#IASLCUPDATES

Iniciativa científica de:

GECP lung cancer research

LUNG CANCER UPDATES

IASLC HIGHLIGHTS

7-10 DE SEPTIEMBRE 2019

Con la colaboración de:

Bristol-Myers Squibb

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Cirugía I

Dr. Florentino Hernando Trancho

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Results of trimodality therapy for patients with cN2 lung cancer diagnosed by video-assisted mediastinoscopic lymphadenectomy (VAMLA)

Call, S, Obiols, C; Rami Porta, R; Catot Tort, S; Núñez Fernández, M; Campayo, M; Pérez Ochoa, JF; Serra-Mitjans, M; Belda, J

Departments of Thoracic Surgery, Oncology, Radiation Oncolgy and Pathology

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OBJECTIVE

To analyze the results of those patients with **cN2 NSCLC diagnosed by VAMLA** who underwent **trimodality treatment** in terms of **feasibility and survival**

METHODS

2010-17

Prospective

250
cN0-1 NSCLC

35 N2 (14.5%)

Unfit for CH + RT (7 cases)

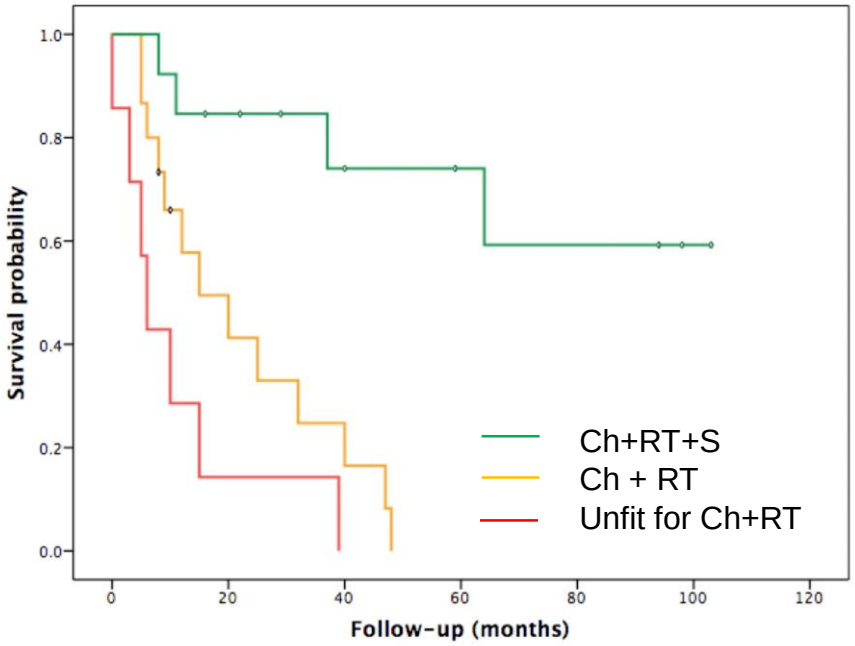
28 N2
Cisplatin (x3)
54Gy (40-70 Gy)

RESTAGING by PET-TC

- ✓ Stability or response of the primary tumor
- ✓ Absence of extrathoracic disease

RESULTS

Survival – all N2 cases (n=35)



$p < 0.0001$

	n	3-y Survival	5-y Survival
Ch + RT + S	13	**85%**	**74%**
Ch + RT	15	25%	0%
Unfit for Ch+RT	7	14.3%	0%

TAKE HOME MESSAGE

- The use of VAMLA in trimodality treatment is **feasible** and invasive mediastinal **restaging** after the induction therapy **is not necessary**

- **VAMLA** should be included in the current staging algorithms, especially for those **tumors with intermediate risk of N2 and normal mediastinum by PET-CT**

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RECCURRENCE PATTERN AFTER ADJUVANT CUSTOMIZED CHEMOTHERAPY BASED ON BRCA EXPRESSION LEVEL (SCAT TRIAL)

B. Massutí, J.M. Sanchez, M. Cobo, T. Moran, J.L. Gonzalez Larriba, I. Barneto, J. De Castro Carpeño, L. Iglesias, M.A.Muñoz, G. López-Vivanco, D. Isla, R. López, R. De Las Peñas, D. Rodriguez-Abreu, A. Artall, E. Esteban, M.Provencio, E.Pereira, J. Sanchez-Payá, R. Rosell . On behalf Spanish Lung Cancer Group / GECP

Hospital General Universitario de Alicante, ISABIAL Alicante, Hospital La Princesa, Madrid, University Hospital Regional Málaga, Malaga, Catalan Institute of Oncology-Badalona; Hospital Universitari Germans Trías I Pujol; B-ARGO; IGTP, Badalona, Hospital Clínico San Carlos, Madrid, Hospital Universitario Reina Sofia, Cordoba, Hospital Universitario La Paz, IDIPAZ Madrid, Hospital 12 de Octubre, Madrid, Instituto Valenciano Oncología, Valencia, Hospital Universitario Cruces, Barakaldo, Hospital Clinico Universitario Lozano Blesa, Zaragoza, Hospital Clínico Universitario de Santiago de Compostela, Santiago de Compostela, Hospital Provincial de Castellón, Castellon, Hospital Insular de Gran Canaria, Las Palmas, Hospital Universitario Miguel Servet, Zaragoza, Hospital Universitario Central de Asturias, Oviedo, Hospital Puerta de Hierro-Majadahonda, Madrid, Spanish Lung Cancer Group, Barcelona, Hospital General Universitario de Alicante ISABIAL, Alicante, Germans Trias i Pujol Science Inst., Catalan Institute of Oncology (ICO Badalona), Barcelona. Spanish Lung Cancer Group/Grupo Español Cáncer de Pulmón

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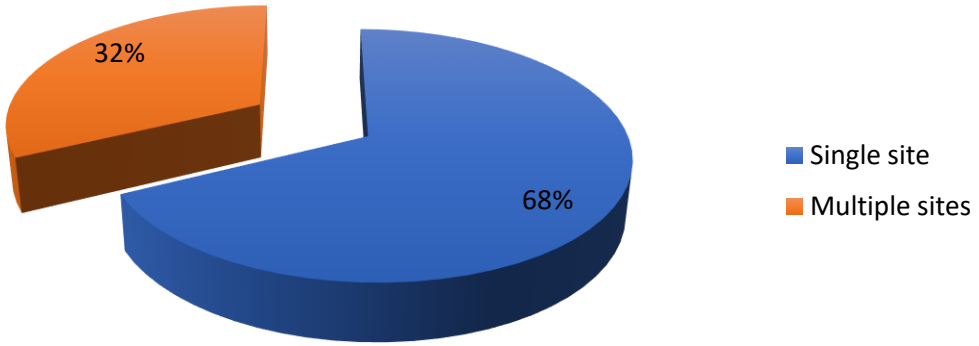
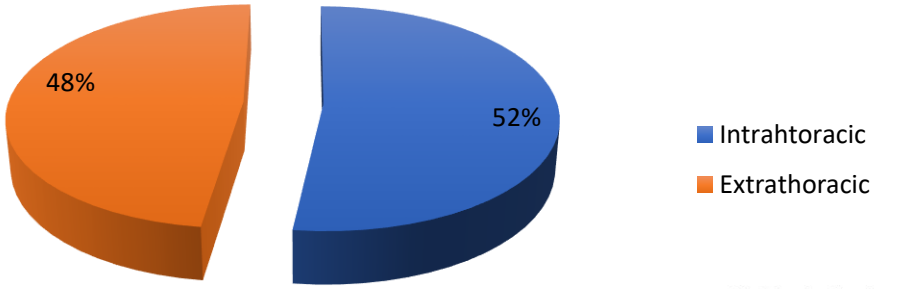
Cumulative reccurrence and patterns

Overall reccurrence: 232/456 = 50.2%
Control Arm: 50/102 = 49%
Experimental Arm: 182/534 = 51%
RR = 1.04 (0.83-1.30) (p=0.672)

Reccurrence



Reccurrence site



Risk of metastases according BRCA levels and treatment

Metastatic site	p Value
Bone	0,397
Brain	0,001
Liver	0,427
Lung	0,672
Adrenal	0,543

Conclusions

- In spite of adjuvant CT around one half of resected NSCLC with lymph node involvement reccurs
- Majority of reccurrences were single site
- No differences in overall reccurrence rate among experimental customized adjuvant therapy
- Bone (37.5%) and brain (34%) metastases were the most frequent metastatic sites
- Brain metastases risk was significantly lower for patients with high BRCA1 expression treated with single agent Docetaxel

Take home messages

- Lymph node involvement in resected NSCLC patients remains a significant poor prognostic factor
- Low BRCA1 expression levels were associated with better overall survival
- In case of high BRCA1 expression adjuvant treatment with single agent Docetaxel without Platinum could reduce brain metastases risk

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SLCG SCAT Trial: Surgical Audit to Lymph node Assessment Based on IASLC Recommendations

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SLCG SCAT trial

Unexpected N+ after complete resection (R0) NSCLC

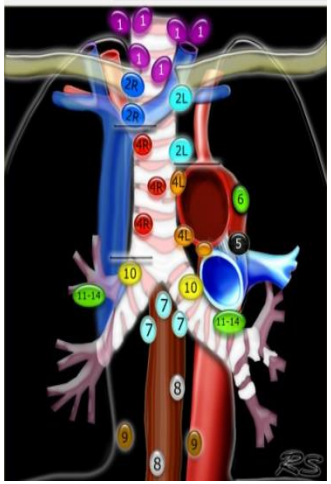
- control group: docetaxel + cisplatin
- Tumoral BRCA expression
  - T1 BRCA1: gen+cis
  - T2 BRCA1: doc+cis
  - T3 BRCA1: doc

Objective: R0 - IASLC criteria → Audit to lymph node assessment

Method: - Analysis of lymph node dissection data

- Role of lymph node dissection on survival

> Kaplan-Meier
> Univariate análisis (Cox)



From: radiologyassistant.nl

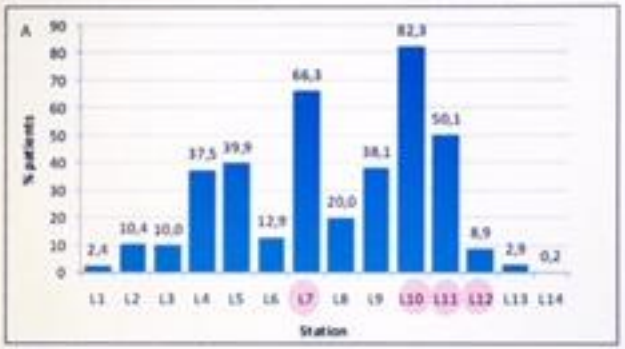
IASLC

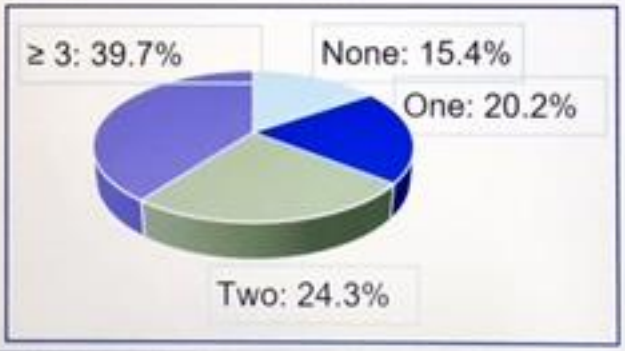
2019 World Conference on Lung Cancer
September 7-10, 2019 | Barcelona, Spain

wclc2019.iaslc.com | #WCLC19
Conquering Thoracic Cancers Worldwide

Results (I): Lymph node assesment

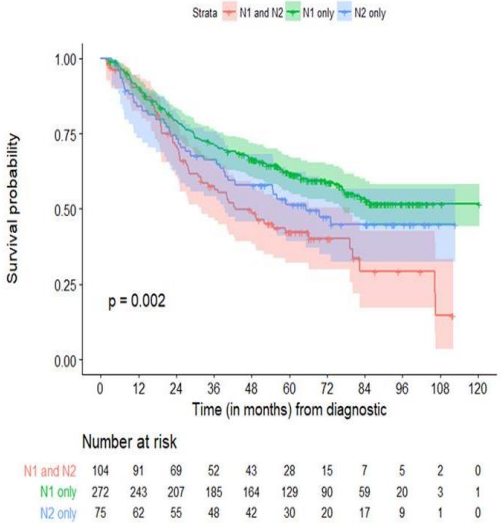
- N = 451
- Rate of assessment of main regions
- 21.1% → only 1 or 2 regions assessed
- Number of N2 regions analyzed in N1+
- Skip metastases with no N1 evaluation: 8.9%
- Highest N2 regions involved: 29,3%
- Both N1-N2 positive implied more lymph node dissection





Results (II): Survival

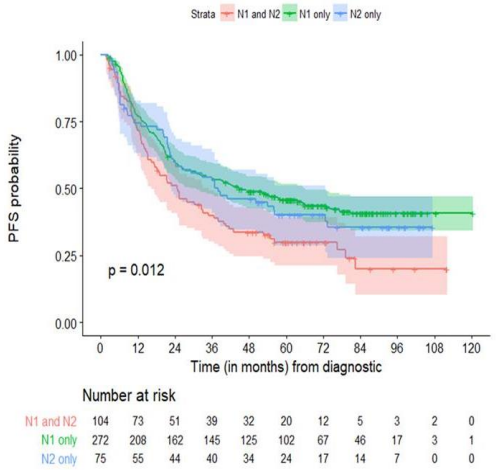
5-year overall survival: 55.7% (median: 79.3 months)
5-year DFS: 41.3% (median: 36.6 months)



N1: 61.7%

N2: 51.5%

N1+N2: 42.3%



N1: 45.8%

N2: 40.1%

N1+N2: 30%

Conclusions

- IASLC recommendations about lymph node assessment in complete resection of NSCLC were not observed in a high rate of cases included in the SLCG-SCAT trial

- Patterns of N1 and N2 involvement shown to impact prognosis

- The design of trials assessing surgical series requires the control of surgical issues to avoid recruitment biases

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Mediastinal lymph node dissection (MLND) v systematic sampling (SS) v neither (NN) in population-based cohort

Meredith Ray[1], Nicholas Faris[2], Carrie Fehnel[2], Cheryl Houston-Harris[2], Olawale Akinbobla[2], Phillip Ojeabulu[2], Matthew Smeltzer[1], Raymond Osarogiagbon[2]

[1]University of Memphis, [2]Multidisciplinary Thoracic Oncology Program, Baptist Cancer Center, Memphis, Tennessee, United States

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Bristol-Myers Squibb
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Background

- ACOSOG Z0030 trial found no survival difference between patients with early-stage NSCLC who had MLND or SS

- A meta-analysis of 1,980 patients in 5 RCTs from 1989-2007 associated better survival with MLND

- We re-enacted the Z0030 trial by comparing the survival of patients with MLND v SS v NN

Methods

- Patients with cT1 or cT2 N0 or non-hilar N1, M0 NSCLC with primary anatomic resection across all institutions within 4 contiguous US Hospital Referral Regions from 2009-2019
  - MLND: stations 2R, 4R, 7, 8 , 9, and 10R for right-sided resections and 4L, 5, 6, 7, 8, 9, and 10L for left-sided resections
  - SS: Minimum of 4R, 7, and 10R on right-sided resections and 5, 6, 7, and 10L for left-sided resections
  - NN: lymph node examination that did not meet MLND or SS
- Using appropriate statistical tests, we compared demographic and clinical characteristics, perioperative complication rates and survival after assessing interactions and confounding

Results

Demographic Characteristics

	MLND 352 (17%)	SS 372 (18%)	Neither 1390 (66%)
Sex (p=0.0023)			
Male	161 (46)	179 (48)	762 (55)
Insurance (p=0.0309)			
Medicare	164 (47)	165 (44)	699 (50)
Medicaid	51 (14)	60 (16)	195 (14)
Commercial	134 (38)	137 (37)	448 (32)
Histology (p=0.0003)			
Adenocarcinoma	234 (66)	211 (57)	742 (53)
Squamous	93 (26)	127 (34)	488 (35)
Other	25 (7)	34 (9)	160 (12)
Invasive Staging (p=0.0052)			
Yes	43 (12)	42 (11)	237 (17)
Technique (p<0.001)			
Open	104 (30)	165 (44)	899 (65)
Robotically-assisted	241 (68)	142 (38)	272 (20)
Video-assisted	7 (2)	65 (17)	219 (16)

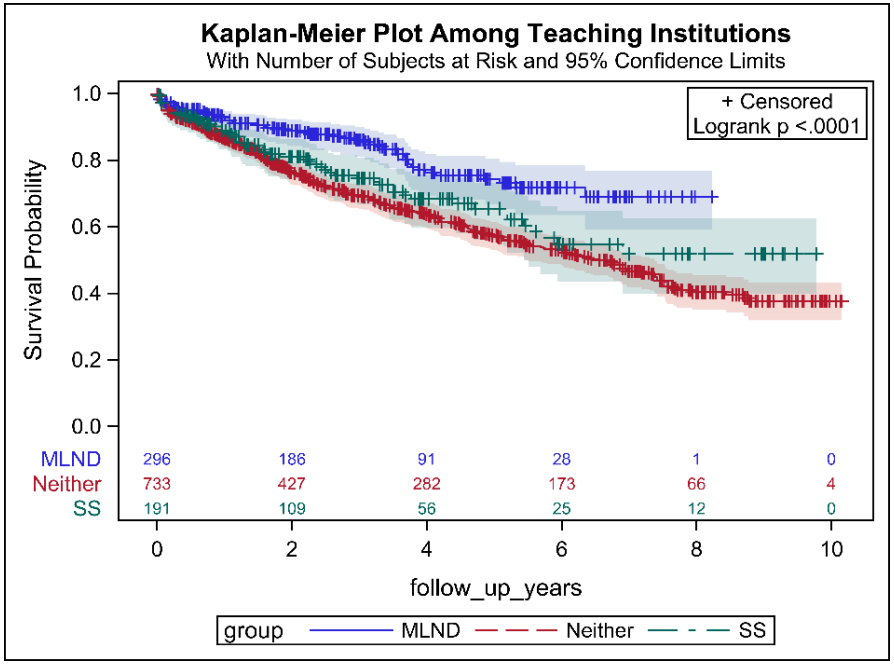
Perioperative Complications: Median (IQR)*

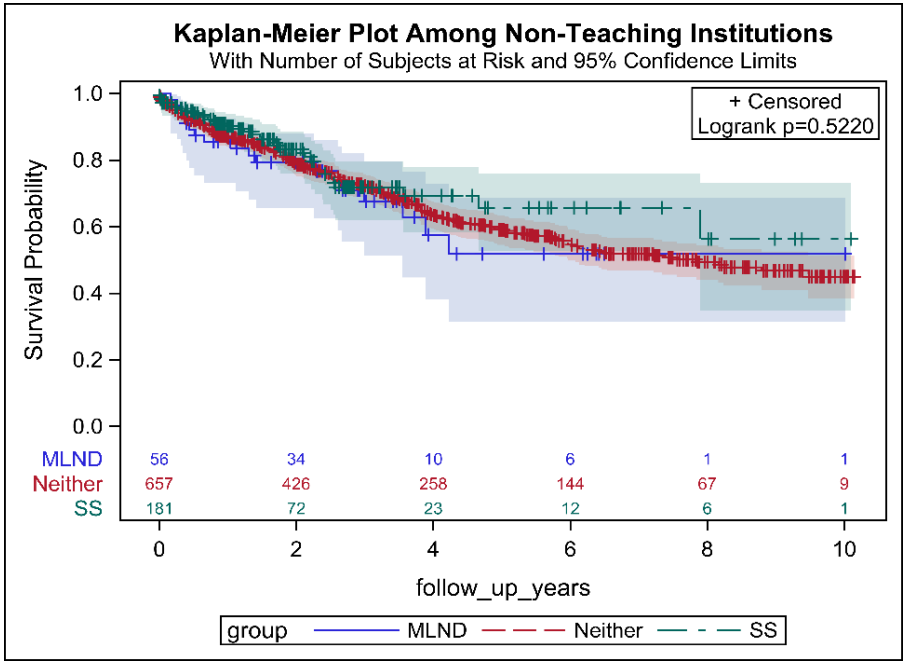
	MLND	SS	Neither
Length of surgery (p<0.001)	108 (82-156) 108 (82-156)	147 (107-193)	140 (102-186) 140 (102-186)
Blood transfusion N(%) (p=0.02)	4 (1) 4 (1)	4 (1)	42 (3) 42 (3)
Dur. of chest tube (p<0.001)	2 (1-5) 2 (1-5)	3 (2-5)	4 (3-7) 4 (3-7)
ICU stay (p<0.001)	1 (1-2) 1 (1-2)	1 (1-2)	1 (1-3) 1 (1-3)
Hospital stay (p<0.001)	4 (3-7) 4 (3-7)	5 (3-7)	6 (4-10) 6 (4-10)

Hazard Ratios (95% Confidence Intervals)

		Unadjusted	Adjusted‡
MLND vs Neither	0.60 (0.46, 0.77)	p<0.001	p<0.001
SS vs Neither	0.82 (0.65, 1.02)	p=0.0746	p=0.1753
MLND vs SS	0.73 (0.53, 1.00)	p=0.0473	p=0.1163

** M (IQR) – Median (interquartile range); ‡ Adjusted for pairwise comparisons using Tukey's method*





Sampling	Hazard Ratio (95% Confidence Interval)	Unadjusted P-value	Multiple Comparisons Adjusted P-value
MLND vs Neither	0.50 (0.37, 0.67)	<0.001	<0.001
SS vs Neither	0.80 (0.60, 1.06)	0.1245	0.2740
MLND vs SS	0.62 (0.43, 0.91)	0.0140	0.0372

Sampling	Hazard Ratio (95% Confidence Interval)	Unadjusted P-value	Multiple Comparisons Adjusted P-value
MLND vs Neither	1.10 (0.68, 1.77)	0.7064	0.9248
SS vs Neither	0.83 (0.58, 1.18)	0.3032	0.5582
MLND vs SS	1.32 (0.75, 2.33)	0.3362	0.6011

Take-home Message

- 55% of resections did not meet ACOSOG MLND or SS criteria suggesting a need for quality improvement in pathologic nodal evaluation

- The environment of care may influence the survival impact of nodal dissection; MLND was associated with superior survival over SS at teaching hospitals