EGFR inhibitors are the best choice for the first line treatment of EGFR mutated lung adenocarcinoma patients

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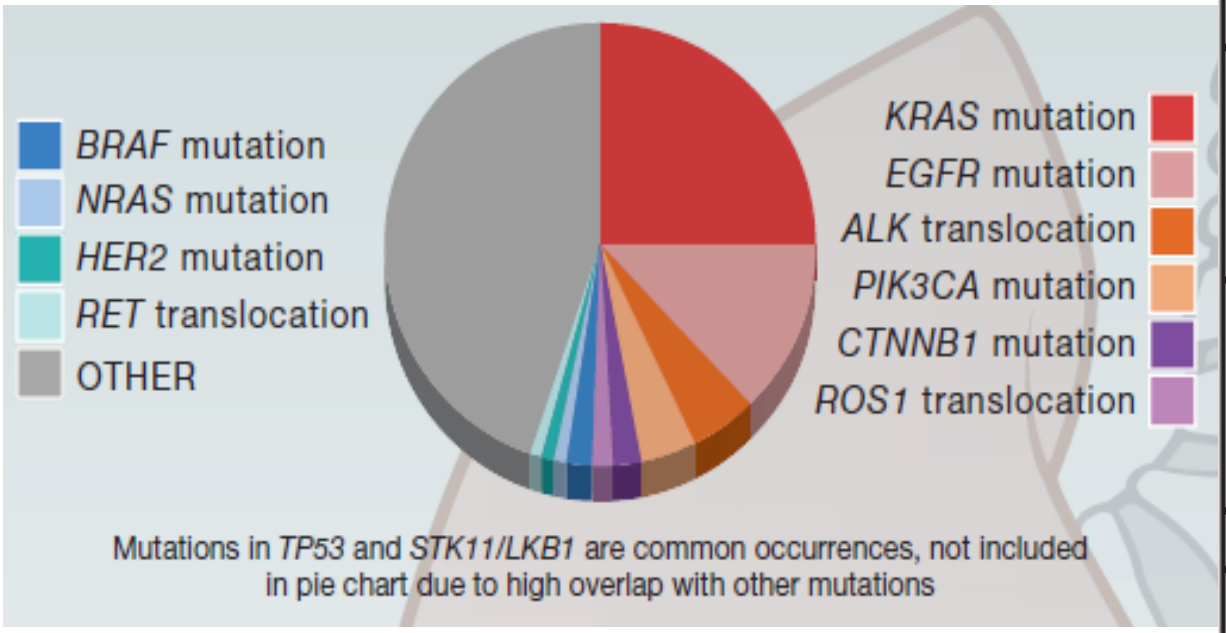
Pro Speaker: Tony Mok

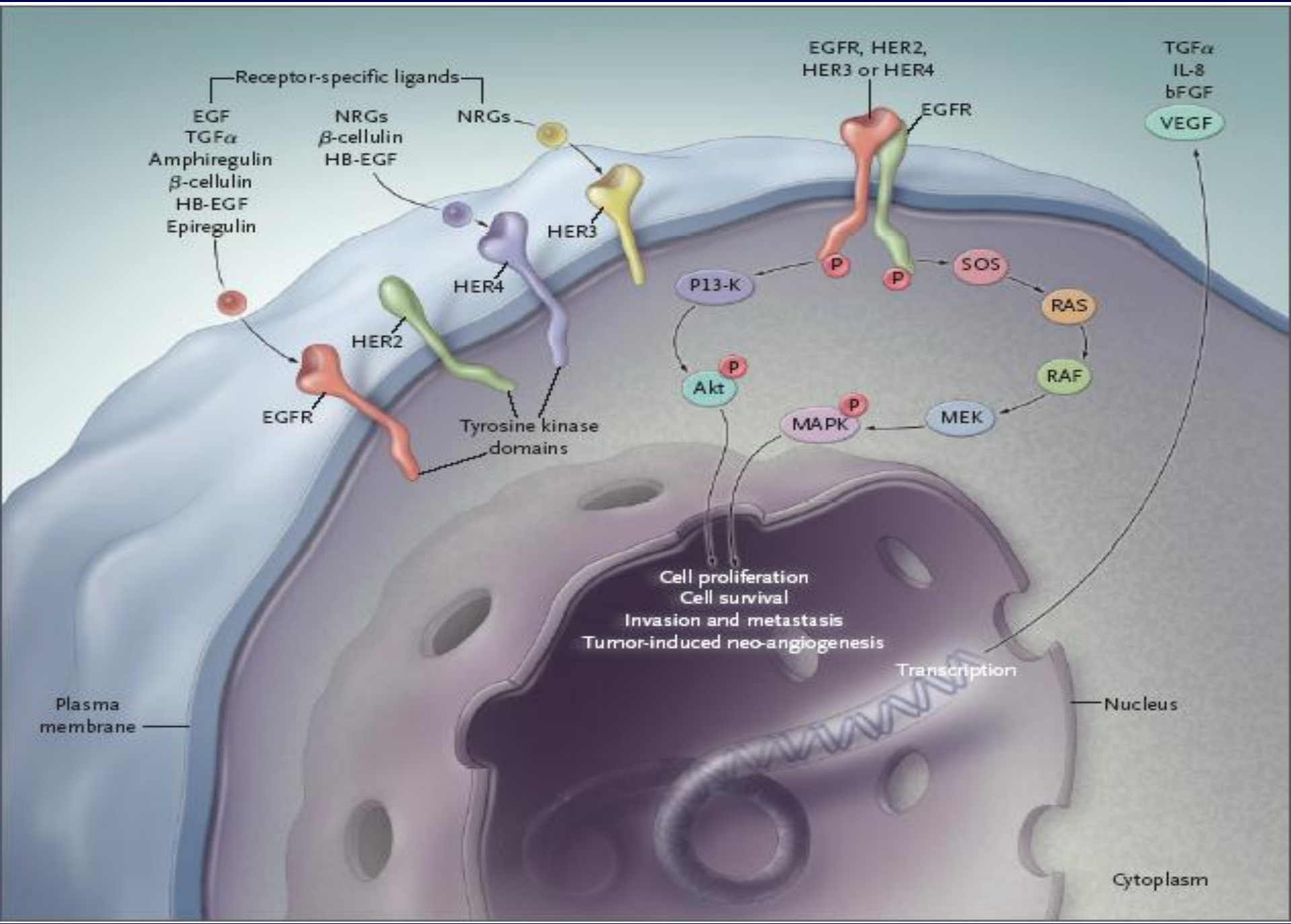
Contra Speaker: Benjamin Besse

Mutation spectrum in lung adenocarcinoma



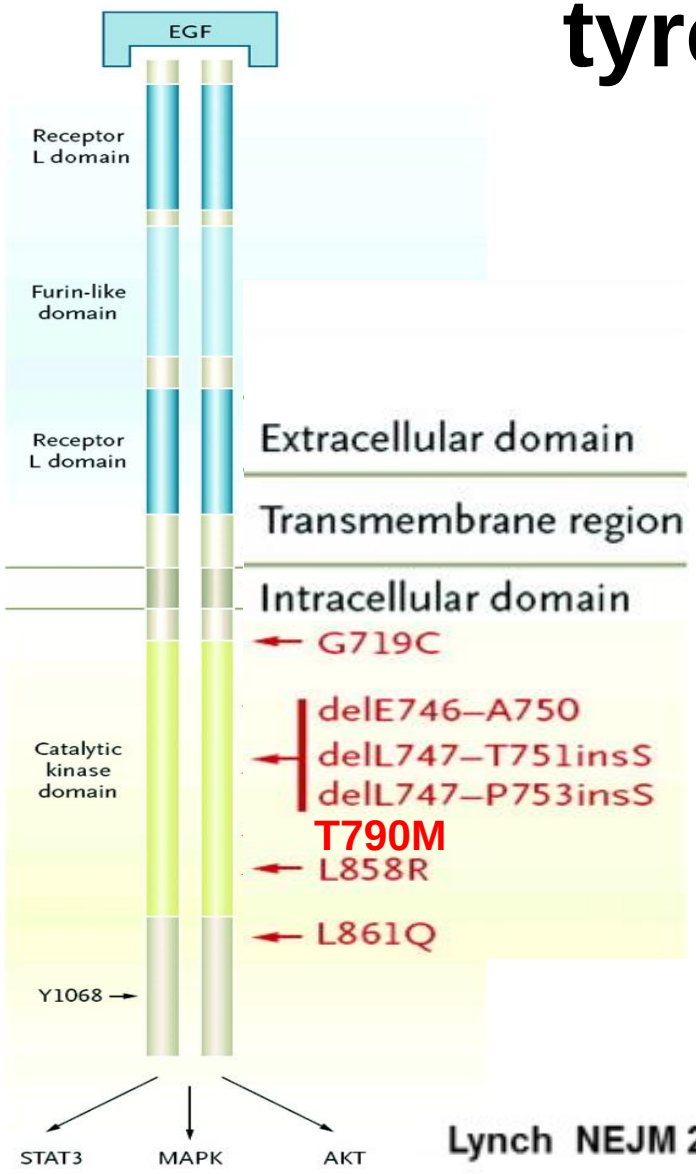
Target	Drug
EGFR	Erlotinib (approved)
	Gefitinib (approved)
	PF299804
	Afatinib (BIBW2992)
ALK	Crizotinib (approved)
	LDK378
	AP26113
	AF802
ROS1	Crizotinib
HER2	PF299804
	Afatinib (BIBW2992)

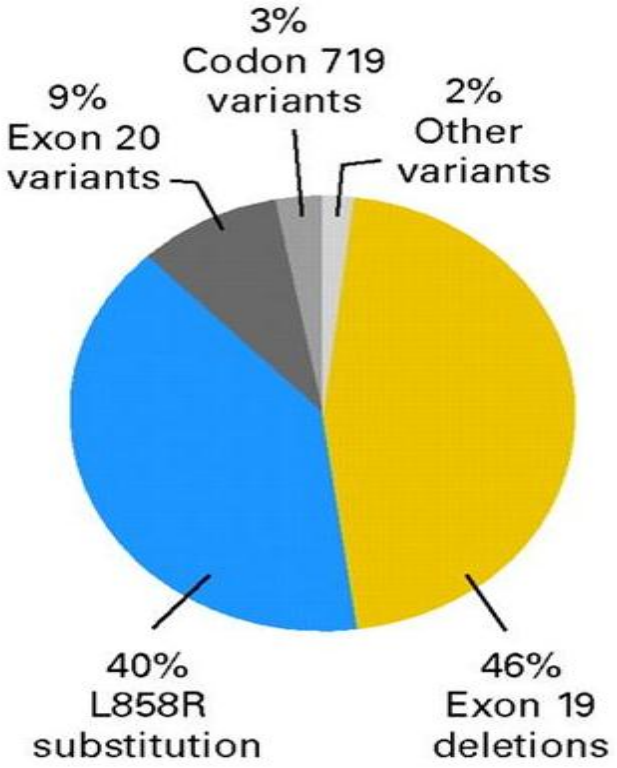
Heist & Engelman. Cancer Cell 2012



Ciardiello F and Tortora G. New Engl J Med 2008;358:1160–74.

Mutations in the EGFR tyrosine kinase domain





Lynch NEJM 2004; Paez Science 2004; Pao PNAS 2004; Sequist JCO 2007

Incidence of EGFR tyrosine kinase domain mutations in NSCLC patients

Characteristics of tumors	N. of tumors	Tumors with EGFR mutation	
		Number	Rate (%)
Smoking history			
Smokers or former smokers	1.387	99	7.1
Never smokers	504	231	45.8
Sex			
Male	1.424	14	10
Female	498	193	38.7
Histologic type			
Adenocarcinoma	1.127	331	29.4
Non-adenocarcinoma	916	17	1.8
Ethnicity			
East-Asian	843	282	33.4
Non-East-Asian	1.200	66	5.5
TOTAL	2.043	348	17

16%

Normanno N Gene 2006

Randomized phase III clinical trials of EGFR tyrosine kinase Inhibitors versus chemotherapy in NSCLC patients

Study	Country	Group	Primary Endpoint	n	PFS (months)	OS (months)
IPASS: Mok TS et al.	East Asia	Gefitinib 250 mg/day	PFS	132	9.5	18.8
		PTX 200 mg/m2,d1,q3w þ CBP (AUC ¼ 5–6) d1,q3w 6 cycles		139	6.3	17.4
First-Signal: Lee JS et al.	Korea	Gefitinib 250 mg/day	OS	26	8.4	30.6
		GEM 1,250 mg/m2 d1,8,q3w þ DDP 80 mg/m2, d1,q3w 9 cycles		16	6.7	26.5
Maemondo M et al.	Japan	Gefitinib 250 mg/day	PFS	114	10.8	30.5
		PTX 200 mg/m2,d1,q3w þ CBP (AUC ¼ 6) d1,q3w >3 cycles		114	5.4	23.6
Mitsudomi T et al.	Japan	Gefitinib 250 mg/day	PFS	86	9.2	30.9
		DXT 60 mg/m2,d1,q3w þ DDP 80 mg/m2,d1,q3w 3–6 cycles		86	6.3	NR
OPTIMAL: Zhou CC et al.	China	Erlotinib 150 mg/day	PFS	83	13.1	NR
		GEM 1,000 mg/m2 d1,8,q3w þ CBP(AUC ¼ 5) d1,q3w 4 cycles		82	4.6	NR
EURTAC: Rosell R et al.	Europe	Erlotinib 150 mg/	PFS	77	9.7	19.3
		Standard platinum-based		76	5.2	19.5

Do you test for the presence of activating somatic EGFR mutations in lung cancer in your practice?

1. Yes
2. No
3. Don’t know

Is small molecule tyrosine kinase inhibitors treatment an option for the first line in EGFR mutated lung cancer in your practice?

1. Yes
2. No
3. Don’t know

Is small molecule tyrosine kinase inhibitors therapy your preferred choice for the first line treatment in EGFR mutated lung cancer in your practice?

1. Yes
2. No
3. Don’t know