

**Table S1** Detailed PubMed search strategy

Query number	Query content	Records, n
1	((non-small cell lung cancer OR NSCLC OR lung squamous cell carcinoma OR lung adenocarcinoma OR adenocarcinoma of lung)[title/abstract])	16,575
2	((radiotherapy OR radiation therapy OR irradiation) [title/abstract])	61,407
3	((immune checkpoint inhibitor* OR immunotherapy OR PD-1 OR PD-L1 OR CTLA-4 OR pembrolizumab OR nivolumab OR atezolizumab OR durvalumab OR ipilimumab OR camrelizumab OR tislelizumab OR sintilimab OR toripalimab)[Title/Abstract])	83,210
4	((stage IV OR advanced OR metastas* OR oligometastasis)[title/abstract])	384,616
5	#1 AND #2 AND #3 AND #4	870

(870 hits were imported into EndNote 21; 119 articles were finally retained for narrative synthesis.)