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NCCN Guidelines Panel: CNS Cancers

Please accept this letter as a request the NCCN CNS Cancers Guideline Panel to consider review of data for radiation necrosis to the brain and the use of Bevacizumab (Avastin). We ask for consideration of listing this medication as a treatment for radiation necrosis in patients with metastatic disease to the brain who have undergone radiation.

Bevacizumab (Avastin) is currently FDA approved for treatment of glioblastoma that progressed following prior therapy. It is also currently FDA approved for the use in colorectal cancer, lung cancer, recurrent ovarian cancer, cervical cancer and renal cancer.

Bevacizumab has been utilized to treat cerebral radiation necrosis in patients with brain metastases previously treated with radiation.

The following articles are in support of this proposed indication.

1. Boothe D et al. Bevacizumab as a treatment for radiation necrosis of brain metastases post stereotactic radiosurgery. *Neuro-Oncology* 2013; 15(9):1257-1263. This paper supports bevacizumab as a safe and effective treatment of radiation necrosis.
2. Delishaj D et al. Bevacizumab for the Treatment of Radiation-Induced Cerebral Necrosis: A Systematic Review of the Literature. *Journal of Clinical Medicine Research* 2017 Apr; 9(4): 273-280. This paper supports bevacizumab as a promising agent for the treatment of brain radiation necrosis, as well as an anti-cancer drug.
3. Gonzalez, J et al. Effect of Bevacizumab on Radiation Necrosis of the Brain. *International Journal of Radiation Oncology • Biology • Physics* 2007 Vol 67 No 2 pp 323-326. This paper supports bevacizumab use to reduce radiation necrosis.
4. Wong E et al. Bevacizumab Reverses Cerebral Radiation Necrosis. *Journal of Clinical Oncology* 2008; pp 5649-5650. This paper describes a case study with dramatic improvement after four doses, with neurocognitive improvements at the time of follow up 6 months later.

Sincerely,

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