

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

< Invented Name > 10 mg/ml concentrate for solution for infusion

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

1 ml of concentrate for solution for infusion contains 10 mg of carboplatin.
Each 5 ml vial contains 50 mg carboplatin
Each 15 ml vial contains 150 mg carboplatin
Each 45 ml vial contains 450 mg carboplatin
Each 60 ml vial contains 600 mg carboplatin

For a full list of excipients see section 6.1.

3. PHARMACEUTICAL FORM

Concentrate for solution for infusion.

A clear, colourless solution free from visible particles.

pH- 5.0 to 7.0

Osmolality: 200 - 300 mOsm

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Carboplatin is indicated for the treatment of:

1. advanced ovarian carcinoma of epithelial origin in:
 - first line therapy
 - second line therapy, after other treatments have failed
2. small cell carcinoma of the lung.

4.2 Posology and method of administration

Dosage and Administration:

Carboplatin should be used by the intravenous route only. The recommended dosage of carboplatin in previously untreated adult patients with normal kidney function, i.e. creatinine clearance > 60 ml/min is 400 mg/m² as a single short term IV dose administered by a 15 to 60 minutes infusion. Alternatively, the Calvert formula shown below may be used to determine dosage:

Dose (mg) = target AUC (mg/ml x min) x [GFR ml/min + 25]

Dose (mg) = target AUC (mg/ml x min) x [GFR ml/min + 25]		
Target AUC	Planned Chemotherapy	Patient Treatment status

5-7 mg/ml.min	single agent carboplatin	previously untreated
4-6 mg/ml.min	single agent carboplatin	previously treated
4-6 mg/ml.min	carboplatin plus cyclophosphamide	previously untreated

Note: With the Calvert formula, the total dose of carboplatin is calculated in mg, not mg/m². Calvert's formula should not be used in patients who have received extensive pretreatment**.

**Patients are considered heavily pretreated if they have received any of the following:

- Mitomycin C
- Nitrosourea
- Combination therapy with doxorubicin/ cyclophosphamide/cisplatin,
- Combination therapy with 5 or more agents
- Radiotherapy \geq 4500 rad, focused on a 20 x 20 cm field or on more than one field of therapy.

Therapy with carboplatin should be discontinued in the case of an unresponsive tumour, progressive disease and/or occurrence of not tolerable side effects.

Therapy should not be repeated until four weeks after the previous carboplatin course and/or until the neutrophil count is at least 2,000 cells/mm³ and the platelet count is at least 100,000 cells/mm³.

Reduction of the initial dosage by 20-25% is recommended for those patients who present with risk factors such as prior myelosuppressive treatment and low performance status (ECOG-Zubrod 2-4 or Karnofsky below 80).

Determination of the haematological nadir by weekly blood counts during the initial courses of treatment with carboplatin is recommended for future dosage adjustment.

The safety measures for dangerous substances are to be complied with for preparation and administration. Preparation must be carried out by personnel who have been trained in the safe use while wearing protective gloves, face mask and protective clothes.

Impaired renal function:

Patients with creatinine clearance values of less than 60 ml/min are at greater risk to develop myelosuppression.

The optimal use of carboplatin in patients presenting with impaired renal function requires adequate dosage adjustments and frequent monitoring of both haematological nadirs and renal function.

In case of a glomerular filtration rate of \leq 30 ml/min, carboplatin should not be administered at all.

Combination Therapy:

The optimal use of carboplatin in combination with other myelosuppressive agents requires dosage adjustments according to the regimen and schedule to be adopted.

Paediatric patients:

As no sufficient experience of carboplatin use in children is available, no specific dosage recommendations can be given.

Elderly:

In patients of more than 65 years of age, adjustment of the carboplatin dose to the general condition is necessary during the first and the subsequent therapeutic courses.

Dilution and Reconstitution:

The product must be diluted prior to infusion, see section 6.6

4.3 Contraindications

Carboplatin is contra-indicated in patients with:

- hypersensitivity to the active substance or to other platinum containing compounds
- breast feeding
- severe myelosuppression
- bleeding tumors
- pre-existing severe renal impairment (creatinine clearance \leq 30 ml/min).
- concomitant use with yellow fever vaccine (see section 4.5.)

4.4 Special warnings and precautions for use

Warnings:

Carboplatin should be administered by individuals under the supervision of a qualified physician who is experienced in the use of anti-neoplastic therapy.

Blood counts as well as renal and hepatic function tests must be done regularly and the drug should be discontinued if abnormal depression of the bone marrow or abnormal renal or hepatic function is seen.

Diagnostic and treatment facilities should be readily available for management of therapy and possible complications.

Myelosuppression

Carboplatin myelosuppression is closely related to its renal clearance. Patients with abnormal kidney function or receiving concomitant therapy with other drugs with nephrotoxic potential are likely to experience more severe and prolonged myelotoxicity. Renal function parameters should therefore be carefully assessed before and during therapy.

Haematological toxicity

Leukopenia, neutropenia, and thrombocytopenia are dose-dependent and dose-limiting. Anaemia is frequent and cumulative.

Carboplatin Infusion courses should not be repeated more frequently than monthly under normal circumstances. Frequent monitoring of peripheral blood counts is recommended throughout and following therapy with carboplatin. Carboplatin combination therapy with other myelosuppressive compounds must be planned very carefully with respect to dosages and timing in order to minimise additive effects. Supportive transfusional therapy may be required in patients who suffer severe myelosuppression.

In general, single intermittent courses of carboplatin injection should not be repeated until leukocyte, neutrophil, and platelet counts have returned to normal. Therapy should not be repeated until 4 weeks after the previous carboplatin injection course and/or until the neutrophil count is at least 2,000 cells/mm³ and the platelet count is at least 100,000 cells/mm³.

Anaemia is frequent and cumulative requiring very rarely a transfusion.

In patients with impaired renal function, the effect of carboplatin on the haematopoietic system is more pronounced and longer-acting than in patients with normal renal function. In this risk group, therapy with Carboplatin must be performed with special caution (see section 4.2).

Hepatic and/or renal insufficiency

Renal and hepatic function impairment may be encountered with carboplatin. Very high doses of carboplatin (≥ 5 times single agent recommended dose) have resulted in severe abnormalities in hepatic and/or renal function. It is not clear whether an appropriate hydration programme might overcome effects on renal function. Dose reduction or discontinuation of therapy is required in the presence of moderate to severe alteration in renal or hepatic function test. (see section 4.8).

Impairment of renal function is more likely in patients who have previously experienced nephrotoxicity as a result of cisplatin therapy.

Allergic reactions

Infrequent allergic reactions to carboplatin have been reported, e.g. erythematous rash, fever with no apparent cause or pruritus. Rarely anaphylaxis, angio-oedema and anaphylactoid reactions including bronchospasm, urticaria and facial oedema have occurred.

As with other platinum-based drugs, allergic reactions appearing most often 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 section 4.3 and section 4.8).

Patients should be observed carefully for possible allergic reactions and managed with appropriate supportive therapy, including antihistamines, adrenaline and/or glucocorticoids.

The occurrence, severity and protraction of toxicity is likely to be greater in patients who have received extensive prior treatment for their disease, have poor performance status and are advanced in years. Renal function parameters should be assessed prior to, during and after carboplatin therapy.

Geriatric use

In studies involving combination therapy with carboplatin and cyclophosphamide, elderly patients treated with carboplatin were more likely to develop severe thrombocytopenia than younger patients. Because renal function is often decreased in the elderly, renal function should be considered when determining dosage (see section 4.2).

Neurotoxicity

Neurotoxicity, such as parasthesia, decreased deep tendon reflexes, and ototoxicity are more likely seen in patients older than 65 years and/or previously treated with other platinum treatments and other ototoxic agents.

Impairment of renal function is more likely in patients who have previously experienced nephrotoxicity as a result of cisplatin therapy.

The carcinogenic potential of carboplatin has not been studied but compounds with similar mechanisms of action and mutagenicity have been reported to be carcinogenic (see section 5.3).

Monitoring and neurological examinations should be carried out at regular intervals.

Visual disturbances:

Visual disturbances, including loss of vision, have been reported after the use of carboplatin injection in doses higher than those recommended in patients with renal impairment. Vision appears to recover totally or to a significant extent within weeks of stopping these high doses.

Ototoxicity

Auditory defects have been reported during carboplatin therapy.

Ototoxicity in children

Ototoxicity may be more pronounced in children. Cases of hearing loss with a delayed onset have been reported in paediatric patients. A long-term audiometric follow-up in this population is recommended.

Live vaccinations

Administration of live or live-attenuated vaccines in patients immune compromised by chemotherapeutic agents including carboplatin, may result in serious or fatal infections. Vaccination with a live vaccine should be avoided in patients receiving carboplatin. Killed or inactivated vaccines may be administered; however, the response to such vaccines may be diminished.

Aluminium containing equipment should not be used during preparation and administration of carboplatin (see section 6.2).

4.5 Interaction with other medicinal products and other forms of interaction

Concurrent therapy with nephrotoxic drugs or ototoxic drugs such as aminoglycoside, vancomycin, capreomycin and diuretics is not recommended, since this may lead to increased or exacerbated toxicity due to carboplatin induced changes in renal clearance of these substances.

Concomitant use of yellow fever vaccine is contraindicated, due to risk for fatal disease (see section 4.3).

Concomitant use of other live attenuated vaccines is not recommended due to the risk of systemic, possibly fatal disease. The risk is increased in subjects who are already immunosuppressed by their underlying disease. Use an inactivated vaccine where this exist.

When combining carboplatin with other myelosuppressive compounds (e.g. other cytotoxic substances, ciclosporin, tacrolimus, sirolimus) or radiation therapy, the myelosuppressive effect of carboplatin and/or the other compounds may be more pronounced.

Patients receiving concomitant therapy with other nephrotoxic agents are likely to experience more severe and prolonged myelotoxicity due to decreased renal clearance of carboplatin.

Caution and more frequent INR monitoring is recommended at concomitant treatment of warfarin with Carboplatin, as increased INR has been reported.

Concomitant use not recommended

Phenytoin, fosphenytoin risk of exacerbation of convulsions resulting from the decrease of phenytoin digestive absorption by the cytotoxic drug or risk of toxicity enhancement or lose of efficacy of the cytotoxic drug due to increased hepatic metabolism by phenytoin.

4.6 Fertility, pregnancy and lactation

Pregnancy

The safe use of carboplatin during pregnancy has not been established: Studies in animals have shown reproductive toxicity (see section 5.3.). Carboplatin has been shown to be an embryo toxin and teratogen in rats and mutagenic *in vivo* and *in vitro*.

Carboplatin must not be used in pregnant women or women of childbearing potential who might become pregnant unless the potential benefits to the mother outweigh the possible risks to the foetus.

Fertility

Women of childbearing potential must be advised to avoid becoming pregnant by using effective contraception during treatment and up to 6 months after therapy. For women who are pregnant or become pregnant during therapy, genetic counseling must be provided.

Gonadal suppression resulting in amenorrhea or azospermia may occur in patients receiving antineoplastic therapy. These effects appear to be related to dose and length of therapy and may be irreversible. Prediction of the degree of testicular or ovarian function impairment is complicated by the common use of combinations of several antineoplastics, which makes it difficult to assess the effects of individual agents.

Men of sexually mature age treated with Carboplatin are recommended not to father a child during treatment and up to 6 months afterwards and to ask advice about spermatoc preservation prior to initiation of the therapy because of the possibility of irreversible infertility due to therapy with carboplatin.

Lactation:

If treatment becomes necessary during the lactation period, breastfeeding must be stopped.

4.7 Effects on ability to drive and use machines

Carboplatin has no or negligible influence on the ability to drive and use machines. However carboplatin may cause nausea, vomiting, vision abnormalities and ototoxicity; therefore, patients must be warned on the potential effect of these events on the ability to drive or to use machines.

4.8 Undesirable effects

Incidences of adverse reactions reported here under are based on cumulative data obtained in a large group of patients with various pre-treatment prognostic features.

The following frequencies have been used:

Very common ($\geq 1/10$)

Common ($\geq 1/100$ to $< 1/10$)

Uncommon ($\geq 1/1,000$ to $\leq 1/100$)

Rare ($\geq 1/10,000$ to $\leq 1/1,000$)

Very rare ($< 1/10,000$), not known (cannot be estimated from the available data).

Neoplasms benign, malignant and unspecified (including cysts and polyps)

Uncommon: Secondary malignancies (including promyelocytic leukaemia which occurred 6 years after monotherapy with carboplatin and preceding irradiation) have been reported following administration of carboplatin as a single agent or in combination therapy (causal relationship not established).

Blood and lymphatic system disorders

Very common: Myelosuppression is the dose-limiting toxicity of carboplatin. Myelosuppression may be more severe and prolonged in patients with impaired renal function, extensive prior treatment, poor performance status and age above 65. Myelosuppression is also worsened by therapy combining carboplatin with other compounds that are myelosuppressive. Myelosuppression is usually reversible and not cumulative when carboplatin is used as a single agent and at the recommended dosages and frequencies of administration.

At maximum tolerated dosages of carboplatin administered as a single agent, thrombocytopenia, with nadir platelet counts of less than $50 \times 10^9/l$, occurs in about a third of the patients. The nadir usually occurs between days 14 and 21, with recovery within 35 days from the start of therapy.

Leukopenia has also occurred in approximately 20% of patients but its recovery from the day of nadir (day 14-28) may be slower and usually occurs within 42 days from the start of therapy. Neutropenia with granulocyte counts below $1 \times 10^9/l$ occurs in approximately one fifth of patients.

Common: Haemorrhagic complications, usually minor, have also been reported.

Uncommon: Infectious complications have occasionally been reported.

Rare: Cases of febrile neutropenia have been reported. Single cases of life-threatening infections and bleeding have occurred.

Anaemia with haemoglobin values below 8 g/dl has been observed in 15% of patients with normal baseline values. The incidence of anaemia is increased with increasing exposure to carboplatin injection.

Immune system disorders

Common: Allergic reactions to carboplatin have been reported in less than 2% of patients, e.g., skin rash, urticaria, erythematous rash, and fever with no apparent cause or pruritus. These reactions are similar to those observed after administration of other platinum containing compounds and should be managed with appropriate supportive therapy.

Rare: Anaphylaxis, anaphylactic shock, angio-oedema and anaphylactoid reactions, including bronchospasm, urticaria, facial odema and facial flushing, dyspnoea, hypotension, dizziness, wheezing, and tachycardia have occurred (see section 4.4).

Metabolism and nutrition disorders

Very common: Decreases in serum electrolytes (sodium, magnesium, potassium and calcium) have been reported after treatment with carboplatin but have not been reported to be severe enough to cause the appearance of clinical signs or symptoms.

Rare: In particular, cases of early hyponatraemia have been reported. The electrolyte losses are minor and mostly take a course without any clinical symptoms.

Nervous system disorders

Common: The incidence of peripheral neuropathies after treatment with carboplatin is 6%. In the majority of the patients neurotoxicity is limited to paraesthesia and decreased of osteotendinous reflexes. The frequency and intensity of this side effect increases in elderly patients and those previously treated with cisplatin. Paraesthesia present before commencing carboplatin

therapy, particularly if related to prior cisplatin treatment, may persist or worsen during treatment with carboplatin. (see precautions).

Uncommon: Central nervous symptoms have been reported, however, they seem to be frequently attributed to concomitant antiemetic therapy.

Eye disorders

Rare: Transient visual disturbances, loss of vision, sometimes including transient sight loss, have been reported rarely with platinum therapy. This is usually associated with high dose therapy in renally impaired patients. Optic neuritis has been reported in post marketing surveillance.

Ear and labyrinth disorders

Very common: Subclinical decrease in hearing acuity, consisting of high-frequency (4000-8000 Hz) hearing loss determined by audiogram, has been reported in 15% of the patients treated with carboplatin.

Common: Clinical ototoxicity. Only 1% of patients present with clinical symptoms, manifested in the majority of cases by tinnitus.

At higher than recommended doses in combination with other ototoxic agents, clinically significant hearing loss has been reported to occur in paediatric patients when carboplatin was administered.

Ototoxicity

In patients with a hearing organ predamaged due to cisplatin, a further exacerbation in the hearing function sometimes occurs during treatment with carboplatin.

Cardiac disorders

Very rare: Cardiovascular events (cardiac failure, embolism) as well as cerebrovascular events (apoplexy) have been reported in single cases (causal relationship with carboplatin not established). Single cases of hypertension have been reported.

Respiratory, thoracic and mediastinal disorders

Common: Interstitial lung disease

Very rare: Pulmonary fibrosis manifested by tightness of the chest and dyspnoea. This should be considered if a pulmonary hypersensitivity state is excluded (see General disorders below).

Gastrointestinal disorders

Very common: Nausea without vomiting occurs in about a quarter of patients receiving carboplatin vomiting has been reported in over half of the patients and about one-third of these suffer severe emesis. Nausea and vomiting are generally delayed until 6 to 12 hours after administration of carboplatin, usually disappear within 24 hours after treatment and are usually responsive to (and may be prevented by) anti-emetic medication. A quarter of patients experience no nausea or vomiting. Vomiting that could not be controlled by drugs was observed in only 1% of patients. Vomiting seems to occur more frequently in previously treated

patients, particularly in patients pre-treated with cisplatin. Painful gastro-intestinal disorders occurred in 8% of patients.

Common: Diarrhoea and constipation (6%), mucositis.

Rare: Taste alteration. Cases of anorexia have been reported.

Hepatobiliary disorders

Very common: Abnormalities of liver function tests (usually mild to moderate) have been reported with carboplatin in about one-third of the patients with normal baseline values. The alkaline phosphatase level is increased more frequently than SGOT, SGPT or total bilirubin. The majority of these abnormalities regress spontaneously during the course of treatment.

Rare: Cases of an acute, fulminant liver cell necrosis occurred after high-dosed administration of carboplatin.

Skin and subcutaneous tissue disorders

Common: Alopecia.

Renal and urinary disorders

Very common: Renal toxicity is usually not dose-limiting in patients receiving carboplatin, nor does it require preventive measures such as high volume fluid hydration or forced diuresis. Nevertheless, increasing blood urea and blood urea nitrogen levels or serum creatinine levels can occur.

Common: Renal function impairment, as defined by a decrease in the creatinine clearance below 60 ml/min, may also be observed. The incidence and severity of nephrotoxicity may increase in patients who have impaired kidney function before carboplatin treatment.

It is not clear whether an appropriate hydration programme might overcome such an effect, but dosage reduction or discontinuation of therapy is required in the presence of moderate alteration of renal function (creatinine clearance 41-59 ml/min) or severe renal impairment (creatinine clearance 21-40 ml/min). Carboplatin is contra-indicated in patients with a creatinine clearance at or below 20 ml/min.

General disorders and administration site conditions

Very common: Hyperuricaemia is observed in about one quarter of patients. Serum levels of uric acid can be decreased by allopurinol. Asthenia.

Common: Malaise, urticaria, flu-like syndrome, erythematous rash, pruritis.

Uncommon: Fever and chills without evidence of infection; injection site reactions such as pain, erythema, swelling, urticaria and necrosis

Rare: Haemolytic uraemic syndrome.

Other undesirable effects:

Secondary acute malignancies after cytostatic combination therapies containing carboplatin have been reported.

Alopecia, fever and chills, mucositis, asthenia, malaise as well as dysgeusia have occasionally been observed.

In isolated cases, a haemolytic-uraemic syndrome occurred.

Isolated cases of cardiovascular incidents (cardiac insufficiency, embolism) as well as isolated cases of cerebrovascular accidents have been reported.

Cases of hypertension have been reported.

Local reactions:

Reactions at the site of injection (burning, pain, reddening, swelling, urticaria, necrosis in connection with extravasation) have been reported.

4.9 Overdose

Symptoms of overdose

Carboplatin was administered in Phase I studies at a dosage of up to 1600 mg/m² i.v. per course. At this dosage, life-threatening haematological side effects with granulocytopenia, thrombocytopenia and anaemia were observed. The granulocyte, thrombocyte and haemoglobin nadir were observed between days 9-25 (median: days 12-17). The granulocytes had reached values of $\geq 500/\mu\text{l}$ after 8-14 days (median: 11) and the thrombocytes values of $\geq 25.000/\mu\text{l}$ after 3-8 days (median: 7).

The following non-haematological side effects also occurred: renal function disturbances with a 50% drop in the glomerular filtration rate, neuropathy, ototoxicity, sight loss, hyperbilirubinaemia, mucositis, diarrhoea, nausea and vomiting with headache, erythema, and severe infection. In the majority of cases, hearing disturbances were transient and reversible.

Treatment of overdose

There is no known antidote for carboplatin over dosage. The anticipated complications of over dosage would be related to myelosuppression as well as impairment of hepatic and renal and auditory function. Bone marrow transplantation and transfusions (thrombocytes, blood) can be effective measures of managing haematological side effects.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: other antineoplastic agents, platinum compounds,
ATC code: LO1XA02

Carboplatin is an antineoplastic agent. Its activity has been demonstrated against several murine and human cell lines.

Carboplatin exhibited comparable activity to cisplatin against a wide range of tumours regardless of implant site.

Alkaline elution techniques and DNA binding studies have demonstrated the qualitatively similar modes of action of carboplatin and cisplatin. Carboplatin, like cisplatin, induces changes in the superhelical conformation of DNA, which is consistent with a "DNA shortening effect".

Paediatric patients: safety and efficacy in children have not been established.

5.2 Pharmacokinetic properties

Following administration of carboplatin in man, linear relationships exist between dose and plasma concentrations of total and free ultra-filterable platinum. The area under the plasma concentration versus time curve for total platinum also shows a linear relationship with the dose when creatinine clearance ≥ 60 ml/min.

Repeated dosing during four consecutive days did not produce an accumulation of platinum in plasma. Following the administration of carboplatin reported values for the terminal elimination of half-lives of free ultra-filterable platinum and carboplatin in man are approximately 6 hours and 1.5 hours respectively. During the initial phase, most of the free ultra-filterable platinum is present as carboplatin. The terminal half-life for total plasma platinum is 24 hours. Approximately 87% of plasma platinum is protein bound within 24 hours following administration. Carboplatin is excreted primarily in the urine, with recovery of approximately 70% of the administered platinum within 24 hours. Most of the drug is excreted in the first 6 hours. Total body and renal clearances of free ultra-filterable platinum correlate with the rate of glomerular filtration but not tubular secretion.

Carboplatin clearance has been reported to vary by 3- to 4- fold in paediatric patients. As for adult patients, literature data suggest that renal function may contribute to the variation in carboplatin clearance.

5.3 Preclinical safety data

Carboplatin has been shown to be embryotoxic and teratogenic in rats. It is mutagenic *in vivo* and *in vitro* and although the carcinogenic potential of carboplatin has not been studied, compounds with similar mechanisms of action and mutagenicity have been reported to be carcinogenic.

Toxicity studies have shown that extravasal administration of carboplatin causes tissue necrosis.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Water for Injections

6.2 Incompatibilities

This medicinal product must not be mixed with other medicinal product except those mentioned in section 6.6.

Carboplatin may interact with aluminium to form a black precipitate. Needles, syringes, catheters or intravenous sets containing aluminium parts that may come into contact with carboplatin should not be used for preparation or administration of carboplatin.

6.3 Shelf life

Unopened:
2 years

After dilution

Chemical and physical in-use stability has been demonstrated after dilution in Glucose 5 % for 96 hours at 2⁰C to 8⁰ C and 20⁰ to 25⁰ C.

Chemical and physical in-use stability has been demonstrated after dilution in Sodium Chloride 0.9% for 24 hours at 2⁰C to 8⁰C and 8 hours 20⁰ to 25⁰C.

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 would normally not be longer than 24 hours at 2 °C to 8 °C, unless dilution has taken place in controlled and validated aseptic conditions.

6.4 Special precautions for storage

Keep vial in the outer carton in order to protect from light.

For storage conditions of the diluted medicinal product, see section 6.3.

6.5 Nature and contents of container

5 ml/15 ml/45 ml/60 ml concentrate for solution in a colorless Ph Eur. Type I glass vial with flurotec rubber closure with green/blue/red and yellow aluminium flip-off seal for each presentation. Each vial may be shrink wrapped and may/may not be packed in plastic container

Pack size:
1 vial

Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

This product is for single use only. Any unused infusion solution should be discarded.

Instruction for dilution

The product must be diluted prior to infusion, with 5 % Glucose for Injection or 0.9 % Sodium Chloride for Injection, to concentrations as low as 0.5 mg/ml (500 micrograms/ml).

The solution is to be inspected visually for particulate matter and discoloration prior to administration. The solution should only be used if the solution is clear and free from particles.

Guidelines for the safe handling of anti-neoplastic agents:

1. Carboplatin should be prepared for administration only by professionals who have been trained in the safe use of chemotherapeutic agents.
2. This should be performed in a designated area.
3. Adequate protective gloves, face mask and protective clothes should be worn.
4. Precautions should be taken to avoid the drug accidentally coming into contact with the eyes. In the event of contact with the eyes, wash with water and/or saline.
5. The cytotoxic preparation should not be handled by pregnant staff.
6. Adequate care and precautions should be taken in the disposal of items (syringes, needles, etc.) used to reconstitute cytotoxic drugs. Excess material and body waste may be disposed of by placing in double sealed polythene bags and incinerating at a temperature of 1,000 °C.
7. The work surface should be covered with disposable plastic-backed absorbent paper.
8. Use Luer-Lock fittings on all syringes and sets. Large bore needles are recommended to minimise pressure and the possible formation of aerosols. The latter may also be reduced by the use of a venting needle.

Disposal

Remnants of carboplatin as well as all materials that have been used for dilution and administration must be destroyed according to hospital standard procedures applicable to cytotoxic agents in accordance with local requirements related to the disposal of hazardous waste.

7. MARKETING AUTHORISATION HOLDER

Fresenius Kabi Oncology Plc.
Lion Court, Farnham Road, Bordon,
Hampshire, GU350NF
United Kingdom

8. MARKETING AUTHORISATION NUMBER(S)

[To be completed nationally]

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

[To be completed nationally]

10. DATE OF REVISION OF THE TEXT

[To be completed nationally]