

Merck Oncology Overview

ASCO 2020



Forward-looking statement

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.

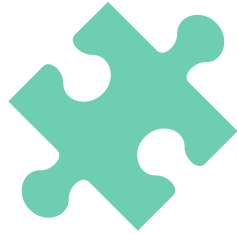
Risks and uncertainties include but are not limited to, general industry conditions and competition; general economic factors, including interest rate and currency exchange rate fluctuations; the impact of the recent global outbreak of novel coronavirus disease (COVID-19); the impact of pharmaceutical 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 2019 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).

We are executing on a broad oncology strategy to improve outcomes for cancer patients globally



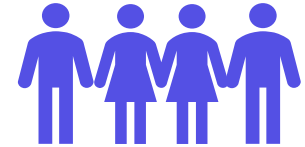
Further **establish** KEYTRUDA as foundational treatment and advance into earlier stages of disease



Broadly **explore** combinations to reach more patients

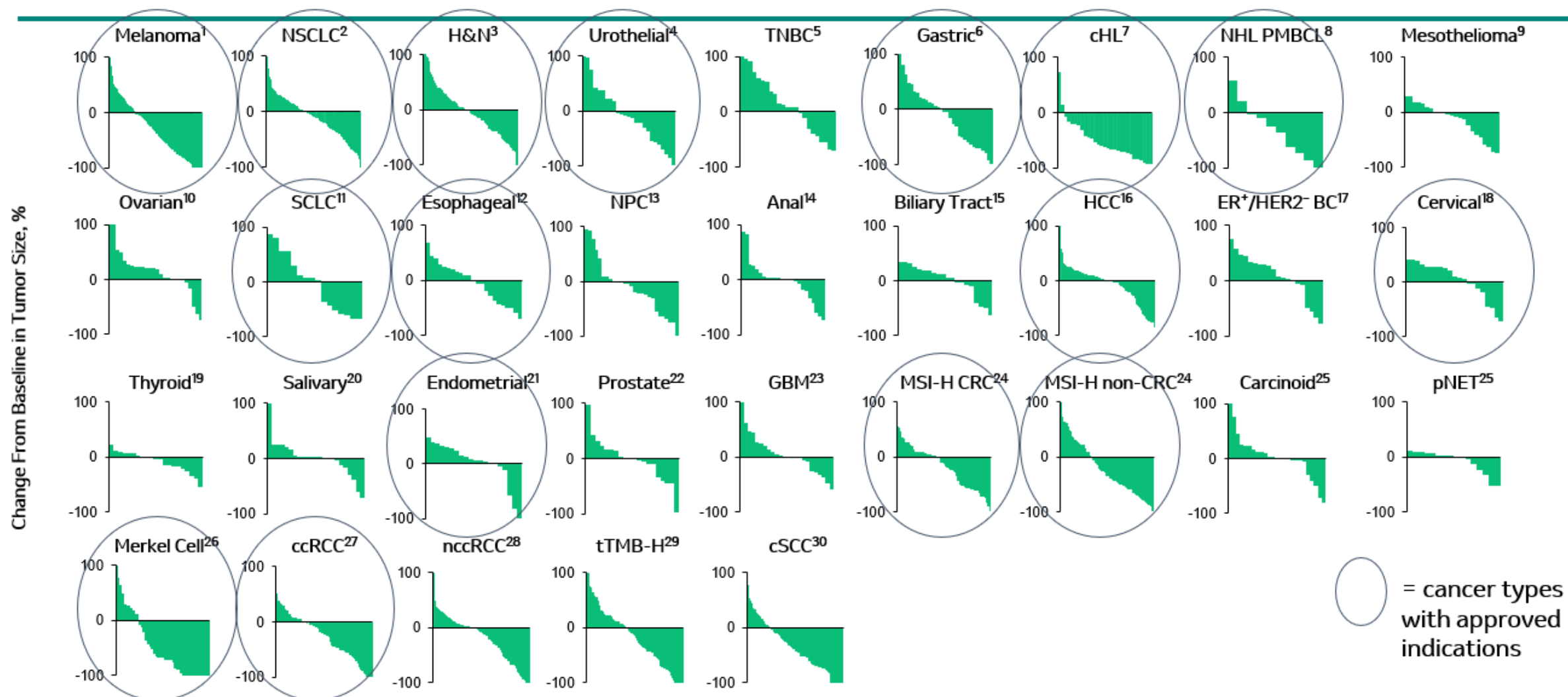


Advance pipeline and pursue strategic collaborations and acquisitions to expand portfolio



Identify patients most likely to benefit using biomarkers

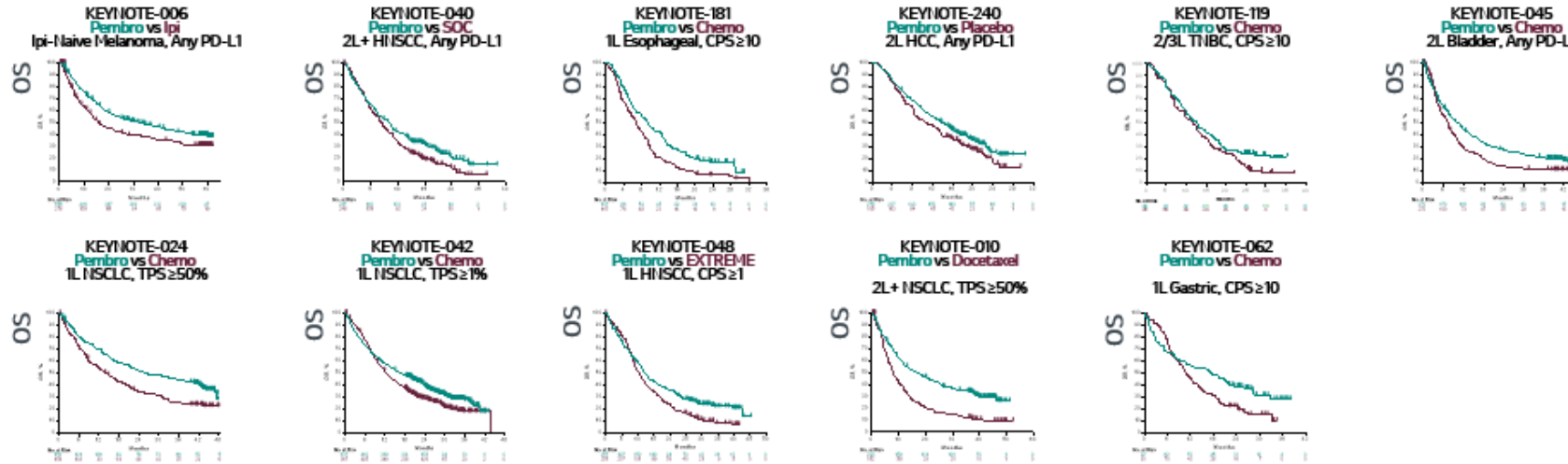
KEYTRUDA has now demonstrated activity in more than 30 different types of cancer defined by site of origin, histology, or genetic markers



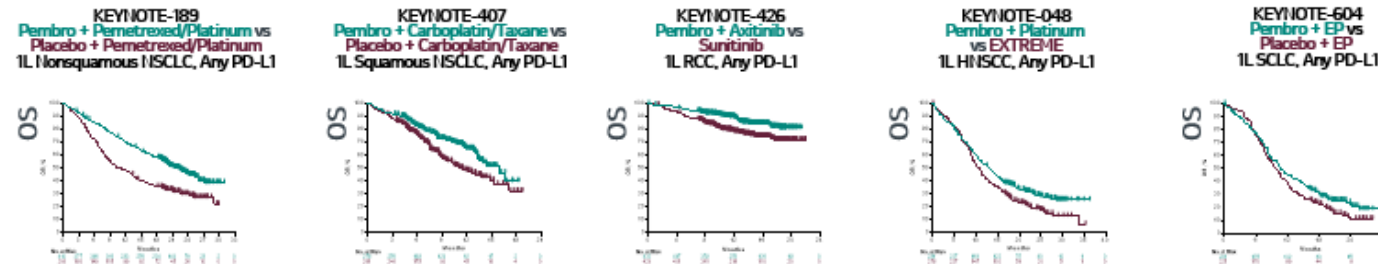
1. Daud A et al. ASCO 2015; 2. Garon EB et al. ESMO 2014; 3. Seiwert T et al. ASCO 2015; 4. Plimack E et al. ASCO 2015; 5. Nanda R et al. SABCS 2014; 6. Bang YJ et al. ASCO 2015; 7. Moskowitz C et al. ASH 2014; 8. Zinzani PL et al. ASH 2015; 9. Alley EA et al. AACR 2015; 10. Varga A et al. ASCO 2015; 11. Ott PA et al. 2015 ASCO; 12. Doi T et al. ASCO 2015; 13. Hsu C et al. ECC 2015; 14. Marabelle A et al. ASCO 2020; 15. Bang Y-J et al. ECC 2015; 16. Zhu A et al. ASCO 2018; 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. Reardon D et al. SNO 2016; 24. Diaz L et al. ESMO 2017; 25. Mehnert J et al. ESMO 2017; 26. Nghiem P et al. ASCO 2018; 27. McDermott DF et al. ASCO 2018; 28. McDermott DF et al. ASCO-GU 2019; 29. Marabelle A et al. ESMO 2019; 30. Grob JJ et al. ESMO 2019.

KEYTRUDA monotherapy and in combination improves overall survival in Phase 3 studies across a broad range of malignancies

Monotherapy



Combinations



Comprehensive KEYTRUDA development program



ASCO 2020: Continued flow of data from deep & diverse oncology portfolio

Presenting new KEYTRUDA data

New Phase 3 data for KEYTRUDA in TNBC, MSI-H CRC and cHL

New Phase 2 data for KEYTRUDA in Stage III NSCLC

Demonstrating KEYTRUDA's long-term survival benefits

Long-term survival data for KEYTRUDA in NSCLC, RCC and Melanoma

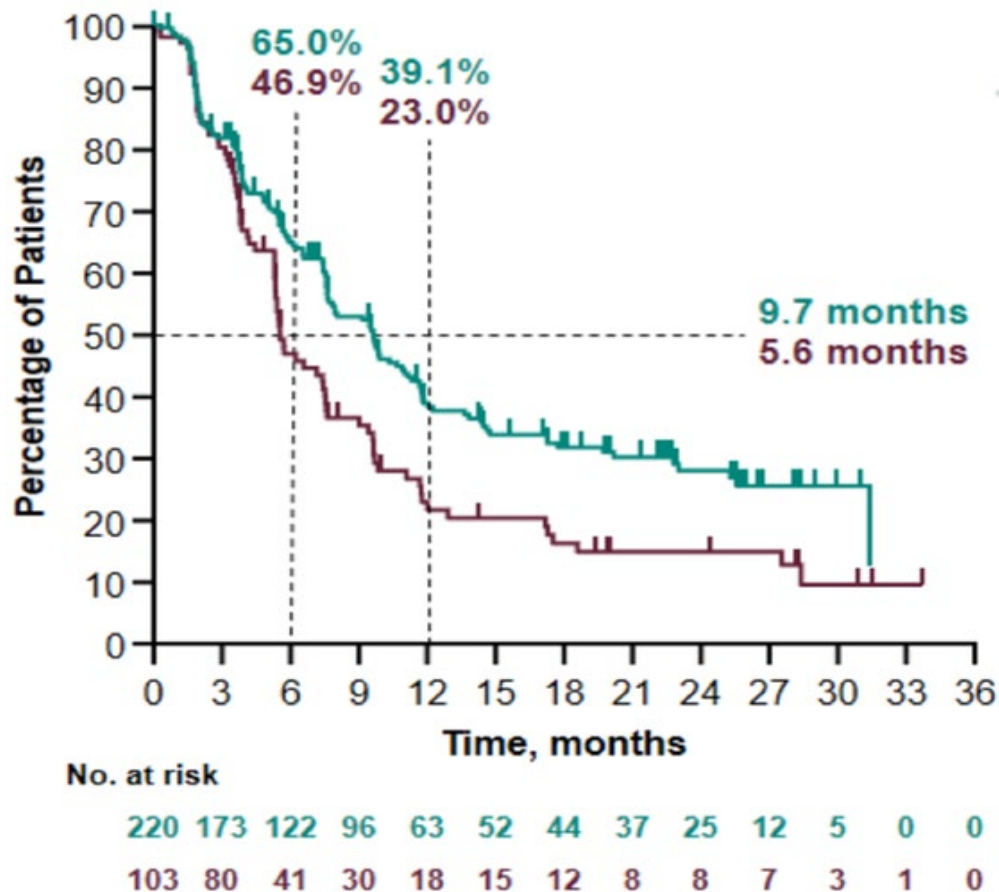
Progressing novel mechanisms

New Phase 2 data from our oral HIF-2 α inhibitor in VHL RCC

MK-6482 now in Phase 3 in 2L RCC

KEYNOTE-355: Improved efficacy and supportive of overall TNBC development program

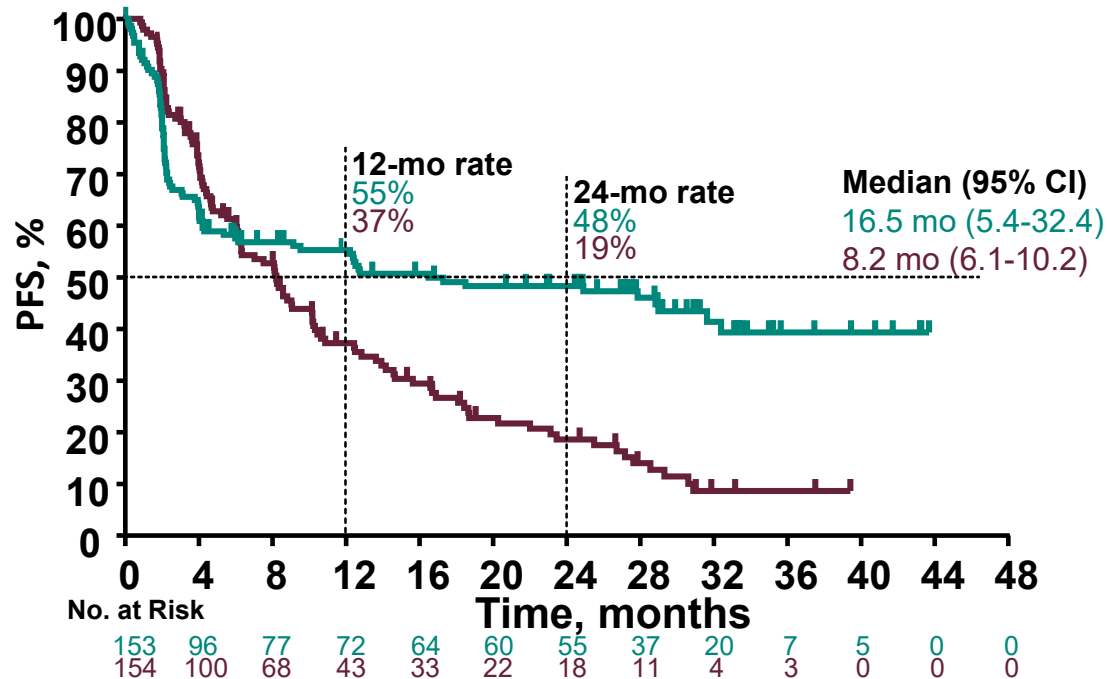
Progression-Free Survival: PD-L1 CPS ≥ 10



KEYTRUDA plus chemo reduced the risk of disease progression or death by 35% vs. chemo for certain TNBC patients (HR = 0.65 [95% CI, 0.49-0.86], p=0.0012)

Trial continues for OS

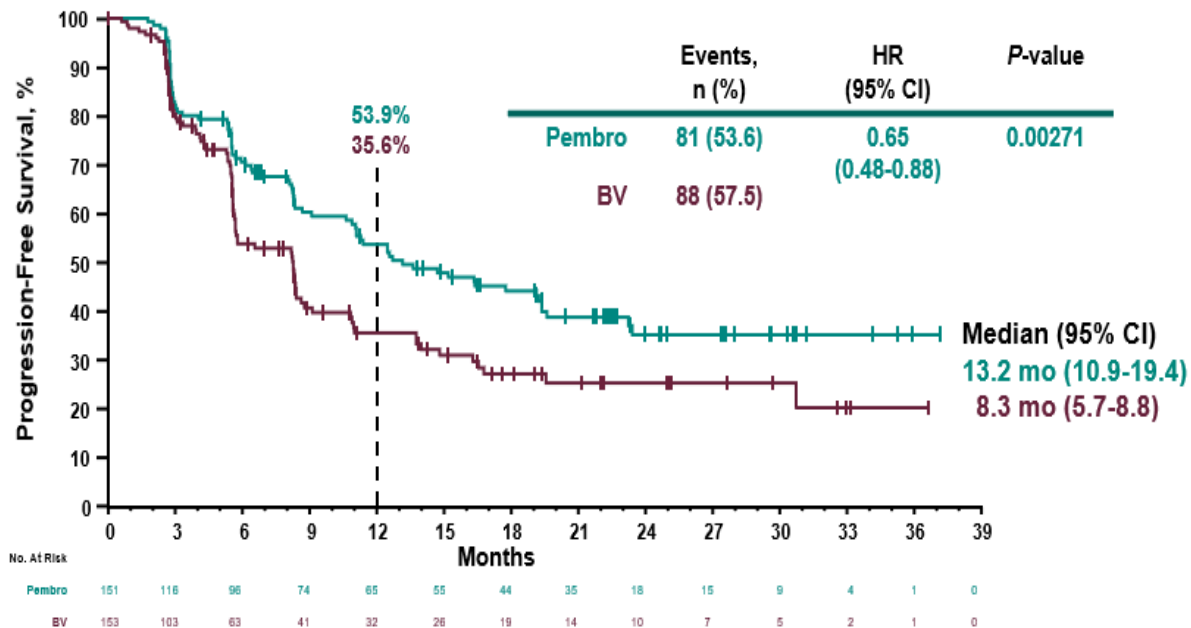
KEYNOTE-177: Single-agent KEYTRUDA may become new standard of care in 1L MSI-H mCRC patients



KEYTRUDA monotherapy significantly reduced risk of disease progression or death by 40% and more than doubled median PFS versus chemo (HR = 0.60 [95% CI, 0.45-0.80], p=0.0002)

Trial continues for OS

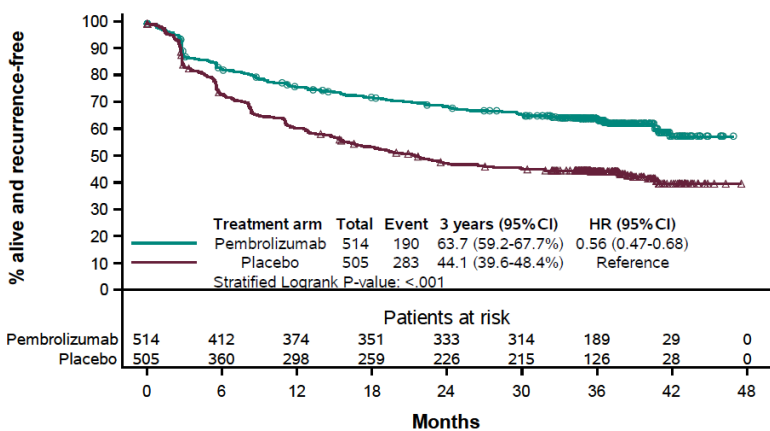
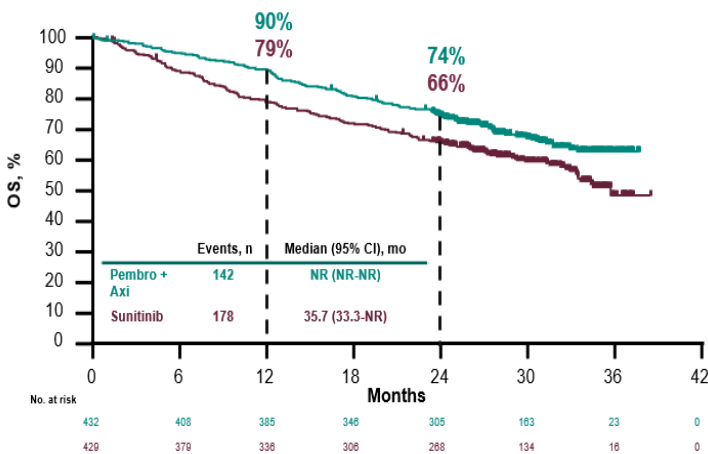
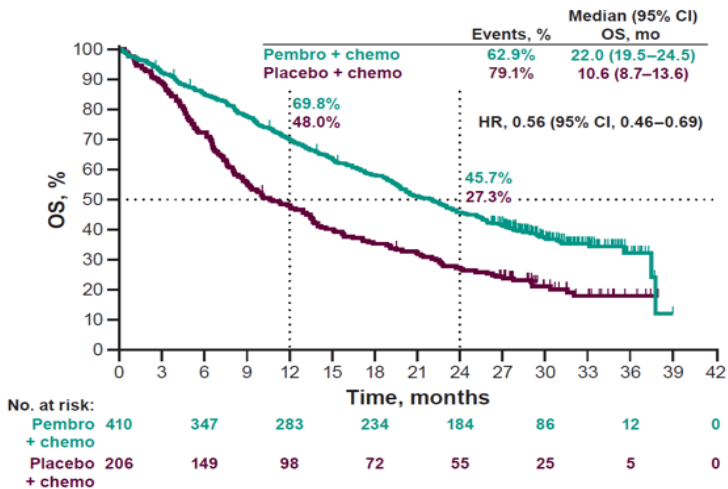
KEYNOTE-204: Displacing standard of care in 2L+ relapsed refractory classic Hodgkin's lymphoma



KEYTRUDA monotherapy showed statistically significant and clinically meaningful improvement in PFS versus BV in R/R cHL (HR = 0.65 [95% CI, 0.48-0.88], p=0.00271)

Trial continues for OS

Long-term follow-up data confirm durable overall survival benefits with KEYTRUDA used in combination or as an adjuvant following surgery



NSCLC

In the final analysis of KEYNOTE-189, KEYTRUDA in combination with chemotherapy reduced the risk of death by 44% versus chemotherapy and at two years, demonstrated a sustained, long-term survival benefit in metastatic NSCLC.

RCC

An updated analysis from KEYNOTE-426 showed the combination of KEYTRUDA plus axitinib continued to demonstrate durable anti-tumor activity vs. sunitinib.

Melanoma

In a 3-yr follow-up on KEYNOTE-054, KEYTRUDA as adjuvant therapy, provided, a sustained improvement in RFS, which was clinically meaningful, in resected high-risk stage III melanoma.

MK-6482: First-time data shows promising overall response rate in Von-Hippel Lindau (VHL)-associated kidney cancer patients

VHL disease is a multi-system disease with most patients having several different tumors

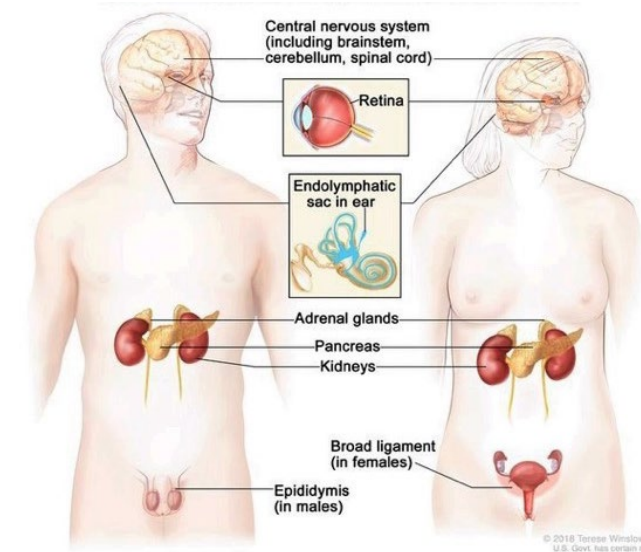
Data demonstrates the therapeutic potential for MK-6482 (HIF-2 α) in VHL-associated ccRCC patients, where there is a high unmet need

- 27.9% ORR and 86.9% of patients saw a decrease in target lesion size

Beyond patients with VHL disease, Phase 2 data presented in 2019 demonstrated the potential as monotherapy for treatment of advanced or metastatic RCC, particularly in PD-1/PD-L1 refractory patients with 24% partial responses (PR) and 54% stable disease (SD)

Phase 3 trial under way studying MK-6482 vs. everolimus in patients with advanced 2L RCC who have progressed following treatment with PD-1/PD-L1 combined with VEGF targeted therapy

Areas of the Body Affected by von Hippel-Lindau Disease



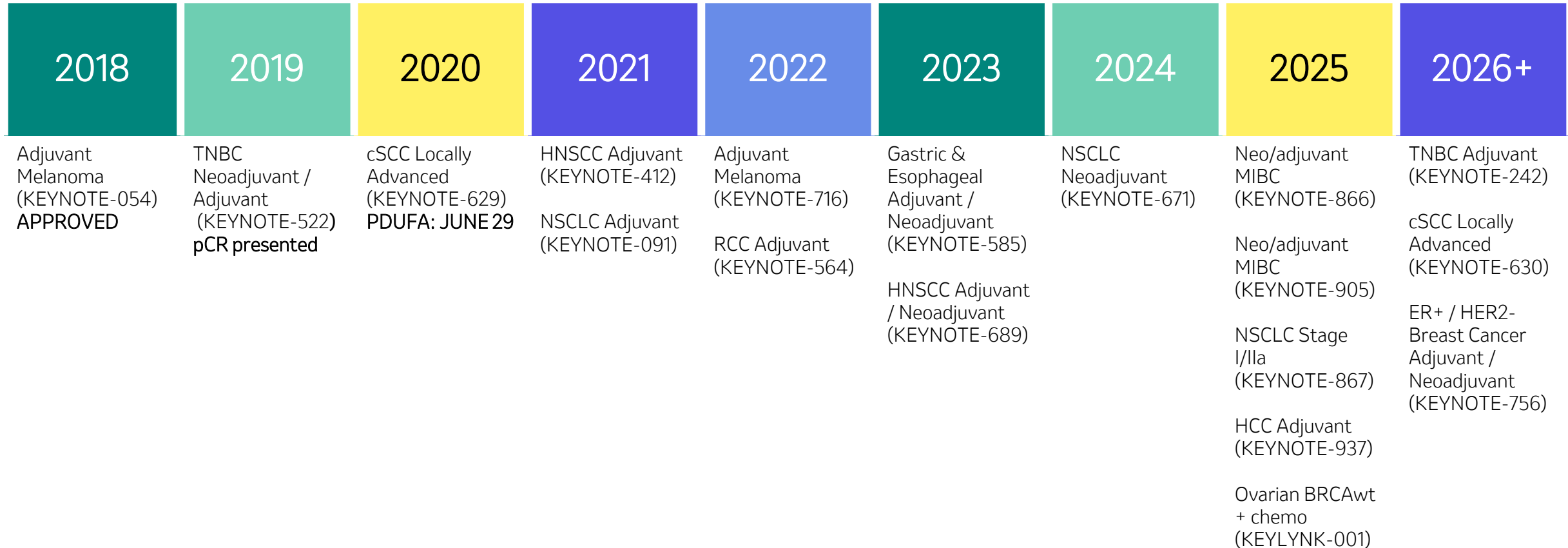
Benign Tumors

- CNS Hemangioblastoma (70-80%)
- Retinal Hemangioblastoma (50-60%)
- Pancreatic Cyst and Cystadenoma (50%)
- Endolymphatic Sac Tumor of the middle ear (10-25%)
- Tumor of the Epididymis or Broad Ligament (10-60%)

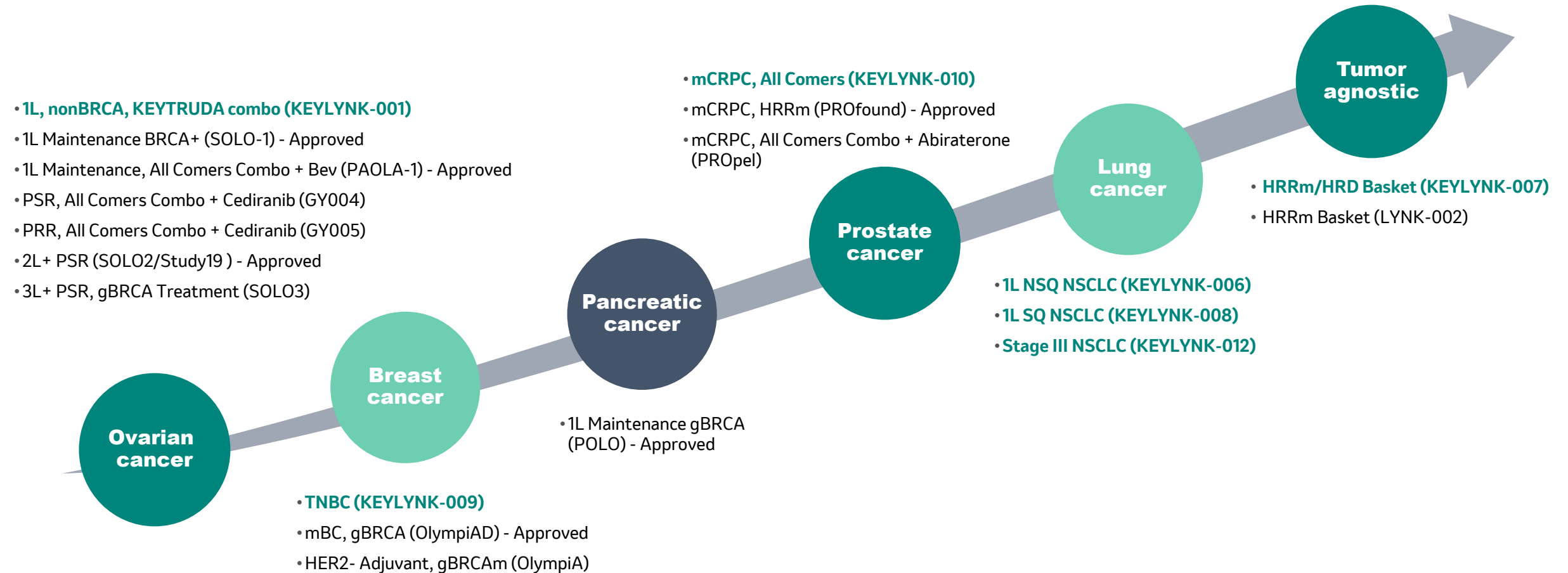
Advanced/Malignant Tumors

- RCC (25-60%)
- Pheochromocytoma (10-20%)
- Pancreatic NET (10-20%)

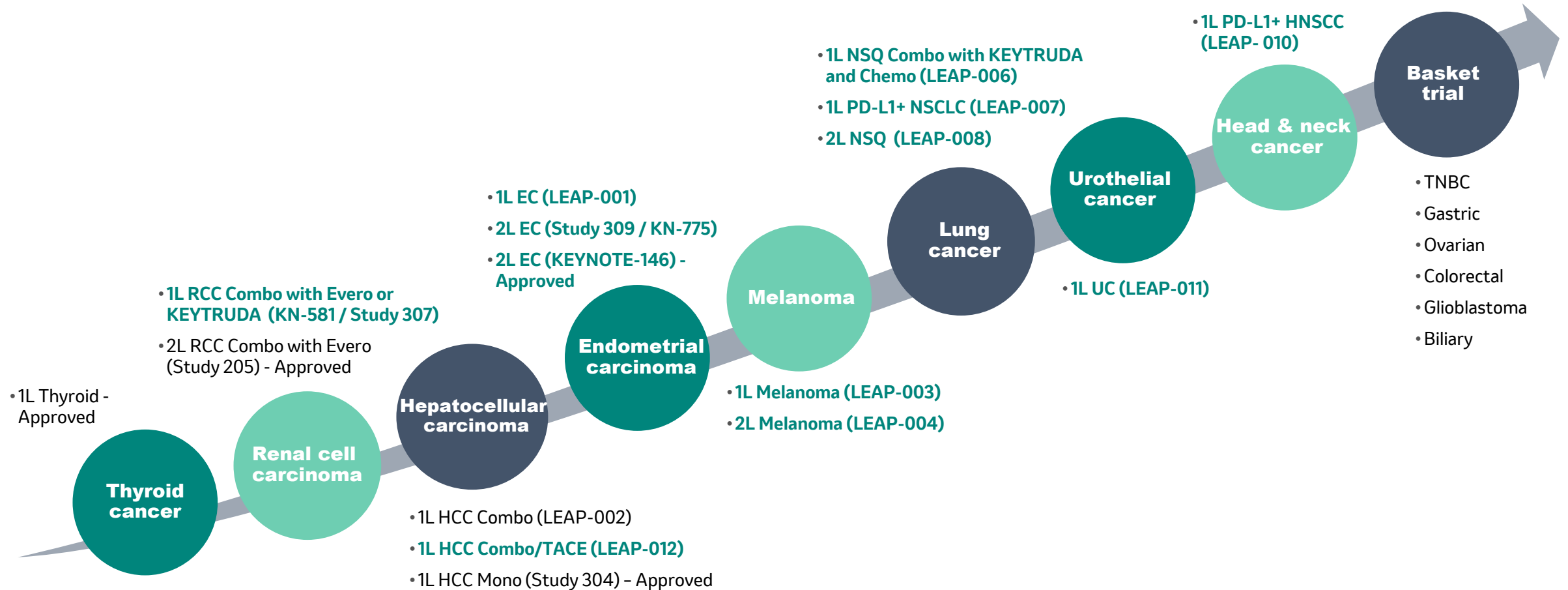
KEYTRUDA is being explored in a broad adjuvant program with 20 registrational studies ongoing



Extensive KEYTRUDA+LYNPARZA combination (KEYLYNK) and LYNPARZA monotherapy programs



Extensive KEYTRUDA+LENVIMA combination (LEAP) and LENVIMA monotherapy programs



Early oncology pipeline* includes more than 20 investigational immuno-therapeutic candidates – including novel combinations with KEYTRUDA

		Pre-Clinical	Phase 1	Phase 1/2	Phase 2
Immune Agonists	<i>Molecules designed to stimulate immune system functions, such as enhancing the activity of anti-tumor immune cells</i>		RIG-I receptor (MK-4621)		CD-27 agonist (MK-5890)
					STING agonist (MK-1454)
Inhibition of Negative Immune Regulators	<i>Blocking the action of molecules that suppress the immune system may trigger a more robust anti-tumor response</i>			ILT4 antagonist (MK-4830)	LAG3 (MK-4280)
					CTLA4 (MK-1308)
					TIGIT (MK-7684)
Personalized Cancer Vaccines	<i>Therapeutic vaccines based on patients' specific cancer could potentially prime the immune system to recognize certain characteristics and attack the cancer cells</i>	KRAS (Moderna) (V941 / mRNA-5671)	RNA-based vaccine (Moderna) (V940 / mRNA-4157)		
		KRAS – Taiho/Astex			
Tumor Microenvironment Modulators	<i>Regulating the environment around tumors, including through oncolytic viruses, may influence tumor growth and its interaction with the immune system</i>	TGFβ (Tilos Therapeutics)			HIF-2α Inhibitor (MK-6482)
					V937 oncolytic virus (formerly CAVATAK)
					ERK Inhibitor (MK-8353)
					BTK Inhibitor (MK-1026)
					AKT Inhibitors (MK-7075 & MK-4440)
			CDK 1, 2, 5, 9 (MK-7965)		

*Select compounds only

We have pursued collaborations, licensing agreements, and acquisitions that will increase our ability to provide benefit to cancer patients

Acquisition	Development Program	Development Stage
	Development of novel small molecule therapeutic candidates targeting HIF-2 α for the treatment of patients with cancer and other diseases	Phase 3 in RCC
	Kinase inhibitory discovery and development for treatment of patients with cancer and other diseases	Phase 2 in CLL
	Gain access to an investigational intratumoral and intravenous formulation of the Coxsackievirus Type A21, designed to infect and kill cancer cells	Phase 2 in melanoma
	Portfolio of investigational antibodies modulating TGF β complex for the treatment of cancer, fibrosis and autoimmune disease	Preclinical
	Collaboration for the development of small molecule inhibitors against several drug targets, including the KRAS oncogene	Preclinical

Creating long-term value for patients, employees and shareholders

Next 5 Years

Strong execution driving sustainable revenue growth, meaningful margin expansion and accelerated bottom-line growth



5-10 Years

Rich pipeline addressing areas of high unmet need to drive performance over the next 5 to 10 years



10+ Years

Revitalized discovery efforts and increased expertise in biology to deliver ongoing scientific breakthroughs for decades to come

Anchored by our deep bench of talent, commitment to our mission & focus on breakthrough science and innovation

Q&A

To ask a question on the operator-assisted audio line, press *1.

Note: be sure to mute your computer speakers if you are listening to the audio webcast.