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Title: Prognostic value study of lung cancer molecular markers and value of mitochondrial activity in resected non-small cell lung cancer

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Body: Aim:Determine the prognostic value of molecular markers (MM) of different lung cancer paths, and the value of mitochondrial activity (MA) in resected non small cell lung cancer (NSCLC). Method:Observational, cohort study in patients with resected NSCLC in our hospital in a four year period. 32 MM were selected.The study consisted on the elaboration of tissue arrays with samples from resected tumor, using a semiquantitative immunohistochemical study.The expression of 4 MA proteins were studied, β-F1-ATPase, Hsp60, GAPDH and PK by inmunohistochemical analysis. For each one of the markers the possible results were established according to intensity and percentage of cells that expressed the protein and the result of multiplying both values.A prognosis analysis was done with the expression of each protein and the overall 5-year survival rate was calculated. Results:134 patients were studied, 92% were men, with mean age of 66.8 (SD: 8), with a 66% of squamous tumors.The results are summarized in the table

Molecular marker and probability of survival

Molecular marker	Molecular expression	n	Probability of survival in 5 years	Wilcoxon	Log rank
p16B	Negative	117	0.50	0.011	0.017
	Positive	16	0.25		
P27	Negative	84	0.54	0.082	0.054
	Positive	44	0.34		
RB	Negative	34	0.32	0.026	0.048
	Positive	98	0.54		
Fas	Negative	118	0.47	0.06	0.061
	Positive	10	0.70		
β-F1-ATPasa	Low and moderate	56	0.36	0.07	0.14

	Strong	72	0.53		

Conclusions:We found two MM with long-term prognostic value.The expression of MA proteins doesn't have significant prognosis value in our population.The cases with strong expression of β-F1-ATPasa have a longer survival, which is clinically relevant. Supported by a research grant SEPAR 817/2009.