

# Dexamethasone for brain metastases

- Therapeutic radiation drives leptomeningeal dissemination of medulloblastoma through an innate immune process
- Improved noninvasive diagnostic evaluations in treatment-naïve adrenocorticotrophic hormone (ACTH)-dependent Cushing's syndrome
- Autonomic seizures and hyperhidrosis due to glioblastoma in a middle-aged man: a case report
- Hypersomatotropism and Hypercortisolism Caused by a Plurihormonal Pituitary Adenoma in a Dog
- Hyperglycemia is associated with poor survival in patients with brain metastases treated with radiotherapy
- Persistent symmetrical white matter hyperintensities: a case report
- Pulmonary Cryptococciosis During Osimertinib Treatment for Epidermal Growth Factor Receptor (EGFR) L858R-Mutant Lung Adenocarcinoma: A Case Report
- Treatment decisions for intermediate-sized brain metastases in or near the motor cortex among the neuro-oncology community

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Steroids provide relief of symptoms due to intra-cerebral edema. The steroid of choice is dexamethasone<sup>1)</sup>

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Dexamethasone is a type of [steroid](#) medication that is commonly used to reduce [inflammation](#) and swelling in the brain in patients with [brain metastases](#), which are cancerous tumors that have spread to the brain from another part of the body. It can be used to relieve symptoms such as headaches, nausea, and confusion, and to improve the effectiveness of radiation therapy and chemotherapy. However, it is important to note that dexamethasone is not a treatment for the underlying cancer, and it should be used in conjunction with other therapies to manage brain metastases.

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Steroid therapy versus no steroid therapy

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Asymptomatic brain metastases patients without mass effect Insufficient evidence exists to make a treatment recommendation for this clinical scenario.

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Brain metastases patients with mild symptoms related to mass effect Level 3 Corticosteroids are recommended to provide temporary symptomatic relief of symptoms related to increased intracranial pressure and edema secondary to brain metastases. It is recommended for patients who are symptomatic from metastatic disease to the brain that a starting dose of 4-8 mg/day of dexamethasone be considered.

Brain metastases patients with moderate to severe symptoms related to mass effect Level 3 Corticosteroids are recommended to provide temporary symptomatic relief of symptoms related to increased intracranial pressure and edema secondary to brain metastases. If patients exhibit severe symptoms consistent with increased intracranial pressure, it is recommended that higher doses such as 16 mg/day or more be considered. Choice of Steroid Level 3 If corticosteroids are given, dexamethasone is the best drug choice given the available evidence. Duration of Corticosteroid Administration Level 3 Corticosteroids, if given, should be tapered slowly over a 2 week time period, or longer in symptomatic patients, based upon an individualized treatment regimen and a full understanding of the long-term sequelae of corticosteroid therapy. Given the very limited number of studies (two) which met the eligibility criteria for the systematic review, these are the only recommendations that can be offered based on this methodology <sup>2)</sup>

<sup>1)</sup>

Tsao MN. Brain metastases: advances over the decades. Ann Palliat Med. 2015 Oct;4(4):225-32. doi: 10.3978/j.issn.2224-5820.2015.09.01. PMID: 26541403.

<sup>2)</sup>

Ryken TC, McDermott M, Robinson PD, Ammirati M, Andrews DW, Asher AL, Burri SH, Cobbs CS, Gaspar LE, Kondziolka D, Linskey ME, Loeffler JS, Mehta MP, Mikkelsen T, Olson JJ, Paleologos NA, Patchell RA, Kalkanis SN. The role of steroids in the management of brain metastases: a systematic review and evidence-based clinical practice guideline. J Neurooncol. 2010 Jan;96(1):103-14. doi: 10.1007/s11060-009-0057-4. Epub 2009 Dec 3. PMID: 19957014; PMCID: PMC2808527.

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