Novalis Certification of stereotactic radiosurgery and stereotactic body radiation therapy programs: methodology and current status

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Objectives

The Novalis Certification program is the only program in the world dedicated to providing a comprehensive and independent assessment of safety and quality in stereotactic radiosurgery (SRS) and stereotactic body radiation therapy (SBRT). Certification is founded on the Novalis Standard, which was established from accepted guidance documents in the field¹-⁴.

Methods

The Novalis Certification program includes a review of SRS/SBRT program structure, adequacy of personnel resources and training, appropriateness and use of technology, program quality management, patient-specific quality assurance and equipment quality control. Currently ten auditors support the program, with six in North America, three in Europe and one in Asia, each bringing a minimum of a decade of experience in stereotactic practice. Centres applying for Novalis Certification complete a self-study 30 days prior to a scheduled one-day site visit by one to two reviewers. Reviewers generate a descriptive 77-point report which is reviewed and voted on by a multidisciplinary expert panel of 3 medical physicists, 2 radiation oncologists and 2 neurosurgeons. Outcomes of reviews include mandatory requirements and optional recommendations, with the former requiring resolution prior to award of Certification.

Results

To date, 16 institutions have received Novalis Certification, including 7 in Europe, 3 in North America and 5 in Asia Pacific (figure 4). 118 certification applications are pending; roughly one half and one third of these are sites in Europe and North America, respectively. The first 15 reviews have generated a total of 9 requirements and 84 recommendations. A retrospective analysis (figure 5) shows that the most frequent requirement is improved documentation of procedures. The most frequent recommendations pertain to equipment/systems QA procedures and a need for additional, dedicated equipment and effective use of checklists / time outs.

Conclusions

Novalis Certification is a unique and expanding peer review program that assesses safety and quality in SRS and SBRT and while recognizes high calibre of practice internationally. The standards-based approach is capable of highlighting outstanding requirements and providing recommendations to enhance both new and established programs.

References

2. Stereotactic body radiation therapy, the report of AAPM task group 101, Med Phys 37(B), 2010.