Concerning RF, the data were very inhomogenous with the median follow-up varying between 6 and 28 months [19–23]. Consequently, the LCR ranged from 13.8% at 6 months to 58% at 28 months [19–23]. Only three studies provided data on OS [21–23]. The 1-year OS varied between 85 and 95% [21–23], whereas the 2-year OS ranged from 68 to 84% [21–23]. Finally, the 3-year OS was only given by two studies and ranged from 47 to 74% [21, 22]. Concerning the mortality, only one paper reported one case of mortality (5.5%) in a patient who underwent both RF and lobectomy at the same time [20], whereas it was null in the other papers. The morbidity for its part ranged from 33 to 100% [19–23], mainly composed of pneumothorax (varying from 9 to 68%), but with a persisting air leak rate of ~5% [20, 23].

CLINICAL BOTTOM LINE

On the whole, we recorded 23 papers meeting the criteria for comparing RF with SABR. The studies concerning SABR are performed on a larger number of patients and include a longer follow-up. Furthermore, the results of SABR seem more encouraging, reporting a better LCR, overall, and CSS. In addition, the morbidity of SABR seems low and is usually controllable by steroid therapy. Hence, the current evidence shows that SABR, if accessible, should first be proposed to patients suffering from a primary NSCLC non-suited for surgery. Nevertheless, to date, there is no prospective blind randomized study comparing SABR to RF. Plus, the published literature provides a low level of evidence and no histological data on recurrence (only based on imaging). Thus, a greater number of prospective control trials are necessary to confirm these preliminary results.

ACKNOWLEDGEMENTS

The authors thank Ilana Adleson for her editorial assistance.

Conflicts of interest: none declared.

REFERENCES


eComment. Standardizing our cooking

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doi: 10.1093/icvts/ivs486
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We read with interest the article by Renaud et al. on radiofrequency ablation or stereotactic ablative radiotherapy as the best treatment for radically treatable primary lung cancer patient who are unfit for surgery [1]. The scenario of the
radiation oncologist and the interventional radiologist arm wrestling over the most appropriate non-surgical treatment for these patients is probably familiar to all in multidisciplinary meetings. There are currently no strict guidelines from American College of Chest Physicians (ACCP), American Thoracic Society (ATS), European Respiratory Society (ERS) or other similar professional bodies that recommend one form of non-surgical treatment over the other in patients who are not surgical candidates. The latest revision of the National Institute for Health and Clinical Excellence (NICE) guidelines for percutaneous radiofrequency ablation for primary or secondary lung cancers concludes that there is adequate evidence for its use in tumour control [2]. However, there is no further advice on case selection. As the authors concluded in their article, properly conducted randomized controlled trials are urgently needed.

The American Society for Radiation Oncology (ASTRO) has strict guidelines for the technique of Stereotactic Body Radiotherapy (SBRT) for small-cell lung cancers, and is regularly reviewed by their own Emerging Technology Committee. On the other hand, the protocol and equipment for radiofrequency ablation in the treatment of primary or secondary lung cancers is less well-defined. In many ways, variation in radiofrequency ablation techniques, equipment, energy delivered, as well as the experience of the interventional radiologist can play an important role in the outcome of the treatment as well as complications resulting from it. Currently, the interventional radiologist can choose between radiofrequency, microwave or cryoablation energies; simple needles or multi-pronged probes; and a variety of protocols with different device designs [3]. In order for future studies to be meaningful, it is clear that there should be standardization and appropriate comparisons of the "cooking" method and the type of "utensils" used for ablating lung tumours. Furthermore, better measures of SBRT and ablation effects are needed other than imaging by computed tomography or positron emission tomography scans. Perhaps measurement of circulating levels of tumour specific molecular markers may be a future way to monitor cancer destruction and recurrence following treatment. After all, a Michelin Star chef would not only care about how his cooked dish looks, but also how it affected the taste!

Conflict of interest: none declared

References