

Brain metastases

- WBRT can be considered in selected patients, contingent on prognostic factors of better survival [III, C]. WBRT should not be offered in RPA class III patients in view of the dismal prognosis [I, A]; only BSC is recommended
- The most frequent WBRT schedules are 20 Gy in 5 fractions or 30 Gy in 10 fractions, with no difference in outcome [I, A]
- For most patients with symptomatic brain metastases and/or significant oedema, dexamethasone or equivalent corticosteroid is recommended [III, A]
- Neuroprotective agents are not recommended for routine use [II, C]
- Hippocampus avoidance WBRT is not currently recommended as a standard treatment [III, C]
- In case of single brain metastases surgical resection can be considered [III, B]
- Postoperative WBRT or SRS is recommended after surgical resection [I, A]
- In the case of a limited number of metastasis, SRS alone is the recommended treatment in patients with RPA class I–II [III, B]
- SRS alone, without WBRT but with close MRI brain imaging follow-up, is an alternative strategy [III, B]
- The indication for SRS is based on total tumour volume rather than numbers of metastases, as the risk of radionecrosis increases with tumour volume [III, C]
- In patients with asymptotically detected CNS metastases at presentation, systemic therapy with deferred RT should be considered due to similar intracranial and extra cranial response [II, B]
- In patients with an actionable oncogenic driver (e.g. EGFR, ALK) and clinically asymptomatic brain metastases, next-generation TKIs may restore control of brain disease and delay cranial RT [II, A]
- There is currently limited trial data demonstrating safety and efficacy of immunotherapy in patients with small-volume untreated CNS metastases [III, B]

Treatment of oligometastatic disease

- Stage IV patients with one to three synchronous metastases at diagnosis may experience long-term DFS following systemic therapy and local consolidative therapy (high-dose RT or surgery) [III, B]. Because of the limited evidence, these patients should be discussed within a multidisciplinary tumour board [II, B], and inclusion in clinical trials is preferred
- Although operative risk is low and long-term survival may be achieved, current evidence for surgery in oligometastatic disease is limited, and the relative contribution of surgery versus RT as local treatment modality has not been established yet
- Stage IV patients with limited metachronous metastases may be treated with a radical local therapy (high-dose RT or surgery) and may experience long-term DFS [IV, B]. However, this is based mainly on retrospective data and inclusion in clinical trials is preferred
- Stage IV patients with driver mutations, with oligoprogression while on molecular-targeted therapy, may be treated with a radical local treatment (high-dose RT or surgery) and may experience long-term DFS [IV, C]. However, this is based mainly on retrospective data and inclusion in clinical trials is preferred
- Solitary lesions in the contralateral lung should, in most cases, be considered as synchronous secondary primary tumours and, if possible, treated with curative-intent therapy [IV, B]