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Clinical prognostic factors (PF) for survival in non small cell lung cancer (SCLC). Can they add something new? Results of a prospective multicenter study

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Purpose: This study determine PF for SV of pretreatment characteristics in a population of consecutive patients through a prospective design. Variables of respiratory function tests (RFT's), antropometric nutritional parameters (ANP) and symptoms were also included.

Patients and Methods: 610 consecutive patients were included between March 1990 to October 1995 from the three participant centers. The inclusion criteria were: histological/citological proof of NSCLC and a Karnofsky Index (KI) ≥ 60%. Factors studied were: age, gender, smoking habit, KI, symptoms of presentation, tumor location, pathology, clinical and pathological (when available) TNM, RFT's *i.e.* FVC,. FEV_1, FEF_{25-75}, PaO_2 and $PaCO_2$., weight loss, seric albumin and ANP *i.e.* cutaneous tricipital skin fold (CTSF) and circumference of the non-dominant arm (CNDA) and LDH. Surgical therapy, Chemotherapy (CT) and Radiotherapy (RT) were also recorded. As value of CT was not fully established when the study was started, its use in locally advanced or disseminated disease was left free according to the criteria of each participant center, but when used, it was always cisplatin based. Under the same bases some patients received RT. All variables were recorded prospectively and analyzed by univariate and multivariate methods.

Results: The global median survival was 28 weeks. In univariate analysis the following factors were associated with a better survival: Histology of squamous cell carcinoma vs others (p = 0.02), LDH of less than 460 i.u (p = 0.0006), Clinical Stage, I–II vs IIIA vs IIIB–IV (p = 0.0001), KI > 80% (p = 0.0001), radical surgery (p = 0.0001), radical RT (p = 0.0001), CT (p = 0.005), no weight loss >10% (p = 0.0001), seric albumin >35 gr/l.(p = 0.05), CNDA > percentil 75% (p = 0.003), FVC > 71% (p = 0.002), FEVI > 78% (p = 0.01), PaO_2 > 70 mmHg (p = 0.01) and no symptoms (p = 0.003). Variables with independent significance for survival were: KI, clinical stage, symptoms of mediastinal involvement (SMI: *i.e.* disphaegia, hoarseness and phrenic paralysis), radical surgery and cisplatin based chemotherapy. Results correspond to the whole group, without sub-grouping analysis.

Conclusions: This study confirm prospectively the value of KI, clinical stage, radical surgery and SMI as independent PF for SV in NSCLC. Significance of CT/RT should be interpreted with caution because selection of good risk patients could have happened. A predictive score of four cathegories can be designed. Up to our knowledge this is the first study demonstrating the prognostic value of some

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Intensified chemotherapy with carboplatin and VP-16+G-CSF after induction with cyclophosphamide, epirubicin and vincristine (CEV) in extensive small cell lung cancer (SCLC). A phase II trial

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Purpose: To assess efficacy and safety of intensification chemotherapy (CT) after induction CT in extensive SCLC.

Methods: From November 1991 to November 1996, 57 consecutive untreated pts (50 males, 7 females) received cyclophosphamide (1 gr/m^2 day 1), epirubicin (90 mg/m^2 day 1), vincristine (2 mg day 1) q3wks for 2–3 courses. Responding pts were then treated with moderately intensive CT consisting of carboplatin (150 mg/m^2 days 1–3) and VP-16 (100 mg/m^2 days 1–5) plus rh G-CSF (5 mcg/Kg/die days 7–16) q3wks for 3 courses. ECOG PS was 0–1 in 45 pts. 2 in 12 pts. 55 pts were evaluable for response and toxicity.

Results: After CEV induction, 36 pts (63%) achieved partial response. In 153 CEV courses delivered WHO grade 3–4 anemia occurred in 4 pts. thrombocytopenia in 4 pts. and leukopenia in 12 pts. One pt died during neutropenic sepsis. 43 pts received intensified treatment: 1 minor response and 4 partial responses were converted into complete responses. 4 pts with stable disease achieved partial response. Over 122 courses of carboplatin-VP-16. WHO grade 3–4 anemia occurred in 4 pts, thrombocytopenia in 10 pts. and leukopenia in 7 pts.

Conclusion: Intensification can improve response to CT and in this experience was safe and well tolerated.

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Cytogenetic abnormalities involving both arms of chromosome 11 in metastatic effusions of 5 patients with breast or ovarian cancer

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Purpose: Loss of heterozygosity and chromosome abnormalities usually leading to partial or total loss of chromosome 11, have been extensively described in breast and ovarian cancers. Herein we present cytogenetic findings from 5 patients (3 with ovarian and 2 with breast cancer) all showing strucutral and numerical anomalies affecting chromosome **11.** This study provides further cytogenetic evidence for the localization of potential metastasis tumor suppressor genes related to breast and ovarian malignancy.

Methods: Chromosome preparations were made from direct preparations and short term cell cultures from recurrent metastatic effusions. Chromosomes were G-banded and more than 30 metaphases from each patient were examined.

Results: All five cases revealed complex karyotypes with a plethora of numerical and structural rearrangements Chromosome 11 was implicated in every case. Chromosome rearrangements leading to total detection of **11p** were found in two patients (one with breast, and one with ovarian cancer). A structural anomaly leading to partial deletion affecting 11p13–p15 was clonal finding in a third patient with ovarian cancer, whereas a forth patient with breast caner showed a terminal deletion of 11q23qter. Monosomies of whole chromosome 11, were frequent in all cases.

Conclusions: All of the karyotypic anomalies presented here support the hypothesis that chromosome 11 harbors important tumor suppressor genes related to metastatic potential of breast and ovarian cancer. The above cytogenetic findings could have a prognostic value in the clinical evaluation of such patients.

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Lung cancer prognosis: The role of the metastatic pattern

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Purpose: All previous studies have consistently shown that, in lung cancer, both clinical stage and each of the T, N, M categories are important prognostically (Buccheri et al. Eur Repir J 1994;7:1350). There is scarce information, however, concerning the value of each anatomical component of a given T, N, or M category.

Methods: In 653 consecutive patients with newly diagnosed carcinoma of the bronchus, the exact anatomical involvement was recorded. Variables considered were 6 for the T category, 13 for N, and 8 for the M one. There were no missing values for any variable. Both univariate and multivariate survival analyses were performed.

Results: Almost all the variables recorded were found prognostically important by univariate methods; however, in multivariate analysis the following set of significant variables was obtained:

Variable	Beta	R.R.	t-value	p-value
brain metastases	0.9635	2.6	5 4199	<0.001
bone metastases	0.7643	2.1	4.7735	<0.0011
liver metastases	0.7119	2.0	4.0774	<0.001
lung metastases	0.4315	1.5	3.0403	<0.01
mediastinal vessel invasion	0.3456	1.4	2.5159	<0.05
high para-tracheal N2	0.2792	1.3	2.1729	<0.05
supra-clavicular N3	0 4478	1.5	2.1695	<0.05
pre- and retro-tracheal N2	0.2793	1.3	1.7959	<0.1

Cases included· 653; Chi^2 = 171.325, df = 27, p = 0.00000

Conclusion: The particular patter of the loco-regional invasion and distant metastasis has profound influence in the outcome of lung cancer and should be accounted for in any prognostic assessment.