(P029) Stereotactic Radiosurgery for Intracranial Metastases of Gynecologic Origin

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Ablative radiotherapy with stereotactic radiosurgery or fractionated stereotactic radiotherapy was effective in treating gynecologic brain metastasis, with excellent local control.

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INTRODUCTION: Gynecologic malignancy with brain metastasis is rare but has a poor prognosis. The purpose of this study was to evaluate the outcomes of patients treated with stereotactic radiosurgery (SRS) and fractionated stereotactic radiotherapy (FSRT) to intact gynecologic brain metastases.

PATIENTS AND METHODS: From 2006–2015, a single-institution institutional review board-approved retrospective analysis identified 15 patients with 40 intracranial metastases treated with SRS (n = 33) and FSRT (n = 7). The median age was 60 years (range: 35–71 yr), with a median of 2 metastases per patient (range: 1–5). The most common primary tumor origin was ovarian (40%), followed by cervical (32.5%), endometrial (17.5%), leiomyosarcoma (5%), and choriocarcinoma (5%). The majority of intracranial treatment sites were within the frontal lobe (25%) and occipital lobe (25%). The median SRS dose was 21 Gy (range: 13–24 Gy), and the median FSRT dose was 25 Gy (range: 25–30 Gy). The median gross tumor volume was 0.37 mL (range: 0.01–17.44 mL), and the median planning target volume was 0.78 mL (range: 0.50–38.15 mL). Median follow-up was 7 months (range: 3–45 mo). Actuarial local control rate, distant brain control rate, and overall survival (OS) were assessed using Kaplan-Meier analysis.

RESULTS: The overall crude local control rate among all patients treated with SRS and FSRT was 93%, with a 12-month actuarial local control rate of 100%. Both local failures were of ovarian origin and were treated with SRS to a total dose of 20 Gy. The 12-month distant brain control and OS rates were 66.7% and 41.9%, respectively. Similarly, the median distant brain control and OS rates were 38 months (95% CI, 3–101 mo) and 40 months (95% CI, 3–82 mo), respectively.

CONCLUSION: Ablative radiotherapy with SRS or FSRT was effective in treating gynecologic brain metastasis, with excellent local control. This study provides support for the role of SRS and FSRT in the treatment of gynecologic brain metastasis.

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