Merck Oncology Overview

ESMO 2016

Investor Call
October 9, 2016

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

This presentation of Merck & Co., Inc., Kenilworth, NJ, USA (the "company") includes "forward-looking statements" within the meaning of the safe harbor provisions of the United States 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 healthcare legislation in the United States and internationally; global trends toward healthcare 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 2015 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).

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Topics we will cover

1. Merck Strategy in Oncology
2. Key Data presented at ESMO 2016
3. Executing Global Launch
4. Q&A

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Merck's Oncology Strategy

Extend and Improve the lives of people worldwide suffering from a wide range of cancers

- Establish KEYTRUDA as foundational treatment in monotherapy and in combination across multiple tumor types
- Explore combinations with standard of care and novel agents including other immune modulators
- Identify patients most likely to benefit from KEYTRUDA through evaluation of biomarkers

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Significant progress made in the last 5 years since KEYTRUDA entered the clinic

Progress since ASCO 2016

- ✓ First anti-PD-1 to market in the U.S.
- ✓ Approvals in NSCLC (2L+ PD-L1+), Melanoma (1L+), H&N (2L+)
- ✓ Demonstrated overall survival as Monotherapy
  - vs. ipilimumab in melanoma
  - vs. docetaxel in 2L PD-L1+ NSCLC
  - vs. platinum doublet in 1L PD-L1 50%+ NSCLC
- ✓ Demonstrated Progression Free Survival in combination with Chemo
  - vs. platinum doublet in 1L Non squamous NSCLC
- ✓ Launching in >50 markets globally (melanoma) / >30 markets (lung)
- ✓ Clinical activity in more than 20 tumor types
- ✓ More than 30 registration-enabling studies ongoing
- ✓ FDA Breakthrough Designations
  - melanoma, 2L NSCLC, MSI-H, Hodgkin Lymphoma and 1L NSCLC

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The Broadest Program of Any Anti-PD-1/PD-L1 Drug

More than 350 trials in more than 30 tumors; More than 100 Combination Trials

EARLY DEVELOPMENT	REGISTRATION	
GITR (MK-4166)	**Melanoma** 1L (KN006) 2L (KN002) Adjuvant (KN053/054) 1L + T-Vec (Amgen) 1L + IDO-1 (Incyte)	**Head and Neck** 1L + chemo/cetuximab (KN048) 2L (KN040) 3L (KN055) 2L Nasopharyngeal (KN122)
GITR (MK-1248)		
LAG-3 (MK-4280)	**NSCLC** 1L (KN024) 1L (KN042) 1L + pemetrexed non sq (KN189) 1L + pacitaxel sq(KN407) 2/3L (KN010) Adjuvant (KN091)	**Hematological Malignancies** 3L HL (KN087) rrHL + brent. ved. (KN204) 2L NHL rrPMBCL (KN170) 1L MM + len/dex (KN185) 3L rrMM + pom/dex (KN183)
IL-10 (MK-1966)		
CEACAM1 (MK-6018)		
CDK 1,2,5,9 (MK-7965)	**Gastrointestinal** 1L Gastric + chemo (KN062) 2L Gastric (KN061) 3L Gastric (KN059) 2L Esophageal (KN181) 3L Esophageal (KN180) 1L CRC MSI-high (KN177) 3L CRC MSI-high (KN164)	**Bladder** 1L (KN052) 1L (KN361) 2L NIBC (KN057) 2L (KN045)
BET-Bromodomain (MK-8628)		
PI3K Delta (MK-1822)		**Triple Negative Breast** 2L+ (KN086) 2L/3L (KN119)
Additional I-O Preclinical Programs	**Hepatocellular** 2L (KN224) 2L (KN240)	**Other** 2L Ovarian (KN100) 2L Prostate (KN199) 1L Renal Cell Carcinoma (KN427) 1L + Axitinib Renal Cell Carcinoma (KN426)

KEYTRUDA Clinical Programs

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Several KEYTRUDA studies in multiple tumor types have been presented during ESMO

Summary of major KEYTRUDA sessions only—in total, findings from 30 studies across 12 different cancer types have been presented at ESMO 2016

Lung

- **Keynote-024: vs. Chemo as 1L NSCLC (TPS≥50%) - Oral**
- **Keynote-021G: + Carboplatin and Pematrexed as 1L - Oral**
- Keynote-001,010,024: Prevalence of PD-L1 expression - Poster
- Keynote-010: vs. Docetaxal NSCLC – Longer follow-up - Poster
- Keynote-098: Safety and activity in combo with Ramucirumab - Poster

GU

- **Keynote-052: 1L bladder - Oral**
- Keynote-028: Prostate adenocarcinoma - Poster
- Keynote-035: Combo with Axitinib in renal cell carcinoma - Poster

Melanoma and Head & neck

- Keynote-002: OS data in Melanoma – Longer follow-up - Oral
- Keynote-055: Head and Neck after Platinum and Cetuximab - Poster

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What we expect over the next 12 months

- **Many potential new filings across multiple tumor types**
- **Anticipated approvals for NSCLC in multiple jurisdictions**
- **Additional novel combination data**
- **Additional internal I-O targets moving into the clinic**

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Lung

Keynote-024: vs. Chemo as 1L NSCLC (TPS≥50%)

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ORIGINAL ARTICLE

Pembrolizumab versus Chemotherapy for PD-L1–Positive Non–Small-Cell Lung Cancer

Martin Reck, M.D., Ph.D., Delvys Rodríguez-Abreu, M.D., Andrew G. Robinson, M.D., Rina Hui, M.B., B.S., Ph.D., Tibor Csőszi, M.D., Andrea Fülöp, M.D., Maya Gottfried, M.D., Nir Peled, M.D., Ph.D., Ali Tafreshi, M.D., Sinead Cuffe, M.D., Mary O'Brien, M.D., Suman Rao, M.D., Katsuyuki Hotta, M.D., Ph.D., Melanie A. Leiby, Ph.D., Gregory M. Lubiniecki, M.D., Yue Shentu, Ph.D., Reshma Rangwala, M.D., Ph.D., and Julie R. Brahmer, M.D., for the KEYNOTE-024 Investigators*

ABSTRACT

BACKGROUND

Pembrolizumab is a humanized monoclonal antibody against programmed death 1 (PD-1) that has antitumor activity in advanced non–small-cell lung cancer (NSCLC), with increased activity in tumors that express programmed death ligand 1 (PD-L1).

METHODS

In this open-label, phase 3 trial, we randomly assigned 305 patients who had previously untreated advanced NSCLC with PD-L1 expression on at least 50% of tumor cells and no sensitizing mutation of the epidermal growth factor receptor gene or translocation of the anaplastic lymphoma kinase gene to receive either pembrolizumab (at a fixed dose of 200 mg every 3 weeks) or the investigator's choice of platinum-based chemotherapy. Crossover from the chemotherapy group to the pembrolizumab group was permitted in the event of disease progression. The primary end point, progression-free survival, was assessed by means of blinded, independent, central radiologic review. Secondary end points were overall survival, objective response rate, and safety.

RESULTS

Median progression-free survival was 10.3 months (95% confidence interval [CI], 6.7 to not reached) in the pembrolizumab group versus 6.0 months (95% CI, 4.2 to 6.2) in the chemotherapy group (hazard ratio for disease progression or death, 0.50; 95% CI, 0.37 to 0.68; P<0.001). The estimated rate of overall survival at 6 months was 80.2% in the pembrolizumab group versus 72.4% in the chemotherapy group (hazard ratio for death, 0.60; 95% CI, 0.41 to 0.89; P=0.005). The response rate was higher in the pembrolizumab group than in the chemotherapy group (44.8% vs. 27.8%), the median duration of response was longer (not reached [range, 1.9+ to 14.5+ months] vs. 6.3 months [range, 2.1+ to 12.6+]), and treatment-related adverse events of any grade were less frequent (occurring in 73.4% vs. 90.0% of patients), as were grade 3, 4, or 5 treatment-related adverse events (26.6% vs. 53.3%).

CONCLUSIONS

EDITORIAL

Divide and Conquer to Treat Lung Cancer

Bruce E. Johnson, M.D.

The tactic of divide and conquer, which has been attributed to Philip of Macedonia and Julius Caesar in warfare, is transforming the treatment of lung cancer. Biomarkers are being used to identify subsets of patients with lung cancer who can receive initial treatment with a checkpoint inhibitor or a targeted agent. The results of the KEYNOTE-024 trial, now reported in the *Journal* by Reck and colleagues,[1] show therapeutic benefits for the checkpoint inhibitor pembrolizumab for the subset of patients with non–small-cell lung cancer (NSCLC) who have a high level of programmed death ligand 1 (PD-L1) expression, which is defined by a PD-L1 tumor proportion score of 50% or greater (i.e., membranous PD-L1 expression on at least 50% of tumor cells, regardless of the staining intensity); this subset represented 30% of the screened KEYNOTE population. The patients treated with pembrolizumab achieved longer progression-free survival than did patients treated with chemotherapy (hazard ratio for disease progression or death, 0.50), as well as longer overall survival (hazard ratio for death, 0.60). In addition, grade 3, 4, or 5 treatment-related adverse events were half as frequent in the patients treated with pembrolizumab as in those treated with chemotherapy, a finding that further favors treatment with the checkpoint inhibitor over chemotherapy.

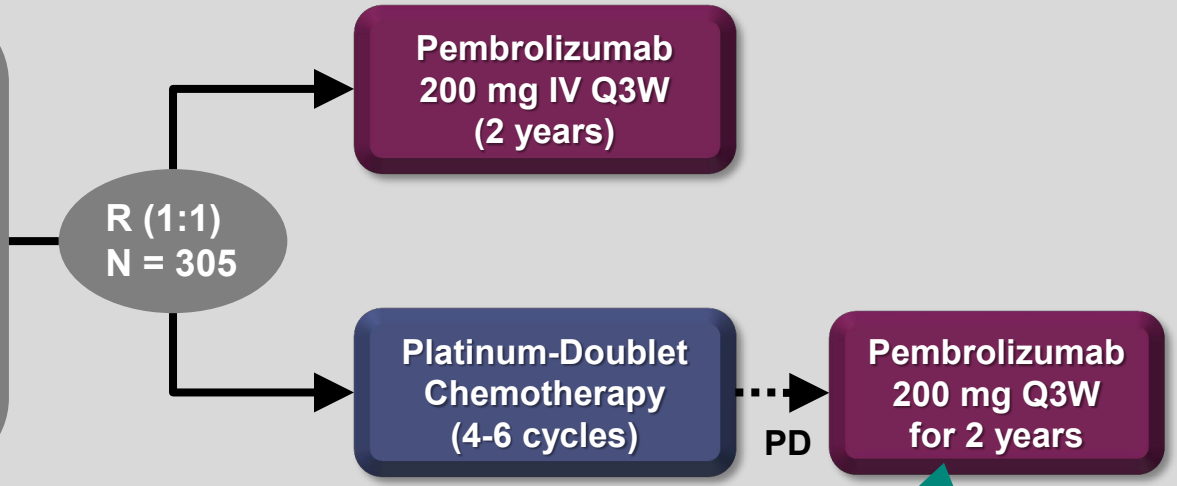
Earlier studies showed that previously treated patients with either nonsquamous or squamous lung cancers who were treated with the checkpoint inhibitors pembrolizumab and nivolumab had a survival advantage over those who were of these therapies.[2-4] In the study favoring pembrolizumab,[4] patients needed to have PD-L1 expression on at least 1% of tumor cells, whereas in the studies favoring nivolumab,[2,3] patients were not selected on the basis of PD-L1 expression. The trial conducted by Reck and colleagues may establish a new standard of care for previously untreated patients with NSCLC and a PD-L1 tumor proportion score of 50% or greater.

FDA-approved targeted agents that are being used as initial treatment for patients with NSCLC include gefitinib, erlotinib, and afatinib for the 15% of patients with mutations of epidermal growth factor receptor (*EGFR*), as well as crizotinib for both the 5% with rearrangements of anaplastic lymphoma kinase (*ALK*) and the 1% with rearrangements involving the gene encoding the ROS1 proto-oncogene receptor tyrosine kinase (*ROS1*).[5-9] The patients who participated in the KEYNOTE-024 trial had clinical characteristics that were different from those of the patients who participated in the trials of these other targeted agents. The majority of the patients in the KEYNOTE-024 trial were men, more than 90% were current or former smokers, and approximately 20% had squamous lung cancer. In the other trials,[5-9] approximately 90% of the three oncogenic drivers (*EGFR* mutations or *ALK* or *ROS1* rearrangements) were found in patients with adenocarcinomas, and the majority of those patients were women and had never smoked. In addition to differences in the patient characteristics, the foremost difference between the

KEYNOTE-024 Study Design and Key End-Points

Study Design

Key Eligibility criteria
- Untreated stage IV NSCLC
- PD-L1 TPS ≥50%
- ECOG PS 0-1
- No activating EGFR mutation or ALK translocation
- No untreated brain metastases
- No active autoimmune disease requiring systemic therapy



Key end-points
Primary: PFS (RECIST v1.1 per blinded, independent central review)
Secondary: OS, ORR, safety
Exploratory: DOR

50% crossover in ITT population
54% crossover excluding ongoing pts

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KEYNOTE-024 Baseline Characteristics

	Pembro N = 154	Chemo N = 151
Median age (range), y	64.5 (33-90)	66.0 (38-85)
Men, n (%)	92 (60)	95 (63)
Enrolled in east Asia	21 (14)	19 (13)
ECOG PS 1, n (%)	99 (64)	98 (65)
Squamous histology, n (%)	29 (19)	27 (18)
Smoking status,[a] n (%)		
Current	34 (22)	31 (21)
Former	115 (75)	101 (67)
Never	5 (3)	19 (13)
Brain metastases, n (%)	18 (12)	10 (7)

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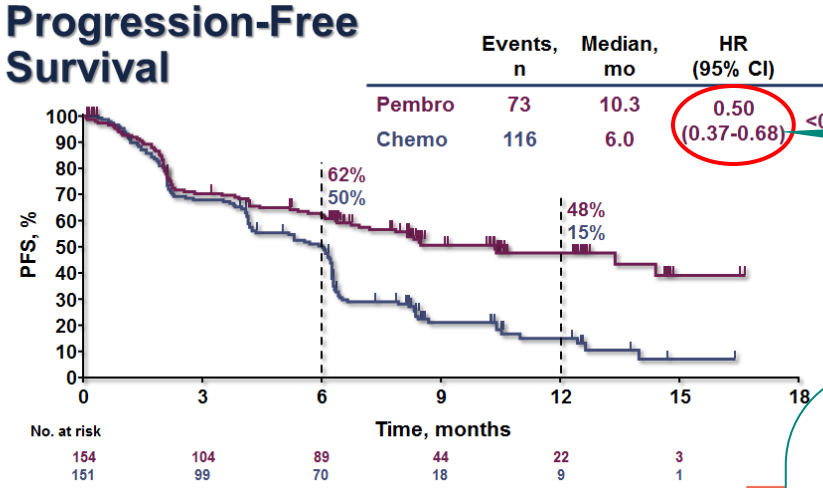
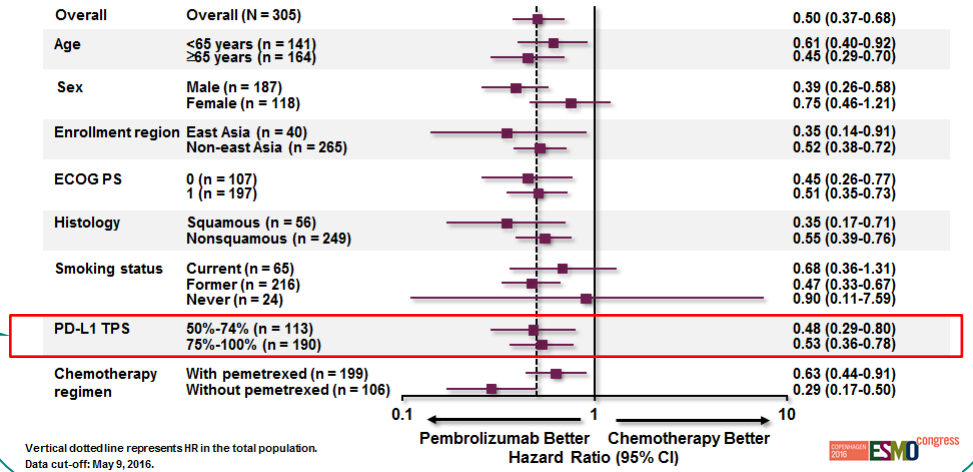
KEYNOTE-024 Progression-Free Survival



50% risk reduction of disease progression

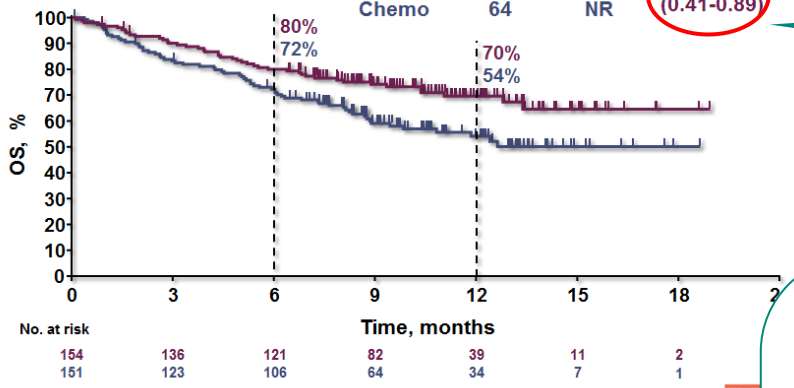


No difference in PFS between PD-L1 50-75% vs. PD-L1 75-100%

KEYNOTE-024 Overall Survival and Objective Response

Overall Survival

	Events, n	Median, mo	HR (95% CI)	P
Pembro	44	NR	0.60 (0.41-0.89)	0.005
Chemo	64	NR		

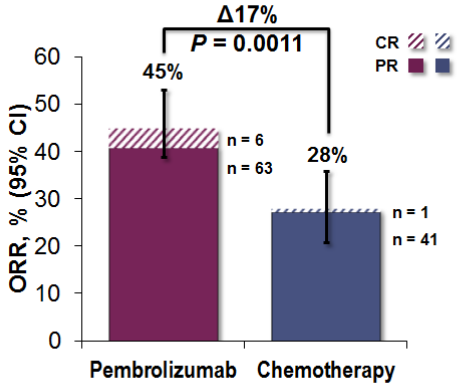


Data cut-off: May 9, 2016.

40% risk reduction of death

50% crossover in ITT population
54% crossover excluding ongoing pts

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+)

Assessed per RECIST v1.1 by blinded, independent central review.
Data cut-off: May 9, 2016.

KEYNOTE-024 Exposure and AE Summary

	Pembrolizumab N = 154	Chemotherapy N = 150
Exposure, median (range)	7.0 mo (1 d-18.7 mo)	3.5 mo (1 d-16.8 mo)
Treatment-related AEs, n (%)	113 (73)	135 (90)
Grade 3-4	40 (26)	77 (51)
Serious	33 (21)	31 (21)
Led to discontinuation	11 (7)	16 (11)
Led to death	1 (<1)	3 (2)

Data cut-off: May 9, 2016.

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Lung

Keynote-021G: + Carboplatin and Pemetrexed in 1L

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Carboplatin and pemetrexed with or without pembrolizumab for advanced, non-squamous non-small-cell lung cancer: a randomised, phase 2 cohort of the open-label KEYNOTE-021 study

*Corey J Langer, Shirish M Gadgeel, Hossein Borghaei, Vassiliki A Papadimitrakopoulou, Amita Patnaik, Steven F Powell, Ryan D Gentzler, Renato G Martins, James P Stevenson, Shadia I Jalal, Amit Panwalkar, James Chih-Hsin Yang, Matthew Gubens, Lecia V Sequist, Mark M Awad, Joseph Fiore, Yang Ge, Harry Raftopoulos, Leena Gandhi, for the KEYNOTE-021 investigators**

Summary

Background Limited evidence exists to show that adding a third agent to platinum-doublet chemotherapy improves efficacy in the first-line advanced non-small-cell lung cancer (NSCLC) setting. The anti-PD-1 antibody pembrolizumab has shown efficacy as monotherapy in patients with advanced NSCLC and has a non-overlapping toxicity profile with chemotherapy. We assessed whether the addition of pembrolizumab to platinum-doublet chemotherapy improves efficacy in patients with advanced non-squamous NSCLC.

Methods In this randomised, open-label, phase 2 cohort of a multicohort study (KEYNOTE-021), patients were enrolled at 26 medical centres in the USA and Taiwan. Patients with chemotherapy-naive, stage IIIB or IV, non-squamous NSCLC without targetable *EGFR* or *ALK* genetic aberrations were randomly assigned (1:1) in blocks of four stratified by PD-L1 tumour proportion score (<1% vs ≥1%) using an interactive voice-response system to 4 cycles of pembrolizumab 200 mg plus carboplatin area under curve 5 mg/mL per min and pemetrexed 500 mg/m² every 3 weeks followed by pembrolizumab for 24 months and indefinite pemetrexed maintenance therapy or to 4 cycles of carboplatin and pemetrexed alone followed by indefinite pemetrexed maintenance therapy. The primary endpoint was the proportion of patients who achieved an objective response, defined as the percentage of patients with radiologically confirmed complete or partial response according to Response Evaluation Criteria in Solid Tumors version 1.1 assessed by masked, independent central review, in the intention-to-treat population, defined as all patients who were allocated to study treatment. Significance threshold was p<0·025 (one sided). Safety was assessed in the as-treated population, defined as all patients who received at least one dose of the assigned study treatment. This trial, which is closed for enrolment but continuing for follow-up, is registered with ClinicalTrials.gov, number NCT02039674.

Findings Between Nov 25, 2014, and Jan 25, 2016, 123 patients were enrolled; 60 were randomly assigned to the pembrolizumab plus chemotherapy group and 63 to the chemotherapy alone group. 33 (55%; 95% CI 42–68) of 60 patients in the pembrolizumab plus chemotherapy group achieved an objective response compared with 18 (29%; 18–41) of 63 patients in the chemotherapy alone group (estimated treatment difference 26% [95% CI 9–42%]; p=0·0016). The incidence of grade 3 or worse treatment-related adverse events was similar between groups (23 [39%] of 59 patients in the pembrolizumab plus chemotherapy group and 16 [26%] of 62 in the chemotherapy alone group). The most common grade 3 or worse treatment-related adverse events in the pembrolizumab plus chemotherapy group

Lancet Oncol 2016

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*Investigators listed in the appendix (p 2)

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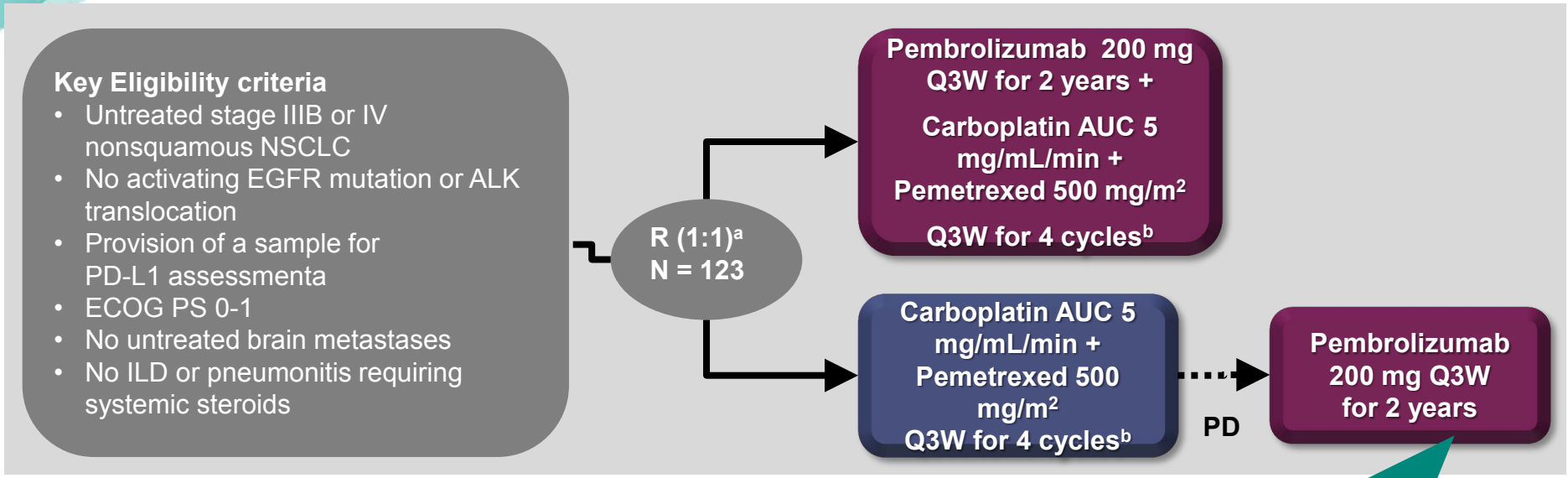
KEYNOTE-021 Cohort G Study Design



Key end-points

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

Key secondary: PFS

Other secondary: OS, safety

Exploratory: Relationship between antitumor activity and PD-L1 TPS

51% crossover in ITT population
73% crossover excluding ongoing pts

[a]Randomization was stratified by PD-L1 TPS <1% vs ≥1%.
[b]Indefinite maintenance therapy with pemetrexed 500 mg/m² Q3W permitted.

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KEYNOTE-021 Cohort G Baseline Characteristics

	Pembro + Chemo N = 60	Chemo Alone N = 63
Median age (range), y	62.5 (40-77)	66.0 (37-80)
Women, n (%)	38 (63)	37 (59)
ECOG PS 1, n (%)	35 (58)	34 (54)
Adenocarcinoma histology, n (%)	58 (97)	55 (87)
Stage IV disease, n (%)	59 (98)	60 (95)
Smoking status, n (%)		
Current or former	45 (75)	54 (86)
Never	15 (25)	9 (14)
Stable brain metastases, n (%)	9 (15)	6 (10)
PD-L1 TPS, n (%)		
<1%	21 (35)	23 (37)
1%-49%	19 (32)	23 (37)
≥50%	20 (33)	17 (27)

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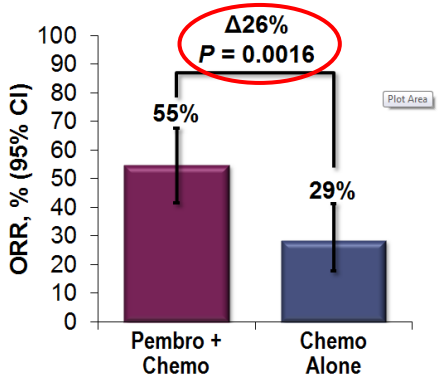
KEYNOTE-021 Cohort G Overall Response and by PD-L1 TPS

ORR nearly doubled with KEYTRUDA combo vs. chemo alone

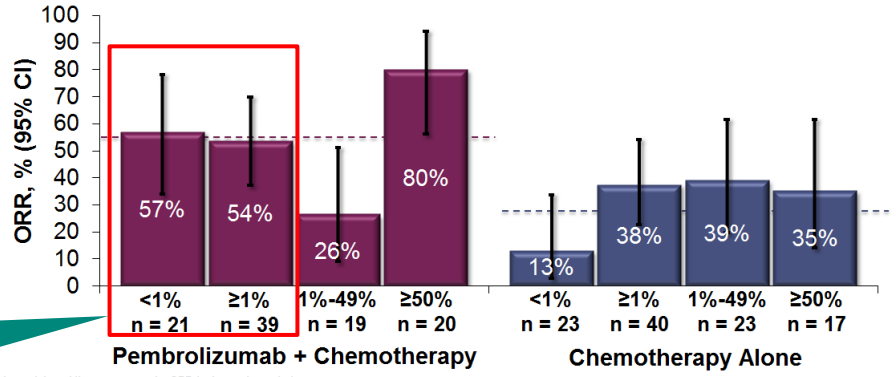
Objective Response



	Pembro + Chemo Responders n = 33	Chemo Alone Responders n = 18
TTR, mo median (range)	1.5 (1.2-12.3)	2.7 (1.1-4.7)
DOR, mo median (range)	NR (1.4+-13.0+)	NR (1.4+-15.2+)
Ongoing response,[a] n (%)	29 (88)	14 (78)

[a]Alive without subsequent disease progression.
Assessed per RECIST v1.1 by blinded, independent central review.
Data cut-off: August 8, 2016.

Objective Response by PD-L1 TPS



Horizontal dotted lines represent the ORR in the total population.
Assessed per RECIST v1.1 by blinded, independent central review.
Data cut-off: August 8, 2016.

Significant ORR benefit with KEYTRUDA combo in PD-L1 negative and PD-L1 positive patients

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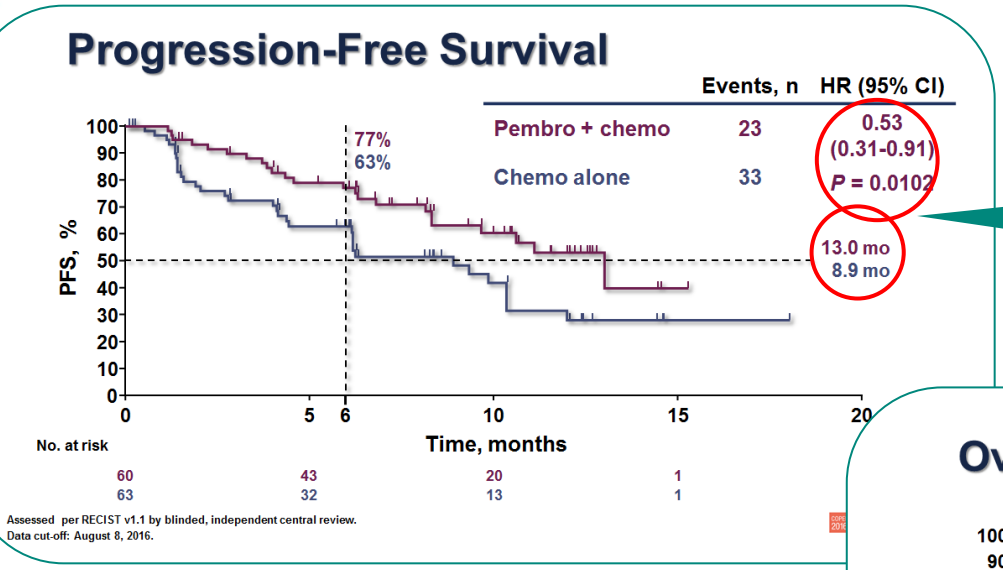
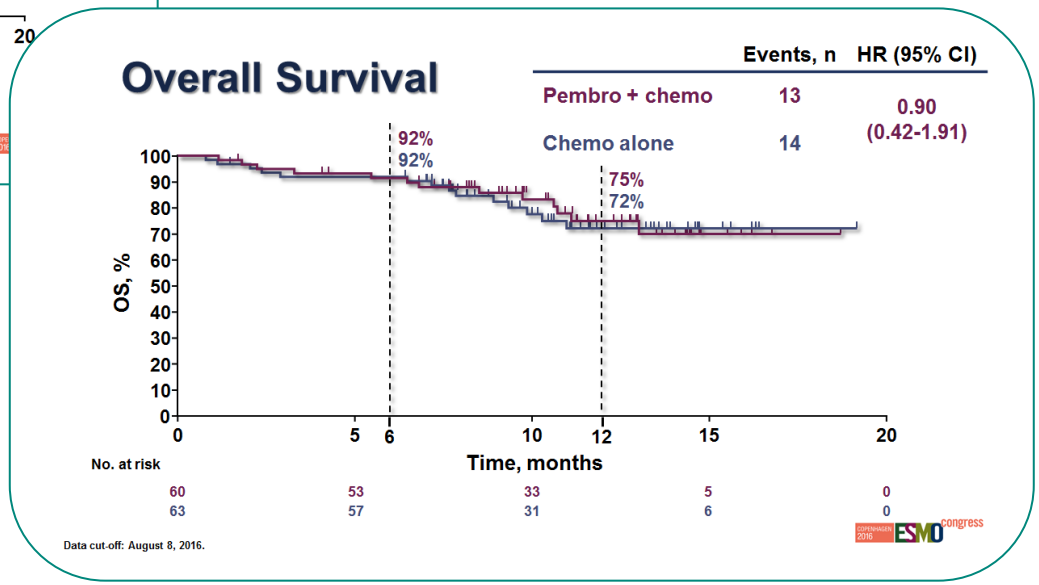
KEYNOTE-021 Cohort G Progression Free Survival and Overall Survival



47% risk reduction of disease progression

Median PFS = 13.0 Months



51% crossover in ITT population
73% crossover excluding ongoing pts

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KEYNOTE-021 Cohort G Exposure and AE Summary

	Pembro + Chemo n = 59	Chemo Alone n = 62
Exposure, median (range)	8.0 mo (1 d - 16.1 mo)	4.9 mo (1 d - 15.3 mo)
Treatment-related AEs, n (%)	55 (93)	56 (90)
Grade 3-4	23 (39)	16 (26)
Led to discontinuation	6 (10)	8 (13)
Led to death	1 (2)	2 (3)

Data cut-off: August 8, 2016.

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Keynote-052: 1L bladder

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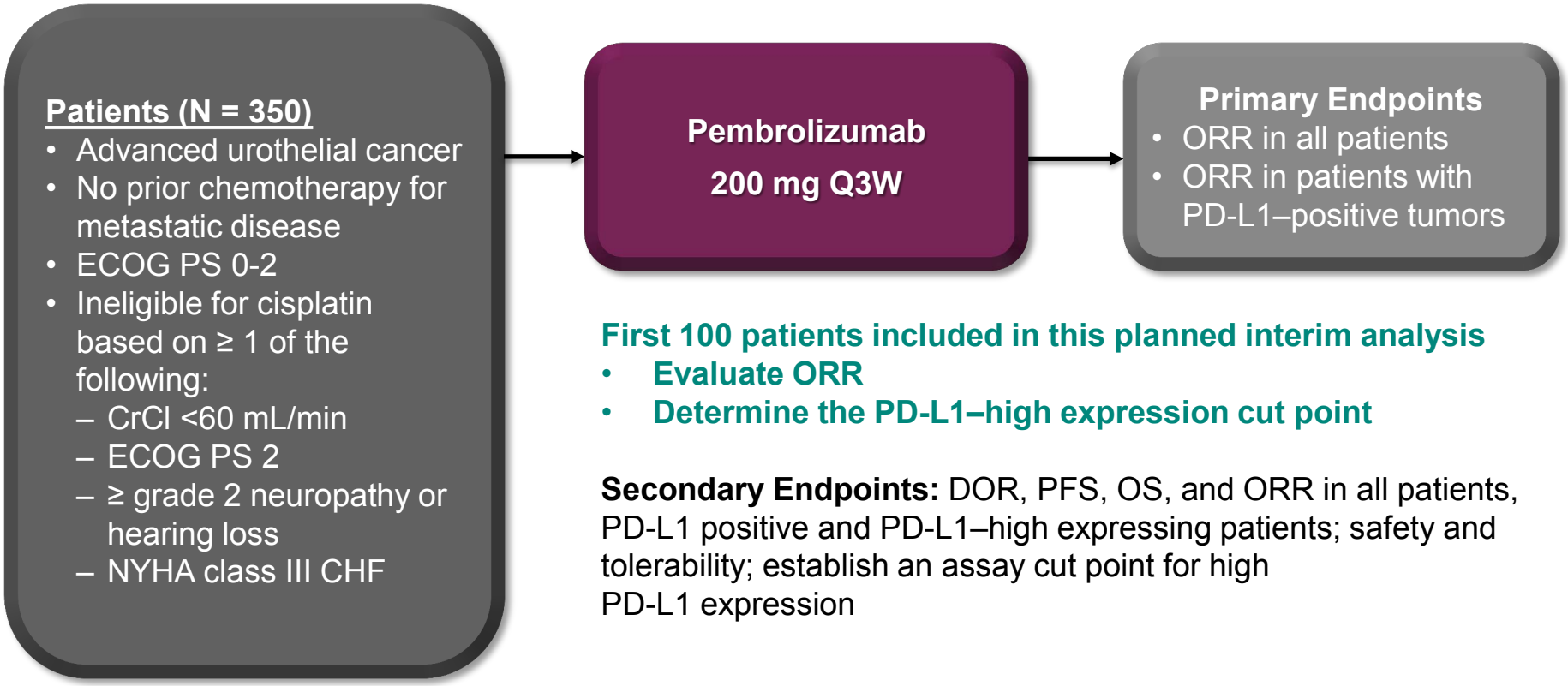
KEYNOTE-052 Study Design



First 100 patients included in this planned interim analysis

- **Evaluate ORR**
- **Determine the PD-L1–high expression cut point**

Secondary Endpoints: DOR, PFS, OS, and ORR in all patients, PD-L1 positive and PD-L1–high expressing patients; safety and tolerability; establish an assay cut point for high PD-L1 expression

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KEYNOTE-052 Baseline Characteristics

Characteristic	N = 100 n (%)
Age, median (range), years	75 (44-94)
≥80 years, n (%)	34 (34)
Male, n (%)	76 (76)
ECOG performance status, n (%)	
0	24 (24)
1	30 (30)
2	45 (45)
Primary tumor location, n (%)	
Upper tract (renal pelvis/ureter)	20 (20)
Lower tract (bladder/urethra)	80 (80)
Metastases location, n (%)	
Lymph node only	10 (10)
Visceral disease[ᵉ]	87 (87)
Liver metastasis	27 (27)

Treatment	N = 100 n (%)
Prior perioperative therapy	13 (13)
Prior BCG therapy	10 (10)
Reason for cisplatin ineligibility	
ECOG PS 2[†]	43 (43)
Renal dysfunction[‡]	45 (45)
Grade ≥2 peripheral neuropathy	2 (2)
Grade ≥2 hearing loss	10 (10)
ECOG PS 2 and renal dysfunction	11 (11)

[ᵉ]Defined as metastases involving liver, lung, bone, any non-lymph node, or soft tissue
[†]ECOG performance status assessed during screening
[‡]Renal dysfunction defined as creatinine clearance < 60 ml/min
Data cutoff date: June 1, 2016

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KEYNOTE-052 Objective Response Rate

Confirmed Objective Response Rate Per RECIST v1.1, Central Review

N = 100	n	% (95% CI)
Objective response rate (CR + PR)	**24**	**24% (16-34)**
Complete response	6	6% (2-13)
Partial response	18	18% (11-27)
Stable disease	15	15% (9-24)
Progressive disease	48	48% (38-58)
Non-evaluable†	3	3% (1-9)
No assessment‡	10	10% (5-18)

Only confirmed responses are reported. CR = complete response; PR = partial response. Data cutoff date: June 1, 2016

†3 patients had stable disease within 6 weeks of treatment start and then discontinued.

‡10 patients dropped out of the study before the 1st post-baseline imaging, either due to clinical progression or AE.

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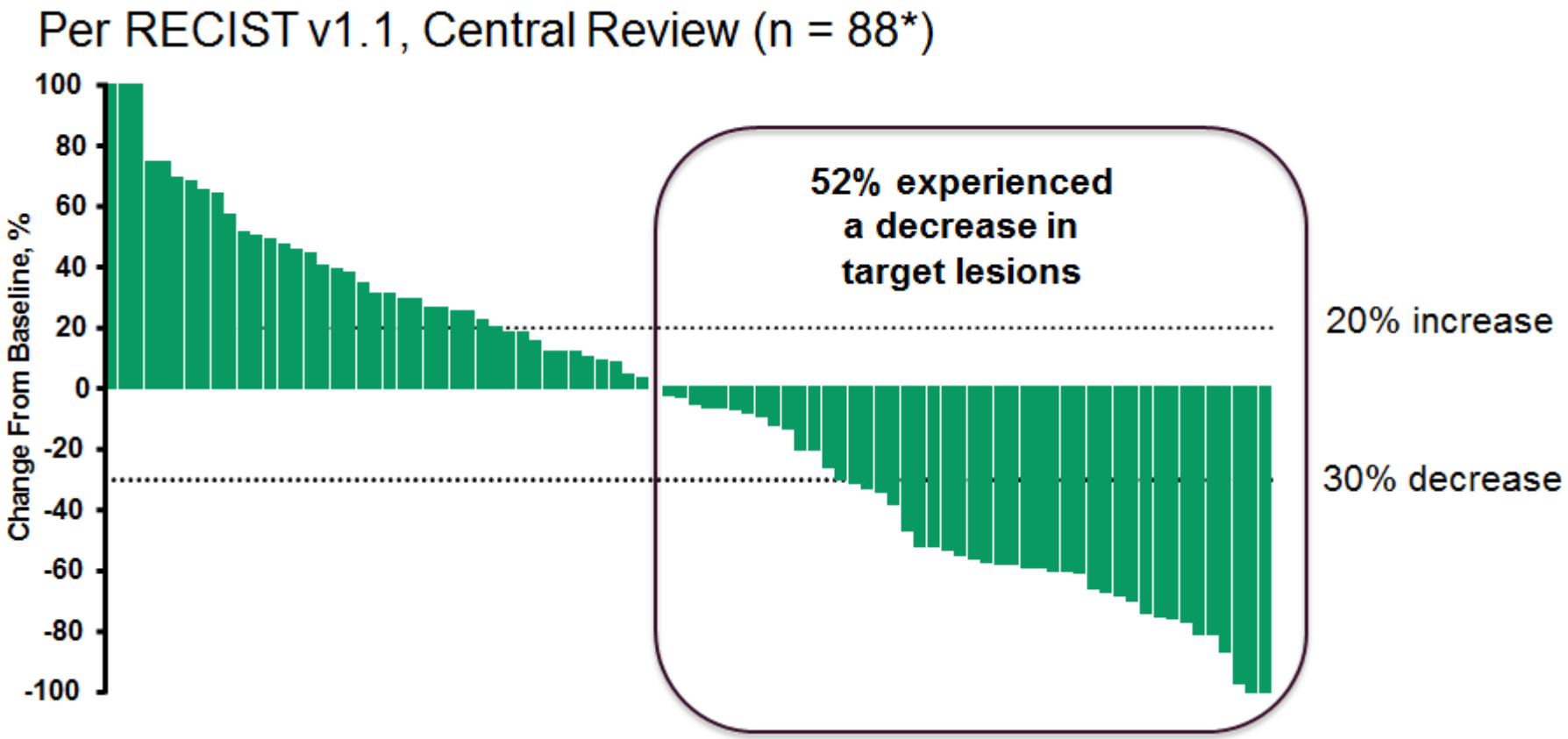
Change in tumor size from baseline



*Includes patients who received ≥1 dose of pembrolizumab, had a baseline scan with measurable disease per RECIST v1.1, and a postbaseline assessment.
Data cutoff date: June 1, 2016

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Treatment Related Adverse Events

Treatment-Related AEs N = 100	Any Grade n (%)	Grade 3-4 n (%)
Any	67 (67)	16 (16)
Fatigue	14 (14)	4 (4)
Pruritus	12 (12)	0
Pyrexia	8 (8)	0
Decreased appetite	7 (7)	1 (1)
Diarrhea	7 (7)	1 (1)
Rash	7 (7)	0
Chills	6 (6)	0
Nausea	6 (6)	0
Muscle spasms	2 (2)	2 (2)

Table includes any-grade treatment-related AEs observed in ≥5 patients and grade 3-4 treatment-related AEs observed in ≥2 patients as reported.
Data cutoff date: June 1, 2016

Immune-Mediated AEs of Special Interest† N = 100	n (%)
Hypothyroidism	
Grade 2	6 (6)
Pneumonitis	
Grade 2	1 (1)
Grade 3	2 (2)
Nephritis	
Grade 3	1 (1)
Colitis	
Grade 3	1 (1)

- **Low discontinuation (5%) due to treatment-related AEs**
- **No deaths due to treatment-related AEs**

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Key takeaways from KEYNOTE studies presented at ESMO

- **KEYTRUDA is the only anti PD-1 to demonstrate superior efficacy in 1L NSCLC treatment in randomized controlled clinical trials**
- **KEYTRUDA should become foundation of treatment for substantial portion of 1L metastatic NSCLC patients either as monotherapy or in combination with chemotherapy**
  - **PD-L1 testing will allow for the selection of patients for whom monotherapy will be optimal in terms of benefit / risk**
- **KEYTRUDA demonstrate significant anti-tumor activity across multiple tumor types, including in 1L Bladder cancer as reported in KN-052 during ESMO**

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Topics we will cover

1. Merck Strategy in Oncology
2. Key Data presented at ESMO 2016
3. Executing Global Launch
4. Q&A

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We are launching KEYTRUDA globally across several tumor types… with more to come

- Executing our strategy as a leader in oncology
- Investing behind launches around the world
  - Melanoma in more than 50 markets
  - Lung in more than 30 markets
  - Head and Neck in the U.S.
- Discussing value of biomarkers with payers and clinicians worldwide to guide meaningful clinical decision-making and optimize patient treatment
- Preparing for potential additional launches, including 1L NSCLC

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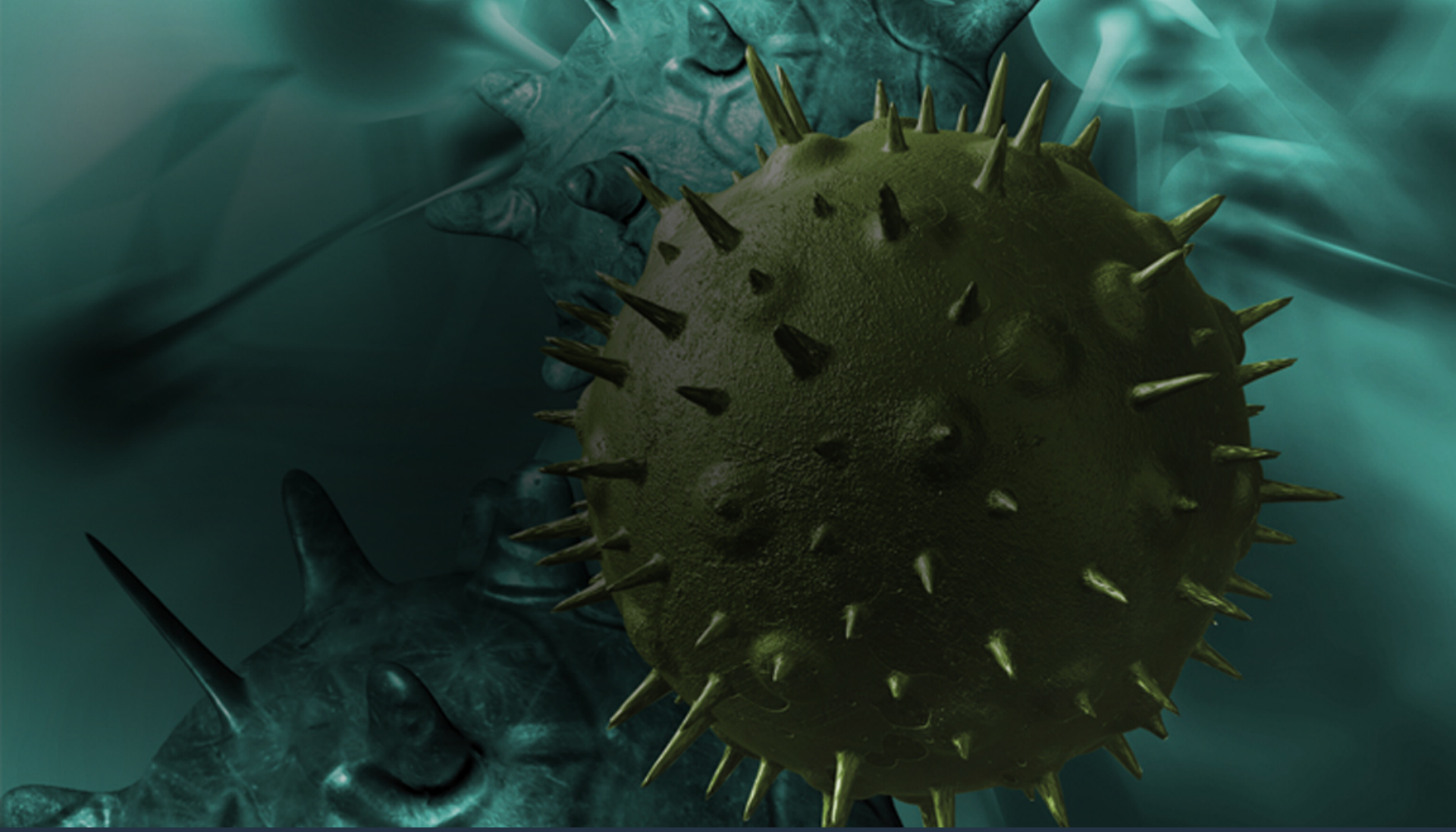

Q&A

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