























































**Table 13: Laboratory Abnormalities Worsening from Baseline Occurring in ≥20% of Patients with SCLC Receiving TECENTRIQ in IMpower133**

Laboratory Abnormality	TECENTRIQ with Carboplatin and Etoposide <sup>2</sup>		Placebo with Carboplatin and Etoposide <sup>2</sup>	
	All Grades <sup>1</sup> (%) <sup>2</sup>	Grades 3–4 <sup>1</sup> (%) <sup>2</sup>	All Grades <sup>1</sup> (%) <sup>2</sup>	Grades 3–4 <sup>1</sup> (%) <sup>2</sup>
<b>Hematology</b>				
Anemia	94	17	93	19
Neutropenia	73	45	76	48
Thrombocytopenia	58	20	53	17
Lymphopenia	46	14	38	11
<b>Chemistry</b>				
Hyperglycemia	67	10	65	8
Increased Alkaline Phosphatase	38	1	35	2
Hyponatremia	34	15	33	11
Hypoalbuminemia	32	1	30	0
Decreased TSH <sup>3</sup>	28	NA <sup>3</sup>	15	NA <sup>3</sup>
Hypomagnesemia	31	5	35	6
Hypocalcemia	26	3	28	5
Increased ALT	26	3	31	1
Increased AST	22	1	21	2
Increased Blood Creatinine	22	4	15	1
Hyperphosphatemia <sup>3</sup>	21	NA <sup>3</sup>	23	NA <sup>3</sup>
Increased TSH <sup>3</sup>	21	NA <sup>3</sup>	7	NA <sup>3</sup>

584  
585  
586  
587  
588<sup>1</sup> Graded per NCI CTCAE v4.0<sup>2</sup> Each test incidence is based on the number of patients who had both baseline and at least one on-study laboratory measurement available: TECENTRIQ (range: 181-193); Placebo (range: 181-196)<sup>3</sup> NA= Not applicable. NCI CTCAE v4.0 does not include these laboratories.**589 6.2 Immunogenicity**

590 As with all therapeutic proteins, there is a potential for immunogenicity. The detection of  
591 antibody formation is highly dependent on the sensitivity and specificity of the assay.  
592 Additionally, the observed incidence of antibody (including neutralizing antibody) positivity in  
593 an assay may be influenced by several factors including assay methodology, sample handling,  
594 timing of sample collection, concomitant medications, and underlying disease. For these reasons,  
595 comparison of the incidence of antibodies to atezolizumab in the studies described above with  
596 the incidence of antibodies in other studies or to other products may be misleading.

597 Among 565 patients with NSCLC in OAK, 30% tested positive for treatment-emergent anti-drug  
598 antibodies (ADA) at one or more post-dose time points. The median onset time to ADA  
599 formation was 3 weeks. The ability of these binding ADA to neutralize atezolizumab is  
600 unknown. Patients who tested positive for treatment-emergent ADA also had decreased systemic  
601 atezolizumab exposure [see *Clinical Pharmacology (12.3)*]. Exploratory analyses showed that  
602 the subset of patients who were ADA positive by week 4 (21%; 118/560) appeared to have less  
603 efficacy (effect on overall survival) as compared to patients who tested negative for treatment-  
604 emergent ADA by week 4 [see *Clinical Studies (14.2)*]. The presence of ADA did not have a  
605 clinically significant effect on the incidence or severity of adverse reactions.

606 Among 275 patients with urothelial carcinoma in IMvigor210 (Cohort 2), 42% tested positive for  
607 treatment-emergent ADA at one or more post-dose time points. Among 111 patients in

608 IMvigor210 (Cohort 1), 48% tested positive for treatment-emergent ADA at one or more post-  
609 dose time points. Patients who tested positive for treatment-emergent ADA also had decreased  
610 systemic atezolizumab exposures. The presence of ADA did not have a clinically significant  
611 effect on the incidence or severity of adverse reactions.

612 Among 364 ADA-evaluable patients with NSCLC who received TECENTRIQ with  
613 bevacizumab, paclitaxel and carboplatin in IMpower150, 36% (n=132) tested positive for  
614 treatment-emergent ADA at one or more post-dose time points and 83% of these 132 patients  
615 tested ADA positive prior to receiving the second dose of atezolizumab. The ability of these  
616 binding ADA to neutralize atezolizumab is unknown. Patients who tested positive for treatment-  
617 emergent ADA had lower systemic atezolizumab exposure as compared to patients who were  
618 ADA negative [see *Clinical Pharmacology (12.3)*]. The presence of ADA did not increase the  
619 incidence or severity of adverse reactions [see *Clinical Studies (14.2)*].

620 Among 434 patients with TNBC in IMpassion130, 13% tested positive for treatment-emergent  
621 ADA at one or more post-dose time points. Among 178 patients in PD-L1 positive subgroup  
622 with TNBC in IMpassion130, 12% tested positive for treatment-emergent ADA at one or more  
623 post-dose time points. Patients who tested positive for treatment-emergent ADA had decreased  
624 systemic atezolizumab exposure [see *Clinical Pharmacology (12.3)*]. There are insufficient  
625 numbers of patients in the PD-L1 positive subgroup with ADA to determine whether ADA alters  
626 the efficacy of atezolizumab. The presence of ADA did not have a clinically significant effect on  
627 the incidence or severity of adverse reactions.

## 628 **8 USE IN SPECIFIC POPULATIONS**

### 629 **8.1 Pregnancy**

#### 630 Risk Summary

631 Based on its mechanism of action [see *Clinical Pharmacology (12.1)*], TECENTRIQ can cause  
632 fetal harm when administered to a pregnant woman. There are no available data on the use of  
633 TECENTRIQ in pregnant women.

634 Animal studies have demonstrated that inhibition of the PD-L1/PD-1 pathway can lead to  
635 increased risk of immune-related rejection of the developing fetus resulting in fetal death (see  
636 *Data*). Advise females of reproductive potential of the potential risk to a fetus.

637 In the U.S. general population, the estimated background risk of major birth defects and  
638 miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

#### 639 Data

##### 640 *Animal Data*

641 Animal reproduction studies have not been conducted with TECENTRIQ to evaluate its effect on  
642 reproduction and fetal development. A literature-based assessment of the effects on reproduction  
643 demonstrated that a central function of the PD-L1/PD-1 pathway is to preserve pregnancy by  
644 maintaining maternal immune tolerance to a fetus. Blockage of PD-L1 signaling has been shown  
645 in murine models of pregnancy to disrupt tolerance to a fetus and to result in an increase in fetal  
646 loss; therefore, potential risks of administering TECENTRIQ during pregnancy include increased  
647 rates of abortion or stillbirth. As reported in the literature, there were no malformations related to  
648 the blockade of PD-L1/PD-1 signaling in the offspring of these animals; however, immune-  
649 mediated disorders occurred in PD-1 and PD-L1 knockout mice. Based on its mechanism of  
650 action, fetal exposure to atezolizumab may increase the risk of developing immune-mediated  
651 disorders or altering the normal immune response.

652 **8.2 Lactation**

653 Risk Summary

654 There is no information regarding the presence of atezolizumab in human milk, the effects on the  
655 breastfed infant, or the effects on milk production. As human IgG is excreted in human milk, the  
656 potential for absorption and harm to the infant is unknown. Because of the potential for serious  
657 adverse reactions in breastfed infants from TECENTRIQ, advise women not to breastfeed during  
658 treatment and for at least 5 months after the last dose.

659 **8.3 Females and Males of Reproductive Potential**

660 Pregnancy Testing

661 Verify pregnancy status in females of reproductive potential prior to initiating TECENTRIQ [*see*  
662 *Use in Specific Populations (8.1)*].

663 Contraception

664 *Females*

665 Based on its mechanism of action, TECENTRIQ can cause fetal harm when administered to a  
666 pregnant woman [*see Use in Specific Populations (8.1)*]. Advise females of reproductive  
667 potential to use effective contraception during treatment with TECENTRIQ and for at least  
668 5 months following the last dose.

669 Infertility

670 *Females*

671 Based on animal studies, TECENTRIQ may impair fertility in females of reproductive potential  
672 while receiving treatment [*see Nonclinical Toxicology (13.1)*].

673 **8.4 Pediatric Use**

674 The safety and effectiveness of TECENTRIQ have not been established in pediatric patients.

675 **8.5 Geriatric Use**

676 Of 2481 patients with urothelial carcinoma, lung cancer, and triple-negative breast cancer who  
677 were treated with TECENTRIQ in clinical studies, 45% were 65 years and over and 11% were  
678 75 years and over. No overall differences in safety or effectiveness were observed between  
679 patients aged 65 years or older, and younger patients.

680 **11 DESCRIPTION**

681 Atezolizumab is a programmed cell death ligand 1 (PD-L1) blocking antibody. Atezolizumab is  
682 an Fc-engineered, humanized, non-glycosylated IgG1 kappa immunoglobulin that has a  
683 calculated molecular mass of 145 kDa.

684 TECENTRIQ (atezolizumab) injection for intravenous use is a sterile, preservative-free,  
685 colorless to slightly yellow solution in single-dose vials. Each 20 mL vial contains 1200 mg of  
686 atezolizumab and is formulated in glacial acetic acid (16.5 mg), L-histidine (62 mg),  
687 polysorbate 20 (8 mg), and sucrose (821.6 mg), with a pH of 5.8. Each 14 mL vial contains 840  
688 mg of atezolizumab and is formulated in glacial acetic acid (11.5 mg), L-histidine (43.4 mg),  
689 polysorbate 20 (5.6 mg), and sucrose (575.1 mg) with a pH of 5.8.

690 **12 CLINICAL PHARMACOLOGY**

691 **12.1 Mechanism of Action**

692 PD-L1 may be expressed on tumor cells and/or tumor infiltrating immune cells and can  
693 contribute to the inhibition of the anti-tumor immune response in the tumor microenvironment.

694 Binding of PD-L1 to the PD-1 and B7.1 receptors found on T cells and antigen presenting cells  
695 suppresses cytotoxic T-cell activity, T-cell proliferation and cytokine production.

696 Atezolizumab is a monoclonal antibody that binds to PD-L1 and blocks its interactions with both  
697 PD-1 and B7.1 receptors. This releases the PD-L1/PD-1 mediated inhibition of the immune  
698 response, including activation of the anti-tumor immune response without inducing antibody-  
699 dependent cellular cytotoxicity. In syngeneic mouse tumor models, blocking PD-L1 activity  
700 resulted in decreased tumor growth.

### 701 **12.3 Pharmacokinetics**

702 Patients' exposure to atezolizumab increased dose proportionally over the dose range of 1 mg/kg  
703 to 20 mg/kg, including a dose of 1200 mg administered every 3 weeks. The clearance (CV%)  
704 was 0.20 L/day (29%), the volume of distribution at steady state was 6.9 L, and the terminal half-  
705 life was 27 days. Steady state was achieved after 6 to 9 weeks following multiple doses. The  
706 systemic accumulation ratio for every 2 weeks administration and every 3 weeks administration  
707 was 3.3- and 1.9- fold, respectively. Atezolizumab clearance was found to decrease over time,  
708 with a mean maximal reduction (CV%) from baseline value of approximately 17% (41%);  
709 however, the decrease in clearance was not considered clinically relevant.

#### 710 Specific Populations

711 Age (21 to 89 years), body weight, sex, albumin levels, tumor burden, region or race, mild or  
712 moderate renal impairment [estimated glomerular filtration rate (eGFR) 30 to 89 mL/min/1.73  
713 m<sup>2</sup>], mild hepatic impairment (bilirubin ≤ ULN and AST > ULN or bilirubin > 1 to 1.5 × ULN  
714 and any AST), level of PD-L1 expression, or performance status had no clinically significant  
715 effect on the systemic exposure of atezolizumab. In OAK, IMpower150 (TECENTRIQ,  
716 bevacizumab, paclitaxel, carboplatin arm only), and IMpassion130 (TECENTRIQ and paclitaxel  
717 protein-bound) atezolizumab clearance in patients who tested positive for treatment-emergent  
718 anti-drug antibodies (ADA) was 25%, 18%, and 22% higher, respectively, as compared to  
719 clearance in patients who tested negative for treatment-emergent ADA.

720 The effect of severe renal impairment or moderate or severe hepatic impairment on the  
721 pharmacokinetics of atezolizumab is unknown.

#### 722 Drug Interaction Studies

723 The drug interaction potential of atezolizumab is unknown.

## 724 **13 NONCLINICAL TOXICOLOGY**

### 725 **13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility**

726 No studies have been performed to test the potential of atezolizumab for carcinogenicity or  
727 genotoxicity.

728 Animal fertility studies have not been conducted with atezolizumab; however, an assessment of  
729 the male and female reproductive organs was included in a 26-week, repeat-dose toxicity study  
730 in cynomolgus monkeys. Weekly administration of atezolizumab to female monkeys at the  
731 highest dose tested caused an irregular menstrual cycle pattern and a lack of newly formed  
732 corpora lutea in the ovaries. This effect occurred at an estimated AUC approximately 6 times the  
733 AUC in patients receiving the recommended dose and was reversible. There was no effect on the  
734 male monkey reproductive organs.

### 735 **13.2 Animal Toxicology and/or Pharmacology**

736 In animal models, inhibition of PD-L1/PD-1 signaling increased the severity of some infections  
737 and enhanced inflammatory responses. M. tuberculosis-infected PD-1 knockout mice exhibit  
738 markedly decreased survival compared with wild-type controls, which correlated with increased

739 bacterial proliferation and inflammatory responses in these animals. PD-L1 and PD-1 knockout  
740 mice and mice receiving PD-L1 blocking antibody have also shown decreased survival following  
741 infection with lymphocytic choriomeningitis virus.

## 742 **14 CLINICAL STUDIES**

### 743 **14.1 Urothelial Carcinoma**

#### 744 Cisplatin-Ineligible Patients with Locally Advanced or Metastatic Urothelial Carcinoma

745 The efficacy of TECENTRIQ was investigated in IMvigor210 (Cohort 1) (NCT02951767), a  
746 multicenter, open-label, single-arm trial that included 119 patients with locally advanced or  
747 metastatic urothelial carcinoma who were ineligible for cisplatin-containing chemotherapy and  
748 were either previously untreated or had disease progression at least 12 months after neoadjuvant  
749 or adjuvant chemotherapy. Patients were considered cisplatin-ineligible if they met any one of  
750 the following criteria at study entry: impaired renal function [creatinine clearance (CLcr) of 30 to  
751 59 mL/min], Eastern Cooperative Oncology Group (ECOG) performance status (PS) of 2,  
752 hearing loss of  $\geq 25$  decibels (dB) at two contiguous frequencies, or Grades 2-4 peripheral  
753 neuropathy. This study excluded patients who had: a history of autoimmune disease; active or  
754 corticosteroid-dependent brain metastases; administration of a live, attenuated vaccine within  
755 28 days prior to enrollment; or administration of systemic immunostimulatory agents within 6  
756 weeks or systemic immunosuppressive medications within 2 weeks prior to enrollment. Patients  
757 received TECENTRIQ 1200 mg as an intravenous infusion every 3 weeks until unacceptable  
758 toxicity or disease progression. Tumor response assessments were conducted every 9 weeks for  
759 the first 54 weeks and every 12 weeks thereafter. Major efficacy outcome measures included  
760 confirmed overall response rate (ORR) as assessed by independent review facility (IRF) using  
761 Response Evaluation Criteria in Solid Tumors (RECIST v1.1), duration of response (DoR) and  
762 overall survival (OS).

763 In this study, the median age was 73 years, 81% were male, and 91% were White. Thirty-five  
764 percent of patients had non-bladder urothelial carcinoma and 66% had visceral metastases.  
765 Eighty percent of patients had an ECOG PS of 0 or 1. Reasons for ineligibility for cisplatin-  
766 containing chemotherapy were: 70% had impaired renal function, 20% had an ECOG PS of 2,  
767 14% had a hearing loss of  $\geq 25$ dB, and 6% had Grades 2-4 peripheral neuropathy at baseline.  
768 Twenty percent of patients had disease progression following prior platinum-containing  
769 neoadjuvant or adjuvant chemotherapy.

770 Tumor specimens were evaluated prospectively using the VENTANA PD-L1 (SP142) Assay at a  
771 central laboratory, and the results were used to define subgroups for pre-specified analyses. Of  
772 the 119 patients, 27% were classified as having PD-L1 expression of  $\geq 5\%$  (defined as PD-L1  
773 stained tumor-infiltrating immune cells [IC] covering  $\geq 5\%$  of the tumor area). The remaining  
774 73% of patients were classified as having PD-L1 expression of  $< 5\%$  (PD-L1 stained tumor-  
775 infiltrating IC covering  $< 5\%$  of the tumor area).

776 Among the 32 patients with PD-L1 expression of  $\geq 5\%$ , median age was 67 years, 81% were  
777 male, 19% female, and 88% were White. Twenty-eight percent of patients had non-bladder  
778 urothelial carcinoma and 56% had visceral metastases. Seventy-two percent of patients had an  
779 ECOG PS of 0 or 1. Reasons for ineligibility for cisplatin-containing chemotherapy were: 66%  
780 had impaired renal function, 28% had an ECOG PS of 2, 16% had a hearing loss  $\geq 25$  dB, and  
781 9% had Grades 2-4 peripheral neuropathy at baseline. Thirty-one percent of patients had disease  
782 progression following prior platinum-containing neoadjuvant or adjuvant chemotherapy.

783 Confirmed ORR in all patients and the two PD-L1 subgroups are summarized in Table 14. The  
784 median follow-up time for this study was 14.4 months. In 24 patients with disease progression  
785 following neoadjuvant or adjuvant therapy, the ORR was 33% (95% CI: 16%, 55%).

**Table 14: Efficacy Results in IMvigor210 (Cohort 1)**

	All Patients	PD-L1 Expression Subgroups	
	N = 119	PD-L1 Expression of < 5% in ICs <sup>1</sup> N = 87	PD-L1 Expression of ≥ 5% in ICs <sup>1</sup> N = 32
<b>Number of IRF-assessed Confirmed Responders</b>	28	19	9
<b>ORR % (95% CI)</b>	23.5% (16.2, 32.2)	21.8% (13.7, 32)	28.1% (13.8, 46.8)
Complete Response (CR) (%)	6.7%	6.9%	6.3%
Partial Response (PR) (%)	16.8%	14.9%	21.9%
<b>Median DoR, months (range)</b>	NR (3.7, 16.6+)	NR (3.7, 16.6+)	NR (8.1, 15.6+)
NR = Not reached + Denotes a censored value <sup>1</sup> PD-L1 expression in tumor-infiltrating immune cells (ICs)			

787

788 IMvigor130 (NCT02807636) is an ongoing multicenter, randomized study in previously  
789 untreated patients with metastatic urothelial carcinoma who are eligible for platinum-containing  
790 chemotherapy. The study contains three arms: TECENTRIQ monotherapy, TECENTRIQ with  
791 platinum-based chemotherapy (i.e., cisplatin or carboplatin with gemcitabine), and platinum-  
792 based chemotherapy alone (comparator). Both cisplatin-eligible and cisplatin-ineligible patients  
793 are included in the study. Tumor specimens were evaluated prospectively using the VENTANA  
794 PD-L1 (SP142) Assay at a central laboratory. The independent Data Monitoring Committee  
795 (iDMC) for the study conducted a review of early data and found that patients classified as  
796 having PD-L1 expression of <5% when treated with TECENTRIQ monotherapy had decreased  
797 survival compared to those who received platinum-based chemotherapy. The iDMC  
798 recommended closure of the monotherapy arm to further accrual of patients with low PD-L1  
799 expression, however, no other changes were recommended for the study, including any change  
800 of therapy for patients who had already been randomized to and were receiving treatment in the  
801 monotherapy arm.

#### 802 Previously Treated Locally Advanced or Metastatic Urothelial Carcinoma

803 The efficacy of TECENTRIQ was investigated in IMvigor210 (Cohort 2) (NCT02108652), a  
804 multicenter, open-label, single-arm trial that included 310 patients with locally advanced or  
805 metastatic urothelial carcinoma who had disease progression during or following a platinum-  
806 containing chemotherapy regimen or who had disease progression within 12 months of treatment  
807 with a platinum-containing neoadjuvant or adjuvant chemotherapy regimen. This study excluded  
808 patients who had: a history of autoimmune disease, active or corticosteroid-dependent brain  
809 metastases, administration of a live, attenuated vaccine within 28 days prior to enrollment, or  
810 administration of systemic immunostimulatory agents within 6 weeks or systemic  
811 immunosuppressive medications within 2 weeks prior to enrollment. Patients received  
812 TECENTRIQ 1200 mg intravenously every 3 weeks until unacceptable toxicity or either  
813 radiographic or clinical progression. Tumor response assessments were conducted every 9 weeks  
814 for the first 54 weeks and every 12 weeks thereafter. Major efficacy outcome measures included  
815 confirmed ORR as assessed by IRF using RECIST v1.1 and DoR.

816 In this study, the median age was 66 years, 78% were male, 91% of patients were White.

817 Twenty-six percent had non-bladder urothelial carcinoma and 78% of patients had visceral

818 metastases. Sixty-two percent of patients had an ECOG PS of 1 and 35% of patients had a  
 819 baseline CLCr < 60 mL/min. Nineteen percent of patients had disease progression following prior  
 820 platinum-containing neoadjuvant or adjuvant chemotherapy. Forty-one percent of patients had  
 821 received 2 or more prior systemic regimens in the metastatic setting. Seventy-three percent of  
 822 patients received prior cisplatin, 26% had prior carboplatin, and 1% were treated with other  
 823 platinum-based regimens.

824 Tumor specimens were evaluated prospectively using the VENTANA PD-L1 (SP142) Assay at a  
 825 central laboratory and the results were used to define subgroups for pre-specified analyses. Of  
 826 the 310 patients, 32% were classified as having PD-L1 expression of  $\geq 5\%$ . The remaining 68%  
 827 of patients were classified as having PD-L1 expression of < 5%.

828 Confirmed ORR and median DOR in all patients and the two PD-L1 subgroups are summarized  
 829 in Table 15. The median follow-up time for this study was 32.9 months. In 59 patients with  
 830 disease progression following neoadjuvant or adjuvant therapy, the ORR was 22.0% (95% CI:  
 831 12.3%, 34.7%).

832 **Table 15: Efficacy Results in IMvigor210 (Cohort 2)**

	All Patients	PD-L1 Expression Subgroups	
	N = 310	PD-L1 Expression of < 5% in IC <sup>1</sup> N = 210	PD-L1 Expression of $\geq 5\%$ in IC <sup>1</sup> N = 100
<b>Number of IRF-assessed Confirmed Responders</b>	46	20	26
<b>ORR % (95% CI)</b>	14.8% (11.2, 19.3)	9.5% (5.9, 14.3)	26% (17.7, 35.7)
Complete Response (CR) (%)	5.5%	2.4%	12.0%
Partial Response (PR) (%)	9.4%	7.1%	14.0%
<b>Median DOR, months (range)</b>	27.7 (2.1+, 33.4+)	20.9 (2.1+, 33.4+)	29.7 (4.2, 31.2+)
+ Denotes a censored value			
<sup>1</sup> PD-L1 expression in tumor-infiltrating immune cells (IC)			

833  
 834 **14.2 Non-Small Cell Lung Cancer**

835 Metastatic Chemotherapy-Naive Non-Squamous NSCLC

836 The efficacy of TECENTRIQ with bevacizumab, paclitaxel, and carboplatin was evaluated in  
 837 IMpower150 (NCT02366143), a multicenter, international, randomized (1:1:1), open-label trial  
 838 in 1202 patients with metastatic non-squamous NSCLC. IMpower150 enrolled patients with  
 839 stage IV non-squamous NSCLC who had received no prior chemotherapy for metastatic disease,  
 840 but could have received prior EGFR or ALK kinase inhibitor if appropriate, regardless of PD-L1  
 841 or T-effector gene (tGE) status and ECOG performance status 0 or 1. The trial excluded patients  
 842 with a history of autoimmune disease, administration of a live attenuated vaccine within 28 days  
 843 prior to randomization, active or untreated CNS metastases, administration of systemic  
 844 immunostimulatory agents within 4 weeks or systemic immunosuppressive medications within 2  
 845 weeks prior to randomization, or clear tumor infiltration into the thoracic great vessels or clear  
 846 cavitation of pulmonary lesions as seen on imaging.

847 Randomization was stratified by sex, presence of liver metastases, and PD-L1 expression status  
 848 on tumor cells (TC) and tumor-infiltrating immune cells (IC) as follows: TC3 and any IC vs.

849 TC0/1/2 and IC2/3 vs. TC0/1/2 and IC0/1. Patients were randomized to one of the following  
850 three treatment arms.

- 851 • Arm A: TECENTRIQ 1200 mg, paclitaxel 175 mg/m<sup>2</sup> or 200 mg/m<sup>2</sup> and carboplatin AUC 6  
852 mg/mL/min on Day 1 of each 21-day cycle for a maximum of 4 or 6 cycles
- 853 • Arm B: TECENTRIQ 1200 mg, bevacizumab 15 mg/kg, paclitaxel 175 mg/m<sup>2</sup> or 200 mg/m<sup>2</sup>,  
854 and carboplatin AUC 6 mg/mL/min on Day 1 of each 21-day cycle for a maximum of 4 or 6  
855 cycles
- 856 • Arm C: bevacizumab 15 mg/kg, paclitaxel 175 mg/m<sup>2</sup> or 200 mg/m<sup>2</sup>, and carboplatin AUC 6  
857 mg/mL/min on Day 1 of each 21-day cycle for a maximum of 4 or 6 cycles

858 Patients who had not experienced disease progression following the completion or cessation of  
859 platinum-based chemotherapy, received:

- 860 • Arm A: TECENTRIQ 1200 mg intravenously on Day 1 of each 21-day cycle until disease  
861 progression or unacceptable toxicity
- 862 • Arm B: TECENTRIQ 1200 mg and bevacizumab 15 mg/kg intravenously on Day 1 of each  
863 21-day cycle until disease progression or unacceptable toxicity
- 864 • Arm C: bevacizumab 15 mg/kg intravenously on Day 1 of each 21-day cycle until disease  
865 progression or unacceptable toxicity

866 Tumor assessments were conducted every 6 weeks for the first 48 weeks following Cycle 1, Day  
867 1 and then every 9 weeks thereafter. Tumor specimens were evaluated prior to randomization for  
868 PD-L1 tumor expression using the VENTANA PD-L1 (SP142) assay at a central laboratory.  
869 Tumor tissue was collected at baseline for expression of tGE signature and evaluation was  
870 performed using a clinical trial assay in a central laboratory prior to the analysis of efficacy  
871 outcome measures.

872 The major efficacy outcome measures for comparison of Arms B and C were progression free  
873 survival (PFS) by RECIST v1.1 in the tGE-WT (patients with high expression of T-effector gene  
874 signature [tGE], excluding those with EGFR- and ALK-positive NSCLC [WT]) and in the ITT-  
875 WT subpopulations and overall survival (OS) in the ITT-WT subpopulation. Additional efficacy  
876 outcome measures for comparison of Arms B and C or Arms A and C were PFS and OS in the  
877 ITT population, OS in the tGE-WT subpopulation, and ORR/DoR in the tGE-WT and ITT-WT  
878 subpopulations.

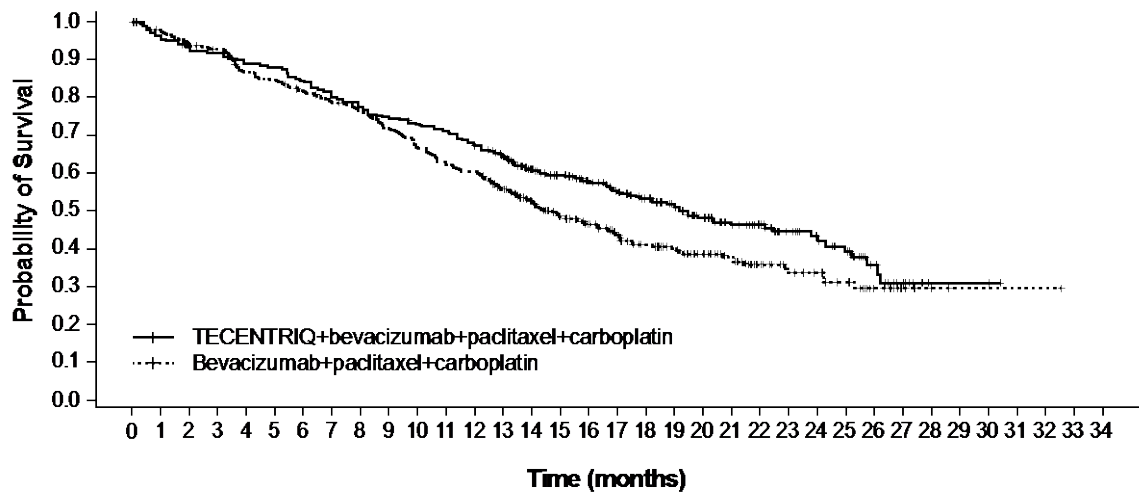
879 A total of 1202 patients were enrolled across the three arms of whom 1045 were in the ITT-WT  
880 subpopulation and 447 were in the tGE-WT subpopulation. The demographic information is  
881 limited to the 800 patients enrolled in Arms B and C where efficacy has been demonstrated. The  
882 median age was 63 years (range: 31 to 90), and 60% of patients were male. The majority of  
883 patients were White (82%), 13% of patients were Asian, 10% were Hispanic, and 2% of patients  
884 were Black. Clinical sites in Asia (enrolling 13% of the study population) received paclitaxel at a  
885 dose of 175 mg/m<sup>2</sup> while the remaining 87% received paclitaxel at a dose of 200 mg/m<sup>2</sup>.  
886 Approximately 14% of patients had liver metastases at baseline, and most patients were current  
887 or previous smokers (80%). Baseline ECOG performance status was 0 (43%) or 1 (57%). PD-L1  
888 was TC3 and any IC in 12%, TC0/1/2 and IC2/3 in 13%, and TC0/1/2 and IC0/1 in 75%. The  
889 demographics for the 696 patients in the ITT-WT subpopulation were similar to the ITT  
890 population except for the absence of patients with EGFR- or ALK-positive NSCLC.

891 The trial demonstrated a statistically significant improvement in PFS between Arms B and C in  
892 both the tGE-WT and ITT-WT subpopulations, but did not demonstrate a significant difference  
893 for either subpopulation between Arms A and C based on the final PFS analyses. In the interim  
894 analysis of OS, a statistically significant improvement was observed for Arm B compared to  
895 Arm C, but not for Arm A compared to Arm C. Efficacy results for the ITT-WT subpopulation  
896 are presented in Table 16 and Figure 1.



**Table 16: Efficacy Results in ITT-WT Population in IMpower150**

	<b>Arm C: Bevacizumab, Paclitaxel and Carboplatin</b>  N = 337	<b>Arm B: TECENTRIQ with Bevacizumab, Paclitaxel, and Carboplatin</b>  N = 359	<b>Arm A: TECENTRIQ with Paclitaxel, and Carboplatin</b>  N = 349
<b>Overall Survival<sup>1</sup></b>			
Deaths (%)	197 (59%)	179 (50%)	179 (51%)
Median, months	14.7	19.2	19.4
(95% CI)	(13.3, 16.9)	(17.0, 23.8)	(15.7, 21.3)
Hazard ratio <sup>2</sup> (95% CI)	---	0.78 (0.64, 0.96)	0.84 (0.72, 1.08)
p-value <sup>3</sup>	---	0.016 <sup>4</sup>	0.204 <sup>5</sup>
<b>Progression-Free Survival<sup>6</sup></b>			
Number of events (%)	247 (73%)	247 (69%)	245 (70%)
Median, months	7.0	8.5	6.7
(95% CI)	(6.3, 7.9)	(7.3, 9.7)	(5.6, 6.9)
Hazard ratio <sup>2</sup> (95% CI)	---	0.71 (0.59, 0.85)	0.94 (0.79, 1.13)
p-value <sup>3</sup>	---	0.0002 <sup>7</sup>	0.5219
<b>Objective Response Rate<sup>6</sup></b>			
Number of responders (%)	142 (42%)	196 (55%)	150 (43%)
(95% CI)	(37, 48)	(49, 60)	(38, 48)
Complete response	3 (1%)	14 (4%)	9 (3%)
Partial response	139 (41%)	182 (51%)	141 (40%)
<b>Duration of Response<sup>6</sup></b>	n = 142	n = 196	n = 150
Median (months)	6.5	10.8	9.5
(95% CI)	(5.6, 7.6)	(8.4, 13.9)	(7.0, 13.0)
<sup>1</sup> Based on OS interim analysis . <sup>2</sup> Stratified by sex, presence of liver metastases, and PD-L1 expression status on TC and IC <sup>3</sup> Based on the stratified log-rank test compared to Arm C <sup>4</sup> Compared to the allocated $\alpha=0.0174$ (two sided) for this interim analysis. <sup>5</sup> Compared to the allocated $\alpha=0.0128$ (two sided) for this interim analysis. <sup>6</sup> As determined by independent review facility (IRF) per RECIST v1.1 (Response Evaluation Criteria in Solid Tumors v1.1) <sup>7</sup> Compared to the allocated $\alpha=0.006$ (two sided) for the final PFS analysis. CI=confidence interval			



No. at Risk	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
TECENTRIQ+bevacizumab+paclitaxel+carboplatin	369	339	328	323	314	310	296	284	273	264	256	250	235	218	188	167	147	133	119	103	84	66	57	41	34	28	16	9	2	2	2					
Bevacizumab+paclitaxel+carboplatin	337	326	315	308	287	280	268	255	247	233	216	203	196	174	152	129	115	101	87	77	66	56	40	32	29	22	13	6	3	1	1	1	1			

899 Exploratory analyses showed that the subset of patients in the four drug regimen arm who were  
 900 ADA positive by week 4 (30%) appeared to have similar efficacy (effect on overall survival) as  
 901 compared to patients who tested negative for treatment-emergent ADA by week 4 (70%) [see  
 902 *Adverse Reactions (6.2), Clinical Pharmacology (12.3)*]. In an exploratory analysis, propensity  
 903 score matching was conducted to compare ADA positive patients in the TECENTRIQ,  
 904 bevacizumab, paclitaxel, and carboplatin arm with a matched population in the bevacizumab,  
 905 paclitaxel, and carboplatin arm. Similarly ADA negative patients in the TECENTRIQ,  
 906 bevacizumab, paclitaxel, and carboplatin arm were compared with a matched population in the  
 907 bevacizumab, paclitaxel, and carboplatin arm. Propensity score matching factors were: baseline  
 908 sum of longest tumor size (BSLD), baseline ECOG, baseline albumin, baseline LDH, sex, tobacco  
 909 history, metastatic site, TC level, and IC level. The hazard ratio comparing the ADA-positive  
 910 subgroup with its matched control was 0.69 (95% CI: 0.44, 1.07). The hazard ratio comparing the  
 911 ADA-negative subgroup with its matched control was 0.64 (95% CI: 0.46, 0.90).

913 Previously Treated Metastatic NSCLC

914 The efficacy of TECENTRIQ was evaluated in a multicenter, international, randomized (1:1),  
 915 open-label study (OAK; NCT02008227) conducted in patients with locally advanced or  
 916 metastatic NSCLC whose disease progressed during or following a platinum-containing regimen.  
 917 Patients with a history of autoimmune disease, symptomatic or corticosteroid-dependent brain  
 918 metastases, or requiring systemic immunosuppression within 2 weeks prior to enrollment were  
 919 ineligible. Randomization was stratified by PD-L1 expression tumor-infiltrating immune cells  
 920 (IC), the number of prior chemotherapy regimens (1 vs. 2), and histology (squamous vs. non-  
 921 squamous).

922 Patients were randomized to receive TECENTRIQ 1200 mg intravenously every 3 weeks until  
 923 unacceptable toxicity, radiographic progression, or clinical progression or docetaxel 75 mg/m<sup>2</sup>  
 924 intravenously every 3 weeks until unacceptable toxicity or disease progression. Tumor  
 925 assessments were conducted every 6 weeks for the first 36 weeks and every 9 weeks thereafter.  
 926 The major efficacy outcome measure was overall survival (OS) in the first 850 randomized  
 927 patients and OS in the subgroup of patients with PD-L1-expressing tumors (defined as ≥ 1% PD-  
 928 L1 expression on tumor cells [TC] or immune cells [IC]). Additional efficacy outcome measures

929 were OS in all randomized patients (n = 1225), OS in subgroups based on PD-L1 expression,  
 930 overall response rate (ORR), and progression free survival as assessed by the investigator per  
 931 RECIST v.1.1.

932 Among the first 850 randomized patients, the median age was 64 years (33 to 85 years) and 47%  
 933 were ≥ 65 years old; 61% were male; 70% were White and 21% were Asian; 15% were current  
 934 smokers and 67% were former smokers; and 37% had baseline ECOG PS of 0 and 63% had a  
 935 baseline ECOG PS of 1. Nearly all (94%) had metastatic disease, 74% had non-squamous  
 936 histology, 75% had received only one prior platinum-based chemotherapy regimen, and 55% of  
 937 patients had PD-L1-expressing tumors.

938 Efficacy results are presented in Table 17 and Figure 2.

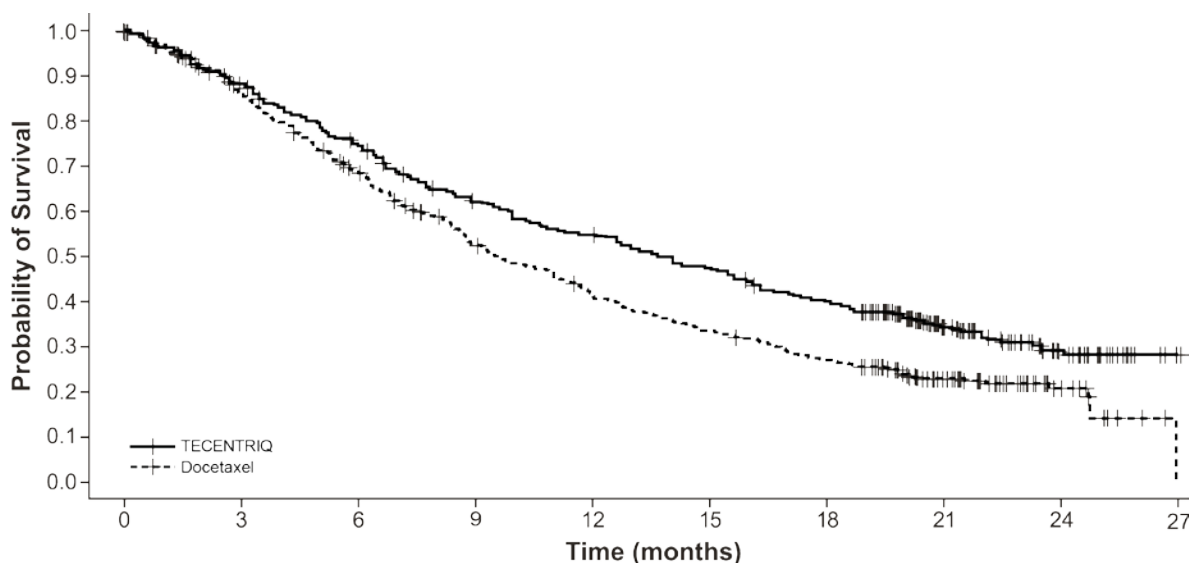
939 **Table 17: Efficacy Results in OAK**

	<b>TECENTRIQ</b>	<b>Docetaxel</b>
<b>Overall Survival in first 850 patients</b>		
Number of patients	N=425	N=425
Deaths (%)	271 (64%)	298 (70%)
Median, months	13.8	9.6
(95% CI)	(11.8, 15.7)	(8.6, 11.2)
Hazard ratio <sup>1</sup> (95% CI)	0.74 (0.63, 0.87)	
p-value <sup>2</sup>	0.0004 <sup>3</sup>	
<b>Progression-Free Survival</b>		
Number of Patients	N=425	N=425
Events (%)	380 (89%)	375 (88%)
Progression (%)	332 (78%)	290 (68%)
Deaths (%)	48 (11%)	85 (20%)
Median, months	2.8	4.0
(95% CI)	(2.6, 3.0)	(3.3, 4.2)
Hazard ratio <sup>1</sup> (95% CI)	0.95 (0.82, 1.10)	
<b>Overall Response Rate<sup>4</sup></b>		
Number of Patients	N=425	N=425
ORR, n (%)	58 (14%)	57 (13%)
(95% CI)	(11%, 17%)	(10%, 17%)
Complete response	6 (1%)	1 (0.2%)
Partial response	52 (12%)	56 (13%)
<b>Duration of Response<sup>3</sup></b>		
Median (months)	N=58 16.3	N=57 6.2
(95% CI)	(10.0, NE)	(4.9, 7.6)
<b>Overall Survival in all 1225 patients</b>		
Number of patients	N=613	N=612
Deaths (%)	384 (63%)	409 (67%)
Median, months	13.3	9.8
(95% CI)	(11.3, 14.9)	(8.9, 11.3)

	TECENTRIQ	Docetaxel
Hazard ratio <sup>1</sup> (95% CI)	0.79 (0.69, 0.91)	
p-value <sup>2</sup>	0.0013 <sup>5</sup>	

<sup>1</sup> Stratified by PD-L1 expression in tumor infiltrating immune cells, the number of prior chemotherapy regimens, and histology  
<sup>2</sup> Based on the stratified log-rank test  
<sup>3</sup> Compared to the pre-specified allocated  $\alpha$  of 0.03 for this analysis  
<sup>4</sup> Per RECIST v1.1 (Response Evaluation Criteria in Solid Tumors v1.1)  
<sup>5</sup> Compared to the allocated  $\alpha$  of 0.0177 for this interim analysis based on 86% information using O'Brien-Fleming boundary  
CI=confidence interval; NE=not estimable

940 **Figure 2: Kaplan-Meier Curves of Overall Survival in the First 850 Patients Randomized**  
941 **in OAK**



No. Patients at Risk	0	3	6	9	12	15	18	21	24	27																		
TECENTRIQ	425	407	382	363	342	326	305	279	260	248	234	223	218	205	198	188	175	163	157	141	116	74	54	41	28	15	4	1
Docetaxel	425	390	365	336	311	286	263	236	219	195	179	168	151	140	132	123	116	104	98	90	70	51	37	28	16	6	3	

942  
943 Tumor specimens were evaluated prospectively using the VENTANA PD-L1 (SP142) Assay at a  
944 central laboratory and the results were used to define the PD-L1 expression subgroups for pre-  
945 specified analyses. Of the 850 patients, 16% were classified as having high PD-L1 expression,  
946 defined as having PD-L1 expression on  $\geq 50\%$  of TC or  $\geq 10\%$  of IC. In an exploratory efficacy  
947 subgroup analysis of OS based on PD-L1 expression, the hazard ratio was 0.41 (95% CI: 0.27,  
948 0.64) in the high PD-L1 expression subgroup and 0.82 (95% CI: 0.68, 0.98) in patients who did  
949 not have high PD-L1 expression.

950 Exploratory analyses showed that the subset of patients who were ADA positive by week 4  
951 (21%) appeared to have less efficacy (effect on overall survival) as compared to patients who  
952 tested negative for treatment-emergent ADA by week 4 (79%) [see Adverse Reactions (6.2),  
953 Clinical Pharmacology (12.3)]. ADA positive patients by week 4 appeared to have similar OS  
954 compared to docetaxel-treated patients. In an exploratory analysis, propensity score matching  
955 was conducted to compare ADA positive patients in the atezolizumab arm with a matched  
956 population in the docetaxel arm and ADA negative patients in the atezolizumab arm with a  
957 matched population in the docetaxel arm. Propensity score matching factors were: baseline sum  
958 of longest tumor size (BSLD), baseline ECOG, histology (squamous vs. non-squamous),  
959 baseline albumin, baseline LDH, gender, tobacco history, metastases status (advanced or local),  
960 metastatic site, TC level, and IC level. The hazard ratio comparing the ADA positive subgroup

961 with its matched control was 0.89 (95% CI: 0.61, 1.3). The hazard ratio comparing the ADA  
 962 negative subgroup with its matched control was 0.68 (95% CI: 0.55, 0.83).

### 963 **14.3 Locally Advanced or Metastatic Triple-Negative Breast Cancer**

964 The efficacy of TECENTRIQ in combination with paclitaxel protein-bound was investigated in  
 965 IMpassion130 (NCT02425891), a multicenter, international, double-blinded, placebo-controlled,  
 966 randomized trial that included 902 unresectable locally advanced or metastatic triple-negative  
 967 breast cancer patients that had not received prior chemotherapy for metastatic disease. Patients  
 968 were stratified by presence of liver metastases, prior taxane treatment, and by PD-L1 expression  
 969 status in tumor infiltrating immune cells (IC) (PD-L1 stained tumor-infiltrating immune cells  
 970 [IC] <1% of tumor area vs. ≥ 1% of the tumor area) by the VENTANA PD-L1 (SP142) Assay.  
 971 Of the 902 patients in the intent to treat population (ITT), 41% (369 patients) were classified as  
 972 PD-L1 expression ≥ 1%. Patients were randomized (1:1) to receive either TECENTRIQ (840  
 973 mg) or placebo intravenous infusions on Days 1 and 15 of every 28-day cycle, plus paclitaxel  
 974 protein-bound (100 mg/m<sup>2</sup>) administered via intravenous infusion on Days 1, 8 and 15 of every  
 975 28-day cycle. Patients received treatment until radiographic disease progression per RECIST  
 976 v1.1, or unacceptable toxicity.

977 Patients were excluded if they had a history of autoimmune disease, administration of a live  
 978 attenuated vaccine within 4 weeks prior to randomization, administration of systemic  
 979 immunostimulatory agents within 4 weeks or systemic immunosuppressive medications within 2  
 980 weeks prior to randomization; or untreated or corticosteroid-dependent brain metastases. Tumor  
 981 assessments were performed every 8 weeks (± 1 week) for the first 12 months after Cycle 1, day  
 982 1 and every 12 weeks (± 1 week) thereafter.

983 In IMpassion130, the median age was 55 years (range: 20-86). Overall, most patients were  
 984 women (99.6%) and the majority of patients were white (68%), Asian (18%), Black or African  
 985 American (7%), and American Indian or Alaskan Native (4.4%). The demographic and baseline  
 986 disease characteristics of the study population were well balanced between the treatment arms.  
 987 Baseline ECOG performance status was 0 (58%) or 1 (41%). Overall, 41% of enrolled patients  
 988 had PD-L1 expression ≥ 1%, 27% had liver metastases and 7% brain metastases at baseline.  
 989 Approximately half the patients had received a taxane (51%) or anthracycline (54%) in the  
 990 (neo)adjuvant setting. Patient demographics and baseline tumor disease in the PD-L1 expressing  
 991 population were generally representative of the broader study population.

992 Tumor specimens (archival or fresh) were evaluated prospectively using the VENTANA PD-L1  
 993 (SP142) Assay at a central laboratory and the results were used as a stratification factor for  
 994 randomization and to define the PD-L1 expression subgroups for pre-specified analyses.

995 The major efficacy outcomes were investigator-assessed progression free survival (PFS) in the  
 996 ITT and PD-L1 expressing patient population per RECIST v1.1 and overall survival (OS) in the  
 997 ITT population. Overall survival data were immature with 43% deaths in the ITT population. The  
 998 efficacy results of IMpassion130 for the patient population with PD-L1 expression ≥ 1% are  
 999 presented in Table 18 and Figure 3.

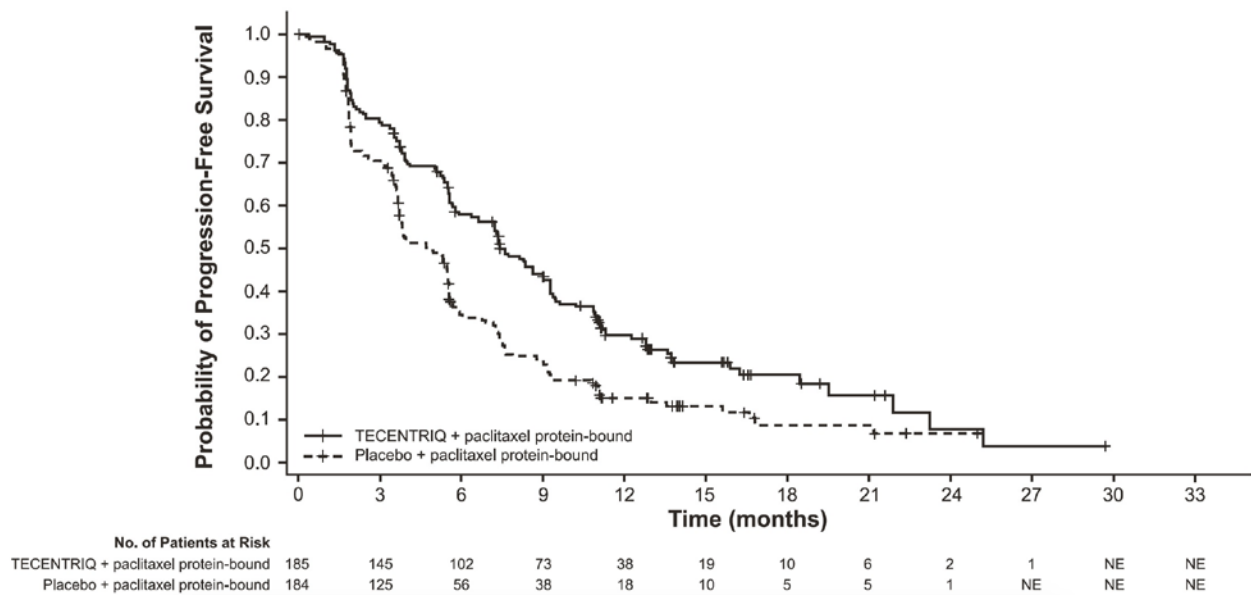
1000 **Table 18: Efficacy Results from IMpassion130 in Patients with PD-L1 Expression ≥ 1%**

	PD-L1 Expression ≥ 1% <sup>1</sup>	
	TECENTRIQ in combination with paclitaxel protein-bound	Placebo in combination with paclitaxel protein-bound
<b>Progression-Free Survival<sup>2,3</sup></b>	(n=185)	(n=184)
Events (%)	136 (74)	151 (82)
Median, months	7.4 (6.6, 9.2)	4.8 (3.8, 5.5)
Stratified Hazard ratio (95% CI) <sup>4</sup>	0.60 (0.48, 0.77)	

p-value	<0.0001	
<b>Objective Response Rate</b> <sup>2,3,5,6</sup>	n=185	n=183
Number of responders (%)	98 (53)	60 (33)
(95% CI)	(45.5, 60.3)	(26.0, 40.1)
Complete response (%)	17 (9)	1 (<1)
Partial response (%)	81 (44)	59 (32)
<b>Duration of Response</b> <sup>2,3,6</sup>	n=98	n=60
Median (months)	9.2	6.2
(95% CI)	(7.5, 11.9)	(5.5, 8.8)
<sup>1</sup> PD-L1 expression in tumor-infiltrating immune cells (IC) <sup>2</sup> As determined by investigator assessment <sup>3</sup> per RECIST v1.1 (Response Evaluation Criteria in Solid Tumors v1.1) <sup>4</sup> Stratified by presence of liver metastases, and by prior taxane treatment <sup>5</sup> patients with measurable disease at baseline <sup>6</sup> confirmed responses PFS=Progression-Free Survival; CI=Confidence Interval; ORR=Objective Response Rate; DOR=Duration of Response; NE=Not Estimable		

1001

1002 **Figure 3: Kaplan-Meier Plot of Progression-Free-Survival in IMpassion130 in Patients**  
1003 **with PD-L1 Expression  $\geq 1\%$**



1004

1005

#### 1006 14.4 Small Cell Lung Cancer

1007 The efficacy of TECENTRIQ with carboplatin and etoposide was investigated in IMpower133  
1008 (NCT02763579), a randomized (1:1), multicenter, double-blind, placebo-controlled trial in 403  
1009 patients with ES-SCLC. IMpower133 enrolled patients with ES-SCLC who had received no  
1010 prior chemotherapy for extensive stage disease and ECOG performance status 0 or 1. The trial  
1011 excluded patients with active or untreated CNS metastases, history of autoimmune disease,  
1012 administration of a live, attenuated vaccine within 4 weeks prior to randomization, or  
1013 administration of systemic immunosuppressive medications within 1 week prior to randomization.

1014 Randomization was stratified by sex, ECOG performance status, and presence of brain  
1015 metastases. Patients were randomized to receive one of the following two treatment arms:

- 1016 • TECENTRIQ 1200 mg and carboplatin AUC 5 mg/mL/min on Day 1 and etoposide 100  
1017 mg/m<sup>2</sup> intravenously on Days 1, 2 and 3 of each 21-day cycle for a maximum of 4 cycles  
1018 followed by TECENTRIQ 1200 mg once every 3 weeks until disease progression or  
1019 unacceptable toxicity, or
- 1020 • placebo and carboplatin AUC 5 mg/mL/min on Day 1 and etoposide 100 mg/m<sup>2</sup>  
1021 intravenously on Days 1, 2, and 3 of each 21-day cycle for a maximum of 4 cycles followed  
1022 by placebo once every 3 weeks until disease progression or unacceptable toxicity.

1023 Administration of TECENTRIQ was permitted beyond RECIST-defined disease progression.  
1024 Tumor assessments were conducted every 6 weeks for the first 48 weeks following Cycle 1, Day  
1025 1 and then every 9 weeks thereafter. Patients treated beyond disease progression had tumor  
1026 assessment conducted every 6 weeks until treatment discontinuation.

1027 Major efficacy outcome measures were OS and PFS as assessed by investigator per RECIST  
1028 v1.1 in the intent-to-treat population. Additional efficacy outcome measures included ORR and  
1029 DoR as assessed by investigator per RECIST v1.1.

1030 A total of 403 patients were randomized, including 201 to the TECENTRIQ arm and 202 to the  
1031 chemotherapy alone arm. The median age was 64 years (range 26 to 90) and 65% were male.  
1032 The majority of patients were White (80%); 17% were Asian, 4% were Hispanic and 1% were  
1033 Black. Baseline ECOG performance status was 0 (35%) or 1 (65%); 9% of patients had a history  
1034 of brain metastases, and 97% were current or previous smokers.

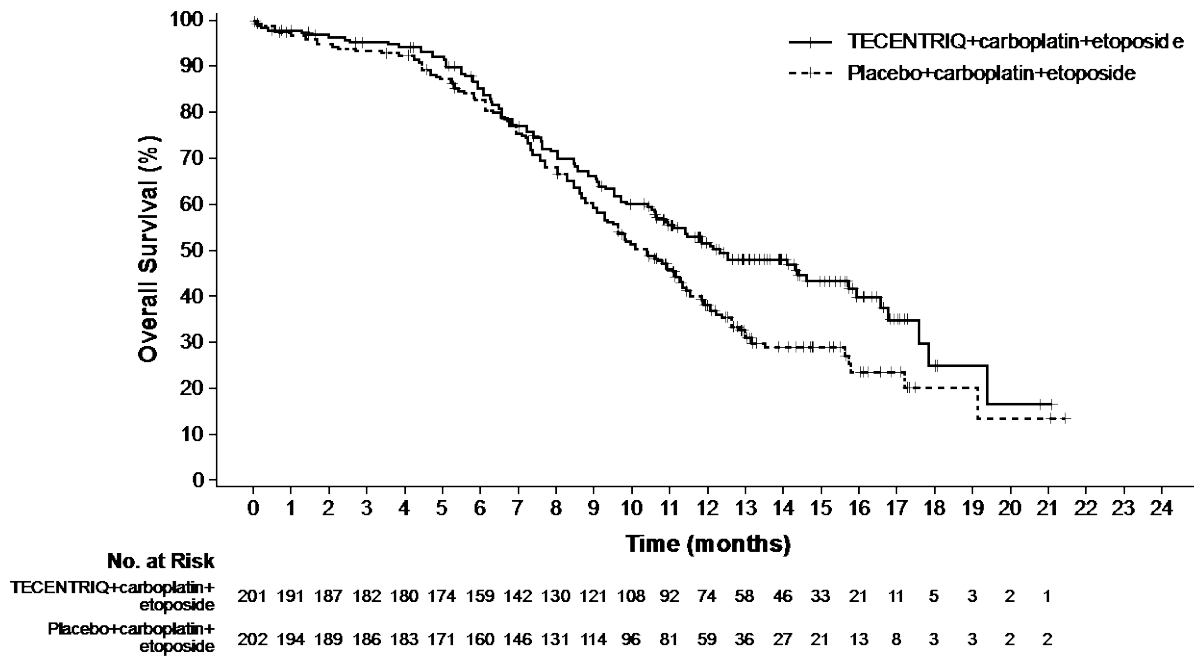
1035 Efficacy results are presented in Table 19 and Figure 4.

1036 **Table 19: Efficacy Results from IMpower133**

	<b>TECENTRIQ with Carboplatin and Etoposide</b>	<b>Placebo with Carboplatin and Etoposide</b>
<b>Overall Survival</b>	N=201	N=202
Deaths (%)	104 (52%)	134 (66%)
Median, months	12.3	10.3
(95% CI)	(10.8, 15.9)	(9.3, 11.3)
Hazard ratio <sup>3</sup> (95% CI)	0.70 (0.54, 0.91)	
p-value <sup>4,5</sup>	0.0069	
<b>Progression-Free Survival<sup>1,2</sup></b>	N=201	N=202
Number of events (%)	171 (85%)	189 (94%)
Median, months	5.2	4.3
(95% CI)	(4.4, 5.6)	(4.2, 4.5)
Hazard ratio <sup>3</sup> (95% CI)	0.77 (0.62, 0.96)	
p-value <sup>4,6</sup>	0.0170	
<b>Objective Response Rate<sup>1,2,7</sup></b>	N=201	N=202
Number of responders (%)	121 (60%)	130 (64%)
(95% CI)	(53, 67)	(57, 71)
Complete response	5 (2%)	2 (1%)
Partial response	116 (58%)	128 (63%)
<b>Duration of Response<sup>1,2,7</sup></b>	N=121	N=130
Median (months)	4.2	3.9
(95% CI)	(4.1, 4.5)	(3.1, 4.2)
<sup>1</sup> As determined by investigator assessment		
<sup>2</sup> per RECIST v1.1 (Response Evaluation Criteria in Solid Tumors v1.1)		
<sup>3</sup> Stratified by sex and ECOG performance status		
<sup>4</sup> Based on the stratified log-rank test		
<sup>5</sup> Compared to the allocated $\alpha$ of 0.0193 for this interim analysis based on 78% information using O'Brien-Fleming boundary		
<sup>6</sup> Compared to the allocated $\alpha$ of 0.05 for this analysis.		
<sup>7</sup> Confirmed response		
CI=confidence interval		

1037

1038 **Figure 4: Kaplan-Meier Plot of Overall Survival in IMpower133**



1039

1040 **16 HOW SUPPLIED/STORAGE AND HANDLING**

1041 TECENTRIQ injection is a sterile, preservative-free, and colorless to slightly yellow solution for  
1042 intravenous infusion supplied as a carton containing one 840 mg/14 mL single-dose vial (NDC  
1043 50242-918-01) or 1200 mg/20 mL single-dose vial (NDC 50242-917-01).

1044 Store vials under refrigeration at 2°C to 8°C (36°F to 46°F) in original carton to protect from  
1045 light. Do not freeze. Do not shake.

1046 **17 PATIENT COUNSELING INFORMATION**

1047 Advise the patient to read the FDA-approved patient labeling (Medication Guide).

1048 Immune-Mediated Adverse Reactions

1049 Inform patients of the risk of immune-mediated adverse reactions that may require corticosteroid  
1050 treatment and interruption or discontinuation of TECENTRIQ, including:

- 1051 • Pneumonitis: Advise patients to contact their healthcare provider immediately for any new  
1052 or worsening cough, chest pain, or shortness of breath [see Warnings and Precautions  
1053 (5.1)].
- 1054 • Hepatitis: Advise patients to contact their healthcare provider immediately for jaundice,  
1055 severe nausea or vomiting, pain on the right side of abdomen, lethargy, or easy bruising or  
1056 bleeding [see Warnings and Precautions (5.2)].
- 1057 • Colitis: Advise patients to contact their healthcare provider immediately for diarrhea, blood  
1058 or mucus in stools, or severe abdominal pain [see Warnings and Precautions (5.3)].



1059 • Endocrinopathies: Advise patients to contact their healthcare provider immediately for signs  
1060 or symptoms of hypophysitis, hyperthyroidism, hypothyroidism, adrenal insufficiency, or  
1061 type 1 diabetes mellitus, including diabetic ketoacidosis [*see Warnings and Precautions*  
1062 (5.4)].

1063 • Other Immune-Mediated Adverse Reactions: Advise patients to contact their healthcare  
1064 provider immediately for signs or symptoms of other potential immune-mediated adverse  
1065 reactions [*see Warnings and Precautions* (5.5)].

1066 Infections

1067 Advise patients to contact their healthcare provider immediately for signs or symptoms of  
1068 infection [*see Warnings and Precautions* (5.6)].

1069 Infusion-Related Reactions

1070 Advise patients to contact their healthcare provider immediately for signs or symptoms of  
1071 infusion-related reactions [*see Warnings and Precautions* (5.7)].

1072 Embryo-Fetal Toxicity

1073 Advise females of reproductive potential that TECENTRIQ can cause harm to a fetus and to  
1074 inform their healthcare provider of a known or suspected pregnancy [*see Warnings and*  
1075 *Precautions* (5.8), *Use in Specific Populations* (8.1, 8.3)].

1076 Advise females of reproductive potential to use effective contraception during treatment and for  
1077 at least 5 months after the last dose of TECENTRIQ [*see Use in Specific Populations* (8.3)].

1078 Lactation

1079 Advise female patients not to breastfeed while taking TECENTRIQ and for at least 5 months  
1080 after the last dose [*see Use in Specific Populations* (8.2)].  
1081

1082

1083 Manufactured by:

1084 Genentech, Inc.

1085 A Member of the Roche Group

1086 1 DNA Way

1087 South San Francisco, CA 94080-4990

1088 U.S. License No. 1048

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1090 ©2019 Genentech, Inc.

**MEDICATION GUIDE**  
**TECENTRIQ® (te-SEN-trik)**  
**(atezolizumab)**  
**injection**

**What is the most important information I should know about TECENTRIQ?**

TECENTRIQ is a medicine that may treat certain cancers by working with your immune system. TECENTRIQ can cause your immune system to attack normal organs and tissues and can affect the way they work. These problems can sometimes become serious or life-threatening and can lead to death.

**Call or see your healthcare provider right away if you get any symptoms of the following problems or these symptoms get worse:**

**Lung problems (pneumonitis).** Signs and symptoms of pneumonitis may include:

- new or worsening cough
- shortness of breath
- chest pain

**Liver problems (hepatitis).** Signs and symptoms of hepatitis may include:

- yellowing of your skin or the whites of your eyes
- dark urine (tea colored)
- severe nausea or vomiting
- bleeding or bruising more easily than normal
- pain on the right side of your stomach area (abdomen)
- feeling less hungry than usual
- drowsiness

**Intestinal problems (colitis).** Signs and symptoms of colitis may include:

- diarrhea (loose stools) or more bowel movements than usual
- blood or mucus in your stools or dark, tarry, sticky stools
- severe stomach area (abdomen) pain or tenderness

**Hormone gland problems (especially the thyroid, adrenal glands, pancreas, and pituitary).** Signs and symptoms that your hormone glands are not working properly may include:

- headaches that will not go away or unusual headaches
- feeling cold
- extreme tiredness
- constipation
- weight gain or weight loss
- your voice gets deeper
- dizziness or fainting
- urinating more often than usual
- feeling more hungry or thirsty than usual
- nausea or vomiting
- hair loss
- stomach area (abdomen) pain
- changes in mood or behavior, such as decreased sex drive, irritability, or forgetfulness

**Problems in other organs.** Signs and symptoms may include:

- severe muscle weakness
- neck stiffness
- numbness or tingling in hands or feet
- eye pain or redness
- confusion
- skin blisters or peeling
- blurry vision, double vision, or other vision problems
- chest pain, irregular heartbeat, shortness of breath or swelling of the ankles
- changes in mood or behavior
- extreme sensitivity to light

**Severe infections.** Signs and symptoms of infection may include:

- fever
- flu-like symptoms
- cough
- pain when urinating, frequent urination or back pain

**Severe infusion reactions.** Signs and symptoms of infusion reactions may include:

- chills or shaking
- dizziness
- itching or rash
- fever
- flushing
- feeling like passing out
- shortness of breath or wheezing
- back or neck pain
- swelling of your face or lips

**Getting medical treatment right away may help keep these problems from becoming more serious.**

Your healthcare provider will check you for these problems during your treatment with TECENTRIQ. Your healthcare provider may treat you with corticosteroid or hormone replacement medicines. Your healthcare provider may delay or completely stop treatment with TECENTRIQ if you have severe side effects.

## What is TECENTRIQ?

TECENTRIQ is a prescription medicine used to treat adults with:

- **a type of bladder and urinary tract cancer called urothelial carcinoma.** TECENTRIQ may be used when your bladder cancer has spread or cannot be removed by surgery, **and if you have any one of the following conditions:**
  - you are not able to take chemotherapy that contains a medicine called cisplatin, and your cancer tests positive for “PD-L1”, **or**
  - you are not able to take chemotherapy that contains any platinum regardless of “PD-L1” status, **or**
  - you have tried chemotherapy that contains platinum, and it did not work or is no longer working.
- **a type of lung cancer called non-small cell lung cancer (NSCLC).**
  - **TECENTRIQ may be used with bevacizumab and the chemotherapy medicines carboplatin and paclitaxel as your first treatment when your lung cancer:**
    - has spread or grown, **and**
    - is a type of lung cancer called “non-squamous NSCLC
    - your tumor does not have an abnormal “EGFR” or “ALK” gene
  - **TECENTRIQ may be used alone when your lung cancer:**
    - has spread or grown, **and**
    - you have tried chemotherapy that contains platinum, and it did not work or is no longer working.
    - if your tumor has an abnormal “EGFR” or “ALK” gene, you should have also tried an FDA-approved therapy for tumors with these abnormal genes, and it did not work or is no longer working.
- **a type of breast cancer called triple-negative breast cancer (TNBC).** TECENTRIQ may be used with the medicine paclitaxel protein-bound when your breast cancer:
  - has spread or cannot be removed by surgery, **and**
  - your cancer tests positive for “PD-L1”.
- **a type of lung cancer called small cell lung cancer (SCLC).**

**TECENTRIQ may be used with the chemotherapy medicines carboplatin and etoposide as your first treatment when your lung cancer**

is a type called “extensive-stage SCLC,” which means that it has spread or grown.

It is not known if TECENTRIQ is safe and effective in children.

**Before you receive TECENTRIQ, tell your healthcare provider about all of your medical conditions, including if you:**

- have immune system problems such as Crohn’s disease, ulcerative colitis, or lupus
- have had an organ transplant
- have lung or breathing problems
- have liver problems
- have a condition that affects your nervous system, such as myasthenia gravis or Guillain-Barré syndrome
- are being treated for an infection
- are pregnant or plan to become pregnant. TECENTRIQ can harm your unborn baby. Tell your healthcare provider right away if you become pregnant or think you may be pregnant during treatment with TECENTRIQ.

**Females who are able to become pregnant:**

- Your healthcare provider should do a pregnancy test before you start treatment with TECENTRIQ.
- You should use an effective method of birth control during your treatment and for at least 5 months after the last dose of TECENTRIQ.
- are breastfeeding or plan to breastfeed. It is not known if TECENTRIQ passes into your breast milk. Do not breastfeed during treatment and for at least 5 months after the last dose of TECENTRIQ.

**Tell your healthcare provider about all the medicines you take**, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

## How will I receive TECENTRIQ?

- Your healthcare provider will give you TECENTRIQ into your vein through an intravenous (IV) line over 30 to 60 minutes.
- TECENTRIQ is usually given every 2, 3, or 4 weeks.
- Your healthcare provider will decide how many treatments you need.
- Your healthcare provider will test your blood to check you for certain side effects.
- If you miss any appointments, call your healthcare provider as soon as possible to reschedule your appointment.

**What are the possible side effects of TECENTRIQ?**

**TECENTRIQ can cause serious side effects, including:**

- See “What is the most important information I should know about TECENTRIQ?”

The most common side effects of TECENTRIQ when used alone include:

- feeling tired or weak
- nausea
- cough
- shortness of breath
- decreased appetite

The most common side effects of TECENTRIQ when used in lung cancer with other anti-cancer medicines include:

- feeling tired or weak
- nausea
- hair loss
- constipation
- diarrhea
- decreased appetite

The most common side effects of TECENTRIQ when used in triple-negative breast cancer with paclitaxel protein-bound include:

- hair loss
- tingling or numbness in hands or feet
- feeling tired
- nausea
- diarrhea
- low red blood cells (anemia)
- constipation
- cough
- headache
- low white blood cells
- vomiting
- decreased appetite

TECENTRIQ may cause fertility problems in females, which may affect the ability to have children. Talk to your healthcare provider if you have concerns about fertility.

These are not all the possible side effects of TECENTRIQ. Ask your healthcare provider or pharmacist for more information. Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

**General information about the safe and effective use of TECENTRIQ.**

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. If you would like more information about TECENTRIQ, talk with your healthcare provider. You can ask your healthcare provider for information about TECENTRIQ that is written for health professionals.

**What are the ingredients in TECENTRIQ?**

**Active ingredient:** atezolizumab

**Inactive ingredients:** glacial acetic acid, L-histidine, polysorbate 20 and sucrose,

Manufactured by: **Genentech, Inc.**, A Member of the Roche Group, 1 DNA Way, South San Francisco, CA 94080-4990 USA

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For more information, call 1-844-832-3687 or go to [www.TECENTRIQ.com](http://www.TECENTRIQ.com).

This Medication Guide has been approved by the U.S. Food and Drug Administration.

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