tive dose of 2.5 – 138.5 mg/patient (median 25.5 mg) alternating with 398
4 mg/m². The number of lumbar punctures ranged from 1–12. Toxicities included mild to moderate transient headaches and nausea more frequent after liposomal cytarnarine (20 versus 4). Twelve patients receiving liposomal cytarnarine developed increased intracranial pressure requiring evacuating liquids. These experienced transient decline in short term memory. Two developed a hearing deficit and one a transient visual impairment. Since all patients received some sort of concurrent anti-cancer therapy, the efficacy of intrathecal therapy cannot be assessed independently. However, 31 patients were alive and only 625 patients who died had developed metastases, 19 died of local recurrences, and none had tumor cells in the CSF at their last evaluation. CONCLUSION: In conclusion, alternating intraventricular liposomal cytarnarine and etoposide is feasible, allows for a more dose tense schedule, may produce responses and prove to be a important adjunct for patients receiving drugs with a low penetrance into the CSF.

BMET-09. BRAIN METASTASES FROM OVARIAN CARCINOMA: PROGNOSTIC FACTORS AND TREATMENT OUTCOME
Zvi Cohen, Gil Kimhi and Anton Volli; Sheba Medical Center, Ramat-Gan, Israel.

Between January 1995 and December 2014, 25 patients with ovarian brain metastases were treated at The Sheba Medical Center. The medical records were retrospectively reviewed to collect demographic, clinical and imaging data. Treatment modalities and survival were noted at the time of brain metastases diagnosis and 62.1 years. The median interval between the diagnosis of the primary cancer and brain metastases was 39.25 months. Neurological deficit, headache, and seizure were the most common symptoms. The brain was the only site of metastasis in 20% of patients. Active ovarian cancer at the diagnosis of brain metastases was observed in half of the patients with systemic disease. Multiple brain metastases were seen in 25% of the patients. We treated 12 patients with Surgery + Radiotherapy + Pirarubicin (S-R + P) and 7 patients received surgical resection only. The median survival of brains metastases patients was 7 months (range 3.5-12) and of brain metastases patients treated was 0.9, with a median of 0.41 (0.07-3.38). The mean percent of brain volume that received a dose of 12 Gy was 5.0 (0-21.0), and of 8 Gy was 9.0 (1.0-38). For each of the first three-month intervals, the median percent of tumor control was 97%, 96%, and 100%, respectively in the patients with available data. CONCLUSIONS: GKS effectively treats and controls brain tumors, even in patients presenting with 10 or more tumors simultaneously. The number of tumors initially present was not found to have a significant correlation with general tumor control.

BMET-11. DURAL METASTASES FROM BREAST CANCER - CASE SERIES
David Macdonald1, Joseph Megyesi2 and Kylea Potvin2; 1London Regional Cancer Program, Western University, London, ON, Canada, 2Department of Clinical Neurological Sciences, London Health Sciences Centre, Western University, London, ON, Canada

INTRODUCTION: Intracranial metastases from solid tumors are increasingly common, often brain or leptomeningeal metastases. Dural metastases are under-reported, present diagnostic and therapeutic challenges, and may mimic intracranial disease in imaging. This report describes patients with dural metastases from breast cancer. CASES: A 64-year old woman, without known cancer, had 5 months of increasing headaches, left weakness, and focal seizures. Imaging showed an enlarging right frontal extra-axial enhancing mass with edema, initially thought to be a meningioma. At surgery the tumor involved overlying bone, replaced the dura, and invaded brain. Pathology was metastatic adenosarcoma, ER/PR positive and Her-2 negative. Investigations showed a right breast primary, and lung and bone metastases. She received cranial radiotherapy (RT), letrozole and pamidronate. The tumor remains controlled after 42+ months. The 3 other patients all had prior known breast cancer, 2 ER/PR positive and Her-2 negative, and 1 triple negative (ER/PR/Her-2 negative), ages 45-70 years. Two had known systemic metastases prior to neurological presentation. Presenting symptoms included headache, seizures, focal weakness, and confusion. All had new or progressive systemic metastases, including bone, at diagnosis of dural metastases. None had intraparenchymal brain metastases. Two had resection of dural metastases, 1 with complicated postoperative course, with significant intracranial complications. Two required debulking. 1 patient had all received hormonal therapy or chemotherapy, with initial clinical or MRI intracranial control for 6+, 7+ and 9 months. One patient had a small, asymptomatic dural recurrence 9 months after initial diagnosis, with new neurological symptoms only. Both patients continued to improve after debulking and radiation therapy. The 3 other patients were under treatment for metastases to brain, lung, and bone at the time of surgery. CONCLUSIONS: These cases illustrate the complexity of dural metastases. Although patients often have extensive metastatic disease, treatment can improve symptoms and prolong survival.

BMET-19. STEREOTACTIC RADIOSURGERY FOR PATIENTS WITH TEN OR MORE BRAIN METASTASES
Elliot Schiff1, Luke Szwasek2, Jonathan Knisely2, Aditya Halthore, Sussan Salas2, Nina Kohn2 and Michael Schuller2; 1Yeshiva University, New York, NY, USA, 2Hofstra Northwell School of Medicine, Manhasset, NY, USA.

OBJECTIVE: To evaluate the efficacy of Gamma Knife radiosurgery (GKRS) as treatment in patients with 10 or more metastatic brain tumors. METH-ODS: Between February 2014 and January 2016, 20 patients were treated with GKRS for 10 or more brain metastases. We retrospectively analyzed the data from these patients, with survival and tumor control as primary endpoints. Brain volumes treated with 8 Gy and 12 Gy were measured to explore volume of treated tissue as a contributing factor to tumor control. Pre-treatment and post-treatment magnetic resonance imaging (MRI) studies were reviewed at intervals of 3 months, as were patient records on site. RESULTS: Of the 20 patients treated, 13 were excluded due to insufficient follow-up data. For the 7 included patients the median age was 61 (range 19-76). These patients were treated for a total of 323 tumors, with a median of 17 tumors per patient (12-34). The median survival for these patients was 12.5 months (1.3-16.9). Patient survival was censored at the time of data collection, and the true upper limit of survival is higher than recorded here. The mean percent of brain volume treated was 0.9, with a median of 0.41 (0.07 – 3.38). The mean percent of brain volume that received a dose of 12 Gy was 5.0 (0 – 21.0), and of 8 Gy was 9.0 (1.0 – 38). For each of the first three-month intervals, the median percent of tumor control was 97%, 96%, and 100%, respectively in the patients with available data. CONCLUSIONS: GKRS effectively treats and controls brain tumors, even in patients presenting with 10 or more tumors simultaneously. The number of tumors initially present was not found to have a significant correlation with general tumor control.