

## SUMMARY OF PRODUCT CHARACTERISTICS

### <sup>90</sup>Y-MULTIBONE RADIOPHARMACEUTICAL KIT

Radioactive therapeutic drug product for intravenous use

Marketing Authorization Number:

OGYI-T-9196/01

1 NAME OF THE MEDICINAL PRODUCT

**<sup>90</sup>Y-MULTIBONE RADIOPHARMACEUTICAL KIT FOR THERAPEUTIC PURPOSES (Y-RA-26)**

By mixing MULTIBONE in vivo kit and [<sup>90</sup>Y]yttrium chloride precursor the <sup>90</sup>Y-MULTIBONE radiopharmaceutical kit for therapeutic use can be prepared in situ on the location of the utilisation (at isotope laboratories of clinics or hospitals).

**Specification:** company standard

**Symbol indicating the strength:** + (single cross), strong action

**Manufacturer:**

Institute of Isotopes Co. Ltd. Budapest, Hungary, H- 1121

Konkoly-Thege Miklós str. 29–33.

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

2.1 Composition

2.1.1 Composition of the content of MULTIBONE in vivo kit

Name of the components	Quantity per volume unit	Function
<i>Active ingredient</i>		
Ethylenediamine tetramethylene phosphonate	25.0 mg	Organ-specific chelating agent of <sup>90</sup> Y radionuclide
<i>Excipients</i>		
Stannous chloride dihydrate	1.0 mg	Promoter of complexation of <sup>90</sup> Y at room temperature
Ascorbic acid	5.0 mg	Stabiliser
Glucose, anhydrous	10.0 mg	Filler

2.1.2 Composition of [<sup>90</sup>Y]yttrium chloride precursor

Name of the components	Quantity per volume unit	Function
<i>Active ingredient</i>		
[ <sup>90</sup> Y]yttrium chloride	400 MBq	Radionuclide providing radiation therapeutic effect
<i>Excipients</i>		
Hydrochloric acid	0.55 mg	Solvent
Water for injection	1 ml	Solvent

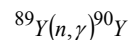
2.1.3 Composition of <sup>90</sup>Y-MULTIBONE injection

Name of the components	Quantity per volume unit	Function
<i>Active ingredients</i>		
<sup>90</sup> Y-EDTMP	400 MBq	Local, lesion-specific radiation therapeutic effect

2.2 Radiation physical properties of <sup>90</sup>Y isotope

Physical half life:	64.0 hours	
Energy and intensity of the emitted beta particle:	2280 keV	100 %
During the decay stable <sup>90</sup> Zr is produced.		

<sup>90</sup>Y isotope is manufactured in nuclear reactor by neutron irradiation according to the reaction given below:



The neutron flux of the reactor is:

$$5 \times 10^{13} - 2 \times 10^{14} \text{ neutron.cm}^{-2}.\text{s}^{-1}.$$

By-product radioisotopes are not produced.

2.3 Radioactive properties

2.3.1 Specific activity

Not less than 400 MBq/mg.

2.3.2 Activity concentration

400 MBq/ml

2.3.3 Radionuclidic purity at the time of utilisation

> 99.5%

2.3.4 Radiochemical purity

> 95 %

3 PHARMACEUTICAL FORM

Pharmaceutical form of MULTIBONE in vivo kit: powder for solution for injection.

Pharmaceutical form of [<sup>90</sup>Y]yttrium chloride precursor: sterile solution not to be used directly as pharmaceutical preparation.

Pharmaceutical form of <sup>90</sup>Y-MULTIBONE injection: radioactive, sterile injection.

4 CLINICAL PARTICULARS

4.1 Indications

INDICATION FIELD: RADIONUCLIDE THERAPY

Palliative, analgesic treatment of previously localised bone metastases. Use of the preparation highly recommended in the case of the indications listed below:

- palliative treatment of painful bone metastases of breast cancer
- palliative treatment of bone metastases of prostate cancer
- palliative treatment of bone metastases of other tumours

4.2 Posology and method of administration

4.2.1 Posology

<sup>90</sup>Y-Multibone prepared in one labelling reaction represents a dose for one patient. Labelling should be performed by using 400 MBq of <sup>90</sup>Y. The individual patient dose is 400 MBq of <sup>90</sup>Y-Multibone.

4.2.2 Method of administration

<sup>90</sup>Y-Multibone should be administered slowly, intravenously to the patient. After this, the patient should drink 100 ml/10 kg of bodyweight of liquid and/or the blood circulation should be stimulated by administration of 20 ml of saline intravenously. During several hours, medical attention should be provided for the patient's benefit. Urine produced in this time interval must be handled as radioactive waste.

4.3 Contraindications

Relative contraindications

- The use of the product is relatively contraindicated at the age below 18 years, except when the necessity and importance of the therapy prevails the risk originating from the radiation exposure.
- in case of patient with seriously impaired bone marrow, since the risk of the therapy would be higher than the advantageous effect expected. The contraindication is especially valid if the following quantitative parameters of the patient are above/below the limits given below:
  - White cell count < 3 × 10<sup>9</sup>
  - Platelet count < 120 × 10<sup>9</sup>
  - Serum creatinine > 120 μM / litre
  - Karnofsky index < 60 %

Absolute contraindications

The use of the product is absolutely contraindicated

- in case of pregnant or breast-feeding women,
- if the patient does not provide an oral or written consent of being treated with the radionuclide.
- if the quantitative parameters of the patient are above/below the limits given above.

4.4 Special warnings and precautions for use

This drug product contains radioactive isotope. For handling, shipping and storage of this product the rules and regulations referring to the radioactive materials should be observed. This drug product can only be applied by properly qualified and trained personnel within designated clinical settings, which possess the appropriate government authorisation for the use and manipulation of radioisotopes.

<sup>90</sup>Y-Multibone therapy can be carried out in case of outpatients. After administration of the preparation the patient should be kept under medical attendance for several hours because the activity not bounded to the bone lesions is excreted during this period. The urine should be handled as radioactive waste. It is advantageous that the physical half life of <sup>90</sup>Y is 64.5 hours, after ten fold of the half life (4 weeks) the radioactivity can be considered decayed.

4.5 Interaction with other medicinal products and other forms of interaction

None stated.

4.6 Pregnancy and lactation, paediatrics

Pregnancy and lactation

Administration of the product to pregnant or lactating women is contraindicated unless the necessity and importance of acquiring the information prevails the risk originating from the radiation exposure.

The product can be administered to women of childbearing age after the possibility of pregnancy has been precluded. It is recommended to treat these women in the first 10 days after menstruation.

Paediatrics

This medicinal product must not be administered to patients below 18 years of age, unless the necessity and importance of acquiring the information prevails the risk originating from the radiation exposure.

4.7 Effects on ability to drive and use machines

The product has no direct influence on ability of car driving or working in hazardous circumstances. In occurrence of unexpected side effects the ability to drive and the aptitude to work amidst accident risk are to be reconsidered.

4.8 Undesirable effects

Early adverse reactions:

1 – 2 hours after the intravenous administration nausea can occur.

After 2 – 3 days the increase of the bone pain can occur, this is temporary and eases in one week or disappears. Occurrence of this temporarily increase of the bone pain predicts and increase the chance of the good therapeutic effect. In case of extravasation, tissue necrosis may occur.

Late adverse reaction:

Temporary myelosuppression, which normalises in several weeks' time.

4.9 Overdose

No case of overdose has been reported. In the unlikely event of overdose the vital functions of the patient should be supported.

The patient and her/his environment receive surplus absorbed radiation dose if higher radioactivity than the prescribed value is administered. This is unnecessary and must be avoided.

In case of incidental overdose, the effectively administered activity of <sup>90</sup>Y must be determined (in MBq) and the actual absorbed radiation dose must be calculated by using the data of the dosimetric table of Chapter 5.4. On the strength of the results, the necessity and method of further treatment should be concluded.

The table of Chapter 5.4 contains absorbed radiation dose data in mGy in case of intravenous administration of 1 MBq of <sup>90</sup>Y-Multibone. Multiply these specific absorbed radiation dose data by the effectively administered activity (in MBq) to obtain the required absorbed radiation dose data in mGy.

One injection vial of Multibone should be labelled with one vial of [<sup>90</sup>Y]yttrium chloride precursor and the whole solution should be administered to one patient. This represents 25 mg of <sup>90</sup>Y-EDTMP. If content of two vials containing the labelled substance is administered to one patient by mistake, of which probability is very low, 50.0 mg of <sup>90</sup>Y-EDTMP is introduced in the body.

Intravenous acute toxicity studies on mice showed that there are not any clinical symptoms, if less than 50 mg/kg of bodyweight is administered. In case of administration of the recommended dose the administered <sup>90</sup>Y-EDTMP is equivalent to 0.357 mg / kg of bodyweight, calculated to an average 70 kg bodyweight. This amount represents 0.72% of the no observed effect level.

If the content of the two vials containing the labelled substance is administered to one patient by mistake, it represents 1.44 % of the no observed effect level.

Thus, no toxic effects are expected in case of administration of double dose of the preparation.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

ATC code: V10B X 02

MULTIBONE kit can be labelled with two different therapeutic radionuclides. MULTIBONE labelled with <sup>152</sup>Sm or <sup>90</sup>Y can be used for the palliative treatment of the bone metastases.

Active ingredient of <sup>90</sup>Y-MULTIBONE is <sup>90</sup>Y-EDTMP, which rapidly leaves the bloodstream and is accumulated mainly by the bone lesions, since in the bone lesions the blood supply of the bone and the bone building (osteoblast) activity are increased.

Healthy bone accumulates less quantity and the accumulation by soft tissues is negligible. The mechanism of the uptake by the bone is precipitation and chemisorption in the inorganic matrix of the bone (hydroxy-apatite of ionic nature, Ca<sub>10</sub>(PO<sub>4</sub>)<sub>6</sub>(OH)<sub>2</sub>).

Due to the increased accumulation of the <sup>90</sup>Y radioactivity in the bone lesions a selective, local radionuclide therapy can be carried out. 47-77% of the administered 400 MBq of <sup>90</sup>Y-EDTMP appears in the bone and bone lesions. The bone lesion / normal bone activity ratio can be even 16:1. If the are more and extensive lesions the accumulation of <sup>90</sup>Y-EDTMP is greater.

<sup>90</sup>Y-Multibone not bound by the bone tissues is excreted via the urine, excretion via the hepatobiliary system is negligible.

The beta particles of 2281 keV energy emitted by <sup>90</sup>Y radionuclide, which are absorbed in the tissues (including bone metastases) within 3.6 mm average distance, provide the therapeutic effect of <sup>90</sup>Y-Multibone. The upper limit of the absorption range is 12 mm. The beta particles transmit their full energy to the tissues, bone lesions, in which they are absorbed. This energy transfer causes the palliative effect by the destruction of the tissues.

The quantity of radiation energy that is absorbed per unit mass of tissue is the absorbed dose, of which effective range is 5 – 50 Gy. By administering 400 MBq of <sup>90</sup>Y-Multibone per patient, this range can be achieved. In case of this amount of radioactivity myelosuppression can occur 1 – 2 weeks after administration which normalises in 3 – 4 weeks.

5.2 Pharmacokinetic properties

Intravenously administered <sup>90</sup>Y-EDTMP leaves the bloodstream rapidly, 70% of the activity is eliminated within 10 minutes, 90 % within 1 hour and 98% within 4 hours. The excretion can be characterised with two parallel processes described with T<sub>1/2</sub> values as follows:

- Quick phase T<sub>1/2</sub> = 2.8 min
- Slow phase T<sub>1/2</sub> = 64 min

The activity necessary to achieve the therapeutic effect appears in the bone lesions 1.5 hours after administration. During that time 40-70% of the injected radioactivity is localised in the bone and bone lesions, in case of several and more extensive lesions the accumulation is greater.

The non-bound activity appears in the kidneys and the urinary bladder, the highest activity in the kidneys can be observed 2 - 5 minutes after administration. Excretion can be characterised by a biexponential curve, the biological half life is 15 ± 5 minutes in the rapid phase and 50 ± 10 minutes in the slow phase. Activity in the liver is negligible.

5.3 Preclinical safety data

Intravenous acute toxicity experiments on mice showed that no clinical symptoms can be observed up to 50 mg/kg of bodyweight. Labelling of the MULTIBONE kit with [<sup>90</sup>Y]yttrium chloride precursor is easy and safe

The injection prepared by using content of one vial of MULTIBONE kit and one vial of [<sup>90</sup>Y]yttrium chloride precursor represents the dose of one patient. The administered amount of <sup>90</sup>Y-EDTMP in case of an average 70 kg bodyweight is equivalent to 0.357 mg EDTMP per kg of body weight, which is equal to 0.72 % of the no observed effect level. Thus, the use of the product considered safe. Further advantage of the product is that radioactivity in the recommended 400 MBq <sup>90</sup>Y activity does not have effect on the radiochemical purity of the product; the quantity of the radiochemical impurities does not exceed 5%. As a result, the kit considered safe from the labelling point of view.

5.4 Radiation dosimetry

A single dose of a patient contains 400 MBq of <sup>90</sup>Y activity. In case of 70 kg average body weight 1 MBq of the injection induces the following absorbed doses in the listed organs:

Organ	Absorbed dose [mGy/MBq]
bone lesion	18
red bone marrow	1.86
kidneys	0.04
bladder	0.90
liver	< 0.04

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Stannous chloride dihydrate, ascorbic acid, glucose anhydrous, sodium chloride, water for injection.

6.2 Incompatibilities

Multibone in vivo kit is incompatible with any alkaline media of greater quantity than the buffer capacity of the product since it increases the pH value when dissolving the content of the ampoule. Labelling takes place with a poorer efficiency in alkaline medium, therefore, the radiochemical purity of the preparation may decrease below the prescribed limit. Consequently, the cap and the stopper of the vial can only be removed right before the radioactive labelling, which should be carried out strictly according to the instructions for use and handling of the product.

The [<sup>90</sup>Y]yttrium chloride precursor for labelling is incompatible with any alkaline media because it would cause hydrolysis of <sup>90</sup>Y<sup>3+</sup> cation before the formation of the complex, i.e. influences the circumstances of complex compound formation and this way the radiochemical purity of the preparative.

6.3 Shelf life

Shelf life of Multibone in vivo kit (freeze-dried, non-radioactive components in glass vials closed with rubber stopper and aluminium cap) is 12 months from the day of production.

One paper box contains 6 vials. Radioactive labelling of the content of the individual vials can be done at different occasions within the expiry date shown on the label of the vial and the paper box.

Shelf life of the radioactive [<sup>90</sup>Y]yttrium chloride precursor is 4 days from the date of manufacture, which is shown on the labels of the packaging materials.

The <sup>90</sup>Y-EDTMP injection (Multibone labelled with <sup>90</sup>Y radionuclide) is to be used within 24 hours from labelling.

#### 6.4 Special precautions for storage

**Multibone in vivo kit** is to be stored in a fridge at 2-8°C in its original paper box.

**[<sup>90</sup>Y]yttrium chloride precursor** is to be stored at room temperature in its original container.

**<sup>90</sup>Y-EDTMP injection** is to be stored at room temperature (15-25°C) in accordance with the regulations on radioactive materials.

#### 6.5 Nature and contents of container

##### 6.5.1 Packaging material

**Multibone in vivo kit** is composed of injection vials, which contain the sterile, bacterial endotoxin-free and freeze-dried components (See Composition). The BEKA type 6 ml injection vials are closed with rubber stopper and tear-off aluminium cap. The labelled vials are supplied in a white, 150 x 100 x 60 mm carton box. Position of the vials inside the box is fixed by a carton insert, which prevents the moving of the vials. One box contains six pieces of vials. Labelling of the content of the individual vials can be performed at different times. The white paper box is packed in foil.

**[<sup>90</sup>Y]yttrium chloride precursor** is supplied in BEKA type 6 ml injection vials closed with rubber stopper and tear-off aluminium cap. The labelled vial is placed in a lead container, which contains a paper insert and has a wall thickness of 15-30 mm (KT 1-6). The lead container is packed in a labelled tear-off metal can, which contains plastic insert (Type A packaging).

##### 6.5.2 Pack size

**Multibone in vivo kit** contains 6 of injection vials in one paper box.

**[<sup>90</sup>Y]yttrium chloride precursor:** 400 MBq / vial.

##### 6.5.3 Content of the packaging

**Multibone in vivo kit:** 6 pieces of injection vials, 1 piece of Summary of Product Characteristics

**[<sup>90</sup>Y]yttrium chloride precursor:** 1 piece of injection vial, 1 piece of Summary of Product Characteristics

#### 6.6 Instructions for use and handling

Remove the protective foil and lift the upper part of the paper box up to access the vials. During the use of this product the rules and regulations referring to the radioactive materials should be observed.

[<sup>90</sup>Y]yttrium chloride precursor is a radioactive product supplied in Type A packaging. To open the packaging, follow the instruction given below.

Tear the top panel of the metal can off. Remove the upper part of the plastic foam insert. Lift the lead container out of the metal can and put it on the working area. Remove the seal strip and then the upper part of the lead container. This way the glass vial containing the radioactive material is readily accessible. Comply with the regulations for radiation safety.

Multibone kit can only be administered to patient after labelling it with <sup>90</sup>Y. Never administer Multibone kit without performing the labelling.

<sup>90</sup>Y-Multibone injection contains radioactive isotope. For handling, shipping and storage of this product the rules and regulations referring to the radioactive materials should be observed.

#### LABELLING PROCEDURE

Place the glass vial containing the freeze-dried material in a small lead container of 15 mm wall thickness (e.g. type KT-3). Under aseptic conditions inject 2.0 ml of physiological saline solution into the vial via the rubber stopper by using a sterile syringe. After complete dissolution of the powder, inject the [<sup>90</sup>Y]yttrium chloride precursor ordered for one patient (activity: 400 MBq, volume: 1 ml) with a sterile syringe equipped with lead shielding into the vial containing the previously prepared EDTMP solution via the rubber stopper. Shake the vessel thoroughly and allow it to stand at room temperature for 15 minutes. This way EDTMP labelled with <sup>90</sup>Y is obtained and the solution can be intravenously administered to the patient. pH of the injection is in the range of pH = 5.0-8.0. The labelled preparation must be used in 24 hours after labelling. The quantity of the radiochemical impurities must not exceed 5% during that time.

If there are quality problems or side effects, these should be reported to the National Institute of Pharmacy by using the documents, which were established for this purpose (Registration of non-expected side effect, Registration of quality problem).

##### 6.6.1 Control of the drug product

###### 6.6.1.1 Principle

Radiochemical purity of <sup>90</sup>Y-Multibone is tested by using paper chromatography.

###### 6.6.1.2 Method

##### Stationary phase

3 pcs of 1.5 x 20 cm Whatmann ET-31 (catalogue code: 3031915)

##### Mobile phase

Phosphate buffer, pH=7.5

##### Temperature

Room temperature (20–25°C)

##### Test solution

The solution in the vial

#### Distribution of radioactivity

<sup>90</sup>Y-yttrium chloride  $R_f = 0-0.1$

<sup>90</sup>Y-EDTMP  $R_f = 0.9-1.0$

##### 6.6.1.3 Test

Use 3 pieces of 1.5 x 20 cm ET-31 paper strips. Apply to the strips 5 – 5 µl (approximately 1 MBq) of the solution to be tested at 1.5 cm from the end of the paper. Develop the strips over a 12 – 15 cm path in phosphate buffer (pH = 7.5).

Dry the strips, impregnate them with 5% polystyrene solution, and allow them to dry again. Determine the radioactivity by using a scanner. Radiochemical purity is calculated by using the data of three replicates.

Radiochemical purity is calculated by using the peak area data. The activity corresponding to <sup>90</sup>Y-EDTMP peak compared to the total activity on the strip as 100% provides the radiochemical purity, which should be not less than 95% at expiry.

##### 6.6.2 Handling of radioactive waste

The remainder of the solution and strips should be stored as radioactive waste according to the regulations for radiation safety.

#### 7 MARKETING AUTHORIZATION HOLDER



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#### 8 MARKETING AUTHORIZATION NUMBER

**OGYI-T- 9196/01**

#### 9 DATE OF FIRST AUTHORISATION / RENEWAL OF THE AUTHORISATION

- Renewal: 21.01.2004.
- First authorisation: 07.08.1997.

#### 10 DATE OF REVISION OF THE TEXT

18.04.2003.

Authorization number of the original Hungarian SmPC: 757/40/04

*This SmPC was translated by the manufacturer based on the original Hungarian document.*

#### Patient information leaflet

Read all of this leaflet carefully because it contains important information for you about your medicine.

Ask your doctor if you need more information or advice. Keep this leaflet. You may need to read it again.

In this leaflet:

- What YTRTRIUM-MULTIBONE INJECTION is and what it is used for
- Before you are given YTRTRIUM-MULTIBONE INJECTION
- How is YTRTRIUM-MULTIBONE INJECTION used
- Possible side effects
- Storing YTRTRIUM-MULTIBONE INJECTION

YTRTRIUM-MULTIBONE INJECTION, which is an injectable solution for intravenous use, contains <sup>90</sup>Y-yttrium radioisotope. Active ingredient of this medicine is <sup>90</sup>Y-yttrium-EDTMP. Other ingredients are stannous chloride dihydrate, ascorbic acid, anhydrous glucose, hydrogen chloride and water for injection.

#### Marketing Authorisation Holder of YTRTRIUM-MULTIBONE INJECTION:

Institute of Isotopes Co. Ltd.

H-1121 Budapest, Konkoly Thege Miklós út 29–33. Hungary

#### Manufacturer of YTRTRIUM-MULTIBONE INJECTION:

Institute of Isotopes Co. Ltd.

H-1121 Budapest, Konkoly Thege Miklós út 29–33. Hungary

## 1 WHAT YTRTRIUM-MULTIBONE INJECTION IS AND WHAT IT IS USED FOR

YTRTRIUM-MULTIBONE INJECTION is a radiopharmaceutical preparation which can be used for the treatment of bone metastases of breast cancer, prostate cancer and other types of cancer. This product can be utilized only at the departments of nuclear medicine. YTRTRIUM-MULTIBONE INJECTION is a colourless solution. This medicine is administered to the human body intravenously. Active ingredient of the product is accumulated in the bone lesions and has therapeutic effect due to its physical characteristics there. This way it can ease your bone pain.

#### What YTRTRIUM-MULTIBONE INJECTION is used for?

After YTRTRIUM-MULTIBONE INJECTION was intravenously administered to you, it is distributed to the bone tissues by the blood circulation. It is accumulated in the bone tissues where it binds to various damaged tissues causing pain. At these sites it has pain-killing effect. After you are given the injection, the bone lesions are exposed to continuous radioactive radiation which brings about the reduction of their size. Due to that the bone pain eases. This medicinal product is for therapeutic use only.

## 2 BEFORE YOU ARE GIVEN YTRTRIUM-MULTIBONE INJECTION

### 2.1 Special warnings and special precautions

Comply with the instructions of your physician both before and after the examination to avoid radiation exposure of other people and radioactive contamination of the environment. The non-bounded radioactive isotope is excreted in the urine.

Flush your urine with abundant quantity of water two or three times and wash your hands thoroughly for several days after administration of the injection. Be careful not to drop urine drips to other places than the WC. Change your underwear if it becomes contaminated and wash it separately by using abundant quantities of water.

### 2.2 Pregnancy and breast-feeding

Please inform your doctor if you are pregnant or are breast-feeding an infant. Do not use this medicinal product in these cases.

### 2.3 Paediatrics

YTRTRIUM-MULTIBONE INJECTION should not be used in patients below 18 years of age. Your doctor will consider the necessity and importance of the radioisotope diagnostics.

### 2.4 Other cases in which this product is inapplicable

In case of patient with seriously impaired bone marrow, since the risk of the therapy would be higher than the advantageous effect expected. The contraindication is especially valid if the following quantitative parameters of the patient are above/below the limits given below:

White cell count	< 3 x 10 <sup>9</sup>
Platelet count	< 120 x 10 <sup>9</sup>
Serum creatinine	> 120 µM / litre
Karnofsky index	< 60 %

THIS MEDICINAL PRODUCT MUST NOT BE ADMINISTERED IF THE PATIENT DOES NOT PROVIDE A WRITTEN CONSENT OF BEING EXAMINED.

### 2.5 Driving and using machines

You can drive and use machines, but be careful. Do not ride on a bicycle. Keep away from situations in which you can have a fall or can be injured. In occurrence of unexpected side effects, the ability to drive and the aptitude to work amidst accident risk are to be reconsidered.

### 2.6 Important information about YTRTRIUM-MULTIBONE INJECTION

Purpose of the use of YTRTRIUM-MULTIBONE INJECTION is to provide a long-term therapeutic effect in case of benign and malignant diseases by causing the lowest possible whole body radiation exposure to the patient. However, radiation dose due to YTRTRIUM-MULTIBONE INJECTION is relatively high.

YOU SHOULD CHECK WITH YOUR DOCTOR BEFORE THE ADMINISTRATION OF THIS PRODUCT IF YOU ARE UNSURE.

#### Taking other medicines:

TO AVOID DRUG INTERACTIONS YOU SHOULD TELL YOUR DOCTOR ABOUT ALL OTHER MEDICINE THAT YOU ARE TAKING OR PLAN TO TAKE, INCLUDING THOSE OBTAINED WITHOUT A PRESCRIPTION.

## 3 HOW IS YTRTRIUM-MULTIBONE INJECTION GIVEN?

This therapeutic injection is administered intravenously. The administered activity depends on the severity of your disease and is determined by your doctor.

#### What to do in case of overdose?

Use of YTRTRIUM-MULTIBONE INJECTION is strictly controlled, thus; the probability of overdose is low. In the unlikely event of overdose, it was proven by experiments that the excess of the injection has no damaging effects.

There are strict rules and regulations referring to the handling, shipping and storage of radioactive materials. Therefore, YTRTRIUM-MULTIBONE INJECTION can only be used in designated clinical settings or institutes. Only people who are specialised to handle, use and annihilate this injection and are properly trained to manage radioactive materials can deal with this medicine. These people instruct you about the precautions and warnings. Comply with their instructions.

## 4 POSSIBLE SIDE EFFECTS OF YTRTRIUM-MULTIBONE INJECTION

Appearance of side effects and undesirable symptoms to be felt are not expected. Your blood parameters can temporarily worsen but it can be controlled by your doctor.

IF YOU NOTICE ANY SIDE EFFECTS, PLEASE INFORM YOUR DOCTOR.

## 5 STORING YTRTRIUM-MULTIBONE INJECTION

Staff of the hospital is responsible for the storage of the product and for avoidance of administering expired product.

Keep out of the reach and sight of children and people who are not authorized to handle, use or transport this product.

Store at room temperature at 15 -25°C, in its own container. Storage conditions and expiry date is indicated on the label of the vial containing the medicine.

This leaflet was prepared on 30.05.2003.

#### Additional information

The information given above is a brief summary. For further information about YTRTRIUM-MULTIBONE INJECTION ask your doctor.

For any information about this medicinal product, please contact the local representative of the Marketing Authorisation Holder (Institute of Isotopes Co. Ltd.)

Authorization number of this leaflet: 757/40/03

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*This leaflet was translated by the manufacturer based on the original Hungarian document.*