**Conclusions:** Mean doses in tumour varied from 102.9 Gy to 268.2 Gy depending on the tumour size. Doses in sclera and lens did not exceed the tolerance levels in all three groups of patients.

**12. THE EVALUATION OF CLINICAL, HISTOLOGICAL AND MOLECULAR PREDICTIVE AND GROGNOSTIC FACTORS IN PATIENTS WITH ADVANCED SQUAMOUS CELL CANCER OF THE LARYNX, MESO- AND HYPOPHARYNX, FLOOR OF MOUTH IRRADIATED AFTER INDUCTION CHEMOTHERAPY**

K. Małecki

Centrum Onkologii, Klinika Radioterapii Kraków, Polska

Between 1988-1997 198 patients with HNSCC received induction chemotherapy. Clinical staging was as follows II-7(52%), III-45(20%), IV-146(64%). Patients received 1 to 4 cycles of Cisplatin + 5FU. Response to chemotherapy (CR or PR) was observed only in patients who received 2-4 cycles of chemotherapy. The best responses were observed in patients with laryngeal, mesopharyngeal and hypopharyngeal cancers, 55%. Radiotherapy was subsequently performed in 178(90%). Twenty patients were not irradiated because of poor performance status or progression of disease after chemotherapy. Radical radiotherapy was performed in 124 (5-year LC 38%, DFS 35%, DSS 43%, OS 30%). All 25 patients irradiated palliatively died during 26 months. The best results were observed in patients with laryngeal cancer; LC 48%, DFS 25%, DSS 32%, OS 22%. The most frequent failure was local recurrence in 29(23%) patients. In the next step of this study we want: 1) to assess prognostic and predictive value of selected clinical, histological and molecular factors by defining its influence on the chance of response to chemotherapy and chance of cure 2) to examine the correlation between these factors and to establish if they give new predictive and prognostic information 3) to establish which of examined factors may be useful in selecting patients with advanced HNSCCs to combined modality treatment (chemotherapy + radiotherapy), and particularly in selecting patients with advanced laryngeal cancer to larynx preservation treatment. We will examine the cell cycle parameter Ki67, expression of p53 protein and expression of (EGFr). There will be also reevaluated histological material (grading).

**13. IMMUNOGENETHERAPY COMBINED WITH BRAIN METASTASES IRRADIATION IN MELANOMA PATIENTS**

S. Nawrocki, A. Karczewska, P. Milecki, D. Iżycki, G. Stryczyńska, A. Mackiewicz

Greatpoland Cancer Centre, USOMS, Poznań, Poland

**Aims:** To assess toxicity and results of melanoma brain metastases irradiation in patients treated with genetically modified tumour vaccine.

**Materials/methods:** A group of 45 melanoma stage IV (AJCC) patients was treated with vaccine consisted of autologic melanoma cells admixed with allogeneic cells modified with IL-6 and siL-6R genes. During the treatment 14 patients developed symptoms of brain metastases. 5 patients had solitary metastases, 9 multiple lesions. 4 patients with single metastasis were treated surgically. All 14 patients were irradiated with the doses 30-39 Gy, using 3 Gy/fraction, 5 fractions/week. Toxicity of cranial irradiation (clinically, CT) and clinical results (CT, survival) were evaluated. Immunological cellular responses were assessed in vitro.

**Results:** Acute effects of irradiation were tolerable and manageable using standard dexamethasone treatment. There was no radiation encephalopathy or radiation necrosis. In 7/14 patients stabilization or partial remission of brain lesions was observed. Overall survival measured from brain metastases diagnosis ranged from 2 to 21 months (2 patients are still alive), median survival was 316 days. In 4 treated patients radiation enhanced immune responses to the vaccine.

**Conclusions:** Palliative cranial irradiation is well tolerated by patients treated with novel systemic approaches such as immunogene therapy, relives symptoms and may extend survival. Radiation of metastases modulates immune responses to melanoma cells.