

ANNEX I

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

LeukoScan 0.31 mg powder for solution for injection.

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Kit for the preparation of ^{99m}Tc -labelled LeukoScan.

Each 3 ml vial contains 0.31 mg sulesomab (IMMU-MN3 murine Fab'-SH antigranulocyte monoclonal antibody fragments) for the preparation of ^{99m}Tc labelled LeukoScan. The kit does not include the radioisotope.

3. PHARMACEUTICAL FORM

Powder for solution for injection.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

LeukoScan is indicated for diagnostic imaging for determining the location and extent of infection/inflammation in bone in patients with suspected osteomyelitis, including patients with diabetic foot ulcers.

When a bone scan is positive and imaging with LeukoScan is negative, infection is unlikely. When a bone scan is negative, imaging with LeukoScan may rarely show a positive response and this may indicate early osteomyelitis.

4.2 Posology and method of administration

LeukoScan is reconstituted with 0.5 ml isotonic sodium chloride injection. Following reconstitution, 1 ml sodium pertechnetate [^{99m}Tc] is added.

The recommended adult dose is 0.25 mg of Fab' fragment labelled with 900 ± 200 MBq of technetium ^{99m}Tc pertechnetate (approximately 1.2 ml). The radiolabelled solution ~~is~~ should be administered as an intravenous injection. After injection, any remaining portion of the reconstituted solution should be discarded.

Safety and diagnostic accuracy in persons under 21 years of age have not been established. Administration of LeukoScan to young subjects should only be performed after consideration of the possible risks and benefits to the individual subject.

Formal studies have not been performed in patients with renal or hepatic impairment. However, due to the low dose of protein administered and the short half-life of ^{99m}Tc , dosage adjustment is probably not necessary in such patients.

Readministration is discussed in section 4.4.7.

4.3 Contraindications

Patients with known allergies or hypersensitivity to mouse proteins.

Pregnancy.

4.4 Special warnings and special precautions for use

4.4.1 Use of radiopharmaceutical agents

Radiopharmaceutical agents should be used only by qualified personnel with appropriate government authorisation for the use and manipulation of radionuclides.

This radiopharmaceutical may be received, used and administered only by authorised persons in designated clinical settings. Its receipt, storage, use, transfer and disposal are subject to the regulations and/or appropriate licenses of local competent official organisations.

Radiopharmaceuticals should be prepared by the user in a manner which satisfies both radiation safety and pharmaceutical quality requirements. Appropriate aseptic precautions should be taken, complying with the requirements of Good Manufacturing Practices (GMP) for pharmaceuticals.

4.4.2 Reconstitution

Immediately prior to use, contents of the vial are reconstituted in the unlabeled form to prepare LeukoScan [^{99m}Tc]. The unreconstituted contents of the vial before radiolabelling are not to be directly administered to patients.

4.4.3 Recommended imaging protocol

Immunoscintigraphy should be performed one to eight hours after injection.

There was essentially no difference in the detection of the presence or absence of osteomyelitis between the 1-2 hour timepoint and the 5-8 hour timepoint after injection. This suggests that imaging can be accomplished anytime between one and eight hours after injection (at the convenience of the nuclear medicine department and the patient).

Planar imaging in all views necessary to adequately visualise the affected area at 1-8 h post-injection with at least 500 k counts or ten minutes per view should be made. Image acquisition in analogue and/or digital word-mode and at least a 128 x 128 matrix is recommended.

Single photon emission computed tomography (SPECT) imaging can also be conducted and may aid in differentiating osteomyelitis from soft tissue infections. SPECT acquisition parameters recommended are: 60 projections in a 360° step-and-shoot technique, 30 seconds per view in at least a 64 x 64 matrix. Data processing by filtered backprojection and reconstruction in three planes (transaxial, coronal, and sagittal) is recommended.

4.4.4 Imaging performance of LeukoScan

On the basis of two controlled clinical trials of LeukoScan to demonstrate the safety and effectiveness of this product for defining the presence and location of osteomyelitis, in a total of 175 evaluable patients, LeukoScan had a sensitivity of 88.2%, a specificity of 65.6%, an accuracy of 76.6%, a positive predictive value of 70.8%, and a negative predictive value of 85.5%.

In a subgroup of patients in whom LeukoScan was compared directly to the currently available ^{111}In -labelled (occasionally ^{99m}Tc -labelled) autologous white blood cell (WBC) scanning test, LeukoScan

showed a statistically significant increase in sensitivity over that achieved by WBC scanning (87.7% vs. 72.6%, $p = 0.003$ by McNemar's Test), with no discernible decrease in specificity as compared to WBC imaging (67.1% vs. 69.4%).

The clinical results indicate that among different presentations of osteomyelitis, LeukoScan can show different results. The product is more sensitive (93.9% vs. 80.6%), but less specific (51.6% vs. 72.9%), in diagnosing osteomyelitis in patients with diabetic foot ulcers than in patients with other sites of long bone osteomyelitis. However, there is an equivalent diagnostic accuracy between these two presentations (77.5% vs. 75.8%, respectively). This difference is perhaps explained by the anatomically and pathophysiology more complicated clinical setting of osteomyelitis in the diabetic foot, making differentiation of soft tissue and bone infection more difficult than in other presentations of long bone osteomyelitis.

An evaluation of potential clinical impact of LeukoScan demonstrated that LeukoScan could change clinical management in 50.2% or improve clinical outcome in 43.4% of the 175 evaluable patients with suspected osteomyelitis. In 49.7% of the patients, LeukoScan was presumed to provide clinical benefit not achievable by other available diagnostic imaging methods, with the potential that the diagnosis could have been made by LeukoScan alone in 70.3% of the patients. These benefits were also accompanied by a substantial reduction (85.4%) in the number of patients who would require other diagnostic imaging procedures.

Since LeukoScan cross-reacts with CEA, it should be borne in mind that it may interact with CEA producing tumors.

4.4.5 Hypersensitivity

Anaphylactic and other hypersensitivity reactions are possible whenever mouse protein materials are administered to patients. Appropriate cardiopulmonary resuscitation facilities and trained personnel should be available for immediate use in the event of an adverse reaction.

4.4.6 Human Anti-mouse Antibody (HAMA)

In clinical trials involving over 350 patients, no induction of human anti-mouse antibody (HAMA) to antibody fragments has been observed nor has there been any elevation of HAMA levels in patients with pre-existing HAMA.

Patients who have previously received murine monoclonal antibody products are more likely to have HAMA. In subjects with HAMA, there may be a greater chance of hypersensitivity reactions and diminished efficacy in imaging.

4.4.7 Readministration

There are, as yet, limited data on safety following repeated use. Readministration should only be considered in patients whose sera are negative for human anti-mouse antibody (HAMA) elevation in the fragment assay. The overall radiation dose received by the patient over time should also be taken into account.

HAMA titers should be determined before repeated administration of LeukoScan.

4.4.8 Sickle Cell Anemia

LeukoScan has not been employed to diagnose osteomyelitis in patients with sickle cell anemia.

4.4.9 Paroxysmal nocturnal hemoglobinuria

LeukoScan is not expected to bind to leukocytes in patients with paroxysmal nocturnal hemoglobinuria.

4.5 Interactions with other medicaments and other forms of interaction

Formal drug interaction studies have not been performed, but no drug interactions have been described to date, including patients receiving antibiotics.

4.6 Use during pregnancy and lactation

4.6.1 Women of childbearing potential

When it is necessary to administer radioactive medicinal products to women of childbearing potential, information should always be sought about pregnancy. Any woman who has missed a period should be assumed to be pregnant until proven otherwise. Where uncertainty exists, it is important that radiation exposure should be the minimum consistent with achieving the desired clinical information. Alternative techniques which do not involve ionising radiation should be considered.

4.6.2 Pregnancy

Radionuclide procedures carried out on pregnant women also involve radiation doses to the fetus. LeukoScan is contraindicated in pregnancy. Administration of 750 MBq LeukoScan will give an estimated absorbed dose of 4.1 mGy to an embryo or fetus at an early stage.

4.6.3 Lactation

Before administering a radioactive medicinal product to a mother who is breast feeding, consideration should be given as to whether the investigation could be reasonably delayed until the mother has ceased breast feeding and as to whether the most appropriate choice of radiopharmaceutical has been made, bearing in mind the secretion of activity in breast milk. If the administration is considered necessary, breast feeding should be interrupted and the expressed feeds discarded. It is usual to advise that breast feeding can be restarted when the level in the milk will not result in a radiation dose to the child greater than 1 mSv. Due to the short six-hour, half-life of ^{99m}Tc , a dose of less than 1 mSv in mother's milk can be expected 24 hours after the administration of LeukoScan [^{99m}Tc].

4.7 Effects on the ability to drive and use machines

No studies on the effects on the ability to drive and use machines have been performed.

4.8 Undesirable effects

1. The following minor, self-limiting, rare adverse effects have been reported: 1) eosinophilia; 2) facial rash.
2. Statistically significant reductions in white blood cell (WBC) count were observed in the controlled studies at 24 hours post-injection, from a mean value of 8.9 to a mean value of 8.0 ($\times 10^3/\text{mm}^3$), but remained within the normal range, and returned to their pre-injection values by the time of the next measurement at 10 days. By contrast, in non-infected subjects, transient increases in WBC count were seen 24 hours after LeukoScan administration. The eosinophil count increased from 2.7% pre-injection to 2.9% at 24 hours post-injection, and to 3.9% at 10 days, with the magnitude of both increases being statistically significant. The magnitude of these increases were assessed by the investigators to be of no clinical consequence on an individual patient basis.

It is unknown whether the changes in WBC or eosinophil counts observed, although of no clinical significance, are due to a transient effect on WBC function. If so, no inferences concerning the underlying mechanism(s) responsible may be derived from the clinical laboratory results. However, *in vitro* granulocyte function tests did not show significant changes when the sulesomab was added.

In vitro, a positive binding to lymphocytes up to 2-6% has been shown. The effect on lymphocyte function has not been determined.

3. HAMA:
No induction of human anti-mouse antibody (HAMA) reactive with fragment was observed in any patient administered LeukoScan.
4. For each patient, exposure to ionising radiation must be justifiable on the basis of likely benefit. The activity administered must be such that the resulting radiation dose is as low as reasonably achievable bearing in mind the need to obtain the intended diagnostic result. Exposure to ionising radiation is linked with cancer induction and a potential for development of hereditary defects. For diagnostic nuclear medicine investigations, the current evidence suggests that the adverse effects will occur with low frequency because of the low radiation doses incurred.
5. For most diagnostic investigations using a nuclear medicine procedure, the radiation dose delivered (effective dose/EDE) is less than 20 mSv. Higher doses may be justified in some clinical circumstances.

4.9 Overdose

The maximum amount of LeukoScan [^{99m}Tc] that can be administered safely has not been determined. In clinical trials, single doses of 1.0 mg of LeukoScan radiolabelled with 900 ± 200 MBq of ^{99m}Tc were administered to 11 patients with various types of infection and there were no adverse reactions at this dose.

In the unlikely event of a radiation overdose being administered with LeukoScan [^{99m}Tc], the absorbed dose to the patient may be reduced by increased oral or intravenous intake of fluids to promote excretion of the radiolabel.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Diagnostic Radiopharmaceuticals. ATC code: VO4D

At the concentrations and activities used for diagnostic procedures, LeukoScan does not appear to exert any pharmacodynamic effects.

The antibody (IMMU-MN3) recognizes an antigenic structure shared by a surface glycoprotein (NCA-90) of granulocytes and the tumor marker, carcinoembryonic antigen (CEA).

In a single-group, open-label, uncontrolled study of 53 patients with acute or chronic infections of unknown origin or extent, doses of LeukoScan from 0.1 mg to 1.0 mg were studied. There was no dose-response effect for imaging efficacy (sensitivity or specificity) over antibody doses ranging from 0.1 mg to 1.0 mg.

In vitro studies have demonstrated that LeukoScan has no effect on either up-regulation or down-regulation of granulocytes, but LeukoScan does appear to bind more avidly to activated rather than resting granulocytes.

5.2 Pharmacokinetic properties

Pharmacokinetic studies were performed after the intravenous administration of the product. At one hour after infusion, the blood level was 34% of baseline, 17% at four hours and 7% of baseline at 24 hours. The distribution half-life was approximately 1.5 hours; the route of excretion is essentially renal with 41% of the radiolabel excreted in urine over the first 24 hours after administration.

5.3 Preclinical safety data

Only very limited preclinical studies have been performed with either the labeled or unlabeled agent. These revealed no remarkable findings. It should be noted, however, that these studies did not assess genotoxicity, carcinogenic potential, or toxicity to reproduction.

5.4 Radiation dosimetry

For this product, the effective dose equivalent resulting from an administered activity of 750 MBq is typically 7.7 mSv for a 70 kg individual.

Technetium [^{99m}Tc] disintegrates with the emission of gamma radiation with an energy of 140 keV and a half life of 6 hours to technetium [^{99}Tc] which can be regarded as quasi stable.

The estimated absorbed radiation doses to an average adult patient (70 kg) from an intravenous administration of LeukoScan labeled with 750 MBq of technetium-99m are provided in Table 1. These dose estimates assume a urinary bladder voiding interval of two hours. These values were calculated according to Medical Internal Radiation Dosimetry.

Table 1

Summary of Normal Organ Dosimetry to an Average Adult Patient (70 kg) from an Intravenous Dose of LeukoScan Labelled with 750 MBq of Technetium-99m [Dose Estimate from 13 Subjects 26 Administrations]	
LeukoScan [^{99m} Tc]	
Organ	Average Dose μ Gy/MBq
Kidneys	44.9
Urinary Bladder Wall	21.5
Spleen	15.7
Heart Wall	11.8
Lungs	10.0
Liver	9.0
Bone Surfaces	8.0
Adrenals	7.2
Red Marrow	7.1
Pancreas	6.8
Thyroid	6.7
Gall Bladder Wall	6.2
Uterus	5.9
Ovaries	4.9
Small Intestine	4.8
Stomach	4.8
Upper Large Intestinal Wall	4.7
Lower Large Intestinal Wall	4.7
Thymus	4.5
Total Body	4.2
Muscle	3.5
Testes	3.0
Breasts	2.8
Brain	2.4
Skin	2.1
Effective Dose Equivalent*	10.3
Effective Dose*	8.0
* Effective Dose Equivalent and Effective Dose are in units of μ Sv/MBq.	

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Stannous Chloride, Dihydrate	Sodium Chloride
Acetic Acid, Glacial (Trace)	Hydrochloric Acid (Trace)
Sodium Potassium Tartrate, Tetrahydrate	Sodium Acetate, Trihydrate
Sucrose	Nitrogen

6.2 Incompatibilities

In the absence of compatibility studies, this medicinal product must not be mixed with other medicinal products.

6.3 Shelf-life

Kit - 48 months.

Reconstituted and radiolabelled material - 4 hours.

6.4 Special precautions for storage

Kit - Store at 2°C - 8°C (in a refrigerator). Do not freeze.

Reconstituted and radiolabelled material - Do not store above 25°C. Do not refrigerate or freeze.

6.5 Nature and contents of container

One vial prepared so as to contain 0.31 mg lyophilised LeukoScan monoclonal antibody fragment.

The Type I glass vial is closed with a gray butyl rubber stopper with a green flip-off seal.

Pack size: one vial per carton container.

6.6 Instructions for use and handling, and disposal (if appropriate)

Read complete directions thoroughly before starting the preparation procedure.

Reconstituted radiopharmaceuticals should be handled using waterproof gloves, adequate shielding of radioactivity, and aseptic technique. Following reconstitution, unused radiopharmaceutical and vial should be handled as radioactive waste and disposed of in accordance with local requirements.

6.6.1 Method of preparation and quality control

6.6.1.1 Method of preparation

1. Obtain at least 1000 MBq of freshly eluted ^{99m}Tc sodium pertechnetate eluate from any commercial source which has been eluted within the past 24 hours. Using saline injection, bring the final volume of eluate solution to 1.0 ml.
2. Clean the rubber closure of each vial such as with an alcohol wipe. For reconstitution of lyophilised powder, with a sterile disposable syringe add 0.50 ml of saline injection into the shielded LeukoScan 3-ml vial.
3. Swirl and shake the vial contents gently for 30 seconds to insure dissolution. Radiolabelling should take place immediately after reconstitution of product.
4. Add the 1.0 ml into the shielded vial, shake and allow the labelling reaction to proceed for ~~five~~ ten minutes. Total volume in vial equals 1.5 ml.
5. Based on the activity measured in the activity calibrator, withdraw a sufficient amount of the product to provide the desired activity (750-1100 MBq of ^{99m}Tc , see Dosage and Administration). LeukoScan [^{99m}Tc] can be used after ten minutes and should be used within four hours after preparation. LeukoScan [^{99m}Tc] can be stored at room temperature after formulation.
6. Prior to administration, the solution should be inspected visually for particulate matter and discoloration. If either are present, the product should be discarded.

6.6.1.2 Quality Control

After radiolabelling the antibody and diluting a 10 µl sample with 1.5 ml saline, immediately determine the radiochemical purity by Instant Thin Layer Chromatography on silica gel impregnated glass fiber strips, 1 × 9 cm using acetone as the solvent. When the solvent front is within 1 cm of the top of the strip, remove it, cut it in half and place each into a glass tube. Count each tube in a gamma scintillation counter, dose calibrator or radiochromatogram analyzer. Calculate the percent free technetium as follows:

$$\% \text{ Free Technetium} = \frac{\text{Activity in top half of strip}}{\text{Total Activity}} \times 100$$

The radiolabelled product should not contain more than 10% free technetium.

6.6.2 Disposal

After use, the container should be disposed of as radioactive waste.

7. MARKETING AUTHORISATION HOLDER

Immunomedics GmbH
Otto-Röhm-Straße 69
D-64293 Darmstadt
Germany

8. NUMBER IN THE COMMUNITY REGISTER OF MEDICINAL PRODUCTS

EU/1/97/032/001

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

14 February 1997

10. DATE OF REVISION OF THE TEXT

ANNEX II

- A. MANUFACTURER OF THE BIOLOGICAL ACTIVE
SUBSTANCE AND MANUFACTURING AUTHORISATION
HOLDER RESPONSIBLE FOR BATCH RELEASE**
- B. CONDITIONS OF THE MARKETING AUTHORISATION**

**A. MANUFACTURER OF THE BIOLOGICAL ACTIVE SUBSTANCE AND
MANUFACTURING AUTHORISATION HOLDER RESPONSIBLE FOR BATCH
RELEASE**

Name and address of the manufacturer of the biological active substance

Immunomedics, Inc.
300 American Road
Morris Plains
NJ 07950
USA

Name and address of the manufacturer responsible for batch release

Eli Lilly Pharma Fertigung und Distribution GmbH & Co KG
Teichweg 3
D-35396 Giessen
Germany

B. CONDITIONS OF THE MARKETING AUTHORISATION

- **CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE IMPOSED ON
THE MARKETING AUTHORISATION HOLDER**

Medicinal product subject to restricted medical prescription (See Annex I: Summary of Product Characteristics, 4.2)

- **OTHER CONDITIONS**

The holder of this marketing authorisation must inform the European Commission about the marketing plans for the medicinal product authorised by this decision.

ANNEX III
LABELLING AND PACKAGE LEAFLET

A. LABELLING

Container Package Label

LeukoScan
sulesomab
Kit for the Preparation of ^{99m}Tc sulesomab
For Intravenous Use

PACKAGE CONTAINS

One vial, sulesomab powder for solution for injection
Each vial contains 0.31 mg of sulesomab, and stannous chloride, sodium chloride, sodium potassium tartrate, sodium acetate, sucrose, nitrogen.

Store at 2-8°C (in a refrigerator) Batch # xxxx
Do not freeze Expiration Date 00/00/00
Marketing Authorisation # xxxx

Medicinal Product subject to medical prescription.

Keep out of the reach of children.

Dispose of as radioactive waste in accordance with local law.

Immunomedics GmbH
Otto-Röhm-Straße 69
D-64293 Darmstadt
Germany

Vial Label

LeukoScan, sulesomab

Contains 0.31 mg lyophilised sulesomab, ~~0.22 mg~~ stannous chloride and stabilizers.

For Intravenous Use only.

Rehydrate with sterile, non-pyrogenic ^{99m}Tc Na pertechnetate.

Store at 2-8°C (in a refrigerator) Batch # xxxx

Do not freeze

Expiration Date 00/00/00

Marketing authorisation # xxxx

Immunomedics GmbH

Otto-Röhm-Straße 69

D-64293 Darmstadt

Germany

B. PACKAGE LEAFLET

PACKAGE LEAFLET

Please read this leaflet carefully. It does not contain all the information about your medicine that you may need to know, so please refer to the Summary of Product Characteristics or ask your doctor or nurse if you have any questions. This leaflet only applies to LeukoScan.

NAME OF YOUR MEDICINE

LeukoScan (0.31 mg powder for solution for injection) is the trade name of your medicine. Sulesomab is the common name.

COMPOSITION: WHAT YOUR MEDICINE CONTAINS

Each 3-ml vial (glass container) contains 0.31 mg of active substance, sulesomab. The other ingredients are stannous chloride, sodium chloride, sodium potassium tartrate, sodium acetate, sucrose, nitrogen.

NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER AND MANUFACTURER

Marketing Authorisation Holder

Immunomedics GmbH
Otto-Röhm-Straße 69
D-64293 Darmstadt
Germany

Manufacturer responsible for import and batch release in European Economic Area

Eli Lilly Pharma Fertigung und Distribution
GmbH & Co. KG.,
Teichweg 3
D-35396 Giessen
Germany

1. WHAT LEUKOSCAN IS AND WHAT IT IS USED FOR

An antibody is a natural substance made by the body which binds to foreign substances to help remove them from your body. You produce many different kinds of antibodies. LeukoScan (sulesomab) is a special kind of antibody which binds to the surface of certain kinds of blood cells called leukocytes. It is produced in mice and purified so that it can be used in humans. When it is combined to the radioactive technetium isotope and injected, it finds an abnormal accumulation of white blood cells and attaches to them. This helps your doctor make a diagnosis and evaluate the extent of your illness. The doctor does this by using a special imaging camera that reveals areas of radioactivity.

Pharmaceutical Form: What LeukoScan Consists Of

Powder for solution for injection.

Therapeutic Group: How LeukoScan Works

LeukoScan is used to determine the presence of infections in long bones. Shortly after mixing the LeukoScan with the radioactive technetium isotope, the doctor will inject it into your vein. One to eight hours later you will be placed on a special table and pictures will be taken with standard nuclear cameras to see where the infections are located.

Indications: When LeukoScan Is Used

LeukoScan is an antibody fragment which is linked to a radioactive substance called technetium. LeukoScan is used in patients with suspected infection of the bone called osteomyelitis. The antibody

is able to bind to the surface of white blood cells which infiltrate the area of infection. When the radioactive antibody binds to the white blood cells, your doctor can determine where the infection is located by using a special imaging camera that reveals areas of radioactivity. The doctor can also determine how much disease there is. This will help the doctor determine whether there is infection in the bone and what kind of treatment to use.

2. BEFORE YOU USE LEUKOSCAN

Contraindications: When You Should Not Use LeukoScan

If you know that you are allergic to any protein which comes from a mouse, tell your doctor. You should then not be given LeukoScan, unless your doctor takes certain precautions and believes that the potential benefit exceeds any risk. You should not be given LeukoScan if you are pregnant.

Interactions With Other Medications And Other Forms Of Interaction

No interactions have been described to date.

Special Warnings: Things You Should Know Before You Are Given LeukoScan

It is possible to have a serious allergic reaction to LeukoScan. Therefore, your doctor should keep you under close observation for a short time after he has given you this drug.

If you have ever received LeukoScan or another product made from a mouse antibody, your doctor should take a sample of blood for testing to be sure that you have not developed an allergy to it.

If you are breast feeding, you should stop breast feeding your baby for at least 24 hours after you have been given LeukoScan.

If the prepared solution of LeukoScan appears discoloured or contains particles, it should not be used.

Use of Radiopharmaceutical Agents

- Radiopharmaceutical agents should be used only by qualified personnel with appropriate government authorisation for the use and manipulation of radionuclides.
- This radiopharmaceutical may be received, used and administered only by authorised persons in designated clinical settings. Its receipt, storage, use, transfer and disposal are subject to the regulations and/or appropriate licenses of local competent official organisations.
- Radiopharmaceuticals should be prepared by the user in a manner which satisfies both radiation safety and pharmaceutical quality requirements. Appropriate aseptic precautions should be taken, complying with the requirements of Good Manufacturing Practices (GMP) for pharmaceuticals.
- After use, the container should be disposed of as radioactive waste.

3. HOW TO USE LEUKOSCAN

Dosage: The Amount Of Medicine Given

You will receive a single dose of 0.25 mg of LeukoScan. It will contain the radioactive technetium isotope in an amount called 740-1110 MBq.

Method And Route Of Administration: How The Injection Is Given To You

Your doctor will prepare the LeukoScan and the radioactive isotope technetium in a volume of 1.5 ml. 0.25 mg of LeukoScan will be labelled with 740-1110 MBq of technetium. This material will then be injected into your vein. This dose of radioactivity is safe and will be gone from the body in about 24 hours.

Frequency Of Administration: How Often You Will Be Given LeukoScan

LeukoScan is prepared for a single injection. If your doctor decides to give it to you again after several weeks or several months, your blood should be tested first to see if you have developed an allergy to LeukoScan.

4. POSSIBLE SIDE EFFECTS

Some side effects, although not common, have been reported. These include a small increase in the number of certain white blood cells called eosinophils (but without any apparent symptoms) and rash. If you experience either of these or any other unwanted effect after you are given this drug, tell your doctor.

Overdose

The maximum amount of LeukoScan that can be administered has not been determined. Patients have been given four times the amount you will receive with no adverse reactions.

In the unlikely event of the administration of a radiation overdose with LeukoScan, the absorbed dose to the patient may be reduced by increased oral or intravenous intake of fluids to promote excretion of the radiolabel.

5. STORING LEUKOSCAN

Shelf Life: How Long LeukoScan Can Be Kept

Kit - 48 months.

Reconstituted and radiolabelled material - 4 hours.

Special precautions for storage: How It Is Stored

Kit - Store at 2°C-8°C (in a refrigerator). Do not freeze.

Reconstituted and radiolabelled material - Do not store above 25°C. Do not refrigerate or freeze.

This leaflet was last approved on {date}