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Glass rod detectors for small field, stereotactic radiosurgery dosimetric audit.

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This paper demonstrates the feasibility of using glass rod detectors for quality assurance audit of radiosurgery units. Five radiosurgery units (3 Gamma Knife model C, 1 Gamma Knife model U and 1 Cyberknife) located in California participated in the study. At each center glass rod detectors were used to measure a number of dosimetric parameters including relative collimator output factor and absolute dose rate. The Gamma Knife data obtained is in excellent agreement with the commissioning data generated by the manufacturer for each unit and the Cyberknife data is in general agreement with the data published by other centers. In particular the output factor of the 4 mm Gamma Knife helmet factor, a subject of abundant debate, was measured in the range 0.863-0.872 with an accuracy of better than 1% across the four participating centers. It is hoped that this pilot study will facilitate a nationwide postal audit of stereotactic radiosurgery units.

Publication Types:

- Evaluation Studies
- Multicenter Study
- Validation Studies

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