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ORIGINAL PAPER

CLINICOPATHOLOGICAL AND MOLECULAR FEATURES OF NON-SMALL CELL LUNG CANCER THAT TRANSFORM TO SMALL-CELL LUNG CANCER: CASE REPORTS AND LITERATURE REVIEW

Qiqi Gao¹, Lixin Zhang², Yulong Zheng³

¹Department of Pathology, the First Affiliated Hospital, Zhejiang University, School of Medicine, Hangzhou, China

²Department of Pathology, Xinchang Hospital of Traditional Chinese Medicine, Xinchang, China

³Department of Medicine-Oncology, the First Affiliated Hospital, Zhejiang University, School of Medicine, Hangzhou, China

Suppl. Table 1.

Source	Age	Sex	Smoke status	Histology of initial diagnosis	Genomic profile of original NSCLC	Treatment before transformation	Time to transformation	Histology after transformation	Genomic profile of SCLC	Treatment for SCLC	Patient outcome
P1	71	M	Smoker (30 cigarettes a day)	SCC	NOTCH1	Gemcitabine/cisplatin (1 mo) >- surgery >- gemcitabine/cisplatin >- nivolumab >- docetaxel/docetaxel >-	12 mo	SCLC	TP53 SETD2 RET NOTCH1 ATM	Cisplatinum/etoposide	Died 6 mo post SCLC dx
P2	65	M	Smoker (20 cigarettes a day)	SCC	TP53	Radical resection>- Paclitaxel/cisplatin	10 mo	SCLC	TP53 PIK3CA	No	Died 13 mo post SCLC dx
P3	56	F	Never	LADC	TP53 PIK3CA	Pemetrexed/cisplatin(3 mo) >- pemetrexed/cisplatin/pabolistumab/radiotherapy >- pemetrexed/pabolistumab>- pabolistumab	10 mo	SCLC	ALK ARHGAP35 ATM MGA NOTCH1 PIK3CA RBM10 TP53	Etoposide/carboplatin/endostar >- cisplatinum >- etoposide/carboplatin+anlotinib >-etoposide/carboplatin/durvalumab >- durvalumab >-anlotinib	Survival after 12 mo post SCLC dx
P4	53	M	Never	LADC	EGFR	Radical resection>- Icotinib (25 mo) >- radical resection >-, etoposide/cisplatinum (4cycles) >- radiotherapy	47 mo	SCLC	Unknown	Irinotecan/cisplatinum	Died 16 mo post SCLC dx

P5	57	M	Smoker (20 cigarettes a day)	SCC		Gemcitabine1/cisplatinum > - radiotherapy	11 mo	SCLC	Unknown	Not available	Loss to follow-up
P6	55	M	Smoker (20 cigarettes a day)	LADC	L858R	Pemetrexed/ cisplatin Bevacizumab Icotinib >- PC	22 mo	SCLC	Unknown		>24 mo after SCLC dx (alive)
P7	60	F	Never	LADC	19-Del	Gefitinib>- osimertinib	19mo	SCLC	Unknown	Etoposide/cisplatinum >- icotinib >- etoposide/cisplatinum >- osimertinib	Died 11 mo post SCLC dx
P8	70	M	Smoker (25 cigarettes a day)	SCC		Paclitaxel/carboplatin/BGB-A317 (3 cycles)	13 mo	SCLC	Unknown	BGB-A317	Lost to follow-up
P9	54	F	Never	LADC	19-Del	Gefitinib (12 mo T790M) >- osimertinib (3 mo)	15 mo	SCLC	Unknown	Pemetrexed	Died 12 mo post SCLC dx
P10	65	F	Never	LADC	19-Del	EGFR-TKI (details are not available)	35 mo	SCLC	Unknown	Not available	Died 2 mo post SCLC dx
P11	31	F	Never	LADC	S768I, L858R	Endostain/icotinib (20 mo)	22 mo	SCLC	Unknown	Pemetrexed/ cisplatin/AZD9291>- irinotecan/carboplatin>- docetaxel>-Icotinib >- etoposide/cisplatinum>- gemcitabine	Loss to follow-up after 12mo post SCLC dx

P12	44	M	Never	LADC	19Del,T790 M	Mefatinib >- osimertinib >- pemetrexed/ carboplatin	17 mo	SCLC	Unknown	Etoposide/cisplatinum	Survival after 6 mo post SCLC dx
P13	54	M	Smoker (10 cigarettes a day)	LADC		Erlotinib	10 mo	SCLC	Unknown	Etoposide/carboplatin	Alive 3 mo post SCLC dx ;then lost to follow-up
P14	69	M	30-pack year	SCC		Sintilimab	3 mo	SCLC	Unknown	Symptomatic therapy	Died 2 mo post SCLC dx
Sehgal <i>et al.</i> 2020	Mid 60 s	F	Smoker (30 pack-years)	SCC	TP53 mut (R283fs*62 and G325), CDKN2A R58 mut,SOX2 amp, PIK3CA amp, ERBB4 amp,REL amp, KRAS amp,ZNF70 3 amp, FGFR1 amp (Foundation Medicine	CBDCA/GEM (4 cycles)Nivo q2wk (second line, 47cycles	25 mo	SCLC	TP53 R283fs*6 2 mut, CDKN2A R58 mut,SOX 2 amp, PIK3CA amp, PIK3CA E545K, CCND2 amp, CCND3 amp,MY CL1 amp, CSF3R amp, FGF23 amp, FGF6 amp,	Carboplatin/etoposide 10 months then concurrent nivolumab and radiotherapy	Died 14 m post SCLC dx

									C17orf39 amp,KD M5A amp, PRKCI amp, TERC amp, VEGF amp (Foundati onOne CDx)		
Iams <i>et al.</i> 2019	75	F	Smoker(30 pack-years)	LADC	KRAS G12C mut	CBDCA/PEM/BEV (6 cycles) -> maint.PEM/BEV > 16 mo therapy holiday Nivo q2wk (2nd line, 33 cycles)-> 11 mo therapy holiday	50 mo	SCLC	KRAS G12C mut, TP53 R273Cmut	Carboplatin and etoposide, nivolumab and ipilimumab, and irinotecan monotherapy	Died 16 mo post SCLC dx
Iams <i>et al.</i> 2019	67	F	Smoker (50 pack-years)	LADC	KRAS G12C mut	CBDCA/PTX(4 cycles) -> 19 mo therapy holiday Nivo q2wk(2nd line, 36 cycles	36 mo	SCLC	TP53 S315S frameshift mut,RB1 splice site mut	Carboplatin and etoposide followed by paclitaxel	Died 11 mo post SCLC dx

Bar <i>et al.</i> 2019	70	F	Active Smoker	Squamous	TP53 mut(Arg249Ser and Arg196Ter)	Palliative XRT vertebral lesion -> to D5 CBDCA/GEM (1st line, 5 cycles) Nivo q2wk (2nd line, 3 cycles);(5th line, 10 mo)	21 mo	SCLC	TP53 mut(Arg249Ser and Arg196Ter)	Nivolumab	Alive 9 mo post SCLC dx;then lost to follow-up
Bar <i>et al.</i> 2019	75	M	Past smoker (>10 pack-years)	Squamous	TP53 mut (Asn131fs and Pro177Ser), FBXW7 Arg441Phe mut	Palliative XRT to mediastinal lesion CBDCA/GEM (5 mo) -> 3 mo therapy holiday Nivo (2nd line, 6 mo);stopped 2/2 pneumonitis ->2 mo therapy holiday	18 mo	SCLC	TP53 Cys238Phe mut	CBDCA/VP16 XRT to chest (1st line, 3-4 mo) 2 mo therapy holiday Nivo (2nd line, 2 mo DTX (3rd line, 1 mo),stopped 2/2 toxicity Gefitinib (4th line, 1 mo)	Died 13 mo post SCLC dx
Okeya <i>et al.</i> 2019	66	M	Smoker (45 pack-years)	Adeno/limited specimen	Indeterminate for EGFR mut, Negative for Alk alterations	CBDCA/PEM/BEV (4 cycles) -> maint.v PEM/BEV (2 cycles) Pembro (2nd line, 2PEM/BEV (2 cycles) Pembro (2nd line)	8 mo	SCLC	Not described	CBDCA/VP16 (1stline, 3 cycles) amrubicin (2nd line, 3 cycles)	Died 5 mo post SCLC dx
Abdallah <i>et al.</i> 2018	65	M	Past smoker (35 pack-years)	Squamous /	Negative for EGFR/Alk alterations	CBDCA/PEM (6 cycles) -> maint. PEM (9 cycles) Nivo (2nd line, 5 cycles)	Uncertain	SCLC	Not described	CBDCA/VP16 (2 cycles at the time)	Response to chemotherapy
Abdallah <i>et al.</i> 2018	68	M	Not described	Two primaries (Squamous and poorly diff)	Not described	Pembro/CBDCA/PTX (4 cycles) -> maint. Pembro (26 cycles)	27 mo	SCLC	Not described	CBDCA/VP16 (4 cycles) -> definitive XRT to chest	Alive with no evidence of disease 18 mo post SCLC dx

				limited specimen							
Imakita <i>et al.</i> 2019	75	M	Smoker (50 pack-years)	Poorly diff/no NSCLC	Negative for EGFR/Alk alterations	DTX/BEV (2-3 cycles)-> 2-3 mo therapy holiday 2/2 toxicity Nivo holiday 2/2 toxicity Nivo (2nd line,3 cycles)	7 mo	SCLC	Not described	Amrubicin	Died 1 mo post-SCLC dx
Oya <i>et al.</i> 2018	62	M	Former smoker male (38 pack-year history)	LADC	ALK	cytotoxic chemotherapy (carboplatin/pemetrexed/bevacizumab) (4 mo) -> alectinib (2 Y), radiological	28mo	SCLC	ALK	Ceritinib -> cisplatin /etoposide(4 cycles) amrubicin (AMR), nivolumab, and irinotecan	Died 20 mo post-SCLC dx
Takegawa <i>et al.</i> 2016	43	F	Not described	LADC	ALK	Cisplatin/pemetrexed (6 cycles) -> crizotinib (6 mo)->S-1/ docetaxel/ erlotinib/gemcitabine/rechallenge /crizotinib/ (18 mo)->Alectinib (13 mo)	41mo (uncertain)	SCLC	ALK	No	Died soon after post-SCLC dx

Shiro Fujita <i>et al.</i> 2016	67	F	Never	LADC	ALK	Cisplatin /vinorelbine/ radiotherapy-> paclitaxel /bevacizumab-> crizotinib (7 mo)-> pemetrexed/ gemcitabine/ docetaxel/ monotherapy-> alectinib (3mo)	Uncertain	SCLC	ALK	Irinotecan /alectinib	Partial response
Caumont <i>et al.</i> 2016	63	F	Never	LADC	ALK	Radiotherapy/cisplatin-pemetrexed (2 cycles-> crizotinib	10 mo	neuroendocrine carcinoma	ALK	Alectinib	Partial response
Cha <i>et al.</i> 2016	72	M	Ex-smoker (40 pack-years)	LADC	ALK	Gemcitabine /carboplatin (2 mo) -> crizotinib (2 mo)		carcinoma with neuroendocrine differentiation(SCLC like feature	ALK	Not described	Not described
Levacq <i>et al.</i> 2016	53	F	Never	LADC	ALK PTEN mutation	Cisplatin /pemetrexed (2cycles)-> crizotinib (10 mo)-> docetaxel (6 cycles)->ceritinib (9 mo)	26 mo	SCLC	No ALK p.T319del of the PTEN gene and p.V203M of the TP53 gene	Cytotoxic/cisplatin /etoposide	Not described

Zhu <i>et al.</i> 2017	49	M	Never	LADC	ALK	Cisplatin /paclitaxel (5 cycles)->-crizotinib (5 mo)->-gemcitabine/docetaxel/bevacizumab	50 mo (uncertain)	SCLC	TP53 gene mutation ALK ERBB3 p.P554Q, NOTCH1 p.P3S, IL7R p.P417R, and IL6ST p.A896V; no loss of RB	Etoposide (2 cycles)	Alive at the time of writing this article
Miyamoto <i>et al.</i> 2016	56	F	Never	LADC	ALK	Cisplatin /vinorelbine->-carboplatin->-pemetrexed(6cycles)->- crizotinib ->-alectinib	47 mo	SCLC	Not described	Cisplatin/irinotecan (2 cycles)	Alive at the time of writing this article
Ren <i>et al.</i> 2020	52	F	Never	LADC	exon 19 deletion mutation	Vinorelbine/ cisplatin/endostar (10 mo)->-erlotinib (1Y) biopsy ADC EGFR T790M and exon 19 deletion ->- osimertinib (15 mo)	42 mo	SCLC	EGFR exon 19 deletion, T790M mutation, cis-C797S mutation, and a loss of RB1	Etoposide/cisplatin (6 cycles)	Alive at the time of writing this article

Zhou <i>et al.</i> 2018	26	F	Never	LADC	EGFR ex19del	Gefitinib (4 mo) >- gefitinib/cisplatin /etoposide (5 cycle)	7 mo	SCLC	TP53 C176S and EGFR ex19del	No	Died soon after rebiopsy
Zhang <i>et al.</i> 2013	80	M	Never	LADC	(exon 19 deletion) in the EGFR gene	Icotinib	9 mo	SCLC	exon 19 deletion	Etoposide /cisplatin (2 cycles) >- radiotherapy /VP-16 (3 cycles)	Stable disease for 6months
Minari <i>et al.</i> 2018	69	M	Never	LADC	EGFR exon 19 deletion	Afatinib /radiotherapy (ex19del and T790M)>- osimertinib	12 mo	SCLC	ex19del- T790M-	No other therapy	Died few weeks
Minari <i>et al.</i> 2018	70	F	Never	LADC	EGFR exon 19 deletion	Afatinib(T790M)>- osimertinib	11mo	SCLC	ex19del+ T790M-	No other therapy	Died few weeks
Minari <i>et al.</i> 2018	58	F	Previous light smoker	LADC	EGFR L858R	afatinib	22 mo	SCLC	combined tumor presentin g adenocar cinoma (EGFR L858R and T790M positive) and SCLC (EGFR L858R	Osimertinib	Died few weeks later

									positive, T790M negative)		
Minari <i>et al.</i> 2018	55	M	Former smoker	LADC	EGFR ex19del	Cisplatin/pemetrexe d (6cycles) >- gefitinib >- thoracic radiotherapy (ex19del and T790M) >- osimertinib	> 39 mo	SCLC	ex19del+ T790M- p53 gene	Carboplatin and etoposide	Died 10 mo after the detection of SCLC transformation.
Minari <i>et al.</i> 2018	68	M	Never	LADC	EGFR activating mutation L858R	Carboplatin/ paclitaxel/ bevacizumab(3 cycles) >-afatinib (15 mo EGFR L858R and T790M)>- osimertinib	> 15 mo	SCLC	EGFR L858R mutation but not T790M	Carboplatin /etoposide	Partial response
Ma <i>et al.</i> 2020	57	F	Never	LADC	EGFR exon 19 deletion	Gefitinib (14 mo EGFR exon 19 deletion and acquired exon 20 T790M mutation) >- pemetrexed/carbopl atin (5 mo) >- osimertinib	18mo	SCLC	No EGFR mutations (CSF)	Etoposide/cisplatin	Died 11 mo post-SCLC dx
Chu <i>et al.</i> 2018	58	F	Never	LADC	EGFR exon 19 deletion IHC Rb and	pemetrexed/ carboplatin (1 cycle)>-radiotherapy	44 mo	SCLC	EGFR driving mutation	Etoposide /cisplatin	Deteriorated rapidly

					p53 inactivation	(2 cycles) >-gefitinib (2 mo)			(exon 19 deletion E746-A750 IHC Rb and p53 inactivation)		
Liu <i>et al.</i> 2019	60	F	Not describe	LADC	EGFR L858R mutation	Gefitinib	Almost 72 mo	SCLC	EGFR L858R mutation CAV1-MET fusion Rb and p53 inactivation	Crizotinib/osimertinib	Alive at the time of writing this article
Nishikawa <i>et al.</i> 2016	76	F	Smoker (20-pack-year)	LADC	Exon 21 (L858R)	Gefitinib (20 mo)	20 mo	SCLC	exon 21 (L858R)	Cisplatin /etoposide (4 cycles) >-amrubicin (2 cycles) >- nivolumab (ineffective)	Not described
Lee <i>et al.</i> 2017	56	F	Never	LADC	Del E746-A750 RB1 P53	Chemotherapy, gefitinib, osimertinib		SCLC	RB1 P53	Not described	Not described
Lee <i>et al.</i> 2017	39	F	Never	LADC	Del E746-A750 RB1 P53	Gefitinib, chemotherapy, EGF816		SCLC with spindle cells	RB1 P53	Not described	Not described
Lee <i>et al.</i> 2017	51	F	Ex-smoker, pack-year	LADC	L858R	Gefitinib		LADC + SCLC	RB1 P53	Not described	Not described
Lee <i>et al.</i> 2017	39	F	Ex-smoker, pack-year	LADC	Exon 19 del (not specifi	Osimertinib		SCLC	RB1 P53	Not described	Not described

					ed) RB1 P53						
Lee <i>et al.</i> 2017	50	M	Never	LADC	Del E746- T751 ins VP	Dacomitinib, chemotherapy, gefi tinib		SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	79	F	Never	LADC	Del E746- A750	Gefitinib		LADC + SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	61	F	Never	LADC	Del E746- A750	Dacomitinib		SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	61	F	Never	LADC	L858R	Chemotherapy, gefi tinib		LADC + SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	58	F	Never	LADC	Del L747- P753	Gefitinib		SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	62	M	Never	LADC	Del L747- T751	Gefitinib		SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	54	F	Never	LADC	Del L747- A755 ins SRD	Chemotherapy, afatinib		LADC + SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	55	F	Never	LADC	Exon 19 del (not specifi ed)	Gefitinib, osimertinib		SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	59	F	Never	LADC	Exon 19 del (not specifi ed)	Chemotherapy, gefi tinib, rociletinib		LADC + SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	37	M	Ex-smoker, pack-year	LADC	Exon 19 del (not specifi ed)	Gefitinib, chemotherapy, osimertinib		SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	57	F	Never	LADC	L858R	Erlotinib, chemotherapy, osimertinib		SCLC	Not described	Not described	Not described

Lee <i>et al.</i> 2017	58	F	Never	LADC	Exon 19 del (not specified)	Chemotherapy, erlotinib, afatinib, osimertinib		SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	53	M	Ex-smoker, pack-year	LADC	Exon 19 del (not specified)	Erlotinib, chemotherapy, afatinib		SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	56	F	Never	LADC	Del E746-A750	Afatinib		SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	64	F	Never	LADC	Del E746-A750	Chemotherapy, gefitinib, osimertinib		SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	66	M	Ex-smoker, pack-year	LADC	L858R	Erlotinib		SCLC	Not described	Not described	Not described
Lee <i>et al.</i> 2017	43	M	Ex-smoker, pack-year	LADC	Del E746-A750	Erlotinib		SCLC	Not described	Not described	Not described
Lu <i>et al.</i> 2018	48	M	Ex-smoker	LADC	EGFR 21 L858R mutation	Carboplatin/gemcitabine (6 cycles)->-pemetrexed (4 cycles)->-icotinib 19	66 mo	Neuroendocrine carcinoma	(PIK3CA) mutation RB) loss	5 cycles of intravenous etoposide (180 mg/d1) combined with cisplatin	not described
Fang <i>et al.</i> 2017	74	M	Smoker (50-pack-year)	LADC	Exon 19 of EGFR	Ceftazidime /levofloxacin >-gefitinib(14mo)	14 mo	SCLC	No exon 19 of EGFR	Etoposide->- high-frequency electrocoagulation	Died 18 months after the initial diagnosis
Fallet <i>et al.</i> 2012	44	F	Ex-smoker	LADC	Exon 19 deletion (E746-A750)	Carboplatin/paclitaxel/bevacizumab(6mo)->-Erlotinib(6mo)->-pemetrexed/docetaxel->-erlotinib	16 mo	SCLC	exon 19 deletion T790M exon 20 resistance mutation	Cisplatin etoposide erlotinib	Died after one cycle

Suda <i>et al.</i> 2015	76	F	Never	(NSCLC)	EGFR exon 19 deletion mutation (E746_A750 del).TP53 P151S PIK3CA and RB1 mutations	Platinum-doublet chemotherapy / radiation (15mo)->- gefitinib (8mo)	≤ 23 mo	six SCLCs+two LADC	EGFR exon 19 deletion V(ALL)EGFR T790M mutation(adenocarcinoma) PTEN M264I mutation(SCLC)	Not described	Died 23 mo after the initial diagnosis
Liu <i>et al.</i> 2015	38	M	Never	LADC	EGFR) exon 21 L858R mutation	Pemetrexed /cisplatin (4cycles)->- erlotinib 18mo)	24 mo	SCLC	Not described	Etoposide /cisplatin (6 cycles)	Survival
Jiang <i>et al.</i> 2016	46	M	Never	LADC	EGFR exon 21 L858R mutation	Gefitinib/radiotherapy (14 mo)	14 mo	SCLC	EGFR 21L858R mutation(CSF)	Platinum /pemetrexed (4 mo) ->- gefitinib/radiation (4 mo) ->- erlotinib /methotrexate(1 week) ->- etoposide (1 mo)	Died 25 mo after the initial diagnosis
Ali <i>et al.</i> 2016	45	M	Never	LADC	EGFR exon 19 deletion	Gefitinib/zoledronic acid (11 mo) ->- radiation (1 mo) ->- paclitaxel/carboplatin/bevacizumab ->- radiation ->-erlotinib/bevacizumab (4 mo)	28 mo	SCLC	EGFR exon 19 deletion T790M mutation	Epirubicin/paclitaxel 6 cycles	Survival
Yang <i>et al.</i> 2019	53	F	Never	LADC	EGFR exon 19 deletion	Erlotinib	13	SCLC	19del	EC/erlotinib (3 mo)	

Yang <i>et al.</i> 2019	63	F	Never	LADC	EGFR exon 19 deletion	Gefetinib	17	SCLC	No mutant	EC (5 mo)	Alive
Yang <i>et al.</i> 2019	48	M	Never	LADC	EGFR exon 19 deletion	Erlotinib	22 mo	SCLC	19del	EC/radiation >-erlotinib maintenance (14)	Alive(PFS was more than 12 mo)
Yang <i>et al.</i> 2019	42	M	Smoker (10-pack-year)	LADC	L858R	Gefetinib	29 mo	SCLC	No mutant	EC (14 mo)	Alive
Yang <i>et al.</i> 2019	48	F	Smoker (24-pack-year)	LADC	EGFR exon 19 deletion	Erlotinib	16 mo	SCLC	19del	EC insert erlotinib + erlotinib maintenance	9 mo
Yang <i>et al.</i> 2019	58	M	Smoker (20-pack-year)	LADC	EGFR exon 19 deletion	Erlotinib	24 mo	SCLC	T790m	EC + osimertinib	11mo
Yang <i>et al.</i> 2019	60	M	Never	LADC	EGFR exon 19 deletion	Erlotinib	14 mo	SCLC	No mutant	EC (5 mo)	Alive
Shiroya <i>ma et al.</i> 2018	35	M	Smoker (15-pack-year)	LADC	EGFR exon 19 deletion	Afatinib (7 mo)	7 mo	SCLC	EGFR exon 19 deletion +T790M mutation	Cisplatin /irinotecan (8 cycles)	Alive
Hwan <i>et al.</i> 2015	61	M	Smoker (40-pack-year)	LADC	EGFR exon 19 deletion	Gefetinib (12 mo)	12 mo	SCLC	EGFR exon 19 deletion	Etoposide /cisplatin (2 cycles)	Alive at the time of writing this article
Watana <i>be et al.</i> 2013	52	F	Never	LADC	Exon 19 deletion	Cisplatin /pemetrexed (9mo)>- erlotinib(11 mo)	20 mo	SCLC	exon 19 deletion	Carboplatin and etoposide	Alive at the time of writing this article
Ham <i>et al.</i> 2016	57	F	Never	LADC	EGFR mutation in exon 21 (L858R)	Erlotinib(12 mo) cisplatin /pemetrexed (8 mo T790M+L858R) >- AZD9291 (14 mo)	34 mo	SCLC	L858R EGFR gene amplification	Etoposide /carboplatin(2 cycles)	Alive at the time of writing this article

Ham <i>et al.</i> 2016	58	F	Never	LADC	EGFR wild-type	Afatinib (9 mo) >-erlotinib (24 mo) 19 deletion along with T790M) >-AZD9291	27mo	SCLC	Exon 19 deletion	Etoposide and carboplatin	Alive at the time of writing this article
Ahn <i>et al.</i> 2016	57	F	Never	LADC	L858R	Irressa and afatinib	37mo	SCLC	L858R	Etoposide and cisplatin	Alive at the time of writing this article
Ahn <i>et al.</i> 2016	55	F	Never	LADC	Del19	irressa	8 mo	SCLC	Del19	Etoposide and cisplatin	Alive at the time of writing this article
Ahn <i>et al.</i> 2016	68	F	Never	LADC	No mutation	gefetinib	31 mo	SCLC	No mutation	No treatment	Death
Ahn <i>et al.</i> 2016	67	M	Smoker(35-pack-year)	LADC	No mutation	No TKI	50 mo	SCLC	No mutation	No treatment	Alive at the time of writing this article
Gu <i>et al.</i> 2019	65	F	Smoker(60-pack-year)	LADC	No mutation of the primary tumour	gemcitabine and carboplatin 14 months erlotinib	86 mo	SCLC	Loss-of-function mutations in TP53 (p.G245V) and retinoblastoma 1 (RB1, p.S81fs increased copy number SOX2	Etoposide and cisplatin 2 cycles erlotinib 4 cycles	Died 16 months after the SCLC diagnosis.
Xie <i>et al.</i> 2020	60	F	Never	LADC	Ex19Del	Chemotherapy, icotinib, afatinib gefitinib,	42.7	SCLC	Not described	Not described	20.7

Xie <i>et al.</i> 2020	70	F	Never	LADC	Ex19Del	Icotinib, afatinib	40.9	SCLC	PIK3CA MGA NOTCH1	Not described	9.7
Xie <i>et al.</i> 2020	48	M	20 yr	LADC	Ex19Del	Chemotherapy, erlotinib	11.4	SCLC		Not described	27.3
Xie <i>et al.</i> 2020	33	F	Never	LADC	Ex18G719X	Chemotherapy, gefitinib, afatinib, bevacizumab	16	SCLC	Ex18G71 9X TP53 RB1	Not described	8.5
Xie <i>et al.</i> 2020	73	M	Never	LADC	Ex19Del	Gefitinib, afatinib	56.2	SCLC	TP53 EGFR	Not described	>14.5(Alive)
Marcoux <i>et al.</i> 2019	51 (27-82)	33 F, 25 M	40 never; 7 (<5), 4 (5-15); 7 (≥15)	57LADC, 1 NOS	12(Ex19Del); 13(L858R); 1(L861Q); 1 (Exon 19 deletion + L833V); 1(E709A + G719X)	TKI	Median 17.8 mo (14.3-26.2)	SCLC	79% (TP53), 58% RB1, 27% PIK3CA	Platinum-etoposide	Median 8.1(0-26.9)
Ferrer <i>et al.</i> 2019	62 (52-70)	39 F, 22 M	31 never; 7 (≤20); 13 (>20); 10 (MD)	55LADC, 3 SCC 3NOS	Not described	Not described	Not described	SCLC	Not described	Not described	Not described

P1-P14 are our own cases and have not been published.