

# Cisplatin

1 mg/ml Sterile Concentrate

Reference Market: UK

AfME Markets using same as LPD:

Saudi Arabia

# SUMMARY OF PRODUCT CHARACTERISTICS

#### WARNINGS

Cisplatin should be administered under the supervision of a qualified physician experienced in the use of cancer chemotherapeutic agents. Appropriate management of therapy and complications is possible only when adequate diagnostic and treatment facilities are readily available.

Cumulative renal toxicity associated with cisplatin is severe. Other major dose-related toxicities are myelosuppression, nausea, and vomiting.

Ototoxicity, which may be more pronounced in children, and is manifested by tinnitus, and/or loss of high frequency hearing and occasionally deafness, is significant.

Anaphylactic-like reactions to cisplatin have been reported. Facial edema, bronchoconstriction, tachycardia, and hypotension may occur within minutes of cisplatin administration. Epinephrine, corticosteroids, and antihistamines have been effectively employed to alleviate symptoms (see WARNINGS and ADVERSE REACTIONS). Exercise caution to prevent inadvertent cisplatin overdose. Doses greater than 100 mg/m 2/cycle once every 3 to 4 weeks are rarely used. Care must be taken to avoid inadvertent cisplatin overdose due to confusion with carboplatin or prescribing practices that fail to differentiate daily doses from total dose per cycle.

# 1. NAME OF THE MEDICINAL PRODUCT

Cisplatin 1 mg/ml Sterile Concentrate

# 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 1 ml of concentrate for solution for infusion contains 1 mg of cisplatin.

Each single vial of 50 ml concentrate for solution for infusion contains 50 mg of cisplatin.

Excipients with known effect:

Cisplatin 50 mg/50 ml (1 mg/ ml) concentrate for solution for infusion contains 177 mg of sodium in each 50 ml vial.

For the full list of excipients, see section 6.1.

# **3. PHARMACEUTICAL FORM**

Concentrate for solution for infusion.

Clear, colourless to pale yellow solution.

# 4. CLINICAL PARTICULARS

#### 4.1 Therapeutic indications

Cisplatin is intended for the treatment of:

advanced or metastasised testicular cancer

- advanced or metastasised ovarian cancer
- advanced or metastasised bladder carcinoma
- advanced or metastasised squamous cell carcinoma of the head and neck
- advanced or metastasised non-small cell lung carcinoma
- advanced or metastasised small cell lung carcinoma

Cisplatin is indicated in the treatment of cervical carcinoma in combination with other chemotherapeutics or with radiotherapy.

Cisplatin can be used as monotherapy and in combination therapy.

#### 4.2 **Posology and method of administration**

Posology

#### **Adults and Paediatric population**

The cisplatin dosage depends on the primary disease, the expected reaction, and on whether cisplatin is used for monotherapy or as a component of combination chemotherapy. The dosage directions are applicable for both adults and children.

For <u>monotherapy</u>, the following two dosage regimens are recommended: Single dose of 50 to  $120 \text{ mg/m}^2$  body surface every 3 to 4 weeks;  $15 \text{ to } 20 \text{ mg/m}^2$ /day for five days, every 3 to 4 weeks

If cisplatin is used in <u>combination therapy</u>, the dose of cisplatin must be reduced. A typical dose is  $20 \text{mg/m}^2$  or more once every 3 to 4 weeks.

For treatment of cervical cancer cisplatin is used in combination with radiotherapy. A typical dose is  $40 \text{ mg/m}^2$  weekly for 6 weeks.

For warning and precautions to be considered prior to the start of the next treatment cycle (see section 4.4).

In patients with renal dysfunction or bone marrow depression, the dose should be reduced adequately (see section 4.3).

The cisplatin solution for infusion prepared according to instructions (see section 6.6) should be administered by intravenous infusion over a period of 6 to 8 hours.

Adequate hydration must be maintained from 2 to 12 hours prior to administration until minimum 6 hours after the administration of cisplatin. Hydration is necessary to cause sufficient diuresis during and after treatment with cisplatin. It is realised by intravenous infusion of one of the following solutions: Sodium chloride solution: 0.9%

#### Method of administration

Cisplatin 1 mg/ml sterile concentrate is to be diluted before administration. For instructions for dilution of the product before administration see section 6.6.

The diluted solution should be administered only intravenously by infusion (see below). For administration, any device containing aluminium that may come in contact with cisplatin (sets for intravenous infusion, needles, catheters, syringes) must be avoided.

Hydration prior to treatment with cisplatin:

Intravenous infusion of 100 to 200ml/Hour for a period of 6 to 12 hours, with a total amount of at least 1 litre.

Hydration after termination of the administration of cisplatin:

Intravenous infusion of another 2 litres at a rate of 100 to 200 ml per hour for a period of 6 to 12 hours.

Forced diuresis may be required should the urine secretion be less than 100 to 200 ml/hour after hydration. Forced diuresis may be realised by intravenously administering 37.5g mannitol as a 10% solution (375 ml mannitol solution 10%), or by administration of a diuretic if the kidney functions are normal.

The administration of mannitol or a diuretic is also required when the administrated cisplatin dose is higher than  $60 \text{ mg/m}^2$  of body surface.

It is necessary that the patient drinks large quantities of liquids for 24 hours after the cisplatin infusion to ensure adequate urine secretion.

#### 4.3 Contraindications

Hypersensitivity to cisplatin or to any of the excipients listed in section 6.1.

Cisplatin may give allergic reactions in some patients. Use is contraindicated in those patients with a history of allergic reaction to cisplatin or other platinum containing compounds, or any component of the formulation. Cisplatin induces nephrotoxicity which is cumulative. It is therefore contraindicated in patients with pre-existing renal impairment.

Cisplatin has also been shown to be cumulatively neurotoxic (in particular ototoxic) and should not be given to patients with pre-existing hearing impairment. Cisplatin is also contraindicated in myelosuppressed patients and those who are dehydrated.

Patients receiving cisplatin should not breast feed (see section 4.6).

Concurrent administration of yellow fever vaccine is contraindicated.

# 4.4 Special warnings and precautions for use

This agent should only be administered under the direction of oncologists in specialist units under conditions permitting adequate monitoring and surveillance. Supportive equipment should be available to control anaphylactic reactions.

Cisplatin reacts with metallic aluminium to form a black precipitate of platinum. All aluminium containing IV sets, needles, catheters and syringes should be avoided.

The solution for infusion should not be mixed with other drugs or additives.

Appropriate monitoring and management of the treatment and its complications are only possible if adequate diagnosis and exact treatment conditions are available.

1. <u>Nephrotoxicity</u>

Cisplatin produces severe cumulative nephrotoxicity which may be potentiated by aminoglycoside antibiotics. The serum creatinine, plasma urea or creatinine clearance and magnesium, sodium potassium, and calcium levels should be measured prior to initiating therapy, and prior to each subsequent course. Cisplatin should not be given more frequently than once every 3-4 weeks.

A urine output of 100 ml/hour or greater will tend to minimise cisplatin nephrotoxicity. This can be accomplished by prehydration with 2 litres of an appropriate intravenous solution, and similar post cisplatin hydration (recommended 2,500 ml/m<sup>2</sup>/24 hours). If vigorous hydration is insufficient to maintain adequate urinary output, an osmotic diuretic may be administered (e.g., mannitol).

#### 2. <u>Neuropathies</u>

Severe cases of neuropathies have been reported.

These neuropathies may be irreversible and may manifest by paresthesia, areflexia and a proprioceptive loss and a loss of vibration perception. A loss of motor function has also been reported. A neurological examination must be carried out at regular intervals.

Neurotoxicity appears to be cumulative. Prior to each course, the absence of symptoms of peripheral neuropathy should be established.

#### 3. <u>Ototoxicity</u>

Ototoxicity has been observed in up to 31% of patients treated with a single dose of cisplatin 50 mg/m<sup>2</sup>, and is manifested by tinnitus and/or hearing loss in the high frequency range (4000 to 8000 Hz). Decreased ability to hear conversational tones may occur occasionally. Ototoxic effect may be more pronounced in children receiving cisplatin. Hearing loss can be unilateral or bilateral and tends to become more frequent and severe with repeated doses; however, deafness after initial dose of cisplatin has been reported rarely. Ototoxicity may be enhanced with prior simultaneous cranial irradiation and may be related to peak plasma concentration of cisplatin. It is unclear whether cisplatin induced ototoxicity is reversible. Careful monitoring by audiometry should be performed prior to initiation of therapy and prior to subsequent doses of cisplatin. Vestibular toxicity has also been reported. (see section 4.8).

# 4. <u>Allergic phenomena</u>

Anaphylactic-like reactions to cisplatin have been reported. These reactions have occurred within minutes of administration to patients with prior exposure to cisplatin and have been alleviated by administration of adrenaline, steroids and antihistamines.

As with other platinum-based products, hypersensitivity reactions appearing in most cases during perfusion may occur, and necessitate discontinuation of the perfusion and an appropriate symptomatic treatment. Cross reactions, sometimes fatal, have been reported with all the platinum compounds (see sections 4.3 and 4.8).

#### 5. <u>Hepatic function and haematological formula</u>

The haematological formula and hepatic function must be monitored at regular intervals.

#### 6. <u>Carcinogenic potential</u>

In humans, in rare cases the appearance of acute leukaemia has coincided with the use of cisplatin, which was in general associated with other leukaemogenic agent.

Cisplatin has been shown to be teratogenic, embryo toxic and carcinogenic in mice and rats.

#### 7. <u>Injection site reactions</u>

Injection site reactions may occur during the administration of cisplatin. Given the possibility of extravasation, it is recommended to closely monitor the infusion site for possible infiltration during drug administration. A specific treatment for extravasation reactions is unknown at this time.

#### WARNINGS

This cytostatic agent had a more marked toxicity than is usually found in antineoplastic chemotherapy.

Renal toxicity, which is above all cumulative, is severe and requires particular precautions during administration (see sections 4.2 and 4.8).

Nausea and vomiting may be intense and require adequate antiemetic treatment.

Close supervision must also be carried out with regard to ototoxicity, myelodepression and anaphylactic reactions (see section 4.8).

#### Preparation of the intravenous solution

#### <u>Warning</u>

As with all other potentially toxic products, precautions are essential when handling the cisplatin solution. Skin lesions are possible in the event of accidental exposure to the product. It is advisable to wear gloves. In the event the cisplatin solution comes into contact with the skin or mucous membranes, wash the skin or mucous membranes vigorously with soap and water.

Conforming to the procedures appropriate for the manipulation and elimination of cytostatic agents is recommended.

Before administering the solution to the patient, verify the clarity of the solution and the absence of particles

#### **Excipient information**

Cisplatin 50 mg/50 ml (1 mg/ ml) concentrate for solution for infusion contains 177 mg of sodium in each 50 ml vial, equivalent to 8.9% of the WHO recommended maximum daily intake of 2 g sodium for an adult.

Cisplatin may be further prepared for administration with sodium-containing solutions (see section 6.6) and this should be considered in relation to the total sodium from all sources that will be administered to the patient.

#### 4.5 Interaction with other medicinal products and other forms of interaction

#### Nephrotoxic substances:

Concomitant administration of nephrotoxic (e.g. cephalosporins, aminoglycosides, amphotericin B or contrast media) or ototoxic (e.g. aminoglycosides) medicinal products will potentiate the toxic effect of cisplatin on the kidneys. During or after treatment with cisplatin caution is advised with predominantly renal eliminated substances, e.g. cytostatic agents such as bleomycin and methotrexate, because of potentially reduced renal elimination.

The renal toxicity of ifosfamide may be greater when used with cisplatin or in patients who have previously been given cisplatin.

Reduction of the blood's lithium values was noticed in a few cases after treatment with cisplatin combined with bleomycin and etoposide. It is therefore recommended to monitor the lithium values.

#### **Ototoxic substances:**

Concomitant administration of ototoxic (e.g. aminoglycosides, loop diuretics) medicinal products will potentiate the toxic effect of cisplatin on auditory function. Except for patients receiving doses of cisplatin exceeding 60 mg/m<sup>2</sup>, whose urine secretion is less than 1000 ml per 24 hours, no forced diuresis with loop diuretics should be applied in view of possible damage to the kidney tract and ototoxicity.

Ifosfamide may increase hearing loss due to cisplatin.

#### Weakened live vaccines:

Yellow fever vaccine is strictly contraindicated because of the risk of fatal systemic vaccinal disease (see section 4.3). In view of the risk of generalised illness, it is advisable to use an inactive vaccine if available.

#### **Oral anticoagulants:**

In the event of simultaneous use of oral anticoagulants, it is advisable to regularly check the INR.

#### Antihistamines, Phenothiazines and others:

Simultaneous use of antihistamines, buclizine, cyclizine, loxapine, meclozone, phenothiazines, thioxanthenes or trimethobenzamines may mask ototoxicity symptoms (such as dizziness and tinnitus).

#### Anticonvulsive substances:

Serum concentrations of anticonvulsive medicines may remain at subtherapeutic levels during treatment with cisplatin.

#### **Pyroxidine + altretamine combination:**

During a randomised study of the treatment of advanced ovarian cancer, the response time was unfavourably affected when pyridoxine was used in combination with altretamine (hexamethylmelamine) and cisplatin.

#### **Paclitaxel:**

Treatment with cisplatin prior to an infusion with paclitaxel may reduce the clearance of paclitaxel by 33% and therefore can intensify neurotoxicity.

#### **Anti-epileptics:**

In patients receiving cisplatin and phenytoin, the serum level of phenytoin might be reduced. This is probably due to reduced absorption and/or increased metabolism. In these patients, one should monitor the levels of phenytoin in plasma, and adjust the dose accordingly.

Simultaneous use of myelosuppressives or radiation will boost the effects of cisplatin's myelosuppressive activity. The occurrence of nephrotoxicity caused by cisplatin may be intensified by concomitant treatment with antihypertensives containing furosemide, hydralazine, diazoxide, and propranolol" and "Cisplatin given in combination with bleomycin and vinblastin can lead to a Raynaud-phenomenon.

#### 4.6 Fertility, pregnancy and lactation

#### Pregnancy

Cisplatin may be toxic to the foetus when administered to a pregnant woman.

Cisplatin has been shown to be teratogenic, embryotoxic and carcinogenic in mice and rats (see section 5.3).

Cisplatin should not be used during pregnancy unless the clinician considers the risk in an individual patient to be clinically justified.

# During treatment with cisplatin and for a minimum of the following 6 months, appropriate measures must be taken to avoid pregnancy; this applies to patients of both sexes.

#### Fertility

Genetic consultation is recommended if the patient wishes to have children after ending treatment.

Since a treatment with cisplatin may cause irreversible infertility, it is recommended that men, who wish to become fathers in the future, ask for advice regarding cryo-conservation of their sperm prior to treatment.

#### Breast-feeding

Cisplatin is excreted in breast milk. Patients treated with cisplatin must not breast feed.

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

No studies on the effects on ability to drive and use machines have been performed. Nevertheless, the profile of undesirable effects (like nephrotoxicity) may influence the ability to drive vehicles and use machinery.

#### 4.8 Undesirable effects

The most frequently reported adverse events (>10%) of cisplatin were haematological (leukopenia, thrombocytopenia and anaemia), gastrointestinal (anorexia, nausea, vomiting and diarrhoea), ear disorders (hearing impairment), renal disorders (renal failure, nephrotoxicity, hyperuricemia) and fever.

Serious toxic effects on the kidneys, bone marrow and ears have been reported in up to about one third of patients given a single dose of cisplatin; the effects are generally dose-related and cumulative. Ototoxicity may be more severe in children

Frequencies are defined using the following convention: 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  $\leq 1/1,000$ ); very rare ( $\leq 1/10,000$ ), not known (cannot be estimated from the available data).

# Table of Adverse Drug Events Reported During Clinical or PostmarketingExperience(MedDRA terms)

System Organ Class	Frequency	MedDRA term
Infections and infestations	Common	Sepsis
	Not known	Infection <sup>a</sup>
Blood and lymphatic system	Very common	Bone marrow failure, thrombocytopenia,
disorders		leukopenia, anaemia
	Not known	Coombs positive haemolytic anaemia,
		thrombotic microangiopathy (haemolytic
		uraemic syndrome)
Neoplasm benign, malignant,	Rare	Acute leukaemia
and unspecified		
Immune system disorders	Uncommon	Anaphylactoid <sup>b</sup> reaction
Endocrine disorders	Not known	Blood amylase increased, inappropriate
		antidiuretic hormone secretion
Metabolism and nutrition	Very common	Hyponatraemia
disorders	Uncommon	Hypomagnesaemia
	Not known	Dehydration, hypokalaemia,
		hypophosphataemia, hyperuricaemia,
		hypocalaemia, tetany
Nervous system disorders	Rare	Convulsion, neuropathy peripheral,
		leukoencephalopathy, reversible posterior
		leukoencephalopathy syndrome
	Not known	Cerebrovascular accident, haemorrhagic
		stroke, ageusia, cerebral arteritis,
		Lhermitte's sign, myelopathy, autonomic
		neuropathy
Eye disorders	Not known	Vision blurred, colour blindness acquired,
		blindness cortical, optic neuritis,
		papilledema, retinal pigmentation
Ear and labyrinth disorders	Uncommon	Ototoxicity
	Not known	Tinnitus, deafness
Cardiac disorders	Common	Arrhythmia, bradycardia, tachycardia
	Rare	Myocardial infarction
	Very rare	Cardiac arrest
	Not known	Cardiac disorder
Vascular disorders	Common	Venous thromboembolism

	Not known	Raynaud's phenomenon
Gastrointestinal disorders	Rare	Stomatitis
	Not known	Vomiting, nausea, anorexia, hiccups,
		diarrhoea
Hepatobiliary disorders	Not known	Hepatic enzymes increased, blood
		bilirubin increased
Respiratory, thoracic and	Not known	Pulmonary embolism
mediastinal disorders		
Skin and subcutaneous tissue	Not known	Rash, alopecia
disorders		
Musculoskeletal, connective	Not known	Muscle spasms
tissue and bone disorders		
Renal and urinary disorders	Not known	Renal failure acute, renal failure <sup>c</sup> , renal
		tubular disorder
Reproductive system and	Uncommon	Abnormal spermatogenesis
breast disorders		
General disorders and	Not known	Pyrexia (very common), asthenia,
administration site condition		malaise, injection site extravasation <sup>d</sup>

a: Infectious complications have led to death in some patients.

b: Symptoms include facial oedema, flushing, wheezing, bronchospasm, tachycardia, and hypotension.

c: Elevations in BUN and creatinine, serum uric acid, and/or decrease in creatinine clearance are subsumed under renal insufficiency/failure.

d: Local soft tissue toxicity including cellulitis, fibrosis, and necrosis (common) pain (common), oedema (common) and erythema (common) as the result of extravasation.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after marketing authorization 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 according to their local country requirements.

# To Report side effects

• Saudi Arabia

National Pharmacovigilance Centre (NPC)

- SFDA Call center : 19999
- E-mail: <u>npc.drug@sfda.gov.sa</u>
- Website: <u>https://ade.sfda.gov.sa/</u>

# Other GCC States

- Please contact the relevant competent authority.

#### 4.9 Overdose

# CAUTION IS ESSENTIAL IN ORDER TO PREVENT AN INADVERTANT OVERDOSE.

Symptoms of overdose involve above mentioned side effects in an excessive manner. Efficient hydration and osmotic diuresis can aid in reduction of toxicity, provided this is applied immediately after overdose. In case of overdose (> 200 mg/m2), direct effects on the respiratory centre are possible, which might result in life threatening respiratory disorders and acid base equilibrium disturbance due to passage of the blood brain barrier.

An acute overdose of cisplatin may result in renal failure, liver failure, deafness, ocular toxicity (including detachment of the retina), significant myelosuppression, untreatable nausea and vomiting and/or neuritis. An overdose may be fatal.

There is no specific antidote in the event of an over dosage of cisplatin. Even if haemodialysis is initiated 4 hours after the overdose it has little effect on the elimination of cisplatin from the body following a strong and rapid fixation of cisplatin to proteins.

Treatment in the event of an overdose consists of general support measures.

#### 5. PHARMACOLOGICAL PROPERTIES

#### 5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Other antineoplastic agents, Platinum compounds, ATC code: L01XA01

Cisplatin has biochemical properties similar to those of bifunctional alkylating agents. The drug inhibits DNA synthesis by producing intrastrand and interstrand cross links in DNA. Protein and RNA synthesis are also inhibited to a lesser extent.

Although the principal mechanism of action of cisplatin appears to be inhibition of DNA synthesis, other mechanisms, including enhancement of tumour immunogenicity, may be involved in its antineoplastic activity. Cisplatin also has immunosuppressive, radio-sensitising, and antimicrobial properties.

Cisplatin does not appear to be cell cycle specific.

#### 5.2 Pharmacokinetic properties

#### Absorption

There is good uptake of cisplatin by the kidneys, liver and intestine. More than 90% of platinum containing species remaining in the blood are bound (possibly irreversibly) to plasma proteins.

Penetration into the CSF is poor although significant amounts of cisplatin can be detected in intracerebral tumours.

#### Distribution

The clearance of total platinum from plasma is rapid during the first four hours after intravenous administration, but then proceeds more slowly because of covalent

binding to serum proteins. Levels of unbound platinum fall with a half-life of 20 minutes to 1 hour depending on the rate of drug infusion.

#### **Elimination**

The elimination of intact drug and various platinum-containing biotransformation products is via the urine. About 15-25% of administered platinum is rapidly excreted in the first 2-4 hours after administration of cisplatin. This early excretion is mostly of intact cisplatin. In the first 24 hours after administration, 20-80% is excreted, the remainder representing drug bound to tissues or plasma protein.

#### 5.3 Preclinical safety data

In repeat dose toxicity models, renal damage, bone marrow depression, gastrointestinal disorders, ototoxicity, neurotoxicity, and immunosuppression have been observed.

Cisplatin is mutagenic in numerous *in vitro* and *in vivo* tests. In long term studies, it has been shown that cisplatin is carcinogenic in mice and rats.

Non-clinical findings in mice showed that cisplatin caused direct damage to primordial follicle oocytes, leading to apoptosis, and ovarian depletion. Cisplatin causes testis damage and decreased sperm counts in mice, primarily through effects on differentiated spermatogonia. These findings suggest potential effects on male and female fertility.

Cisplatin is embryotoxic in mice and rats, and in both species, deformities have been reported.

Studies in rodents have shown that exposure during pregnancy can cause tumors in adult offspring.

Other anti-neoplastic substances have been shown to be carcinogenic and this possibility should be borne in mind in long term use of cisplatin.

# 6. PHARMACEUTICAL PARTICULARS

#### 6.1 List of excipients

Mannitol Sodium chloride Dilute hydrochloric acid Water for injections

# 6.2 Incompatibilities

There is a total loss of cisplatin in 30 minutes at room temperature when mixed with metoclopramide and sodium metabisulfite in concentrations equivalent to those that would be found on mixing with a commercial formulation of metoclopramide.

Cisplatin and sodium bisulfite have been known to react chemically. Such antioxidants might inactivate cisplatin before administration if they are present in intravenous fluids.

#### 6.3 Shelf life

Cisplatin must not be used after the expiry date which is stated on the vial label and carton after 'EXP'. Where only a month and year is stated, the expiry date refers to the last day of that month.

:<u>Prior to first use</u>: 2 years. <u>In use</u>: 24 hours.

#### 6.4 Special precautions for storage

<u>Prior to first use</u>: Do not store above 25°C. Do not refrigerate or freeze. Keep container in the outer carton in order to protect from light.

<u>In use:</u> Following dilution in 0.9% sodium chloride injection, chemical and physical in-use stability has been demonstrated for up to 14 days at 20°C. The diluted product should not be refrigerated. From a microbiological point of view, however, the product should be used immediately. If not used immediately, in-use storage times and conditions prior to use are the responsibility of the user and dilution should take place in controlled and validated aseptic conditions.

#### 6.5. Nature and contents of container

50 mg/50 ml presentations in Type I amber glass vials and Onco-Tain<sup>®</sup> vials. Supplied in packs containing: 1 x 50 mg/50 ml vial

# 6.6. Special precautions for disposal and handling

Single use only. Discard any unused contents.

Refer to local cytotoxic handling guidelines.

# **Dilution:**

Cisplatin 1 mg/ml sterile concentrate should be diluted in 2 litres of 0.9% sodium chloride injection.

#### Administration:

Should be administered only by or under the direct supervision of a qualified physician who is experienced in the use of cancer chemotherapeutic agents.

#### **Preparation (Guidelines):**

- 1. Chemotherapeutic agents should be prepared for administration only by professionals who have been trained in the safe use of the preparation.
- 2. Operations such as reconstitution, dilution and transfer to syringes should be carried out only in the designated area.

- 3. The personnel carrying out these procedures should be adequately protected with clothing, gloves and eye shield.
- 4. Pregnant personnel are advised not to handle chemotherapeutic agents

#### **Contamination:**

- (a) In the event of contact with the skin or eyes, the affected area should be washed with copious amounts of water or normal saline. A bland cream may be used to treat the transient stinging of skin. Medical advice should be sought if the eyes are affected.
- (b) In the event of spillage, operators should put on gloves and mop up the spilled material with a sponge kept in the area for that purpose. Rinse the area twice with water. Put all solutions and sponges into a plastic bag and seal it.

#### **Disposal:**

Syringes, container, absorbent materials, solution and any other contaminated material should be placed in a thick plastic bag or other impervious container and incinerated.

Keep out of the sight and reach of children.

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

Medicines should not be disposed of via wastewater or household waste. Ask your pharmacist how to dispose of medicines no longer required. These measures will help to protect the environment.

# 7. FURTHER INFORMATION

#### MARKETING AUTHORISATION HOLDER

Hospira UK Limited Horizon, Honey Lane Hurley Maidenhead SL6 6RJ United Kingdom

# **MANUFACTURER:**

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# 8. DATE OF FIRST AUTHORISATION/RENEWAL OF AUTHORISATION

30-JUNE-1997

# 9. DATE OF REVISION OF THE TEXT

June 2021