



This medicinal product is subject to additional monitoring in Australia. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse events at [www.tga.gov.au/reporting-problems](http://www.tga.gov.au/reporting-problems).

## AUSTRALIAN PRODUCT INFORMATION

### ELAHERE® (MIRVETUXIMAB SORAVTANSINE) CONCENTRATE SOLUTION FOR INTRAVENOUS INFUSION

#### 1 NAME OF THE MEDICINE

Mirvetuximab soravtansine

#### 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

ELAHERE is available in a single-dose vial containing 100 mg of mirvetuximab soravtansine in 20 mL (5 mg/mL).

Mirvetuximab soravtansine is a folate receptor alpha (FR $\alpha$ )-directed antibody-drug conjugate (ADC) consisting of three components: 1) an anti-FR $\alpha$  monoclonal antibody of human immunoglobulin G (IgG)1 subtype 2) the small molecule anti-tubulin agent DM4 (a maytansine derivative) and 3) a linker, sulfo-SPDB (1-((2,5-dioxopyrrolidin-1-yl)oxy)-1-oxo-4-(pyridin-2-yl)disulfanyl)butane-2-sulfonic acid) that covalently attaches DM4 to the mirvetuximab antibody.

Mirvetuximab soravtansine is produced by chemical conjugation of the antibody and small molecule components. The antibody is produced by mammalian (Chinese hamster ovary) cells, and the small molecule components are produced by chemical synthesis. An average of 3.4 molecules of DM4 are attached to each antibody molecule.

For the full list of excipients, see Section 6.1 List of excipients.

#### 3 PHARMACEUTICAL FORM

ELAHERE (mirvetuximab soravtansine) concentrate solution for intravenous infusion single-dose vial is supplied as a sterile, preservative-free, clear to slightly opalescent, colourless solution. The pH is approximately 5.0.

## 4 CLINICAL PARTICULARS

### 4.1 Therapeutic indications

ELAHERE as monotherapy is indicated for the treatment of adult patients with folate receptor-alpha (FR $\alpha$ ) positive, platinum-resistant high grade serous epithelial ovarian, fallopian tube, or primary peritoneal cancer, who have received one to three prior systemic treatment regimens (see Section 4.2).

### 4.2 Dose and method of administration

ELAHERE must be initiated and supervised by a health care professional experienced in the use of anticancer medicinal products.

#### Patient Selection

Prior to the use of ELAHERE, FR $\alpha$  status of the tumour must be established. Eligible patients should have FR $\alpha$  tumour status defined as  $\geq 75\%$  viable tumour cells demonstrating moderate (2+) and/or strong (3+) membrane staining by immunohistochemistry (IHC). Testing used in clinical practice should be validated and adequately comparable to the testing used in the relevant pivotal study (see Section 5.1 Clinical trials).

#### Recommended Dosage

The recommended dose of ELAHERE is 6 mg/kg adjusted ideal body weight (AIBW) administered once every 3 weeks (21-day cycle) as an intravenous infusion until disease progression or unacceptable toxicity. Dosing based on AIBW reduces exposure variability for patients who are either underweight or overweight.

The total dose of ELAHERE is calculated based on each patient's AIBW using the following formula:

$$\begin{aligned}\text{Female IBW (Ideal Body Weight [kg])} &= 0.9 \times \text{height [cm]} - 92 \\ \text{AIBW} &= \text{IBW [kg]} + 0.4 \times (\text{Actual weight [kg]} - \text{IBW})\end{aligned}$$

For example, for a female patient who is 165 cm in height and 80 kg in weight.

First, calculate IBW:  $\text{IBW} = 0.9 \times 165 - 92 = 56.5 \text{ kg}$

Then calculate AIBW:  $\text{AIBW} = 56.5 + 0.4 \times (80 - 56.5) = 65.9 \text{ kg}$

## Premedication and Required Eye Care

### Premedication

Administer the pre-medications in Table 1 prior to each infusion of ELAHERE to reduce the incidence and severity of infusion related reactions (IRRs), nausea, and vomiting.

**Table 1. Pre-medication Prior to Each ELAHERE infusion**

Pre-medication	Route of administration	Examples (or equivalent)	Administration time prior to ELAHERE infusion
Corticosteroid	Intravenous	dexamethasone 10 mg	at least 30 minutes prior
Antihistamine	oral or intravenous	diphenhydramine 25 mg to 50 mg	
Antipyretic	oral or intravenous	paracetamol 325 mg to 650 mg	
Antiemetic	oral or intravenous	5-HT <sub>3</sub> serotonin receptor antagonist or appropriate alternatives	before each dose and following the administration of other premedication

For patients experiencing nausea and/or vomiting, consider additional antiemetics as needed.

For patients who experience an IRR Grade  $\geq$  2, consider additional pre-medication with dexamethasone 8 mg two times a day (BID) (or equivalent) the day before ELAHERE administration.

### Ophthalmic Exams and Premedication

*Ophthalmic Exam:* Conduct an ophthalmic exam including visual acuity and slit lamp exam prior to initiation of ELAHERE, and thereafter if a patient develops new or worsening ocular symptoms prior to the next dose. In patients with  $\geq$  Grade 2 ocular adverse reactions, additional ophthalmic exams should be conducted at a minimum of every other cycle and as clinically indicated until resolution or return to baseline.

*Ophthalmic Topical Steroids:* For patients found to have signs of  $\geq$  Grade 2 corneal adverse reactions (keratopathy) on slit lamp examination, secondary prophylaxis with ophthalmic topical steroids is recommended for subsequent cycles of ELAHERE, unless the patient's eye care professional determines that the risks outweigh the benefits of such therapy.

Administer steroid eye drops on the day of infusion and through the next 7 days of each subsequent cycle of ELAHERE (see Table 3).

Wait at least 15 minutes or as directed per local prescribing information after ophthalmic topical steroid administration before instilling lubricating eye drops.

During treatment with ophthalmic topical steroids, the measurement of intraocular pressure and an examination with slit lamp should be carried out regularly.

*Lubricating eye drops:* Instruct patients to use lubricating eye drops throughout treatment with ELAHERE.

### **Dose modifications**

Before the start of each cycle, the patient should be advised to report any new or worsening symptoms to the treating physician or qualified individual.

In patients who develop new or worsening ocular symptoms, conduct an ophthalmic exam before dosing. Review the ophthalmic examination report and determine the dose of ELAHERE based on the severity of findings in the most severely affected eye.

Table 2 provides dose reduction levels and Table 3 provides dose modifications for ELAHERE due to adverse reactions.

**Table 2. Dose Reduction Schedule**

	<b>ELAHERE dose levels</b>
Starting dose	6 mg/kg AIBW once every 3 weeks (21-day cycle)
First dose reduction	5 mg/kg AIBW once every 3 weeks (21-day cycle)
Second dose reduction	4 mg/kg AIBW* once every 3 weeks (21-day cycle)

\* Permanently discontinue in patients who cannot tolerate 4 mg/kg AIBW.

**Table 3. Dose Modifications for Adverse Reactions**

<b>Adverse reaction</b>	<b>Severity of adverse reaction*</b>	<b>Dose modification</b>
<b>Keratitis/Keratopathy</b>	Non-confluent superficial keratitis/keratopathy	Monitor
	Confluent superficial keratitis/keratopathy, a cornea epithelial defect, or 3-line or more loss in best corrected visual acuity	Withhold dose until improved to non-confluent superficial keratitis/keratopathy or better or resolved, then maintain at same dose level. Consider dose reduction for patients with recurrent confluent keratitis/keratopathy despite best supportive care or in patients with ocular toxicity lasting longer than 14 days.
	Corneal ulcer or stromal opacity or best corrected distance visual acuity 6/60 or worse	Withhold dose until improved to nonconfluent superficial keratitis/keratopathy or better or resolved, then reduce by one dose level.
	Corneal perforation	Permanently discontinue
<b>Pneumonitis</b>	Grade 1	Monitor
	Grade 2	Withhold dose until Grade 1 or less, then maintain at same dose level or consider dose reduction if recurrent, lasts longer than 28 days, or at physician discretion.
	Grade 3 or 4	Permanently discontinue
<b>Peripheral neuropathy</b>	Grade 2	Withhold dose until Grade 1 or less, then reduce by one dose level.
	Grade 3 or 4	Permanently discontinue
	Grade 1	Maintain infusion rate

Adverse reaction	Severity of adverse reaction*	Dose modification
<b>Infusion-related reactions/ Hypersensitivity</b>	Grade 2	<ul style="list-style-type: none"> <li>• Interrupt infusion and administer supportive treatment.</li> <li>• After recovery from symptoms, resume the infusion at 50% of the previous rate, and if no further symptoms appear, increase rate as appropriate until infusion is completed.</li> <li>• Administer additional pre-medication with dexamethasone 8 mg oral BID the day before infusion (or local equivalent) for future cycles.</li> </ul>
	Grade 3 or 4	<ul style="list-style-type: none"> <li>• Immediately stop infusion and administer supportive treatment.</li> <li>• Advise patient to seek emergency treatment and immediately notify their healthcare professional if the infusion-related symptoms recur after discharge from the infusion area.</li> <li>• Permanently discontinue</li> </ul>
<b>Haematological</b>	Grade 3 or 4	Withhold dose until Grade 1 or less, then resume at one lower dose level.
<b>Other adverse reactions</b>	Grade 3	Withhold dose until Grade 1 or less, then resume at one lower dose level.
	Grade 4	Permanently discontinue

\*: Unless otherwise specified, National Cancer Institute Common Terminology Criteria for Adverse Events (NCI CTCAE) version 5.0.

## Preparation and Administration

ELAHERE is for intravenous use. It must be diluted by a healthcare professional and administered as an intravenous infusion.

### Preparation

- Calculate the dose (mg) (based on the patient's AIBW), total volume (mL) of solution required, and the number of vials of ELAHERE needed. More than one vial will be needed for a full dose.

- Remove the vials of ELAHERE from the refrigerator and allow to warm to room temperature.
- Inspect the vials visually for particulate matter and discolouration prior to administration. ELAHERE is a clear to slightly opalescent, colourless solution. Do not use if the solution is discoloured or cloudy, or if foreign particulate matter is present.
- Gently swirl and inspect each vial prior to withdrawing the calculated dose volume of ELAHERE. Do not shake the vial.
- Using aseptic technique, withdraw the calculated dose volume of ELAHERE for subsequent dilution.
- ELAHERE contains no preservatives and is intended for single dose only. Product is for single use in one patient only. Discard any unused solution remaining in the vial in accordance with local requirements.

### Dilution

- ELAHERE must be diluted prior to administration with 5% glucose to a final concentration of 1 mg/mL to 2 mg/mL.
- ELAHERE is incompatible with 0.9% (w/v) sodium chloride. ELAHERE must not be mixed with any other drugs or intravenous fluids.
- Determine the volume of 5% glucose required to achieve the final diluted drug concentration. Either remove excess 5% glucose from a prefilled intravenous bag or add the calculated volume of 5% glucose to a sterile empty intravenous bag. Then add the calculated dose volume of ELAHERE to the intravenous bag.
- Gently mix the diluted drug solution by slowly inverting the bag several times to assure uniform mixing. Do not shake or agitate.
- If the diluted infusion solution is not used immediately, store the solution either at ambient temperature (18°C to 25°C) for no more than 8 hours (including infusion time), or under refrigeration at 2°C to 8°C for no more than 24 hours.
- If refrigerated, allow the infusion bag to reach room temperature prior to administration.
- After refrigeration, administer diluted infusion solution within 8 hours (including infusion time).
- Do not freeze prepared infusion solution.

### Administration

- If the prepared infusion solution was stored refrigerated (2°C to 8°C), allow the infusion bag to reach room temperature prior to administration. Administer diluted infusion solution within 8 hours (including infusion time).

- Inspect the ELAHERE intravenous infusion bag visually for particulate matter and discoloration prior to administration.
- Administer pre-medications prior to ELAHERE administration (see Section 4.2 Dose and Method of Administration - Premedication and Required Eye Care).
- Administer ELAHERE as an intravenous infusion only, using a 0.2 or 0.22 µm polyethersulfone (PES) in-line filter. Do not substitute other membrane materials.
- Avoid use of administration delivery devices containing Di-2-ethylhexyl phthalate (DEHP).
- Administer the initial dose as an intravenous infusion at the rate of 1 mg/min. If well tolerated after 30 minutes at 1 mg/min, the infusion rate can be increased to 3 mg/min. If well tolerated after 30 minutes at 3 mg/min, the infusion rate can be increased to 5 mg/min.
- If no infusion-related reactions occur with the previous dose, subsequent infusions should be started at the maximally tolerated rate and may be increased up to a maximum infusion rate of 5 mg/min, as tolerated.
- Following the infusion, flush the intravenous line with 5% glucose to ensure delivery of the full dose. Do not use any other intravenous fluids for flushing.

#### **Use in hepatic impairment**

No dosage adjustment of ELAHERE is recommended for patients with mild hepatic impairment (total bilirubin  $\leq$  ULN and AST  $>$  ULN or total bilirubin  $>$  1 to 1.5 times ULN and any AST) (see Section 5.2 Pharmacokinetic Properties).

Avoid use of ELAHERE in patients with moderate or severe hepatic impairment (total bilirubin  $>$  1.5 ULN).

#### **Use in renal impairment**

No dosage adjustment of ELAHERE is recommended for patients with mild to moderate renal impairment (creatinine clearance [CrCl] 30 to 89 mL/min). ELAHERE has not been evaluated in patients with severe renal impairment (CrCl 15 to  $<$  30 mL/min) or end-stage renal disease and the potential need for dose adjustment in these patients cannot be determined (see Section 5.2 Pharmacokinetic Properties).

### **4.3 Contraindications**

Hypersensitivity to the active substance or any of the excipients listed in 6.1.

## **4.4 Special warnings and precautions for use**

### **Ocular Disorders**

ELAHERE can cause severe ocular adverse reactions, including visual impairment (predominantly blurred vision), keratopathy (corneal disorders), dry eye, photophobia, and eye pain (see Section 4.8 Adverse Effects (Undesirable Effects)).

Refer patients to an eye care professional for an ophthalmic exam before initiation of ELAHERE.

Before the start of each cycle, advise patients to report any new or worsening ocular symptoms to the treating physician or qualified individual.

If ocular symptoms develop, conduct an ophthalmic exam, review the ophthalmic report and modify the dose of ELAHERE as needed based on the severity of the findings (see Section 4.2 Dose and Method of Administration).

Use of lubricating eye drops during treatment with ELAHERE is recommended. In patients who develop  $\geq$  Grade 2 corneal adverse reactions, ophthalmic topical steroids are recommended for subsequent cycles of mirvetuximab soravtansine (see Section 4.2 Dose and Method of Administration).

Monitor patients for ocular toxicity and withhold, reduce, or permanently discontinue ELAHERE based on the severity and persistence of ocular adverse reactions (see Section 4.2 Dose and Method of Administration).

Advise patients to avoid use of contact lenses during treatment with ELAHERE unless directed by a healthcare professional.

### **Pneumonitis**

Severe, life-threatening, or fatal interstitial lung disease (ILD), including pneumonitis, can occur in patients treated with ELAHERE (see Section 4.8 Adverse Effects (Undesirable Effects)).

Monitor patients for pulmonary signs and symptoms of pneumonitis, which may include hypoxia, cough, dyspnoea, or interstitial infiltrates on radiologic exams. Infectious, neoplastic, and other causes for such symptoms should be excluded through appropriate investigations.

Withhold ELAHERE for patients who develop persistent or recurrent Grade 2 pneumonitis until symptoms resolve to  $\leq$  Grade 1 and consider dose reduction. Permanently discontinue ELAHERE in all patients with Grade 3 or 4 pneumonitis (see Section 4.2 Dose and Method of Administration – Dose Modifications). Patients who are asymptomatic may continue dosing of ELAHERE with close monitoring.

### **Peripheral Neuropathy**

Peripheral neuropathy has occurred with ELAHERE treatment, including Grade  $\geq$  3 reactions (see Section 4.8 Adverse Effects (Undesirable Effects)).

Monitor patients for signs and symptoms of neuropathy, such as paraesthesia, tingling or a burning sensation, neuropathic pain, muscle weakness, or dysesthesia. For patients experiencing new or worsening peripheral neuropathy, withhold dosage, dose reduce, or permanently discontinue ELAHERE based on the severity of peripheral neuropathy (see Section 4.2 Dose and Method of Administration – Dose Modifications).

### **Embryofetal toxicity**

Based on its mechanism of action, mirvetuximab soravtansine could cause embryofetal harm when administered to a pregnant patient because it contains a genotoxic compound (DM4) and affects actively dividing cells.

Patients of childbearing potential should use effective contraception during treatment with mirvetuximab soravtansine and for 7 months after the last dose (see Section 4.6).

### **Use in hepatic impairment**

Avoid use of ELAHERE in patients with moderate or severe hepatic impairment (total bilirubin  $>$  1.5 ULN) (see Section 4.2 Dose and method of administration – Use in hepatic impairment and Section 5.2 Pharmacokinetic Properties – Pharmacokinetics in Special Populations).

### **Use in the elderly**

No dosage adjustment of ELAHERE is recommended in patients  $\geq$  65 years of age (see Section 5.2 Pharmacokinetic Properties).

### **Paediatric use**

The safety and efficacy of ELAHERE in children less than 18 years of age have not been established.

## **Effects on laboratory tests**

Refer to Section 4.8 Adverse effects (Undesirable effects).

## **4.5 Interactions with other medicines and other forms of interactions**

No clinical studies evaluating the drug-drug interaction potential of mirvetuximab soravtansine have been conducted.

DM4 is a CYP3A4 substrate. Concomitant use of ELAHERE with strong CYP3A4 inhibitors may increase unconjugated DM4 exposure, which may increase the risk of ELAHERE adverse reactions. If concomitant use with strong CYP3A4 inhibitors (e.g. ceritinib, clarithromycin, cobicistat, idelalisib, itraconazole, ketoconazole, posaconazole, ritonavir, voriconazole) cannot be avoided, patients should be closely monitored for adverse reactions. Strong CYP3A4 inducers (e.g., phenytoin, rifampicin, carbamazepine) may decrease the exposure of unconjugated DM4.

## **4.6 Fertility, pregnancy and lactation**

### **Effects on fertility**

Fertility studies have not been conducted with mirvetuximab soravtansine or DM4. There are no data on the effect of ELAHERE on human fertility. However, given the mechanism of action of ELAHERE leads to microtubule disruption and death of rapidly dividing cells, there is the potential for drug-related fertility effects.

### **Females of childbearing potential**

The pregnancy status in patients of childbearing potential should be verified prior to initiating treatment.

Females of reproductive potential should use effective contraception during treatment with ELAHERE and for 7 months after the last dose. Patients who become pregnant must immediately contact their doctor.

### **Use in pregnancy – Pregnancy Category D**

No reproductive or developmental animal toxicity studies have been conducted with mirvetuximab soravtansine. Based on its mechanism of action, mirvetuximab soravtansine can cause embryofetal harm when administered to a pregnant patient because it contains a genotoxic compound (DM4) and affects actively dividing cells (see Section 5.3 Preclinical safety data – Genotoxicity). Human IgG is known to cross the placental barrier; therefore, mirvetuximab soravtansine has the potential to be transmitted from the pregnant patient to

the developing fetus. There are no available human data on mirvetuximab soravtansine use in pregnant patients to inform a drug-associated risk. No reproductive or developmental animal toxicity studies have been conducted with mirvetuximab soravtansine.

Advise patients of the potential risk to a fetus. If a patient becomes pregnant during treatment with ELAHERE or within 7 months following the last dose, close monitoring is recommended.

### **Use in lactation**

There are no data on the presence of mirvetuximab soravtansine in human milk or the effects on the breastfed child or milk production. Human immunoglobulin G (IgG) is known to pass on in breast milk. Because of the potential for serious adverse reactions in a breastfed child, advise women not to breastfeed during treatment with ELAHERE and for 1 month after the last dose.

### **4.7 Effects on ability to drive and use machines**

No studies on the effects of mirvetuximab soravtansine on the ability to drive and use machines have been performed. ELAHERE may have moderate influence on the ability to drive and use machines. Patients may experience visual disturbances, peripheral neuropathy, fatigue or dizziness during treatment with ELAHERE (see Section 4.4 Special warnings and precautions for use – Ocular Disorders and Section 4.8 Adverse effects (undesirable effects)) and should be instructed not to drive or use machines until deemed clinically safe to do so.

### **4.8 Adverse effects (Undesirable effects)**

#### **Clinical Trials Experience**

The adverse reactions are based on pooled data from 4 clinical studies (Study 0416, Study 0417, Study 0403 (NCT02631876), and Study 0401 (NCT01609556)) which included 682 patients with epithelial ovarian, fallopian tube, or primary peritoneal cancer (collectively referenced as Epithelial Ovarian Cancer (EOC) treated with mirvetuximab soravtansine 6 mg/kg AIBW administered once every 3 weeks. The median duration of treatment with mirvetuximab soravtansine was 4.4 months (range: 1.0 to 30.0).

The most common adverse reactions with mirvetuximab soravtansine were blurred vision (43%), nausea (41%), diarrhoea (39%), fatigue (35%), abdominal pain (30%), keratopathy (29%), dry eye (27%), constipation (26%), vomiting (23%), decreased appetite (22%), peripheral neuropathy (20%), headache (19%), asthenia (18%), AST increased (16%), and arthralgia (16%).

The most commonly reported serious adverse reactions were pneumonitis (4%), small intestinal obstruction (3%), intestinal obstruction (3%), pleural effusion (2%), abdominal pain (2%), dehydration (1%), constipation (1%), nausea (1%), ascites (1%) and thrombocytopenia (<1%).

Adverse reactions that most commonly led to dose reduction or dose delay were blurred vision (17%), keratopathy (10%), dry eye (5%), neutropenia (5%), keratitis (4%), cataract (3%), visual acuity reduced (3%), thrombocytopenia (3%), peripheral neuropathy (3%), and pneumonitis (3%).

Permanent discontinuation due to an adverse reaction occurred in 12% of patients who received mirvetuximab soravtansine, including most commonly, gastrointestinal disorders (4%), respiratory, thoracic, and mediastinal disorders (3%), blood and lymphatic system disorders (1%), nervous system disorders (1%), and eye disorders (1%).

#### Study 0416 (MIRASOL)

The safety of ELAHERE was evaluated in Study 0416, a multicentre, open-label, active-controlled, randomised, two-arm study (ELAHERE versus chemotherapy), in 453 patients with platinum-resistant epithelial ovarian, fallopian tube, or primary peritoneal cancer (see Section 5.1 Pharmacokinetic Properties – Clinical Studies). Patients received ELAHERE 6 mg/kg AIBW once every 3 weeks until disease progression or unacceptable toxicity. The median duration of treatment was 5 months (range: 0.69 to 27.4).

Serious adverse reactions occurred in 11% of patients treated with ELAHERE. The most common ( $\geq 2\%$ ) serious adverse reactions was abdominal pain (3%).

Permanent discontinuation of ELAHERE due to adverse reactions occurred in 6% of patients. The most common ( $\geq 1\%$ ) adverse reactions leading to permanent discontinuation were pneumonitis (2%), blurred vision (1%), and peripheral neuropathy (1%).

Dosage delays of ELAHERE due to an adverse reaction occurred in 41% of patients treated with ELAHERE. Adverse reactions which required dosage delays in  $\geq 3\%$  of patients included blurred vision (19%), keratopathy (17%), dry eye (6%), neutropenia (5%), pneumonitis (5%), photophobia (4%), and cataract (4%).

Dose reductions of ELAHERE due to an adverse reaction occurred in 33% of patients. Adverse reactions which required dose reductions in  $\geq 3\%$  of patients included blurred vision (14%), keratopathy (10%), peripheral neuropathy (6%), dry eye (5%), and fatigue (3%).

Tables 4 summarises adverse reactions occurring in patients who received ELAHERE in Study 0416. Adverse reactions are listed by MedDRA body system organ class, rate, and frequency. Frequencies are defined as very common ( $\geq 1/10$ ), common ( $\geq 1/100$  to  $< 1/10$ ), uncommon ( $\geq 1/1,000$  to  $< 1/100$ ), rare ( $\geq 1/10,000$  to  $< 1/1,000$ ), very rare ( $< 1/10,000$ ).

**Table 4. Adverse Reactions Occurring in Patients with Epithelial Ovarian, Fallopian Tube, or Primary Peritoneal Cancer Who Received ELAHERE in Study 0416**

Adverse Reaction by System Organ Class	ELAHERE (N=218)		Chemotherapy (N=207)	
	All grades % (frequency)	Grade 3 or 4 %	All grades %	Grade 3 or 4 %
<b>Gastrointestinal disorders</b>				
Abdominal pain <sup>a</sup>	34 (very common)	3	23	2
Diarrhoea	29 (very common)	1	17	<1
Constipation	27 (very common)	0	19	<1
Nausea	27 (very common)	2	29	2
Vomiting	18 (very common)	3	18	1
<b>Eye disorders</b>				
Blurred vision event <sup>b</sup>	45 (very common)	9	3	0
Keratopathy <sup>c</sup>	37 (very common)	11	0	0
Dry eye <sup>d</sup>	29 (very common)	3	5	0
Photophobia	18 (very common)	<1	<1	0
Cataract <sup>e</sup>	16 (very common)	3	<1	0
Ocular discomfort <sup>f</sup>	12 (very common)	0	<1	0
<b>General disorders and administration site conditions</b>				
Fatigue <sup>g</sup>	47 (very common)	3	41	7
<b>Nervous system disorders</b>				
Peripheral neuropathy <sup>h</sup>	37 (very common)	4	23	4
Headache	14 (very common)	0	10	0
<b>Musculoskeletal and connective tissue disorders</b>				
Musculoskeletal pain <sup>i</sup>	32 (very common)	<1	22	2
<b>Blood and lymphatic system disorders</b>				
Neutropenia	11 (very common)	<1	29	17
Anaemia	10 (common)	<1	34	10
Thrombocytopenia	7 (common)	<1	16	6

Adverse Reaction by System Organ Class	ELAHERE (N=218)		Chemotherapy (N=207)	
	All grades % (frequency)	Grade 3 or 4 %	All grades %	Grade 3 or 4 %
<b>Investigations</b>				
Aspartate aminotransferase increased	11 (very common)	<1	4	0
Alanine aminotransferase increased	9 (common)	<1	4	0
Weight decreased	9 (common)	0	3	0
Blood alkaline phosphatase increased	4 (common)	0	2	0
Gamma-glutamyltransferase increased	3 (common)	0	<1	0
<b>Metabolism and nutrition disorders</b>				
Decreased appetite	18 (very common)	1	14	<1
Dehydration	4 (common)	<1	<1	0
<b>Respiratory, thoracic and mediastinal disorders</b>				
Pneumonitis <sup>j</sup>	10 (common)	<1	<1	0
<b>Injury, poisoning and procedural complications</b>				
Infusion related reaction/Hypersensitivity <sup>k</sup>	8 (common)	0	13	<1
<b>Hepatobiliary disorders</b>				
Hyperbilirubinemia	<1 (uncommon)	0	0	0

<sup>a</sup> Abdominal pain includes preferred term (PTs) abdominal pain, abdominal pain upper, abdominal discomfort, and abdominal pain lower

<sup>b</sup> Blurred vision event includes PTs vision blurred, visual acuity reduced, visual impairment, vitreous floaters, accommodation disorder, and diplopia

<sup>c</sup> Keratopathy includes PTs keratopathy, keratitis, corneal epithelial microcysts, punctate keratitis, corneal deposits, corneal disorder, and corneal opacity

<sup>d</sup> Dry eye includes PTs dry eye, and lacrimation increased

<sup>e</sup> Cataract includes PTs cataract, and cataract nuclear

<sup>f</sup> Ocular discomfort includes PTs ocular discomfort, eye pain, eye irritation, and eye pruritus

<sup>g</sup> Fatigue includes PTs fatigue, and asthenia

<sup>h</sup> Peripheral neuropathy includes PTs neuropathy peripheral, peripheral sensory neuropathy, paraesthesia, neurotoxicity, hypoesthesia, peripheral sensorimotor neuropathy, polyneuropathy, and peripheral motor neuropathy

<sup>i</sup> Musculoskeletal pain includes PTs arthralgia, back pain, myalgia, pain in extremity, muscle spasms, non-cardiac chest pain, musculoskeletal stiffness, neck pain, bone pain, musculoskeletal pain, musculoskeletal chest pain, and musculoskeletal discomfort

<sup>j</sup> Pneumonitis includes PTs pneumonitis, interstitial lung disease, respiratory failure, and organizing pneumonia

<sup>k</sup> Infusion related reaction/hypersensitivity includes Standardised MedDRA Query (SMQ) Hypersensitivity narrow and PTs erythema, and flushing occurring within 3 days of dosing

### Study 0417 (SORAYA)

The safety of ELAHERE was evaluated in Study 0417, a single-arm, open-label study in 106 patients with platinum-resistant epithelial ovarian, fallopian tube, or primary peritoneal cancer (see Section 5.1 Pharmacokinetic Properties – Clinical Studies). Patients received

ELAHERE 6 mg/kg AIBW once every 3 weeks until disease progression or unacceptable toxicity. The median duration of treatment was 4.2 months (range: 0.7 to 13.3).

Serious adverse reactions occurred in 9% of patients treated with ELAHERE. The most common ( $\geq 2\%$ ) serious adverse reactions was pneumonitis (3%).

Permanent discontinuation of ELAHERE due to adverse reactions occurred in 10% of patients. The most common ( $\geq 2\%$ ) adverse reactions leading to permanent discontinuation were thrombocytopenia (4%), and pneumonitis (2%). One patient (0.9%) permanently discontinued ELAHERE due to visual impairment (unilateral decrease to BCVA  $\leq 6/60$  that resolved to baseline after discontinuation).

Dosage delays of ELAHERE due to an adverse reaction occurred in 33% of patients treated with ELAHERE. Adverse reactions which required dosage delays in  $\geq 3\%$  of patients included blurred vision (15%), keratopathy (14%), neutropenia (7%), dry eye (4%), cataract (4%), Pneumonitis (4%), thrombocytopenia (3%) and gamma-glutamyl transferase increased (3%).

Dose reductions of ELAHERE due to an adverse reaction occurred in 20% of patients. Adverse reactions which required dose reductions in  $\geq 3\%$  of patients included blurred vision (12%) and keratopathy (8%).

Table 5 summarizes the adverse reactions in patients treated with ELAHERE in Study 0417. Adverse reactions are listed by MedDRA body system organ class, rate, and frequency. Frequencies are defined as very common ( $\geq 1/10$ ), common ( $\geq 1/100$  to  $< 1/10$ ), uncommon ( $\geq 1/1,000$  to  $< 1/100$ ), rare ( $\geq 1/10,000$  to  $< 1/1,000$ ), very rare ( $< 1/10,000$ ).

**Table 5. Adverse Reactions Occurring in Patients with Epithelial Ovarian, Fallopian Tube, or Primary Peritoneal Cancer Who Received ELAHERE in Study 0417**

Adverse Reaction by System Organ Class	ELAHERE (N=106)	
	All grades % (frequency)	Grade 3 or 4 %
<b>Gastrointestinal disorders</b>		
Nausea	39 (very common)	0
Abdominal pain <sup>a</sup>	36 (very common)	7
Diarrhoea	31 (very common)	3
Constipation	30 (very common)	<1
Vomiting	19 (very common)	0

Adverse Reaction by System Organ Class	ELAHERE (N=106)	
	All grades % (frequency)	Grade 3 or 4 %
<b>Eye disorders</b>		
Blurred vision event <sup>b</sup>	49 (very common)	8
Keratopathy <sup>c</sup>	39 (very common)	9
Dry eye <sup>d</sup>	28 (very common)	2
Cataract	20 (very common)	5
Photophobia	16 (very common)	0
Ocular discomfort <sup>e</sup>	13 (very common)	0
<b>General disorders and administration site conditions</b>		
Fatigue <sup>f</sup>	49 (very common)	3
<b>Nervous system disorders</b>		
Peripheral neuropathy <sup>g</sup>	35 (very common)	3
Headache	9 (common)	0
<b>Musculoskeletal and connective tissue disorders</b>		
Musculoskeletal pain <sup>h</sup>	38 (very common)	<1
<b>Blood and lymphatic system disorders</b>		
Neutropenia	15 (very common)	2
Anaemia	13 (very common)	2
Thrombocytopenia	9 (common)	2
<b>Investigations</b>		
Aspartate aminotransferase increased	15 (very common)	2
Gamma-glutamyltransferase increased	12 (very common)	5
Alanine aminotransferase increased	11 (very common)	<1
Blood alkaline phosphatase increased	11 (very common)	2
Weight decreased	7 (common)	0
<b>Metabolism and nutrition disorders</b>		
Decreased appetite	19 (very common)	<1
Dehydration	<1 (uncommon)	0
<b>Respiratory, thoracic and mediastinal disorders</b>		
Pneumonitis <sup>i</sup>	10 (very common)	2
<b>Injury, poisoning and procedural complications</b>		
Infusion related reaction/hypersensitivity <sup>j</sup>	9 (common)	<1

Adverse Reaction by System Organ Class	ELAHERE (N=106)	
	All grades % (frequency)	Grade 3 or 4 %
<b>Hepatobiliary disorders</b>		
Hyperbilirubinaemia	3 (common)	0

<sup>a</sup> Abdominal pain includes PTs abdominal pain, abdominal pain upper, abdominal discomfort, and abdominal pain lower.

<sup>b</sup> Blurred vision event includes PTs vision blurred, visual acuity reduced, visual impairment, vitreous floaters, accommodation disorder, diplopia, presbyopia, and refraction disorder.

<sup>c</sup> Keratopathy includes PTs keratopathy, keratitis, corneal epithelial microcysts, punctate keratitis, corneal deposits, and corneal epithelium defect.

<sup>d</sup> Dry eye includes PTs dry eye, and lacrimation increased.

<sup>e</sup> Ocular discomfort includes PTs ocular discomfort, eye pain, eye irritation, eye pruritus, and foreign body sensation in eyes

<sup>f</sup> Fatigue includes PTs fatigue and asthenia.

<sup>g</sup> Peripheral neuropathy includes PTs neuropathy peripheral, peripheral sensory neuropathy, paraesthesia, neurotoxicity, hypoesthesia, polyneuropathy, and peripheral motor neuropathy.

<sup>h</sup> Musculoskeletal pain includes PTs arthralgia, back pain, myalgia, pain in extremity, muscle spasms, non-cardiac chest pain, musculoskeletal discomfort, musculoskeletal stiffness, musculoskeletal pain, and musculoskeletal chest pain.

<sup>i</sup> Pneumonitis includes PTs pneumonitis, interstitial lung disease, and respiratory failure.

<sup>j</sup> Infusion related reaction/hypersensitivity includes SMQ Hypersensitivity narrow and PTs erythema, erythema of eyelid, and flushing occurring within 3 days of dosing.

## Important Adverse Reactions

The pooled safety population reflects exposure to ELAHERE in 682 patients with epithelial ovarian, fallopian tube, or primary peritoneal cancer at 6 mg/kg AIBW administered intravenously once every 3 weeks until disease progression or unacceptable toxicity in four clinical studies.

### Ocular Disorders

Ocular adverse reactions occurred in 59% of patients in the pooled safety population. Eleven percent (11%) of patients experienced Grade 3 ocular adverse reactions and <1% experienced Grade 4 events. The most common  $\geq$  Grade 3 ocular adverse reactions were blurred vision (5%) and keratopathy and cataract (both 4%).

The median time to onset for first ocular adverse reaction was 5.1 weeks (range: 0.1 to 68.6). Of the patients who experienced ocular events, 53% had complete resolution (Grade 0) and 38% had partial improvement (defined as a decrease in severity by one or more grades from the worst grade). At the last follow-up, 0.3% (2/682) patients had  $\geq$  Grade 3 ocular adverse events (1 patient with Grade 3 decreased visual acuity and 1 patient with Grade 4 cataract).

Ocular adverse reactions led to dose delays in 24% of patients, and dose reductions in 15% of patients. Ocular adverse reactions led to permanent discontinuation of ELAHERE in 1% of patients.

### Pneumonitis

Pneumonitis occurred in 10% of patients in the pooled safety population, including 0.9% (6/682) patients with Grade 3 events, and 0.2% (1/682) patient with a Grade 4 event. Two patients (0.3%) died due to respiratory failure. One patient (0.2%) died due to respiratory failure in the setting of pneumonitis and lung metastases confirmed at autopsy. One patient (0.2%) died due to respiratory failure of unknown aetiology without concurrent pneumonitis.

The median time to onset of pneumonitis was 18.1 weeks (range 1.6 to 97.0). Pneumonitis resulted in ELAHERE dose delays in 3%, dose reductions in 1%, and permanent discontinuation in 3% of patients.

### Peripheral Neuropathy

Peripheral neuropathy occurred in 36% of patients in the pooled safety population; 3% of patients experienced Grade 3 peripheral neuropathy. Peripheral neuropathy adverse reactions included peripheral neuropathy (20%), peripheral sensory neuropathy (9%), paraesthesia (6%), neurotoxicity (3%), hypoesthesia (1%), peripheral motor neuropathy (0.9%), polyneuropathy (0.3%), and peripheral sensorimotor neuropathy (0.1%).

The median time to onset of peripheral neuropathy was 5.9 weeks (range 0.1 to 126.7). Of the patients who experienced peripheral neuropathy, 23% had complete resolution and 12% had partial improvement (defined as a decrease in severity by one or more grades from the worst grade) at last follow up. Peripheral neuropathy resulted in ELAHERE dose delays in 2%, dose reductions in 4%, and led to permanent discontinuation in 0.7% of patients.

### **Immunogenicity**

In four clinical studies including 626 patients with epithelial ovarian, fallopian tube, or primary peritoneal cancer treated with mirvetuximab soravtansine 6 mg/kg AIBW administered once every 3 weeks, anti-drug antibodies (ADA) were detected in 9% of patients. Due to the small numbers of patients in the groups analysed, the impact of ADA on efficacy could not be determined.

### **Reporting suspected adverse effects**

Reporting suspected adverse reactions after registration of the medicinal product is important. It allows continued monitoring of the benefit-risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions at [www.tga.gov.au/reporting-problems](http://www.tga.gov.au/reporting-problems).

## 4.9 Overdose

There is no known treatment/antidote available for overdose of mirvetuximab soravtansine. In the event of overdose, monitor the patient for any signs or symptoms of adverse reactions and administer appropriate supportive treatment.

For information on the management of overdose, contact the Poisons Information Centre on 13 11 26 (Australia).

## 5 PHARMACOLOGICAL PROPERTIES

### 5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Antineoplastic and immunomodulating agents, monoclonal antibodies and antibody drug conjugates, other monoclonal antibodies and antibody drug conjugates. ATC code: L01FX26.

#### Mechanism of action

Mirvetuximab soravtansine is an ADC. The antibody is a chimeric IgG1 directed against FR $\alpha$ . The small molecule, DM4, is a microtubule inhibitor attached to the antibody via a cleavable linker. Upon binding to FR $\alpha$ , mirvetuximab soravtansine is internalized followed by intracellular release of DM4 via proteolytic cleavage. DM4 disrupts the microtubule network within the cell, resulting in cell cycle arrest and apoptotic cell death.

#### Pharmacodynamic effects

##### Cardiac electrophysiology

At the approved recommended dose, mirvetuximab soravtansine did not cause mean increases > 10 msec in the QTc interval based on the results of concentration QTc analysis.

#### Clinical trials

##### Study 0416 (MIRASOL)

The efficacy and safety of ELAHERE were studied in Study 0416 (MIRASOL), a multicentre, open-label, active-controlled, randomised, two-arm phase 3 study that enrolled platinum-resistant advanced high-grade serous epithelial ovarian, primary peritoneal or fallopian tube cancer patients whose tumours were FR $\alpha$  positive as determined by the VENTANA FOLR1 (FOLR1-2.1) RxDx Assay ( $\geq$  75% of viable tumour cells with moderate (2) and/or strong (3) membrane staining intensity by immunohistochemistry (IHC)) evaluated at a central laboratory.

Platinum-resistant disease was defined as EOC that recurred within 6 months of the last dose of platinum.

The study excluded patients with primary platinum-refractory disease and patients with ECOG  $\geq$  2. Patients were also excluded if they had active or chronic corneal disorders, ocular conditions requiring ongoing treatment, Grade > 1 peripheral neuropathy, or non-infectious ILD.

Patients were randomised (1:1) to receive ELAHERE 6 mg/kg (based on adjusted ideal body weight) as an intravenous infusion every 3 weeks or investigator's choice of chemotherapy (paclitaxel [80 mg/m<sup>2</sup> administered once weekly within a 4-week cycle], pegylated liposomal doxorubicin [PLD] [40 mg/m<sup>2</sup> administered once every 4 weeks], or topotecan [4 mg/m<sup>2</sup> administered on Days 1, 8, and 15 every 4 weeks or for 5 consecutive days at 1.25 mg/m<sup>2</sup> from Days 1-5 of each 21-day cycle]) until disease progression or unacceptable toxicity. Tumour response assessments occurred every 6 weeks for the first 36 weeks and every 12 weeks thereafter. Randomization was stratified by the following factors: number of prior lines of therapy (1 vs. 2 vs. 3) and chemotherapy (paclitaxel vs. PLD vs. topotecan) chosen prior to randomization.

The primary efficacy outcome measure was investigator-assessed PFS, and key secondary efficacy outcome measures were objective response rate (ORR), and OS. PFS and ORR were evaluated according to Response Evaluation Criteria in Solid Tumours (RECIST), version 1.1. Additional efficacy measures included: patient-reported outcome (PRO) assessment of European Organisation for Research and Treatment of Cancer (EORTC) QLQ-OV28 (key secondary endpoint); duration of response (DOR); and time to second disease progression (PFS2).

**Table 6. Demographics and Baseline Characteristics in Study 0416**

	<b>ELAHERE N=227</b>	<b>IC chemotherapies N=226</b>
<b>Age, median years (range)</b>	64 (32, 88)	62 (29, 87)
<b>Race, n (%)</b>		
White	156 (69)	145 (64)
Black or African American	8 (4)	5 (2)
Asian	28 (12)	25 (11)
Not reported	32 (14)	49 (22)
<b>Primary diagnosis, n (%)</b>		
Epithelial ovarian	182 (80)	182 (81)

	<b>ELAHERE N=227</b>	<b>IC chemotherapies N=226</b>
Fallopian tube	27 (12)	23 (10)
Primary peritoneal	16 (7)	20 (9)
<b>BRCA status, n (%)</b>		
Positive	29 (13)	36 (16)
Negative/Unknown	198 (87)	190 (84)
<b>ECOG performance, n (%)</b>		
0	130 (57)	120 (53)
1	97 (43)	101 (45)
<b>Number of prior systemic therapies, n (%)</b>		
1	29 (13)	34 (15)
2	90 (40)	88 (39)
3	108 (48)	104 (46)
<b>Prior therapy with, n (%)</b>		
Bevacizumab	138 (61)	143 (63)
PARP inhibitor	124 (55)	127 (56)
<b>Platinum-Free Interval<sup>a</sup>, n (%)</b>		
≤ 3 months	88 (39)	99 (44)
> 3 to ≤ 6 months	138 (61)	124 (55)

<sup>a</sup> Time from last dose of latest line platinum therapy to the date of disease progression and/or relapse following that line of therapy.

The primary analysis demonstrated a statistically significant improvement in PFS, ORR, and OS for patients randomized to ELAHERE as compared with chemotherapy. Efficacy results for Study 0416 are shown in Table 7. The Kaplan Meier curves for investigator-assessed PFS (median follow-up of 11.2 months) and for OS (median follow-up of 13.1 months) are presented in Figure 1 and Figure 2, respectively.

**Table 7. Efficacy Results in Study 0416**

	<b>ELAHERE N=227</b>	<b>IC chemotherapies<sup>a</sup> N=226</b>
<b>Progression-free survival (PFS)<sup>b</sup></b>		
Number of events (%)	176 (78)	166 (73)
Median, months (95% CI)	5.6 (4.3, 6.0)	4.0 (2.9, 4.5)
Hazard ratio (95% CI)	0.65 (0.52, 0.81)	
p-value <sup>c</sup>	< 0.0001	
<b>Objective response rate (ORR)<sup>d</sup></b>		
n (%) (95% CI)	96 (42) (35.8, 49.0)	36 (16) (11.4, 21.4)
Odds Ratio (95% CI)	3.81 (2.440, 5.940)	
p-value <sup>e</sup>	< 0.0001	
Complete response, n (%)	12 (5)	0
Partial response, n (%)	84 (37)	36 (16)
<b>Overall survival (OS)<sup>f</sup></b>		
Number of events (%)	90 (40)	114 (50)
Median, months (95% CI)	16.5 (14.5, 24.6)	12.7 (10.9, 14.4)
Hazard ratio (95% CI)	0.67 (0.50, 0.89)	
p-value <sup>c</sup>	0.0046	
<b>Duration of response (DOR)<sup>g</sup></b>		
N'	96	36
Number of events (%)	64 (67)	29 (81)
Median, months (95% CI)	6.8 (5.6, 8.3)	4.5 (4.2, 5.8)
<b>Progression-Free Survival-2 (PFS2)<sup>h</sup></b>		
Number of events (%)	129 (57)	150 (66)
Median, months (95% CI)	11.0 (9.4, 12.5)	8.1 (6.7, 9.4)
Hazard ratio (95% CI)	0.63 (0.50, 0.80)	
p-value <sup>c,i</sup>	0.0001	

<sup>a</sup> Chemotherapy: paclitaxel, PLD, or topotecan.

<sup>b</sup> PFS is defined as the time from the date of randomisation until the date of progressive disease per investigator assessment or death from any cause, whichever occurred first.

<sup>c</sup> Two-sided p-value based on stratified log-rank test adjusted for number of prior lines of therapy (1 vs. 2 vs. 3) and chemotherapy (paclitaxel vs. PLD vs. topotecan) chosen prior to randomisation.

<sup>d</sup> Objective response rate is defined as proportion of patients with confirmed complete or partial response per investigator assessment.

<sup>e</sup> Two-sided p-value based upon Cochran-Mantel-Haenszel (CMH) test adjusted for number of prior lines of therapy (1 vs. 2 vs. 3) and chemotherapy (paclitaxel vs. PLD vs. topotecan) chosen prior to randomization.

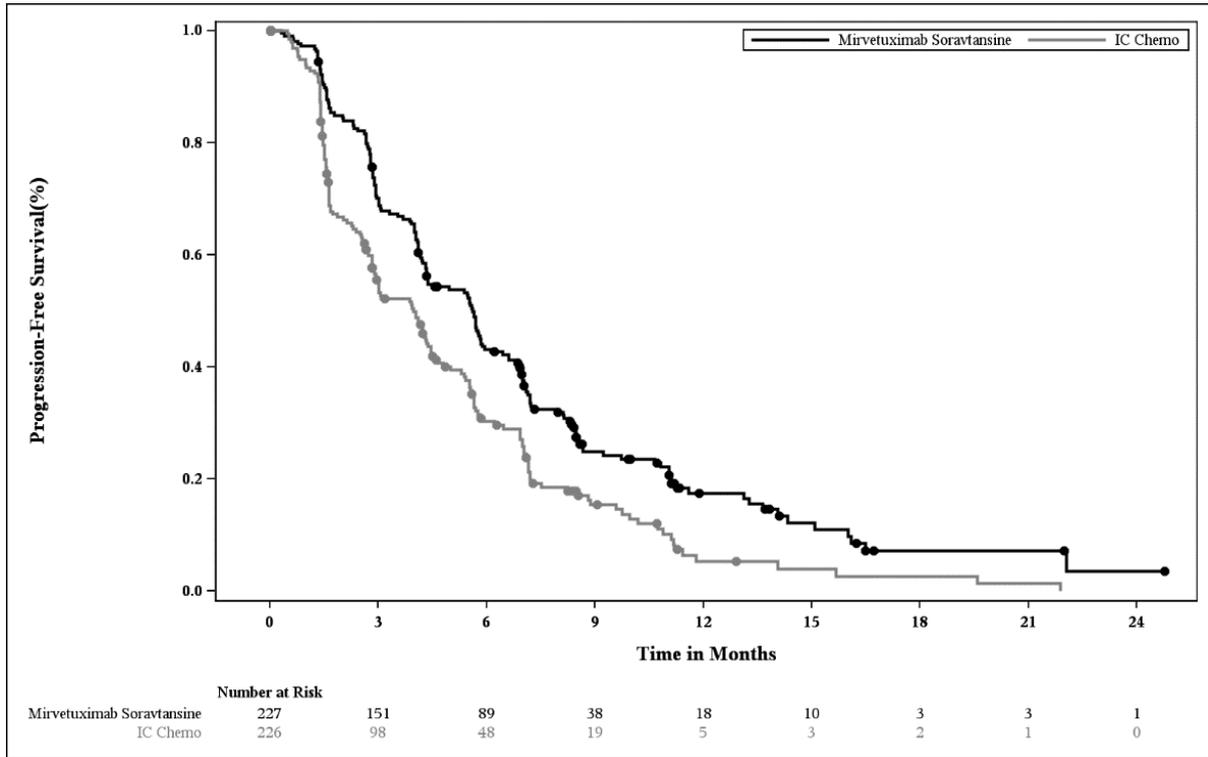
<sup>f</sup> OS is defined as the time from the date of randomisation until the date of death from any cause.

<sup>g</sup> DOR is defined as the time from the date of first response (CR or PR) to the date of progressive disease per investigator assessment or death from any cause, whichever occurred first. DOR is evaluated in the subjects who achieved confirmed CR or PR (N').

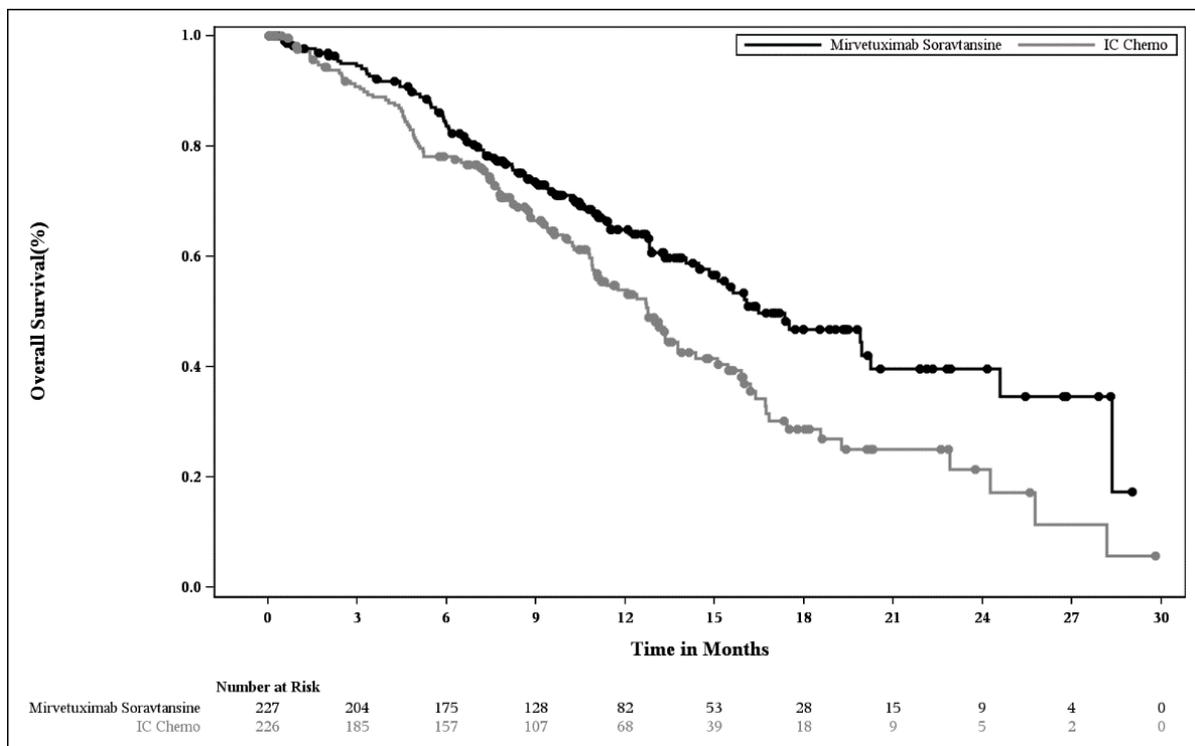
<sup>h</sup> PFS2 is defined as the time from date of randomization until second disease progression per investigator assessment or death from any cause, whichever occurred first.

<sup>i</sup> Nominal p-value.

**Figure 1. Kaplan-Meier Curve for Progression-free Survival in Study 0416**



**Figure 2. Kaplan-Meier Curve for Overall Survival in Study 0416**



## 5.2 Pharmacokinetic properties

### Pharmacokinetics

The intravenous pharmacokinetics were characterised after patients were administered mirvetuximab soravtansine 0.16 mg/kg to 8.7 mg/kg AIBW dosages (i.e., 0.027 times to 1.4 times the approved recommended dosage of 6 mg/kg AIBW), unless otherwise noted.

Table 9 summarises the exposure parameters of mirvetuximab soravtansine, unconjugated DM4, and its metabolite S-methyl-DM4 following intravenous administration after the first cycle (3-weeks). Peak mirvetuximab soravtansine concentrations were observed near the end of intravenous infusion, while peak unconjugated DM4 concentrations were observed on the second day after administration and the peak S-methyl-DM4 concentrations were observed approximately 3 days after administration. Steady state concentrations of mirvetuximab soravtansine, DM4, and S-methyl-DM4 were reached after one 3-week cycle. Accumulation of the mirvetuximab soravtansine, DM4, and S-methyl-DM4 was minimal following multiple cycles.

**Table 9. Exposure parameters of mirvetuximab soravtansine, unconjugated DM4, and S-methyl DM4 after first cycle at a dosage of 6 mg/kg**

	<b>Mirvetuximab soravtansine Mean (<math>\pm</math>SD)</b>	<b>Unconjugated DM4 Mean (<math>\pm</math>SD)</b>	<b>S-methyl-DM4 Mean (<math>\pm</math>SD)</b>
$C_{max}$	137.3 ( $\pm$ 62.3) $\mu$ g/mL	4.11 ( $\pm$ 2.29) ng/mL	6.98 ( $\pm$ 6.79) ng/mL
AUC <sub>tau</sub>	20.65 ( $\pm$ 6.84) h*mg/mL	530 ( $\pm$ 245) h*ng/mL	1848 ( $\pm$ 1585) h*ng/mL

$C_{max}$  = maximum concentration, AUC<sub>tau</sub> = area under the concentration vs. time curve over the dosing interval (21 days).

### Distribution

The mean ( $\pm$ SD) steady state volume of distribution of mirvetuximab soravtansine was 2.6 ( $\pm$ 2.98) L.

Human plasma protein binding of DM4 and S-methyl DM4 was > 99%, *in vitro*.

### Metabolism

The monoclonal antibody portion of mirvetuximab soravtansine is expected to be metabolised into small peptides by catabolic pathways. Unconjugated DM4 and S-methyl-DM4 undergo metabolism by CYP3A4. In human plasma, DM4 and S-methyl DM4 were identified as the main circulating metabolites, accounting for approximately 0.4% and 1.4% of mirvetuximab soravtansine AUC, respectively.

## Excretion

The mean ( $\pm$ SD) total plasma clearance of mirvetuximab soravtansine was 18.9 ( $\pm$ 9.8) mL/hour. The mean terminal phase half-life of mirvetuximab soravtansine after the first dose was 4.9 days. For the unconjugated DM4, the mean ( $\pm$ SD) total plasma clearance was 14.5 ( $\pm$ 4.5) L/hour and the mean terminal phase half-life was 2.8 days. For S-methyl-DM4, the mean ( $\pm$ SD) total plasma clearance was 5.3 ( $\pm$ 3.4) L/hour and the mean terminal phase half-life was 5.1 days.

*In vitro* and nonclinical *in vivo* studies indicate that DM4 and S-methyl-DM4 are primarily metabolised by CYP3A4 and eliminated via biliary excretion in the faeces.

## **Drug Interactions**

In *in vitro* studies, unconjugated DM4 is a time-dependent inhibitor of CYP3A4. Unconjugated DM4 and S-methyl DM4 are not direct inhibitors of CYP1A2, CYP2B6, CYP2C8, CYP2C9, CYP2C19, CYP2D6, or CYP3A. DM4 and S-methyl DM4 are not inducers of CYP1A2, CYP2B6, or CYP3A4. Unconjugated DM4 and S-methyl DM4 are substrates of P-glycoprotein (P-gp) but are not inhibitors of P-gp.

## **Pharmacokinetics in Special Populations**

### Use in hepatic impairment

No clinically significant differences in the pharmacokinetics of mirvetuximab soravtansine were observed based on mild hepatic impairment (total bilirubin  $\leq$  ULN and any AST  $>$  ULN or total bilirubin  $>$  1 to 1.5 times ULN and any AST). The pharmacokinetics of mirvetuximab soravtansine in patients with moderate to severe hepatic impairment (total bilirubin  $>$  1.5 ULN with any AST) is unknown.

### Use in renal impairment

No clinically significant differences in the pharmacokinetics of mirvetuximab soravtansine were observed based on mild to moderate renal impairment (CrCl  $\geq$  30 and  $<$  90 mL/min). The pharmacokinetics of mirvetuximab soravtansine in patients with severe renal impairment (CrCl 15 to 30 mL/min) or end-stage renal disease is unknown.

### Body Weight

No clinically significant differences in the pharmacokinetics of mirvetuximab soravtansine were observed based on body weight (36 to 136 kg).

### Gender or Race

Mirvetuximab soravtansine is indicated for female patients with ovarian cancer, and thus sex was not assessed. No clinically significant differences in the pharmacokinetics of mirvetuximab soravtansine were observed based on race (Caucasian, Black, or Asian).

### Use in the Elderly

Pharmacokinetics of ELAHERE was not different in patients  $\geq 65$  years of age (age range 65-89 years old) compared to younger patients.

### Paediatric Use

The pharmacokinetics of ELAHERE in paediatric patients has not been established.

## **5.3 Preclinical safety data**

### **Genotoxicity**

DM4 and S-methyl DM4 were not mutagenic in the bacterial reverse mutation (Ames) assay. DM4 and S-methyl DM4 resulted in micronuclei in polychromatic erythrocytes.

### **Carcinogenicity**

Carcinogenicity studies have not been conducted with mirvetuximab soravtansine or DM4.

## **6 PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Glacial acetic acid

Polysorbate 20

Sodium acetate

Sucrose

Water for injections

### **6.2 Incompatibilities**

ELAHERE is incompatible with sodium chloride 9 mg/mL (0.9%) solution for infusion. This medicinal product must not be mixed with other medicinal products except those mentioned in Section 4.2 Dose and method of administration - Preparation and Administration.

### 6.3 Shelf life

In Australia, information on the shelf life can be found on the public summary of the Australian Register of Therapeutic Goods (ARTG). The expiry date can be found on the packaging.

### 6.4 Special precautions for storage

Store ELAHERE vials upright in a refrigerator at 2°C to 8°C until the time of preparation in the original carton to protect from light. Do not freeze or shake.

Refer to Section 4.2 Dose and method of administration – Preparation and Storage for information on the storage for diluted and prepared ELAHERE.

### 6.5 Nature and contents of container

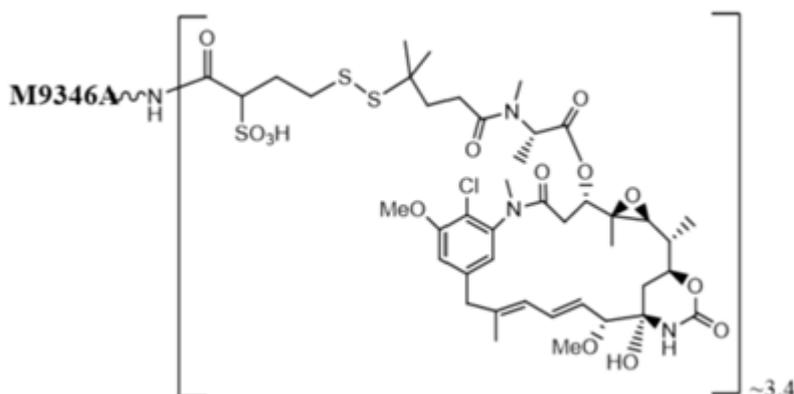
Type 1 glass vial with butyl rubber serum stopper and aluminium seal with a royal blue polypropylene flip-off plastic cap. The vial stopper is not made with natural rubber latex. Pack size of 1 vial.

### 6.6 Special precautions for disposal

ELAHERE is a cytotoxic medicinal product. Follow applicable special handling and disposal procedures.

### 6.7 Physicochemical properties

#### Chemical structure



#### CAS number

1453084-37-1

## **7 MEDICINE SCHEDULE (POISONS STANDARD)**

Schedule 4 – Prescription Only Medicine

## **8 SPONSOR**

AbbVie Pty Ltd

241 O’Riordan Street

Mascot NSW 2020

AUSTRALIA

PH: 1800 252 224

[www.abbvie.com.au](http://www.abbvie.com.au)

## **9 DATE OF FIRST APPROVAL**

19 February 2026

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