Thank you for joining us. The program will commence momentarily.



Current Questions and Controversies in the Management of Lung Cancer An Interactive Meet The Professor Series

Lecia V Sequist, MD, MPH

Director, Center for Innovation in Early Cancer Detection Massachusetts General Hospital Cancer Center The Landry Family Professor of Medicine Harvard Medical School Boston, Massachusetts



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Dr Love — Disclosures

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Dr Sequist — Disclosures

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Data and Safety Monitoring Board/Committee	Genentech, a member of the Roche Group
Patent Pending	In conjunction with Blueprint Medicines



Upcoming Live Webinars

Friday, August 28, 2020 12:00 PM – 1:00 PM ET

Exploring the Role of Immune Checkpoint Inhibitor Therapy and Other Novel Strategies in Gynecologic Cancers

Faculty Michael J Birrer, MD, PhD

Moderator Neil Love, MD Monday, August 31, 2020 12:00 PM – 1:00 PM ET

Clinical Investigator Perspectives on the Current and Future Management of Multiple Myeloma

Faculty Joseph Mikhael, MD

Upcoming Live Webinars

Thursday, September 3, 2020 12:00 PM – 1:00 PM ET

Exploring the Role of Immune Checkpoint Inhibitor Therapy and Other Novel Strategies in Gynecologic Cancers

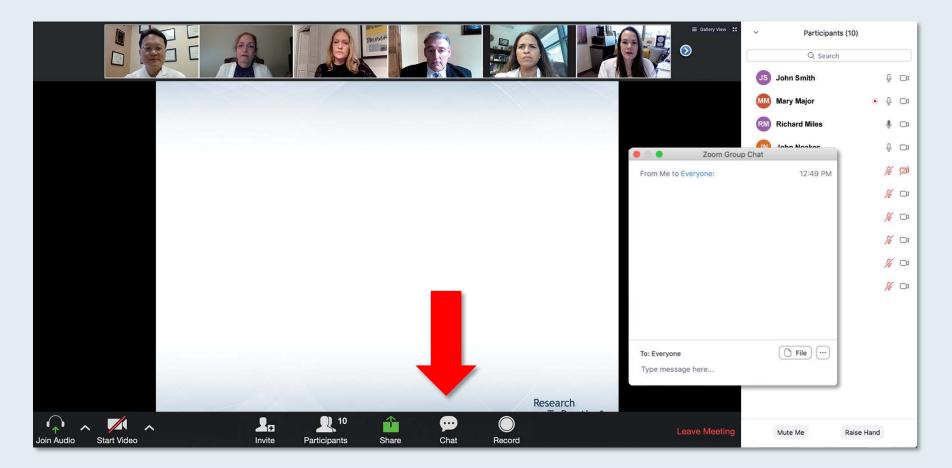
Faculty Professor Ignace Vergote

Moderator Neil Love, MD Friday, September 4, 2020 12:00 PM – 1:00 PM ET

Optimizing the Selection and Sequencing of Therapy for Patients with Chronic Lymphocytic Leukemia

Faculty Kerry Rogers, MD

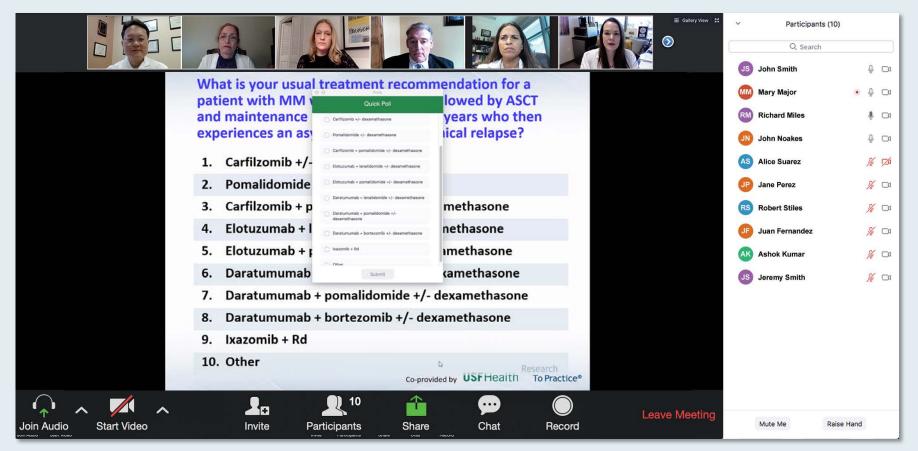
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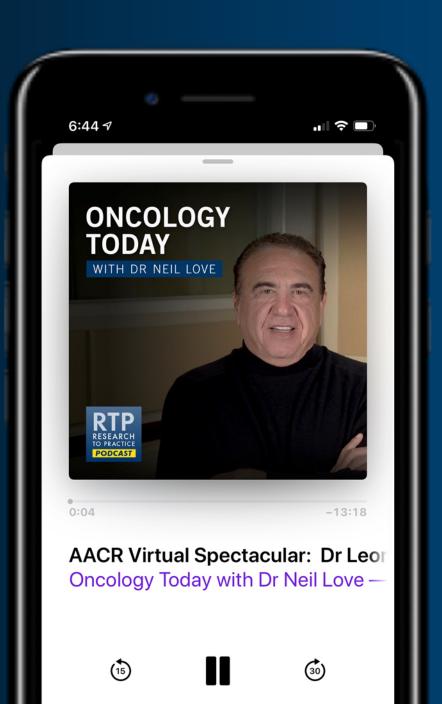


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Meet The Professor Program Participating Faculty



John V Heymach, MD, PhD Professor and Chair Thoracic/Head and Neck Medical Oncology The University of Texas MD Anderson Cancer Center Houston, Texas



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Benjamin Levy, MD Associate Professor Johns Hopkins School of Medicine Clinical Director Medical Director, Thoracic Oncology Program Johns Hopkins Sidney Kimmel Cancer Center at Sibley Memorial Washington, DC



Meet The Professor Program Participating Faculty



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Nathan A Pennell, MD, PhD Professor, Hematology and Medical Oncology Cleveland Clinic Lerner College of Medicine of Case Western Reserve University Director, Cleveland Clinic Lung Cancer Medical Oncology Program Cleveland, Ohio



David R Spigel, MD Chief Scientific Officer Program Director Lung Cancer Research Sarah Cannon Research Institute Nashville, Tennessee



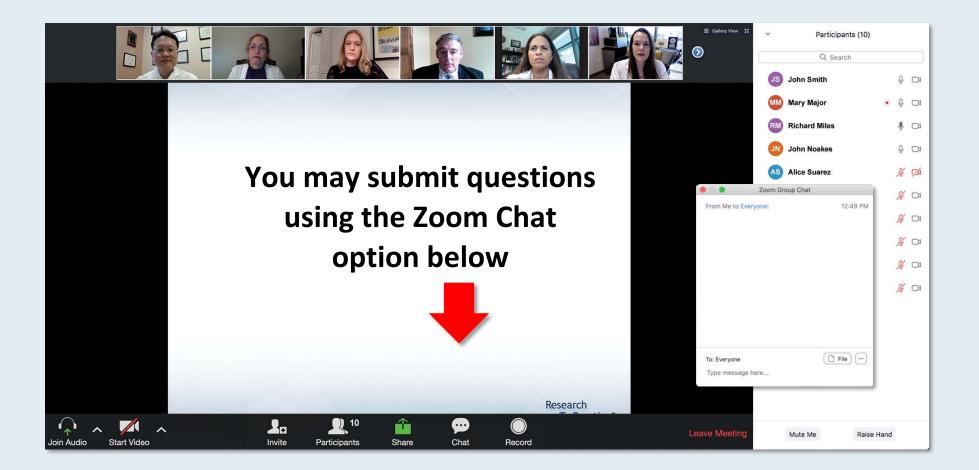
Meet The Professor Program Moderator



Project Chair Neil Love, MD Research To Practice Miami, Florida



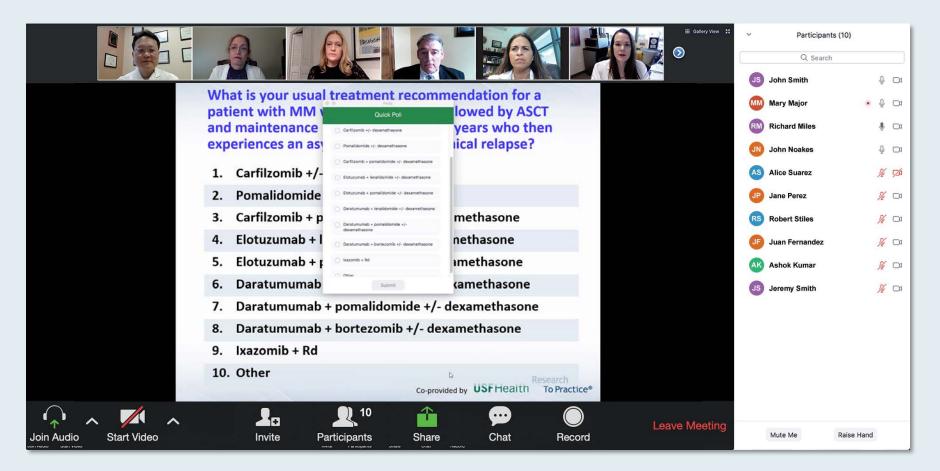
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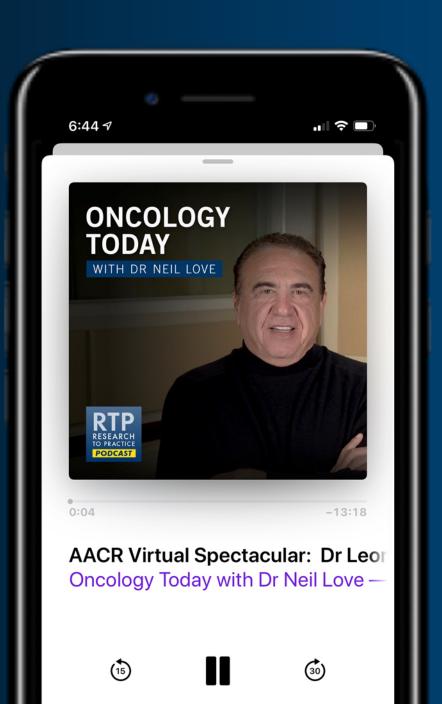


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Consulting Oncologist



Warren S Brenner, MD Lynn Cancer Institute Boca Raton, Florida



Meet The Professor with Dr Sequist

Module 1: Anti-PD-1/PD-L1 Antibodies Alone or in Combinations for Metastatic NSCLC

• A 66-year-old woman with metastatic adenocarcinoma of the lung, PD-L1 100% – Dr Brenner

Module 2: Management of Metastatic NSCLC with Targetable Mutations

- An 81-year-old woman with metastatic adenocarcinoma of the lung, EGFR exon 19 mutation Dr Brenner
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Module 3: First-Line Treatment of Extensive-Stage Small Cell Lung Cancer

• A 55-year-old woman with small cell lung cancer – Dr Brenner

Module 4: Checkpoint Inhibition in the Management of Locally Advanced NSCLC

• A 57-year-old man with locally advanced NSCLC, PD-L1 90% – Dr Brenner



Case Presentation – Dr Brenner: 66-year-old woman with metastatic adenocarcinoma of the lung, PD-L1 100%

- Large RLL mass with metastatic disease to the right axilla, right lateral chest wall, periportal, peripancreatic, retroperitoneal, aortocaval and periaortic lymph nodes
- Initial axillary biopsy: Metastatic, poorly differentiated adenocarcinoma
- Molecular profiling: PD-L1 100%, TMB 9 mut/Mb, no actionable mutations, KRAS mutation, ALK mutation variant of uncertain significance
- Comorbidities: Psoriatic arthritis, hypertension, history of probable ischemic colitis, atrial fibrillation, hypothyroidism
- June 25, 2020: Carboplatin/pemetrexed
 - Hospitalization, probable aspiration pneumonia; profound weakness, pancytopenia and possible small stroke → recovered after 3 weeks
- Pemetrexed/pembrolizumab

Questions

- What is the best front-line treatment for patients with adenocarcinoma of the lung with a high PD-L1?
- In a patient with a history of psoriatic arthritis, currently controlled, would the faculty use a checkpoint inhibitor (CI)? Are there situations where they would use a CI in patients with autoimmune disease?



Warren S Brenner, MD



Which first-line treatment regimen would you recommend for a patient with metastatic <u>nonsquamous lung cancer</u>, no identified targetable mutations and a PD-L1 TPS of 10%? Of 60%?

	TPS of 10%		TPS of 60%		
	Age 65	Age 65 Age 80 Age 65		Age 80	
JOHN V HEYMACH, MD, PHD	Pembro/carbo/pem	Pembro	Pembro	Pembro	
LEORA HORN, MD, MSC	Pembro/carbo/pem	Pembro or hospice	Pembro	Pembro	
COREY J LANGER, MD	Pembro/carbo/pem	Pembro	Pembro*	Pembro	
BENJAMIN LEVY, MD	Pembro/carbo/pem	Pembro	Pembro	Pembro	
JOEL W NEAL, MD, PHD	Pembro/carbo/pem	Pembro	Pembro +/- carbo/pem	Pembro	
NATHAN A PENNELL, MD, PHD	Pembro/carbo/pem	Pembro/carbo/pem ⁺	Pembro	Pembro	
DAVID R SPIGEL, MD	Pembro/carbo/pem	Pembro/carbo/pem	Pembro	Pembro	

Pem = pemetrexed

* If very symptomatic, pembro/carbo/pem; ⁺ Likely dose-reduced chemotherapy



Which first-line treatment regimen would you recommend for a patient with metastatic squamous lung cancer, no identified targetable mutations and a PD-L1 TPS of 10%? Of 60%?

	TPS of 10%		TPS of 60%		
	Age 65 Age 80		Age 65	Age 80	
JOHN V HEYMACH, MD, PHD	Pembro/carbo/ nab-P	Pembro	Pembro	Pembro	
LEORA HORN, MD, MSC	Pembro/carbo/ nab-P	Pembro/carbo/ <i>nab</i> -P	Pembro	Pembro	
COREY J LANGER, MD	Pembro/carbo/ <i>nab</i> -P	Pembro/carbo/ <i>nab</i> -P	Pembro	Pembro	
BENJAMIN LEVY, MD	Pembro/carbo/ nab-P	Pembro/carbo/P	Pembro	Pembro	
JOEL W NEAL, MD, PHD	Pembro/carbo/ <i>nab</i> -P or P	Pembro/carbo/ <i>nab</i> -P	Pembro +/- carbo/ nab-P or P	Pembro+/- carbo/ <i>nab</i> -P	
NATHAN A PENNELL, MD, PHD	Pembro/carbo/ <i>nab</i> -P	Pembro/carbo/P	Pembro	Pembro	
DAVID R SPIGEL, MD	Pembro/carbo/ <i>nab</i> -P	Pembro/carbo/ <i>nab</i> -P	Pembro	Pembro	

Nab-P = nanoparticle albumin-bound paclitaxel; P = paclitaxel



How long would you continue treatment for a patient with metastatic NSCLC who is receiving an anti-PD-1/PD-L1 antibody and at first evaluation is tolerating it well and has a...

	Complete clinical response	Partial clinical response
JOHN V HEYMACH, MD, PHD	2 years	Indefinitely or until PD/toxicity
LEORA HORN, MD, MSC	2 years	2 years
COREY J LANGER, MD	2 years (min)	2 years (min)
BENJAMIN LEVY, MD	Indefinitely or until PD/toxicity	Indefinitely or until PD/toxicity
JOEL W NEAL, MD, PHD	2 years	2 years
NATHAN A PENNELL, MD, PHD	2 years	2 years
DAVID R SPIGEL, MD	Likely 2 years but CR duration dependent	Indefinitely or until PD/toxicity



PD = progressive disease

Key Data Sets



FDA-Approved Immunotherapy Options for the First-Line Treatment of Metastatic NSCLC

Combination regimen	FDA approval	Pivotal study	Histologic type	HR (OS)
Pembrolizumab + Platinum and pemetrexed ¹	8/20/18	KEYNOTE-189	Nonsquamous	0.56
Pembrolizumab + Carboplatin, paclitaxel or <i>nab</i> paclitaxel ²	10/30/18	KEYNOTE-407	Squamous	0.64
Atezolizumab + Carboplatin and paclitaxel and bevacizumab ³	12/6/18	IMpower150	Nonsquamous	0.78
Atezolizumab + Carboplatin and <i>nab</i> paclitaxel ⁴	12/3/19	IMpower130	Nonsquamous	0.79
Nivolumab + Ipilimumab ⁵	5/15/20	CheckMate-227	PD-L1 TPS≥1, EGFR and/or ALK <i>wt</i>	0.62
Nivolumab + Ipilimumab and chemotherapy ⁶	5/26/20	CheckMate-9LA	EGFR and/or ALK wt	0.69
Monotherapy	FDA approval	Pivotal study	Histologic type	HR (OS)
Pembrolizumab ^{7,8}	4/11/19 10/24/16	KEYNOTE-042 KEYNOTE-024	PD-L1 TPS≥1%	0.63
Atezolizumab ⁹	5/18/20	IMpower110	PD-L1 TPS≥50, EGFR and/or ALK <i>wt</i>	0.59

¹ Gadgeel S et al. *J Clin Oncol* 2020;38(14):1505-17. ² Paz-Ares L et al. *NEJM* 2018;379(21):2040-51.
 ³ Socinski MA et al. *NEJM* 2018;378(24):2288-301. ⁴ West H et al. *Lancet Oncol* 2019;20(7):924-37.
 ⁵ Hellmann MD et al. *N Engl J Med* 2019;381(21):2020-31. ⁶ Reck M et al. ASCO 2020;Abstract 9501.
 ⁷ Mok TSK et al. *Lancet* 2019;393(10183):1819-30. ⁸ Reck M et al. *J Clin Oncol* 2019;37(7):537-46.
 ⁹ Spigel DR et al. ESMO 2019;Abstract LBA78



FDA Approves Nivolumab with Ipilimumab for First-Line Metastatic NSCLC (PD-L1 Tumor Expression ≥1%) Press Release — May 15, 2020

"The Food and Drug Administration approved the combination of nivolumab plus ipilimumab as first-line treatment for patients with metastatic non-small cell lung cancer whose tumors express PD-L1(≥1%), as determined by an FDA-approved test, with no epidermal growth factor receptor (EGFR) or anaplastic lymphoma kinase (ALK) genomic tumor aberrations.

Efficacy was investigated in CHECKMATE-227 (NCT02477826), a randomized, open-label, multi-part trial in patients with metastatic or recurrent NSCLC and no prior anticancer therapy. In Part 1a of the trial, 793 patients with PD-L1 tumor expression ≥1% were randomized to receive either the combination of nivolumab plus with ipilimumab (n=396) or platinum-doublet chemotherapy (n=397)."

https://www.fda.gov/drugs/drug-approvals-and-databases/fda-approves-nivolumab-plus-ipilimumab-first-line-mnsclc-pd-l1-tumor-expression-1

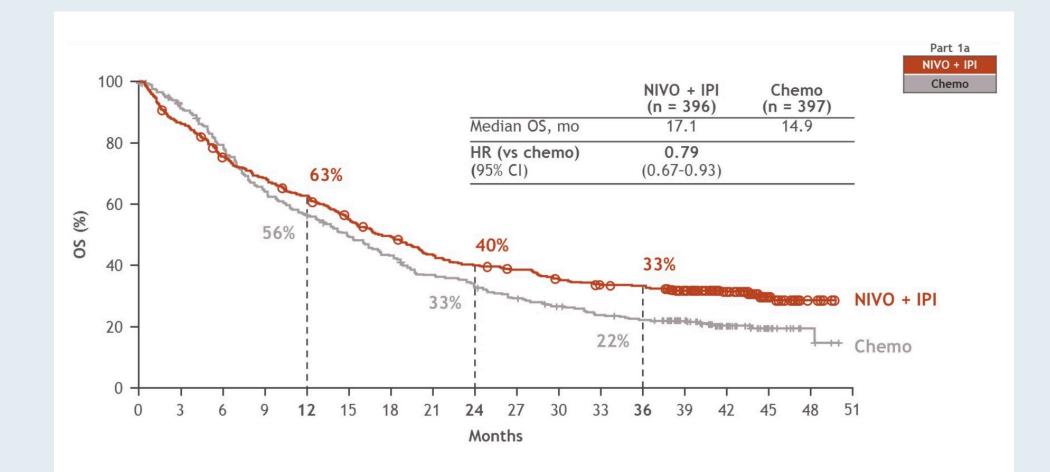


Nivolumab + Ipilimumab versus Platinum-Doublet Chemotherapy as First-Line Treatment for Advanced Non-Small Cell Lung Cancer: Three-Year Update from CheckMate 227 Part 1

Ramalingam SS et al. ASCO 2020;Abstract 9500.



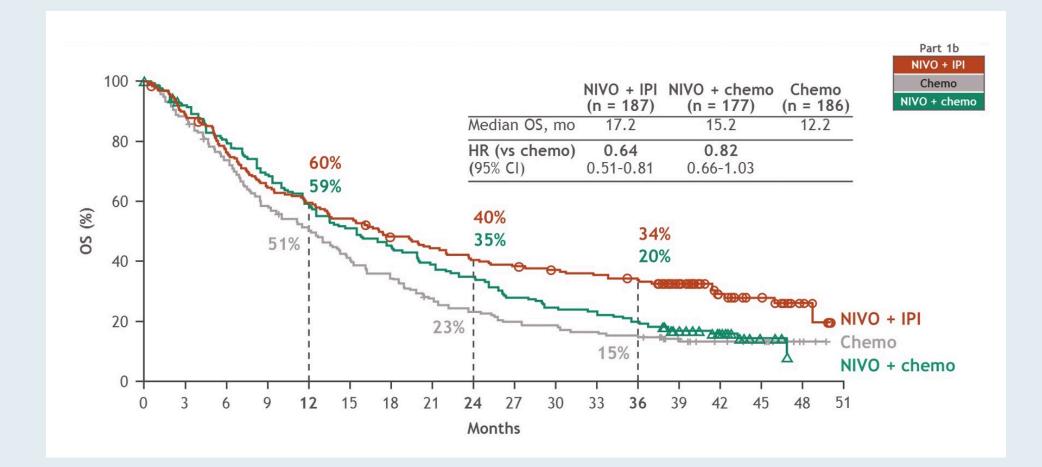
3-Year Update: OS with IPI + Nivo vs Chemo (PD-L1 ≥ 1%)





Ramalingam SS et al. ASCO 2020; Abstract 9500.

3-Year Update: OS with IPI + Nivo vs Chemo vs Nivo + Chemo (PD-L1 < 1%)





Ramalingam SS et al. ASCO 2020; Abstract 9500.

Landmark Analysis of OS by Response Status at 6 Months with PD-L1 ≥ 1% (IPI + Nivo vs Chemo)

	lpi + Nivo (n = 295) versus Chemo (n = 306)				
Response status	Response at 6 mo	1-yr OS rate	2-yr OS rate	3-yr OS rate	
CR or PR	39% vs 25%	90% vs 73%	76% vs 51%	70% vs 39%	
SD	14% vs 18%	69% vs 54%	45% vs 38%	34% vs 33%	
PD	46% vs 58%	44% vs 47%	22% vs 25%	19% vs 17%	



CheckMate 227: Treatment-Related AEs

	Nivo/Ipi (n = 576)		Chemo (n = 570)		
Select AE	Any grade	Grade 3-4	Any grade	Grade 3-4	
Diarrhea	17.0%	1.7%	9.6%	0.7%	
Rash	17.0%	1.6%	5.3%	0	
Fatigue	14.4%	1.7%	18.9%	1.4%	
Decreased appetite	13.2%	0.7%	19.6%	1.2%	
Nausea	9.9%	0.5%	36.1%	2.1%	
Anemia	3.8%	1.4%	33.0%	11.6%	
Neutropenia	0.2%	0	17.2%	9.5%	

- Treatment-related serious AEs (any grade): 24.5% (Nivo/Ipi) vs 13.9% (chemo)
- Treatment-related AEs leading to discontinuation (any grade): 18.1% (Nivo/Ipi) vs 9.1% (chemo)
- Treatment-related **death (any grade)**: 1.4% (Nivo/Ipi) vs 1.1% (chemo)



Hellmann MD et al. *N Engl J Med* 2019;381(21):2020-31.

FDA Approves Nivolumab with Ipilimumab and Chemotherapy for First-Line Treatment of Metastatic NSCLC Press Release — May 26, 2020

"The Food and Drug Administration approved the combination of nivolumab plus ipilimumab and 2 cycles of platinum-doublet chemotherapy as first-line treatment for patients with metastatic or recurrent non-small cell lung cancer (NSCLC), with no epidermal growth factor receptor (EGFR) or anaplastic lymphoma kinase (ALK) genomic tumor aberrations.

Efficacy was investigated in CHECKMATE-9LA (NCT03215706), a randomized, open-label trial in patients with metastatic or recurrent NSCLC. Patients were randomized to receive either the combination of nivolumab plus ipilimumab and 2 cycles of platinum-doublet chemotherapy (n=361) or platinum-doublet chemotherapy for 4 cycles (n=358)."

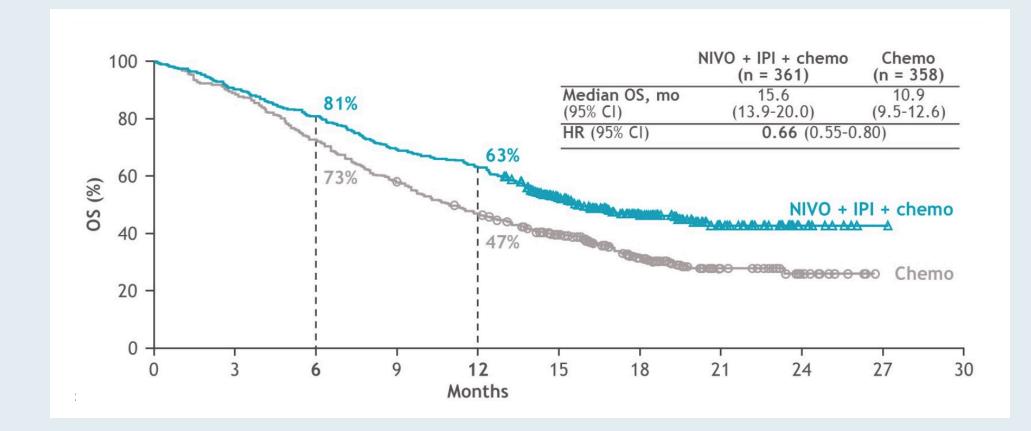


Nivolumab (NIVO) + Ipilimumab (IPI) + 2 Cycles of Platinum-Doublet Chemotherapy (Chemo) vs 4 Cycles Chemo as First-Line (1L) Treatment (tx) for Stage IV/Recurrent Non-Small Cell Lung Cancer (NSCLC): CheckMate 9LA

Reck M et al. ASCO 2020;Abstract 9501.



CheckMate 9LA: Updated OS



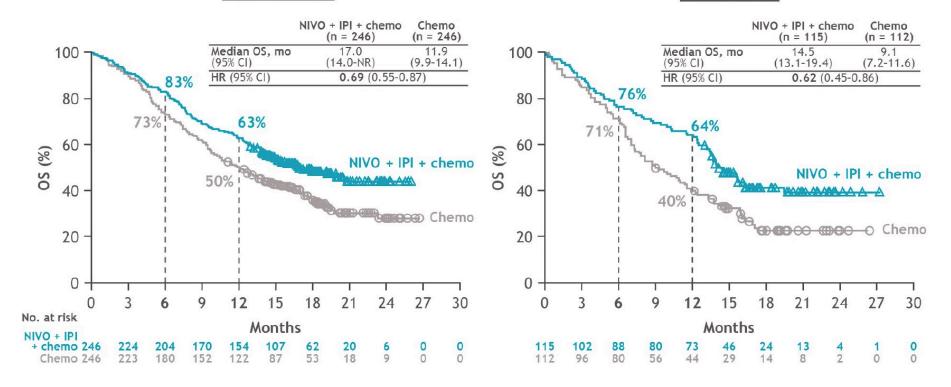


Reck M et al. ASCO 2020; Abstract 9501.

CheckMate 9LA: Updated OS by Histology

NSQ NSCLC^a

SQ NSCLC^b





Reck M et al. ASCO 2020; Abstract 9501.

CheckMate 9LA: Safety Summary

	NIVO + IP (n =		Chemo (n = 349)	
TRAE,ª %	Any grade	Grade 3-4	Any grade	Grade 3-4
Any TRAE	92	47	88	38
TRAEs leading to discontinuation of any component of the regimen	19	16	7	5
Serious TRAEs	30	25.4	18	15
Treatment-related deaths ^b	7	2	7	2

- Median (range) duration of therapy was 6.1 (0-23.5) months and 2.4 (0-24.0) months for NIVO + IPI + chemo versus chemo, respectively
- Most common any-grade TRAEs (≥ 15%) were nausea, anemia, asthenia and diarrhea



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Case Presentation – Dr Brenner: 81-year-old woman with metastatic adenocarcinoma of the lung, EGFR exon 19 mutation

- December 2015: Diagnosed with mediastinal LAD and bone disease
- Erlotinib 100 mg daily, increased to 150 mg daily January 2016
 - June 2016: Decreased back to 100 mg daily
- July 2018: Disease progression, with development of hoarseness, left vocal cord paralysis, and evidence of progressive mediastinal and subcarinal lymph nodes
- Liquid biopsy: T790M mutation
- Osimertinib, discontinued after 10 days due to rash requiring steroids
- September 2018: Re-initiation of osimertinib, dose-reduced 40 mg
- June 2020: Disease progression

Questions

- What are the options for a patient with an EGFR-mutated lung cancer who has progressed on osimertinib and now has progressive disease? Chemo alone? Chemo + CI?
- What is the role for rebiopsy of these patients to look for new acquired mutations? Liquid versus tumor biopsy?



Warren S Brenner, MD



Case Presentation – Dr Brenner: 93-year-old man with adenocarcinoma of the lung with brain metastases, MET exon 14 skipping mutation



Warren S Brenner, MD

- Capmatinib
- Developed pneumonia, and possible pneumonitis and passed away

Questions

- Does the faculty have any experience with capmatinib? Any pearls regarding its management?
- In patients with MET exon 14 skipping mutations, should we use capmatinib in the front-line setting or in the relapse setting? Are there any particular toxicities we should be aware of?



Comments and Questions: Management of metastatic NSCLC with an EGFR exon 20 mutation



Dr Warren S Brenner



For a patient with metastatic nonsquamous NSCLC with an EGFR exon 19 deletion and a PD-L1 TPS of 60% who receives first-line osimertinib with response followed by disease progression, would you recommend repeat mutation testing? What treatment would you recommend if no further actionable mutations were identified?

	Recommend repeat testing?	Second-line treatment
JOHN V HEYMACH, MD, PHD	Yes, tissue	Atezo/carbo/paclitaxel + bev
LEORA HORN, MD, MSC	Yes, liquid; if negative, tissue	Carbo/pemetrexed
COREY J LANGER, MD	Yes, liquid and tissue	Continue osimertinib, add carbo/pemetrexed/bev*
BENJAMIN LEVY, MD	Yes, liquid and tissue	Atezo/carbo/paclitaxel + bev
JOEL W NEAL, MD, PHD	Yes, tissue	Pembro/carbo/pemetrexed or Atezo/carbo/paclitaxel + bev
NATHAN A PENNELL, MD, PHD	Yes, tissue	Pembro/carbo/pemetrexed
DAVID R SPIGEL, MD	Yes, liquid	Continue osimertinib, add carbo/pemetrexed

Atezo = atezolizumab; carbo = carboplatin; bev = bevacizumab; pembro = pembrolizumab

* Atezo/carbo/paclitaxel + bev if very symptomatic



Regulatory and reimbursement issues aside, which adjuvant systemic therapy would you generally recommend for a patient with <u>Stage IIB</u> nonsquamous NSCLC and an EGFR exon 19 deletion?

- 1. Chemotherapy
- 2. Osimertinib
- 3. Chemotherapy followed by osimertinib
- 4. Other



Key Data Sets



Osimertinib as Adjuvant Therapy in Patients (pts) with Stage IB–IIIA EGFR Mutation Positive (EGFRm) NSCLC After Complete Tumor Resection: ADAURA

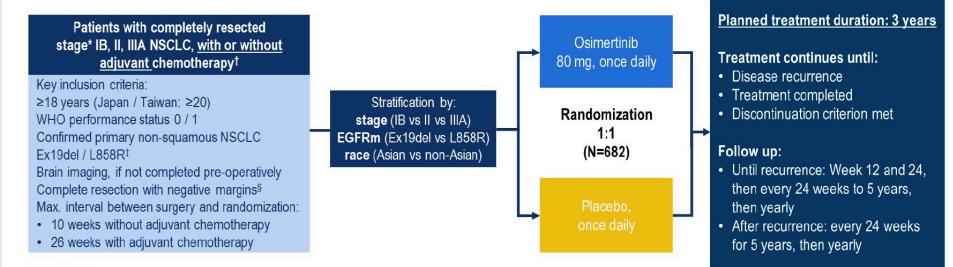
Herbst RS et al. ASCO 2020;Abstract LBA5.

Discussion of LBA5

Discussant: David R Spigel, MD, FASCO | Sarah Cannon Research Institute



ADAURA Phase III Trial Schema

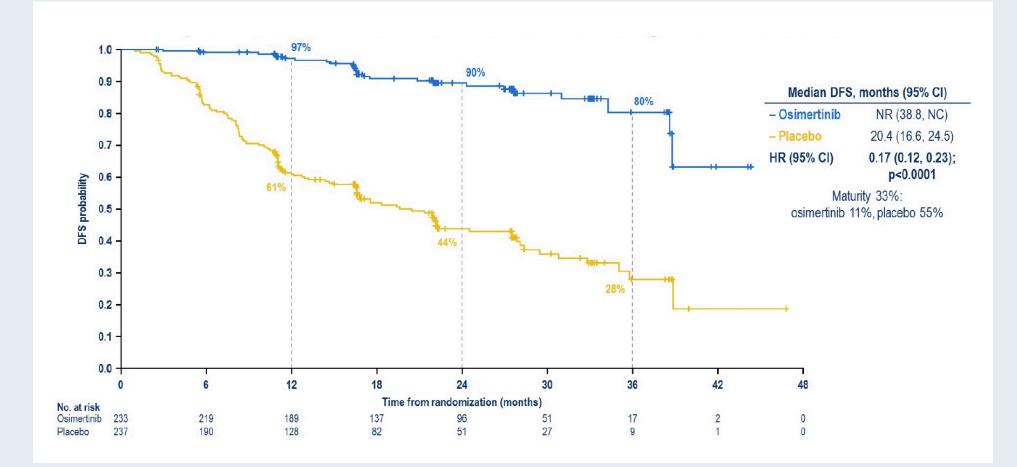


Endpoints

- Primary: DFS, by investigator assessment, in stage II/IIIA patients; designed for superiority under the assumed DFS HR of 0.70
- Secondary: DFS in the overall population[¶], DFS at 2, 3, 4, and 5 years, OS, safety, health-related quality of life
- Following IDMC recommendation, the study was unblinded early due to efficacy; here we report an unplanned interim analysis
- At the time of unblinding the study had completed enrollment and all patients were followed up for at least 1 year

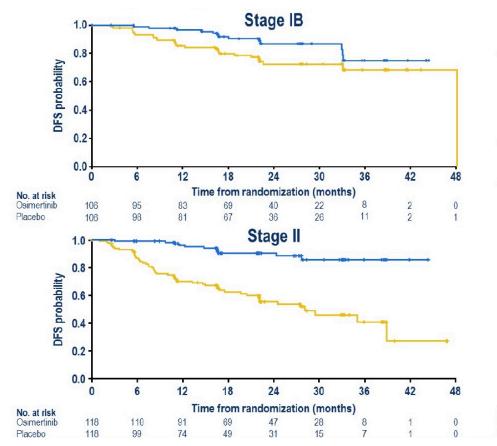


ADAURA Primary Endpoint: Inv-Assessed DFS (Stage II/IIIA)

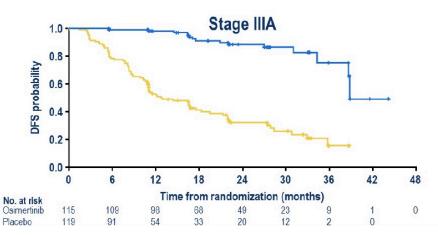




ADAURA: DFS by Stage

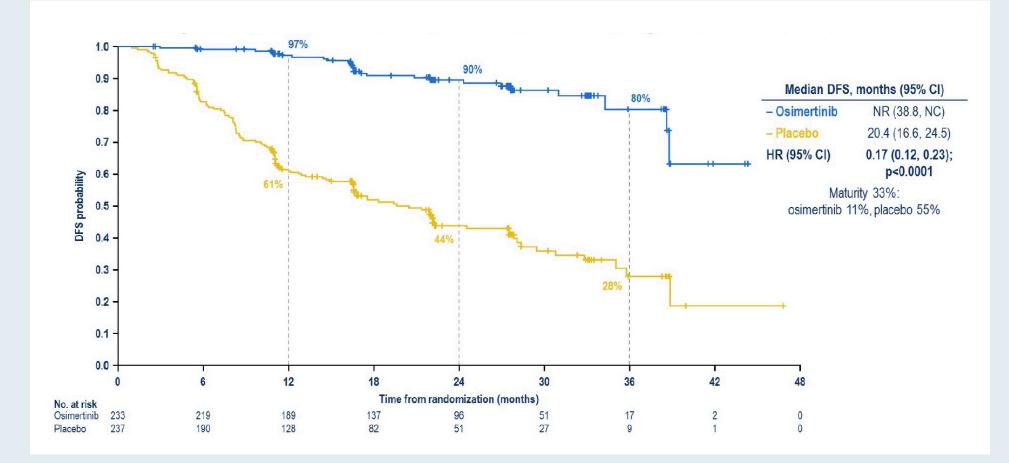


	Stage IB	Stage II	Stage IIIA
2 year DFS rate, % (95% CI)			
- Osimertinib	87 (77, 93)	91 (82, 95)	88 (79, 94)
– Placebo	73 (62, 81)	56 (45, 65)	32 (23, 42)
Overall HR (95% CI)	0.50 (0.25, 0.96)	0.17 (0.08, 0.31)	0.12 (0.07, 0.20)



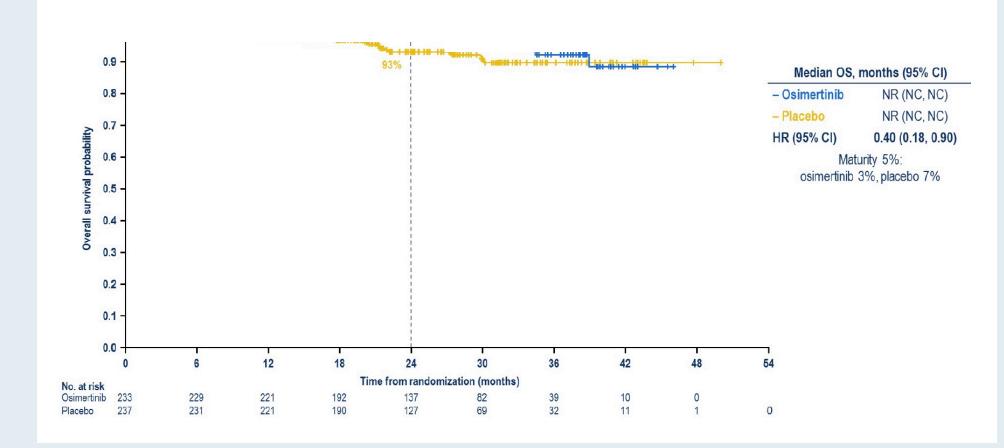


ADAURA Secondary Endpoint: Inv-Assessed DFS in the Overall Population (Stage IB/II/IIIA)





ADAURA: Early Snapshot of OS (Stage II/IIIA)





ADAURA: Safety Summary

AE, any cause*, n (%)	Osimertinib (n=336)	Placebo (n=343)
Any AE	327 (97)	306 (89)
Any AE Grade ≥3	68 (20)	48 (14)
Any AE leading to death	0	1 (<1)
Any serious AE	54 (16)	44 (13)
Any AE leading to discontinuation	38 (11)	15 (4)
Any AE leading to dose reduction	25 (7)	2 (1)
AE, possibly causally related [†] , n (%)		
Any AE	303 (90)	190 (55)
Any AE Grade ≥3	32 (10)	9 (3)
Any AE leading to death	0	0
Any serious AE	9 (3)	2 (1)



Phase II Randomized Trial of Carboplatin + Pemetrexed + Bevacizumab, +/- Atezolizumab in Stage IV Non-Squamous Non-Small Lung Cancer (NSCLC) Patients who Harbor a Sensitizing EGFR Mutation or Have Never Smoked

Bodor JN et al. ASCO 2020;Abstract TPS9629.



FDA Approves Ramucirumab with Erlotinib for First-Line Metastatic NSCLC Press Release — May 29, 2020

"On May 29, 2020, the Food and Drug Administration approved ramucirumab in combination with erlotinib for first-line treatment of metastatic non-small cell lung cancer (NSCLC) with epidermal growth factor receptor (EGFR) exon 19 deletions or exon 21 (L858R) mutations.

Efficacy was evaluated in RELAY (NCT02411448), a multinational, randomized, doubleblind, placebo-controlled, multicenter study in patients with previously untreated metastatic NSCLC whose tumors have EGFR exon 19 deletion or exon 21 (L858R) substitution mutations. A total of 449 patients were randomized (1:1) to receive either ramucirumab 10 mg/kg or placebo every 2 weeks as an intravenous infusion, in combination with erlotinib 150 mg orally once daily, until disease progression or unacceptable toxicity."



FDA Approves Brigatinib for ALK-Positive Metastatic NSCLC Press Release — May 22, 2020

"On May 22, 2020, the Food and Drug Administration approved brigatinib for adult patients with anaplastic lymphoma kinase (ALK)-positive metastatic non-small cell lung cancer (NSCLC) as detected by an FDA-approved test.

The FDA also approved the Vysis ALK Break Apart FISH Probe Kit as a companion diagnostic for brigatinib.

Efficacy was investigated in ALTA 1L (NCT02737501), a randomized (1:1), open-label, multicenter trial in adult patients with advanced ALK-positive NSCLC who had not previously received an ALK-targeted therapy. The trial required patients to have an ALK rearrangement based on a local standard of care testing. A subset of the clinical samples was retrospectively tested with the Vysis ALK Break Apart FISH Probe Kit.

The recommended brigatinib dose is 90 mg orally once daily for the first 7 days; then increase to 180 mg orally once daily."

https://www.fda.gov/drugs/drug-approvals-and-databases/fda-approves-brigatinib-alk-positive-metastatic-nsclc



Lorlatinib Significantly Improves Progression-Free Survival in First-Line ALK-Positive Lung Cancer

Press Release – August 5, 2020

"The Phase 3 CROWN study of lorlatinib in people with previously untreated advanced anaplastic lymphoma kinase (ALK)-positive non-small cell lung cancer (NSCLC) met its primary endpoint by demonstrating significantly improved progression-free survival (PFS), as compared to crizotinib. The results were reviewed by an independent Data Monitoring Committee (DMC) at a planned interim analysis. The safety profile for lorlatinib and crizotinib were consistent with what has been previously seen in clinical trials.

CROWN is a Phase 3, randomized, open-label, parallel 2-arm study in which 296 people with previously untreated advanced ALK-positive NSCLC were randomized 1:1 to receive lorlatinib monotherapy or crizotinib monotherapy. The primary endpoint of the CROWN trial is PFS based on blinded independent central review (BICR). Secondary endpoints include overall survival, PFS based on investigator's assessment, objective response (OR) based on BICR and on investigator's assessment; intracranial OR (IC-OR), IC time to progression, duration of response (DR), IC-DR, time to tumor response (TTR), IC-TTR (all by BICR); PFS2 based on investigator's assessment, and safety."

https://investors.pfizer.com/investor-news/press-release-details/2020/LORBRENA-lorlatinib-Significantly-Improves-Progression-Free-Survival-in-First-Line-ALK-Positive-Lung-Cancer/default.aspx



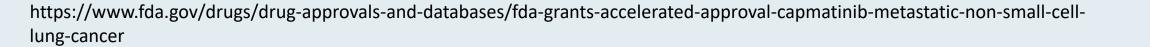
FDA Grants Accelerated Approval to Capmatinib for Metastatic Non-Small Cell Lung Cancer Press Release — May 6, 2020

"On May 6, 2020, the Food and Drug Administration granted accelerated approval to capmatinib for adult patients with metastatic non-small cell lung cancer (NSCLC) whose tumors have a mutation that leads to mesenchymal-epithelial transition (MET) exon 14 skipping as detected by an FDA-approved test.

The FDA also approved the FoundationOne CDx assay as a companion diagnostic for capmatinib.

Efficacy was demonstrated in the GEOMETRY mono-1 trial (NCT02414139), a multicenter, non-randomized, open-label, multicohort study enrolling 97 patients with metastatic NSCLC with confirmed MET exon 14 skipping.

The recommended capmatinib dose is 400 mg orally twice daily with or without food."





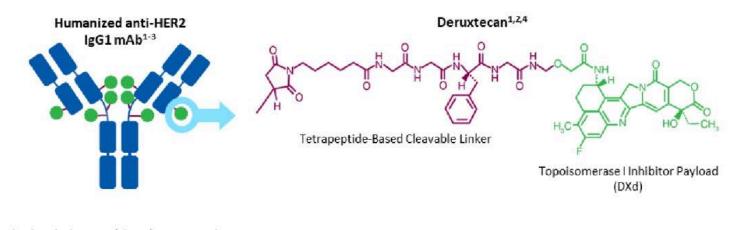
Trastuzumab Deruxtecan (T-DXd; DS-8201) in Patients with HER2-Mutated Metastatic Non-Small Cell Lung Cancer (NSCLC): Interim Results of DESTINY-Lung01

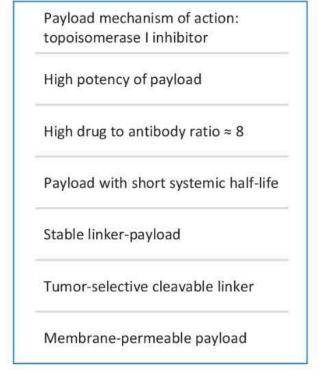


Antibody-Drug Conjugate Trastuzumab Deruxtecan

T-DXd is an ADC with 3 components:

- A humanized anti-HER2 IgG1 mAb with the same amino acid sequence as trastuzumab
- A topoisomerase I inhibitor payload, an exatecan derivative
- A tetrapeptide-based cleavable linker







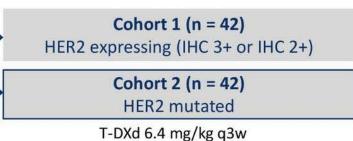
DESTINY-Lung01: Phase II Study Design

Patients

- Unresectable/metastatic
 nonsquamous NSCLC
- Relapsed/refractory to standard treatment
- HER2-expressing or HER2activating mutation^a
- No prior HER2-targeted therapy, except pan-HER TKIs



Confirmed ORR by independent central review

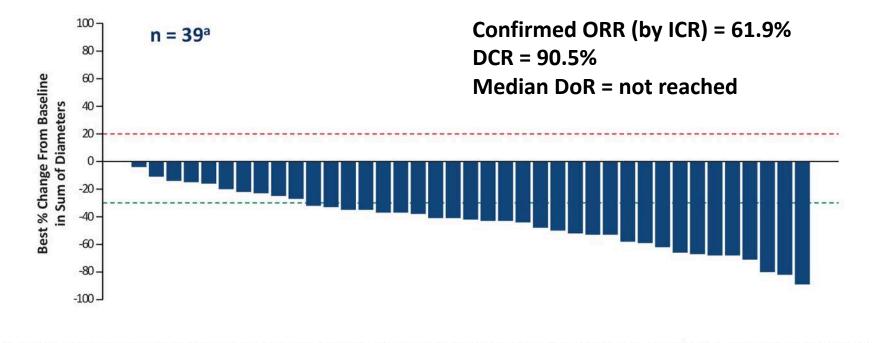


Data cutoff: November 25, 2019

- 45.2% of patients (19/42) in Cohort 2 remained on treatment
- 54.8% discontinued, primarily for progressive disease and adverse events (21.4% each)



DESTINY-Lung01: Efficacy

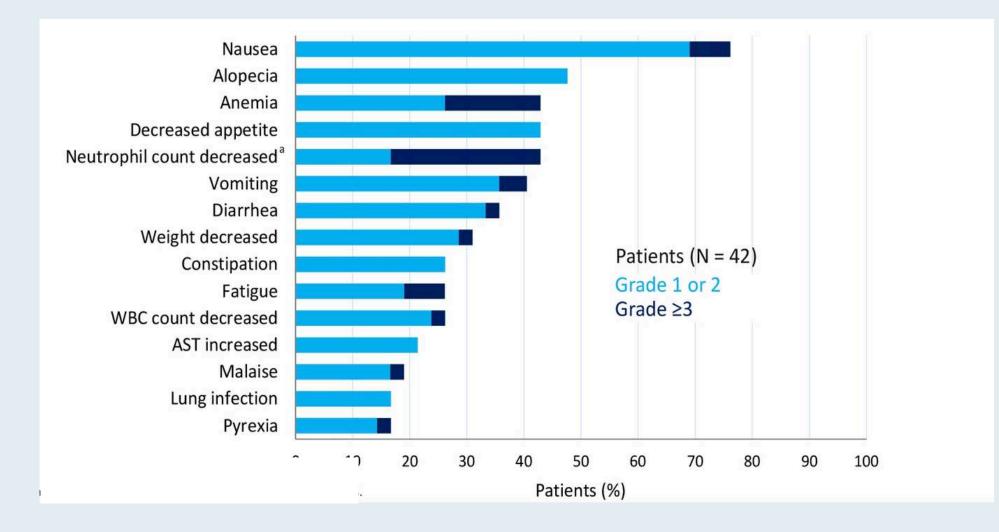


Based on independent central review. Baseline is last measurement taken before enrollment. Shown is best (minimum) percent change from baseline in the sum of diameters for all target lesions. ^a One patient was missing a baseline assessment and 2 additional patients were missing post-baseline assessments.

• Median PFS = 14.0 mos



DESTINY-Lung01: Treatment-Emergent AEs





DESTINY-Lung01: AEs of Special Interest – Interstitial Lung Disease

	All Patients (N = 42)					
	Grade					Any Grade/
n (%)	1	Grade 2	Grade 3	Grade 4	Grade 5	Total
Interstitial lung disease	0 ^a	5 (11.9)	0	0	0	5 (11.9)

- Median time to onset of investigator-reported ILD was at 86 days (range, 41-255 days)
- 4 patients had drug withdrawn and 1 had drug interrupted
- All patients received steroid treatment
- 2 patients recovered, 1 recovered with sequelae, 1 was recovering, and 1 had not recovered by data-cutoff
- No grade 5 ILD was observed in this cohort



FDA Approves Selpercatinib for Lung and Thyroid Cancer with RET Gene Mutations or Fusions

Press Release — May 8, 2020

"On May 8, 2020, the Food and Drug Administration granted accelerated approval to selpercatinib for the following indications:

- Adult patients with metastatic RET fusion-positive non-small cell lung cancer (NSCLC);
- Adult and pediatric patients ≥12 years of age with advanced or metastatic RET-mutant medullary thyroid cancer (MTC) who require systemic therapy;
- Adult and pediatric patients ≥12 years of age with advanced or metastatic RET fusionpositive thyroid cancer who require systemic therapy and who are radioactive iodinerefractory (if radioactive iodine is appropriate).

Efficacy was investigated in a multicenter, open-label, multi-cohort clinical trial (LIBRETTO-001) in patients whose tumors had RET alterations."

https://www.fda.gov/drugs/drug-approvals-and-databases/fda-approves-selpercatinib-lung-and-thyroid-cancers-ret-genemutations-or-fusions



Meet The Professor with Dr Sequist

Module 1: Anti-PD-1/PD-L1 Antibodies Alone or in Combinations for Metastatic NSCLC

• A 66-year-old woman with metastatic adenocarcinoma of the lung, PD-L1 100% – Dr Brenner

Module 2: Management of Metastatic NSCLC with Targetable Mutations

- An 81-year-old woman with metastatic adenocarcinoma of the lung, EGFR exon 19 mutation Dr Brenner
- A 93-year-old man with adenocarcinoma of the lung, MET exon 14 skipping mutation Dr Brenner

Module 3: First-Line Treatment of Extensive-Stage Small Cell Lung Cancer

• A 55-year-old woman with small cell lung cancer – Dr Brenner

Module 4: Checkpoint Inhibition in the Management of Locally Advanced NSCLC

• A 57-year-old man with locally advanced NSCLC, PD-L1 90% – Dr Brenner



Case Presentation – Dr Brenner: 55-year-old woman with small cell lung cancer

- August 2019: SCLC involving the RUL, with bulky right hilar lymphadenopathy encasing the pulmonary arteries, infrahilar lymphadenopathy, right paratracheal prevascular lymphadenopathy
- September 2019: Cisplatin/etoposide \rightarrow concurrent hyperfractionated radiation and chemotherapy
- March 2020: Recurrence of disease, with small brain lesion, and T8 bone lesion
 - April 2020: Stereotactic radiation therapy to brain lesion
 - May 2020: Radiation therapy to T8 thoracic lesion
- May 2020: Progression of disease in the chest and mediastinum
- June 3, 2020: Ipilimumab/nivolumab, with ipilimumab 1 mg/kg, nivolumab 3 mg/kg
- June 18, 2020: New small multifocal brain metastases and progressive disease in bones

Questions

- In platinum-refractory SCLC, what is the treatment of choice?
- What is the role of the new agent, lurbinectedin, that was recently approved?
- Do we use checkpoint inhibitors? What is the role of dual checkpoint inhibitors?
- Should we use high-dose ipilimumab or lower-dose ipilimumab?



Warren S Brenner, MD



What is your preferred second-line treatment for a patient with extensive-stage small cell cancer of the lung with metastases and disease progression on chemotherapy/atezolizumab?

- 1. Topotecan or irinotecan
- 2. Lurbinectedin
- 3. Nivolumab/ipilimumab
- 4. Pembrolizumab
- 5. Nivolumab
- 6. Other



Regulatory and reimbursement issues aside, what would be your preferred first-line treatment regimen for a patient with extensive-stage SCLC?

	Age 65	Age 80	
JOHN V HEYMACH, MD, PHD	Carbo/etoposide + atezolizumab	Carbo/etoposide + atezolizumab	
LEORA HORN, MD, MSC	Carbo/etoposide + atezolizumab	Carbo/etoposide + atezolizumab	
COREY J LANGER, MD	Carbo/etoposide + atezolizumab or durvalumab	Carbo/etoposide + durvalumab	
BENJAMIN LEVY, MD	Carbo/etoposide + atezolizumab	Carbo/etoposide + atezolizumab	
JOEL W NEAL, MD, PHD	Carbo/etoposide + atezolizumab	Carbo/etoposide + atezolizumab or durvalumab	
NATHAN A PENNELL, MD, PHD	Carbo/etoposide + atezolizumab	Carbo/etoposide + atezolizumab	
DAVID R SPIGEL, MD	Carbo/etoposide + durvalumab	Carbo/etoposide + durvalumab	



Regulatory and reimbursement issues aside, what would be your preferred first-line treatment regimen for a 65-year-old patient with extensive-stage SCLC and neurologic paraneoplastic syndrome causing moderate to severe proximal myopathy?

JOHN V HEYMACH, MD, PHD	Carboplatin/etoposide
LEORA HORN, MD, MSC	Carboplatin/etoposide
COREY J LANGER, MD	Carboplatin/etoposide + atezolizumab or durvalumab
BENJAMIN LEVY, MD	Carboplatin/etoposide
JOEL W NEAL, MD, PHD	Carboplatin/etoposide + atezolizumab or durvalumab
NATHAN A PENNELL, MD, PHD	Carboplatin/etoposide
DAVID R SPIGEL, MD	Carboplatin/etoposide + durvalumab



Regulatory and reimbursement issues aside, what would be your preferred first-line treatment for a 65-year-old patient with extensive-stage SCLC and symptomatic SIADH, in addition to standard treatment for SIADH?

JOHN V HEYMACH, MD, PHD	Carboplatin/etoposide + atezolizumab or durvalumab
LEORA HORN, MD, MSC	Carboplatin/etoposide/atezolizumab
COREY J LANGER, MD	Carboplatin/etoposide + atezolizumab or durvalumab
BENJAMIN LEVY, MD	Carboplatin/etoposide/atezolizumab
JOEL W NEAL, MD, PHD	Carboplatin/etoposide + atezolizumab or durvalumab
NATHAN A PENNELL, MD, PHD	Carboplatin/etoposide/atezolizumab
DAVID R SPIGEL, MD	Carboplatin/etoposide + durvalumab

SIADH = syndrome of inappropriate antidiuretic hormone secretion



Key Data Sets



FDA Approves Durvalumab for Extensive-Stage Small Cell Lung Cancer Press Release — March 27, 2020

"On March 27, 2020, the Food and Drug Administration approved durvalumab in combination with etoposide and either carboplatin or cisplatin as first-line treatment of patients with extensive-stage small cell lung cancer (ES-SCLC).

Efficacy of this combination in patients with previously untreated ES-SCLC was investigated in CASPIAN, a randomized, multicenter, active-controlled, open-label, trial (NCT03043872). The evaluation was based on the comparison of patients randomized to durvalumab plus chemotherapy vs. chemotherapy alone.

For ES-SCLC, durvalumab is to be administered prior to chemotherapy on the same day. The recommended durvalumab dose when administered with etoposide and either carboplatin or cisplatin is 1500 mg every 3 weeks prior to chemotherapy and then every 4 weeks as a single agent."



Durvalumab +/- Tremelimumab + Platinum-Etoposide in First-Line Extensive-Stage SCLC (ES-SCLC): Updated Results from the Phase III CASPIAN Study

Paz-Ares LG et al. ASCO 2020;Abstract 9002.



Accelerated Approval of Lurbinectedin for Metastatic SCLC Press Release – June 15, 2020

"On June 15, 2020, the Food and Drug Administration granted accelerated approval to lurbinectedin for adult patients with metastatic small cell lung cancer (SCLC) with disease progression on or after platinum-based chemotherapy.

Efficacy was demonstrated in the PM1183-B-005-14 trial (Study B-005; NCT02454972), a multicenter open-label, multi-cohort study enrolling 105 patients with metastatic SCLC who had disease progression on or after platinum-based chemotherapy. Patients received lurbinectedin 3.2 mg/m² by intravenous infusion every 21 days until disease progression or unacceptable toxicity.

The recommended lurbinected in dose is 3.2 mg/m² every 21 days."



Randomized Phase II Clinical Trial of Cisplatin/Carboplatin and Etoposide (CE) Alone or in Combination with Nivolumab as Frontline Therapy for Extensive-Stage Small Cell Lung Cancer (ES-SCLC): ECOG-ACRIN EA5161

Leal T et al. ASCO 2020;Abstract 9000.



Pembrolizumab or Placebo plus Etoposide and Platinum as First-Line Therapy for Extensive-Stage Small-Cell Lung Cancer: Randomized, Double-Blind, Phase III KEYNOTE-604 Study

Rudin CM et al. *J Clin Oncol* 2020;38(21):2369-79.



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Case Presentation – Dr Brenner: 57-year-old man with locally advanced NSCLC, PD-L1 90%

- September 2019: T1b N3 adenocarcinoma of the RUL, with contralateral supraclavicular lymph nodes, PD-L1 90%
 - NGS: Rearrangement in RET intron 11
- October 18, 2019: Induction carboplatin/paclitaxel
- December 17, 2019 January 21, 2020: Concurrent RT with weekly carboplatin/paclitaxel
- April 2020: Repeat PET-CT, with excellent response
- April 7, 2020: Initiation of durvalumab

Questions

- Should we do NGS on earlier-stage lung cancer, especially given recent data of benefit with adjuvant osimertinib?
- Any correlation from PACIFIC trial regarding benefit of IO therapy and PD-L1 status?
- Any data regarding RET intron mutations?
- Are patients with actionable mutations less likely to benefit from maintenance IO therapy?



Warren S Brenner, MD



Should PD-L1 levels generally be tested in patients with locally advanced NSCLC? In general, do you recommend durvalumab as consolidation treatment for patients with locally advanced NSCLC who have no disease progression after chemoradiation therapy?

	Recommend consolidation durvalumab?			
	Test for PD-L1?	PD-L1 ≤1%	EGFR mutation	ALK rearrangement
JOHN V HEYMACH, MD, PHD	Νο	Yes	Yes	Yes
LEORA HORN, MD, MSC	Νο	Yes	No	No
COREY J LANGER, MD	Yes	Yes	Yes	Yes
BENJAMIN LEVY, MD	Yes	Yes	Yes	Yes
JOEL W NEAL, MD, PHD	Yes	Yes	Yes	No
NATHAN A PENNELL, MD, PHD	Νο	Yes	Yes	Yes
DAVID R SPIGEL, MD	Νο	Yes	Yes	Yes



A patient who successfully received chemoradiation therapy for locally advanced NSCLC is about to start durvalumab. Pretreatment imaging shows changes consistent with radiation effect. Would you use durvalumab?

In general, would you recommend consolidation durvalumab for similar patients who are experiencing mild esophagitis or mildly symptomatic pneumonitis?

	Radiation effect	Mild esophagitis	Mildly symptomatic pneumonia
JOHN V HEYMACH, MD, PHD	Yes	Yes	Νο
LEORA HORN, MD, MSC	Yes	Yes	No, wait until improvement
COREY J LANGER, MD	Yes	Yes	Yes*
BENJAMIN LEVY, MD	Yes	Yes	Yes
JOEL W NEAL, MD, PHD	Yes	Yes	Yes
NATHAN A PENNELL, MD, PHD	Yes	Yes	Νο
DAVID R SPIGEL, MD	Yes	Yes	Yes

* If Grade 1 and do not require steroids



Key Data Sets



Real-World Rates of Pneumonitis After Consolidation Durvalumab

Real-World Survey of Pneumonitis/Radiation Pneumonitis in LA-NSCLC After Approval of Durvalumab: HOPE-005/CRIMSON Retrospective Cohort Study

- >80% developed pneumonitis
- More than half of them were asymptomatic, but 5% needed HOT and 1.5% developed fatal pneumonitis
- V20 was an independent risk factor for symptomatic pneumonitis (Grade ≥2)
- With careful consideration, durvalumab-rechallenge could be an option after corticosteroid therapy for pneumonitis

Incidence of Pneumonitis in US Veterans with NSCLC Receiving Durvalumab After Chemoradiation Therapy

- In this real-world cohort, clinical significant pneumonitis was:
 - More frequent compared to clinical trial reports
 - Asymptomatic infiltrates on imaging: 39.8%
 - Clinically significant pneumonitis: 21.1%
 - Grade 2 (7.3%), Grade 3 (11.4%), Grade 4 (1.6%), Grade 5 (0.8%)
 - Not associated with increased risk of death

Saito et al. ASCO 2020; Abstract 9039. Thomas T et al. ASCO 2020; Abstract 9034.



Exploring the Role of Immune Checkpoint Inhibitor Therapy and Other Novel Strategies in Gynecologic Cancers A Meet The Professor Series

> Friday, August 28, 2020 12:00 PM – 1:00 PM ET

Faculty Michael J Birrer, MD, PhD

> Moderator Neil Love, MD



Thank you for joining us!

CME and MOC credit information will be emailed to each participant within 5 days.

