

442 pairs of films for 226 patients were analyzed.

**Results:** For 35 patients action level was exceeded (gynecologic 13, prostate 2, rectum 6, breast 7, brain 5 and lung 2). For 10 patients the second portal film was significantly different from reference film and simulation was repeated. Only in 5 cases systematic errors were found (gynecologic 2, rectum 2 and brain 1). PIPS-PRO software is proven to be a very useful tool for portal control.

#### 43.

### NEOADJUVANT RADIOTHERAPY OF EPIDERMIOID LUNG CARCINOMA PATIENTS UNDER SHORT TERM HYPOXIA CONDITION

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Main method of treating the epidermoid lung carcinoma patients is a surgery which gives a 5-year survival of 53–70% of patients with 1 and 2 stage of disease. However, if metastases in lymphatic nodes of mediastinum are present then number of patients surviving this period considerably decreases. To increase surgery effectiveness one seeks the combined therapy methods using, in particular, neoadjuvant radiotherapy. We have studied such a therapy method which is to be applied during the pre-operative period of hypoxiradiotherapy. Date of 237 epidermoid lung carcinoma patients has been analyzed, mainly for the 3-d stage of disease: 1-st group of 123 patients was given a surgery treatment, the second one, of 114 patients, received an additional intensive pre-surgery radiation (5 Gy daily, 20 Gy) under condition of a short term hypoxia of a short term hypoxia caused by a gas mixture of 10% of oxygen and 90% of nitrogen. Surgeries were carried out during the first 3 days after the completing the radiation treatment. Mechanical conditions of the surgery procedure, blood losses and after surgery complications were similar in both cases. The number of cases of general radiation reactions decreased 3 times, all the cases being limited to the 1 and 2 degrees on the RTOG scale. After analysis of deferent factors, which define the result of treatment, significance the most reliable were the size of primary lesion and presence of mediastinum lymphatic nodes metastasis. Was shown rising of 3-year survival

rate after combined treatment vs. operative treatment only.

#### 44.

### RADIATION THERAPY IN THE TREATMENT OF PARTIALLY RESECTED LOW-GRADE CEREBELLAR ASTROCYTOMAS IN ADULT PATIENTS

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Between 1975 and 1995, ninety two adult patients received postoperative irradiation for subtotally resected cerebellar tumours, of which 31 were low-grade (I-II) astrocytomas. The median dose of 51 Gy was given. 29 patients showed good tolerance to treatment. The overall 5 and 10-year actuarial survival rates were 78% and 61 % respectively. Age of patients had the strongest influence on prognosis. Young patients (up to 20 years) achieved the 10-year overall actuarial survival rate of 85%, while older patients had poorer survival with the 10-year overall actuarial survival rate of 46% ( $p=0.0205$ ).

#### 45.

### IMPACT OF Hb LEVEL DURING POSTOPERATIVE RADIOTHERAPY OF PATIENTS WITH LARYNX CANCER

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**Aim:** assessment the influence of low level of Hgb on the locoregional outcome of postoperative radiotherapy patients with advanced cancer of larynx.

**Material and methods:** An retrospective analysis of two hundred fifty four patients with larynx carcinoma with stage III or IV squamous cell carcinoma of larynx who were treated between January 1993 and December 1996 was performed. Postoperative radiotherapy was performed in conventional way to total dose of 60 Gy, 5 times a week. Of 254 patients, 86 patients (34%) were considered to have a low level of hemoglobin (below 13 g/dl) prior the beginning of radiotherapy and 56 patients (22%)