Brain metastases in lung cancer

Lung cancer and the CNS

Lung cancer is the most common type of cancer worldwide, with 2.09 million new cases diagnosed every year. About 85% of lung cancer cases are non-small cell lung cancer (NSCLC) and 15% are small cell lung cancer (SCLC).

The brain and other central nervous system (CNS) locations are common sites of progression in lung cancer, particularly in NSCLC. ~7–10% of NSCLC patients present with brain metastases at the time of initial diagnosis. 20–40% of patients develop brain metastases at some point during their illness.

Brain metastases

Brain metastases, sometimes known as secondary brain tumours, can cause:
- Headaches
- Seizures
- Impaired vision
- Numbness
- Impaired movement
- Reduced mental performance
- Changes in personality and behaviour

Brain metastases are also associated with a significant reduction in quality of life and life expectancy.

Treatments

- Tumours in the brain are difficult to treat as the blood-brain barrier (BBB) blocks and actively removes some drug molecules from the brain.
- Treatments which are effective in crossing the BBB and remaining in the brain offer new hope for patients.

References