Updates in Small Cell & Squamous Lung Carcinomas

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Saint Luke's HEALTH SYSTEM

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Disclosures

- Research funding: Novartis, Merck, CanStem, Helsinn, Biocept, Incyte, Genetech & Paradigm
- Advisory role: Astra Zeneca, Boehringer Ingelheim, Novartis, Eli Lilly & Pfizer
- Speakers bureau: Astra Zeneca & Boehringer Ingelheim

Hanahan D & Weinberg RA et al. Cell 2000

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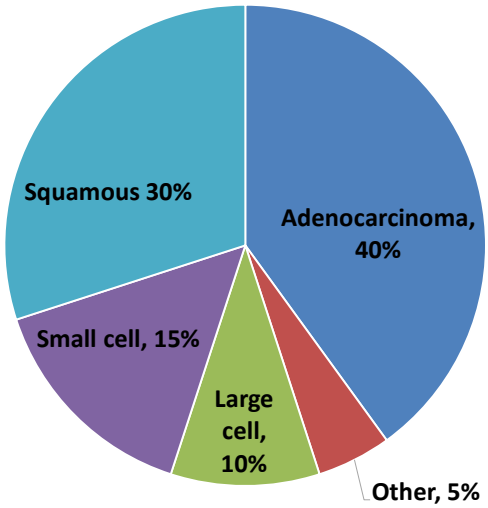
Distribution of Lung Cancer Histologies



Adapted from https://https://lungevity.org/for-patients-caregivers/lung-cancer-101/types-of-lung-cancer

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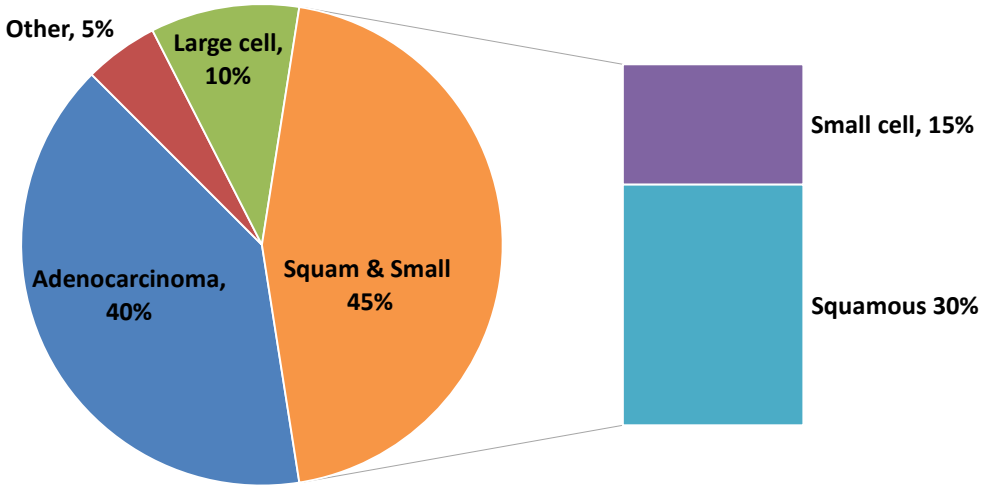

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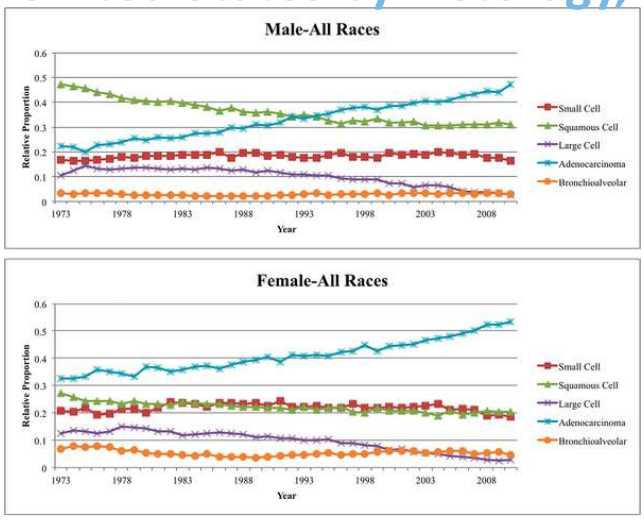
Relative proportions of lung cancer cases in the United States by histology, 1973–2010.



- Squamous and small cell cancer rates decline over time.
- Declining rates driven by changes in tobacco smoking habit and type of cigarettes.
- Constitute 40% - 45% of all lung cancers.
- Approximately 80-90,000 cases a year in the United States.
- Both strongly correlate with cigarette smoking.

Meza R,et al PLOS ONE 2015

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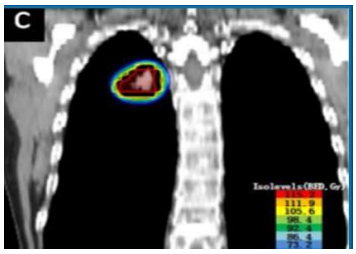
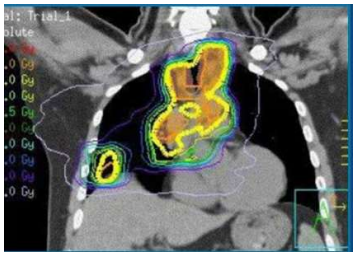
Limited Stage Small Cell Lung Cancer (SCLC)

- Limited stage: 1/3 of all cases
- Defined as disease that can be treated definitively or with curative intent. Corresponds to Stage I to III of NSCLC
- Standard of care
  - Stage I : resection followed by adjuvant chemotherapy
  - Stage I – III: Concurrent chemo-radiation
    - Cis/Etop x 4 cycles
    - RT: QD or BID
  - Prophylactic cranial irradiation (PCI)
    - 5 year survival benefit (5.4% benefit)
  - Outcomes
    - ORR: 70%-90%; 5yr survival at ~ 26%
    - Most (~75%) recur



Stage I



Stage III

Yang et al JCO 2016, Li et al PLoS One 2017, Huo et al, Clin Adv Radio Tech 2016

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Extensive Stage (ES) SCLC

- 2/3rds of all SCLC cases
- **Between 1980 – 2006 no major advances beyond platinum doublet**

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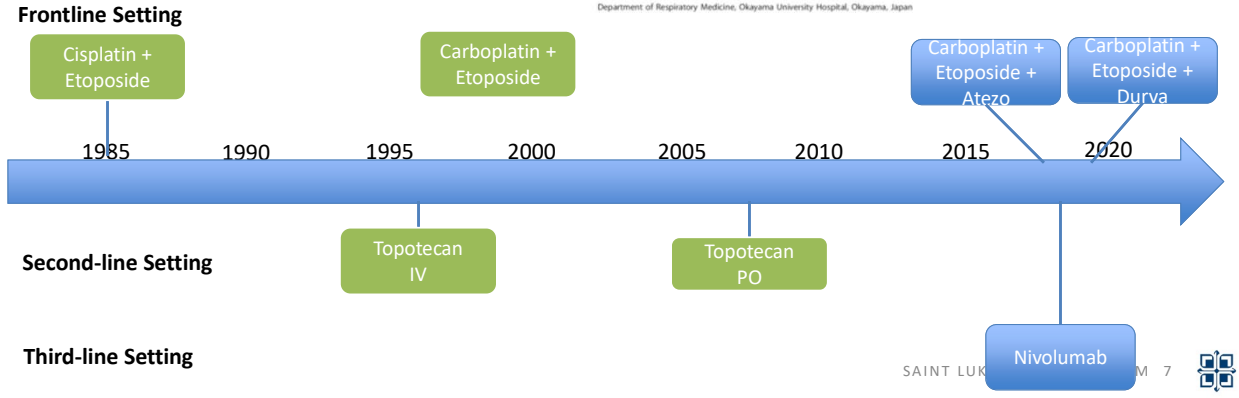
Twenty-Seven Years of Phase III Trials for Patients with Extensive Disease Small-Cell Lung Cancer: Disappointing Results

Isao Oze, Katsuyuki Hotta*, Katsuyuki Kiura, Nobuaki Ochi, Nagio Takigawa, Yoshiro Fujiwara, Masahiro Tabata, Mitsune Tanimoto

Department of Respiratory Medicine, Okayama University Hospital, Okayama, Japan



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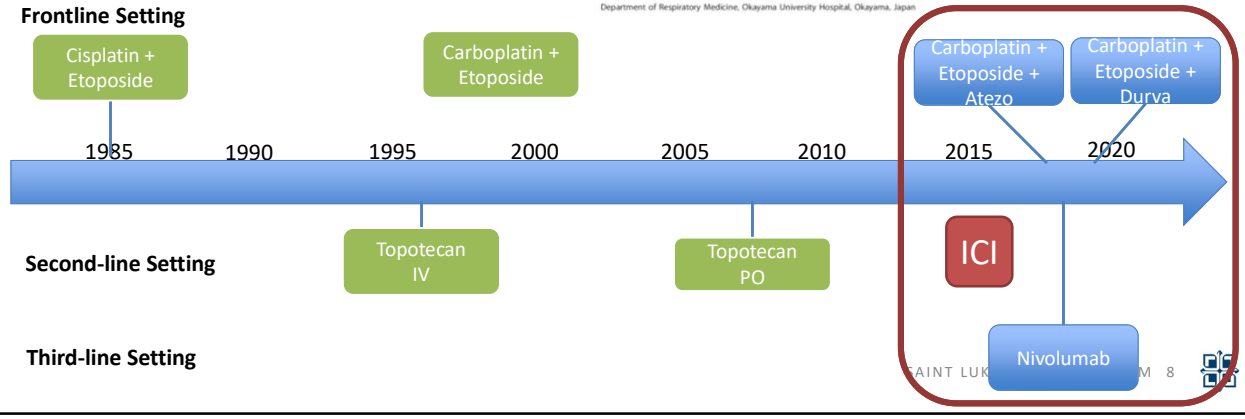

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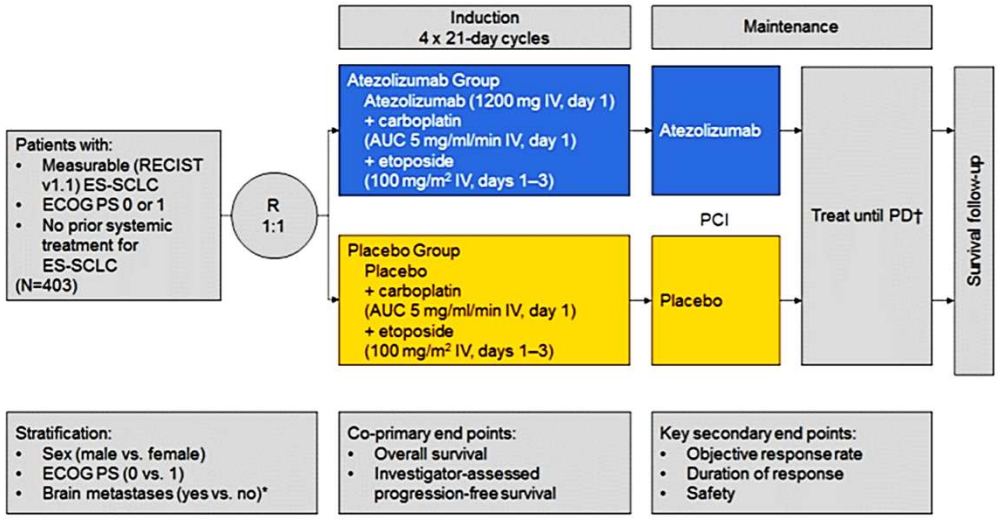
IMpower133: Phase 1/3 double blind, randomized trial evaluating carboplatin, etoposide & atezolizumab



Horn et al NEJM 2018

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IMpower133: Baseline Characteristics

Characteristic	Atezo + CP/ET (N = 201)	Placebo + CP/ET (N = 202)
Median age (range)	64 (28-90)	64 (26-87)
Age group – no (%)		
< 65 years	111 (55)	106 (52)
≥ 65 years	90 (45)	96 (48)
Male sex – no (%)	129 (64)	132 (65)
Smoking status		
Current smoker	74 (36.8)	75 (37.1)
Former Smoker	118 (58.7)	124 (61.4)
Race – no (%)		
White	163 (81)	159 (79)
ECOG PS – no (%)		
0	73 (36)	67 (33)
1	128 (64)	135 (67)
Brain metastasis – no (%)		
Yes	17 (8)	18 (9)

Horn et al NEJM 2018

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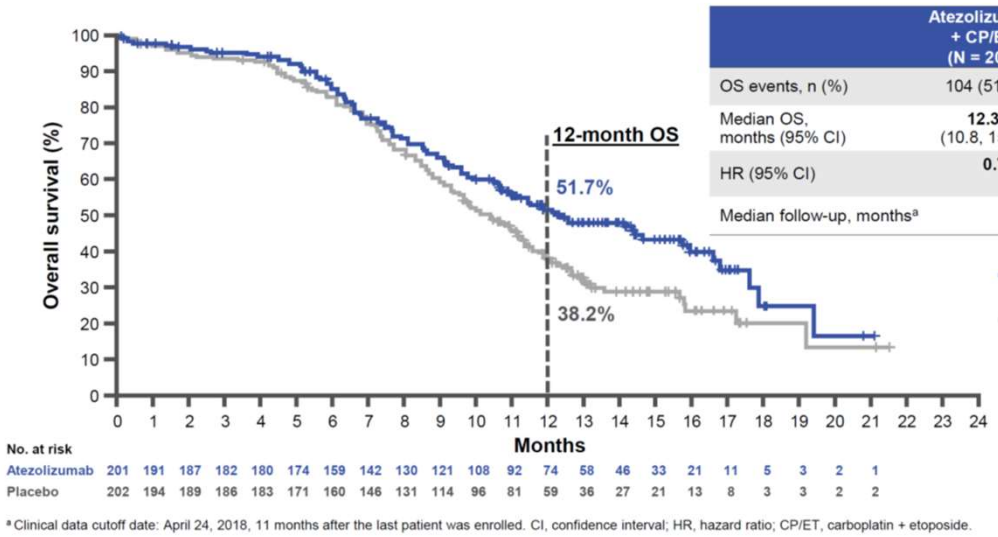
IMpower133: Overall Survival



	Atezolizumab + CP/ET (N = 201)	Placebo + CP/ET (N = 202)
OS events, n (%)	104 (51.7)	134 (66.3)
Median OS, months (95% CI)	**12.3** (10.8, 15.9)	**10.3** (9.3, 11.3)
HR (95% CI)	**0.70** (0.54, 0.91) p = 0.0069	
Median follow-up, months[a]	13.9	

[a] Clinical data cutoff date: April 24, 2018, 11 months after the last patient was enrolled. CI, confidence interval; HR, hazard ratio; CP/ET, carboplatin + etoposide.

Horn et al NEJM 2018

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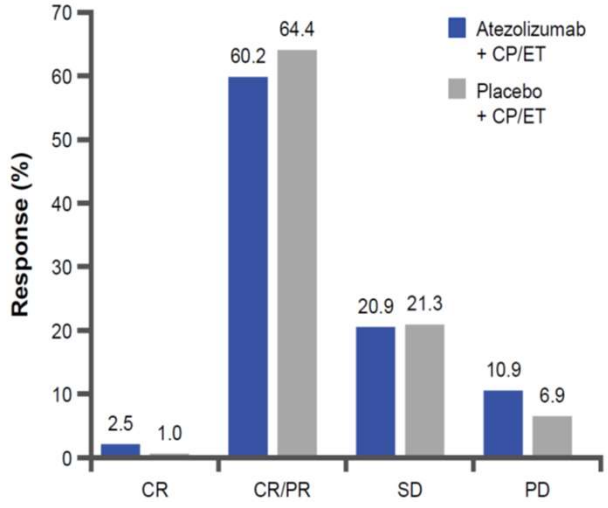
IMpower133: ORR and DoR



Duration of response	Atezolizumab + CP/ET (N = 121)	Placebo + CP/ET (N = 130)
Median duration, months (range)	4.2 (1.4[a] to 19.5)	3.9 (2.0 to 16.1[a])
HR (95% CI)	0.70 (0.53, 0.92)	
6-month event-free rate — %	32.2	17.1
12-month event-free rate — %	14.9	6.2
Patients with ongoing response — no. (%)[b]	18 (14.9)	7 (5.4)

Horn et al NEJM 2018

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IMpower133: Adverse Events

Treatment-related AEs — no. (%) > 5% Grade 3–4 AEs in either treatment group	Atezolizumab + CP/ET (N = 198)			Placebo + CP/ET (N = 196)		
	Grade 1–2	Grade 3–4	Grade 5	Grade 1–2	Grade 3–4	Grade 5
Neutropenia	26 (13.1)	45 (22.7)	1 (0.5)	20 (10.2)	48 (24.5)	0
Anemia	49 (24.7)	28 (14.1)	0	41 (20.9)	24 (12.2)	0
Neutrophil count decreased	7 (3.5)	28 (14.1)	0	12 (6.1)	33 (16.8)	0
Thrombocytopenia	12 (6.1)	20 (10.1)	0	14 (7.1)	15 (7.7)	0
Leukopenia	15 (7.6)	10 (5.1)	0	10 (5.1)	8 (4.1)	0
Febrile neutropenia	0	6 (3.0)	0	0	12 (6.1)	0

Immune-related AEs — no. (%) > 1% Grade 3–4 AEs in either treatment group	Atezolizumab + CP/ET (N = 198)			Placebo + CP/ET (N = 196)		
	Grade 1–2	Grade 3–4	Grade 5	Grade 1–2	Grade 3–4	Grade 5
Rash	33 (16.7)	4 (2.0)	0	20 (10.2)	0	0
Hepatitis	11 (5.6)	3 (1.5)	0	9 (4.6)	0	0
Infusion-related reaction	7 (3.5)	4 (2.0)	0	9 (4.6)	1 (0.5)	0
Pneumonitis	3 (1.5)	1 (0.5)	0	3 (1.5)	2 (1.0)	0
Colitis	1 (0.5)	2 (1.0)	0	0	0	0
Pancreatitis	0	1 (0.5)	0	0	2 (1.0)	0

Horn et al NEJM 2018

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Pneumonitis	3 (1.5)	1 (0.5)	0	3 (1.5)	2 (1.0)	0
Colitis	1 (0.5)	2 (1.0)	0	0	0	0
Pancreatitis	0	1 (0.5)	0	0	2 (1.0)	0

Horn et al NEJM 2018

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IMpower133: Results

- IMpower133 shift's the paradigm of managing ES-SCLC after almost 30 years
- Addition of atezolizumab improves both OS and PFS
  - mOS 12.3 months vs 10.3 months
  - mPFS 5.2 months vs 4.3 months
- Atezolizumab plus Carbo/Etop has an acceptable safety profile
  - Hematologic toxicity not significantly different, slightly higher rates of anemia
  - Increased risk for imAEs

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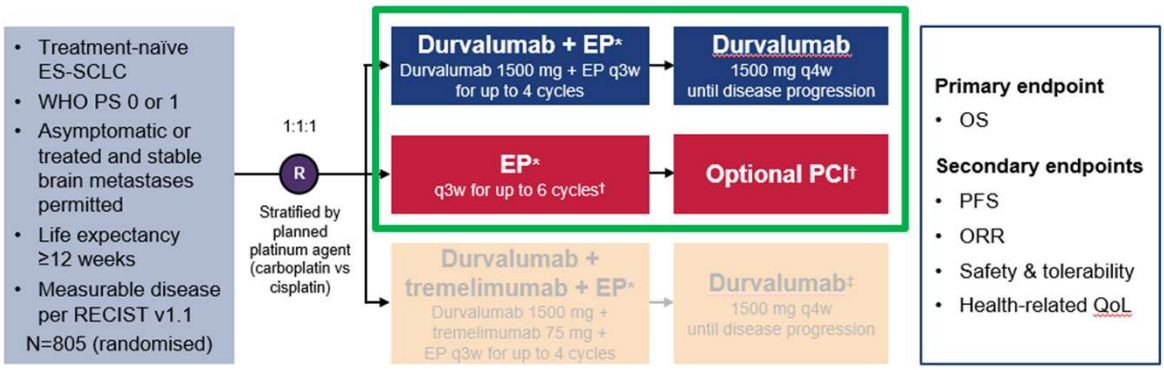
CASPIAN: Phase 3 randomized, open label trial evaluating carboplatin, etoposide & durvalumab



The durvalumab + tremelimumab + EP versus EP comparison continues to final analysis

*EP consists of etoposide 80–100 mg/m² with either carboplatin AUC 5–6 or cisplatin 75–80 mg/m²
†Patients could receive an additional 2 cycles of EP (up to 6 cycles total) and PCI at the investigator's discretion
‡Patients received an additional dose of tremelimumab post-EP

Paz-Ares et al Lancet 2019

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CASPIAN: Baseline Characteristics

Characteristic	Durva+ CP/ET (N = 268)	CP/ET (N = 269)
Median age (range)	62 (58-68)	63 (57-68)
Age group – no (%)		
< 65 years	167 (62)	157 (58)
≥ 65 years	101 (38)	112 (42)
Male sex – no (%)	190 (71)	184 (68)
Smoking status		
Current smoker	120 (45)	126 (46)
Former Smoker	126 (47)	128 (48)
Race – no (%)		
White	229 (85)	221 (82)
ECOG PS – no (%)		
0	99 (37)	90 (33)
1	169 (63)	179 (67)
Brain metastasis – no (%)		
Yes	28 (10)	27 (10)

Horn et al NEJM 2018

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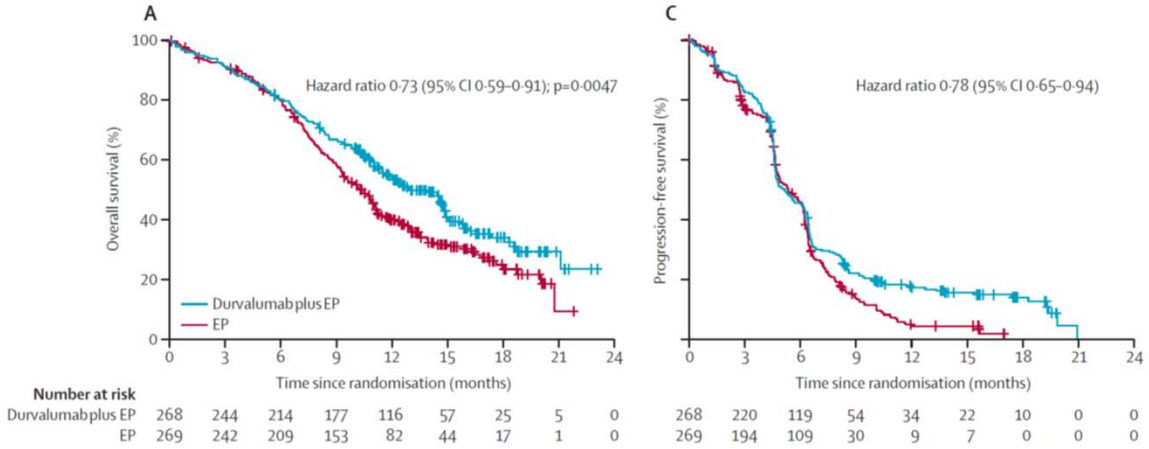
CASPIAN: Survival



Median OS 13.0 vs 10.3 months
1 year survival 54% vs 40%

Median PFS 5.1 vs 5.4 months
6 month PFS 45% vs 46%
12 month PFS 18% vs 5%

Paz-Ares et al Lancet 2019

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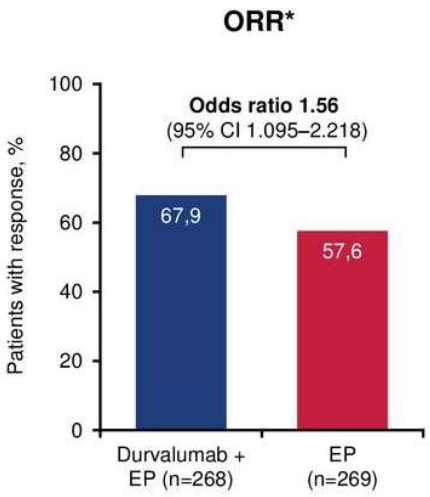
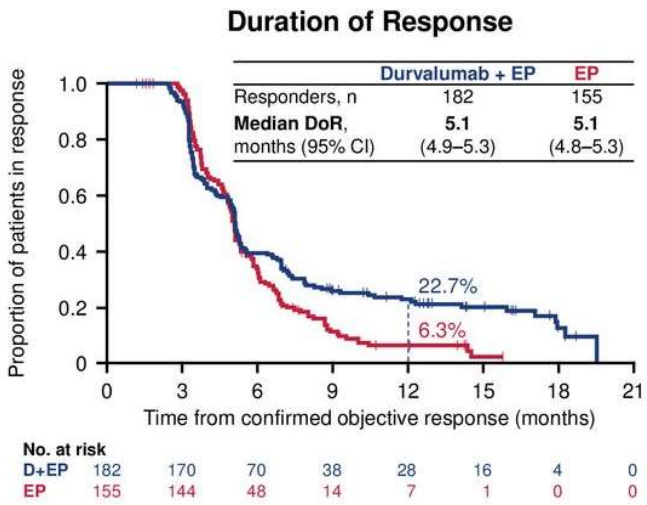
CASPIAN: ORR





Paz-Ares et al Lancet 2019

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CASPIAN: Safety

	Durva+ CP/ET (N = 265)	CP/ET (N = 266)
Any grade all cause AEs, n (%)	260 (98.1)	258 (97.0)
Grade 3/4 AEs	163 (61.5)	166 (62.4)
Serious AEs	82 (30.9)	96 (36.1)
AEs leading to treatment discontinuation*	25 (9.4)	25 (9.4)
Immune-mediated AEs†	52 (19.6)	7 (2.6)
AEs leading to death	13 (4.9)	15 (5.6)
Treatment related AEs leading to death	5 (1.9)	2 (0.8)

* Includes patients who discontinued atleast one drug.
† An event that is associated with drug exposure and consistent with an immune-mediated mechanism of action, where there is not clear alternate etiology and the event required the treatment with systemic corticosteroids and immunosuppressants and/or for specific endocrine events, endocribe therapy; majority of imAEs were low grade and thyroid related.

Paz-Ares et al Lancet 2019
Horn et al NEJM 2019

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CASPIAN vs IMpower 133

	CASPIAN		IMpower 133	
	Durva + EP (n = 268)	EP (n = 269)	Atezo + EC (n = 201)	EC + placebo (n = 202)
Median age	62	63	64	64
Male, %	70.9	68.4	64	65
White/Asian %	85.4/13.4	82.2/15.6	81/16	79/18
PS 0/1, %	36.9/63.1	33.5/66.5	36/64	33/67
Brain mets, %	10.4	10.0	8	9
Design	Open label	Open label	Placebo control	Placebo control
Carbo/Cis	78.5/24.5	78.2/25.2	100	100
Chemo cycles	4	6	4	4
PCI, %	-	8	11	10

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CASPIAN vs IMpower 133

	CASPIAN		IMpower 133	
	Durva + EP (n = 268)	EP (n = 269)	Atezo + EC (n = 201)	EC + placebo (n = 202)
OS, m	13.0	10.3	12.3	10.3
1 year OS, %	54	40	51.7	38.2
PFS, m	5.1	5.4	5.2	4.3
ORR, %	67.9	57.6	60.2	64.4
DOR, m	5.1	5.1	4.2	3.9
Gr 3/4 AEs, %	61.5	62.4	67.2	63.8
irAEs, %	19.6	2.6	39.9	24.5
Biomarker	-	-	TMB	TMB
Post study Treatment, %	42	44	50/14/1/5	57/18/7

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IASLC

2019 World Conference on Lung Cancer
September 7–10, 2019 | Barcelona, Spain

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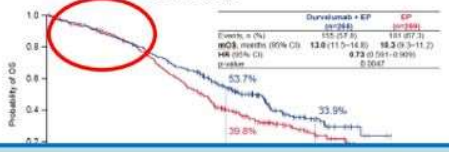
Conquering Thoracic Cancers Worldwide

1. Maintenance effect or Delayed effect of IO?

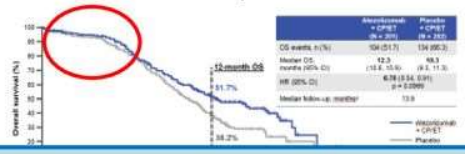
CASPIAN

OS



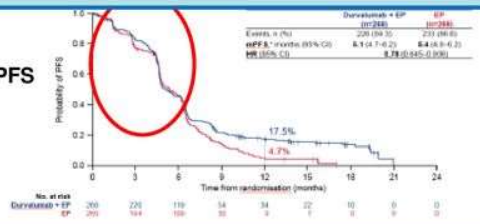
IMpower133

OS

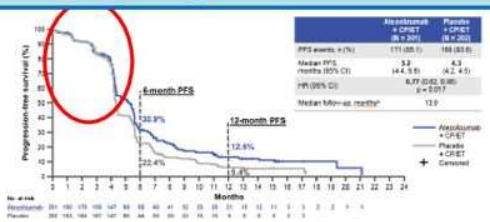


Nivolumab, Nivolumab + Ipilimumab (CM-451), and Pembrolizumab failed in the maintenance setting

PFS



PFS



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IASLC

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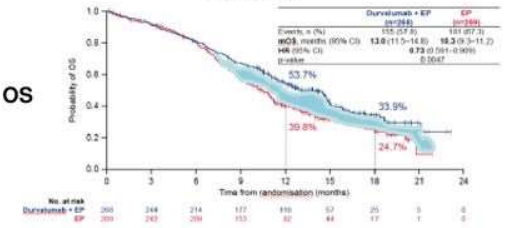
2. Predictive Biomarker to Select Patients Benefit from IO?

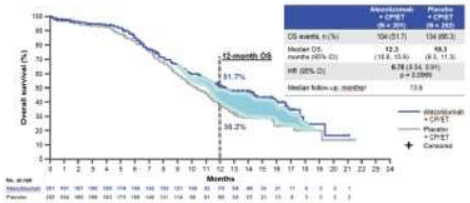
CASPIAN

OS



IMpower133

OS



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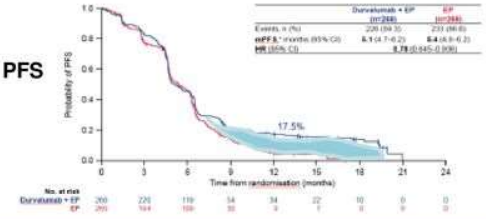

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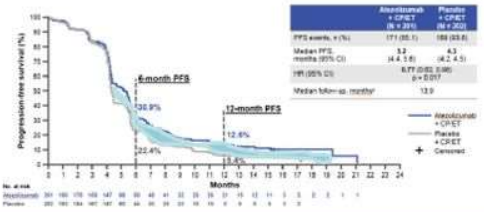

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Horn L et al NEJM 2018

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bTMB did not differentiate benefit of atezolizumab in IMpower133

Population	Median overall survival (months) Atezolizumab + CP/ET	Placebo + CP/ET	OS hazard ratio* (95% CI)
Male (n = 261)	12.3	10.9	0.74 (0.54, 1.02)
Female (n = 142)	12.5	9.5	0.65 (0.42, 1.00)
< 65 years (n = 217)	12.1	11.5	0.92 (0.64, 1.32)
≥ 65 years (n = 186)	12.5	9.6	0.53 (0.36, 0.77)
ECOG PS 0 (n = 140)	16.6	12.4	0.78 (0.49, 1.27)
No brain metastases (n = 368)	12.6	10.4	0.68 (0.52, 0.89)
Liver metastases (n = 149)	9.3	7.8	0.81 (0.55, 1.20)
No liver metastases (n = 254)	16.8	11.2	0.64 (0.45, 0.90)
bTMB < 10 mut/mb (n = 139)	11.8	9.2	0.70 (0.45, 1.07)
bTMB ≥ 10 mut/mb (n = 212)	14.6	11.2	0.68 (0.47, 0.97)
bTMB < 16 mut/mb (n = 271)	12.5	9.9	0.71 (0.52, 0.98)
bTMB ≥ 16 mut/mb (n = 80)	17.8	11.9	0.63 (0.35, 1.15)
ITT (N = 403)	12.3	10.3	0.70 (0.54, 0.91)

Biomarker study is not available in CASPIAN study !

0.1 1.0 2.5
Atezolizumab better | Placebo better

Clinical data cutoff date: April 24, 2018. bTMB (blood tumor mutational burden) assessed as reported in Gandara DR, et al. *Nat Med*. 2018.
*Hazard ratios are unstratified for patient subgroups and stratified for the ITT.

Horn L et al NEJM 2018

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Pembrolizumab in Frontline SCLC : KEYNOTE 604

Eligibility Criteria:
- Newly diagnosed ES-SCLC
- ECOG PS 0 to 1
- No previous systemic therapy for SCLC
- Tumor biopsy sample

Stratification
- Type of platinum (cisplatin vs carboplatin)
- ECOG PS (0 vs 1)
- LDH (≤ULN vs ≥ULN)

(N=430)

R 1:1

Pembrolizumab 200 mg (q3w x 4) + Etoposide/Platinum IV
→ **Pembrolizumab 200 mg IV q3w x 31 cycles**

Placebo + Etoposide/Platinum IV q3w x 4 cycles
→ **Placebo IV x 31 cycles**

→ **Treat until PD, unacceptable toxicity, treatment-limiting concomitant illness, noncompliance**

Etoposide 100 mg/m² on Days 1-3 combined with either cisplatin 75 mg/m² or carboplatin AUC 5 on Day 1 of treatment cycle

Patients may be offered PCI at the discretion of the investigator if they have an objective response after 4 study treatment cycles

Co-primary end points
- Overall survival
- PFS-blinded independent central review

Key secondary end points
- Objective response rate
- Duration of response
- Safety
- Patient-reported outcomes

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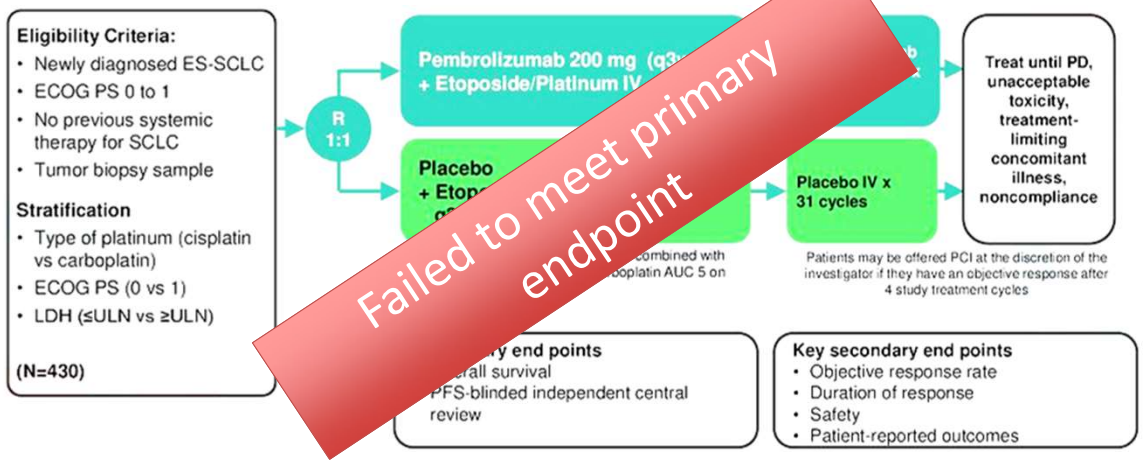
Pembrolizumab in Frontline SCLC: KEYNOTE 604



Failed to meet primary endpoint

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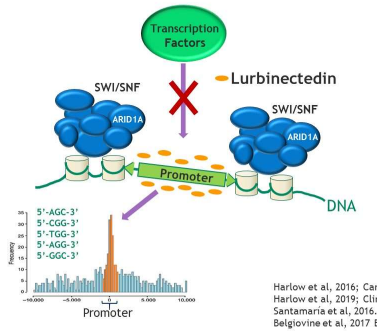
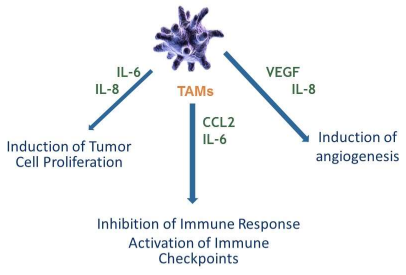
Lurbinectedin - a Selective Inhibitor of Oncogenic Transcription

CANCER IS FREQUENTLY A TRANSCRIPTIONAL DISEASE CAUSED BY DEREGULATED ONCOGENIC TRANSCRIPTION FACTORS



BY INHIBITING ACTIVE TRANSCRIPTION IN TUMOR ASSOCIATED MACROPHAGES (TAMS), LURBINECTEDIN DOWNREGULATES IL-6, IL-8, CCL2 AND VEGF



Harlow et al, 2016; Cancer Res 72: 6657-68
Harlow et al, 2019; Clin Cancer Res doi: 10.1158/1078-0432.CCR-18-3511
Santamaria et al, 2016. Mol Cancer Ther 15:2399-412
Belgiovine et al, 2017 Br J Cancer 117:628-38

PRESENTED AT: 2019 ASCO ANNUAL MEETING #ASCO19

PRESENTED BY: Dr. Luis Paz Ares

Presented By Luis Paz-Ares at 2019 ASCO Annual Meeting

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Lurbinectidin: Results

Response evaluable patients	L + DOX (q3 week)		L + TAX (q3 week)	Single agent (q3 week)
	Cohort A L 3-5 mg/m² + DOX 50 mg/m² (n = 21)	Cohort B L 2 mg/m² + DOX 40 mg/m² (n = 27)	L 2.2 mg/m² + TAX 80 mg/m² d1 & 8 (n = 7)	L 3.2 mg/m² + (n = 36)
CR	2 (10%)	1 (4%)	1 (14%)	-
PR	12 (57%)	9 (33%)	4 (57%)	13 (36%)
ORR	14 (67%)	10 (37%)	5 (71%)	14 (36%)
SD	3 (14%)	9 (33%)	-	14 (39%)
PD	4 (19%)	8 (30%)	2 (29%)	9 (25%)
DCR	17 (81%)	19 (70%)	5 (71%)	27 (75%)
DOR (mo)	4.5	5.2	2.3	6.2+
PFS (mo) CTFI> 30d	4.7	5.3	3.9	3.1+
PFS (mo) platinum sensitive	5.8	6.2	3.9	4.6

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Lurbinectidin: Results

Response evaluable patients	L + DOX (q3 week)		L + TAX (q3 week)	Single agent (q3 week)
	Cohort A L 3-5 mg/m² + DOX 50 mg/m² (n = 21)	Cohort B L 2 mg/m² + DOX 40 mg/m² (n = 27)	L 2.2 mg/m² + TAX 80 mg/m² d1 & 8 (n = 7)	L 3.2 mg/m² + (n = 36)
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PR	12 (57%)	9 (33%)	4 (57%)	13 (36%)
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PFS (mo) CTFI> 30d	4.7	5.3	3.9	3.1+
PFS (mo) platinum sensitive	5.8	6.2	3.9	4.6

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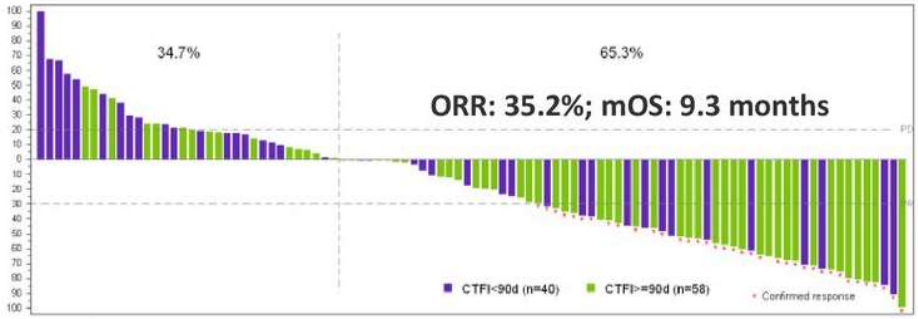
Phase II: Single agent Lurbinectidin in 2nd line SCLC

Sensitive disease: ORR = 45.0%
Refractory disease: ORR = 22.2%



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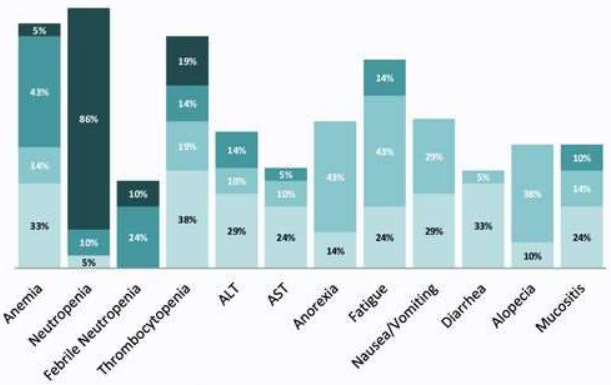
IASLC
INTERNATIONAL ASSOCIATION FOR THE STUDY OF LUNG CANCER

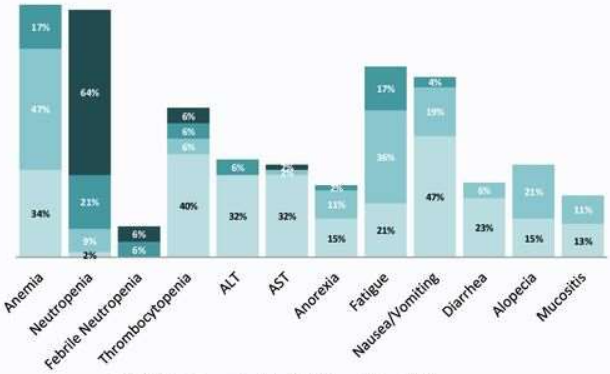
IASLC 18TH WORLD CONFERENCE ON LUNG CANCER
October 15–18, 2017 | Yokohama, Japan
WWW.IASLC.ORG

Safety: Cohort A Combination (n=21)
Myelosupression Most Common AE



GCSF 71%, Dose reduction 33% Dose delays 38%

Safety: Cohort B Combination (n=27)
Myelosupression Most Common AE



GCSF 43%, Dose reduction 21% Dose delays 39%

Grade 1 Grade 2 Grade 3 Grade 4

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Conclusions

- ICI plus chemotherapy is the SOC for ES-SCLC
- Improvement is incremental and still lagging in biomarker development
- ICI maintenance has not been effective
- 2nd line treatment of SCLC - an unmet need
  - Lurbinectedin has shown promise.
  - Liposomal irinotecan may be an option and data awaited.
  - ?DLL3 based Antibody-Drug Conjugate (ADC)?
  - 2nd or 3rd line role for ICI in relapsed/refractory limited stage SCLC

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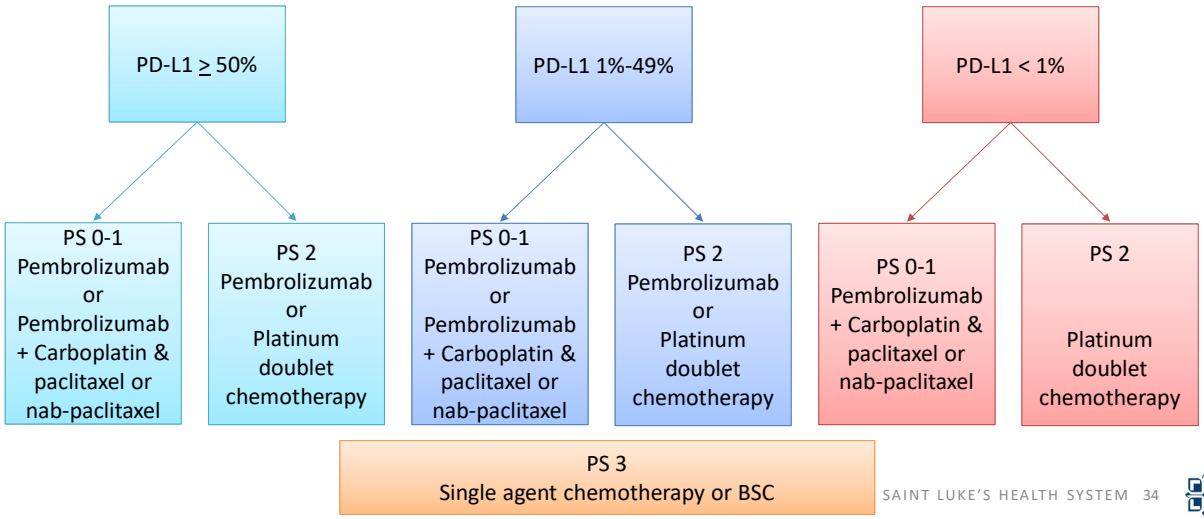
Frontline treatment in Squamous Lung Cancer



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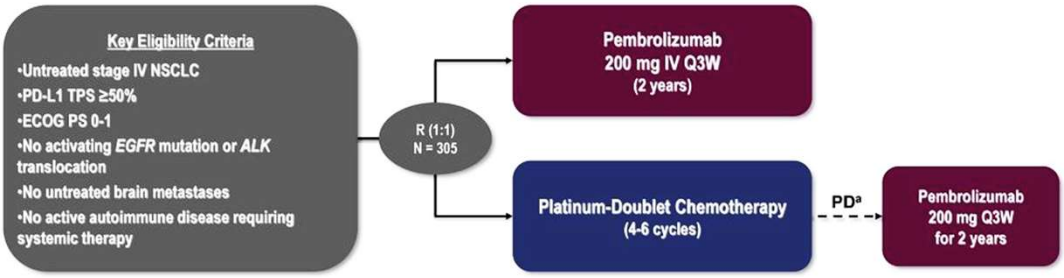
KEYNOTE 24: Pembrolizumab vs Chemotherapy



Key End Points

Primary: PFS (RECIST v1.1 per blinded, independent central review)

Secondary: OS, ORR, safety

Exploratory: DOR

Reck et al NEJM 2016

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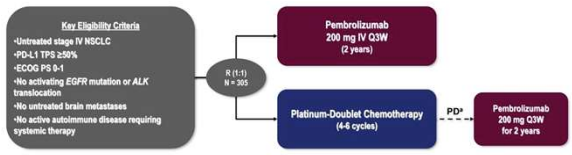
KEYNOTE 24: Pembrolizumab vs Chemotherapy



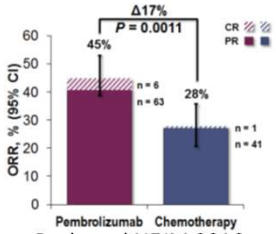
Key End Points

Primary: PFS (RECIST v1.1 per blinded, independent central review)

Secondary: OS, ORR, safety

Exploratory: DOR

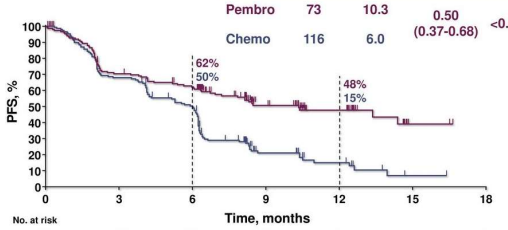
Objective Response



	Pembro Responders n = 69	Chemo Responders n = 42
TTR, mo median (range)	2.2 mo (1.4-8.2)	2.2 mo (1.8-12.2)
DOR, mo median (range)	NR (1.9+ to 14.5+)	6.3 mo (2.1+ to 12.6+)

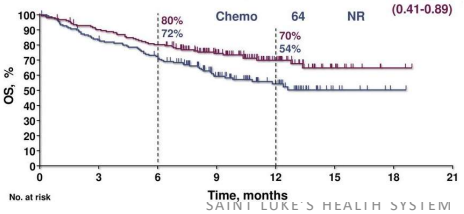
PFS

	Events, n	Median, mo	HR (95% CI)	P
Pembro	73	10.3	0.50 (0.37-0.68)	<0.001
Chemo	116	6.0		



OS

	Events, n	Median, mo	HR (95% CI)
Pembro	44	NR	0.60 (0.41-0.89)
Chemo	64	NR	



Reck et al NEJM 2016

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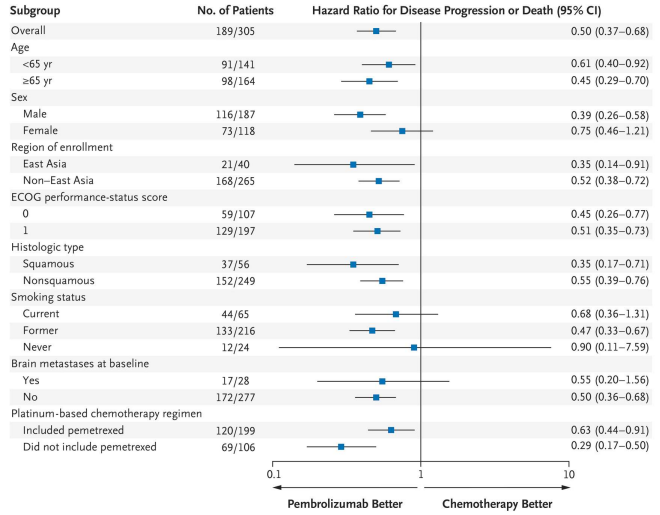
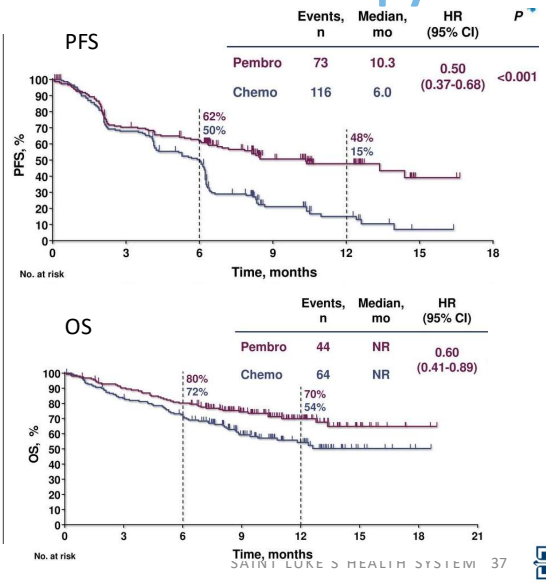
KEYNOTE 24: Pembrolizumab vs Chemotherapy





Reck et al NEJM 2016

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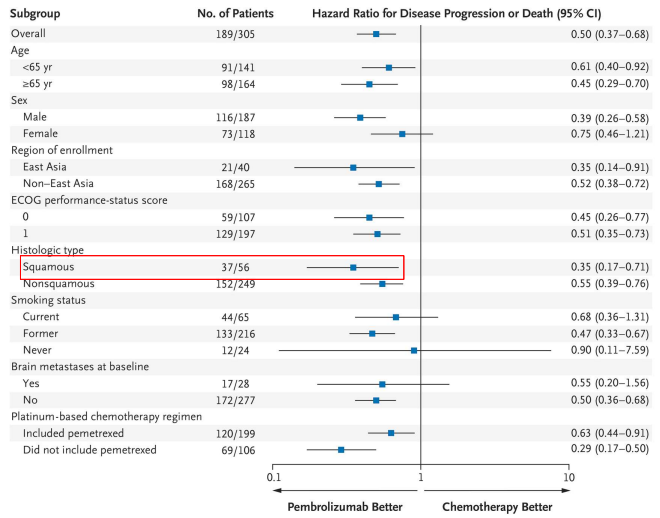
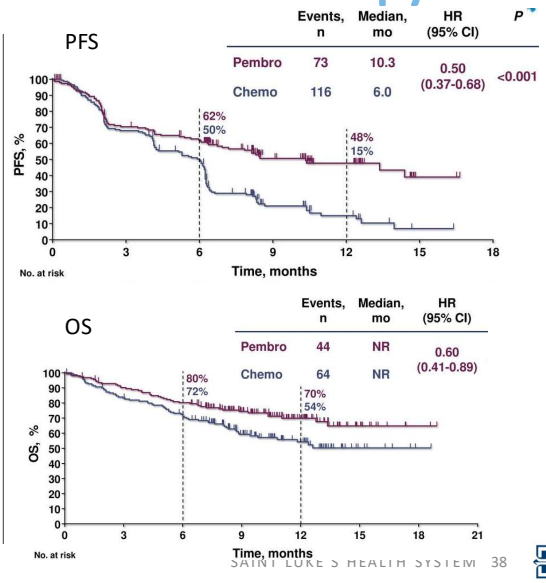
KEYNOTE 24: Pembrolizumab vs Chemotherapy





Reck et al NEJM 2016

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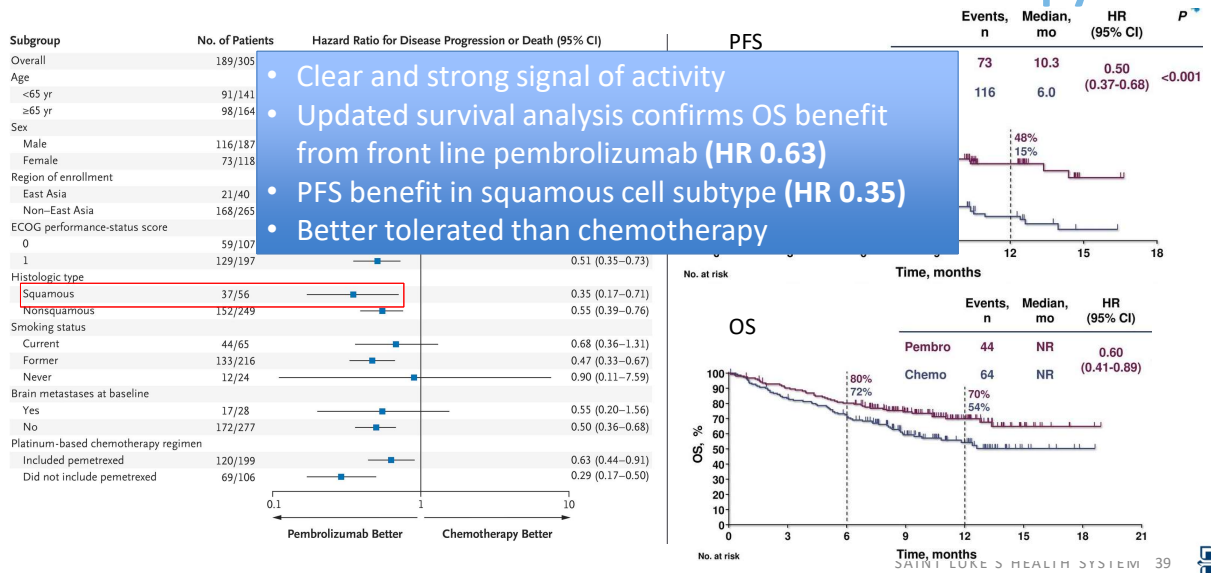
KEYNOTE 24: Pembrolizumab vs Chemotherapy



- Clear and strong signal of activity
- Updated survival analysis confirms OS benefit from front line pembrolizumab **(HR 0.63)**
- PFS benefit in squamous cell subtype **(HR 0.35)**
- Better tolerated than chemotherapy

Reck et al NEJM 2016

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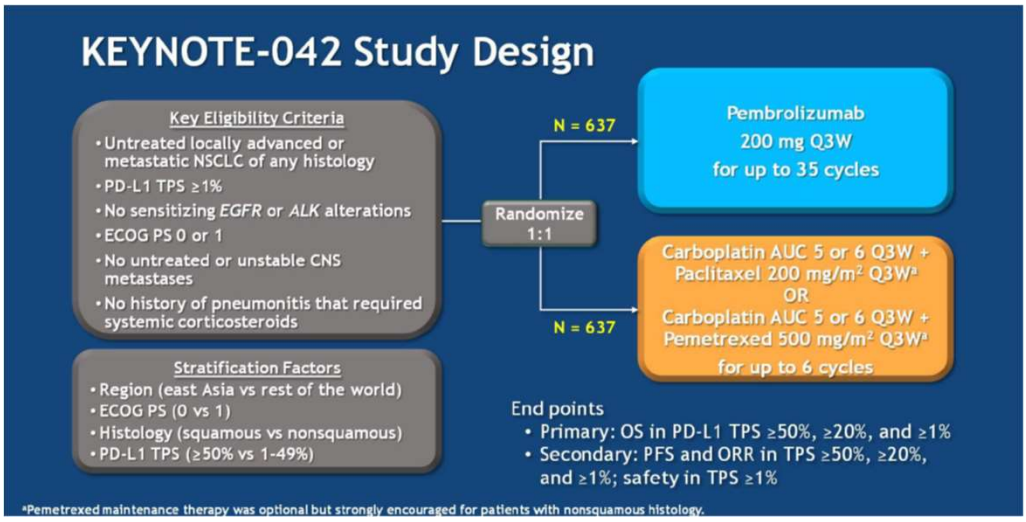
KEYNOTE 42



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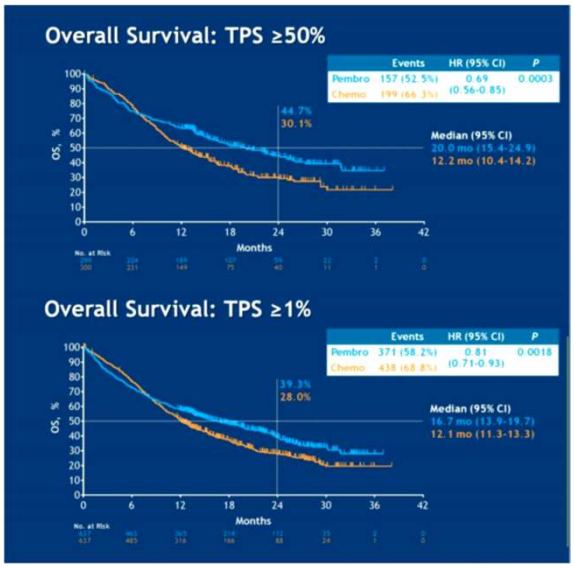
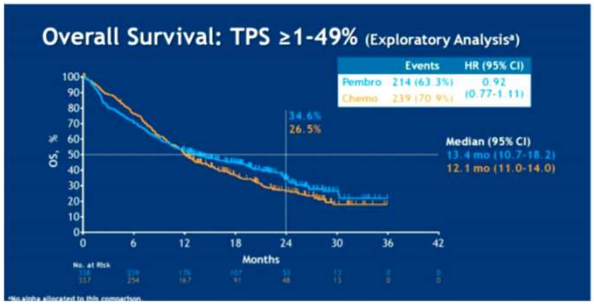
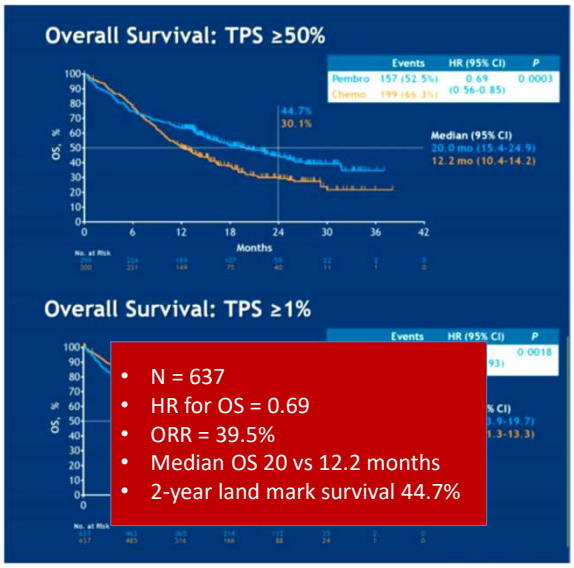
KEYNOTE 42: Results



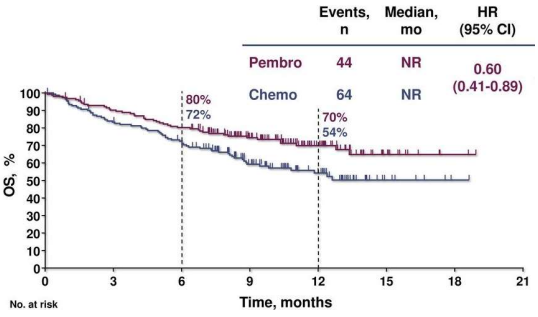


- Pembrolizumab superior to chemo
- No crossover allowed
- Improvement in OS driven by TPS ≥ 50%
- HR 0.8 for TPS ≥ 1% and HR 0.9 for TPS 1-49%

KEYNOTE 42 vs KEYNOTE 24

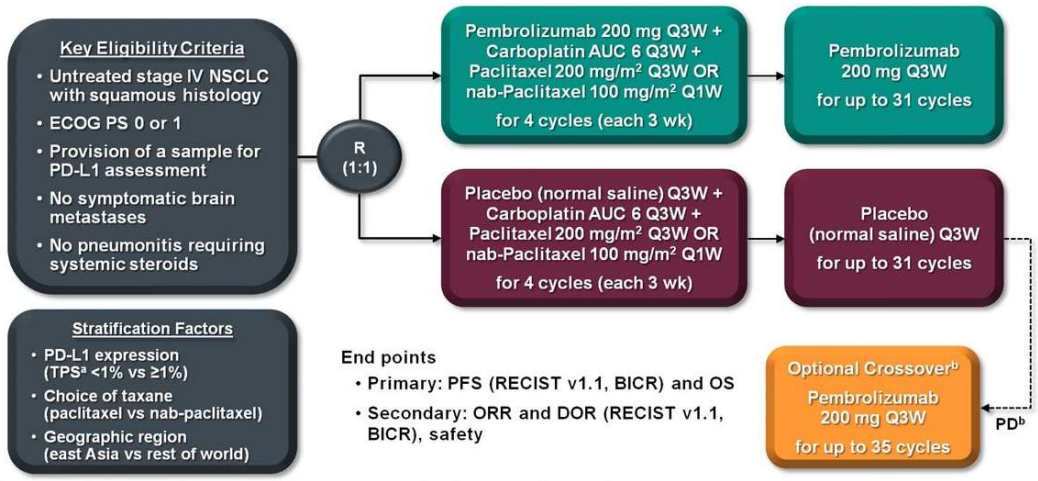


- N = 637
- HR for OS = 0.69
- ORR = 39.5%
- Median OS 20 vs 12.2 months
- 2-year land mark survival 44.7%



- N = 305
- HR for OS = 0.60
- ORR = 44.8%
- Median OS 30 vs 14.2 months
- 2-year land mark survival 51%

KEYNOTE 407 – Chemo/IO vs Chemo in SqCC



BICR, blinded independent central radiologic review. [a]Percentage of tumor cells with membranous PD-L1 staining assessed using the PD-L1 IHC 22C3 pharmDx assay.
[b]Patients could crossover during combination therapy or monotherapy. To be eligible for crossover, PD must have been verified by BICR and all safety criteria had to be met.

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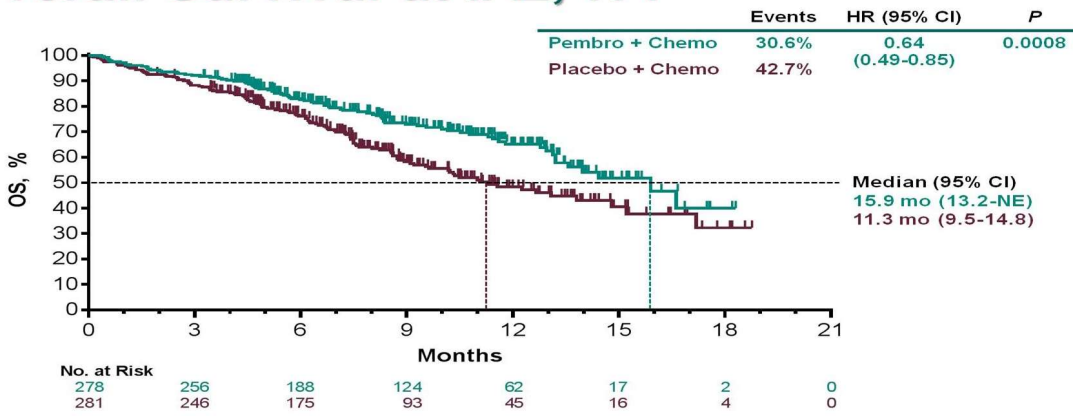
KEYNOTE 407 – Chemo/IO vs Chemo in SqCC

Overall Survival at IA2, ITT



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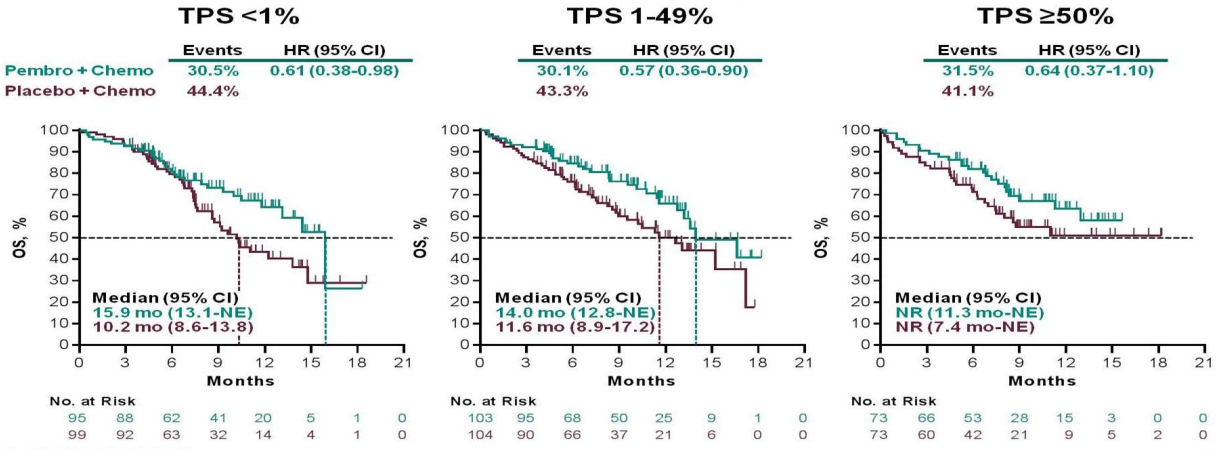
KEYNOTE 407 – Chemo/IO vs Chemo in SqCC

Overall Survival at IA2 by PD-L1 TPS



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Better response rate with Chemo/IO

	IO			Chemo/IO		
	ORR	1 year OS	mOS	ORR	1 year OS	mOS
PD-L1 < 1%				63.2%	64.2%	15.9 mos
PD-L1 ≥ 1%	27.3%	39.3%	16.7 mos			
PD-L1 1%-49%				49.8%	65.9%	14.0 mos
PD-L1 ≥ 50%	39.5%	44.7%	20 mos	60.3%	63.4%	11.3 mos

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Better response rate with Chemo/IO

	IO			Chemo/IO		
	ORR	1 year OS	mOS	ORR	1 year OS	mOS
PD-L1 < 1%				63.2%	64.2%	15.9 mos
PD-L1 ≥ 1%	27.3%	39.3%	16.7 mos			
PD-L1 1%-49%				49.8%	65.9%	14.0 mos
PD-L1 ≥ 50%	39.5%	44.7%	20 mos	60.3%	63.4%	11.3 mos

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Frontline Treatment of SqCC - Takeaways

- Triplet maybe the new 1st line standard in SqCC.
- Single agent pembro in PD-L1 > 50% or contraindication to chemotherapy.
- Borderline PS or contraindication for IO but TPS ≥ 1%: chemotherapy.
- Role of Carboplatin/Taxane/Atezolizumab unclear – IMPOWER-131

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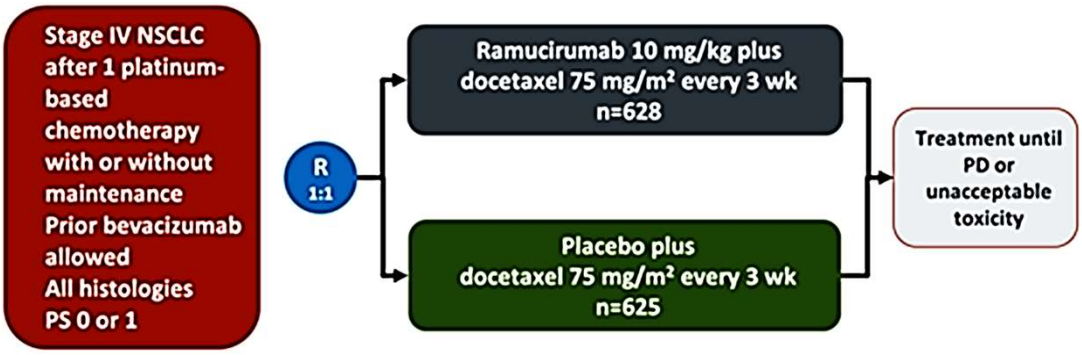
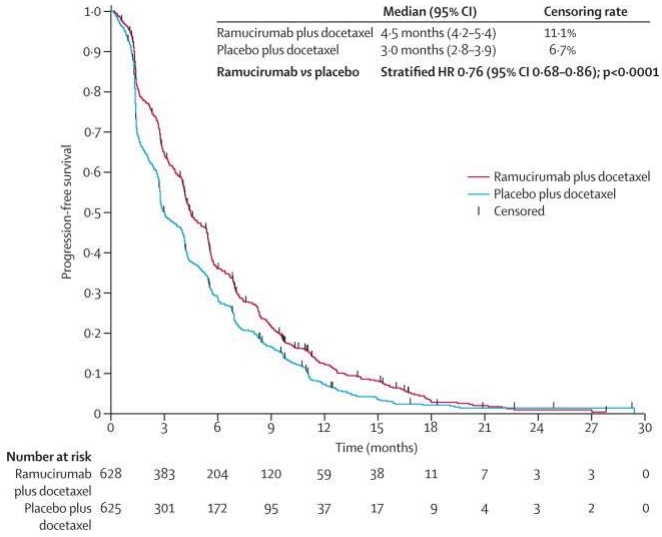
2nd Line Option for SqCLC – REVEL Trial



Exclusion criteria: Major vessel involvement, tumor cavitation, recent thromboembolic event, hemoptysis and bleeding.

Garon Lancet 2014

REVEL: Results



	Ram + Doc N = 628	Doc N = 625	HR (95% CI) p val
Median OS	10.5 mo	9.1 mo	0.86 (0.75-0.98) .02
Median PFS	4.5 mo	3.0 mo	0.76 (0.68-0.86) <.0001
ORR	23%	14%	OR 1.89 (1.42-2.54) <.0001

Garon Lancet 2014

REVEL: Adverse Events

Adverse Effects	Ram + Doce (n=627)		Placebo + Doce (n=618)	
	Any Grade	Grade ≥3	Any Grade	Grade ≥3
Bleeding/hemorrhage	181 (29%)	15 (2%)	94 (15%)	14 (2%)
Epistaxis	116 (19%)	2 (<1%)	40 (6%)	1 (<1%)
GI hemorrhage	17 (3%)	4 (1%)	10 (2%)	2 (<1%)
Pulmonary hemorrhage	49 (8%)	8 (1%)	46 (7%)	8 (1%)
Hemoptysis	36 (6%)	4 (1%)	32 (5%)	4 (1%)
HTN	68 (11%)	35 (6%)	30 (5%)	13 (2%)
Infusion-related reaction	23 (4%)	5 (1%)	28 (4%)	4 (1%)
Proteinuria	21 (3%)	1 (<1%)	5 (1%)	0
Venous thromboembolic	16 (3%)	11 (2%)	36 (6%)	18 (3%)
Renal failure	14 (2%)	3 (<1%)	14 (2%)	2 (<1%)
Arterial thromboembolic	10 (2%)	6 (1%)	13 (2%)	8 (1%)
CHF	6 (1%)	5 (1%)	4 (1%)	1 (<1%)
GI perforation	6 (1%)	5 (1%)	2 (<1%)	2 (<1%)

Garon Lancet 2014

2nd Line SqCLC Treatment

- Docetaxel/Ramucirumab if not contraindicated.
- Single agent docetaxel if Ram is contraindicated.
- ?Afatinib – LUX Lung 8.
- 3rd line & beyond – single agent chemo – vinorelbine, gemcitabine etc.
- Don't forget NGS testing.

EASY FIX FOR LUNG SQUAMOUS & SMALL CELL LUNG CARCINOMAS.

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EASY FIX FOR LUNG SQUAMOUS & SMALL CELL LUNG CARCINOMAS.

SAVE A CIGARETTE

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