consisted in radiotherapy twice-daily delivered: first week: 2x1,20 Gy "elective fields", the remaining three weeks 1,80 Gy "elective fields" and 1,20 Gy boost on involved areas by oblique fields. Total dose was 57 Gy. Conventional treatment techniques were employed. RT-BOOST technique was conformally planned and delivered, total dose was 56,7 Gy in 21 fractions (per fraction: 1,9 Gy to limited elective areas and concurrent boost of 0,8 Gy to the GTV) and 26 days.

Results: With a follow-up period ranging from 1 to 19 months, there is no difference in the compliance with the treatment-plan, treatment tolerance and response rate in the two analysed groups. In all but two patients treatment plan was realised. In RT-BOOST group treatment was discontinued in one patient, because of prolonged III° EORTC/RTOG oesophageal toxicity. In RAHIP group in one patient treatment was prolonged by 10 days because of pneumonitis (II° lung toxicity). One case of III° oesophageal toxicity was observed in each group. There was no increase in toxicity among patients receiving chemotherapy before radiotherapy. The response rate was similar in both analysed groups (RAHIP: 73% PR, 7,5%, CR; RT-BOOST: 65% PR, 7% CR). Estimated by Kaplan-Meier actuarial one-year survival rate method was 66% and actuarial one-year progression free-survival rate was 58% for the entire group.

Conclusions: Preliminary results of accelerated radiotherapy for locally advanced NSCLC seem promising. Additionally a good compliance with the treatment in both groups allows to work out a phase III study dealing with this problem.

41.
ESTIMATION OF DOSE DISTRUBUTION ACCORDING TO DOSE VOLUME HISTOGRAMS (DVH) IN CONFORMAL RADIOTHERAPY

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Aim: The evaluation what kind of statistical informations concomitant with DVH are essential in estimations of dose distribution in conformal planning of radiotherapy.

Method: Un the base of test case -- cancer of the base of tongue, irradiation plans for different sizes of irradiation boost field margins were analysed. DVHs - differential and cumulative for selected critical organs and target volume have been accounted. On base of standard deviation and minimal doses in select volumes target and critical tissues have been estimated. Then probability of local control the risk of complications have been expected.

Results and discussion: The modelled results show, that graphic representation of DVH is not sufficient information itself in estimation of dose distribution. Statistical parameters like modal dole, standard deviation determine essential supplement of graphic dose distribution. Especially standard deviation contains indispensable information. The histogram differential and cumulative should be used together for estimations of dose distribution. It appears that estimation of dose distribution in target volume should be based on cumulative histogram and estimation of dose distribution in critical organs - on differential histogram.

42.
RESULTS OF DAILY CONTROL OF PATIENTS SETUP TREATED ON HOLYCROSS CANCER CENTRE IN KIELCE BETWEEN 1 APRIL 2000 AND 31 MARCH 2001

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Purpose: Presentation of quality control system being in force in Kielce and results of patients' setup reproducibility and repeatability.

System description: Almost all patients treated in our hospital begin theirs treatments on Monday. For every patient treated with radical intent portal films are taken and compared with reference images obtained at simulator during the first fraction. After digitizing of both portal and reference films the comparison is performed by means of PIPS-PRO software. Comparison has to be completed until Wednesday morning when results are presented to radiotherapists on check meeting. Action levels specific to individual localization are defined and if difference between portal and reference film exceeds the specific level, another portal film is taken on the next day. If the difference still exceeds the action level the patient is directed again to simulator and the procedure starts from the very beginning. Until 31.01.2001 more than