

Robert Förster¹, Paul Windisch¹, Daniel Zwahlen¹, Christina Schröder^{1,2}

¹Inselspital, Bern University Hospital, University of Bern, Department of Radiation Oncology, Bern, Switzerland; ²Cantonal Hospital Winterthur, Department of Radiation Oncology, Winterthur, Switzerland

Purpose

- Stereotactic radiotherapy (SRT) has become a widely accepted standard of care for brain metastases
- Concerns persist regarding increased re-treatment rates and need for salvage WBRT
- This study aims to evaluate the frequency, timing, and patterns of salvage cranial radiotherapy

Methods

- We retrospectively analyzed patients who received cranial radiotherapy for brain metastases 2018 - 2024 at our institution
- Patient characteristics, treatment modalities, fractionation schemes, and time intervals between treatments were assessed.

Conclusion

The rate of salvage WBRT after upfront SRT was low and comparable to the rate of salvage SRT after WBRT. However, the timing of salvage interventions differed, with WBRT occurring sooner after initial SRT compared to salvage SRT post-WBRT. These findings support the continued use of SRT as a first-line treatment, given the relatively low requirement for salvage WBRT.

Results

- 434 patients with 594 courses of cranial radiotherapy
- 237 patients initially treated with SRT
 - 80 patients (31%) received at least one further course of cranial RT after a median of 7.6 months (range 1.2-60.9)
 - 20 patients (7.8%) required salvage WBRT
 - The median time from first SRT to salvage WBRT was 6.6 months (range 1.2-59.1)
- 172 patients initially treated with WBRT
 - 17 (9.9%) required salvage SRT after a median of 12.4 months (range 3.3-62.8)
- 4 patients underwent salvage SRT after prophylactic WBRT
- 101 patients (23.3%) received more than one course of cranial RT, with 36 undergoing three or more courses

