

## Supplementary

Total Sample Size = 588 (Icotinib: erlotinib: gefitinib = 284:106:198)

Median follow up time (months): Icotinib: erlotinib: gefitinib = 22.6:39.4:25.3

### Scenario 1

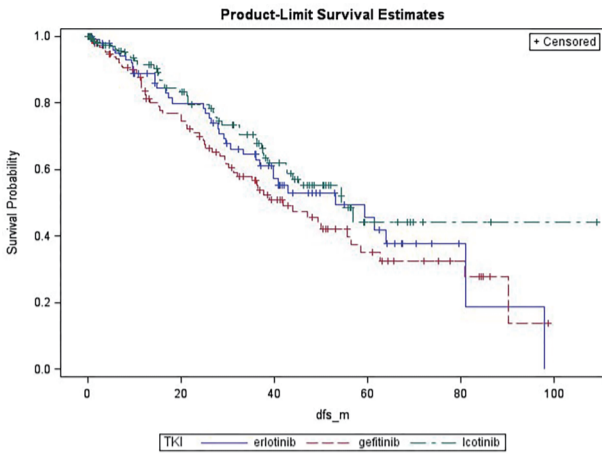
Matching ratio = 1:1:1; Matched pairs = 95; all p-values > 0.05

Median follow up time after matching (months): Icotinib: erlotinib: gefitinib = 32.1: 41.0 : 25.3

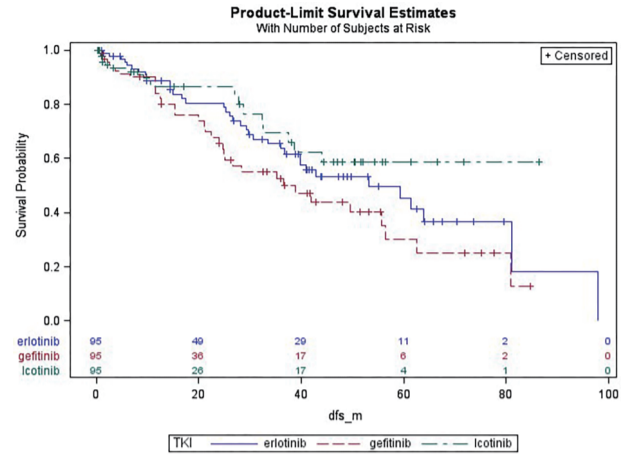
Variables	P-value before matching	After matching			p-value
		Icotinib (N=95)	Erlotinib (N=95)	Gefitinib (N=95)	
Age group	0.424				0.750
<60		45 (47.4)	41 (43.2)	46 (48.4)	
>=60		50 (52.6)	54 (56.8)	49 (51.6)	
Sex	0.408				0.719
Female		57 (60.0)	62 (65.3)	57 (60.0)	
Male		38 (40.0)	33 (34.7)	38 (40.0)	
Smoke status	0.301				0.846
Never		60 (63.2)	67 (70.5)	64 (67.4)	
Former		4 (4.2)	4 (4.2)	2 (2.1)	
Current		21 (22.1)	14 (14.7)	19 (20.0)	
Unknown		10 (10.5)	10 (10.5)	10 (10.5)	
EGFR mutation status	<0.001				0.930
Exon 19 deletions		32 (33.7)	35 (36.8)	39 (41.1)	
Exon 21 Leu85Arg		54 (56.8)	50 (52.6)	46 (48.4)	
Others		1 (1.1)	2 (2.1)	1 (1.1)	
Unkonwn		8 (8.4)	8 (8.4)	9 (9.5)	
Stage	0.007				0.774
I		44 (46.3)	43 (45.3)	41 (43.2)	
II		18 (19.0)	16 (16.8)	13 (13.7)	
III		33 (34.7)	36 (37.9)	41 (43.2)	
N Stage	0.001				0.814
0		52 (54.7)	47 (49.5)	44 (46.3)	
1		12 (12.6)	15 (15.8)	14 (14.7)	
2		31 (32.6)	33 (34.7)	37 (39.0)	
Resection type	0.993				0.761
Sublobectomy		14 (14.7)	12 (12.6)	10 (10.5)	
Lobectomy		80 (84.2)	82 (86.3)	85 (89.5)	
Pneumonectomy		1 (1.1)	1 (1.1)	0	
Pathology	0.950				>0.999
Adenocarcinoma		94 (98.9)	93 (97.9)	94 (98.9)	
Adenosquamous		1 (1.1)	2 (2.1)	1 (1.1)	

P-values were calculated based on Fisher's exact test.

A: Before matching



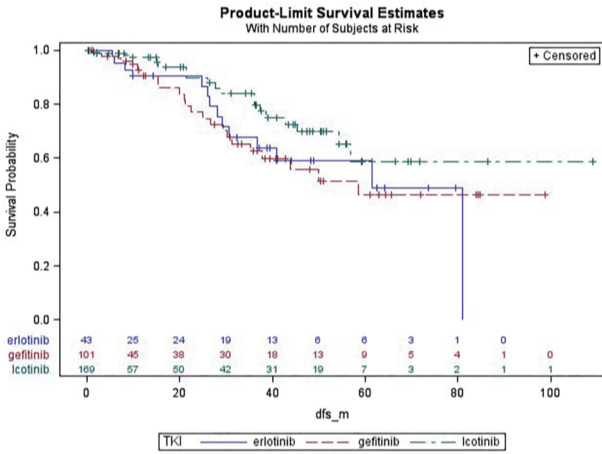
B: After matching



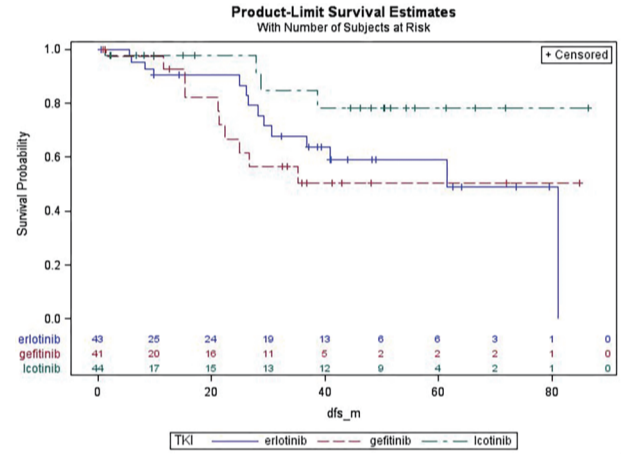
	icotinib (N=284)	Erlotinib (N=106)	Gefitinib (N=198)	Log-rank P-value	icotinib (N=95)	Erlotinib (N=95)	Gefitinib (N=95)	Log-rank P-value
Event, n (%)	49 (17.3)	39 (36.8)	63 (31.8)		18 (18.9)	36 (37.9)	35 (36.8)	
Median DFS (95% CI), months	54.4 (42.6, NA)	53.1 (36.8, 81.1)	41.9 (30.2, 56.4)	0.112	NA (37.6, NA)	53.1 (36.8, 81.1)	36.5 (24.7, 56.4)	0.154

Subgroup analysis: Stage = I

A: Before matching



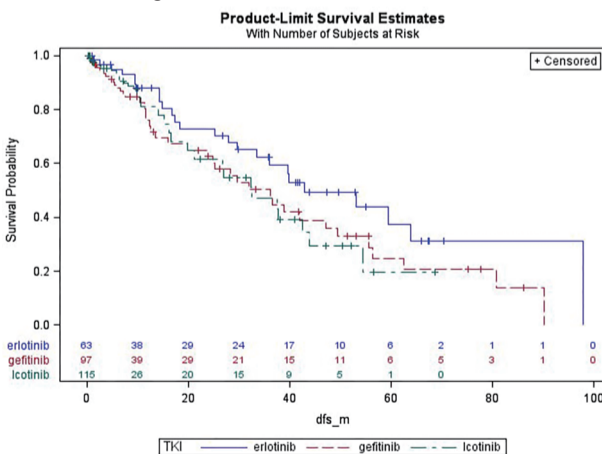
B: After matching



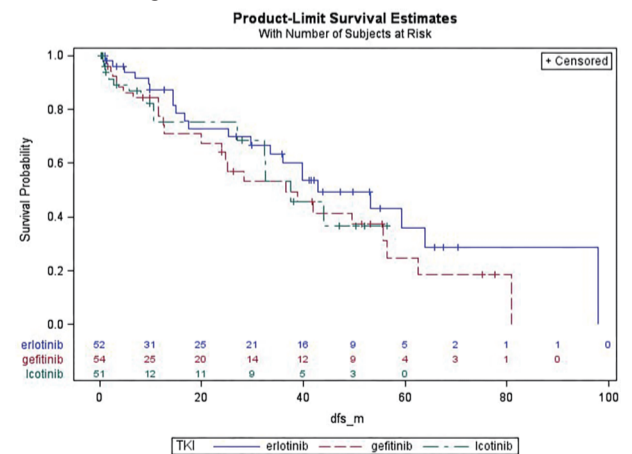
	icotinib (N=169)	Erlotinib (N=43)	Gefitinib (N=101)	Log-rank P-value	icotinib (N=44)	Erlotinib (N=43)	Gefitinib (N=41)	Log-rank P-value
Event, n (%)	19 (11.2)	14 (32.6)	23 (22.8)		4 (9.1)	14 (32.6)	10 (24.4)	
Median DFS (95% CI), months	NA (54.2, NA)	61.5 (30.6, 81.1)	58.5 (31.2, NA)	0.122	NA (38.6, NA)	61.5 (30.6, 81.1)	NA (21.3, NA)	0.134

Subgroup analysis: Stage = II or III

A: Before matching



B: After matching



	icotinib (N=115)	Erlotinib (N=63)	Gefitinib (N=97)	Log-rank P-value	icotinib (N=51)	Erlotinib (N=52)	Gefitinib (N=54)	Log-rank P-value
Event, n (%)	30 (26.1)	25 (39.7)	40 (41.2)		14 (27.5)	22 (42.3)	25 (46.3)	
Median DFS (95% CI), months	32.5 (19.9, 43.9)	42.8 (29.6, 97.8)	36.1 (23.9, 49.4)	0.223	37.6 (27.0, NA)	42.8 (29.6, 63.8)	36.5 (19.9, 55.7)	0.431

*Scenario 2: treatment duration was included into logistic model as a covariate to calculate propensity score*

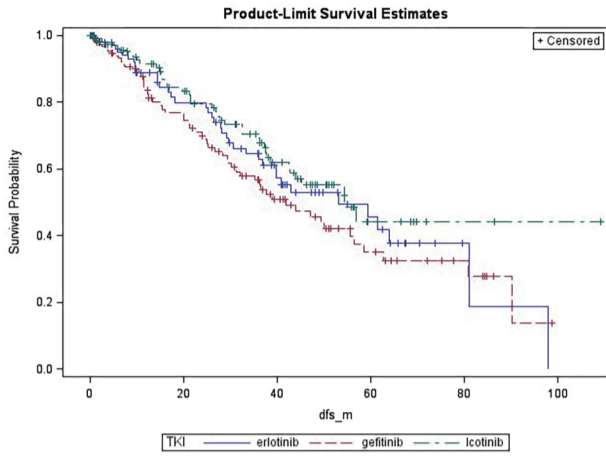
Matching ratio = 1:1:1; Matched pairs = 92; all p-values > 0.05

Median follow up time after matching (months): Icotinib: erlotinib: gefitinib = 20.7: 38.7: 24.0

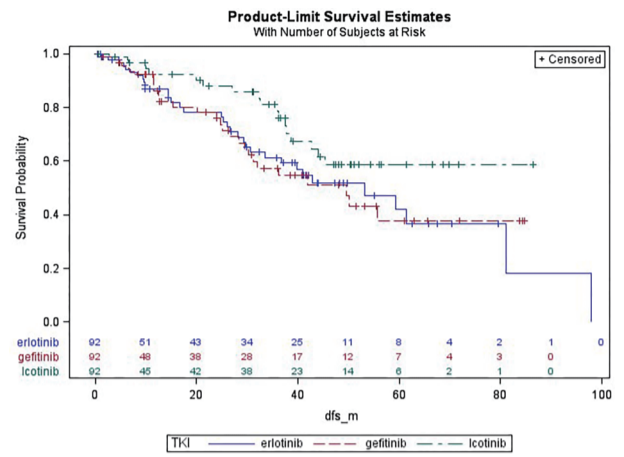
Variables	P-value before matching	After matching			p-value
		Icotinib (N=92)	Erlotinib (N=92)	Gefitinib (N=92)	
Age group	0.424				0.886
<60		40 (43.5)	40 (43.5)	37 (40.2)	
>=60		52 (56.5)	52 (56.5)	55 (59.8)	
Sex	0.408				>0.999
Female		59 (64.1)	58 (63.0)	58 (63.0)	
Male		33 (35.9)	34 (37.0)	34 (37.0)	
Smoke status	0.301				0.954
Never		70 (76.1)	64 (69.6)	65 (70.7)	
Former		3 (3.3)	4 (4.4)	4 (4.4)	
Current		10 (10.9)	15 (16.3)	13 (14.1)	
Unknown		9 (9.8)	9 (9.8)	10 (10.9)	
EGFR mutation status	<0.001				0.558
Exon 19 deletions		26 (28.3)	34 (37.0)	32 (34.8)	
Exon 21 Leu85Arg		55 (59.8)	48 (52.2)	51 (55.4)	
Others		0	2 (2.2)	0	
Unkonwn		11 (12.0)	8 (8.7)	9 (9.8)	
Stage	0.007				0.628
I		46 (50.0)	41 (44.6)	43 (46.7)	
II		14 (15.2)	14 (15.2)	9 (9.8)	
III		32 (34.8)	37 (40.2)	40 (43.5)	
N Stage	0.001				0.857
0		50 (54.4)	45 (48.9)	43 (46.7)	
1		13 (14.1)	12 (13.0)	11 (12.0)	
2		29 (31.5)	34 (37.0)	37 (40.2)	
3		0	1 (1.1)	1 (1.1)	
Resection type	0.993				0.719
Sublobectomy		9 (9.8)	12 (13.0)	13 (14.1)	
Llobectomy		82 (89.1)	80 (87.0)	79 (85.9)	
Pneumonectomy		1 (1.1)	0	0	
Pathology	0.950				>0.999
Adenocarcinoma		90 (97.8)	90 (97.8)	90 (97.8)	
Adenosquamous		2 (2.2)	2 (2.2)	2 (2.2)	
Treatment Duration, months	<0.001				0.332
Mean (SD)		16.2 (10.1)	15.1 (8.6)	14.3 (7.1)	

P-values were calculated based on Fisher's exact test for categorical variables and analysis of variance (ANOVA) for continuous variables.

A: Before matching



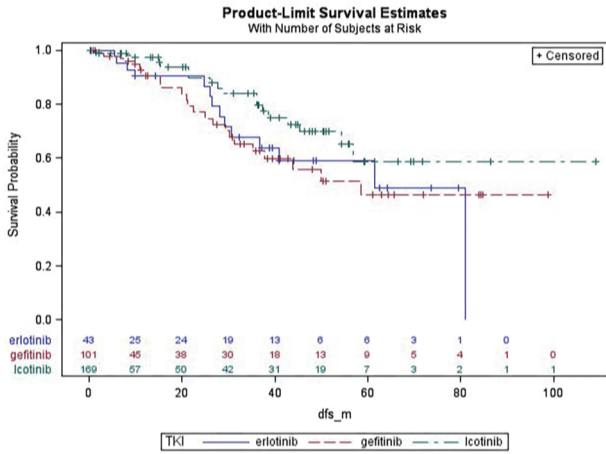
B: After matching



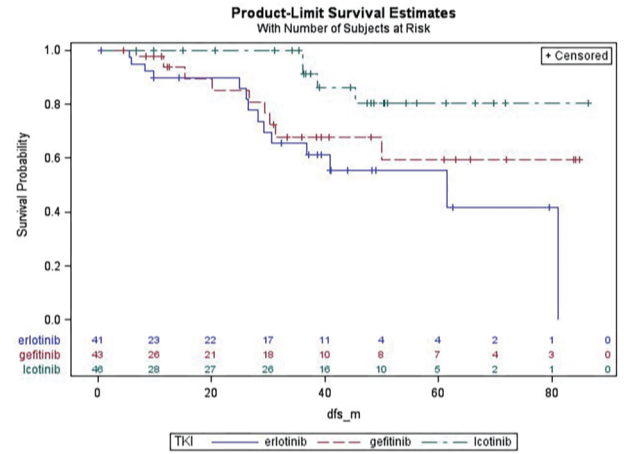
	Icotinib (N=284)	Erlotinib (N=106)	Gefitinib (N=198)	Log-rank P-value	Icotinib (N=92)	Erlotinib (N=92)	Gefitinib (N=92)	Log-rank P-value
Event, n (%)	49 (17.3)	39 (36.8)	63 (31.8)		18 (19.6)	34 (37.0)	28 (30.4)	
Median DFS (95% CI), months	54.4 (42.6, NA)	53.1 (36.8, 81.1)	41.9 (30.2, 56.4)	0.112	NA (42.6, NA)	53.1 (30.6, 81.1)	49.4 (29.4, NA)	0.077

Subgroup analysis: Stage = I

A: Before matching



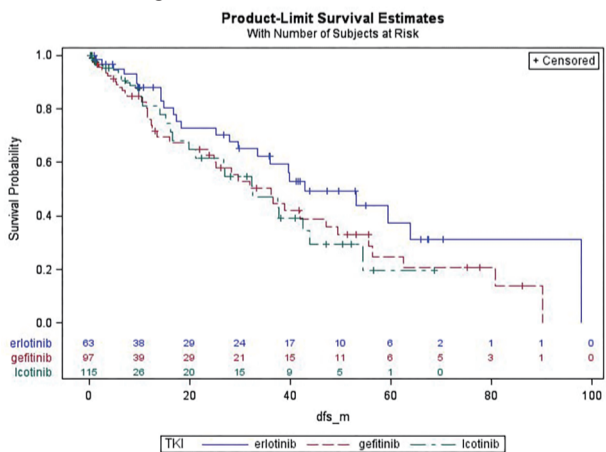
B: After matching



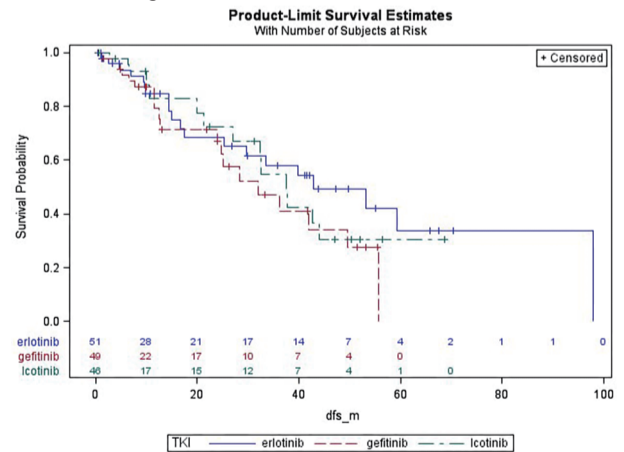
	Icotinib (N=169)	Erlotinib (N=43)	Gefitinib (N=101)	Log-rank P-value	Icotinib (N=46)	Erlotinib (N=41)	Gefitinib (N=43)	Log-rank P-value
Event, n (%)	19 (11.2)	14 (32.6)	23 (22.8)		4 (8.7)	14 (34.1)	9 (20.9)	
Median DFS (95% CI), months	NA (54.2, NA)	61.5 (30.6, 81.1)	58.5 (31.2, NA)	0.122	NA (NA, NA)	61.5 (29.2, 81.1)	NA (31.2, NA)	0.011

Subgroup analysis: Stage = II or III

A: Before matching



B: After matching



	Icotinib (N=115)	Erlotinib (N=63)	Gefitinib (N=97)	Log-rank P-value	Icotinib (N=46)	Erlotinib (N=51)	Gefitinib (N=49)	Log-rank P-value
Event, n (%)	30 (26.1)	25 (39.7)	40 (41.2)		14 (30.4)	20 (39.2)	19 (38.8)	
Median DFS (95% CI), months	32.5 (19.9, 43.9)	42.8 (29.6, 97.8)	36.1 (23.9, 49.4)	0.223	37.6 (21.2, NA)	42.8 (25.2, 97.8)	32.0 (23.9, 49.4)	0.442