Application of failure mode and effects analysis to intracranial stereotactic radiation surgery by linear accelerator
In Regard to Masini et al

To the Editor: We read with great interest the article by Masini et al1 about the use of failure mode and effects analysis in intracranial stereotactic radiation surgery. The authors address a very important issue—the priority of safety and risk management—especially now that nearly all hospitals use highly advanced radiation therapy machines that require great care to prevent unwanted harm to patients and staff. The relentless march of technology, both hardware and software, requires that training and safety procedures for clinical staff be constantly updated and workflows adapted.2-4

Radiation therapy was one of the first medical specialties to implement quality assurance programs in clinical practice.5,6 Masini and colleagues1 address numerous relevant aspects of safety in radiation therapy, particularly with regard to actions that must be taken before and after a failure occurs, and regardless of whether that failure is potential or real.7 Risk management, in contrast to quality assurance, is a relatively new approach in medical disciplines. Methods of evaluation and risk management must be identified, applied, and adapted to the specificities of this domain. Private industry has a long history of experience with risk management processes, and this experience can be applied to the field of radiation therapy to substantially improve safety.

Give the situation described above, we believe it is important to highlight the need to develop and implement comprehensive risk management guidelines for radiation therapy. Fortunately, such guidelines are currently in advanced development, and we would like to call attention to that project, called ACCIRAD.8 The ACCIRAD project is a European Union–funded effort to develop guidelines for risk analysis of accidental and unintended exposures in external beam radiation therapy. A survey was conducted to assess risk management processes in European countries. On the basis of the survey results and analysis thereof, guidelines entitled “Patient safety in external beam radiotherapy: Guidelines on risk assessment and analysis of adverse events and near misses” were developed to provide a comprehensive strategy to managing risk in radiotherapy.8,9 Although methods for risk assessment and analysis of events might be local, there is a clear, unmet need for action and strategy at the international level, especially to harmonize taxonomies and terminology.9,10 The work by Masini et al1 underscores the importance of risk management and the need for comprehensive guidelines in this field.

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