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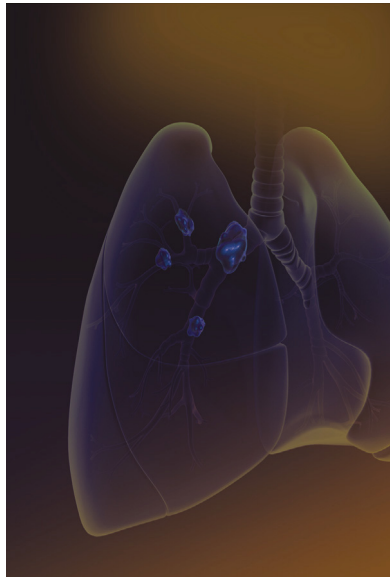


Illustration by Irin Moore

CLINICAL Lung Cancer

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Original Studies

- 1 Outcome of Patients With Resected Early-Stage Non-small Cell Lung Cancer and EGFR Mutations: Results From the IFCT Biomarkers France Study**
Pierre Mordant, Solenn Brosseau, Bernard Milleron, Nicola Santelmo, Séverine Fraboulet-Moreau, Benjamin Besse, Alexandra Langlais, Dominique Gossot, Pascal-Alexandre Thomas, Jean-Louis Pujol, Charles Ricordel, Jeannick Madelaine, Régine Lamy, Clarisse Audigier-Valette, Pascale Missy, Hélène Blons, Fabrice Barlesi, Virginie Westeel
Molecular profile of localized non-small cell lung cancer has not been reported in Western Europe. In the nationwide Biomarker France study, EGFR mutations were found in 12.9% of resected stage III NSCLC, associated with 5-year DFS of 65% and 5-year OS of 75%. No difference was found between EGFR -mutant and EGFR -wt tumors regarding recurrence site, disease-free survival, and overall survival.
- 11 Antibiotic Prescriptions in Lung Cancer and Melanoma Populations: Differences With Potential Clinical Implications in the Immunotherapy Era**
Amrit S. Gonugunta, Mitchell S. Von Itzstein, David Hsiehchen, Tri Le, Sawsan Rashdan, Hui Yang, Christopher Selby, Carlos Alvarez, David E. Gerber
Antibiotic exposure is associated with worse outcomes from immune checkpoint inhibitors (ICI). We determined antibiotic prescription patterns in lung cancer and melanoma, two malignancies in which ICI are widely used across stages. In a national cohort, antibiotics were more frequently prescribed in lung cancer, non-white individuals, patients with comorbidities, and women. These observations may have clinical and healthy policy implications.
- 18 The Value of Radiotherapy in Patients With Resectable Stage IIIA Non-Small-Cell Lung Cancer in the Era of Individualized Treatment: A Population-Based Analysis**
Bohao Liu, Zhiyu Wang, Heng Zhao, Shan Gao, Hongyi Wang, Yanpeng Zhang, Kun Fan, Runyi Tao, Yixing Li, Jinteng Feng, Yuchen Sun, Jia Zhang, Guangjian Zhang
Radiotherapy remains controversial for resected stage IIIA NSCLC patients. Public records of 2632 NSCLC patients were re-staged using AJCC 8th manual and analyzed using X-tile. 5 + mediastinal N2 lymph nodes metastasis, visceral pleural invasion, age >65, or larger tumor size (>3 cm) were found to be associated with a better outcome. Further well-designed trials are warranted.
- 29 Impact of TP53 Mutations on EGFR-Tyrosine Kinase Inhibitor Efficacy and Potential Treatment Strategy**
Jing Fu, Yuyang Tong, Ziguang Xu, Yaonan Li, Ya Zhao, Tao Wang, Cuidan Li, Shundong Cang

40 Real-World Treatment Sequencing, Toxicities, Health Utilities, and Survival Outcomes in Patients with Advanced ALK-Rearranged Non-Small-Cell Lung Cancer

Sabine Schmid, Sierra Cheng, Simren Chotai, Miguel Garcia, Luna Zhan, Katrina Hueniken, Karmugi Balaratnam, Khaleeq Khan, Devalben Patel, Benjamin Grant, Roula Raptis, M. Catherine Brown, Wei Xu, Patrick Moriarty, Frances A. Shepherd, Adrian G. Sacher, Natasha B. Leighl, Penelope A. Bradbury, Geoffrey Liu

The aim of our analysis was to better understand current real-world treatment patterns, toxicities and outcomes across all available five ALK-TKIs in patients with ALK-positive NSCLC. Our results suggest a role for each of the later generation ALK-TKIs in this setting. Furthermore, we add to evidence that treatment modifications due to toxicity may not necessarily compromise survival outcomes.

51 The comparison of Lobe-Specific or Systematic Mediastinal Lymph Node Dissection for Early-Stage Lung Adenocarcinoma With Consolidation Tumor Ratio Over 0.5

Qihai Sui, Huiqiang Yang, Jiacheng Yin, Ming Li, Xing Jin, Zhencong Chen, Wei Jiang, Qun Wang

To propose a personalized plan for lymph node dissection in early-stage lung adenocarcinoma, 210 Clinical stage I lung adenocarcinoma patients with solid component ratio (CTR) between 0.5 and 1 were retrospectively analyzed and divided into systematic (SLND) and lobe-specific (L-LND) lymph node dissection groups. Postoperative quality and operation risk of the patients were evaluated. In conclusion, L-LND is as effective as SLND.

60 Increased Utilization of Stereotactic Body Radiotherapy is Associated with Decreased Disparities and Improved Survival for Early-Stage NSCLC

Ashwin Ganesh, Mark Korpics, Mary Pasquinelli, Lawrence Feldman, Michael Spiotto, Matthew Koshy

The National Cancer Database (NCDB) was utilized to determine that increased use of SBRT decreased disparities in receipt of treatment between Whites and Blacks from 2004-2017. In addition, the Surveillance, Epidemiology, and End Result (SEER) database was used to determine that SBRT use was also associated with decreased mortality from early-stage NSCLC.

Case Report

72 Small-Cell Lung Cancer Transformation as a Mechanism of Resistance to Pralsetinib in *RET*-Rearranged Lung Adenocarcinoma: A Case Report

Alexia Gazeu, Mylena Aubert, Daniel Pissaloux, Sylvie Lantuejoul, Maurice Pérol, Nadia Ikhlef, Amine Bouhamama, Tatiana Franceschi, Aurélie Swalduz

76 Regression of Malignant Pleural Mesothelioma in Absence of Chemotherapy or Surgery: A Case Series

Corrine A. Nief, Hyunsoo Joshua No, Christine Y. Louie, Lucas Vitzthum, Millie Das

Current Trial Report

82 Design and Rationale for a Phase II, Randomized, Open-Label, Two-Cohort Multicenter Interventional Study of Osimertinib with or Without Savolitinib in De Novo *MET* Aberrant, *EGFR*-Mutant Patients with Advanced Non-Small-Cell Lung Cancer: The FLOWERS Trial

Anna Li, HuaJun Chen, Jinji Yang

Available Exclusively Online at www.clinical-lung-cancer.com

e1 Pathological Stage N1 Limited-Stage Small-Cell Lung Cancer Patients Can Benefit From Surgical Resection

Lian Yu, Jianlin Xu, Rong Qiao, Baohui Han, Hua Zhong, Runbo Zhong

Surgery is controversial in limited-stage small-cell lung cancer (LS-SCLC) (except for T1-2, NOMO). We retrospectively analyzed the prognosis of pathological stage N1 (p-N1) LS-SCLC patients after surgical resection. The median DFS and OS of the surgery group were 13.567 months and 29.600 months. Surgery and postoperative adjuvant therapy showed a potential benefit in p-N1 LS-SCLC.

e9 Outcomes Following SBRT vs. IMRT and 3DCRT for Older Patients with Stage IIA Node-Negative Non-Small Cell Lung Cancer >5 cm

Jessica H. Tran, Grace Mhango, Henry S. Park, Deborah C. Marshall, Kenneth E. Rosenzweig, Qian Wang, Juan P. Wisnivesky, Rajwanth R. Veluswamy

Contemporary comparative data for radiotherapy modalities are scarce for larger non-small cell lung cancer (NSCLC) tumors. Using the SEER-Medicare database, we identified 584 patients with Stage IIA node-negative NSCLC >5 cm in size who were treated with stereotactic body radiotherapy (SBRT), intensity-modulated radiotherapy (IMRT) or 3-dimensional conformal radiotherapy (3DCRT). While SBRT was associated with higher survival compared to IMRT or 3DCRT, concurrent chemoradiation with IMRT or 3DCRT had similar survival rates to SBRT. Nevertheless, the SBRT group experienced fewer complications than the 3DCRT or IMRT groups, suggesting that SBRT may be appropriate treatment strategy for older patients with larger tumors.

e19 Safety of mRNA-COVID-19 Vaccines in Patients With Thoracic Cancers

G. Spitaleri, P. Trillo Aliaga, C. Catania, E. Del Signore, I. Attili, C. Santoro, F. Giugliano, P.P.M Berton Giachetti, G. Curigliano, A. Passaro, F. de Marinis

This is a prospective trial of 207 patients with thoracic cancer receiving anticancer treatments and COVID-19 vaccines. After long follow-up, there were no safety signals of concern and only 0.5% grade 3 vaccine-related adverse events. Our study supports the current vaccine prioritization, third and/or fourth dose of all lung cancer patients with active treatment.

e27 Clinical Outcomes and Prognosis of Patients With Interstitial Lung Disease Undergoing Lung Cancer Surgery: A Propensity Score Matching Study

Min Seo Ki, Song Yee Kim, Eun Young Kim, Ji Ye Jung, Young Ae Kang, Moo Suk Park, Young Sam Kim, Seong Yong Park, Sang Hoon Lee

We compared the prognosis after lung cancer surgery in 104 patients with ILD and 104 patients without ILD matched by key variables. Patients with ILD had worse survival. Concomitant IPF or high physiological severity of ILD was associated with worse survival. Evaluation of underlying ILD before surgery is thought to be helpful in predicting the prognosis after lung cancer surgery.

e39 Real-world ALK Testing Trends in Patients With Advanced Non-Small-Cell Lung Cancer in the United States

Huamao M. Lin, Yanyu Wu, Yu Yin, Huifeng Niu, Eileen A. Curran, Christine M. Lovly, Michael J. Humphries

Real-world data from the United States were used to assess ALK biomarker testing in patients with nonsmallcell lung cancer. Between 2011 and 2019, tumors from 61.1% of patients were tested, and 2.8% were ALK-positive (ALK+). Treatment decisions may have been made without guideline-recommended biomarker data as ALK status was not available for nearly 25% of ALK + patients at treatment initiation.

e50 A Novel PRKAR1A::MET Fusion Dramatic Response to Crizotinib in a Patient with Unresectable Lung Cancer

Yang Yang, Yanxiang Zhang, Dandan Zhao, Xiaoli Li, Tonghui Ma