

BioCAST/IFCT-1002: epidemiological and molecular features of lung cancer in never-smokers

Sébastien Couraud^{1,2,3,4†}, Pierre-Jean Souquet^{1,2}, Christophe Paris⁵, Pascal Dô⁶, H  l  ne Doubre⁷, Eric Pichon^{8,9}, Adrien Dixmier¹⁰, Isabelle Monnet¹¹, B  n  dicte Etienne-Mastroianni^{12,13}, Michel Vincent¹⁴, Jean Tr  daniel¹⁵, Marielle Perrichon¹⁶, Pascal Foucher¹⁷, Bruno Coudert¹⁸, Denis Moro-Sibilot^{19,20}, Eric Dansin²¹, St  phanie Labonne^{1,2}, Pascale Missy²², Franck Morin²², H  l  ne Blanch  ²³ and G  rard Zalcman²⁴ on behalf of The French Cooperative Intergroup IFCT²⁵

± Author Affiliations

1. ¹Dept of Respiratory Medicine, Lyon Sud Hospital, Hospices Civils de Lyon, Lyon, France
2. ²Faculty of Medicine Lyon-Sud Charles M  rieux, Lyon 1 University, Lyon, France
3. ³Centre for Clinical Epidemiology, Lady Davis Institute for Medical Research, Jewish General Hospital, Montreal, Quebec, Canada
4. ⁴Dept of Epidemiology, Biostatistics and Occupational Health, McGill University, Montreal, Quebec, Canada
5. ⁵(CP) INGRES, EA7298, Lorraine University, Vandoeuvre Les Nancy, France
6. ⁶Francois Baclesse Cancer Institute, Caen, France
7. ⁷Pulmonology Unit, Foch General Hospital, Paris, France
8. ⁸Pulmonology Unit, University Hospital of Tours, Tours, France
9. ⁹Fran  ois Rabelais University, Respiratory Diseases Study Centre, U1100/EA6305, Tours, France
10. ¹⁰Pulmonology Unit, Orleans Regional Hospital, Orl  ans, France
11. ¹¹Pulmonology Unit, Centre Hospitalier Intercommunal de Cr  teil, Cr  teil, France
12. ¹²Dept of Respiratory Medicine, H  pital Louis Pradel, Hospices Civils de Lyon, Lyon, France
13. ¹³Claude Bernard University Lyon 1, Lyon, France
14. ¹⁴Pulmonology Dept, Saint Joseph-Saint Luc Hospital, Lyon, France
15. ¹⁵Pulmonology Dept, Paris - Saint Joseph Hospital, and Sorbonne Paris Cit   University, Paris, France
16. ¹⁶Pulmonology Dept, Bourg-en-Bresse General Hospital, Bourg en Bresse, France
17. ¹⁷Thoracic Oncology, Dijon University Hospital, Dijon, France
18. ¹⁸Oncology Dept, Georges Fran  ois Leclerc Cancer Centre, Dijon, France
19. ¹⁹Pulmonology and Thoracic Oncology Dept, Grenoble University Hospital, Grenoble, France
20. ²⁰Medicine Faculty, Joseph Fourier University, La Tronche, France
21. ²¹Oncology Dept, Oscar Lambret Cancer Centre, Lille, France
22. ²²Intergroupe Francophone de Canc  rologie Thoracique, Paris, France
23. ²³Fondation Jean Dausset - CEPH, Paris, France
24. ²⁴Pulmonology and Thoracic Oncology Dept, Caen University Hospital, and UMR INSERM 1086, Caen Basse-Normandie University, Caen, France
25. ²⁵For collaborators of the BioCAST/IFCT-1002 study, please see the acknowledgements section

1. S  bastien Couraud, Service de Pneumologie, Hospices Civils de Lyon, CH Lyon Sud, 165 Chemin du Grand Revoyet, F-69495 Pierre B  nite, France. E-mail: sebastien.couraud@chu-lyon.fr

Abstract

Lung cancer in never-smokers (LCINS) (fewer than 100 cigarettes in lifetime) is considered as a distinct entity and harbours an original molecular profile. However, the epidemiological and molecular features of LCINS in Europe remain poorly understood.

All consecutive newly diagnosed LCINS patients were included in this prospective observational study by 75 participating centres during a 14-month period. Each patient completed a detailed questionnaire about risk factor exposure. Biomarker and pathological analyses were also collected. We report the main descriptive overall results with a focus on sex differences.

384 patients were included: 65 men and 319 women. 66% had been exposed to passive smoking (significantly higher among women). Definite exposure to main occupational carcinogens was significantly higher in men (35% *versus* 8% in women). A targetable molecular alteration was found in 73% of patients (without any significant sex difference): *EGFR* in 51%, *ALK* in 8%, *KRAS* in 6%, *HER2* in 3%, *BRAF* in 3%, *PI3KCA* in less than 1%, and multiple in 2%.

We present the largest and most comprehensive LCINS analysis in a European population. Physicians should track occupational exposure in men (35%), and a somatic molecular alteration in both sexes (73%).

Bibliografie aditionala

Lung cancer in never-smokers

*David Planchard*¹ and *Benjamin Besse*^{1,2}

Affiliations: ¹Dept of Medical Oncology, Gustave Roussy, Villejuif, France. ²Paris-Sud University, Paris, France.

Correspondence: D. Planchard, Dept of Medical Oncology, Gustave Roussy, 114 rue Edouard Vaillant, 94805

Villejuif, France. E-mail: david.planchard@gustaveroussy.fr
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