

## HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use IMFINZI safely and effectively. See full prescribing information for IMFINZI.

IMFINZI® (durvalumab) injection, for intravenous use  
Initial U.S. Approval: 2017

### RECENT MAJOR CHANGES

Indications and Usage (1.5)	06/2024
Dosage and Administration (2.1, 2.2, 2.3, 2.4)	06/2024
Warnings and Precautions (5.1)	04/2024

### INDICATIONS AND USAGE

IMFINZI is a programmed death-ligand 1 (PD-L1) blocking antibody indicated:

- for the treatment of adult patients with unresectable, Stage III non-small cell lung cancer (NSCLC) whose disease has not progressed following concurrent platinum-based chemotherapy and radiation therapy. (1.1)
- in combination with tremelimumab-actl and platinum-based chemotherapy, for the treatment of adult patients with metastatic non-small cell lung cancer (NSCLC) with no sensitizing epidermal growth factor receptor (EGFR) mutations or anaplastic lymphoma kinase (ALK) genomic tumor aberrations. (1.1)
- in combination with etoposide and either carboplatin or cisplatin, as first-line treatment of adult patients with extensive-stage small cell lung cancer (ES-SCLC). (1.2)
- in combination with gemcitabine and cisplatin, as treatment of adult patients with locally advanced or metastatic biliary tract cancer (BTC). (1.3)
- in combination with tremelimumab-actl, for the treatment of adult patients with unresectable hepatocellular carcinoma (uHCC). (1.4)
- in combination with carboplatin and paclitaxel followed by IMFINZI as a single agent, for the treatment of adult patients with primary advanced or recurrent endometrial cancer that is mismatch repair deficient (dMMR). (1.5)

### DOSAGE AND ADMINISTRATION

- Administer IMFINZI as an intravenous infusion over 60 minutes after dilution. (2.4)
- Stage III NSCLC:
  - Weight  $\geq$  30 kg: 10 mg/kg every 2 weeks or 1,500 mg every 4 weeks (2.2)
  - Weight < 30 kg: 10 mg/kg every 2 weeks (2.2)
- Metastatic NSCLC:
  - Weight  $\geq$  30 kg: 1,500 mg every 3 weeks in combination with tremelimumab-actl 75 mg and platinum-based chemotherapy for 4 cycles, and then administer IMFINZI 1,500 mg every 4 weeks as a single agent with histology-based pemetrexed maintenance therapy every 4 weeks, and a fifth dose of tremelimumab-actl 75 mg in combination with IMFINZI dose 6 at week 16 (2.2)
  - Weight < 30 kg: 20 mg/kg every 3 weeks in combination with tremelimumab-actl 1 mg/kg and platinum-based chemotherapy, and then administer IMFINZI 20 mg/kg every 4 weeks as a single agent with histology-based pemetrexed therapy every 4 weeks, and a fifth dose of tremelimumab-actl 1 mg/kg in combination with IMFINZI dose 6 at week 16 (2.2)
- ES-SCLC:
  - Weight  $\geq$  30 kg: With etoposide and either carboplatin or cisplatin, administer IMFINZI 1,500 mg every 3 weeks in combination with chemotherapy, and then 1,500 mg every 4 weeks as a single agent (2.2)
  - Weight < 30 kg: With etoposide and either carboplatin or cisplatin, administer IMFINZI 20 mg/kg every 3 weeks in combination with chemotherapy, and then 10 mg/kg every 2 weeks as a single agent (2.2)
- BTC:
  - Weight  $\geq$  30 kg: administer IMFINZI 1,500 mg every 3 weeks in combination with chemotherapy, and then 1,500 mg every 4 weeks as a single agent (2.2)
  - Weight < 30 kg: administer IMFINZI 20 mg/kg every 3 weeks in combination with chemotherapy, and then 20 mg/kg every 4 weeks as a single agent (2.2)
- uHCC:

- Weight  $\geq$  30 kg: IMFINZI 1,500 mg in combination with tremelimumab-actl 300 mg as a single dose at Cycle 1/Day 1, followed by IMFINZI as a single agent every 4 weeks (2.2)
- Weight < 30 kg: IMFINZI 20 mg/kg in combination with tremelimumab-actl 4 mg/kg as a single dose at Cycle 1/Day 1, followed by IMFINZI as a single agent every 4 weeks (2.2)
- dMMR endometrial cancer:
  - Weight  $\geq$  30 kg: IMFINZI 1,120 mg in combination with carboplatin and paclitaxel every 3 weeks for 6 cycles, followed by IMFINZI 1,500 mg every 4 weeks as a single agent (2.1, 2.2)
  - Weight < 30 kg: IMFINZI 15 mg/kg in combination with carboplatin and paclitaxel every 3 weeks for 6 cycles, followed by IMFINZI 20 mg/kg every 4 weeks as a single agent (2.1, 2.2)
- See full Prescribing Information for preparation and administration instructions and dosage modifications for adverse reactions.

### DOSAGE FORMS AND STRENGTHS

- Injection: 500 mg/10 mL (50 mg/mL) solution in a single-dose vial. (3)
- Injection: 120 mg/2.4 mL (50 mg/mL) solution in a single-dose vial. (3)

### CONTRAINDICATIONS

None. (4)

### WARNINGS AND PRECAUTIONS

- Immune-Mediated Adverse Reactions (5.1)
  - Immune-mediated adverse reactions, which may be severe or fatal, can occur in any organ system or tissue, including the following: immune-mediated pneumonitis, immune-mediated colitis, immune-mediated hepatitis, immune-mediated endocrinopathies, immune-mediated dermatologic adverse reactions, immune-mediated nephritis and renal dysfunction, solid organ transplant rejection, and immune-mediated pancreatitis.
    - Monitor for early identification and management. Evaluate liver enzymes, creatinine, and thyroid function at baseline and periodically during treatment.
    - Withhold or permanently discontinue based on severity and type of reaction.
- Infusion-Related Reactions: Interrupt, slow the rate of infusion, or permanently discontinue IMFINZI based on the severity of the reaction. (5.2)
- Complications of Allogeneic HSCT: Fatal and other serious complications can occur in patients who receive allogeneic HSCT before or after being treated with a PD-1/PD-L1 blocking antibody. (5.3)
- Embryo-Fetal Toxicity: Can cause fetal harm. Advise females of reproductive potential of the potential risk to a fetus and use of effective contraception. (5.4, 8.1, 8.3)

### ADVERSE REACTIONS

#### IMFINZI as a Single Agent

- Most common adverse reactions ( $\geq$  20% of patients with unresectable, Stage III NSCLC) are cough, fatigue, pneumonitis/radiation pneumonitis, upper respiratory tract infections, dyspnea, and rash. (6.1)

#### IMFINZI in Combination with Platinum-Based Chemotherapy

- Most common adverse reactions ( $\geq$  20% of patients with extensive-stage SCLC) are nausea, fatigue/asthenia, and alopecia. (6.1)

#### IMFINZI in Combination with gemcitabine and cisplatin

- Most common adverse reactions ( $\geq$  20% of patients with BTC) are fatigue, nausea, constipation, decreased appetite, abdominal pain, rash, and pyrexia. (6.1)

#### IMFINZI in Combination with Tremelimumab-actl

- Most common adverse reactions ( $\geq$  20%) of patients with uHCC are rash, diarrhea, fatigue, pruritis, musculoskeletal pain, and abdominal pain. (6.1)

#### IMFINZI in Combination with Tremelimumab-actl and Platinum-Based Chemotherapy

- Most common adverse reactions ( $\geq$  20% of patients with metastatic NSCLC) were nausea, fatigue, musculoskeletal pain, decreased appetite, rash, and diarrhea. (6.1)

#### IMFINZI in Combination with Carboplatin and Paclitaxel, followed by IMFINZI as a single agent

- Most common adverse reactions ( $\geq$  20% of patients with endometrial cancer) were peripheral neuropathy, musculoskeletal pain, nausea, alopecia, fatigue, abdominal pain, constipation, rash, decreased magnesium, increased ALT, increased AST, diarrhea, vomiting, cough,

decreased potassium, dyspnea, headache, increased alkaline phosphatase, and decreased appetite. (6.1)

----- **USE IN SPECIFIC POPULATIONS** -----  
Lactation: Advise not to breastfeed. (8.2)

To report SUSPECTED ADVERSE REACTIONS, contact AstraZeneca at 1-800-236-9933 or FDA at 1-800-FDA-1088 or [www.fda.gov/medwatch](http://www.fda.gov/medwatch).

See 17 for PATIENT COUNSELING INFORMATION and Medication Guide.

Revised: 07/2024

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## FULL PRESCRIBING INFORMATION

### 1 INDICATIONS AND USAGE

#### 1.1 Non-Small Cell Lung Cancer

- IMFINZI is indicated for the treatment of adult patients with unresectable Stage III non-small cell lung cancer (NSCLC) whose disease has not progressed following concurrent platinum-based chemotherapy and radiation therapy.
- IMFINZI, in combination with tremelimumab-actl and platinum-based chemotherapy, is indicated for the treatment of adult patients with metastatic NSCLC with no sensitizing epidermal growth factor receptor (EGFR) mutations or anaplastic lymphoma kinase (ALK) genomic tumor aberrations.

#### 1.2 Small Cell Lung Cancer

IMFINZI, in combination with etoposide and either carboplatin or cisplatin, is indicated for the first-line treatment of adult patients with extensive-stage small cell lung cancer (ES-SCLC).

#### 1.3 Biliary Tract Cancers

IMFINZI, in combination with gemcitabine and cisplatin, is indicated for the treatment of adult patients with locally advanced or metastatic biliary tract cancer (BTC).

#### 1.4 Hepatocellular Carcinoma

IMFINZI, in combination with tremelimumab-actl, is indicated for the treatment of adult patients with unresectable hepatocellular carcinoma (uHCC).

#### 1.5 Endometrial Cancer

IMFINZI in combination with carboplatin and paclitaxel followed by IMFINZI as a single agent is indicated for the treatment of adult patients with primary advanced or recurrent endometrial cancer that is mismatch repair deficient (dMMR).

### 2 DOSAGE AND ADMINISTRATION

#### 2.1 Patient Selection

##### Advanced or Recurrent dMMR Endometrial Cancer

Select patients for treatment based on the presence of dMMR in tumor specimens [see [Clinical Studies \(14.5\)](#)].

An FDA-approved test for the detection of dMMR in tumor specimens from patients with primary advanced or recurrent endometrial cancer for treatment with IMFINZI is not available.

#### 2.2 Recommended Dosage

The recommended dosages for IMFINZI as a single agent and IMFINZI in combination with other therapeutic agents are presented in Tables 1, 2 and 3.

Administer IMFINZI as an intravenous infusion after dilution as recommended [see [Dosage and Administration \(2.3\)](#)].

**Table 1. Recommended Dosages of IMFINZI**

Indication	Recommended IMFINZI Dosage	Duration of Therapy
<b>Single Agent</b>		
Unresectable stage III NSCLC	Patients with a body weight of $\geq 30$ kg: 10 mg/kg every 2 weeks or 1,500 mg every 4 weeks Patients with a body weight of $< 30$ kg: 10 mg/kg every 2 weeks	Until disease progression, unacceptable toxicity, or a maximum of 12 months
<b>Combination with Other Therapeutic Agents</b>		
ES-SCLC	Patients with a body weight of $\geq 30$ kg: 1,500 mg in combination with chemotherapy* every 3 weeks (21 days) for 4 cycles, followed by 1,500 mg every 4 weeks as a single agent  Patients with a body weight of $< 30$ kg: 20 mg/kg in combination with chemotherapy* every 3 weeks (21 days) for 4 cycles, followed by 10 mg/kg every 2 weeks as a single agent	Until disease progression or unacceptable toxicity
BTC	Patients with a body weight of $\geq 30$ kg: 1,500 mg in combination with chemotherapy* every 3 weeks (21 days) up to 8 cycles followed by 1,500 mg every 4 weeks as a single agent  Patients with a body weight of $< 30$ kg: 20 mg/kg in combination with chemotherapy* every 3 weeks	Until disease progression or until unacceptable toxicity

Indication	Recommended IMFINZI Dosage	Duration of Therapy
	(21 days) up to 8 cycles followed by 20 mg/kg every 4 weeks as a single agent	
uHCC	<p>Patients with a body weight of <math>\geq 30</math> kg:</p> <ul style="list-style-type: none"> <li>• IMFINZI 1,500 mg following a single dose of tremelimumab-actl<sup>s</sup> 300 mg at Day 1 of Cycle 1;</li> <li>• Continue IMFINZI 1,500 mg as a single agent every 4 weeks</li> </ul> <p>Patients with a body weight of <math>&lt; 30</math> kg:</p> <ul style="list-style-type: none"> <li>• IMFINZI 20 mg/kg following a single dose of tremelimumab-actl<sup>s</sup> 4 mg/kg at Day 1 of Cycle 1;</li> <li>• Continue IMFINZI 20 mg/kg as a single agent every 4 weeks</li> </ul>	After Cycle 1 of combination therapy, administer IMFINZI as a single agent every 4 weeks until disease progression or unacceptable toxicity
dMMR endometrial cancer	<p>Patients with a body weight of <math>\geq 30</math> kg: IMFINZI 1,120 mg in combination with carboplatin and paclitaxel* every 3 weeks (21 days) for 6 cycles, followed by IMFINZI 1,500 mg every 4 weeks as a single agent</p> <p>Patients with a body weight of <math>&lt; 30</math> kg: IMFINZI 15 mg/kg in combination with carboplatin and paclitaxel* every 3 weeks (21 days) for 6 cycles, followed by IMFINZI 20 mg/kg every 4 weeks as a single agent</p>	Until disease progression or unacceptable toxicity

\* Administer IMFINZI prior to chemotherapy on the same day. Refer to the Prescribing Information for the agent administered in combination with IMFINZI for recommended dosage information, as appropriate.

<sup>§</sup> Administer tremelimumab-actl prior to IMFINZI on the same day. When tremelimumab-actl is administered in combination with IMFINZI, refer to the Prescribing Information for tremelimumab-actl dosing information.

### IMFINZI in Combination with Tremelimumab-actl and Platinum-Based Chemotherapy

The recommended dosage schedule and regimens for IMFINZI for the treatment of metastatic non-small cell lung cancer (NSCLC) are provided in Tables 2 and 3.

Weigh patients prior to each infusion.

Calculate the appropriate dose using Table 3 below based on the patient’s weight and tumor histology.

**Table 2: Recommended Dosage Schedule**

	Week <sup>*,§</sup>																								
	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
<b>Cycle:</b>	1			2			3			4			5				6				7				8
IMFINZI <sup>*,¶</sup>	X			X			X			X			X				X				X				X
Tremelimumab-actl <sup>¶,#</sup>	X			X			X			X							X								
Chemotherapy	X			X			X			X			X <sup>p</sup>				X <sup>p</sup>				X <sup>p</sup>				X <sup>p</sup>

\* continue IMFINZI until disease progression or intolerable toxicity.

<sup>§</sup> note the dosing interval change from every 3 weeks to every 4 weeks starting at cycle 5.

<sup>¶</sup> intravenous infusion over 60 minutes [see [Dosage and Administration \(2.4\)](#)].

<sup>#</sup> if patients receive fewer than 4 cycles of platinum-based chemotherapy, the remaining cycles of tremelimumab-actl (up to a total of 5) should be given after the platinum-based chemotherapy phase, in combination with IMFINZI, every 4 weeks.

<sup>p</sup> optional pemetrexed therapy from week 12 until disease progression or intolerable toxicity for patients with non-squamous disease who received treatment with pemetrexed and carboplatin/cisplatin.

**Table 3: Recommended Regimen and Dosage**

Tumor Histology	Patient Weight	IMFINZI Dosage	Tremelimumab-actl Dosage*	Platinum-based Chemotherapy Regimen*
<b>Non-Squamous</b>	≥ 30kg	1,500 mg	75 mg	<ul style="list-style-type: none"> <li>carboplatin &amp; nab-paclitaxel</li> </ul> OR
	< 30kg	20 mg/kg	1 mg/kg	
<b>Squamous</b>	≥ 30kg	1,500 mg	75 mg	<ul style="list-style-type: none"> <li>carboplatin &amp; nab-paclitaxel</li> </ul> OR
	< 30kg	20 mg/kg	1 mg/kg	

\* Refer to the Prescribing Information for dosing information.

### 2.3 Dosage Modifications for Adverse Reactions

No dose reduction for IMFINZI is recommended. In general, withhold IMFINZI for severe (Grade 3) immune-mediated adverse reactions. Permanently discontinue IMFINZI for life-threatening (Grade 4) immune-mediated adverse reactions, recurrent severe (Grade 3) immune-mediated reactions that require systemic immunosuppressive treatment, or an inability to reduce corticosteroid dose to 10 mg or less of prednisone or equivalent per day within 12 weeks of initiating corticosteroids.

Dosage modifications for IMFINZI or IMFINZI in combination with tremelimumab-actl or chemotherapy for adverse reactions that require management different from these general guidelines are summarized in Table 4.

**Table 4. Recommended Dosage Modifications for Adverse Reactions**

Adverse Reaction	Severity*	Dosage Modification
<b>Immune-Mediated Adverse Reactions</b> [see <a href="#">Warnings and Precautions (5.1)</a> ]		
Pneumonitis	Grade 2	Withhold <sup>†</sup>
	Grade 3 or 4	Permanently discontinue
Colitis	Grade 2	Withhold <sup>†</sup>
	Grade 3	Withhold <sup>†</sup> or permanently discontinue <sup>‡</sup>
	Grade 4	Permanently discontinue
Intestinal perforation	Any grade	Permanently discontinue
Hepatitis with no tumor involvement of the liver	ALT or AST increases to more than 3 and up to 8 times the ULN or total bilirubin increases to more than 1.5 and up to 3 times ULN	Withhold <sup>†</sup>
	ALT or AST increases to more than 8 times ULN or total bilirubin increases to more than 3 times the ULN	Permanently discontinue
Hepatitis with tumor involvement of the liver <sup>§</sup>	AST or ALT is more than 1 and up to 3 times ULN at baseline and increases to more than 5 and up to 10 times ULN or	Withhold <sup>†</sup>

Adverse Reaction	Severity*	Dosage Modification
	AST or ALT is more than 3 and up to 5 times ULN at baseline and increases to more than 8 and up to 10 times ULN	
	AST or ALT increases to more than 10 times ULN or total bilirubin increases to more than 3 times ULN	Permanently discontinue
Endocrinopathies	Grade 3 or 4	Withhold until clinically stable or permanently discontinue depending on severity
Nephritis with Renal Dysfunction	Grade 2 or 3 increased blood creatinine	Withhold†
	Grade 4 increased blood creatinine	Permanently discontinue
Exfoliative Dermatologic Conditions	Suspected SJS, TEN, or DRESS	Withhold†
	Confirmed SJS, TEN, or DRESS	Permanently discontinue
Myocarditis	Grade 2, 3, or 4	Permanently discontinue
Neurological Toxicities	Grade 2	Withhold†
	Grade 3 or 4	Permanently discontinue
<b>Other Adverse Reactions</b>		
Infusion-related reactions [ <i>see Warnings and Precautions (5.2)</i> ]	Grade 1 or 2	Interrupt or slow the rate of infusion
	Grade 3 or 4	Permanently discontinue

ALT = alanine aminotransferase, AST = aspartate aminotransferase, DRESS = Drug Rash with Eosinophilia and Systemic Symptoms, SJS = Stevens Johnson Syndrome, TEN = toxic epidermal necrolysis, ULN = upper limit normal.

\* Based on National Cancer Institute Common Terminology Criteria for Adverse Events, version 4.03.

† Resume in patients with complete or partial resolution (Grade 0 to 1) after corticosteroid taper. Permanently discontinue if no complete or partial resolution within 12 weeks of initiating corticosteroids or an inability to reduce corticosteroid dose to 10 mg of prednisone or less per day (or equivalent) within 12 weeks of initiating corticosteroids.

‡ Permanently discontinue IMFINZI for Grade 3 colitis when administered as part of a tremelimumab-actl containing regimen.

§ If AST and ALT are less than or equal to ULN at baseline in patients with liver involvement, withhold or permanently discontinue IMFINZI based on recommendations for hepatitis with no liver involvement.

## 2.4 Preparation and Administration

### Preparation

- Visually inspect drug product for particulate matter and discoloration prior to administration, whenever solution and container permit. Discard the vial if the solution is cloudy, discolored, or visible particles are observed.
- Do not shake the vial.
- Withdraw the required volume from the vial(s) of IMFINZI and transfer into an intravenous bag containing 0.9% Sodium Chloride Injection, USP or 5% Dextrose Injection, USP. Mix diluted solution by gentle inversion. Do not shake the solution. The final concentration of the diluted solution should be between 1 mg/mL and 15 mg/mL.
- Discard partially used or empty vials of IMFINZI.

### Storage of Infusion Solution

- IMFINZI does not contain a preservative.
- Administer infusion solution immediately once prepared. If the infusion solution is not administered immediately and needs to be stored, the time from preparation until the completion of the infusion should not exceed:
  - 28 days in a refrigerator at 2°C to 8°C (36°F to 46°F)
  - 8 hours at room temperature up to 25°C (77°F)
- Do not freeze.
- Do not shake.

### Administration

- Administer infusion solution intravenously over 60 minutes through an intravenous line containing a sterile, low-protein binding 0.2 or 0.22 micron in-line filter.
- Use separate infusion bags and filters for each drug product.

### *IMFINZI in Combination with Other Products*

- Administer all intravenous drug products as separate infusions.
- Do not co-administer other intravenous drugs through the same infusion line.
- For platinum-based chemotherapy, refer to Prescribing Information for administration information.
- For pemetrexed therapy, refer to Prescribing Information for administration information.

### Combination Regimens: Order of Infusions

*IMFINZI in Combination with Tremelimumab-actl*

- Infuse tremelimumab-actl first, followed by IMFINZI on the same day of dosing.

*IMFINZI in Combination with Tremelimumab-actl and Platinum-Based Chemotherapy*

- Infuse tremelimumab-actl first, followed by IMFINZI and then platinum-based chemotherapy on the day of dosing.

*IMFINZI in Combination with Tremelimumab-actl and Pemetrexed Therapy*

- Infuse tremelimumab-actl first, followed by IMFINZI and then pemetrexed therapy on the day of dosing.

*IMFINZI in Combination with Carboplatin and Paclitaxel*

- Infuse IMFINZI first and then carboplatin and paclitaxel on the same day of dosing.

Combination Regimens: Infusion Instructions

*IMFINZI in Combination with Tremelimumab-actl*

- Administer tremelimumab-actl over 60 minutes followed by a 60 minute observation period. Then administer IMFINZI as a separate intravenous infusion over 60 minutes.

*IMFINZI in Combination with Tremelimumab-actl and Platinum-Based Chemotherapy/ Pemetrexed Therapy*

*Cycle 1*

- Infuse tremelimumab-actl over 1 hour. One to two hours after completion of tremelimumab-actl infusion, infuse IMFINZI over 1 hour. One to two hours after completion of IMFINZI infusion, administer platinum-based chemotherapy.

*Subsequent Cycles*

- If there are no infusion reactions during cycle 1, subsequent cycles of IMFINZI can be given immediately after tremelimumab-actl. The time between the end of the IMFINZI infusion and the start of chemotherapy can be reduced to 30 minutes.

### **3 DOSAGE FORMS AND STRENGTHS**

Injection: 120 mg/2.4 mL (50 mg/mL) and 500 mg/10 mL (50 mg/mL) clear to opalescent, colorless to slightly yellow solution in a single-dose vial.

### **4 CONTRAINDICATIONS**

None.

### **5 WARNINGS AND PRECAUTIONS**

## 5.1 Immune-Mediated Adverse Reactions

IMFINZI is a monoclonal antibody that belongs to a class of drugs that bind to either the programmed death-receptor 1 (PD-1) or the PD-ligand 1 (PD-L1), blocking the PD-1/PD-L1 pathway, thereby removing inhibition of the immune response, potentially breaking peripheral tolerance and inducing immune-mediated adverse reactions. Important immune-mediated adverse reactions listed under Warnings and Precautions may not include all possible severe and fatal immune-mediated reactions.

The incidence and severity of immune-mediated adverse reactions were similar when IMFINZI was administered as a single agent or in combination with chemotherapy or in combination with tremelimumab-actl and platinum-based chemotherapy, unless otherwise noted.

Immune-mediated adverse reactions, which may be severe or fatal, can occur in any organ system or tissue. Immune-mediated adverse reactions can occur at any time after starting treatment with a PD-1/PD-L1 blocking antibody. While immune-mediated adverse reactions usually manifest during treatment with PD-1/PD-L1 blocking antibodies, immune-mediated adverse reactions can also manifest after discontinuation of PD-1/PD-L1 blocking antibodies.

Early identification and management of immune-mediated adverse reactions are essential to ensure safe use of PD-1/PD-L1 blocking antibodies. Monitor patients closely for symptoms and signs that may be clinical manifestations of underlying immune-mediated adverse reactions. Evaluate liver enzymes, creatinine, and thyroid function at baseline and periodically during treatment. In cases of suspected immune-mediated adverse reactions, initiate appropriate workup to exclude alternative etiologies, including infection. Institute medical management promptly, including specialty consultation as appropriate.

Withhold or permanently discontinue IMFINZI depending on severity [*see [Dosage and Administration \(2.3\)](#)*]. In general, if IMFINZI requires interruption or discontinuation, administer systemic corticosteroid therapy (1 mg to 2 mg/kg/day prednisone or equivalent) until improvement to Grade 1 or less. Upon improvement to Grade 1 or less, initiate corticosteroid taper and continue to taper over at least 1 month. Consider administration of other systemic immunosuppressants in patients whose immune-mediated adverse reactions are not controlled with corticosteroid therapy.

Toxicity management guidelines for adverse reactions that do not necessarily require systemic steroids (e.g., endocrinopathies and dermatologic reactions) are discussed below.

### Immune-Mediated Pneumonitis

IMFINZI can cause immune-mediated pneumonitis. The incidence of pneumonitis is higher in patients who have received prior thoracic radiation.

#### *IMFINZI as a Single Agent*

##### *In Patients Who Did Not Receive Recent Prior Radiation*

In patients who received IMFINZI on clinical trials in which radiation therapy was generally not administered immediately prior to initiation of IMFINZI, the incidence of immune-mediated pneumonitis was 2.4% (34/1414), including fatal (< 0.1%), and Grade 3-4 (0.4%) adverse reactions. Events resolved in

19 of the 34 patients and resulted in permanent discontinuation in 5 patients. Systemic corticosteroids were required in 19 patients (19/34) with pneumonitis who did not receive chemoradiation prior to initiation of IMFINZI.

#### *In Patients Who Received Recent Prior Radiation*

The incidence of pneumonitis (including radiation pneumonitis) in patients with unresectable Stage III NSCLC following definitive chemoradiation within 42 days prior to initiation of IMFINZI in PACIFIC was 18.3% (87/475) in patients receiving IMFINZI and 12.8% (30/234) in patients receiving placebo. Of the patients who received IMFINZI (475) 1.1% were fatal and 2.7% were Grade 3 adverse reactions. Events resolved in 50 of the 87 patients and resulted in permanent discontinuation in 27 patients.

Systemic corticosteroids were required in 64 patients (64/87) with pneumonitis who had received chemoradiation prior to initiation of IMFINZI, while 2 patients required use of infliximab with high-dose steroids.

The frequency and severity of immune-mediated pneumonitis in patients who did not receive definitive chemoradiation prior to IMFINZI were similar whether IMFINZI was given as a single agent in patients with various cancers in a pooled data set or in patients with ES-SCLC or BTC when given in combination with chemotherapy.

#### *IMFINZI with Tremelimumab-actl*

Immune-mediated pneumonitis occurred in 1.3% (5/388) of patients receiving IMFINZI in combination with tremelimumab-actl, including fatal (0.3%) and Grade 3 (0.2%) adverse reactions. Events resolved in 3 of the 5 patients and resulted in permanent discontinuation in 1 patient. Systemic corticosteroids were required in all patients; of these, 4 patients required high-dose corticosteroid treatment (at least 40 mg prednisone or equivalent per day). One patient (1/5) required other immunosuppressants.

#### *IMFINZI with Tremelimumab-actl and Platinum-Based Chemotherapy*

Immune-mediated pneumonitis occurred in 3.5% (21/596) of patients receiving IMFINZI in combination with tremelimumab-actl and platinum-based chemotherapy, including fatal (0.5%), and Grade 3 (1%) adverse reactions. Events resolved in 11 of the 21 patients and resulted in permanent discontinuation in 7 patients. Systemic corticosteroids were required in all patients with immune-mediated pneumonitis, while 1 patient (1/21) required other immunosuppressants.

#### Immune-Mediated Colitis

IMFINZI can cause immune-mediated colitis that is frequently associated with diarrhea. Cytomegalovirus (CMV) infection/reactivation has been reported in patients with corticosteroid-refractory immune-mediated colitis. In cases of corticosteroid-refractory colitis, consider repeating infectious workup to exclude alternative etiologies.

#### *IMFINZI as a Single Agent*

Immune-mediated colitis occurred in 2% (37/1889) of patients receiving IMFINZI, including Grade 4 (< 0.1%) and Grade 3 (0.4%) adverse reactions. Events resolved in 27 of the 37 patients and resulted in

permanent discontinuation in 8 patients. Systemic corticosteroids were required in all patients with immune-mediated colitis, while 2 patients (2/37) required other immunosuppressants (e.g., infliximab, mycophenolate).

#### *IMFINZI with Tremelimumab-actl*

Immune-mediated colitis or diarrhea occurred in 6% (23/388) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 3 (3.6%) adverse reactions. Events resolved in 22 of the 23 patients and resulted in permanent discontinuation in 5 patients. All patients received systemic corticosteroids, and 20 of the 23 patients received high-dose corticosteroid treatment (at least 40 mg prednisone or equivalent per day). Three patients also received other immunosuppressants.

Intestinal perforation has been observed in other studies of IMFINZI in combination with tremelimumab-actl.

#### *IMFINZI with Tremelimumab-actl and Platinum-Based Chemotherapy*

Immune-mediated colitis occurred in 6.5% (39/596) of patients receiving IMFINZI in combination with tremelimumab-actl including fatal (0.2%) and Grade 3 (2.5%) adverse reactions. Events resolved in 33 of 39 patients and resulted in permanent discontinuation in 11 patients. Systemic corticosteroids were required in all patients with immune-mediated colitis, while 4 patients (4/39) required other corticosteroids.

Intestinal perforation and large intestine perforation were reported in 0.1% of patients receiving IMFINZI in combination with tremelimumab-actl.

#### Immune-Mediated Hepatitis

IMFINZI can cause immune-mediated hepatitis.

#### *IMFINZI as a Single Agent*

Immune-mediated hepatitis occurred in 2.8% (52/1889) of patients receiving IMFINZI, including fatal (0.2%), Grade 4 (0.3%) and Grade 3 (1.4%) adverse reactions. Events resolved in 21 of the 52 patients and resulted in permanent discontinuation of IMFINZI in 6 patients. Systemic corticosteroids were required in all patients with immune-mediated hepatitis, while 2 patients (2/52) required use of mycophenolate with high-dose steroids.

#### *IMFINZI with Tremelimumab-actl*

Immune-mediated hepatitis occurred in 7.5% (29/388) of patients receiving IMFINZI in combination with tremelimumab-actl, including fatal (0.8%), Grade 4 (0.3%), and Grade 3 (4.1%) adverse reactions. Events resolved in 12 of the 29 patients and resulted in permanent discontinuation in 9 patients. Systemic corticosteroids were required in all 29 patients and all 29 patients required high-dose corticosteroid treatment (at least 40 mg prednisone or equivalent per day). Eight patients (8/29) required other immunosuppressants.

#### *IMFINZI with Tremelimumab-actl and Platinum-Based Chemotherapy*

Immune-mediated hepatitis occurred in 3.9% (23/596) of patients receiving IMFINZI in combination with tremelimumab-actl, including fatal (0.3%), Grade 4 (0.5%), and Grade 3 (2.0%) adverse reactions. Events resolved in 12 of the 23 patients and resulted in permanent discontinuation in 10 patients. Systemic corticosteroids were required in all patients with immune-mediated hepatitis, while 2 patients (2/23) required use of other immunosuppressants.

### Immune-Mediated Endocrinopathies

#### *Adrenal Insufficiency*

IMFINZI can cause primary or secondary adrenal insufficiency. For Grade 2 or higher adrenal insufficiency, initiate symptomatic treatment, including hormone replacement as clinically indicated. Withhold or permanently discontinue IMFINZI based on the severity [see [Dosage and Administration \(2.3\)](#)].

#### *IMFINZI as a Single Agent*

Immune-mediated adrenal insufficiency occurred in 0.5% (9/1889) of patients receiving IMFINZI, including Grade 3 (< 0.1%) adverse reactions. Events resolved in 1 of the 9 patients and did not lead to permanent discontinuation of IMFINZI in any patients. Systemic corticosteroids were required in all patients with adrenal insufficiency; of these, the majority remained on systemic corticosteroids.

#### *IMFINZI with Tremelimumab-actl*

Immune-mediated adrenal insufficiency occurred in 1.5% (6/388) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 3 (0.3%) adverse reactions. Events resolved in 2 of the 6 patients. Systemic corticosteroids were required in all 6 patients, and of these, 1 patient required high-dose corticosteroid treatment (at least 40 mg prednisone or equivalent per day).

#### *IMFINZI with Tremelimumab-actl and Platinum-Based Chemotherapy*

Immune-mediated adrenal insufficiency occurred in 2.2% (13/596) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 3 (0.8%) adverse reactions. Events resolved in 2 of the 13 patients and resulted in permanent discontinuation in 1 patient. Systemic corticosteroids were required in all patients with adrenal insufficiency. One patient also required endocrine therapy.

#### *Hypophysitis*

IMFINZI can cause immune-mediated hypophysitis. Hypophysitis can present with acute symptoms associated with mass effect such as headache, photophobia, or visual field cuts. Hypophysitis can cause hypopituitarism. Initiate symptomatic treatment including hormone replacement as clinically indicated. Withhold or permanently discontinue IMFINZI depending on severity [see [Dosage and Administration \(2.3\)](#)].

#### *IMFINZI as a Single Agent*

Grade 3 hypophysitis/hypopituitarism occurred in < 0.1% (1/1889) of patients who received IMFINZI. Treatment with systemic corticosteroids was administered in this patient. The event did not lead to permanent discontinuation of IMFINZI.

#### *IMFINZI with Tremelimumab-actl*

Immune-mediated hypophysitis/hypopituitarism occurred in 1% (4/388) of patients receiving IMFINZI in combination with tremelimumab-actl. Events resolved in 2 of the 4 patients. Systemic corticosteroids were required in 3 patients, and of these, 1 patient received high-dose corticosteroid treatment (at least 40 mg prednisone or equivalent per day). Two patients also required endocrine therapy.

#### *IMFINZI with Tremelimumab-actl and Platinum-Based Chemotherapy*

Immune-mediated hypophysitis occurred in 1.3% (8/596) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 3 (0.5%) adverse reactions. Events resulted in permanent discontinuation in 1 patient. Systemic corticosteroids were required in 6 patients with immune-mediated hypophysitis; of these, 2 of the 8 patients received high-dose corticosteroid treatment (at least 40 mg prednisone or equivalent per day). Four patients also required endocrine therapy.

#### *Thyroid Disorders*

IMFINZI can cause immune-mediated thyroid disorders. Thyroiditis can present with or without endocrinopathy. Hypothyroidism can follow hyperthyroidism. Initiate hormone replacement therapy for hypothyroidism or institute medical management of hyperthyroidism as clinically indicated. Withhold or discontinue IMFINZI based on the severity [*see [Dosage and Administration \(2.3\)](#)*].

#### *Thyroiditis*

##### *IMFINZI as a Single Agent*

Immune-mediated thyroiditis occurred in 0.5% (9/1889) of patients receiving IMFINZI, including Grade 3 (< 0.1%) adverse reactions. Events resolved in 4 of the 9 patients and resulted in permanent discontinuation in 1 patient. Systemic corticosteroids were required in 3 patients (3/9) with immune-mediated thyroiditis, while 8 patients (8/9) required endocrine therapy.

##### *IMFINZI with Tremelimumab-actl*

Immune-mediated thyroiditis occurred in 1.5% (6/388) of patients receiving IMFINZI in combination with tremelimumab-actl. Events resolved in 2 of the 6 patients. Systemic corticosteroids were required in 2 patients (2/6) with immune-mediated thyroiditis; of these, 1 patient required high-dose corticosteroid treatment (at least 40 mg prednisone or equivalent per day). All patients required other therapy including hormone replacement therapy, thiamazole, carbimazole, propylthiouracil, perchlorate, calcium channel blocker, or beta-blocker.

##### *IMFINZI with Tremelimumab-actl and Platinum-Based Chemotherapy*

Immune-mediated thyroiditis occurred in 1.2% (7/596) of patients receiving IMFINZI in combination with tremelimumab-actl. Events resolved in 2 of the 7 patients and one resulted in permanent

discontinuation. Systemic corticosteroids were required in 2 patients (2/7) with immune-mediated thyroiditis, while all patients required endocrine therapy.

### *Hyperthyroidism*

#### *IMFINZI as a Single Agent*

Immune-mediated hyperthyroidism occurred in 2.1% (39/1889) of patients receiving IMFINZI. Events resolved in 30 of the 39 patients and did not lead to permanent discontinuation of IMFINZI in any patients. Systemic corticosteroids were required in 9 patients (9/39) with immune-mediated hyperthyroidism, while 35 patients (35/39) required endocrine therapy.

#### *IMFINZI with Tremelimumab-actl*

Immune-mediated hyperthyroidism occurred in 4.6% (18/388) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 3 (0.3%) adverse reactions. Events resolved in 15 of the 18 patients. Two patients (2/18) required high-dose corticosteroid treatment (at least 40 mg prednisone or equivalent per day). Seventeen patients required other therapy (thiamazole, carbimazole, propylthiouracil, perchlorate, calcium channel blocker, or beta-blocker).

#### *IMFINZI with Tremelimumab-actl and Platinum-Based Chemotherapy*

Immune-mediated hyperthyroidism occurred in 5% (30/596) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 3 (0.2%) adverse reactions. Events resolved in 21 of the 30 patients. Systemic corticosteroids were required in 5 patients (5/30) with immune-mediated hyperthyroidism, while 28 patients (28/30) required endocrine therapy.

### *Hypothyroidism*

#### *IMFINZI as a Single Agent*

Immune-mediated hypothyroidism occurred in 8.3% (156/1889) of patients receiving IMFINZI, including Grade 3 (<0.1%) adverse reactions. Events resolved in 31 of the 156 patients and did not lead to permanent discontinuation of IMFINZI in any patients. Systemic corticosteroids were required in 11 patients (11/156) and the majority of patients (152/156) required long-term thyroid hormone replacement.

#### *IMFINZI with Tremelimumab-actl*

Immune-mediated hypothyroidism occurred in 11% (42/388) of patients receiving IMFINZI in combination with tremelimumab-actl. Events resolved in 5 of the 42 patients. One patient received high-dose corticosteroid treatment (at least 40 mg prednisone or equivalent per day). All patients required other therapy (thiamazole, carbimazole, propylthiouracil, perchlorate, calcium channel blocker, or beta-blocker).

#### *IMFINZI with Tremelimumab-actl and Platinum-Based Chemotherapy*

Immune-mediated hypothyroidism occurred in 8.6% (51/596) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 3 (0.5%) adverse reactions. Systemic corticosteroids were required in 2 patients (2/51) and all patients required endocrine therapy.

### *IMFINZI with Carboplatin and Paclitaxel*

Immune-mediated hypothyroidism occurred in 14% (34/235) of patients receiving IMFINZI in combination with carboplatin and paclitaxel. Events resolved in 8 of the 34 patients. Endocrine therapy was required in 34 of the 34 patients.

### *Type 1 Diabetes Mellitus, which can present with diabetic ketoacidosis*

Monitor patients for hyperglycemia or other signs and symptoms of diabetes. Initiate treatment with insulin as clinically indicated. Withhold or permanently discontinue IMFINZI based on the severity [[see Dosage and Administration \(2.3\)](#)].

### *IMFINZI as a Single Agent*

Grade 3 immune-mediated type 1 diabetes mellitus occurred in < 0.1% (1/1889) of patients receiving IMFINZI. This patient required long-term insulin therapy and IMFINZI was permanently discontinued. Two additional patients (0.1%, 2/1889) had events of hyperglycemia requiring insulin therapy that did not resolve at the time of reporting.

### *IMFINZI with Tremelimumab-actl*

Two patients (0.5%, 2/388) had events of hyperglycemia requiring insulin therapy that had not resolved at last follow-up.

### *IMFINZI with Tremelimumab-actl and Platinum-Based Chemotherapy*

Immune-mediated Type 1 diabetes mellitus occurred in 0.5% (3/596) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 3 (0.3%) adverse reactions. All patients required endocrine therapy.

### Immune-Mediated Nephritis with Renal Dysfunction

IMFINZI can cause immune-mediated nephritis.

### *IMFINZI as a Single Agent*

Immune-mediated nephritis occurred in 0.5% (10/1889) of patients receiving IMFINZI, including Grade 3 (< 0.1%) adverse reactions. Events resolved in 5 of the 10 patients and resulted in permanent discontinuation in 3 patients. Systemic corticosteroids were required in all patients with immune-mediated nephritis.

### *IMFINZI with Tremelimumab-actl*

Immune-mediated nephritis occurred in 1% (4/388) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 3 (0.5%) adverse reactions. Events resolved in 3 of the 4 patients and resulted in permanent discontinuation in 2 patients. Systemic corticosteroids were required in all patients with immune-mediated nephritis; of these, 3 patients required high-dose corticosteroid treatment (at least 40 mg prednisone or equivalent per day).

### *IMFINZI with Tremelimumab-actl and Platinum-Based Chemotherapy*

Immune-mediated nephritis occurred in 0.7% (4/596) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 3 (0.2%) adverse reactions. Events resolved in 1 of the 4 patients and resulted in permanent discontinuation in 3 patients. Systemic corticosteroids were required in all patients with immune-mediated nephritis.

### Immune-Mediated Dermatology Reactions

IMFINZI can cause immune-mediated rash or dermatitis. Exfoliative dermatitis, including Stevens Johnson Syndrome (SJS), drug rash with eosinophilia and systemic symptoms (DRESS), and toxic epidermal necrolysis (TEN), has occurred with PD-1/L-1 blocking antibodies. Topical emollients and/or topical corticosteroids may be adequate to treat mild to moderate non-exfoliative rashes. Withhold or permanently discontinue IMFINZI depending on severity [*see [Dosage and Administration \(2.3\)](#)*].

### *IMFINZI as a Single Agent*

Immune-mediated rash or dermatitis occurred in 1.8% (34/1889) of patients receiving IMFINZI, including Grade 3 (0.4%) adverse reactions. Events resolved in 19 of the 34 patients and resulted in permanent discontinuation in 2 patients. Systemic corticosteroids were required in all patients with immune-mediated rash or dermatitis.

### *IMFINZI with Tremelimumab-actl*

Immune-mediated rash or dermatitis occurred in 4.9% (19/388) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 4 (0.3%) and Grade 3 (1.5%) adverse reactions. Events resolved in 13 of the 19 patients and resulted in permanent discontinuation in 2 patients. Systemic corticosteroids were required in all patients with immune-mediated rash or dermatitis; of these, 12 patients required high-dose corticosteroid treatment (at least 40 mg prednisone or equivalent per day). One patient received other immunosuppressants.

### *IMFINZI with Tremelimumab-actl and Platinum-Based Chemotherapy*

Immune-mediated rash or dermatitis occurred in 7.2% (43/596) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 3 (0.3%) adverse reactions. Events resolved in 32 of the 43 patients and resulted in permanent discontinuation in 2 patients. Systemic corticosteroids were required in all patients with immune-mediated rash or dermatitis.

### Immune-Mediated Pancreatitis

IMFINZI in combination with tremelimumab-actl can cause immune-mediated pancreatitis.

### *IMFINZI with Tremelimumab-actl*

Immune-mediated pancreatitis occurred in 2.3% (9/388) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 4 (0.3%) and Grade 3 (1.5%) adverse reactions. Events resolved in 6 of the 9 patients. Systemic corticosteroids were required in all 9 patients and of these 7 patients required high-dose corticosteroid treatment (at least 40 mg prednisone or equivalent per day).

### Other Immune-Mediated Adverse Reactions

The following clinically significant, immune-mediated adverse reactions occurred at an incidence of less than 1% each in patients who received IMFINZI or IMFINZI in combination with tremelimumab-actl, or were reported with the use of other PD-1/PD-L1 blocking antibodies.

**Cardiac/vascular:** Myocarditis, pericarditis, vasculitis.

**Nervous system:** Meningitis, encephalitis, myelitis and demyelination, myasthenic syndrome/myasthenia gravis (including exacerbation), Guillain-Barré syndrome, nerve paresis, autoimmune neuropathy.

**Ocular:** Uveitis, iritis, and other ocular inflammatory toxicities can occur. Some cases can be associated with retinal detachment. Various grades of visual impairment to include blindness can occur. If uveitis occurs in combination with other immune-mediated adverse reactions, consider a Vogt-Koyanagi-Harada-like syndrome, as this may require treatment with systemic steroids to reduce the risk of permanent vision loss.

**Gastrointestinal:** Pancreatitis including increases in serum amylase and lipase levels, gastritis, duodenitis.

**Musculoskeletal and connective tissue disorders:** Myositis/polymyositis, rhabdomyolysis and associated sequelae including renal failure, arthritis, polymyalgia rheumatic.

**Endocrine:** Hypoparathyroidism.

**Other (hematologic/immune):** Hemolytic anemia, aplastic anemia, hemophagocytic lymphohistiocytosis, systemic inflammatory response syndrome, histiocytic necrotizing lymphadenitis (Kikuchi lymphadenitis), sarcoidosis, immune thrombocytopenia, solid organ transplant rejection, other transplant (including corneal graft) rejection.

## **5.2 Infusion-Related Reactions**

IMFINZI can cause severe or life-threatening infusion-related reactions.

Monitor for signs and symptoms of infusion-related reactions. Interrupt, slow the rate of, or permanently discontinue IMFINZI based on the severity [see [Dosage and Administration \(2.3\)](#)]. For Grade 1 or 2 infusion-related reactions, consider using pre-medications with subsequent doses.

### IMFINZI as a Single Agent

Infusion-related reactions occurred in 2.2% (42/1889) of patients receiving IMFINZI, including Grade 3 (0.3%) adverse reactions.

### IMFINZI in Combination with Tremelimumab-actl

Infusion-related reactions occurred in 10 (2.6%) patients receiving IMFINZI in combination with tremelimumab-actl.

### IMFINZI with Tremelimumab-actl and Platinum-Based Chemotherapy

Infusion-related reactions occurred in 2.9% (17/596) of patients receiving IMFINZI in combination with tremelimumab-actl, including Grade 3 (0.3%) adverse reactions.

### **5.3 Complications of Allogeneic HSCT after IMFINZI**

Fatal and other serious complications can occur in patients who receive allogeneic hematopoietic stem cell transplantation (HSCT) before or after being treated with a PD-1/L-1 blocking antibody. Transplant-related complications include hyperacute graft-versus-host-disease (GVHD), acute GVHD, chronic GVHD, hepatic veno-occlusive disease (VOD) after reduced intensity conditioning, and steroid-requiring febrile syndrome (without an identified infectious cause). These complications may occur despite intervening therapy between PD-1/L-1 blockade and allogeneic HSCT.

Follow patients closely for evidence of transplant-related complications and intervene promptly. Consider the benefit versus risks of treatment with a PD-1/L-1 blocking antibody prior to or after an allogeneic HSCT.

### **5.4 Embryo-Fetal Toxicity**

Based on its mechanism of action and data from animal studies, IMFINZI can cause fetal harm when administered to a pregnant woman. In animal reproduction studies, administration of durvalumab to cynomolgus monkeys from the onset of organogenesis through delivery resulted in increased premature delivery, fetal loss and premature neonatal death. Advise pregnant women of the potential risk to a fetus. Advise females of reproductive potential to use effective contraception during treatment with IMFINZI and for 3 months after the last dose of IMFINZI [see [Use in Specific Populations \(8.1, 8.3\)](#)].

## **6 ADVERSE REACTIONS**

The following adverse reactions are discussed in greater detail in other sections of the labeling.

- Immune-Mediated Adverse Reactions [see [Warnings and Precautions \(5.1\)](#)].
- Infusion-Related Reactions [see [Warnings and Precautions \(5.2\)](#)].

### **6.1 Clinical Trials Experience**

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

The data described in the Warnings and Precautions section reflect exposure to IMFINZI as a single agent in a total of 1,889 patients enrolled in the PACIFIC study (a randomized, placebo-controlled study that enrolled 475 patients with Stage III NSCLC), Study 1108 (an open-label, single-arm, multicohort study that enrolled 970 patients with advanced solid tumors), and an additional open-label, single-arm trial (ATLANTIC Study) that enrolled 444 patients with advanced solid tumors, including NSCLC. In these trials, IMFINZI was administered at a dose of 10 mg/kg every 2 weeks. Among the 1889 patients, 38% were exposed for 6 months or more and 18% were exposed for 12 months or more. The data also reflect exposure to IMFINZI in combination with chemotherapy in 265 patients from the CASPIAN study (a randomized, open-label study in patients with ES-SCLC), in 338 patients from the TOPAZ-1 study (a

randomized, double-blind study in patients with BTC). In the CASPIAN and TOPAZ-1 studies, IMFINZI was administered at a dose of 1,500 mg every 3 or 4 weeks.

The data also reflect exposure to IMFINZI 1,120 mg in combination with carboplatin and paclitaxel (every 3 weeks for up to 6 cycles) followed by IMFINZI 1,500 mg (every 4 weeks) as a single agent in 235 patients in DUO-E (a randomized, placebo-controlled trial in endometrial cancer). Among the 235 patients, 77% (181 patients) were exposed to IMFINZI for 6 months or more and 41% (96 patients) for 12 months or more.

The data also reflect exposure to IMFINZI 1,500 mg in combination with tremelimumab-actl 300 mg in 388 patients in HIMALAYA. In the HIMALAYA study patients received IMFINZI 1,500 mg in combination with tremelimumab-actl as a single intravenous infusion of 300 mg, followed by IMFINZI 1,500 mg every 4 weeks. The pooled safety population (N = 596) described in the Warnings and Precautions section reflect exposure to IMFINZI 1,500 mg in combination with tremelimumab-actl 75 mg and histology-based platinum chemotherapy regimens in 330 patients in POSEIDON and 266 patients with ES-SCLC in CASPIAN who received up to four cycles of platinum-etoposide plus IMFINZI 1,500 mg with tremelimumab-actl 75 mg every 3 weeks followed by IMFINZI 1,500 mg every 4 weeks (an unapproved regimen for extensive stage small cell lung cancer). Among the 596 patients, 55% were exposed to IMFINZI for 6 months or more and 24% were exposed for 12 months or more.

The data described in this section reflect exposure to IMFINZI in patients with Stage III NSCLC enrolled in the PACIFIC study, in patients with metastatic NSCLC enrolled in the POSEIDON study, in patients with ES-SCLC enrolled in the CASPIAN study, in patients with BTC enrolled in the TOPAZ-1 study, in patients with uHCC included in the HIMALAYA study and in patients with dMMR endometrial cancer enrolled in the DUO-E study.

## Non-Small Cell Lung Cancer

### *Stage III NSCLC - PACIFIC*

The safety of IMFINZI in patients with Stage III NSCLC who completed concurrent platinum-based chemoradiotherapy within 42 days prior to initiation of study drug was evaluated in the PACIFIC study, a multicenter, randomized, double-blind, placebo-controlled study. A total of 475 patients received IMFINZI 10 mg/kg intravenously every 2 weeks. The study excluded patients who had disease progression following chemoradiation, with active or prior autoimmune disease within 2 years of initiation of the study or with medical conditions that required systemic immunosuppression [*see [Clinical Studies \(14.1\)](#)*].

The study population characteristics were: median age of 64 years (range: 23 to 90), 45% age 65 years or older, 70% male, 69% White, 27% Asian, 75% former smoker, 16% current smoker, and 51% had WHO performance status of 1. All patients received definitive radiotherapy as per protocol, of which 92% received a total radiation dose of 54 Gy to 66 Gy. The median duration of exposure to IMFINZI was 10 months (range: 0.2 to 12.6).

IMFINZI was discontinued due to adverse reactions in 15% of patients. The most common adverse reactions leading to IMFINZI discontinuation were pneumonitis or radiation pneumonitis in 6% of patients. Serious adverse reactions occurred in 29% of patients receiving IMFINZI. The most frequent

serious adverse reactions reported in at least 2% of patients were pneumonitis or radiation pneumonitis (7%) and pneumonia (6%). Fatal pneumonitis or radiation pneumonitis and fatal pneumonia occurred in < 2% of patients and were similar across arms. The most common adverse reactions (occurring in ≥ 20% of patients) were cough, fatigue, pneumonitis or radiation pneumonitis, upper respiratory tract infections, dyspnea, and rash.

Table 5 summarizes the adverse reactions that occurred in at least 10% of patients treated with IMFINZI.

**Table 5. Adverse Reactions Occurring in ≥ 10% of Patients in the PACIFIC Study**

Adverse Reaction	IMFINZI N = 475		Placebo N = 234	
	All Grades (%)	Grades 3-4 (%)	All Grades (%)	Grades 3-4 (%)
<b>Respiratory, Thoracic, and Mediastinal Disorders</b>				
Cough/Productive Cough	40	0.6	30	0.4
Pneumonitis*/Radiation Pneumonitis	34	3.4	25	3
Dyspnea†	25	1.5	25	2.6
<b>General Disorders</b>				
Fatigue <sup>b</sup>	34	0.8	32	1.3
Pyrexia	15	0.2	9	0
<b>Infections</b>				
Upper respiratory tract infections <sup>b</sup>	26	0.4	19	0
Pneumonia <sup>à</sup>	17	7	12	6
<b>Skin and Subcutaneous Tissue Disorders</b>				
Rash <sup>¶</sup>	23	0.6	12	0
Pruritus <sup>#</sup>	12	0	6	0
<b>Gastrointestinal Disorders</b>				
Diarrhea	18	0.6	19	1.3
Abdominal pain <sup>‡</sup>	10	0.4	6	0.4
<b>Endocrine Disorders</b>				
Hypothyroidism <sup>§</sup>	12	0.2	1.7	0

\* Includes acute interstitial pneumonitis, interstitial lung disease, pneumonitis, pulmonary fibrosis.

† Includes dyspnea, and exertional dyspnea.

<sup>b</sup> Includes asthenia and fatigue.

<sup>β</sup> Includes laryngitis, nasopharyngitis, peritonsillar abscess, pharyngitis, rhinitis, sinusitis, tonsillitis, tracheobronchitis, and upper respiratory tract infection.

<sup>à</sup> Includes lung infection, pneumocystis jirovecii pneumonia, pneumonia, pneumonia adenoviral, pneumonia bacterial, pneumonia cytomegaloviral, pneumonia haemophilus, pneumonia klebsiella, pneumonia necrotizing, pneumonia pneumococcal, and pneumonia streptococcal.

<sup>¶</sup> Includes rash erythematous, rash generalized, rash macular, rash maculopapular, rash papular, rash pruritic, rash pustular, erythema, eczema, rash, and dermatitis.

<sup>#</sup> Includes pruritus generalized and pruritus.

‡ Includes abdominal pain, abdominal pain lower, abdominal pain upper, and flank pain.

§ Includes autoimmune hypothyroidism and hypothyroidism.

Other adverse reactions occurring in less than 10% of patients treated with IMFINZI were dysphonia, dysuria, night sweats, peripheral edema, and increased susceptibility to infections.

Table 6 summarizes the laboratory abnormalities that occurred in at least 20% of patients treated with IMFINZI.

**Table 6. Laboratory Abnormalities Worsening from Baseline Occurring in  $\geq$  20% of Patients in the PACIFIC Study**

Laboratory Abnormality	IMFINZI		Placebo	
	All Grades* (%) <sup>†</sup>	Grade 3 or 4 (%)	All Grades* (%) <sup>†</sup>	Grade 3 or 4 (%)
<b>Chemistry</b>				
Hyperglycemia	52	8	51	8
Hypocalcemia	46	0.2	41	0
Increased ALT	39	2.3	22	0.4
Increased AST	36	2.8	21	0.4
Hyponatremia	33	3.6	30	3.1
Hyperkalemia	32	1.1	29	1.8
Increased GGT	24	3.4	22	1.7
<b>Hematology</b>				
Lymphopenia	43	17	39	18

\* Graded according to NCI CTCAE version 4.0.

<sup>†</sup> Each test incidence is based on the number of patients who had both baseline and at least one on-study laboratory measurement available: IMFINZI (range: 464 to 470) and placebo (range: 224 to 228).

#### *Metastatic NSCLC - POSEIDON*

The safety of IMFINZI in combination with tremelimumab-actl and platinum-based chemotherapy in patients with metastatic NSCLC was evaluated in POSEIDON (NCT03164616), a randomized, open-label, multicenter, active-controlled trial. A total of 330 patients received IMFINZI 1,500 mg in combination with tremelimumab-actl ( $\geq$  30 kg body weight received 75 mg and  $<$  30 kg body weight received 1 mg/kg) and histology-based platinum chemotherapy regimens [see [Clinical Studies \(14.1\)](#)]. Of these patients, 66% received the maximum 5 doses of tremelimumab-actl and 79% received at least 4 doses. Treatment was continued with IMFINZI as a single agent (or with IMFINZI and histologically-based pemetrexed for non-squamous patients based on the investigator's decision) until disease progression or unacceptable toxicity. The trial excluded patients with active or prior autoimmune disease or with medical conditions that required systemic corticosteroids or immunosuppressants [see [Clinical Studies \(14.1\)](#)].

The median age of patients who received IMFINZI in combination with tremelimumab-actl and platinum-based chemotherapy was 63 years (range: 27 to 87); 80% male; 61% White, 29% Asian, 58% former smoker, 25% current smoker, and 68% ECOG performance of 1.

Serious adverse reactions occurred in 44% of patients receiving IMFINZI in combination with tremelimumab-actl and platinum-based chemotherapy. The most frequent serious adverse reactions reported in at least 2% of patients were pneumonia (11%), anemia (5%), diarrhea (2.4%), thrombocytopenia (2.4%), pyrexia (2.4%), and febrile neutropenia (2.1%). Fatal adverse reactions occurred in a total of 4.2% of patients receiving IMFINZI in combination with tremelimumab-actl and platinum-based chemotherapy. These include hepatitis, nephritis, myocarditis, pancreatitis (all in the same patient), death (2 patients), sepsis (2 patients), pneumonitis (2 patients), acute kidney injury (2 patients), febrile neutropenia (1 patient), chronic obstructive pulmonary disease (COPD) (1 patient), dyspnea (1 patient), sudden death (1 patient), and ischemic stroke (1 patient).

Permanent discontinuation of IMFINZI or tremelimumab-actl due to an adverse reaction occurred in 17% of the patients. Adverse reactions which resulted in permanent discontinuation of IMFINZI or tremelimumab-actl in > 2% of patients included pneumonia.

Dosage interruption or delay of IMFINZI and tremelimumab-actl due to an adverse reaction occurred in 41% of patients. Adverse reactions which required dosage interruption or delay of IMFINZI and tremelimumab-actl in > 1% of patients included anemia, leukopenia/white blood cell count decreased, pneumonia, pneumonitis, colitis, diarrhea, hepatitis, rash, asthenia, amylase increased, alanine aminotransferase increased, aspartate aminotransferase increased, lipase increased, neutropenia/neutrophil count decreased, and thrombocytopenia/platelet count decreased.

The most common adverse reactions (occurring in  $\geq 20\%$  of patients) were nausea, fatigue, musculoskeletal pain, decreased appetite, rash, and diarrhea. Grade 3 or 4 laboratory abnormalities ( $\geq 10\%$ ) were neutropenia, anemia, leukopenia, lymphocytopenia, lipase increased, hyponatremia and thrombocytopenia.

Table 7 summarizes the adverse reactions in POSEIDON.

**Table 7. Adverse Reactions ( $\geq 10\%$ ) in Patients with NSCLC Who Received IMFINZI in the POSEIDON Study**

Adverse Reaction	IMFINZI with tremelimumab-actl and platinum-based chemotherapy N = 330		Platinum-based chemotherapy N = 333	
	All Grades (%)	Grade 3 or 4 (%)	All Grades (%)	Grade 3 or 4 (%)
<b>Gastrointestinal disorders</b>				
Nausea	42	1.8	37	2.1
Diarrhea	22	1.5	15	1.5
Constipation	19	0	24	0.6
Vomiting	18	1.2	14	1.5
Stomatitis <sup>†</sup>	10	0	6	0.3
<b>General disorders and administration site conditions</b>				
Fatigue/Asthenia <sup>‡</sup>	36	5	32	4.5
Pyrexia <sup>#</sup>	19	0	8	0

	<b>IMFINZI with tremelimumab-actl and platinum-based chemotherapy N = 330</b>		<b>Platinum-based chemotherapy N = 333</b>	
<b>Adverse Reaction</b>	<b>All Grades (%)</b>	<b>Grade 3 or 4 (%)</b>	<b>All Grades (%)</b>	<b>Grade 3 or 4 (%)</b>
Edema <sup>p</sup>	10	0	10	0.6
<b>Musculoskeletal and connective tissue disorders</b>				
Musculoskeletal Pain <sup>b</sup>	29	0.6	22	1.5
<b>Metabolism and nutrition disorders</b>				
Decreased appetite	28	1.5	25	1.2
<b>Skin and subcutaneous tissue disorders</b>				
Rash <sup>§</sup>	27	2.4	10	0.6
Pruritus	11	0	4.5	0
Alopecia	10	0	6	0
<b>Infections and Infestations</b>				
Pneumonia <sup>‡</sup>	17	8	12	4.2
Upper respiratory tract infections <sup>‡</sup>	15	0.6	9	0.9
<b>Endocrine disorders</b>				
Hypothyroidism <sup>‡</sup>	13	0	2.1	0
<b>Respiratory, thoracic and mediastinal disorders</b>				
Cough/Productive Cough <sup>*</sup>	12	0	8	0.3
<b>Nervous system disorders</b>				
Headache <sup>‡</sup>	11	0	8	0.6

<sup>†</sup> Includes mucosal inflammation and stomatitis.

<sup>‡</sup> Includes asthenia and fatigue.

<sup>#</sup> Includes body temperature increased, hyperpyrexia, hyperthermia, and pyrexia.

<sup>p</sup> Includes face edema, localized edema, and edema peripheral.

<sup>b</sup> Includes arthralgia, arthritis, back pain, bone pain, musculoskeletal chest pain, musculoskeletal pain, myalgia, neck pain, non-cardiac chest pain, and spinal pain.

<sup>§</sup> Includes eczema, erythema, dermatitis, drug eruption, erythema multiforme, pemphigoid, rash, rash maculopapular, rash papular, rash pruritic, and rash pustular.

<sup>‡</sup> Includes lower respiratory tract infection, pneumocystis jirovecii pneumonia, pneumonia, pneumonia aspiration, and pneumonia bacterial.

<sup>‡</sup> Includes laryngitis, nasopharyngitis, pharyngitis, rhinitis, sinusitis, tonsillitis, tracheobronchitis and upper respiratory tract infection.

<sup>‡</sup> Includes blood thyroid stimulating hormone increased and hypothyroidism.

<sup>\*</sup> Includes cough and productive cough.

<sup>‡</sup> Includes headache and migraine.

Table 8 summarizes the laboratory abnormalities in POSEIDON.

**Table 8. Select Laboratory Abnormalities (≥ 10%) That Worsened from Baseline in Patients with NSCLC Who Received IMFINZI in the POSEIDON Study**

Laboratory Abnormality*	IMFINZI with tremelimumab-actl and platinum-based chemotherapy†		Platinum-based chemotherapy§	
	All Grades (%)	Grade 3 or 4 (%)	All Grades (%)	Grade 3 or 4 (%)
<b>Chemistry</b>				
Blood creatinine increased	89	4	83	1.9
Increased ALT	64	6	56	4.7
Increased AST	63	5	55	2.2
Hypocalcemia	58	0.9	49	0.9
Hyponatremia	55	13	50	11
Hyperkalemia	49	2.2	35	2.8
Hyperglycemia	42	6	37	3.1
Amylase increased	41	9	25	6
Gamma Glutamyl Transferase increased	38	2.2	35	4.7
Lipase increased	35	14	25	5
Increased Alkaline Phosphatase	33	3.4	26	1.2
Albumin decreased	27	1.9	18	0.9
Hypokalemia	21	7	17	2.8
Bilirubinemia	16	0.9	8	0.3
Hypernatremia	15	0	14	0
Hypomagnesemia	12	4	23	0
<b>Hematology</b>				
Anemia	84	24	84	25
Leukopenia	77	21	81	18
Neutropenia	71	37	69	32
Lymphocytopenia	67	20	60	19
Thrombocytopenia	53	11	54	12

\* Graded according to NCI CTCAE version 4.03.

† The denominator used to calculate the rate varied from 45 to 326 based on the number of patients with a baseline value and at least one post-treatment value.

§ The denominator used to calculate the rate varied from 43 to 323 based on the number of patients with a baseline value and at least one post-treatment value.

### Small Cell Lung Cancer

#### *Extensive Stage Small Cell Lung Cancer – CASPIAN*

The safety of IMFINZI in combination with etoposide and either carboplatin or cisplatin in previously untreated ES-SCLC was evaluated in CASPIAN, a randomized, open-label, multicenter, active-controlled trial. A total of 265 patients received IMFINZI 1,500 mg in combination with chemotherapy every

3 weeks for 4 cycles followed by IMFINZI 1,500 mg every 4 weeks until disease progression or unacceptable toxicity. The trial excluded patients with active or prior autoimmune disease or with medical conditions that required systemic corticosteroids or immunosuppressants [see [Clinical Studies \(14.2\)](#)]. Among 265 patients receiving IMFINZI, 49% were exposed for 6 months or longer and 19% were exposed for 12 months or longer.

Among 266 patients receiving chemotherapy alone, 57% of the patients received 6 cycles of chemotherapy and 8% of the patients received prophylactic cranial irradiation (PCI) after chemotherapy.

IMFINZI was discontinued due to adverse reactions in 7% of the patients receiving IMFINZI plus chemotherapy. These include pneumonitis, hepatotoxicity, neurotoxicity, sepsis, diabetic ketoacidosis and pancytopenia (1 patient each). Serious adverse reactions occurred in 31% of patients receiving IMFINZI plus chemotherapy. The most frequent serious adverse reactions reported in at least 1% of patients were febrile neutropenia (4.5%), pneumonia (2.3%), anemia (1.9%), pancytopenia (1.5%), pneumonitis (1.1%) and COPD (1.1%). Fatal adverse reactions occurred in 4.9% of patients receiving IMFINZI plus chemotherapy. These include pancytopenia, sepsis, septic shock, pulmonary artery thrombosis, pulmonary embolism, and hepatitis (1 patient each) and sudden death (2 patients). The most common adverse reactions (occurring in  $\geq 20\%$  of patients) were nausea, fatigue/asthenia and alopecia.

Table 9 summarizes the adverse reactions that occurred in patients treated with IMFINZI plus chemotherapy.

**Table 9. Adverse Reactions Occurring in  $\geq 10\%$  of Patients in the CASPIAN study**

	<b>IMFINZI with etoposide and either carboplatin or cisplatin N = 265</b>		<b>Etoposide and either carboplatin or cisplatin N = 266</b>	
<b>Adverse Reaction</b>	<b>All Grades (%)</b>	<b>Grade 3-4 (%)</b>	<b>All Grades (%)</b>	<b>Grade 3-4 (%)</b>
<b>Gastrointestinal disorders</b>				
Nausea	34	0.4	34	1.9
Constipation	17	0.8	19	0
Vomiting	15	0	17	1.1
Diarrhea	10	1.1	11	1.1
<b>General disorders and administration site conditions</b>				
Fatigue/Asthenia	32	3.4	32	2.3
<b>Skin and subcutaneous tissue disorders</b>				
Alopecia	31	1.1	34	0.8
Rash <sup>†</sup>	11	0	6	0
<b>Metabolism and nutrition disorders</b>				
Decreased appetite	18	0.8	17	0.8
<b>Respiratory, thoracic and mediastinal disorders</b>				
Cough/Productive Cough	15	0.8	9	0
<b>Endocrine disorders</b>				
Hyperthyroidism*	10	0	0.4	0

<sup>†</sup> Includes rash erythematous, rash generalized, rash macular, rash maculopapular, rash papular, rash pruritic, rash pustular, erythema, eczema, rash and dermatitis.

\* Includes hyperthyroidism and Basedow's disease.

Table 10 summarizes the laboratory abnormalities that occurred in at least 20% of patients treated with IMFINZI plus chemotherapy.

**Table 10. Laboratory Abnormalities Worsening from Baseline Occurring in  $\geq 20\%$  \* of Patients in the CASPIAN study**

	<b>IMFINZI with Etoposide and either Carboplatin or Cisplatin</b>	<b>Etoposide and either Carboplatin or Cisplatin</b>
<b>Laboratory Abnormality</b>	<b>Grade<sup>†</sup> 3 or 4 (%)<sup>‡</sup></b>	<b>Grade<sup>†</sup> 3 or 4 (%)<sup>‡</sup></b>
<b>Chemistry</b>		
Hyponatremia	11	13
Hypomagnesemia	11	6
Hyperglycemia	5	5
Increased Alkaline Phosphatase	4.9	3.5
Increased ALT	4.9	2.7
Increased AST	4.6	1.2
Hypocalcemia	3.5	2.4
Blood creatinine increased	3.4	1.1

	<b>IMFINZI with Etoposide and either Carboplatin or Cisplatin</b>	<b>Etoposide and either Carboplatin or Cisplatin</b>
<b>Laboratory Abnormality</b>	<b>Grade<sup>†</sup> 3 or 4 (%)<sup>‡</sup></b>	<b>Grade<sup>†</sup> 3 or 4 (%)<sup>‡</sup></b>
Hyperkalemia	1.5	3.1
TSH decreased < LLN <sup>§</sup> and ≥ LLN at baseline	NA	NA
<b>Hematology</b>		
Neutropenia	41	48
Lymphopenia	14	13
Anemia	13	22
Thrombocytopenia	12	15

\* The frequency cut off is based on any grade change from baseline.

† Graded according to NCI CTCAE version 4.03.

‡ Each test incidence is based on the number of patients who had both baseline and at least one on-study laboratory measurement available: IMFINZI (range: 258 to 263) and chemotherapy (range: 253 to 262) except magnesium IMFINZI with chemotherapy (18) and chemotherapy (16).

§ LLN = lower limit of normal

### Biliary Tract Cancer

#### *Locally Advanced or Metastatic BTC - TOPAZ-1*

The safety of IMFINZI in combination with gemcitabine and cisplatin in locally advanced or metastatic BTC was evaluated in TOPAZ-1, a randomized, double-blind, placebo-controlled, multicenter trial. A total of 338 patients received IMFINZI 1,500 mg in combination with gemcitabine and cisplatin every 3 weeks up to 8 cycles followed by IMFINZI 1,500 mg every 4 weeks until disease progression or unacceptable toxicity. Patients with active or prior documented autoimmune or inflammatory disorders, HIV infection or other active infections, including tuberculosis or hepatitis C were ineligible [see [Clinical Studies \(14.3\)](#)].

IMFINZI was discontinued due to adverse reactions in 6% of the patients receiving IMFINZI plus chemotherapy. The most frequently reported events resulting in discontinuation were sepsis (3 patients) and ischemic stroke (2 patients). The remaining events were dispersed across system organ classes and reported in 1 patient each. Serious adverse reactions occurred in 47% of patients receiving IMFINZI plus chemotherapy. The most frequent serious adverse reactions reported in at least 2% of patients were cholangitis (7%), pyrexia (3.8%), anemia (3.6%), sepsis (3.3%) and acute kidney injury (2.4%). Fatal adverse reactions occurred in 3.6% of patients receiving IMFINZI plus chemotherapy. These include ischemic or hemorrhagic stroke (4 patients), sepsis (2 patients) and upper gastrointestinal hemorrhage (2 patients). The most common adverse reactions (occurring in ≥ 20% of patients) were fatigue, nausea, constipation, decreased appetite, abdominal pain, rash and pyrexia. Table 11 summarizes the adverse reactions that occurred in patients treated with IMFINZI plus chemotherapy.

#### **Table 11. Adverse Reactions Occurring in ≥ 10% of Patients in the TOPAZ-1 Study**

	<b>IMFINZI with Gemcitabine and Cisplatin</b> N = 338		<b>Placebo with Gemcitabine and Cisplatin</b> N = 342	
<b>Adverse Reaction</b>	<b>All Grades* (%)</b>	<b>Grade* 3-4 (%)</b>	<b>All Grades* (%)</b>	<b>Grade* 3-4 (%)</b>
<b>General disorders and administration site conditions</b>				
Fatigue <sup>†</sup>	42	6	43	6
Pyrexia	20	1.5	16	0.6
<b>Gastrointestinal disorders</b>				
Nausea	40	1.5	34	1.8
Constipation	32	0.6	29	0.3
Abdominal pain <sup>‡</sup>	24	0.6	23	2.9
Vomiting	18	1.5	18	2.0
Diarrhea	17	1.2	15	1.8
<b>Metabolism and nutrition disorders</b>				
Decreased appetite	26	2.1	23	0.9
<b>Skin and subcutaneous tissue disorders</b>				
Rash <sup>§</sup>	23	0.9	14	0
Pruritus	11	0	8	0
<b>Psychiatric disorders</b>				
Insomnia	10	0	11	0

\* Graded according to NCI CTCAE version 5.0.

<sup>†</sup> Includes fatigue, malaise, cancer fatigue and asthenia.

<sup>‡</sup> Includes abdominal pain, abdominal pain lower, abdominal pain upper and flank pain.

<sup>§</sup> Includes rash macular, rash maculopapular, rash morbilliform, rash papular, rash pruritic, rash pustular, rash erythematous, dermatitis acneiform, dermatitis bullous, drug eruption, eczema, erythema, dermatitis and rash.

Table 12 summarizes the laboratory abnormalities in patients treated with IMFINZI plus chemotherapy.

**Table 12. Laboratory Abnormalities Worsening from Baseline Occurring in  $\geq 20\%$ \* of Patients in the TOPAZ-1 study**

	<b>IMFINZI with Gemcitabine and Cisplatin</b>	<b>Placebo with Gemcitabine and Cisplatin</b>
<b>Laboratory Abnormality</b>	<b>Grade<sup>†</sup> 3 or 4 (%)</b>	<b>Grade<sup>†</sup> 3 or 4 (%)</b>
<b>Chemistry</b>		
Hyponatremia	18	13
Gamma-glutamyltransferase increased	12	13
Increased bilirubin	10	14
Hypokalemia	8	4.4
Increased AST	8	8
Increased ALT	7	6
Blood creatinine increased	5	2.1

	<b>IMFINZI with Gemcitabine and Cisplatin</b>	<b>Placebo with Gemcitabine and Cisplatin</b>
<b>Laboratory Abnormality</b>	<b>Grade<sup>†</sup> 3 or 4 (%)</b>	<b>Grade<sup>†</sup> 3 or 4 (%)</b>
Hypomagnesemia	4.5	2.2
Hypoalbuminemia	3.6	2.9
Hyperkalemia	2.1	2.1
Increased Alkaline Phosphatase	1.8	3.8
Hypocalcemia	1.8	2.4
<b>Hematology</b>		
Neutropenia	48	49
Anemia	31	28
Leukopenia	28	28
Lymphopenia	23	15
Thrombocytopenia	18	18

\* The frequency cut off is based on any grade change from baseline.

† Graded according to NCI CTCAE version 5.0. Each test incidence is based on the number of patients who had both baseline and at least one on-study laboratory measurement available: IMFINZI with gemcitabine/cisplatin (range: 312 to 335) and Placebo with gemcitabine/cisplatin (range: 319 to 341).

## Hepatocellular Carcinoma

### *Unresectable HCC - HIMALAYA*

The safety of IMFINZI in combination with tremelimumab-actl was evaluated in a total of 388 patients with uHCC in HIMALAYA, a randomized, open-label, multicenter study [see [Clinical Studies \(14.1\)](#)]. Patients received IMFINZI 1,500 mg administered as a single intravenous infusion in combination with tremelimumab-actl 300 mg on the same day, followed by IMFINZI every 4 weeks or sorafenib 400 mg given orally twice daily.

Serious adverse reactions occurred in 41% of patients who received IMFINZI in combination with tremelimumab-actl. Serious adverse reactions in > 1% of patients included hemorrhage (6%), diarrhea (4%), sepsis (2.1%), pneumonia (2.1%), rash (1.5%), vomiting (1.3%), acute kidney injury (1.3%), and anemia (1.3%). Fatal adverse reactions occurred in 8% of patients who received IMFINZI in combination with tremelimumab-actl, including death (1%), hemorrhage intracranial (0.5%), cardiac arrest (0.5%), pneumonitis (0.5%), hepatic failure (0.5%), and immune-mediated hepatitis (0.5%). The most common adverse reactions (occurring in ≥ 20% of patients) were rash, diarrhea, fatigue, pruritis, musculoskeletal pain, and abdominal pain.

Permanent discontinuation of treatment regimen due to an adverse reaction occurred in 14% of patients; the most common adverse reactions leading to treatment discontinuation (≥ 1%) were hemorrhage (1.8%), diarrhea (1.5%), AST increased (1%), and hepatitis (1%).

Dosage interruptions or delay of the treatment regimen due to an adverse reaction occurred in 35% of patients. Adverse reactions which required dosage interruption or delay in ≥ 1% of patients included ALT

increased (3.6%), diarrhea (3.6%), rash (3.6%), amylase increased (3.4%), AST increased (3.1%), lipase increased (2.8%), pneumonia (1.5%), hepatitis (1.5%), pyrexia (1.5%), anemia (1.3%), thrombocytopenia (1%), hyperthyroidism (1%), pneumonitis (1%), and blood creatinine increased (1%).

Table 13 summarizes the adverse reactions that occurred in patients treated with IMFINZI in combination with tremelimumab-actl in the HIMALAYA study.

**Table 13. Adverse Reactions Occurring in  $\geq 10\%$  of Patients in the HIMALAYA study**

Adverse Reaction	IMFINZI and Tremelimumab-actl (N = 388)		Sorafenib (N = 374)	
	All Grades (%)	Grade 3-4 (%)	All Grades (%)	Grade 3-4 (%)
<b>Skin and subcutaneous tissue disorders</b>				
Rash*	32	2.8	57	12
Pruritus	23	0	6	0.3
<b>Gastrointestinal disorders</b>				
Diarrhea*	27	6	45	4.3
Abdominal pain*	20	1.8	24	4
Nausea	12	0	14	0
<b>General disorders and administration site conditions</b>				
Fatigue*	26	3.9	30	6
Pyrexia*	13	0.3	9	0.3
<b>Musculoskeletal and Connective Tissue Disorders</b>				
Musculoskeletal pain*	22	2.6	17	0.8
<b>Metabolism and nutrition disorders</b>				
Decreased appetite	17	1.3	18	0.8
<b>Endocrine disorders</b>				
Hypothyroidism*	14	0	6	0
<b>Psychiatric disorders</b>				
Insomnia	10	0.3	4.3	0

\*Represents a composite of multiple related terms.

Table 14 summarizes the laboratory abnormalities that occurred in patients treated with IMFINZI in combination with tremelimumab-actl in the HIMALAYA study.

**Table 14. Laboratory Abnormalities Worsening from Baseline Occurring in  $\geq 20\%$  of Patients in the HIMALAYA study**

Laboratory Abnormality	IMFINZI and Tremelimumab-actl		Sorafenib	
	Any grade <sup>†</sup> (%) <sup>‡</sup>	Grade 3 <sup>†</sup> or 4 (%) <sup>‡</sup>	Any grade <sup>†</sup> (%) <sup>‡</sup>	Grade 3 <sup>†</sup> or 4 (%) <sup>‡</sup>
<b>Chemistry</b>				
Aspartate Aminotransferase increased	63	27	55	21

Laboratory Abnormality	IMFINZI and Tremelimumab-actl		Sorafenib	
	Any grade <sup>†</sup> (%) <sup>‡</sup>	Grade 3 <sup>†</sup> or 4 (%) <sup>‡</sup>	Any grade <sup>†</sup> (%) <sup>‡</sup>	Grade 3 <sup>†</sup> or 4 (%) <sup>‡</sup>
Alanine Aminotransferase increased	56	18	53	12
Sodium decreased	46	15	40	11
Bilirubin increased	41	8	47	11
Alkaline Phosphatase increased	41	8	44	5
Glucose increased	39	14	29	4
Calcium decreased	34	0	43	0.3
Albumin decreased	31	0.5	37	1.7
Potassium increased	28	3.8	21	2.6
Creatinine increased	21	1.3	15	0.9
<b>Hematology</b>				
Hemoglobin decreased	52	4.8	40	6
Lymphocytes decreased	41	11	39	10
Platelets decreased	29	1.6	35	3.1
Leukocytes decreased	20	0.8	30	1.1

<sup>†</sup> Graded according to NCI CTCAE version 4.03.

<sup>‡</sup> Each test incidence is based on the number of patients who had both baseline and at least one on-study laboratory measurement available: IMFINZI with tremelimumab-actl (range: 367-378) and sorafenib (range:344-352).

## Endometrial Cancer

### *Advanced or Recurrent dMMR Endometrial Cancer – DUO-E*

The safety of IMFINZI in combination with carboplatin and paclitaxel followed by IMFINZI as a single agent was evaluated in 44 patients with dMMR advanced or recurrent endometrial cancer in DUO-E, a randomized, double-blind, placebo-controlled trial [See [Clinical Studies \(14.5\)](#)]. Patients received IMFINZI 1,120 mg with carboplatin and paclitaxel every 3 weeks for up to six 21-day cycles followed by IMFINZI 1,500 mg every 4 weeks or carboplatin and paclitaxel every 3 weeks for up to six 21-day cycles alone. Treatment was continued until disease progression or unacceptable toxicity. The median duration of exposure to IMFINZI with carboplatin and paclitaxel was 14.8 months (range: 0.7 to 31.7).

Serious adverse reactions occurred in 30% of patients who received IMFINZI with carboplatin and paclitaxel. The most common serious adverse reactions ( $\geq 4\%$ ) were constipation (4.5%) and rash (4.5%).

Permanent discontinuation of IMFINZI due to adverse reactions occurred in 11% of patients. The adverse reaction which resulted in permanent discontinuation of IMFINZI ( $\geq 4\%$ ) was rash (4.5%).

Dosage interruptions of IMFINZI due to adverse reactions occurred in 52% of patients. Adverse reactions which required dosage interruptions of IMFINZI ( $\geq 4\%$ ) were anemia (11%), thrombocytopenia (9%), neutropenia (9%), COVID-19 (9%), increased ALT (4.5%), and pneumonitis (4.5%).

The most common adverse reactions (>20%), including laboratory abnormalities, were peripheral neuropathy, musculoskeletal pain, nausea, alopecia, fatigue, abdominal pain, constipation, rash, decreased magnesium, increased ALT, increased AST, diarrhea, vomiting, cough, decreased potassium, dyspnea, headache, increased alkaline phosphatase, and decreased appetite.

Tables 15 and 16 summarize adverse reactions and laboratory abnormalities in DUO-E, respectively.

**Table 15. Adverse Reactions Occurring in  $\geq 10\%$  of Patients with dMMR tumors in DUO-E**

Adverse Reactions	IMFINZI with Carboplatin and Paclitaxel (N=44)		Carboplatin and Paclitaxel (N=46)	
	All Grades (%)	Grade 3-4 (%)	All Grades (%)	Grade 3-4 (%)
<b>Nervous system disorders</b>				
Peripheral neuropathy <sup>a</sup>	61	2.3	61	4.3
Headache	23	0	17	0
<b>Musculoskeletal and connective tissue disorders</b>				
Musculoskeletal pain <sup>b</sup>	59	2.3	52	2.2
<b>Gastrointestinal disorders</b>				
Nausea	59	0	48	2.2
Abdominal pain <sup>c</sup>	39	0	24	2.2
Constipation <sup>d</sup>	39	4.5	35	2.2
Diarrhea	27	2.3	24	2.2
Vomiting	27	0	22	4.3
<b>Skin and subcutaneous tissue disorders</b>				
Alopecia	52	0	41	0
Rash <sup>e</sup>	39	2.3	17	2.2
Pruritus	16	0	11	0
<b>General disorders and administration site conditions</b>				
Fatigue <sup>f</sup>	41	4.5	57	11
Peripheral edema <sup>g</sup>	16	0	13	2.2
<b>Respiratory, thoracic and mediastinal disorders</b>				
Cough / productive cough	27	0	20	0
Dyspnea <sup>h</sup>	25	2.3	9	0
<b>Metabolism and nutrition disorders</b>				
Decreased appetite	18	0	18	0
<b>Infections and infestations</b>				
Upper respiratory tract infection <sup>i</sup>	14	0	4.3	0
<b>Endocrine disorders</b>				
Hypothyroidism <sup>j</sup>	11	0	4.3	0

<sup>a</sup> Includes neuropathy peripheral, peripheral sensory neuropathy, hypoesthesia, peripheral motor neuropathy, and parasthesia.

<sup>b</sup> Includes arthralgia, pain in extremity, back pain, non-cardiac chest pain, myalgia, musculoskeletal pain, musculoskeletal chest pain, arthritis, bone pain, musculoskeletal stiffness, neck pain, musculoskeletal discomfort, and spinal pain.

<sup>c</sup> Includes abdominal pain, abdominal pain lower, flank pain, abdominal discomfort, and abdominal pain upper.

<sup>d</sup> Includes constipation and fecaloma.

<sup>e</sup> Includes eczema, rash, rash erythematous, rash maculo-papular, dermatitis, rash pustular, skin exfoliation, and symmetrical drug-related intertriginous, and flexural exanthema.

<sup>f</sup> Includes asthenia and fatigue.

<sup>g</sup> Includes peripheral edema, peripheral swelling, and edema.

<sup>h</sup> Includes dyspnea and exertional dyspnea.

<sup>i</sup> Includes nasopharyngitis, pharyngitis, rhinitis, sinusitis, tracheobronchitis, and upper respiratory tract infection.

<sup>j</sup> Includes blood thyroid stimulating hormone increased, and hypothyroidism.

Clinically relevant adverse reactions in <10% of patients who received IMFINZI with carboplatin and paclitaxel included autoimmune hemolytic anemia, colitis, immune-mediated thyroiditis, infusion related reaction, interstitial lung disease, myositis, pneumonitis, pulmonary embolism, and sepsis.

Table 16 summarizes the laboratory abnormalities that occurred in patients treated with IMFINZI with carboplatin and paclitaxel followed by IMFINZI as a single agent.

**Table 16. Select Laboratory Abnormalities Worsening from Baseline Occurring in  $\geq$  20% of Patients with dMMR tumors in DUO-E**

Laboratory Abnormality	IMFINZI with Carboplatin and Paclitaxel <sup>‡</sup>		Carboplatin and Paclitaxel <sup>‡</sup>	
	All Grades (%)	Grade 3-4 (%)	All Grades (%)	Grade 3-4 (%)
<b>Chemistry</b>				
Magnesium decreased	36	0	30	2.5
ALT increased	32	2.3	22	2.2
AST increased	30	2.3	22	0
Potassium decreased	25	0	24	2.2
Alkaline phosphatase increased	20	0	16	0

<sup>‡</sup> Each test incidence is based on the number of patients who had both baseline and at least one on-study laboratory measurement available: IMFINZI with carboplatin and paclitaxel (range: 40 to 44), and carboplatin and paclitaxel (range: 37 to 46).

## 8 USE IN SPECIFIC POPULATIONS

### 8.1 Pregnancy

#### Risk Summary

Based on findings from animal studies and its mechanism of action, IMFINZI can cause fetal harm when administered to a pregnant woman [see [Clinical Pharmacology \(12.1\)](#)]. There are no available data on the use of IMFINZI in pregnant women.

In animal reproduction studies, administration of durvalumab to pregnant cynomolgus monkeys from the confirmation of pregnancy through delivery at exposure levels approximately 6 to 20 times higher than those observed at the clinical dose of 10 mg/kg based on area under the curve (AUC), resulted in an increase in premature delivery, fetal loss, and premature neonatal death (*see Data*). Human immunoglobulin G1 (IgG1) is known to cross the placental barrier; therefore, durvalumab has the potential to be transmitted from the mother to the developing fetus. Advise pregnant women of the potential risk to a fetus.

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

#### Data

##### *Animal Data*

As reported in the literature, the PD-1/PD-L1 pathway plays a central role in preserving pregnancy by maintaining maternal immune tolerance to the fetus. In mouse allogeneic pregnancy models, disruption of PD-L1 signaling was shown to result in an increase in fetal loss. The effects of durvalumab on prenatal and postnatal development were evaluated in reproduction studies in cynomolgus monkeys. Durvalumab was administered from the confirmation of pregnancy through delivery at exposure levels approximately 6 to 20 times higher than those observed at a clinical dose of 10 mg/kg (based on AUC). Administration of durvalumab resulted in premature delivery, fetal loss (abortion and stillbirth), and increase in neonatal deaths. Durvalumab was detected in infant serum on postpartum Day 1, indicating the presence of placental transfer of durvalumab. Based on its mechanism of action, fetal exposure to durvalumab may increase the risk of developing immune-mediated disorders or altering the normal immune response and immune-mediated disorders have been reported in PD-1 knockout mice.

## **8.2 Lactation**

#### Risk Summary

There are no data on the presence of durvalumab in human milk, its effects on the breastfed child, or the effects on milk production. Maternal IgG is known to be present in human milk. The effects of local gastrointestinal exposure and limited systemic exposure in the breastfed child to IMFINZI are unknown. Durvalumab was present in the milk of lactating cynomolgus monkeys and was associated with premature neonatal death (*see Data*).

Because of the potential for adverse reactions in a breastfed child, advise women not to breastfeed during treatment with IMFINZI and for 3 months after the last dose. Refer to the Prescribing Information for the agents administered in combination with IMFINZI for recommended duration to not breastfeed, as appropriate.

#### Data

In lactating cynomolgus monkeys, durvalumab was present in breast milk at about 0.15% of maternal serum concentrations after administration of durvalumab from the confirmation of pregnancy through delivery at exposure levels approximately 6 to 20 times higher than those observed at the recommended clinical dose of 10 mg/kg (based on AUC). Administration of durvalumab resulted in premature neonatal death.

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

#### Pregnancy testing

Verify pregnancy status of females of reproductive potential prior to initiating treatment with IMFINZI.

#### Contraception

##### *Females*

IMFINZI can cause fetal harm when administered to a pregnant woman [*see Use in Specific Populations (8.1)*]. Advise females of reproductive potential to use effective contraception during treatment with IMFINZI and for 3 months following the last dose of IMFINZI. Refer to the Prescribing Information for

the agents administered in combination with IMFINZI for recommended contraception duration, as appropriate.

#### **8.4 Pediatric Use**

The safety and effectiveness of IMFINZI have not been established in pediatric patients. Safety and efficacy were assessed but not established in a multi-center, open-label study (NCT03837899) in 45 pediatric patients aged 1 to < 17 years with advanced solid tumors. All 45 patients received at least a single dose of IMFINZI, and 41 patients received IMFINZI in combination with tremelimumab-actl. No new safety signals were observed in pediatric patients in this study.

Durvalumab systemic exposure in pediatric patients weighing  $\geq 35$  kg was within the range of values previously observed in adults given the same weight-based dose, whereas the systemic exposure in pediatric patients weighing < 35 kg was lower than that observed in adults.

#### **8.5 Geriatric Use**

Of the 476 patients treated with IMFINZI in the PACIFIC study, 45% were 65 years or older, while 7.6% were 75 years or older. No overall differences in safety or effectiveness were observed between patients 65 years or older and younger patients. The PACIFIC study did not include sufficient numbers of patients aged 75 years and over to determine whether they respond differently from younger patients.

Of the 265 patients with ES-SCLC treated with IMFINZI in combination with chemotherapy 101 (38%) patients were 65 years or older and 19 (7.2%) patients were 75 years or older. There were no clinically meaningful differences in safety or efficacy between patients 65 years or older and younger patients.

Of the 330 patients with metastatic NSCLC treated with IMFINZI in combination with tremelimumab-actl and platinum-based chemotherapy, 143 (43%) patients were 65 years or older and 35 (11%) patients were 75 years or older. There were no clinically meaningful differences in safety or efficacy between patients 65 years or older and younger patients.

Of the 338 patients with BTC treated with IMFINZI in combination with chemotherapy in the TOPAZ-1 study, 158 (47%) patients were 65 years or older and 38 (11%) patients were 75 years or older. No overall differences in safety or effectiveness of IMFINZI have been observed between patients 65 years of age and older and younger adult patients.

Of the 393 patients with uHCC treated with IMFINZI in combination with tremelimumab-actl, 50% of patients were 65 years of age or older and 13% of patients were 75 years of age or older. No overall differences in safety or effectiveness of IMFINZI have been observed between patients 65 years of age and older and younger adult patients.

Of the 235 patients with endometrial cancer treated with IMFINZI with carboplatin and paclitaxel, 49% of patients were 65 years of age or older and 12% of patients were 75 years of age or older. No overall differences in safety or effectiveness of IMFINZI have been observed between patients 65 years of age and older and younger adult patients.

## 11 DESCRIPTION

Durvalumab is a programmed cell death ligand 1 (PD-L1) blocking antibody. Durvalumab is a human immunoglobulin G1 kappa (IgG1κ) monoclonal antibody that is produced by recombinant DNA technology in Chinese Hamster Ovary (CHO) cell suspension culture.

IMFINZI (durvalumab) Injection for intravenous use is a sterile, preservative-free, clear to opalescent, colorless to slightly yellow solution, free from visible particles.

Each 500 mg vial of IMFINZI contains 500 mg of durvalumab in 10 mL solution. Each mL contains durvalumab, 50 mg, L-histidine (2 mg), L-histidine hydrochloride monohydrate (2.7 mg),  $\alpha,\alpha$ -trehalose dihydrate (104 mg), Polysorbate 80 (0.2 mg), and Water for Injection, USP.

Each 120 mg vial of IMFINZI contains 120 mg of durvalumab in 2.4 mL solution. Each mL contains durvalumab, 50 mg, L-histidine (2 mg), L-histidine hydrochloride monohydrate (2.7 mg),  $\alpha,\alpha$ -trehalose dihydrate (104 mg), Polysorbate 80 (0.2 mg), and Water for Injection, USP.

## 12 CLINICAL PHARMACOLOGY

### 12.1 Mechanism of Action

Expression of programmed cell death ligand-1 (PD-L1) can be induced by inflammatory signals (e.g., IFN-gamma) and can be expressed on both tumor cells and tumor-associated immune cells in the tumor microenvironment. PD-L1 blocks T-cell function and activation through interaction with PD-1 and CD80 (B7.1). By binding to its receptors, PD-L1 reduces cytotoxic T-cell activity, proliferation, and cytokine production.

Durvalumab is a human immunoglobulin G1 kappa (IgG1κ) monoclonal antibody that binds to PD-L1 and blocks the interaction of PD-L1 with PD-1 and CD80 (B7.1). Blockade of PD-L1/PD-1 and PD-L1/CD80 interactions releases the inhibition of immune responses, without inducing antibody dependent cell-mediated cytotoxicity (ADCC).

PD-L1 blockade with durvalumab led to increased T-cell activation *in vitro* and decreased tumor size in co-engrafted human tumor and immune cell xenograft mouse models.

### 12.2 Pharmacodynamics

The steady state AUC, C<sub>trough</sub>, and C<sub>max</sub> in patients administered with 1,500 mg every 4 weeks are 6% higher, 19% lower, and 55% higher than those administered with 10 mg/kg every 2 weeks, respectively. Based on the modeling of pharmacokinetic data and exposure relationships for safety, there are no anticipated clinically meaningful differences in efficacy and safety for the doses of 1,500 mg every 4 weeks compared to 10 mg/kg every 2 weeks in patients weighing > 30 kg with NSCLC.

### 12.3 Pharmacokinetics

The pharmacokinetics of durvalumab as a single agent was studied in patients with doses ranging from 0.1 mg/kg (0.01 times the approved recommended dosage) to 20 mg/kg (2 times the approved recommended dosage) administered once every two, three, or four weeks.

PK exposure increased more than dose-proportionally at doses < 3 mg/kg (0.3 times the approved recommended dosage) and dose proportionally at doses  $\geq$  3 mg/kg every 2 weeks. Steady state was achieved at approximately 16 weeks.

The pharmacokinetics of durvalumab is similar when assessed as a single agent, when in combination with chemotherapy, when in combination with tremelimumab-actl and when in combination with tremelimumab-actl and platinum-based chemotherapy.

#### Distribution

The geometric mean (% coefficient of variation [CV%]) steady state volume of distribution (V<sub>ss</sub>) was 5.4 (13.1%) L.

#### Elimination

Durvalumab clearance decreases over time, with a mean maximal reduction (CV%) from baseline values of approximately 23% (57%) resulting in a geometric mean (CV%) steady state clearance (CL<sub>ss</sub>) of 8 mL/h (39%) at day 365; the decrease in CL<sub>ss</sub> is not considered clinically relevant. The geometric mean (CV%) terminal half-life, based on baseline CL was approximately 21 (26%) days.

#### Specific Populations

There were no clinically significant differences in the pharmacokinetics of durvalumab based on body weight (31 to 175 kg), age (19 to 96 years), sex, race (White, Black, Asian, Native Hawaiian, Pacific Islander, or Native American), albumin levels (4 to 57 g/L), lactate dehydrogenase levels (18 to 15,800 U/L), soluble PD-L1 (67 to 3,470 pg/mL), tumor type (NSCLC, SCLC, BTC and HCC), mild or moderate renal impairment (CL<sub>cr</sub> 30 to 89 mL/min), and mild or moderate hepatic impairment (bilirubin  $\leq$  3x ULN and any AST). The effect of severe renal impairment (CL<sub>cr</sub> 15 to 29 mL/min) or severe hepatic impairment (bilirubin > 3x ULN and any AST) on the pharmacokinetics of durvalumab is unknown.

## **12.6 Immunogenicity**

The observed incidence of anti-drug antibodies (ADA) is highly dependent on the sensitivity and specificity of the assay. Differences in assay methods preclude meaningful comparison of the incidence of ADAs in the studies described below with the incidence of ADAs in other studies including those of IMFINZI.

During the 10 to 48 week treatment period across PACIFIC, CASPIAN, TOPAZ-1, HIMALAYA, POSEIDON, DUO-E and other clinical trials, patients received IMFINZI at dosages of 1,500 mg every 4 weeks, 10 mg/kg every 2 weeks, 20 mg/kg every 4 weeks as a single agent or 1,120 mg every 3 weeks, or 1,500 mg every 3 weeks in the combination therapies. 2.9% (126/4292) of evaluable patients tested positive for anti-durvalumab antibodies, and 21.4% (27/126) of ADA positive patients had neutralizing antibodies against durvalumab. There were no identified clinically significant effects of ADAs on durvalumab pharmacokinetics or safety; however, the effect of these ADAs on the effectiveness of IMFINZI is unknown.

## **13 NONCLINICAL TOXICOLOGY**

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

The carcinogenic and genotoxic potential of durvalumab have not been evaluated.

Animal fertility studies have not been conducted with durvalumab. In repeat-dose toxicology studies with durvalumab in sexually mature cynomolgus monkeys of up to 3 months duration, there were no notable effects on the male and female reproductive organs.

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

In animal models, inhibition of PD-L1/PD-1 signaling increased the severity of some infections and enhanced inflammatory responses. *Mycobacterium tuberculosis*-infected PD-1 knockout mice exhibit markedly decreased survival compared with wild-type controls, which correlated with increased bacterial proliferation and inflammatory responses in these animals. PD-1 blockade using a primate anti-PD-1 antibody was also shown to exacerbate *M. tuberculosis* infection in rhesus macaques. PD-L1 and PD-1 knockout mice have also shown decreased survival following infection with lymphocytic choriomeningitis virus.

## **14 CLINICAL STUDIES**

### **14.1 Non-Small Cell Lung Cancer (NSCLC)**

#### *Unresectable Stage III NSCLC - PACIFIC*

The efficacy of IMFINZI was evaluated in the PACIFIC study (NCT02125461), a multicenter, randomized, double-blind, placebo-controlled study in patients with unresectable Stage III NSCLC who completed at least 2 cycles of concurrent platinum-based chemotherapy and definitive radiation within 42 days prior to initiation of the study drug and had a WHO performance status of 0 or 1. The study excluded patients who had progressed following concurrent chemoradiation, patients with active or prior documented autoimmune disease within 2 years of initiation of the study or patients with medical conditions that required systemic immunosuppression. Randomization was stratified by sex, age (< 65 years vs. ≥ 65 years), and smoking history (smoker vs. non-smoker). Patients were randomized 2:1 to receive IMFINZI 10 mg/kg or placebo intravenously every 2 weeks for up to 12 months or until unacceptable toxicity or confirmed RECIST v1.1-defined progression. Assessment of tumor status was performed every 8 weeks. The major efficacy outcome measures were progression-free survival (PFS) as assessed by a BICR RECIST v1.1, and overall survival (OS). Additional efficacy outcome measures included ORR and DoR assessed by BICR.

A total of 713 patients were randomized: 476 patients to the IMFINZI arm and 237 to the placebo arm. The study population characteristics were: median age of 64 years (range: 23 to 90); 70% male; 69% White and 27% Asian; 16% current smokers, 75% former smokers, and 9% never smokers; 51% WHO performance status of 1; 53% with Stage IIIA and 45% were Stage IIIB; 46% with squamous and 54% with non-squamous histology. All patients received definitive radiotherapy as per protocol, of which 92% received a total radiation dose of 54 Gy to 66 Gy; 99% of patients received concomitant platinum-based chemotherapy (55% cisplatin-based, 42% carboplatin-based chemotherapy, and 2% switched between cisplatin and carboplatin).

At a pre-specified interim analysis for OS based on 299 events (61% of total planned events), the study demonstrated a statistically significant improvement in OS in patients randomized to IMFINZI compared to placebo. The pre-specified interim analysis of PFS based on 371 events (81% of total planned events)

demonstrated a statistically significant improvement in PFS in patients randomized to IMFINZI compared to placebo. Table 17 and Figure 1 summarizes the efficacy results for PACIFIC.

**Table 17. Efficacy Results for the PACIFIC Study**

<b>Endpoint</b>	<b>IMFINZI (N = 476)*</b>	<b>Placebo (N = 237)*</b>
<b>Overall Survival (OS)<sup>†</sup></b>		
Number of deaths (%)	183 (38%)	116 (49%)
Median in months (95% CI)	NR (34.7, NR)	28.7 (22.9, NR)
Hazard Ratio (95% CI) <sup>‡</sup>	0.68 (0.53, 0.87)	
p-value <sup>‡,§</sup>	0.0025	
<b>Progression-Free Survival (PFS)<sup>¶,#</sup></b>		
Number of events (%)	214 (45%)	157 (66%)
Median in months (95% CI)	16.8 (13.0, 18.1)	5.6 (4.6, 7.8)
Hazard Ratio (95% CI) <sup>‡,Ⓟ</sup>	0.52 (0.42, 0.65)	
p-value <sup>‡,Ⓟ</sup>	< 0.0001	

\* Among the ITT population, 7% in the IMFINZI arm and 10% in the placebo arm had non-measurable disease as assessed by BICR according to RECIST v1.1

† OS results are based on the interim OS analysis conducted at 299 OS events which occurred 46 months after study initiation.

‡ Two-sided p-value based on a log-rank test stratified by sex, age, and smoking history

§ Compared with allocated  $\alpha$  of 0.00274 (Lan-DeMets spending function approximating O'Brien Fleming boundary) for interim analysis

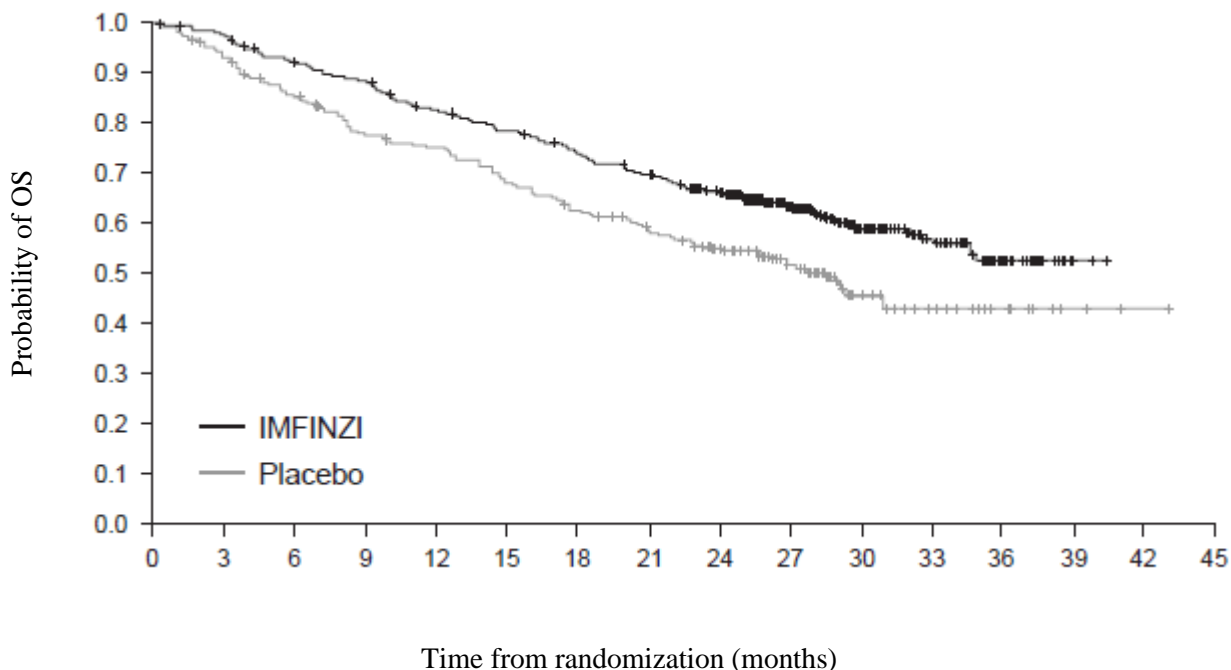
¶ As assessed by BICR RECIST v1.1

# PFS results are based on the interim PFS analysis conducted at 371 PFS events which occurred 33 months after study initiation.

Ⓟ Pike estimator

Ⓟ Compared with allocated  $\alpha$  of 0.011035 (Lan-DeMets spending function approximating O'Brien Fleming boundary) for interim analysis

**Figure 1. Kaplan-Meier Curves of Overall Survival in the PACIFIC Study**



Number of patients at risk																
Month	0	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45
IMFINZI	476	464	431	415	385	364	343	319	274	210	115	57	23	2	0	0
Placebo	237	220	198	178	170	155	141	130	117	78	42	21	9	3	1	0

*Metastatic NSCLC - POSEIDON*

The efficacy of IMFINZI in combination with tremelimumab-actl and platinum-based chemotherapy in previously untreated metastatic NSCLC patients with no sensitizing epidermal growth factor receptor (EGFR) mutation or anaplastic lymphoma kinase (ALK) genomic tumor aberrations was investigated in POSEIDON, a randomized, multicenter, active-controlled, open-label trial (NCT03164616). Eligible patients had Eastern Cooperative Oncology Group (ECOG) Performance Status of 0 or 1 and must have had no prior chemotherapy or any other systemic therapy for metastatic NSCLC. Choice of platinum-based chemotherapy was at the investigator’s discretion, taking into consideration the calculated creatinine clearance. Patients with active and/or untreated brain metastases; a history of active primary immunodeficiency; autoimmune disorders including active or prior documented autoimmune or inflammatory disorders; use of systemic immunosuppressants within 14 days before the first dose of the treatment except physiological dose of systemic corticosteroids were ineligible.

Randomization was stratified by tumor cells (TC) PD-L1 expression (TC ≥ 50% vs. TC < 50%), disease stage (Stage IVA vs. Stage IVB), and histology (non-squamous vs. squamous).

Patients were randomized 1:1:1 to receive IMFINZI in combination with tremelimumab-actl and platinum-based chemotherapy according to the regimens listed below, IMFINZI and platinum-based chemotherapy (an unapproved regimen for metastatic NSCLC), or platinum-based chemotherapy. The evaluation of efficacy for metastatic NSCLC relied on comparison between:

- IMFINZI 1,500 mg with tremelimumab-actl 75 mg (or 1 mg/kg for patients < 30 kg) and platinum-based chemotherapy every 3 weeks for 4 cycles, followed by IMFINZI 1,500 mg every 4 weeks as a single agent. A fifth dose of tremelimumab-actl 75 mg (or 1 mg/kg for patients < 30 kg) was given at Week 16 in combination with IMFINZI dose 6.
- Platinum-based chemotherapy every 3 weeks as monotherapy for 4 cycles. Patients could receive an additional 2 cycles (a total of 6 cycles post-randomization), as clinically indicated, at investigator's discretion.

Patients received IMFINZI in combination with tremelimumab-actl with one of the following platinum-based chemotherapy regimens:

- Non-squamous NSCLC
  - Pemetrexed 500 mg/m<sup>2</sup> with carboplatin AUC 5-6 or cisplatin 75 mg/m<sup>2</sup> every 3 weeks for 4 cycles.
- Squamous NSCLC
  - Gemcitabine 1,000 or 1,250 mg/m<sup>2</sup> on Days 1 and 8 with cisplatin 75 mg/m<sup>2</sup> or carboplatin AUC 5-6 on Day 1 every 3 weeks for 4 cycles.
- Non-squamous and Squamous NSCLC
  - Nab-paclitaxel 100 mg/m<sup>2</sup> on Days 1, 8, and 15 with carboplatin AUC 5-6 on Day 1 every 3 weeks for 4 cycles.

Tremelimumab-actl was given up to a maximum of 5 doses. IMFINZI and histology-based pemetrexed continued every 4 weeks until disease progression or unacceptable toxicity. Administration of IMFINZI monotherapy was permitted beyond disease progression if the patient was clinically stable and deriving clinical benefit as determined by the investigator. Patients with disease progression during IMFINZI monotherapy were given the option to be retreated with 4 additional cycles of tremelimumab-actl in combination with IMFINZI. Tumor assessments were performed at Week 6, Week 12, and then every 8 weeks thereafter.

The major efficacy outcome measures were progression free survival (PFS) and overall survival (OS) of IMFINZI and tremelimumab-actl in combination with platinum-based chemotherapy compared to platinum-based chemotherapy alone. Additional efficacy outcome measures were overall response rate (ORR) and duration of response (DoR). PFS, ORR, and DoR were assessed using Blinded Independent Central Review (BICR) according to RECIST v1.1.

A total of 675 patients were randomized to receive either IMFINZI with tremelimumab-actl and platinum-based-chemotherapy (n = 338) or platinum-based chemotherapy (n = 337). The median age was 63 years (range: 27 to 87), 46% of patients age ≥ 65 years, 77% male, 57% White, 34% Asian, 0.3% Native Hawaiian or Other Pacific Islander, 3% American Indian or Alaska Native, 2% Black or African American, 4% Other Race, 79% former or current smoker, 34% ECOG PS 0, and 66% ECOG PS 1. Thirty-six percent had squamous histology, 63% non-squamous histology, 29% PD-L1 expression TC ≥ 50%, 71% PD-L1 expression TC < 50%.

Efficacy results are summarized in Table 18 and Figure 2.

**Table 18. Efficacy Results for POSEIDON**

	<b>IMFINZI with tremelimumab-actl and platinum-based chemotherapy (n = 338)</b>	<b>Platinum-based chemotherapy (n = 337)</b>
<b>OS<sup>1</sup></b>		
Number of deaths (%)	251 (74)	285 (85)
Median in months (95% CI)	14.0 (11.7, 16.1)	11.7 (10.5, 13.1)
HR (95% CI)	0.77 (0.65, 0.92)	
p-value <sup>2</sup>	0.00304	
<b>PFS<sup>2</sup></b>		
Number of events (%)	238 (70)	258 (77)
Median in months (95% CI)	6.2 (5.0, 6.5)	4.8 (4.6, 5.8)
HR (95% CI)	0.72 (0.60, 0.86)	
p-value <sup>2</sup>	0.00031	
<b>ORR % (95% CI)<sup>3</sup></b>	39 (34, 44)	24 (20, 29)
<b>Median DoR (months) (95% CI)</b>	9.5 (7.2, NR)	5.1 (4.4, 6.0)

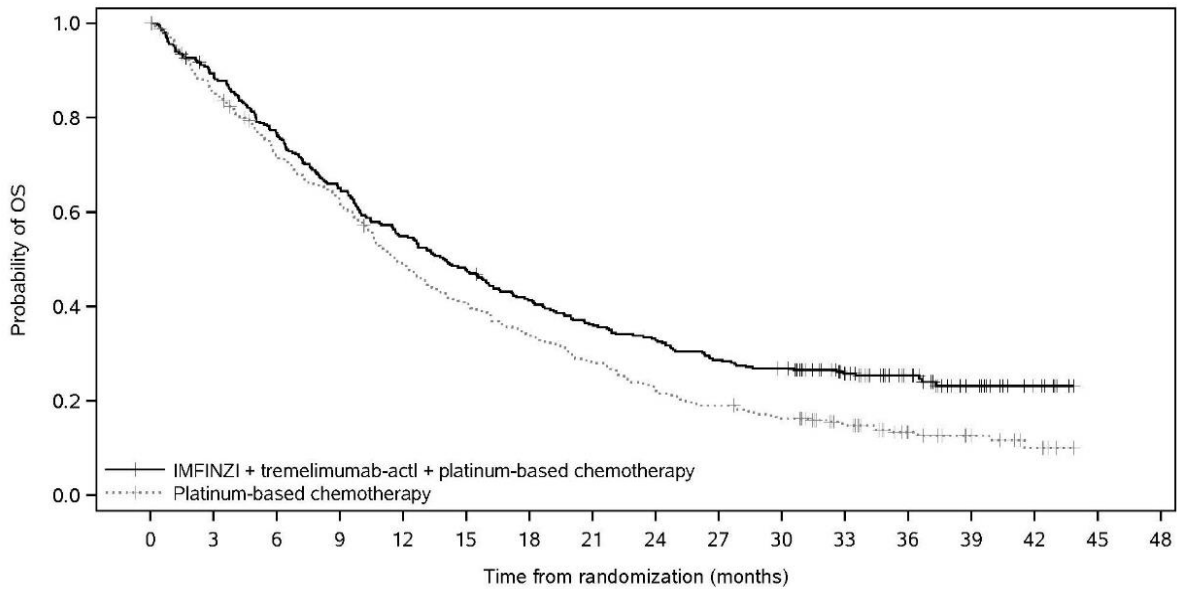
<sup>1</sup> PFS/OS results are based on planned analyses which occurred 25/45 months respectively after study initiation.

<sup>2</sup> 2-sided p-values based on log-rank tests stratified by PD-L1, histology and disease stage and compared to a boundary value of 0.00735 for PFS and 0.00797 for OS.

<sup>3</sup> Confirmed responses with 95% Clopper-Pearson confidence interval.

NR=Not Reached, CI=Confidence Interval

**Figure 2. Kaplan-Meier curves of OS in POSEIDON**



Number of patients at risk	
Month	0 3 6 9 12 15 18 21 24 27 30 33 36 39 42 45
IMFINZI + tremelimumab-actl + platinum-based chemotherapy	338 298 256 217 183 159 137 120 109 95 88 64 41 20 9 0
Platinum-based chemotherapy	337 284 236 204 160 132 111 91 72 62 52 38 21 13 6 0

## 14.2 Small Cell Lung Cancer (SCLC)

### *Extensive-stage SCLC – CASPIAN*

The efficacy of IMFINZI in combination with etoposide and either carboplatin or cisplatin in previously untreated ES-SCLC was investigated in CASPIAN, a randomized, multicenter, active-controlled, open-label trial (NCT03043872). Eligible patients had WHO Performance Status of 0 or 1 and were suitable to receive a platinum-based chemotherapy regimen as first-line treatment for SCLC. Patients with asymptomatic or treated brain metastases were eligible. Choice of platinum agent was at the investigator’s discretion, taking into consideration the calculated creatinine clearance. Patients with history of chest radiation therapy; a history of active primary immunodeficiency; autoimmune disorders including paraneoplastic syndrome; active or prior documented autoimmune or inflammatory disorders; use of systemic immunosuppressants within 14 days before the first dose of the treatment except physiological dose of systemic corticosteroids were ineligible.

Randomization was stratified by the planned platinum-based therapy in cycle 1 (carboplatin or cisplatin).

The evaluation of efficacy for ES-SCLC relied on comparison between:

IMFINZI 1,500 mg, and investigator's choice of carboplatin (AUC 5 or 6 mg/mL/min) or cisplatin (75-80 mg/m<sup>2</sup>) on Day 1 and etoposide (80-100 mg/m<sup>2</sup>) intravenously on Days 1, 2, and 3 of each 21-day cycle for 4 cycles, followed by IMFINZI 1,500 mg every 4 weeks until disease progression or unacceptable toxicity, or

Investigator's choice of carboplatin (AUC 5 or 6 mg/mL/min) or cisplatin (75-80 mg/m<sup>2</sup>) on Day 1 and etoposide (80-100 mg/m<sup>2</sup>) intravenously on Days 1, 2, and 3 of each 21-day cycle, up to 6 cycles. After completion of chemotherapy, PCI as administered per investigator discretion.

Administration of IMFINZI as a single agent was permitted beyond disease progression if the patient was clinically stable and deriving clinical benefit as determined by the investigator.

The major efficacy outcome measure was overall survival (OS) of IMFINZI plus chemotherapy vs. chemotherapy alone. Additional efficacy outcome measures were investigator-assessed progression-free survival (PFS) and objective response rate (ORR), per RECIST v1.1.

The study population characteristics were: median age of 63 years (range: 28 to 82); 40% age 65 or older; 70% male; 84% White, 15% Asian, and 0.9% Black; 65% WHO/ECOG PS of 1; and 93% were former/current smokers. Ninety percent of patients had Stage IV disease and 10% had brain metastasis at baseline. A total of 25% of the patients received cisplatin and 74% of the patients received carboplatin. In the chemotherapy alone arm, 57% of the patients received 6 cycles of chemotherapy, and 8% of the patients received PCI.

The OS results are summarized in Table 19 and Figure 3.

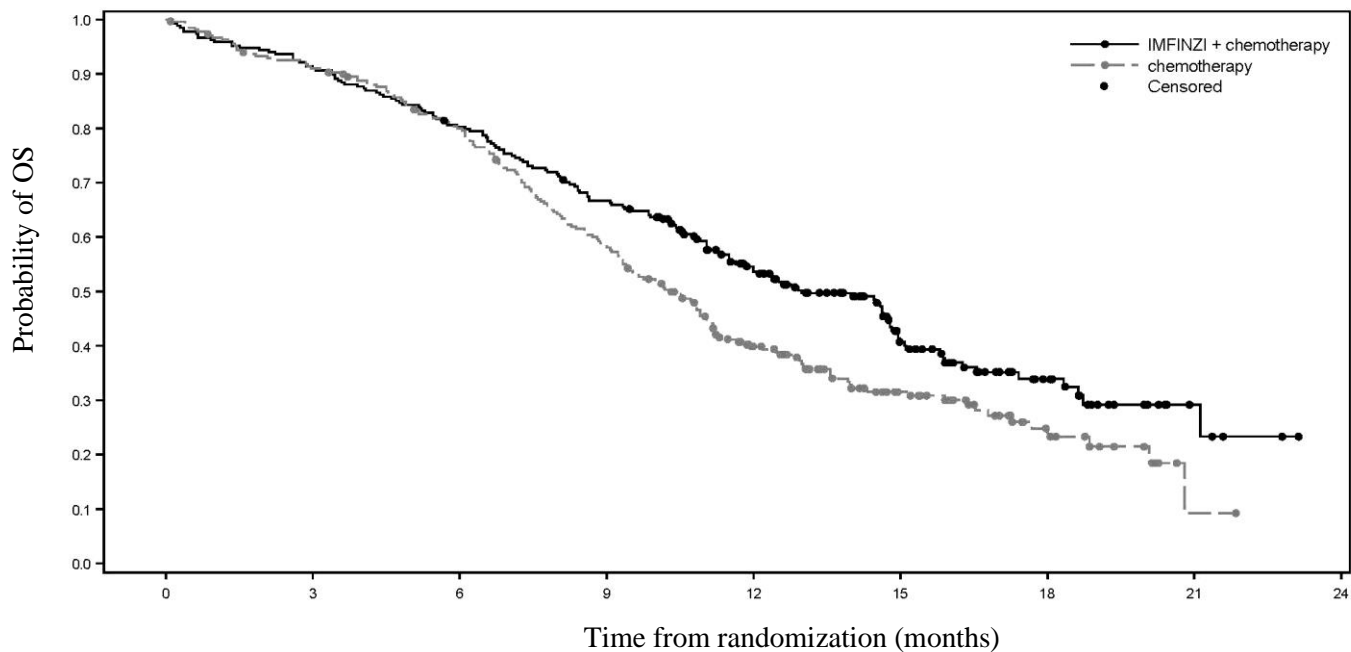
**Table 19. OS Result for the CASPIAN Study**

<b>Endpoint</b>	<b>IMFINZI with Etoposide and either Carboplatin or Cisplatin (n = 268)</b>	<b>Etoposide and either Carboplatin or Cisplatin (n = 269)</b>
<b>Overall Survival (OS)</b>		
Number of deaths (%) <sup>*</sup>	155 (58)	181 (67)
Median in months (95% CI)	13.0 (11.5, 14.8)	10.3 (9.3, 11.2)
Hazard Ratio (95% CI) <sup>†</sup>	0.73 (0.59, 0.91)	
p-value <sup>1</sup>	0.0047	

\* At a pre-specified interim analysis, 336 OS events (79% of total planned events) were observed, and the boundary for declaring efficacy (0.0178) was determined by a Lan-Demets alpha spending function with O'Brien Fleming type boundary.

† The analysis was performed using the stratified log-rank test, adjusting for planned platinum therapy in Cycle 1 (carboplatin or cisplatin) and using the rank tests of association approach.

**Figure 3. Kaplan-Meier Curves of Overall Survival in the CASPIAN Study**



Number of patients at risk	0	3	6	9	12	15	18	21	24
IMFINZI + chemotherapy	268	244	214	177	116	57	25	5	0
chemotherapy	269	242	209	153	82	44	17	1	0

Investigator-assessed PFS (96% of total planned events) showed a HR of 0.78 (95% CI: 0.65, 0.94), with median PFS of 5.1 months (95% CI: 4.7, 6.2) in the IMFINZI plus chemotherapy arm and 5.4 months (95% CI: 4.8, 6.2) in the chemotherapy alone arm. The investigator-assessed confirmed ORR was 68% (95% CI: 62%, 73%) in the IMFINZI plus chemotherapy arm and 58% (95% CI: 52%, 63%) in the chemotherapy alone arm.

In the exploratory subgroup analyses of OS based on the planned platinum chemotherapy received at cycle 1, the HR was 0.70 (95% CI 0.55, 0.89) in patients who received carboplatin, and the HR was 0.88 (95% CI 0.55, 1.41) in patients who received cisplatin.

### 14.3 Biliary Tract Cancer (BTC)

#### Locally Advanced or Metastatic BTC - TOPAZ-1

The efficacy of IMFINZI in combination with gemcitabine and cisplatin in patients with locally advanced or metastatic BTC was investigated in TOPAZ-1 (NCT03875235), a randomized, double-blind, placebo-controlled, multicenter trial that enrolled 685 patients with histologically confirmed locally advanced unresectable or metastatic BTC who have not previously received systemic therapy. Patients with recurrent disease > 6 months after surgery and/or completion of adjuvant therapy were eligible. Patients had an ECOG Performance status of 0 and 1 and at least one target lesion by RECIST 1.1. Patients with ampullary carcinoma; active or prior documented autoimmune or inflammatory disorders; HIV infection

or active infections, including tuberculosis or hepatitis C; current or prior use of immunosuppressive medication within 14 days before the first dose of IMFINZI were ineligible.

Randomization was stratified by disease status (recurrent vs. initially unresectable) and primary tumor location (intrahepatic cholangiocarcinoma [ICCA] vs. extrahepatic cholangiocarcinoma [ECCA] vs. gallbladder cancer [GBC]). Patients were randomized 1:1 to receive:

- IMFINZI 1,500 mg on Day 1+ gemcitabine 1,000 mg/m<sup>2</sup> and cisplatin 25 mg/m<sup>2</sup> on Days 1 and 8 of each 21-day cycle up to 8 cycles, followed by IMFINZI 1,500 mg every 4 weeks, or
- Placebo on Day 1+ gemcitabine 1,000 mg/m<sup>2</sup> and cisplatin 25 mg/m<sup>2</sup> on Days 1 and 8 of each 21-day cycle up to 8 cycles, followed by placebo every 4 weeks.

Treatment with IMFINZI or placebo continued until disease progression, or unacceptable toxicity. Treatment beyond disease progression was permitted if the patient was clinically stable and deriving clinical benefit as determined by the investigator.

The major efficacy outcome measure was overall survival (OS). Additional efficacy outcome measures were investigator-assessed progression-free survival (PFS), objective response rate (ORR) and duration of response (DoR). Tumor assessments were conducted every 6 weeks for the first 24 weeks after the date of randomization, and then every 8 weeks until confirmed objective disease progression.

The study population characteristics were: 50% male, median age of 64 years (range 20-85), 47% age 65 or older; 56% Asian, 37% White, 2% Black or African American, 0.1% American Indian or Alaskan Native, and 4% other; 51% had an ECOG PS of 1; primary tumor location was ICCA 56%, ECCA 18% and GBC 25%; 20% of patients had recurrent disease; 86% of patients had metastatic and 14% had locally advanced disease.

At a pre-specified interim analysis, the trial demonstrated a statistically significant improvement in OS and PFS in patients randomized to IMFINZI in combination with chemotherapy compared to placebo in combination with chemotherapy. Table 20 summarizes the efficacy results for TOPAZ-1.

**Table 20. Efficacy Results for the TOPAZ-1 Study**

<b>Endpoint</b>	<b>IMFINZI with Gemcitabine and Cisplatin (n = 341)</b>	<b>Placebo with Gemcitabine and Cisplatin (n = 344)</b>
<b>Overall Survival (OS)</b>		
Number of deaths (%)	198 (58)	226 (66)
Median in months (95% CI)*	12.8 (11.1, 14)	11.5 (10.1, 12.5)
Hazard Ratio (95% CI)†	0.80 (0.66, 0.97)	
p-value‡	0.021	
<b>Progression-Free Survival (PFS)</b>		
Number of events (%)	276 (81)	297 (86)

Endpoint	IMFINZI with Gemcitabine and Cisplatin (n = 341)	Placebo with Gemcitabine and Cisplatin (n = 344)
Median in months (95% CI)*	7.2 (6.7, 7.4)	5.7 (5.6, 6.7)
Hazard Ratio (95% CI)†	0.75 (0.63, 0.89)	
p-value‡	0.001	

\* Kaplan-Meier estimated median with 95% CI derived using Brookmeyer-Crowley method

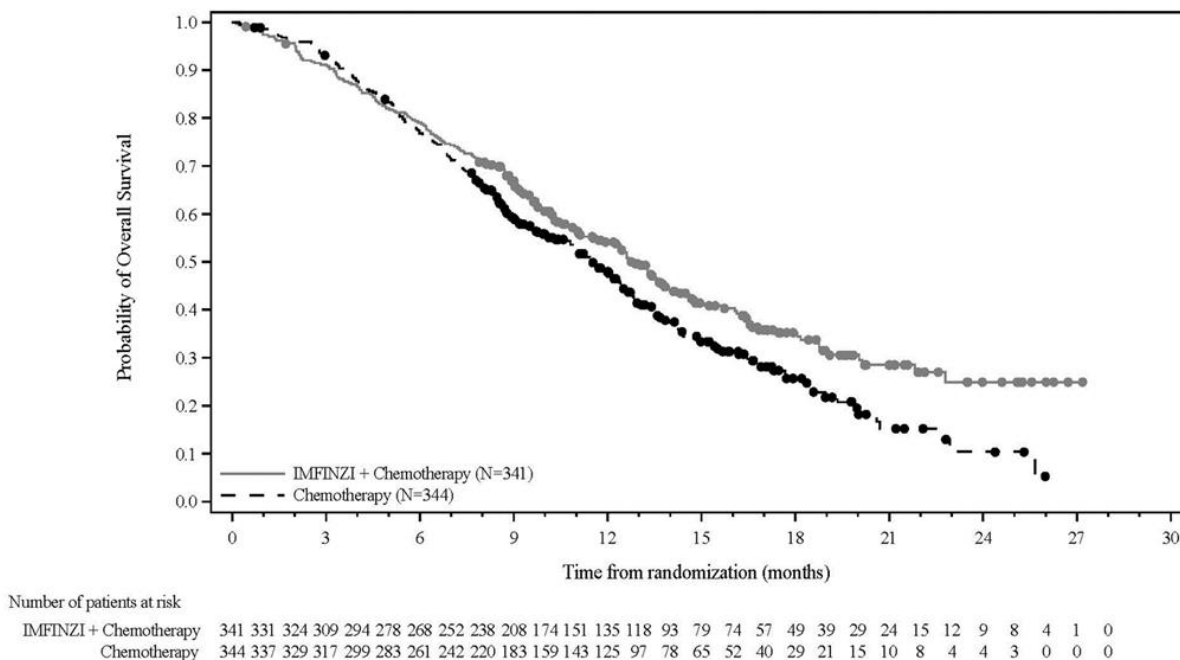
† Based on Cox proportional hazards model stratified by disease status and primary tumor location

‡ 2-sided p-value based on a stratified log-rank test compared with alpha boundary of 0.030

§ 2-sided p-value based on a stratified log-rank test compared with alpha boundary of 0.048

The investigator-assessed ORR was 27% (95% CI: 22% - 32%) in the IMFINZI plus chemotherapy arm and 19% (95% CI: 15%-23%) in the chemotherapy alone arm.

**Figure 4: Kaplan-Meier Curve of OS in TOPAZ-1 Study**



#### 14.4 Hepatocellular Carcinoma (HCC)

The efficacy of IMFINZI in combination with tremelimumab-actl was evaluated in the HIMALAYA study (NCT03298451), a randomized (1:1:1), open-label, multicenter study in patients with confirmed uHCC who had not received prior systemic treatment for HCC. Patients were randomized to one of two investigational arms (IMFINZI plus tremelimumab-actl or IMFINZI) or sorafenib. Study treatment consisted of IMFINZI 1,500 mg in combination with tremelimumab-actl as a one-time single intravenous infusion of 300 mg on the same day, followed by IMFINZI every 4 weeks; IMFINZI 1,500 mg every 4 weeks; or sorafenib 400 mg given orally twice daily, until disease progression or unacceptable toxicity. The efficacy assessment of IMFINZI is based on patients randomized to the IMFINZI plus

tremelimumab-actl arm versus the sorafenib arm. Randomization was stratified by macrovascular invasion (MVI) (yes or no), etiology of liver disease (hepatitis B virus vs. hepatitis C virus vs. others) and ECOG performance status (0 vs. 1).

The study enrolled patients with BCLC Stage C or B (not eligible for locoregional therapy). The study excluded patients with co-infection of viral hepatitis B and hepatitis C; active or prior documented gastrointestinal (GI) bleeding within 12 months; ascites requiring non-pharmacologic intervention within 6 months; hepatic encephalopathy within 12 months before the start of treatment; active or prior documented autoimmune or inflammatory disorders. Esophagogastroduodenoscopy was not mandated prior to enrollment but adequate endoscopic therapy, according to institutional standards, was required for patients with history of esophageal variceal bleeding or those assessed as high risk for esophageal variceal bleeding by the treating physician.

Study treatment was permitted beyond disease progression if the patient was clinically stable and deriving clinical benefit as determined by the investigator.

The major efficacy outcome measure was overall survival (OS) between the IMFINZI plus tremelimumab-actl arm versus the sorafenib arm. Additional efficacy outcomes were investigator-assessed progression-free survival (PFS), objective response rate (ORR) and duration of response (DoR) according to RECIST v1.1. Tumor assessments were conducted every 8 weeks for the first 12 months and then every 12 weeks thereafter.

The baseline demographics of the IMFINZI plus tremelimumab-actl and sorafenib arms were as follows: male (85%), age < 65 years (50%), median age of 65 years (range: 18 to 88 years), White (46%), Asian (49%), Black or African American (2%), Native Hawaiian or other Pacific Islander (0.1%), race Unknown (2%), Hispanic or Latino (5%), Not Hispanic or Latino (94%), ethnicity Unknown (1%), ECOG PS 0 (62%); Child-Pugh Class score A (99%), macrovascular invasion (26%), extrahepatic spread (53%), viral etiology; hepatitis B (31%), hepatitis C (27%), and uninfected (42%).

Efficacy results are presented in Table 21 and Figure 5.

**Table 21. Efficacy Results for the HIMALAYA Study**

<b>Endpoint</b>	<b>IMFINZI and Tremelimumab-actl (N = 393)</b>	<b>Sorafenib (N = 389)</b>
<b>OS</b>		
Number of deaths (%)	262 (66.7)	293 (75.3)
Median in months (95% CI)	16.4 (14.2, 19.6)	13.8 (12.3, 16.1)
HR (95% CI)*	0.78 (0.66, 0.92)	
p-value <sup>†, ‡</sup>	0.0035	
<b>PFS</b>		
Number of events (%)	335 (85.2)	327 (84.1)
Median in months	3.8	4.1

Endpoint	IMFINZI and Tremelimumab-actl (N = 393)	Sorafenib (N = 389)
(95% CI)	(3.7, 5.3)	(3.7, 5.5)
HR (95% CI)*	0.90 (0.77, 1.05)	
<b>ORR</b>		
ORR % (95% CI) <sup>§, ¶</sup>	20.1 (16.3, 24.4)	5.1 (3.2, 7.8)
Complete Response n (%)	12 (3.1)	0
Partial Response n (%)	67 (17.0)	20 (5.1)
<b>DoR</b>		
Median in months (95% CI)	22.3 (13.7, NR)	18.4 (6.5, 26.0)
% with duration ≥ 6 months	82.3	78.9
% with duration ≥ 12 months	65.8	63.2

\* HR (IMFINZI and tremelimumab-actl vs. sorafenib) based on the stratified Cox proportional hazard model.

† Based on a stratified log-rank test.

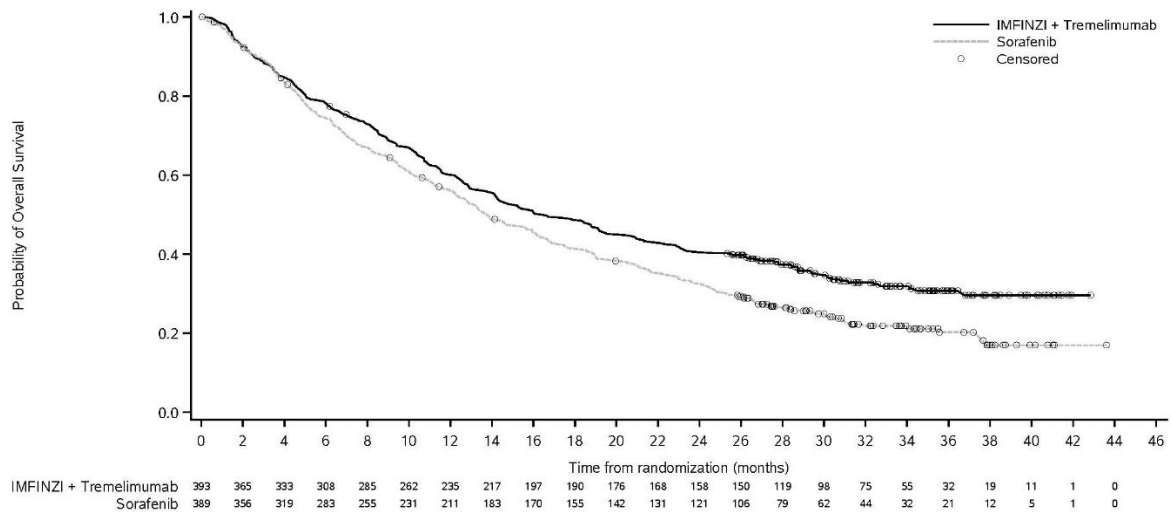
‡ Based on a Lan-DeMets alpha spending function with O'Brien Fleming type boundary and the actual number of events observed, the boundary for declaring statistical significance for IMFINZI and tremelimumab-actl vs. sorafenib was 0.0398 (Lan and DeMets 1983).

§ Confirmed complete response or partial response.

¶ Based on Clopper-Pearson method.

CI=Confidence Interval, HR=Hazard Ratio, NR=Not Reached

**Figure 5. Kaplan-Meier curve of OS**



## 14.5 Endometrial cancer

### Advanced or Recurrent dMMR Endometrial Cancer - DUO-E

IMFINZI was evaluated in combination with carboplatin and paclitaxel in DUO-E (NCT04269200), a randomized, multicenter, double-blind, placebo-controlled trial in patients with advanced or recurrent endometrial cancer. The trial enrolled patients with newly diagnosed Stage III disease (with measurable disease per RECIST v1.1), or newly diagnosed Stage IV disease. The trial also enrolled patients with recurrent disease with a low potential for cure by radiation therapy or surgery. For patients with recurrent disease, prior chemotherapy was allowed only if it was administered in the adjuvant setting and at least 12 months had elapsed from the date of last dose of chemotherapy to the date of relapse. The trial included patients with epithelial endometrial carcinomas of all histologies, including carcinosarcomas. Patients with endometrial sarcoma were excluded, and patients who had active autoimmune disease or a medical condition that required immunosuppression were ineligible.

Randomization was stratified by tumor mismatch repair (MMR) status (proficient or deficient), disease status (recurrent or newly diagnosed), and geographic region (Asia or rest of the world). MMR status was assessed using an immunohistochemistry tumor tissue test.

Patients were randomized (1:1:1) to one of the following treatment arms:

- IMFINZI 1,120 mg in combination with carboplatin and paclitaxel every 3 weeks for a maximum of 6 cycles. Following completion of chemotherapy treatment, patients received IMFINZI 1,500 mg every 4 weeks as maintenance treatment until disease progression.
- Placebo in combination with carboplatin and paclitaxel every 3 weeks for a maximum of 6 cycles. Following completion of chemotherapy treatment, patients received placebo every 4 weeks as maintenance treatment until disease progression.
- An additional investigational combination regimen.

Treatment was continued until Response Evaluation Criteria in Solid Tumors (RECIST) v1.1-defined progression of disease or unacceptable toxicity. Assessment of tumor status was performed every 9 weeks for the first 18 weeks and every 12 weeks thereafter.

The major efficacy outcome measure was progression-free survival (PFS), determined by investigator assessment using RECIST 1.1. Additional efficacy outcome measures included overall response rate (ORR), duration of response (DOR) and overall survival (OS).

Among 95 patients with dMMR tumor, the baseline characteristics were median age of 63 years (range: 34 to 85); 47% age 65 or older; 62% White, 31% Asian, 2% Black or African American; 7% Hispanic or Latino, 1% American Indian or Alaska Native, and 4% other or not reported; ECOG PS of 0 (55%) or 1 (45%); 48% newly diagnosed (11% Stage III and 38% Stage IV) and 52% recurrent disease. The histologic subtypes were endometrioid (78%), mixed epithelial (6%), carcinosarcoma (5%), serous (4%), undifferentiated (1%), and other (5%).

While a statistically significant improvement in PFS was observed in the overall population for IMFINZI with carboplatin and paclitaxel compared to carboplatin and paclitaxel alone, based on an exploratory analysis by MMR status, the PFS improvement in the overall population was primarily attributed to patients with dMMR tumors.

Efficacy results for DUO-E are summarized in Table 22 and Figure 6 for patients with dMMR tumors. OS data in this subpopulation at the time of PFS analysis were immature with 26% of patients who died.

**Table 22. Efficacy Results for Patients with dMMR Tumors in DUO-E**

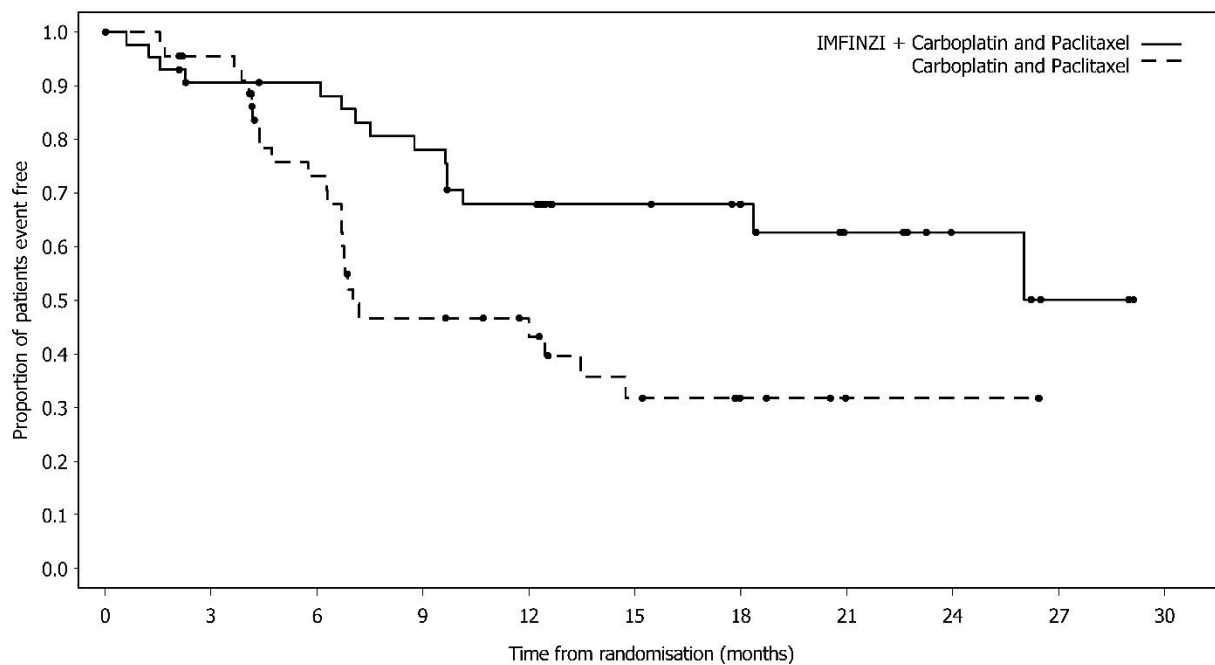
<b>Endpoint</b>	<b>IMFINZI with Carboplatin and Paclitaxel N=46</b>	<b>Carboplatin and Paclitaxel N=49</b>
<b>PFS*</b>		
Number of events (%)	15 (32.6)	25 (51.0)
Median in months (95% CI)‡	NR (NR, NR)	7.0 (6.7, 14.8)
HR (95% CI)	0.42 (0.22, 0.80)	
<b>ORR</b>		
	<b>N=42</b>	<b>N=42</b>
ORR % (95% CI)	71.4 (55.4, 84.3)	40.5 (25.6, 56.7)
Complete response %	12 (28.6)	4 (9.5)
Partial response %	18 (42.9)	13 (31.0)
<b>DOR</b>		
Median in months (range)	NR (2.4+, 26.9+)	10.5 (2.1+, 25.2+)

\* Investigator assessed.

‡ Calculated using the Kaplan-Meier technique.

CI=Confidence Interval, HR=Hazard Ratio, NR=Not Reached, + = response ongoing at last assessment.

**Figure 6. Kaplan-Meier curve of PFS for Patients with dMMR Tumors in DUO-E**



Number of patients at risk:

IMFINZI + Carboplatin and Paclitaxel	46	37	36	31	26	19	14	9	5	2	0
Carboplatin and Paclitaxel	49	41	28	17	13	8	5	2	2	0	0

## 16 HOW SUPPLIED/STORAGE AND HANDLING

IMFINZI (durvalumab) Injection is a clear to opalescent, colorless to slightly yellow solution supplied in a carton containing one single-dose vial either as:

- 500 mg/10 mL (50 mg/mL) (NDC 0310-4611-50)
- 120 mg/2.4 mL (50 mg/mL) (NDC 0310-4500-12)

Store in a refrigerator at 2°C to 8°C (36°F to 46°F) in original carton to protect from light. Do not freeze. Do not shake.

## 17 PATIENT COUNSELING INFORMATION

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

### Immune-Mediated Adverse Reactions

Inform patients of the risk of immune-mediated adverse reactions that may require corticosteroid treatment and interruption or discontinuation of IMFINZI [see [Warnings and Precautions \(5.1\)](#)], including:

- **Pneumonitis:** Advise patients to contact their healthcare provider immediately for any new or worsening cough, chest pain, or shortness of breath.

- Hepatitis: Advise patients to contact their healthcare provider immediately for jaundice, severe nausea or vomiting, pain on the right side of abdomen, lethargy, or easy bruising or bleeding.
- Colitis: Advise patients to contact their healthcare provider immediately for diarrhea, blood or mucus in stools, or severe abdominal pain.
- Endocrinopathies: Advise patients to contact their healthcare provider immediately for signs or symptoms of hypothyroidism, hyperthyroidism, adrenal insufficiency, type 1 diabetes mellitus, or hypophysitis.
- Nephritis: Advise patients to contact their healthcare provider immediately for signs or symptoms of nephritis.
- Dermatological Reactions: Advise patients to contact their healthcare provider immediately for signs or symptoms of severe dermatological reactions.
- Pancreatitis: Advise patients to contact their healthcare provider immediately for signs or symptoms of pancreatitis.
- Other Immune-Mediated Adverse Reactions: Advise patients to contact their healthcare provider immediately for signs or symptoms of pancreatitis, aseptic meningitis, encephalitis, immune thrombocytopenia, myocarditis, hemolytic anemia, myositis, uveitis, keratitis, and myasthenia gravis.

Infusion-Related Reactions:

- Advise patients to contact their healthcare provider immediately for signs or symptoms of infusion-related reactions [see [Warnings and Precautions \(5.2\)](#)].

Complications of Allogeneic HSCT:

- Advise patients of potential risk of post-transplant complications [see [Warnings and Precautions \(5.3\)](#)].

Embryo-Fetal Toxicity:

- Advise females of reproductive potential that IMFINZI can cause harm to a fetus and to inform their healthcare provider of a known or suspected pregnancy [see [Warnings and Precautions \(5.4\)](#) and [Use in Specific Populations \(8.1, 8.3\)](#)].
- Advise females of reproductive potential to use effective contraception during treatment and for 3 months after the last dose of IMFINZI [see [Use in Specific Populations \(8.3\)](#)].

Lactation:

- Advise female patients not to breastfeed while taking IMFINZI and for 3 months after the last dose [see [Warnings and Precautions \(5.4\)](#) and [Use in Specific Populations \(8.2\)](#)].

Manufactured for:

AstraZeneca Pharmaceuticals LP

Wilmington, DE 19850

By: AstraZeneca UK Limited  
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Cambridge, England CB2 0AA  
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**MEDICATION GUIDE**  
**IMFINZI® (im-FIN-zee)**  
**(durvalumab)**  
**injection**

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

IMFINZI is a medicine that may treat certain cancers by working with your immune system.

IMFINZI can cause your immune system to attack normal organs and tissues in any area of your body and can affect the way they work. These problems can sometimes become severe or life-threatening and can lead to death. You can have more than one of these problems at the same time. These problems may happen anytime during treatment or even after your treatment has ended.

**Call or see your healthcare provider right away if you develop any new or worsening signs or symptoms, including:**

- **Lung problems.**
  - cough
  - shortness of breath
  - chest pain
- **Intestinal problems.**
  - diarrhea (loose stools) or more frequent bowel movements than usual
  - stools that are black, tarry, sticky, or have blood or mucus
  - severe stomach-area (abdomen) pain or tenderness
- **Liver problems.**
  - yellowing of your skin or the whites of your eyes
  - severe nausea or vomiting
  - pain on the right side of your stomach-area (abdomen)
  - dark urine (tea colored)
  - bleeding or bruising more easily than normal
- **Hormone gland problems.**
  - headaches that will not go away or unusual headaches
  - eye sensitivity to light
  - eye problems
  - rapid heartbeat
  - increase sweating
  - extreme tiredness
  - weight gain or weight loss
  - feeling more hungry or thirsty than usual
  - urinating more often than usual
  - hair loss
  - feeling cold
  - constipation
  - your voice gets deeper
  - dizziness or fainting
  - changes in mood or behavior, such as decreased sex drive, irritability, or forgetfulness
- **Kidney problems.**
  - decrease in your amount of urine
  - blood in your urine
  - swelling of your ankles
  - loss of appetite
- **Skin problems.**
  - rash
  - itching
  - skin blistering or peeling
  - painful sores or ulcers in mouth or nose, throat, or genital area
  - fever or flu-like symptoms
  - swollen lymph nodes
- **Pancreas problems**
  - pain in your upper stomach area (abdomen)
  - severe nausea or vomiting
  - loss of appetite
- **Problems can also happen in other organs and tissues. These are not all of the signs and symptoms of immune system problems that can happen with IMFINZI. Call or see your healthcare provider right away for any new or worsening signs or symptoms, which may include:**
  - chest pain, irregular heartbeats, shortness of breath or swelling of ankles

- confusion, sleepiness, memory problems, changes in mood or behavior, stiff neck, balance problems
- tingling, numbness or weakness of the arms or legs
- double vision, blurry vision, sensitivity to light, eye pain, changes in eye-sight
- persistent or severe muscle pain or weakness, muscle cramps, joint pain, joint stiffness or swelling
- low red blood cells, bruising
- **Infusion reactions that can sometimes be severe or life-threatening.** Signs and symptoms of infusion reactions may include:
  - chills or shaking
  - itching or rash
  - flushing
  - shortness of breath or wheezing
  - dizziness
  - feel like passing out
  - fever
  - back or neck pain
- **Complications, including graft-versus-host disease (GVHD), in people who have received a bone marrow (stem cell) transplant that uses donor stem cells (allogeneic).**

These complications can be serious and can lead to death. These complications may happen if you underwent transplantation either before or after being treated with IMFINZI. Your healthcare provider will monitor you for these complications.

**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 IMFINZI. Your healthcare provider may treat you with corticosteroid or hormone replacement medicines. Your healthcare provider may also need to delay or completely stop treatment with IMFINZI, if you have severe side effects.

#### **What is IMFINZI?**

**IMFINZI** is a prescription medicine used to treat adults with:

- **a type of lung cancer called non-small cell lung cancer (NSCLC).**
  - IMFINZI may be used alone when your NSCLC:
    - has not spread outside your chest
    - cannot be removed by surgery, **and**
    - has responded or stabilized with initial treatment with chemotherapy that contains platinum, given at the same time as radiation therapy.
  - IMFINZI may be used in combination with tremelimumab-actl and chemotherapy that contains platinum when your NSCLC:
    - has spread to other parts of your body (metastatic), **and**
    - your tumor does not have an abnormal “EGFR” or “ALK” gene.
- **a type of lung cancer called small cell lung cancer (SCLC).** IMFINZI may be used with the chemotherapy medicines etoposide and carboplatin or cisplatin as your first treatment when your SCLC:
  - has spread within your lungs or to other parts of the body, (extensive-stage small cell lung cancer, or ES-SCLC).
- **a type of cancer called biliary tract cancer (BTC),** including cancer of the bile ducts (cholangiocarcinoma) and gallbladder cancer. IMFINZI may be used in combination with chemotherapy medicines gemcitabine and cisplatin when your BTC:
  - has spread to nearby tissues (locally advanced), **or**
  - has spread to other parts of the body (metastatic).
- **a type of liver cancer that cannot be removed by surgery (unresectable hepatocellular carcinoma or uHCC).** IMFINZI is used in combination with tremelimumab-actl to treat uHCC.
- **a type of uterine cancer called endometrial cancer.** IMFINZI may be used in combination with chemotherapy medicines carboplatin and paclitaxel followed by IMFINZI alone when your endometrial cancer:
  - has spread (advanced) or has come back (recurrent), **and**
  - a laboratory test shows that your tumor is mismatch repair deficient (dMMR).

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

**Before you receive IMFINZI, 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 received an organ transplant
- have received or plan to receive a stem cell transplant that uses donor stem cells (allogeneic)
- have received radiation treatment to your chest area
- have a condition that affects your nervous system, such as myasthenia gravis or Guillain-Barré syndrome
- are pregnant or plan to become pregnant. IMFINZI can harm your unborn baby
- are breastfeeding or plan to breastfeed. It is not known if IMFINZI passes into your breast milk. Do not breastfeed during treatment and for 3 months after the last dose of IMFINZI

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

- Your healthcare provider will give you a pregnancy test before you start treatment with IMFINZI.
- You should use an effective method of birth control during your treatment and for 3 months after the last dose of IMFINZI. Talk to your healthcare provider about birth control methods that you can use during this time.
- Tell your healthcare provider right away if you become pregnant or think you may be pregnant during treatment with IMFINZI.

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 IMFINZI?**

- Your healthcare provider will give you IMFINZI into your vein through an intravenous (IV) line over 60 minutes.
- IMFINZI 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 IMFINZI?**

IMFINZI can cause serious side effects, including:

**See “What is the most important information I should know about IMFINZI?”**

The most common side effects of IMFINZI in adults with NSCLC include:

- cough
- feeling tired
- inflammation in the lungs
- upper respiratory tract infections
- shortness of breath
- rash

The most common side effects of IMFINZI when used with tremelimumab-actl and platinum-containing chemotherapy in adults with metastatic NSCLC include:

- nausea
- feeling tired or weak
- muscle or bone pain
- decreased appetite
- rash
- diarrhea

The most common side effects of IMFINZI when used with other anticancer medicines in adults with ES-SCLC include:

- nausea
- hair loss
- feeling tired or weak

The most common side effects of IMFINZI when used with other anticancer medicines in adults with BTC include:

- feeling tired
- nausea
- constipation
- decreased appetite
- stomach (abdominal) pain
- rash
- fever

The most common side effects of IMFINZI when used with tremelimumab-actl in adults with uHCC include:

- rash
- diarrhea
- feeling tired
- itchiness
- muscle or bone pain
- stomach (abdominal) pain

The most common side effects of IMFINZI when used with carboplatin and paclitaxel in adults with endometrial cancer include:

- inflammation of the nerves causing numbness, weakness, tingling or burning pain of the arms and legs
- muscle or bone pain
- nausea
- hair loss
- feeling tired
- stomach (abdominal) pain
- constipation
- rash
- decreased level of magnesium in the blood
- increased liver function tests
- diarrhea
- vomiting
- cough
- decreased level of potassium in the blood
- shortness of breath
- headache
- increased level of alkaline phosphatase in the blood
- decreased appetite

Tell your healthcare provider if you have any side effect that bothers you or that does not go away. These are not all of the possible side effects of IMFINZI. 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 IMFINZI.**

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

**What are the ingredients in IMFINZI?**

**Active ingredient:** durvalumab

**Inactive ingredients:** L-histidine, L-histidine hydrochloride monohydrate,  $\alpha,\alpha$ -trehalose dihydrate, polysorbate 80, Water for Injection, USP.

Manufactured for: AstraZeneca Pharmaceuticals LP, Wilmington, DE 19850

By: AstraZeneca UK Limited, 1 Francis Crick Ave. Cambridge, England CB2 0AA

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For more information, call 1-800-236-9933 or go to [www.IMFINZI.com](http://www.IMFINZI.com)

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