standard data" and calculative techniques. Institutions with unresolved discrepancies are prioritized for an on-site dosimetry review visits. A description of the tools, acceptability criteria, methods used to resolve discrepancies, and the formal report of the review are presented. In addition, the results of the analysis of the first 60 data sets are presented.

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