

A Retrospective Review of Outcomes in Patients with Limited Brain Metastases Treated with Gamma Knife Radiotherapy

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A Retrospective Review of Outcomes in Patients with Limited Brain Metastases Treated with Gamma Knife Radiotherapy

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BACKGROUND

- Brain metastases are the most common intracranial malignancy, occurring in 9% to 17% of patients with cancer¹



- Treatments include surgical resection, whole-brain radiotherapy (WBRT) and stereotactic radiosurgery (SRS)
- SRS has become the more popular option because of its relatively short, convenient, and noninvasive treatment course²
- SRS offers significant cognitive protection²

OBJECTIVES

- Review of treatment for cases presenting with limited brain metastases between 2014-2016
- Determine if treatment at LVHN was in accordance with 2018 NCCN Guidelines³
- Determine overall survival for patients with limited brain metastases by treatment type – WBRT vs. SRS (Gamma Knife)

METHODS



OUTCOMES

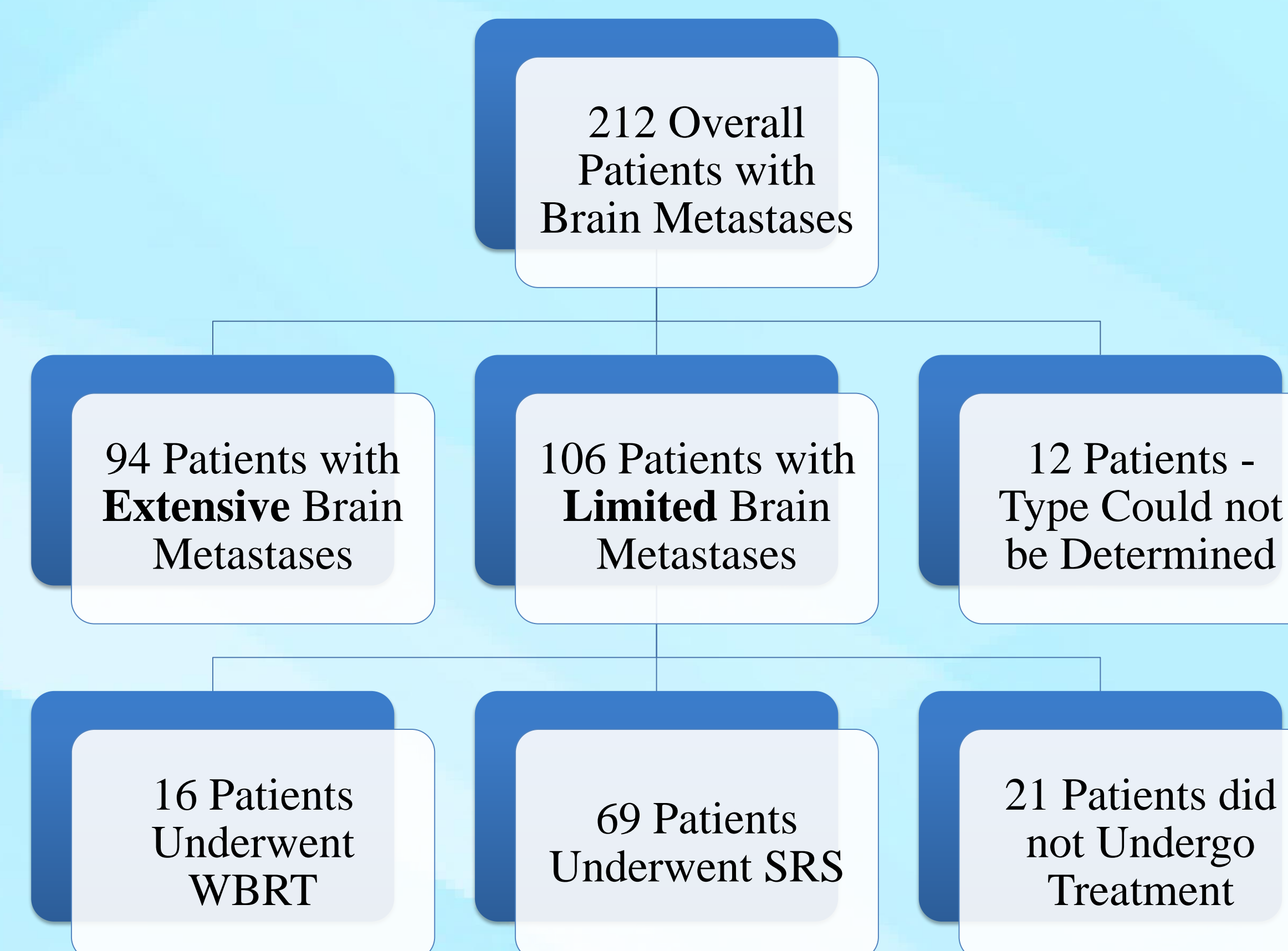


Figure 1 (above). Distribution by type of brain metastases: 50.00% had limited, 44.33% had extensive, 5.66% was not determined.

Patients with **limited** brain metastases: 65.09% underwent SRS, 15.09% underwent WBRT, 19.81% did not undergo treatment.

Status of Overall Patients with Limited Brain Metastases who Received Whole Brain Radiotherapy (WBRT)

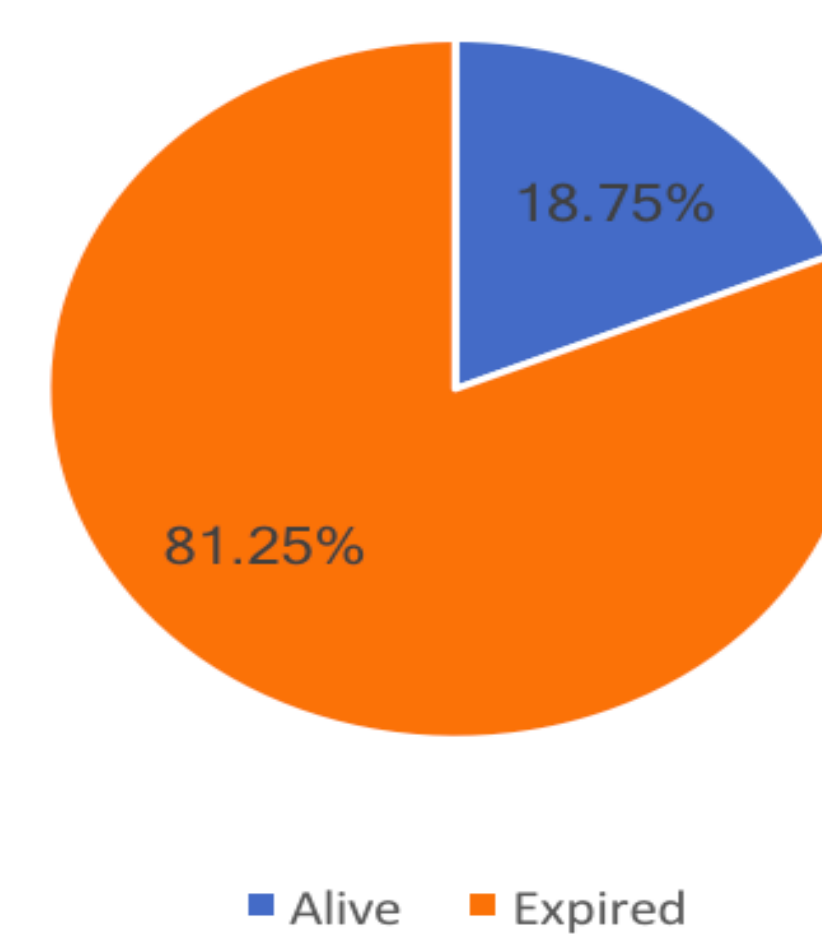
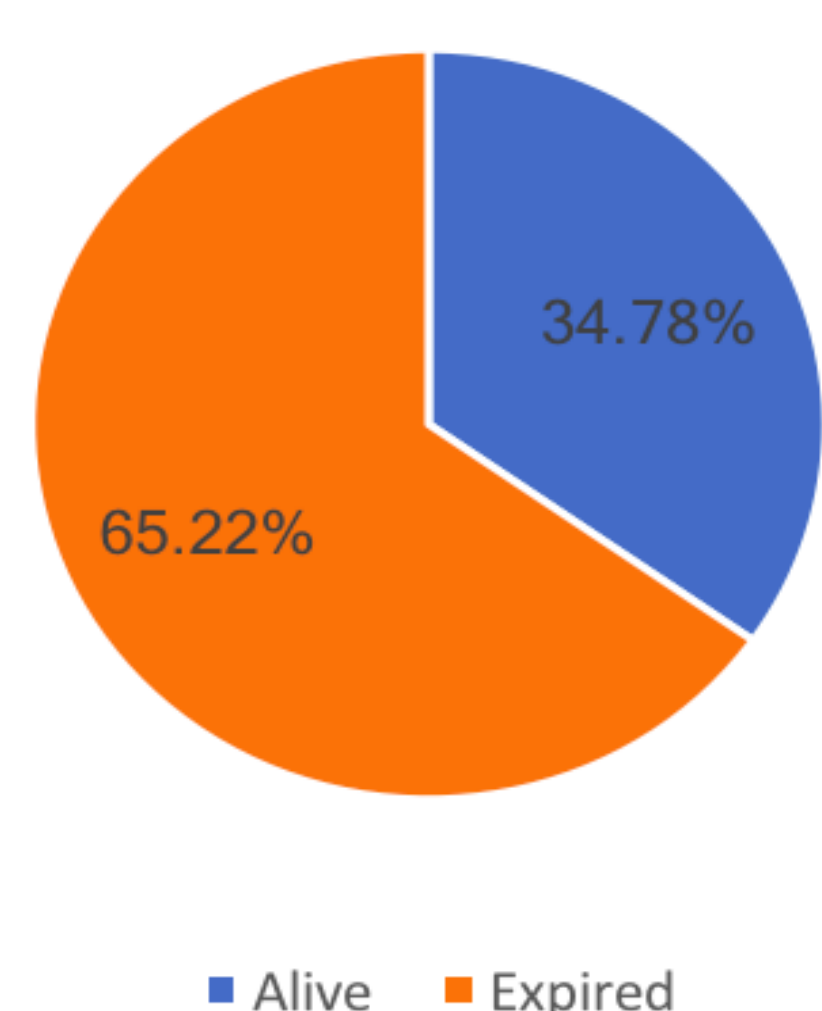
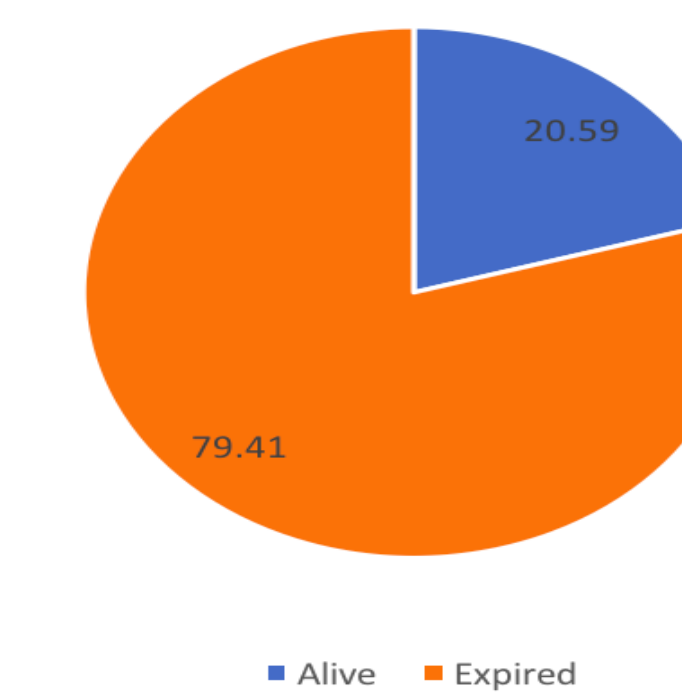


Figure 2 (left). Overall survival of patients with **limited** brain metastases by treatment type: * 3 of 16 who received WBRT are alive (18.75% survival). * 24 of 69 who received SRS are alive (34.78% survival).

Status of Overall Patients with Limited Brain Metastases who Received Stereotactic Radiosurgery (SRS)



Status of Patients with Limited Brain Metastases and Systemic Disease who Received Stereotactic Radiosurgery (SRS)



Status of Patients with Limited Brain Metastases and **NO** Systemic Disease who Received Stereotactic Radiosurgery (SRS)

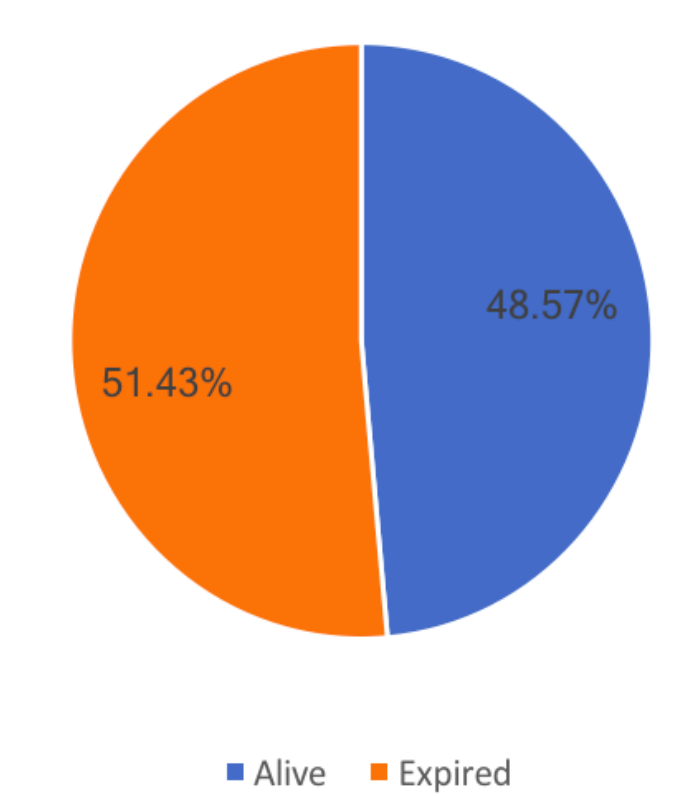


Figure 3 (left). Survival of patients with **limited** brain metastases treated with SRS by presence or absence of systemic disease: * 7 of 34 **with systemic disease** are alive (20.59% survival). * 17 of 35 **without systemic disease** are alive (48.57% survival).

CONCLUSIONS

- Treatment for limited brain metastases at LVHN followed 2018 NCCN Guidelines³
- Survival was higher for patients who received SRS
- Eliminating systemic disease increased survival for limited brain metastases treated with SRS
- Future studies are needed to evaluate the efficacy of SRS in limited brain metastases of different cancer types

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