Table 1. Association of radiotherapy failure with Spinal Instability Neurological Score (SINS) on the total score and collapsed SINS score in categories stable, potentially unstable and unstable. P-values were adjusted for sex, spine status, primary tumor and symptoms

<table>
<thead>
<tr>
<th>SINS category</th>
<th>Odd's Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable (0)</td>
<td>1 (0.2-5.4)</td>
</tr>
<tr>
<td>Potentially- unstable (1-2)</td>
<td>4.6 (0.8-25.3)</td>
</tr>
<tr>
<td>Unstable (3-8)</td>
<td>10.0 (1.6-70.3)</td>
</tr>
</tbody>
</table>

Conclusions: The results of this study suggest that increasing spinal instability, as defined by the SINS score, is associated with radiotherapy failure. Therefore, patients with (potentially) unstable pathologic spin metastases should be considered for surgical stabilization first.

PD-0532 Stereotactic radiotherapy for recurrent high-grade gliomas: retrospective analysis.

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Purpose/Objective: Numerous treatment options are available for recurrent high-grade gliomas (rHGG), including reirradiation. Both fractionated stereotactic radiotherapy (FSRT) and radiosurgery (SRS) represent an optimal method to deliver high-dose radiotherapy to the small volume. Reirradiation is often limited due to the dose-prescription and target volume. The aim of this retrospective study was to evaluate the radiological and clinical efficacy of stereotactic radiotherapy for recurrent high-grade gliomas in terms of overall survival, radiological response and toxicity.

Materials and Methods: Between 2004 and 2011, 128 patients (158 lesions) with recurrent high-grade gliomas (63% Glioblastoma, WHO grade IV; 37% WHO grade III) were treated with CyberKnife stereotactic reirradiation. FSRT was performed in 96 lesions with 3-5 fractions; SRS in 62 lesions. The median time from first irradiation and reirradiation treatment was 11.5 months (95% CI, range 10-157 months).

Results: Nineteen patients (15%) showed a stable disease. The median overall survival was 12 months (range 6-157 months). At 12 months, nineteen patients (15%) showed a stabilization first. Painful spinal metastases should be considered for surgical stabilization.

Purpose/Objective: Elderly patients with cancer represent a different population compared to younger patients. Comorbidities and declining performance may result in lesser outcome after palliative treatments. Our goal was to study the effect of age on response to radiotherapy and quality of life in patients with painful bone metastases.

Materials and Methods: A large randomized radiotherapy trial showed equal effectiveness in pain relief of 8 Gy in a single fraction compared to 24 Gy in six fractions in patients with painful bone metastases. Between March 1996 and Sept 1998 1157 patients were included. At baseline and regular follow-up, patients completed questionnaires involving, among others, pain on an 11-point scale, several aspects of quality of life (QoL) (psychological distress, physical symptom distress, activity level impairment) and a verbally rated validation of QoL. For categorical variables, x-square was used, for continuous variables, one-way ANOVA, with Bonferroni post-hoc testing. For survival and response analyses, the Kaplan Meier method and Cox-regression were used.

Results: At baseline, verbally and verbally rated QoL and QoL-sumscores were available in 92%, 94% and 94% respectively. Elderly patients had worse performance at inclusion (Karnofsky Performance Score 20-60: 26% (A), 29% (B), 39% (C), p=0.004). When assessing baseline characteristics, in different age groups, a difference in activity level was noticed (p<0.001, table 1), with significantly more impairment in group C compared to group B (p=0.01), and to A (p<0.001). Other QoL items were similar among age groups (table 1). During follow up, the decline in QoL was similar between the three age groups. Median survival was 35, 27 and 27 weeks for increasing age groups (p<0.05).

Conclusions: Although elderly patients tended to respond less to radiation therapy compared to younger patients, there was still a significant response: C (67%) compared to A (78%, p=0.07), and to B (74%, p=0.36). Differences in mean time to response or between treatment arms were seen. In multivariate analysis, only primary tumor and performance score were significantly associated with response.

Table 1. Baseline quality of life items

<table>
<thead>
<tr>
<th>Age group</th>
<th>&lt;65 yrs</th>
<th>65-74 yrs</th>
<th>≥75 yrs</th>
<th>n.s.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological distress</td>
<td>mean</td>
<td>20.00</td>
<td>29.50</td>
<td>30.91</td>
</tr>
<tr>
<td>Physical symptom distress</td>
<td>mean</td>
<td>25.05</td>
<td>22.82</td>
<td>23.80</td>
</tr>
</tbody>
</table>

Conclusions: Although at baseline elderly patients had a higher activity level impairment, and a worse performance score when compared to younger patients, they did not evaluate their overall QoL as inferior. Moreover, the majority of elderly patients showed a meaningful response to radiotherapy for painful bone metastases. Therefore, palliative radiotherapy should be considered in elderly patients.

SYMPOSIUM: RECURRENT GLIOMA/GBM

SP-0534 New molecular markers for prediction and prognosis if ready for personalisation therapy?

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In recent years we have made remarkable progress in molecularly characterizing glioma uncovering their patho-genetic evolution and classifying them into different subtypes. Some of these molecular markers have been recognized to improve diagnostic precision and have a prognostic or even a predictive value for patient management based on retrospective analysis of clinical trials. Among these markers are mutations in the isocitrate dehydrogenase (IDH) 1 or 2 gene that