MERCK ONCOLOGY OVERVIEW
AACR 2018
APRIL 16, 2018

Forward-Looking Statement of Merck & Co., Inc., Kenilworth, NJ, USA

This presentation of Merck & Co., Inc., Kenilworth, N.J., USA (the "company") includes "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. These statements are based upon the current beliefs and expectations of the company's management and are subject to significant risks and uncertainties. There can be no guarantees with respect to pipeline products that the products will receive the necessary regulatory approvals or that they will prove to be commercially successful. If underlying assumptions prove inaccurate or risks or uncertainties materialize, actual results may differ materially from those set forth in the forward-looking statements.

Risks and uncertainties include but are not limited to, general industry conditions and competition; general economic factors, including interest rate and currency exchange rate fluctuations; the impact of pharmaceutical industry regulation and health care legislation in the United States and internationally; global trends toward health care cost containment; technological advances, new products and patents attained by competitors; challenges inherent in new product development, including obtaining regulatory approval; the company's ability to accurately predict future market conditions; manufacturing difficulties or delays; financial instability of international economies and sovereign risk; dependence on the effectiveness of the company's patents and other protections for innovative products; and the exposure to litigation, including patent litigation, and/or regulatory actions.

The company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in the company's 2017 Annual Report on Form 10-K and the company's other filings with the Securities and Exchange Commission (SEC) available at the SEC's Internet site (www.sec.gov).

MERCK ONCOLOGY

A LEADER IN DELIVERING BREAKTHROUGH APPROACHES THAT EXTEND AND IMPROVE THE LIVES OF PEOPLE WITH CANCER

KEYTRUDA® (pembrolizumab) Injection 100 mg

Establish KEYTRUDA as **foundational treatment** in monotherapy and in combination across multiple tumor types and stages of disease

Explore combinations and other novel agents to broaden our portfolio in an effort to reach more patients

Identify patients most likely to benefit through evaluation of **biomarkers**

Lynparza™ olaparib

LENVIMA® (lenvatinib) capsules

Viralytics

Developers of Oncolytic Immunotherapies

Advance internal pipeline and pursue **strategic collaborations** and acquisitions to expand oncology portfolio

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SIGNIFICANT PROGRESS IN ONCOLOGY OVER LAST FEW YEARS

700+ Clinical trials studying over 30 tumor types

~200K Approximate number of patients treated worldwide with KEYTRUDA

Assets under collaboration with our partners **~ 60**

Novel assets in the pipeline **20+**

400+ Trials studying KEYTRUDA in combination

10 Approved indications

Tumor types KEYTRUDA is showing activity in **25+**

7 Trials demonstrating overall survival

12 FDA Breakthrough Therapy Designations

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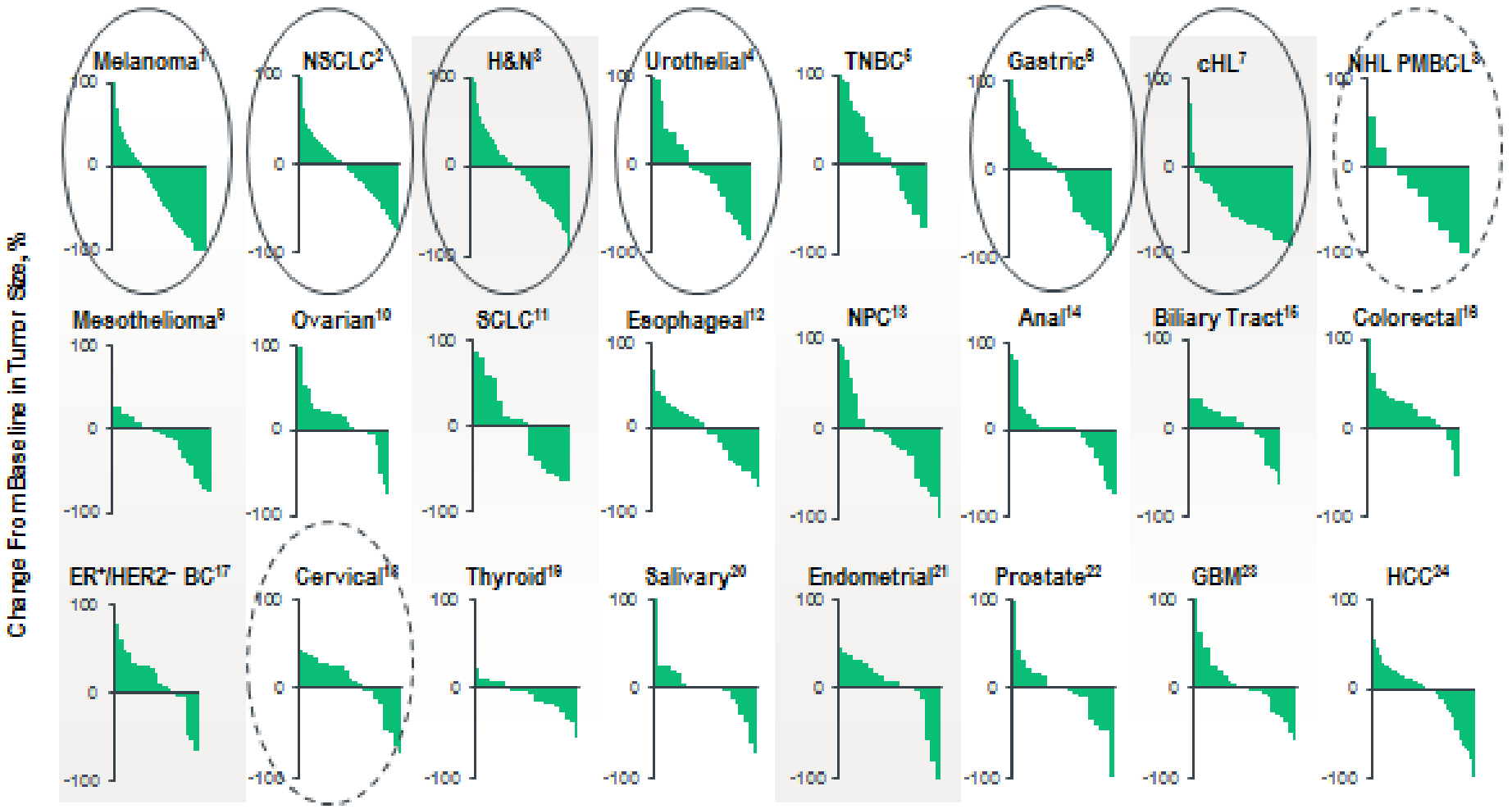

approved - - - under review

KEYTRUDA

DEMONSTRATED ANTI-TUMOR ACTIVITY IN MORE THAN 25 CANCER TYPES

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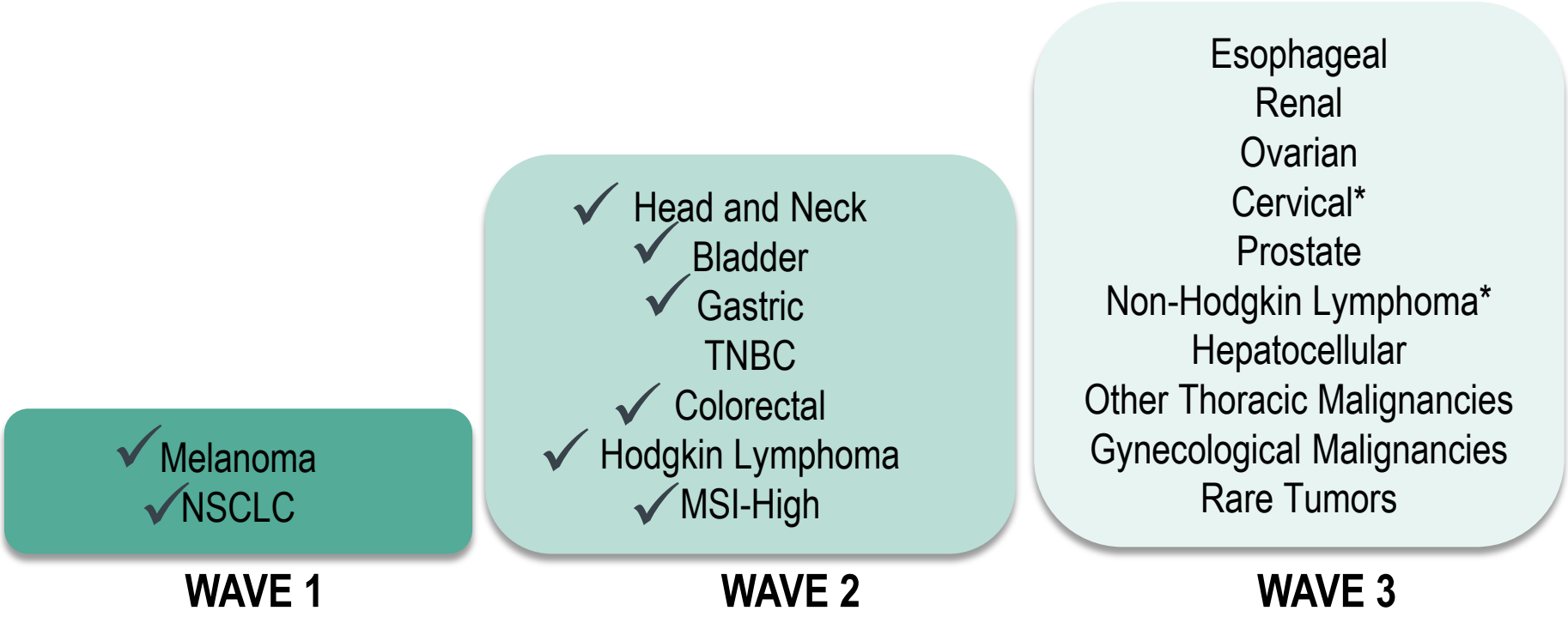
1. Daud A et al. ASCO 2015; 2. Garon EB et al. ESMO 2014; 3. Seiwert T et al. ASCO 2015; 4. Plimack E et al. ASCO 2015; 5. Nanda R et al. SABCS 2014; 6. Bang YJ et al. ASCO 2015 ; 7. Moskowitz C et al. ASH 2014; 8. Zinzani PL et al. ASH 2015; 9. Alley EA et al. AACR 2015; 10. Varga A et al. ASCO 2015; 11. Ott PA et al. 2015 ASCO; 12. Doi T et al. ASCO 2015; 13. Hsu C et al. ECC 2015; 14. Ott PA et al. ECC 2015; 15. Bang Y-J et al. ECC 2015; 16. O'Neil B et al. ECC 2015; 17. Rugo HS et al. SABCS 2015; 18. Frenel JS et al. ASCO 2016; 19. Mehnert JM et al. ASCO 2016; 20. Cohen R et al. ASCO 2016; 21. Ott PA et al. ASCO 2016; 22. Hansen AR et al. ESMO 2016; 23. Reardeon D et al. SNO 2016; 24. Zhu A et al. ASCO GI 2018

KEYTRUDA: BUILDING MOMENTUM

10 APPROVED INDICATIONS



DEMONSTRATED OVERALL SURVIVAL IN 7 TRIALS

EXECUTING ON WAVE 2 & 3 WITH CONTINUED PROGRESS

*Currently under review by the FDA.

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EXPANDING OUR ONCOLOGY PORTFOLIO
THROUGH GLOBAL STRATEGIC COLLABORATIONS

- **World's first PARP** inhibitor in breast cancer
- Significant **long-term opportunity** across multiple tumors and treatment settings
- **Broadest** clinical development program

- **Breakthrough Therapy Designation** in combination with KEYTRUDA in RCC
- **Approved** as monotherapy in RAI-refractory DTC* and in combination with everolimus in advanced RCC; approved in HCC in Japan and filed HCC in US, EU and China
- **Initiating combination studies** in 11 potential indications across 6 tumor types

*Differentiated Thyroid Cancer

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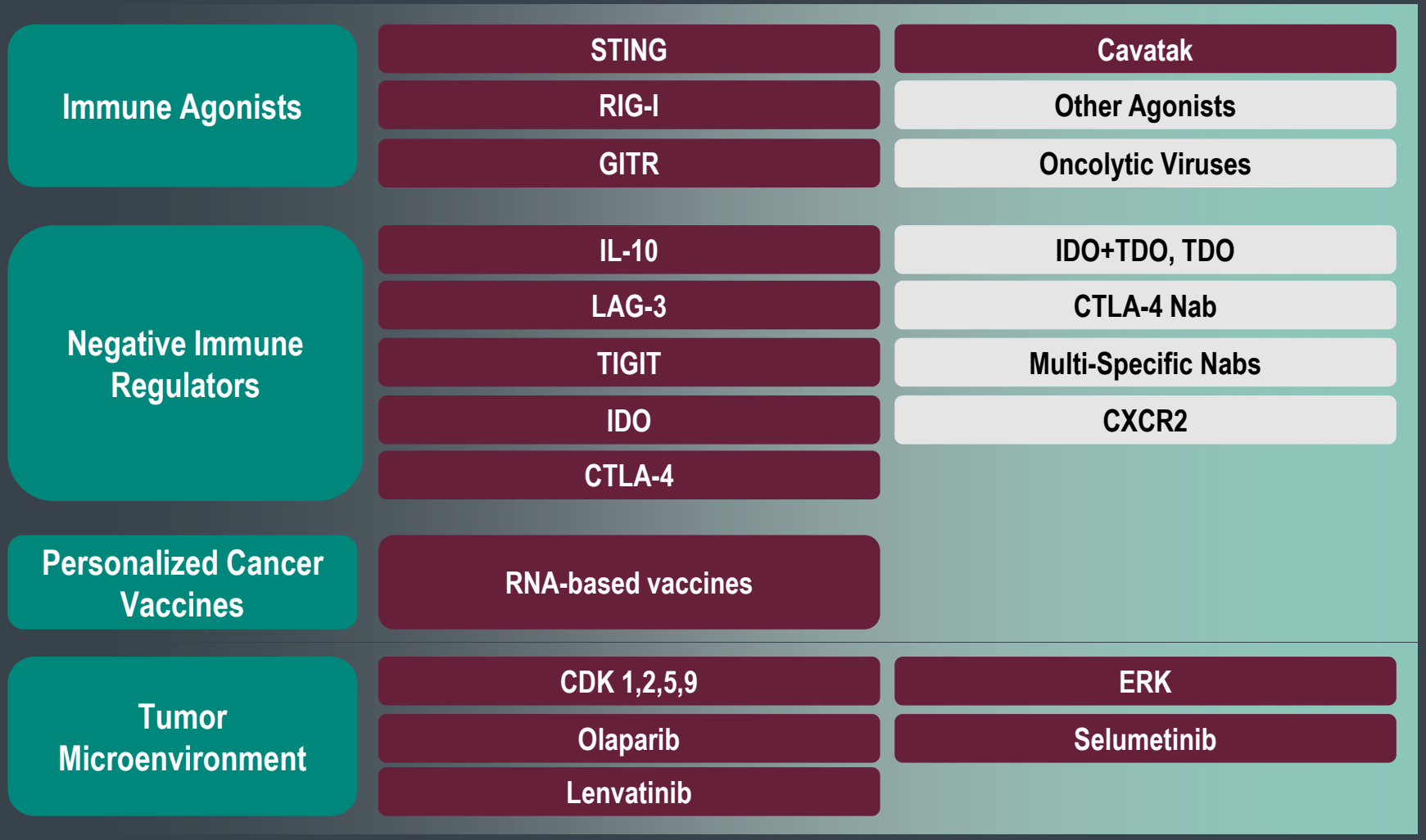
EXPLORING 20+ ASSETS IN ONCOLOGY PIPELINE



KEYNOTE-189

Randomized, Double-Blind, Phase 3 Study of Pembrolizumab or Placebo plus Pemetrexed and Platinum as First-Line Therapy for Metastatic NSCLC

KEYNOTE-054

Pembrolizumab versus placebo after complete resection of high-risk stage III melanoma: Efficacy and safety results from the double-blinded Phase 3 trial

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DATA TO HIGHLIGHT

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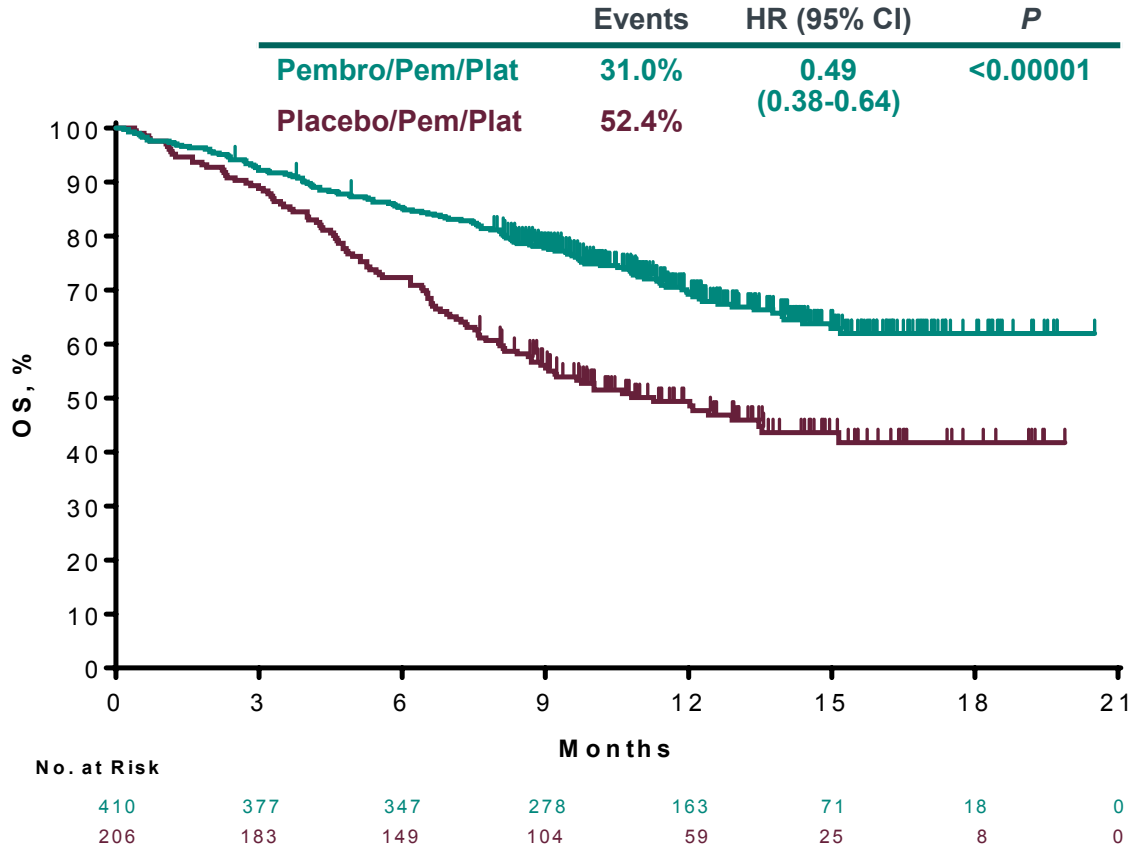
KEYNOTE-189
PHASE 3 TRIAL COMBINING KEYTRUDA AND CHEMOTHERAPY

OS
HR=0.49
[all comers]

KEYTRUDA is the first immunotherapy in combination with chemotherapy to significantly extend survival in 1L nonsquamous NSCLC patients



KEYTRUDA REDUCED THE RISK OF DEATH BY HALF COMPARED TO CHEMOTHERAPY ALONE

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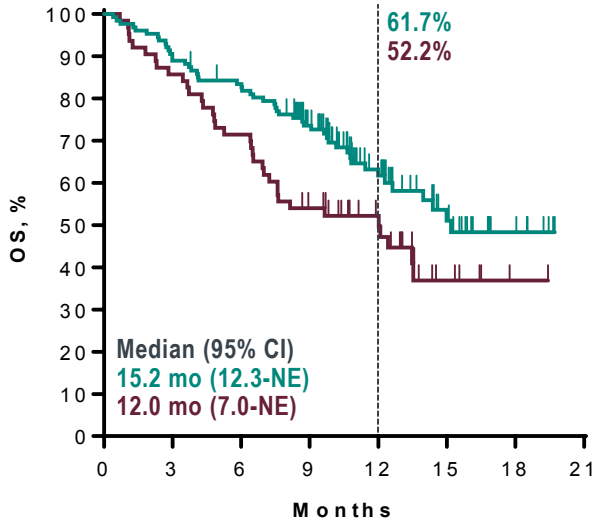
KEYNOTE-189
OS BENEFIT ACROSS ALL PD-L1 SUBGROUPS

TPS <1%

	Events	HR (95% CI)	P[a]
Pembro/Pem/Plat	38.6%	0.59 (0.38-0.92)	0.0095
Placebo/Pem/Plat	55.6%		

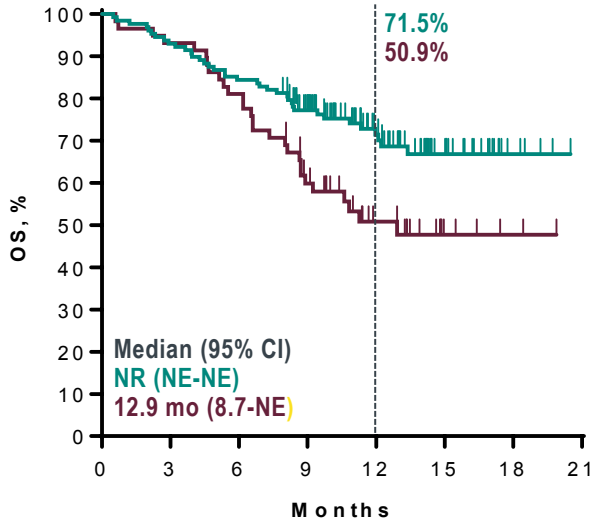


No. at Risk

127	113	104	79	42	20	6	0
63	54	45	32	21	6	1	0

TPS 1-49%

	Events	HR (95% CI)	P[a]
Pembro/Pem/Plat	28.9%	0.55 (0.34-0.90)	0.0081
Placebo/Pem/Plat	48.3%		

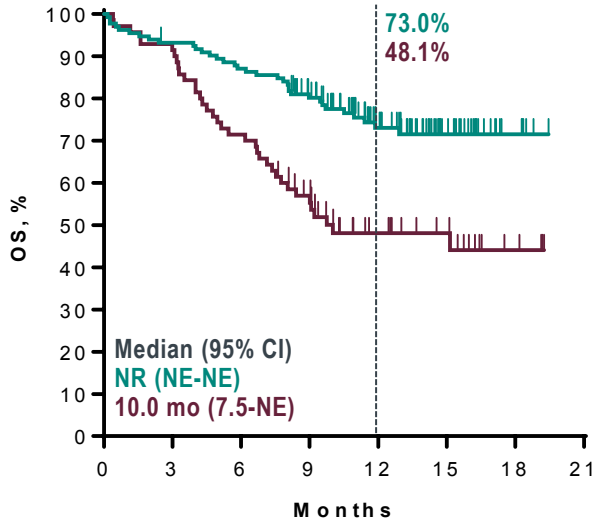


No. at Risk

128	119	108	84	52	21	5	0
58	54	47	32	17	5	2	0

TPS ≥50%

	Events	HR (95% CI)	P[a]
Pembro/Pem/Plat	25.8%	0.42 (0.26-0.68)	0.0001
Placebo/Pem/Plat	51.4%		



No. at Risk

132	122	114	96	56	25	6	0
70	64	50	35	19	13	4	0

[a]Nominal and one-sided. Data cutoff date: Nov 8, 2017.

OVERALL SURVIVAL **IS** THE GOLD STANDARD

SETS THE BAR FOR FUTURE TRIALS IN 1L NSQ NSCLC

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DATA TO HIGHLIGHT

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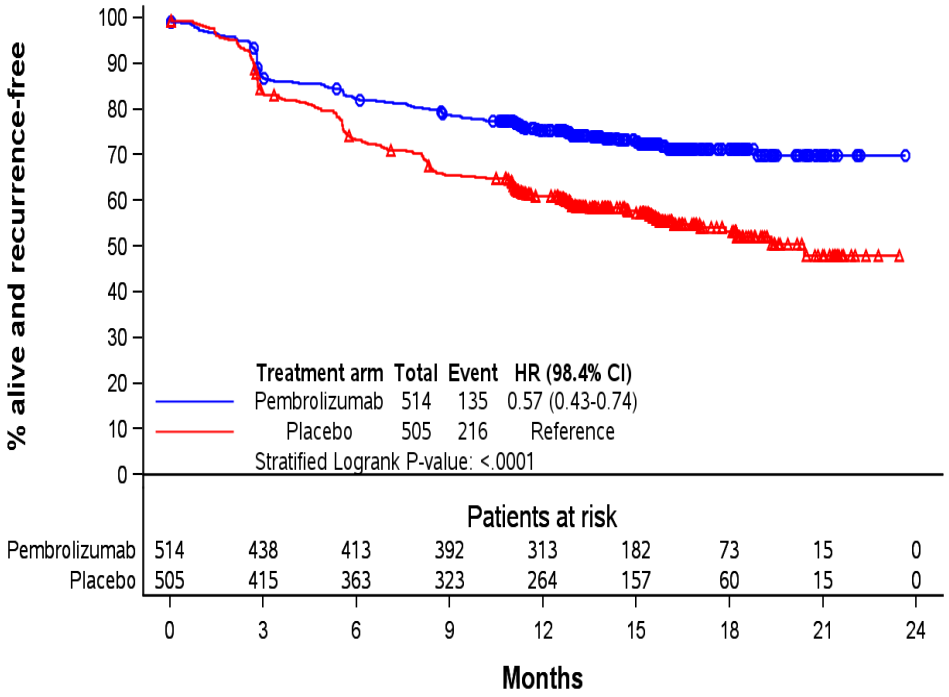
KEYNOTE-054

PHASE 3 TRIAL STUDYING KEYTRUDA IN ADJUVANT MELANOMA

HR=0.57

43% reduction in risk of recurrence or death regardless of disease stage, PD-L1 expression or mutation status



DATA DEMONSTRATE PROLONGED RECURRENCE FREE SURVIVAL (RFS) BENEFIT

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WHAT TO WATCH:

KEY DATA READ-OUTS OVER THE NEXT 18 MONTHS

- 1L NSCLC PD-L1 ≥ 1%: KEYNOTE-042
- 2L HCC: KEYNOTE-224
- 1L SQ NSCLC COMBO: KEYNOTE-407
- 1L H&N MONO/COMBO: KEYNOTE-048
- 1L TNBC: KEYNOTE-522
- 2L+ TNBC: KEYNOTE-119
- cHL: KEYNOTE-204
- 1L GASTRIC MONO/COMBO: KEYNOTE-062
- 2L+ HCC: KEYNOTE-240
- NMIBC BLADDER: KEYNOTE-057
- 1L BLADDER: KEYNOTE-361
- BRCAm OVARIAN (LYNPARZA): SOLO-1

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Q&A

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