and residual errors were measured using the same technique. For OA fields only the set up error was measured.

In AP irradiation the positioning error before correction is more important than the movements due to breathing. Overall systematic and random error were respective −0.8 (−5.36 to 4.53) mm and 4.5 (1.1 to 3.7) mm for longitudinal position and −3.3 (15.8 to 4.5) mm and 7.0 (0.8 to 3.2) mm for lateral position. After correction we found 0.6 and 2.4 mm for longitudinal and −0.02 and 1.6 mm for lateral position as residual systematic and random errors. Rotational errors were comparable before and after correction, ranging from −1.4 to 0.5° (syst.) and 0.9 to 1.9° (random) before and −1.6 to 1.2° (syst.) and 0.5 to 2.2° (random) after correction.

For OA fields there was a tendency to larger systematic errors in longitudinal and lateral position, the random errors were comparable. For rotational errors, both types of errors were increased compared to AP fields.

As a result of this study the patient positioning technique was changed to reduce the variation of the position of the head support in respect to the patients body, which may have a large influence on positioning errors.

1083 ORAL

A COMPLETED PHASE I/II TRIAL OF NEOADJUVANT CHEMOTHERAPY (CT) WITH CISPLATIN AND VINORELBINE FOLLOWED BY ACCELERATED THORACIC IRRADIATION, (TRT) IN INOPERABLE NSCLC

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Goal: To improve local control by accelerating the delivery of TRT. *Design:* Inoperable and measurable stages II, III-A and B NSCLC, KS ⩾70. Prior weight loss allowed. *Treatment:* cisplatin 100 mg/m^2 week 1 and 5, vinorelbine 30 mg/m^2 weekly × 5 (15 mg/m^2 on week 2 followed by TRT, 30 fractions of 2 Gy in four weeks, once daily weeks 1 and 2, BID weeks 3 and 4 (same biological dose as 30 daily fractions of 2 Gy). *Results:* From 11–92 to 11–94, 42 eligible patients entered and 39 are evaluable. Response rate 46.2% (18/39) after CT and 71.8% (28/39) after TRT. 24 patients have progressed (1st relapse: 6 in RT field, 16 outside RT field [7 in brain], 2 unknown), and 20 have died. Actuarial median survival 12.0 months. ⩾ grade III toxicities post TRT in 23.1% (9/39:7 oesophagus [1 grade 5], 1 lung, 1 skin). Median weight loss during treatment was 2.5 kg. *Conclusions:* Cisplatin and vinorelbine is an active induction CT regimen. Accelerated TRT to 60 Gy is well tolerated and may yield better local control than standard TRT.

1084 POSTER

INTERIM RESULTS OF A PHASE II TRIAL OF DOCETAXEL IN COMBINATION WITH CISPLATIN IN PATIENTS WITH METASTATIC OR LOCALLY ADVANCED NON-SMALL CELL LUNG CANCER (NSCLC)

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Docetaxel (Taxotere®; T), a semi-synthetic taxoid has considerable single agent activity in NSCLC with a response rate of 38% (Francis *et al.*, *JCO*12; 1232, 1994). We recently reported the results of a phase I trial of T in combination with cisplatin (P) in patients (pts) with metastatic or locally advanced NSCLC. For phase II trials, the recommended dose of each agent administered as a 1 hr infusion was 75 mg/m^2 (*Ann. Oncol.* 5; P773, 1994). Hydration was started 2 hrs prior to T which was given immediately prior to P and ended 22 hrs post P. Ondansetron and dexamethasone were given as antiemetics. Cycles were repeated each 21 days. Eligibility included locally advanced/metastatic NSCLC, no prior chemotherapy, measurable disease, age 18–75 yrs, WHO performance status (PS) 0–2 and adequate bone marrow, hepatic and renal function. CSF's or prophylactic antibiotics were not permitted. Interim results, as analysed on 9/3/95 are reported. Baseline characteristics for the 47 eligible patients (2 pts with Stage 1 disease were excluded from response analysis) were median age 60 (range 36–74) years, PS 1/2 of 61%/22% and Stage III/IV, 37%/63% pts respectively. All pts were evaluable for toxicity but only eligible pts completing 2 cycles of chemotherapy were evaluable for response. In 36 evaluable pts, the partial response (PR) rate was 33% (12/36 pts), SD 44% (16/36 pts) and PD 22% (8/36 pts). Of the 12 PR's, 6 have been confirmed on subsequent CT scans. Grade 4 toxicities included febrile neutropenia (3 pts), neutropenia (31 pts) and diarrhea (5 pts). Grade 3 or 4 nausea/vomiting was seen in 10 pts. Other toxicities requiring dose reductions or discontinuation of study medication included cardiac abnormalities (2 pts) and fluid retention (2 pts). There were 9 hypersensitivity reactions. There was 1 toxic death (infection and neutropenia). Although significant toxicities were observed, these were manageable. Final results will be presented. The combination of docetaxel and cisplatinum has significant activity in NSCLC although does not appear to be substantially better than T alone. Toxicity may preclude phase III evaluation.

1085 POSTER

LUNG CANCER EPIDEMIC IN RUSSIA

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Lung cancer is by far the most frequent cancer cause of death in Russia. One-third of all male cancer deaths are due to lung cancer. In males high risk areas with age-standardized incidence rates (world standard population) per 100,000 person-years (ASIR) being higher than 90.0 are scattered across Northern Russia, Oural, South-West and Far-East Siberia. ASIR ranging from 90.0 to 120.0 are recorded in more than twenty cities and large towns. Lung cancer incidence rates in women are not very high, a very similar situation to that in most other countries. High risk areas, ASIR ranging from 15.0 to 26.0 are in East- and Far-East Siberia. In large cities and towns with very high rates of lung cancer male/female ratios of incidence range between 4.0 and 17.0, while in most areas urban/rural ratio for both male and female is about 1.0–1.5. 94% of lung cancer death in males and 48% in females in Russia are attributed to smoking. Prevalence of smoking in males have reached in some areas 70–80% and has leveled, while smoking in women is increasing. This trend predicts that the epidemic of lung cancer in women will probably reach in Russia the same size as in men.

1086 PUBLICATION

A PHASE II STUDY OF GEMCITABINE WITH CISPLATIN IN PATIENTS WITH NON-SMALL CELL LUNG CANCER

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In a phase II study of patients with locally advanced or metastatic non-small cell lung cancer (NSCLC), gemcitabine was given at a dose of 1000 mg/m^2 weekly for 3 weeks (days 1, 8 and 15 followed by a 1 week rest) and cisplatin was given at a dose of 100 mg/m^2 on day 15 with gemcitabine—this all consisting of 1 cycle of chemotherapy. The patients had no prior chemotherapy, were WHO performance status 0–2 and all had measurable disease on CT scan. To date, 38 patients are available for analysis of whom 35 are evaluable for a response as they have received at least 1 cycle of chemotherapy. All patients are evaluable for toxicity. The mean patient age was 56 years (range, 35–74 years) and the proportion with stage IIIa and IIIb and stage IV disease was 29%, 35% and 36%. The patients received a median of 4 cycles of chemotherapy. A complete response was observed in 1 patient (3%) and a partial response in 15 patients (43%) for an overall response rate of 46%. A WHO grade 1 and 2 increase in serum creatinine, occurred in 11% and 3% of patients respectively. WHO grade 3 and 4 leukopenia occurred in 24% and 0%, and thrombocytopenia in 19% and 3% of patients respectively. These findings are compatible with a higher response rate with the combination of drugs than with either drug singly and with moderate toxicity.