





## INDICATIONS AND RESULTS OF ABLATIVE THERAPY

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The highly effective systemic therapies, including targeted systemic therapies and immunotherapy, have improved the survival of patients with lung cancer. However these treatments are usually non curative and in patients with oligometastatic disease (OMD) the combination with locally ablative treatments increase long-term disease control and overall survival. Furthermore, advances in imaging technology have allowed for more accurate staging of lung cancer patients and the detection of previously undetected metastases.

The most common consensus to define OMD would include one to five metastatic lesions but there is no generally accepted number. OMD could represent different clinical scenarios and the European Society for Radiotherapy and Oncology has developed a comprehensive system for characterisation and classification olimetastatic disease named: oligorecurrence, oligoprogression, and oligopersistence, considering whether oligometastatic disease is diagnosed during a treatment-free interval or during active systemic therapy and whether or not an oligometastatic lesion is progressing on current imaging1.

The modality for locally ablative therapy in the treatment of oligometastases is guided by tumor location, individual patient characteristics and available local expertise. And also, life expectancy, performance status and medical comorbidities are major factors to consider ablative treatments.

Stereotactic ablative radiotherapy (SABR) is a non invasive treatment that has been proposed as an alternative to surgery and other ablative treatments. SABR is an image-guided radiotherapy technique that delivers high doses (ablative doses) with high precision to small target volume in a 1 to 8 fractions. This highly accurate treatment includes methods of respiratory motion management technology to avoid harming healthy issue.

The SABR treatment of OMD in non-small cell lung cancer is increasing in recent years and evidence comes from phase II randomized trials, two trials in NSCLC after first-line chemotherapy and one in multiple tumor histologies2-4 shows a significant progression-free survival and overall survival benefits in the SABR arm. Phase III trials are currently ongoing to provide a definitive evidence.

SABR has the advantages of being deliverable at multiple tumor locations in different organs with minimal interruptions in systemic treatment delivery, and is generally well tolerated with less than 2% of ≥grade 3 toxicities.

However, the optimal integration of ablative treatments with systemic therapies and the use of clinical biomarkers are testing in ongoing clinical trials. The management of these patients in multidisciplinary teams is essential to improve clinical outcomes.

1-Gruckenberger, M, et all. Lancet Oncol 22, 2021

2-Lyengar P, et all. JAMA Oncol 4, 2018

3- Gomez DR, et all. J Clin Oncol 39, 2021

4- Palma DA, et all. Lancet 393, 2019