

The Competition

“You can't look at the competition and say you're going to do it better. You have to look at the competition and say you're going to do it differently.”

—Steve Jobs

In the battle against lung cancer, there has traditionally been a clear division of labor. Advanced disease is deemed ‘inoperable’, and hence has long been the exclusive domain of oncologists. Early stage disease, on the other hand, is well recognized to be best treated by surgical resection. Thoracic surgeons and oncologists have co-existed and co-operated relatively harmoniously in this symbiosis.

However, in recent years, something has emerged that threatens to disrupt this relationship. Some would call it a Disruptive Technology, such is its revolutionary impact on lung cancer management. One is speaking of course about Stereotactic Body Radiation Therapy (SBRT).

What SBRT promises is fantastically effective local therapy, but without the potential trauma—and patient anxiety—often associated with major thoracic surgery. Results in recent years have amply demonstrated its utility and efficacy. Indeed, SBRT has gradually emerged as not only an ‘option’ for patients that cannot tolerate surgery, but a possible outright alternative to surgery. No other advance in oncological therapy has had such impact. Ablative therapy and even targeted therapy have never achieved what SBRT looks to achieve: to potentially replace surgery for the treatment of early stage lung cancer.

For the first time in decades, lung cancer surgeons feel that their *raison d'être* is under threat. The delicate symbiosis is being upset by the oncologists moving in on their ‘turf’. Epitomising the many studies showing the merit of SBRT, the 2015 *Lancet Oncology* paper by Chang *et al.* demonstrating the possible ‘superiority’ of SBRT over surgery for early stage lung cancer sent shockwaves through the lung cancer community (1). Surgeons have already indicated that they will not go down without a fight, pointing out the flaws which may fundamentally undermine many such SBRT studies (2).

But is this really a ‘zero-sum’ game? Is any gain by clinicians practising SBRT necessarily a loss by thoracic surgeons, and vice-versa? A visionary like Steve Jobs would probably say no. Apple did not grow into the 21st Century by building a ‘better’ Apple II or Macintosh desktop computer. It succeeded by going in a completely different direction: inventing the iPhone and iPad.

For thoracic surgeons, the struggle should not be just about proving surgery is ‘better’ than SBRT. An innovation as powerful as SBRT can never be wished away. Instead, surgeons need to learn to evolve in the new era where SBRT exists, and learn to form a new symbiosis. How can surgery complement SBRT (or targeted therapy for that matter)? How should the multi-disciplinary team function with the increasing pace of new innovations breaking onto the lung cancer scene?

For SBRT practitioners, the fight should also not be with surgeons over the ‘traditional’ patient with early stage lung cancer. Instead, the vision should be to reach patients who would previously have had no other options. It is far more important, for example, to explore new territories in terms of treatable patients than to just scrap over old ones. Treating more different patients is perhaps a nobler endeavour than just treating the same ones a little better.

As surgeons and oncologists—hopefully—find a new equilibrium in the SBRT era, the ones who stand to benefit will undoubtedly be the patients. Good clinicians striving to treat cancer not only ‘better’, but differently will surely lead to greater hope.

This book contains the word ‘versus’ in its title. This is deliberately provocative, to be sure. However, healthy competition may bring rewards for patients. The articles in this book are written by recognized experts in the field of lung cancer therapy. Perspectives from both the SBRT and surgical camps are well represented, and the arguments on either side are balanced and maturely reasoned. Studying the evidence and the opinions from each angle as portrayed in this book is undoubtedly a fine way to steer the competition in a healthy direction.

For the sake of patients, let us all look at the competition clearly and consider how we can do things differently!

References

1. Chang JY, Senan S, Paul MA, et al. Stereotactic ablative radiotherapy versus lobectomy for operable stage I non-small-cell lung

- cancer: a pooled analysis of two randomised trials. *Lancet Oncol* 2015;16:630–37.
2. Cao C, D'Amico T, Demmy T, et al. International VATS Interest Group. Surgery versus SABR for resectable non-small-cell lung cancer. *Lancet Oncol* 2015;16:e370-1.

Alan D. L. Sihoe

Clinical Associate Professor, Department of Surgery, The University of Hong Kong, China

Chief of Thoracic Surgery, The University of Hong Kong Shenzhen Hospital, China

Guest Professor, Department of Thoracic Surgery, Tongji University Shanghai Pulmonary Hospital, China