Sixth International Joint Meeting on THORACIC SURGERY

Barcelona - 20th, 21st and 22nd November 2024
Auditorio Foment del Treball Nacional. Barcelona (Spain)

11th International Meeting on General Thoracic Surgery
Clínic Barcelona | Universitat de Barcelona | Hospital Universitari Sagrat Cor

5th Meeting of the Thoracic Oncology, Thoracic Surgery, Techniques & Transplant, Respiratory Nursing and Respiratory Physiotherapy Areas of the Spanish Society of Pneumology and Thoracic Surgery (SEPAR)
Sociedad Española de Neumología y Cirugía Torácica (SEPAR)

10th International Workshop on Surgical Exploration of the Mediastinum and Systematic Nodal Dissection
Hospital Universitari Mútua Terrassa | Universitat de Barcelona

10th International Workshop on Surgical Exploration of the Mediastinum and Systematic Nodal Dissection
Hospital Universitari Mútua Terrassa | Universitat de Barcelona

3rd Joint Meeting of the Spanish Society of Thoracic Surgery (SECT)
SECT Sociedad Española de Cirugía Torácica

30th Congress of the "Asociación Iberoamericana de Cirugía Torácica" AIACT

Sant Pau Campus Salut Barcelona | UAB Universitat Autònoma de Barcelona | MAR | upf Universitat Pompeu Fabra Barcelona

DISTRIBUTION AND PROGNOSTIC IMPACT OF EGFR AND KRAS MUTATIONS ACCORDING TO HISTOLOGICAL SUBTYPE AND TUMOR INVASION STATUS IN pTIS-3N0M0 LUNG ADENOCARCINOMA

Masaoki Ito; Yoshihiro Miyata; Kei Kushitani; Daisuke Ueda; Yukio Takeshima; Morihito Okada
Department of Surgical Oncology, Research Institute for Radiation Biology and Medicine, Hiroshima University, 1-2-3 Kasumi, Minami-ku, 734-8551 Hiroshima, Japan. Department of Pathology, Graduate School of Biomedical & Health Sciences, Hiroshima University, 1-2-3 Kasumi, Minami-ku, 734-8551 Hiroshima, Japan.

Objectives The impact of EGFR mutation on recurrence in resected lung adenocarcinoma is still controversial. KRAS G12C inhibitor became clinically available and KRAS mutations can guide the post-recurrence treatment. We evaluated prognostic impact of EGFR and KRAS mutations by considering clinicopathological recurrence risks in resected pTis-3N0M0 lung adenocarcinoma. Methods Clinicopathological features including EGFR and KRAS status were estimated in 877 resected cases. RFS and cumulative recurrence rate (CRR) were compared. Uni- and multivariate analyses for RFS were performed after excluding cases with little or no recurrence risks. Results EGFR mutation was more harbored in female, never-smoker, or patients with > 5% lepidic component. KRAS mutation was more harbored in patients with smoking history, IASLC histology grade 3, or with lymphovascular invasion. In IASLC grade 2 and 3, EGFR or KRAS mutation patients had significantly worse 5-year RFS than wild type patients (76.9% vs. 85.0%, HR = 1.55, 95% CI = 1.62–6.41, P < 0.001). KRAS mutant cases had higher 5-year CRR than EGFR mutant cases (16.7% vs. 21.4%, HR = 1.62, 95% CI = 0.96–7.19, P = 0.061). Multivariate analysis revealed positive EGFR/KRAS mutation status was related to worse RFS (HR = 2.007, 95% CI = 1.265–3.183, P = 0.003). Conclusions KRAS mutations were more confirmed in cases with increased risk of recurrence compared to EGFR. Positive EGFR and KRAS mutation statuses were risk for recurrence in resected IASLC grade 2 and 3 patients. KRAS mutation statuses should be evaluated simultaneously when assessing recurrence risk of EGFR.