

## Editorial

# Stereotactic ablative radiotherapy: what's in a name?

**Billy W. Loo Jr MD, PhD<sup>a,\*</sup>, Joe Y. Chang MD, PhD<sup>b</sup>, Laura A. Dawson MD, FRCPC<sup>c</sup>,  
Brian D. Kavanagh MD, MPH<sup>d</sup>, Albert C. Koong MD, PhD<sup>a</sup>,  
Suresh Senan MRCP, FRCR, PhD<sup>e</sup>, Robert D. Timmerman MD<sup>f</sup>**

<sup>a</sup>Department of Radiation Oncology, Stanford University and Cancer Center, Stanford, California

<sup>b</sup>Department of Radiation Oncology, University of Texas MD Anderson Cancer Center, Houston, Texas

<sup>c</sup>Department of Radiation Oncology, University of Toronto/Princess Margaret Hospital, Toronto, Ontario, Canada

<sup>d</sup>Department of Radiation Oncology, University of Colorado Comprehensive Cancer Center, Aurora, Colorado

<sup>e</sup>Department of Radiation Oncology, VU University Medical Center, Amsterdam, The Netherlands

<sup>f</sup>Department of Radiation Oncology, University of Texas Southwestern Medical Center, Dallas, Texas

Received 10 July 2010; revised 20 July 2010; accepted 20 July 2010

What's in a name? That which we call a rose  
By any other name would smell as sweet.

– William Shakespeare, *Romeo and Juliet*

The “star-cross’d” lovers in the Bard’s classic tale learned tragically that a mere name can indeed have life and death implications. Although perhaps not so weighty a matter, in our profession we have nevertheless struggled with naming what is emerging as arguably one of the most important developments in therapeutic radiation for solid malignancies, as evidenced by a burgeoning literature and, increasingly, prospective clinical trials: the highly precise and accurate delivery of highly conformal and highly dose-intensive radiation therapy to limited-volume targets in the body, now known as stereotactic body radiation therapy (SBRT).

Conflicts of interest: BWL has received speaking honoraria from GE Medical Systems, Varian Medical Systems, Accuray, and superDimension, and has consulted for CyberHeart. LAD has received research funding from Bayer and Elekta. SS has received speaking honoraria and research funding from Varian Medical Systems, and has consulted for Varian Medical Systems.

\*Corresponding author. Department of Radiation Oncology, Stanford University and Cancer Center, 875 Blake Wilbur Dr, Stanford, CA 94305-5847.

E-mail address: [BWLoo@Stanford.edu](mailto:BWLoo@Stanford.edu) (B.W. Loo).

The term “SBRT” is basically descriptive of the treatment modality. Merriam-Webster’s Medical Dictionary defines “stereotactic” as “involving, being, utilizing, or used in a surgical technique for precisely directing the tip of a delicate instrument (as a needle) or beam of radiation in 3 planes using coordinates provided by medical imaging (as computed tomography) in order to reach a specific locus in the body...” This incorporates the concept of precise image-guided localization that is now an integral part of the technique, having replaced the use of invasive fixation devices. “Body” distinguishes it from the application of the technique in the cranium, where it is called “stereotactic radiosurgery” (SRS), so christened by pioneering neurosurgeon Dr Lars Leksell,<sup>1</sup> because originally it was applied to some of the same indications and used the same localization technique as other stereotactic neurosurgery procedures, albeit without a knife. Even so, generalization of the term “radiosurgery” to extracranial applications is believed by many to be inappropriate, given that it is fundamentally an alternative to conventional surgery.

However, “SBRT” fails to describe the extreme dose intensity that is core to this treatment and responsible for its high rates of local tumor control and even curative potential in early stage disease. Several earlier incarnations of the name incorporate the term “ablation,” which in reference to nonsurgical oncologic treatment was first used to describe a form of radiation therapy for thyroid cancer (ie, radioiodine ablation), and implies destruction

of tumor clonogenicity, as well as underlying organ function. It was since omitted, presumably to avoid confusion with the local thermal ablation treatments now practiced largely by interventional radiologists, yet the term “ablation” remains an appropriate descriptor for highly intensive radiation therapy.

But to many of us who practice it, a particularly frustrating shortcoming of “SBRT” as a name has been its poor recognition among lay people and medical professionals outside of radiation oncology to whom we must communicate our recommendations (and on whom we often depend for buy-in), perhaps attributable to its lack of “sex appeal.” As trivial as it may seem, the traction that a term attains is greatly affected by how well it rolls off the tongue, and even by whether it can be used as a concocted verb. One of the best nonmedical examples of this principle is “Google,” which in common parlance has effectively come to mean “web-based search,” the flagship functionality of the eponymous company: “Just google it.” Our colleagues in interventional radiology and thoracic surgery, for example, have such acronyms for their special techniques: “Let’s RFA it,”<sup>2</sup> or “I can VATS that.”<sup>3</sup>

On the other hand, for us to say that we can “SBRT” (pronounced “Ess-Bee-Ar-Tee,” or would that be “spurt?”) a tumor, or at least as bad, “radiosurgerize” it, is frankly hard on the ears. Many patients and referring physicians have instead adopted commercial names (GammaKnife and CyberKnife are just a couple of examples) in this usage and in a generic fashion precisely because they are simple and verbally appealing, no doubt by design. Many radiation oncologists have as well, from tiring of the uphill battle to “correct” them or worse yet, from marketing pressures. It would certainly be preferable to have a term that is platform independent, accurate, and similarly attractive. Short is desirable too, “since brevity is the soul of wit.”<sup>4</sup>

Thus, we propose Stereotactic Ablative Radiotherapy, or SABR (pronounced “saber”), which more accurately incorporates the key concepts described previously.

Although, in fact, a relatively small change from SBRT with the substitution of a single word, SABR has a far more attractive ring, aptly invoking an effective and elegant weapon that we can wield against cancer. If the distinction from its intracranial application is felt to be important, Stereotactic Ablative Body Radiotherapy (SABR) or Stereotactic Ablative Extracranial Radiotherapy (SABER) are potential alternates. Of course, the science fiction fans among us who practice Lung Tumor or Liver Tumor Stereotactic Ablative Radiotherapy will be tempted to refer to it as LT-SABR (“lightsaber”).

In all seriousness, clearly the highest priority for the advancement of this field is to conduct and report the results of well-designed prospective clinical trials, and this must be our primary focus. Even so, an accurate and appealing name can contribute to this goal in a small but practical way. Therefore, we propose that SABR be recognized by professional societies, journal editors, and cooperative groups for use in presentations, publications, and clinical trials. In fact, SABR is already starting to appear in the cancer and radiation oncology literature. Certainly other innovative acronyms can be devised, and at a minimum we argue that the time is right to open a dialogue on formulating a better terminology.

While a rose by any other name may smell as sweet, few but aficionados can relate to one as *Rosa x odorata*.<sup>5</sup> Similarly, we hope that our patients and colleagues in other specialties who might find the notion of tumor “SBRTing” unpalatable will be able to relate when we say, “Yes, we can SABR that peripheral lung tumor.”

## References

1. Leksell L. Stereotactic radiosurgery. *J Neurol Neurosurg Psychiatr.* 1983;46:797-803.
2. Radiofrequency ablation.
3. Video-assisted thoracoscopic surgery.
4. Shakespeare W. *Hamlet*; c. 1600: Act 2, scene 2, line 90.
5. Genus and species name of the fragrant tea-scented China rose.