CLINICAL PAPER /

BRAIN METASTASES

The role of chemotherapy in the management of newly diagnosed brain metastases: a systematic review and evidence-based clinical practice guideline

J Neurooncol. 2010 Jan; 96(1): 71–83.

ABSTRACT

TARGET POPULATION:

This recommendation applies to adults with newly diagnosed brain metastases; however, the recommendation below does not apply to the exquisitely chemosensitive tumors, such as germinomas metastatic to the brain.

RECOMMENDATION:

Should patients with brain metastases receive chemotherapy in addition to whole brain radiotherapy (WBRT)? Level 1 Routine use of chemotherapy following WBRT for brain metastases has not been shown to increase survival and is not recommended. Four class I studies examined the role of carboplatin, chloroethylnitrosoureas, tegafur and temozolomide, and all resulted in no survival benefit. Two caveats are provided in order to allow the treating physician to individualize decision-making: First, the majority of the data are limited to non small cell lung (NSCLC) and breast cancer; therefore, in other tumor histologies, the possibility of clinical benefit cannot be absolutely ruled out. Second, the addition of chemotherapy to WBRT improved response rates in some, but not all trials; response rate was not the primary endpoint in most of these trials and end-point assessment was non-centralized, non-blinded, and post-hoc. Enrollment in chemotherapy-related clinical trials is encouraged..

✓ CONCLUSION

Major conclusions that emerge from these studies include:
1.The lack of clear and robust survival benefit with the addition of chemotherapy to WBRT.
2.Enhanced response rates, specifically in NSCLC with the addition of chemotherapy to WBRT.
3.In terms of secondary endpoints such as time to neurologic progression, steroid dose, etc., the data and results are mixed and do not permit robust conclusions.
4.In at least one trial, time to progression was improved by the addition of WBRT to chemotherapy as compared to chemotherapy alone; however, the evidence to corroborate this study is sparse.
5.A single trial provides evidence that outcome is similar whether WBRT is delivered upfront with chemotherapy or delayed by up to 2 cycles, but the data remains too limited to support definitive recommendations for the delay of radiation therapy, especially given the lack of any known survival advantage with chemotherapy.
6.Similarly, the sequencing question (does it matter if chemotherapy precedes WBRT or vice versa?) has been inadequately addressed and the data are too sparse to make definitive conclusions.