THE CLINICAL SIGNIFICANCE OF INTRATUMORAL INVASION ON EARLY STAGE NSCLC

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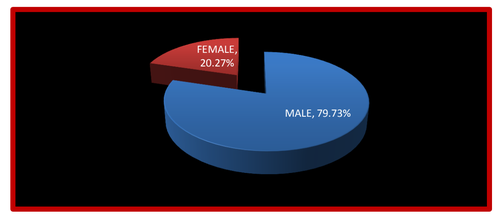
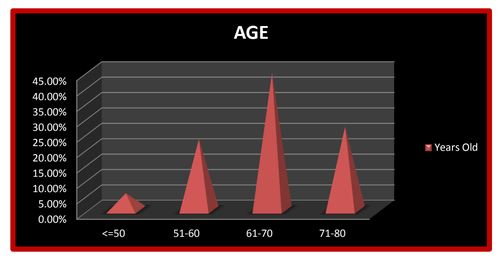
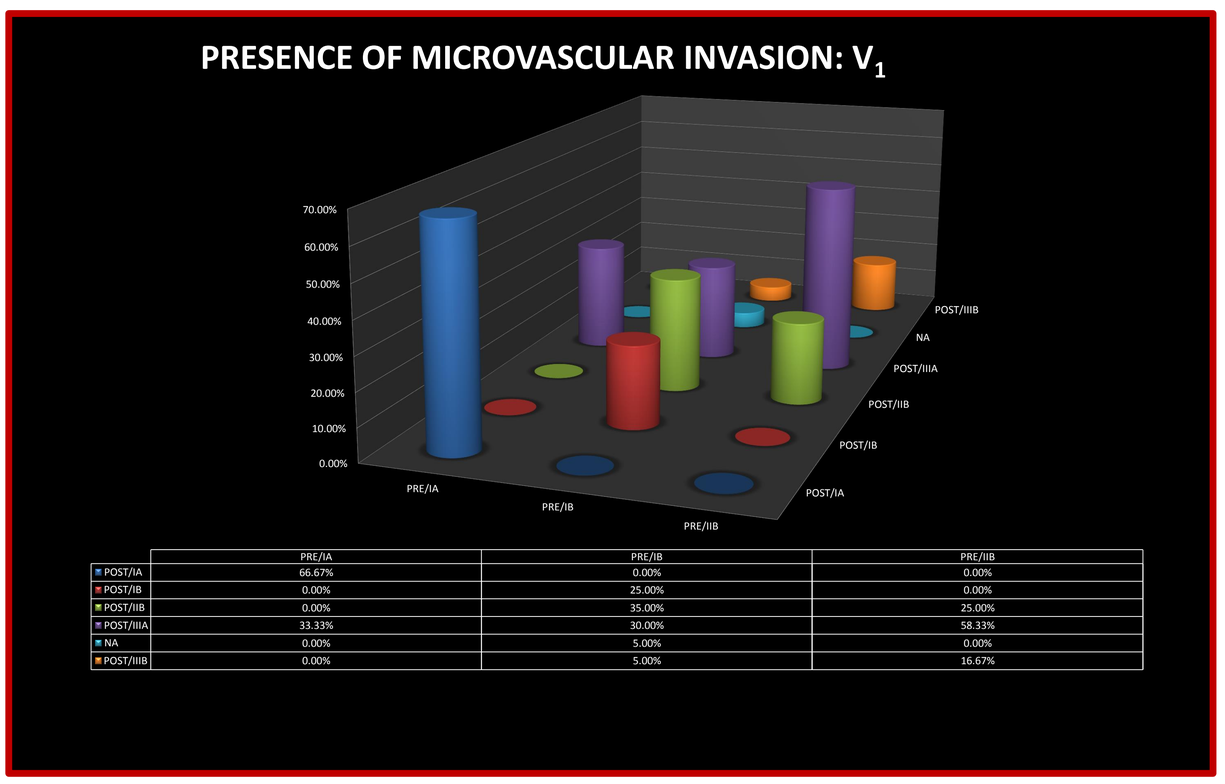
AIM: Microvascular invasion in pathology specimens of resected non small cell lung cancer is considered an indication of tumor invasiveness. It has been associated with higher probability of distant metastasis and dismal outcome. The role of tumor embolic invasion into small vessels has not been fully delineated although and it has not been incorporated into staging systems. The aim of this study is to give some details on the association between microvascular invasion and disease stage pre- and postoperatively.





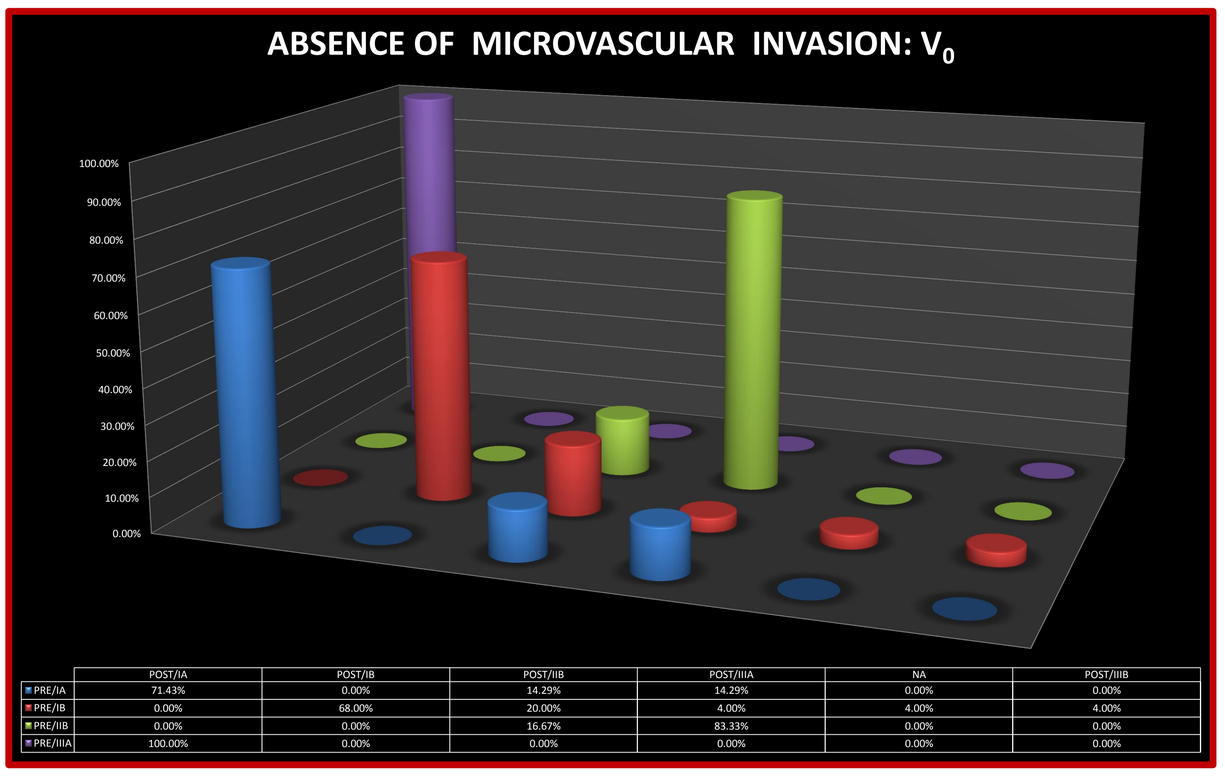
METHODS: Paraffin-embedded specimens from 62 patients (79.73% male) with NSCLC were examined. All patients underwent radical excision of their primary tumor (lobectomy or pneumonectomy), followed by regional lymphadenectomy between January 2007 and December 2013 in Cardiothoracic Surgery Department of Athens Naval Hospital. We reviewed the medical records of the patients comparing the theoretical disease stage according which the patient had been operated and the actual disease stage that was postoperatively found to accurately represent anatomic dissemination, taking into account the presence or the absence of microvascular invasion. There were four categories for venous invasion: Vx: Venous invasion cannot be assessed, V0: No venous invasion, V1: Microscopic venous invasion and V2: Macroscopic venous invasion.

RESULTS: All patients were followed up with a mean period of 24 months (0.2-57). 34 patients died during follow up. We studied disease stage preoperatively and postoperatively in V1 patients. For stages IA, IB, IIB, 33.33%, 75% and 75%, respectively, were upstaged in postoperative staging. In V0 patients for the stages IA, IB, IIB, IIIA the disease was upstaged in 28.5%, 32%, 83%, 0%, respectively. Moderately differentiated disease is presented as V1 more often (31.58%) than the poorly differentiated disease (23.53%). We suggest that, especially for the earlier stages, the finding of microvascular invasion is associated with advanced disease stage than that believed preoperatively.



	PRE/IA	PRE/IB	PRE/IIB
POST/IA	66.67%	0.00%	0.00%
POST/IB	0.00%	25.00%	0.00%
POST/IIB	0.00%	35.00%	25.00%
POST/IIIA	33.33%	30.00%	58.33%
NA	0.00%	5.00%	0.00%
POST/IIIB	0.00%	5.00%	16.67%

CONCLUSIONS: Microvascular invasion seems to be strongly associated with a more advanced disease stage in resected NSCLC. Due to this fact it may have a greater impact on survival than any other known parameter examined. It is possible that its role may be more significant and participate as an independent factor in the completion of the TNM staging system in the future.



	POST/IA	POST/IB	POST/IIB	POST/IIIA	NA	POST/IIIB
PRE/IA	71.43%	0.00%	14.29%	14.29%	0.00%	0.00%
PRE/IB	0.00%	68.00%	20.00%	4.00%	4.00%	4.00%
PRE/IIB	0.00%	0.00%	16.67%	83.33%	0.00%	0.00%
PRE/IIIA	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%