

MONDAY, 10 JUNE 2019
14:30 - 16:00
MTIG VATS RESECTION

O-026

VALIDATION OF THE AGGREGATE RISK SCORE PREDICTING 90-DAY MORTALITY AFTER VIDEO-ASSISTED THORACOSCOPIC LOBECTOMY BY THE ITALIAN VATS GROUP DATABASE

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Objectives:

A five classes (A-E) aggregate risk score predicting 90-day mortality after VATS lobectomy for NSCLC, including as independent factors male sex (3 points), carbon monoxide lung diffusion (DLCO) <60% (1 point) and operative time >150 minutes (1 point), has been recently published. This study aims to assess this model in an independent cohort to test its generalizability.

Methods:

From the Italian VATS Group Database, we selected 2,209 patients (1,315, 60% males; median age 69 years, IQR:63-74) underwent VATS lobectomy for NSCLC; we excluded patients with: incomplete data for risk score calculation; tumour size >5 cm; neoadjuvant treatment; follow-up <3 months. We calculated the aggregate risk score and the corresponding class of 90-day mortality risk for each patient; the correlation between risk classes and the mortality rate was tested in the original cohort and ours by Spearman's ρ -test.

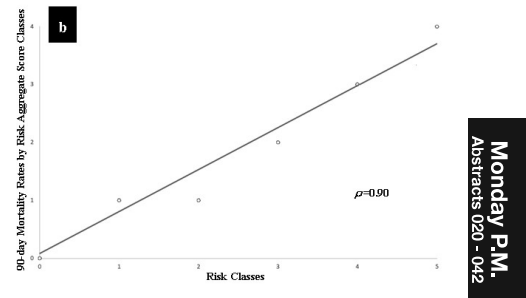
Results:

In our cohort, median DLCO was 82% (IQR: 68-94%), and median operative time was 180 (IQR: 140-220) minutes; conversion to open thoracotomy occurred in 190 cases (8.6%). The overall 90-day mortality in our cohort was 23/2,209 (1.04%). Classes distribution and respective mortality rate are reported in figure 1a. A strong uphill linear correlation was identified between risk classes and 90-day mortality rate in our cohort ($\rho=0.90$; p -value=0.04) as in the original one ($\rho=1.00$; p -value=0.00), confirming the increased mortality risk from class A to E, as shown in figure 1b.



Figure a) 90-day mortality rates by risk aggregate score classes: Italian VATS Group cohort and original cohort; **b)** correlation between risk classes and mortality rate tested by Spearman’s ρ test in the Italian VATS Group cohort.

Class	Italian VATS Group cohort			Original cohort		
	N (%)	Death, n	90-day mortality	N (%)	Death, n	90-day mortality
A	301 (14)	1	0.33	155 (21)	0	0.00
B	593 (27)	3	0.51	262 (36)	1	0.38
C	359 (16)	5	1.39	107 (15)	1	0.93
D	839 (38)	11	1.31	177 (24)	10	5.65
E	117 (5)	3	2.56	32 (5)	6	18.75



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Conclusions:

Our data validated the aggregate risk score of 90-day mortality after VATS lobectomy suggesting its application in NSCLC management and perioperative patients counselling.

Disclosure: No significant relationships.

Keywords: VATS lobectomy, postoperative mortality, risk score, validation