

<div><div>Introduction</div><p>Resected brain metastases have a high rate of local recurrence without adjuvant therapy. Intra-operative permanent Cs-131 brachytherapy (BT) implants can be performed at the time of surgery, thereby avoiding any additional therapy providing cost savings.</p><div>Methods</div><p>Patients with a newly diagnosed metastasis to the brain were prospectively enrolled in an IRB-approved study. After maximal surgical resection, the cavity was lined with permanent Cs-131 seeds. Prescription dose was 80Gy at 5mm depth from the resection cavity. End points were local freedom from progression (FFP), distant metastases FFP, median survival, overall survival (OS), and toxicity.</p></div>	<div><div>Results</div><p>24 patients were enrolled. Median follow-up was 19.3 months. Histology included lung (16), breast (2), kidney (2), melanoma (2), colon (1), and cervix (1). Median activity per seed of 3.8 mCi (range, 3.3-4.8 mCi) and total activity of 46.9 mCi (range, 15.3-130.6 mCi). The 1-year resection cavity FFP was 100%. Exposure to the surgeon was < 0.2mRem/hr. There was 1 regional recurrence, resulting in the 1-year resection cavity FFP = 93.8% (95% CI = 63.2%, 99.1%). There were 12 distant recurrences, resulting in 1-year distant mets FFP = 48.4% (95% CI = 26.3%, 67.4%). There were a total of 13 deaths rendering a median OS = 9.9 months (95% CI = 4.8 months) and 1-year OS = 50.0% (95% CI = 29.1%, 67.8%). Complications included CSF leak (1) and seizure (1). There were no infections and no radiation necrosis.</p><div>Conclusions</div><p>Post-resection intracavitary Cs-131 BT is a safe, well tolerated, technique for achieving local control for newly diagnosed brain metastases during a single therapeutic session. Dosage is delivered maximally and uniquely to the residual microscopic disease and not to an empty cavity or surrounding normal brain. High local control and low radiation necrosis rates make this an attractive therapy.</p></div>	<div><div>Learning Objectives</div><p>Understand the role of brachytherapy after metastasis surgery</p><p>Compare brachytherapy with stereotactic radiosurgery and whole brain radiation therapy.</p><p>Understand complications of brachytherapy [DEFAULT POSTER]</p></div>
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