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The Effect of an Oral Nutritional Supplement With Eicosapentaenoic Acid on Body Composition, Energy Intake, Quality of Life and Survival in Advanced Non-small Cell Lung Cancer

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Background: Patients with non-small cell lung cancer (NSCLC) often lose weight. Malnutrition is associated with increased morbidity and diminished in quality of life. Eicosapentaenoic acid (EPA) is of interest in cancer patients as it has potential to impact on the inflammatory response and reduce catabolism. The aim of this study was to evaluate the impact of EPA supplement on body composition, quality of life and survival in advanced NSCLC patients.

Methods: NSCLC Patients naïve to treatment were evaluated and randomly assigned to receive 2 cans of supplement (2g of EPA daily) or isocaloric diet during 2 patlin/taxane chemotherapy. Subjective global assessment (SGA), anthropometric parameters, dietary quantitative parameters, segmental bioelectrical impedance analysis (BIA), biochemical (albumin, hematologic count) and EORTC QLQ-C30 quality of life questionnaire were performed. Study was approved by clinical trials.

Results: Ninety two patients were included (46 EPA, 46 standard groups). No basal differences between groups were found at baseline. Experimental group present increased albumin levels, and inflammatory parameters significant reduced; increased in energy, protein, lipids and carbohydrate intake after chemotherapy; patients in experimental group presented minor prevalence of weight loss and increased 1.6 kg of lean body mass compared with controls. In quality of life, experimental group presented an improvement in global and physical scale (p = 0.06 both) less fatigue, anorexia and neuropathy. There was no significant difference in overall survival between groups.

**Conclusion:** Intention to treat group comparisons indicated that enrichment with EPA supplement provide a therapeutic advantage in improving appetite and body composition, increasing lean body mass; and showing quality of life benefits in NSCLC patients under chemotherapy treatment.

		Control	Experimental	p
Weight (kg)	T0	65.0±13.6	601±11.5	0.05
	T2	63.1±14.4 *	59.5±11.8	
BMI	T0	25.5±4.2	24.0±3.8	0.06
	T2	24.6±4.2 *	$23.7 \pm 4.1$	
% weight loss	T0	$6.7 \pm 10$	$8.7 \pm 8.5$	0.238
	T2	9.3±118 *	$9.9 \pm 8.6$	
% LBM	T0	$65.1 \pm 10.6$	$60.2 \pm 12.6$	0.04
	T2	$64.8 \pm 8.2$	$61.8 \pm 10.8$	
Albumin (mg/dl)	T0	$3.4 \pm 0.51$	$3.2 \pm 0.51$	0.06
	T2	3.3±061	$3.8 \pm 0.47$	
Kcal (g/day)	T0	1937.2±991.8	$1552.6 \pm 640.2$	<0.001
	T2	1533.6±640.9 *	2186.0±707.0 *	
Protein (g/day)	T0	$68.3 \pm 33.2$	$57.9 \pm 25.3$	<0.001
	T2	54.0±26.4 *	85.5±23.5*	
Lipids (g/day)	T0	$63.4 \pm 33.7$	$56.7 \pm 30.8$	0.002
	T2	48.9±23.8 *	72.2±32.2 *	
Carbohydrates (g/day)	T0	$286.0 \pm 167.9$	$201.7 \pm 82.2$	<0.001
	T2	226.1±101.6 *	301.6±120.7 *	
Fatigue	T0	$34.4 \pm 19.3$	$42.7 \pm 25.0$	0.037
	T2	$31.5 \pm 17.3$	34.2±24.8 *	
Anorexia	T0	$31.9 \pm 31.0$	41.5±34.1	0.05
	T2	$29.0 \pm 27.9$	34±40.1 *	
Neuropathy	T0	$11.7 \pm 22.3$	$19.4 \pm 28.4$	0.05
	T2	31.8±30.5 *	$22.3 \pm 25.4$	

T0 = basal; T2 = after second cycle of chemotherapy.

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Sarcomatoid Malignant Pleural Mesothelioma – a Series of 44 Cases Treated at a Single Oncological Department

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**Background:** Sarcomatoid malignant pleural mesotheliomas (SMPM), accounting for roughly 10% of pleural malignant mesotheliomas, have a poor prognosis and are particularly resistant to conventional chemotherapy with median survival in the range of 6 months. Here we report on clinical outcome of a series of SMPM patients treated at a single Oncological Department.

Patients and Methods: We selected 44 SMPM patients (11 females, 33 males) in our MesoDB including 569 cases diagnosed between 1993 and December 2010 at Alessandria and Casale Monferrato Hospitals. Diagnosis was always confirmed by the same expert pathologist. We reviewed the clinical records focusing on treatments, response to chemotherapy (CT) and outcomes.

Results: Median age at diagnosis was 67 years, range (44–77). Forty-two patients received a first line CT and regimens adopted were as follows: platinum derivatives and pemetrexed in 26, pemetrexed in 6, platinum derivatives and raltitrexed in 3, others regimens (platinum and gemcitabine, anthracycline-based and ifosfamide-based) in 9 cases. Only 1 patient, having received platinum and gemcitabine, had a partial response, 10 patients had stable disease, 26 patients had progressive disease and 7 patients were not evaluable for response. Thirty-three patients received only one CT line, 9 patients 2 CT lines and 2 patients 3 CT lines. Six patients underwent palliative pleurectomy and 6 palliative radiotherapy. Median PFS was 7.5 months (IQR 3.9–8.8) and median overall survival 8.5 months (IQR 5–13.6).

Conclusions: SMPM accounts for 8% of patients in our series, in line with the literature. With the clear limitation of the small number, intriguingly 25% occurred in women: this proportion is higher than that previously reported and an effort to retrieve more detailed information on asbestos exposure is currently ongoing. To our knowledge this is the largest series of SMPM analyzed for treatments outcome. The results confirms that standard CT has a negligible impact on the prognosis. SMPM patients should be ideally treated within phase I-II studies with investigational agents. There is an highly unmet clinical need in this setting and new drugs with novel mode of action are eagerly awaited.

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Treatment and Clinical Outcomes of Young Patients (≤40 Years) With Advanced Non-small Cell Lung (NSCLC) – Data From a Retrospective Multicentric Database

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**Background:** NSCLC diagnosed in young patients (pts) is usually considered as a disease with a better prognosis compared to NSCLC in older pts. In the last decade, the introduction of both third generation chemotherapeutic agents and targeted therapies in the treatment of IIIB/IV stage NSCLC led to a clinical outcomes improvement, with a median survival (MS) of 12–14 months. Some studies have reported small series of young pts with NSCLC but the age cut-offs varied among studies and most of them did not specifically address the clinical outcomes of the IIIB/IV stage pts. The present report specifically addresses the treatment and the clinical outcomes of pts  $\leqslant$  40 years with IIIB/IV stage NSCLC treated after 2000 in our institutions.

Materials and Methods: We reviewed all pts referred for NSCLC from 2000 to 2010 to our Institutions and have selected a consecutive series of 100 pts ≤ 40 years older. Eleven pts with early stages were excluded and 89 with IIIB/IV NSCLC entered this study. Pts characteristics: male/female 55%/45%; median age 36 years (range 21–40); stage IIIB/IV 8%/92%; histological type: adenocarcinoma 71%, squamous 9%, other 20%. Metastatic sites of these pts were lung in 52%, liver in 15%, lymph

<sup>\*</sup>p  $\leq$  0.05 between T0 and T2.