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Primary results of SARON: A randomised-controlled trial of consolidation radiotherapy for synchronous oligometastatic non-small cell lung cancer

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Background

Standard first-line systemic anti-cancer therapy (SACT) for advanced non-small cell lung cancer (NSCLC) without actionable genomic alteration (AGA-negative) is chemotherapy and/or immunotherapy. We investigated whether patients with synchronous oligometastatic (OM) AGA-negative NSCLC benefit from the addition of consolidation radiotherapy (RT).

Methods

SARON, a multicentre phase II trial, randomised (1:1) patients with NSCLC, 1–5 metastases in ≤3 organs, to SACT with or without radical RT. The control arm changed to include immunotherapy in January 2020. The experimental arm received radical RT to the lung primary ± locoregional lymph nodes, and stereotactic ablative RT (SABR) to OM sites. Stratification included SACT, histology, N-stage, number of metastases, brain metastases and recruiting site. Primary and major secondary endpoints were overall (OS) and progression-free survival (PFS).

Results

140 patients were randomised across 22 UK centres (October 2016 to July 2023). Median age was 68 years (range 45–85), 59.3% male, 58.6% adenocarcinoma, 52.9% N-stage 2/3, 62.9% 1x OM site (23.6% 2x, 9.3% 3x, 3.6% 4x, 0.7% 5x OM sites), and 6.4% brain metastases. SACT was 40.0% chemotherapy, 15.0% immunotherapy and 45.0% combination. Median SACT cycles received in both arms was 4, and 62/70 (88.6%) received RT (51 conventional and 11 SABR to primary, 54 SABR to ≥1 OM site). After 37.4 months median follow-up, median OS was 31.0 versus 28.0 months (HR=0.99, 95%CI 0.63–1.55, p=0.95) and median PFS 13.9 versus 8.9 months (HR=0.64, 95%CI 0.43–0.95, p=0.03) in the SACT+RT and SACT arms, respectively. The cumulative incidence of local failure within 12 months was 13.0% versus 39.5% (p<0.01), compared to 36.2% versus 32.3% (p=0.28) for new distant metastasis, respectively. The grade ≥3 adverse event rate was 28.6% in both arms; 6 patients had a grade 3 event possibly related to RT. EORTC QLQ-C30 and LC13 quality of life measures were similar in both arms.

Conclusions

Patients with synchronous OM AGA-negative NSCLC receiving first-line SACT+RT achieved better local disease control and longer PFS than SACT alone with acceptable side-effects, however, this did not translate into survival benefit.

Clinical trial identification

NCT02417662.

Legal entity responsible for the study

University College London.

Funding

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Disclosure

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