

Round Table Case Discussions with:

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Asian Never-Smoker with Adenocarcinoma: EGFR Mutations and Tissue Testing



with
Howard (Jack) West, MD
Medical Oncologist
President & CEO
GRACE

Case: Background

- 53 year-old Asian never-smoking woman
- Presents with shortness of breath climbing stairs
- Chest x-ray: infiltrate in right lower lobe
- Chest CT: RLL infiltrate with solid component
 - additional lung nodules
- PET consistent with multifocal disease
- Biopsy: adenocarcinoma with BAC features

The NEW ENGLAND
JOURNAL of MEDICINE

ESTABLISHED IN 1812 SEPTEMBER 3, 2009 VOL. 361 NO. 10

Gefitinib or Carboplatin–Paclitaxel in Pulmonary
Adenocarcinoma

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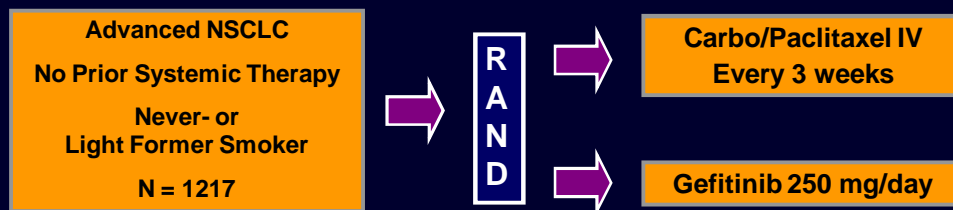
ORIGINAL ARTICLE

Screening for Epidermal Growth Factor
Receptor Mutations in Lung Cancer

Rafael Rosell, M.D., Teresa Moran, M.D., Cristina Queralt, B.S., Rut Porta, M.D.,
Felipe Cardenal, M.D., Carlos Camps, M.D., Margarita Majem, M.D.,
Guillermo Lopez-Vivanco, M.D., Dolores Isla, M.D., Mariano Provencio, M.D.,
Amelia Insa, M.D., Bartomeu Massutí, M.D., Jose Luis Gonzalez-Larriba, M.D.,
Luis Paz-Ares, M.D., Isabel Bover, M.D., Rosario Garcia-Campelo, M.D.,
Miguel Angel Moreno, M.D., Silvia Catot, M.D., Christian Roflo, M.D.,
Noemi Reguart, M.D., Ramon Palmero, M.D., José Miguel Sánchez, M.D.,
Roman Bastus, M.D., Clara Mayo, Ph.D., Jordi Bertran-Alamillo, B.S.,
Miguel Angel Molina, Ph.D., Jose Javier Sanchez, M.D., and Miquel Taron, Ph.D.,
for the Spanish Lung Cancer Group

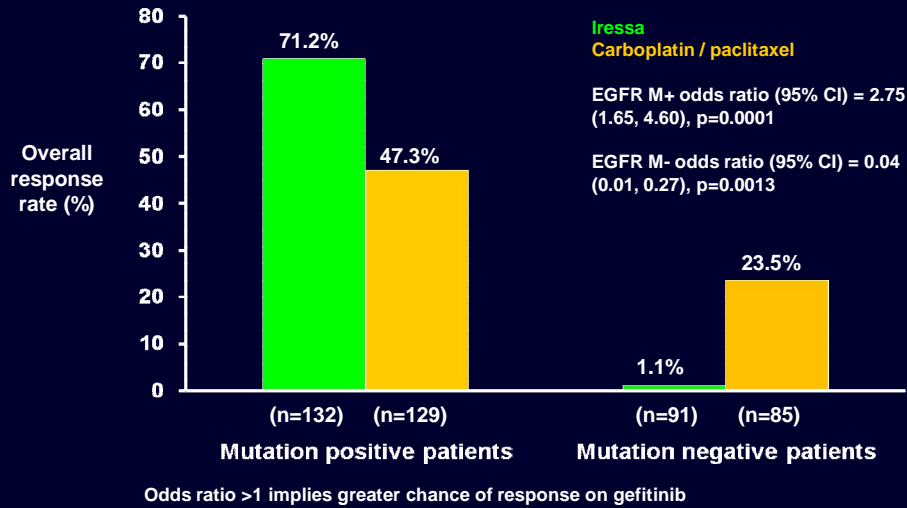
*IPASS: Gefitinib vs. Carbo/Paclitaxel as
First Line Rx in Asian Never- or Light Ex-Smokers

*Iressa Pan-Asian Study

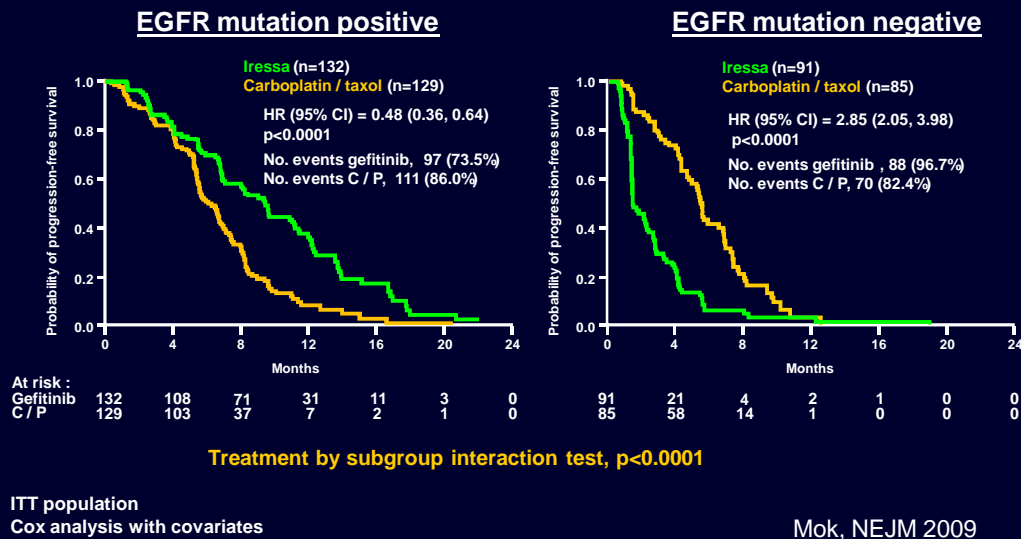


- Primary Endpoint: Progression-Free Survival (PFS)
- Biomarker analysis

IPASS: Objective Response Rate by EGFR Mutation Status

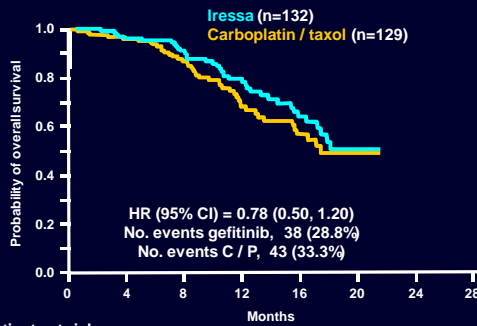


IPASS: Progression-Free Survival by EGFR Mutation Status

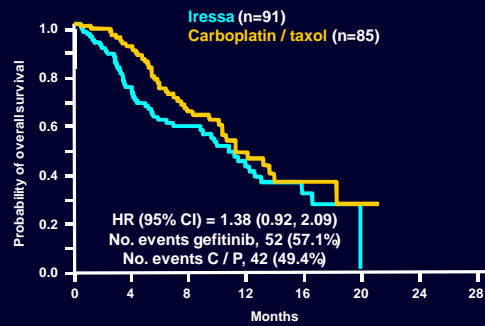


IPASS: Overall Survival by EGFR Mutation Status

EGFR mutation positive



EGFR mutation negative



Patients at risk:

Gefitinib	132	126	114	73	41	17	0	0
C / P	129	123	105	67	38	15	1	0

Gefitinib	91	69	44	25	13	5	0	0
C / P	85	75	55	24	9	4	0	0

Cox analysis with covariates

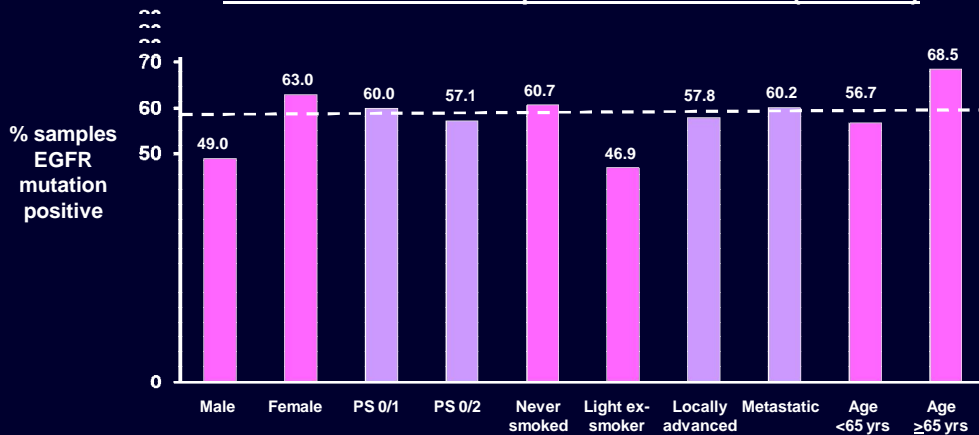
HR <1 implies a lower risk of death on gefitinib

ITT population

Post-hoc analysis of overall survival by EGFR mutation status

IPASS: EGFR Mutation Positive Status and Clinical Characteristics

Overall EGFR mutation positive rate = 59.7% (261 / 437)



(Even Asian never-smoker doesn't mean EGFR mutation)

MSKCC Continuum of Tobacco Exposure and EGFR Mutations

- Looking for exon 19 or 21 mutations in tumors from 265 pts with detailed smoking history

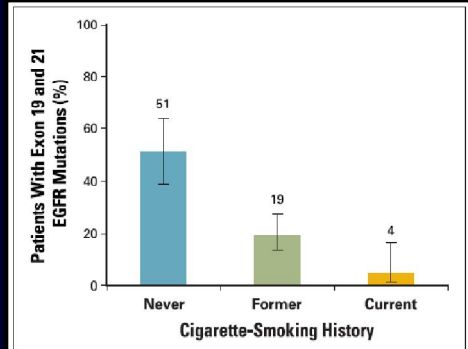


Fig 1. Incidence of EGFR mutations by cigarette smoking status: never v former v current.

Table 2. Incidence of Mutations in EGFR by Smoke-Free Years

Smoke-Free Years	Patients			95% CI	P*
	Total No.	No. With Mutations	% With Mutations		
Never smokers	67	34	51	38 to 64	NA
0 (current smokers)	47	0	0	0 to 20	< .005
1-5	20	5	25	3 to 22	< .005
6-10	24	2	8	1 to 27	< .005
11-15	16	0	0	0 to 21	< .005
16-20	30	3	10	2 to 26	< .005
21-25	18	3	17	4 to 43	.02
26-30	19	9	47	24 to 71	.99
31-35	12	4	33	11 to 69	.52
36-40	9	3	33	8 to 70	.48
> 40	3	1	33	1 to 90	.99

Abbreviation: NA, not applicable.
*P values compare smoke-free year categories with the incidence of mutations in never smokers.

Pham, J Clin Oncol 2006