SABR versus conventional fractionation regimens in NSCLC

We read with interest the publication of the CHISEL trial by David Ball and colleagues,[1] which showed the superiority of stereotactic ablative body radiotherapy (SABR) over conventional radiotherapy in time to local failure in stage I (T1–T2 according to TNM 7th edition) non-small-cell lung cancer (NSCLC) and also in terms of overall survival.

Unlike the SPACE trial,[2] in the CHISEL trial only patients with an Eastern Cooperative Oncology Group performance status of 0 or 1 were recruited and PET scans were routinely done to stage patients. We wonder whether this trial shows that SABR might be the best option for patients with better performance status (0–1), as no improvement in overall survival has been reported for patients with a performance status of 2 (24% of patients in the SPACE trial). Therefore, can standard radiotherapy be still considered a reasonable option in patients with a performance status of 2, given the low toxicity profile of this treatment and the non-detrimental effect on quality of life?

If SABR undoubtedly improved local control in this setting, we wonder whether the improvement in overall survival might have been driven partially or mainly by the subsequent treatments. In fact, the only difference between the SABR and standard radiotherapy groups in the CHISEL trial was that a higher proportion of patients with squamous cell carcinoma were recruited in the standard radiotherapy group than in the SABR group (46% *vs* 33%). Because of the absence of a targetable mutation, overall survival for patients with squamous cell carcinoma might be substantially shorter than for those with lung adenocarcinoma, particularly in the pre-immunotherapy era. Our proposition is further supported by the fact that distant treatment failure was higher in the SABR group than in the standard radiotherapy group (14% *vs* 6%), suggesting that the systemic treatment received afterwards had a possible effect on overall survival.

We declare no competing interests.

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1 Ball D, Mai GT, Vinod S, et al. Stereotactic ablative radiotherapy versus standard radiotherapy in stage 1 non-small-cell lung cancer (TROG 09.02 CHISEL): a phase 3, open-label, randomised controlled trial. *Lancet Oncol* 2019; **20:** 494–503.

2 Nyman J, Hallqvist A, Lund JA, et al. SPACE – a randomized study of SBRT *vs* conventional fractionated radiotherapy in medically inoperable stage I NSCLC. *Radiother Oncol* 2016; **121:** 1–8.