


Study Spotlight: IORT after neurosurgical resection of brain metastases - Experience of a single center cohort of 117 procedures




Seeing beyond

IORT appears to be a safe way with low toxicity & excellent local control


Source



Title
IORT after neurosurgical resection of brain metastases as institutional standard treatment - update of the oncological outcome form a single center cohort after 117 procedures




Authors
Klaus-Henning Kahl, Philipp Krauss, Maria Neu, Christoph Maurer, Sabine Schill-Reiner, Zoha Roushan, Eva Laukmanis, Christian Dobner, Tilman Janzen, Nikolaos Balagiannis, Björn Sommer, Georg Stüben, Ehab Shiban




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Methodology



Study Design
117 resected and with IORT treated brain metastases (BM) in 105 patients to examine if IORT after resection of BM in a high-volume routine setting has impact on oncological outcome and toxicity.



Treatment
117 brain metastases have been resected and treated with intraoperative radiotherapy (IORT) with a median dose of 20 Gy prescribed to the surface of the applicator. Mean follow-up is at 14 months.

Results

Excellent control, low toxicity and chance for early start of systemic therapy

1. Median overall survival (OS): 18.2 months (Estimated 1-year OS is 57.7%)
 2. Local control (LC) rate (Fig. 1): 90.5% (Estimated 1-year LC is 84.2%)
 3. Distant brain control (DC): 61.9% (Estimated 1-year DC is 47.9%)
 4. Leptomeningeal disease (LMD): 6 patients (5.7%) (Estimated LMD rate was 10.4% at 1 year)
 5. Whole brain irradiation (WBI): 16.2% of patients needed WBI to achieve DC
 6. Radio necrosis rate: 2.6%
 7. Median time surgery to discharge from hospital: 6 days (2 – 41 days range)
 8. Median time to start of systemic treatment after surgery: 24 days (1 – 136 days range; 58 patients needed systemic treatment due to additional tumor burden in other organs.)
- Data shows low toxicity and excellent control
 - IORT appears to be a safe way to perform radiotherapy after neurosurgical resection of brain metastases
 - For patients with additional systemic tumor burden IORT holds the chance for an early start of adjacent systemic therapy

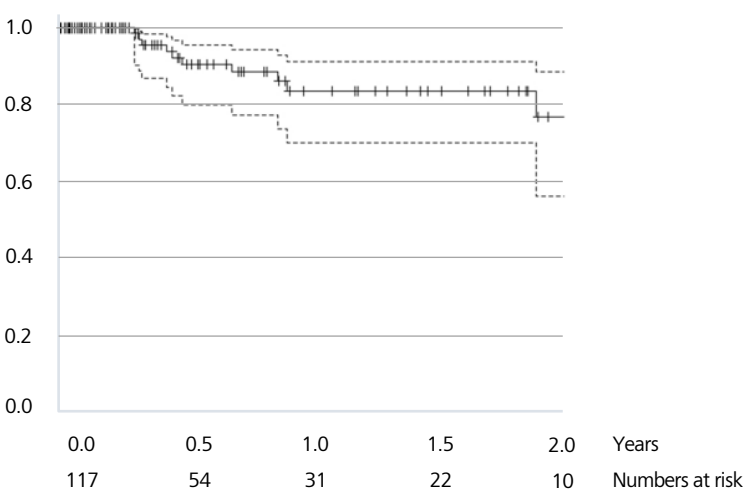


Fig. 1 Probability of local control after resection of BM and IORT (the dotted lines represent the 95% confidence intervals)