Summary of Product Characteristics

1. Name of the Medical Product
SANIX - DS 100

2. Qualitative & Quantitative Composition:
Each 5ml reconstituted suspension contains:
Cefixime trihydrate USP
Eq. to Cefixime.....100mg

For the full list of excipients, see section 6.1.

3. Pharmaceutical Form:
Dry Powder for oral suspension

Visual Description:
Off-white free flowing powder with characteristic odour.

4. Clinical Particulars
4.1 Therapeutic Indications:
Cefixime for Oral Suspension is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:
- Uncomplicated Urinary Tract Infections
- Otitis Media
- Pharyngitis and Tonsillitis

Note: Penicillin is the usual drug of choice in the treatment of S. pyogenes infections, including the prophylaxis of rheumatic fever. Cefixime is generally effective in the eradication of S. pyogenes from the nasopharynx.
- Acute Exacerbations of Chronic Bronchitis
- Uncomplicated gonorrhea (cervical/urethral)

4.2 Posology and Method of administration:
Route of administration: Oral.
Adults
The recommended dose of Cefixime is 400mg daily. For the treatment of uncomplicated cervical/urethral gonococcal infections, a single oral dose of 400mg is recommended.
Children
The recommended dose is 8 mg/kg/day of the suspension. This may be administered as a single daily dose or may be given in two divided doses, as 4 mg/kg every 12 hours.

Suggested doses for paediatric patients
Children weighing more than 45 kg or older than 12 years should be treated with the recommended adult dose.
Otitis media should be treated with the chewable tablets or suspension. Clinical trials of otitis media were conducted with the chewable tablets or suspension, and the chewable tablets or suspension results in higher peak blood levels than the tablet when administered at the same dose. Therefore, the tablet or capsule should

not be substituted for the chewable tablets or suspension in the treatment of otitis media.
In the treatment of infections due to Streptococcus pyogenes, a therapeutic dosage of cefixime should be administered for at least 10 days.

Renal Impairment
Cefixime for Oral Suspension may be administered in the presence of impaired renal function. Normal dose and schedule may be employed in patients with creatinine clearances of 60 ml/min or greater. Patients whose clearance is between 21 and 59 ml/min or patients who are on renal hemodialysis may be given 13 ml (Dose/day). Patients whose clearance is 20 ml/min or less, or patients on continuous ambulatory peritoneal dialysis may be given 8.6 ml (Dose/day). Neither hemodialysis nor peritoneal dialysis removes significant amounts of drug from the body.

4.3 Contraindications:
Cefixime is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

4.4 Special warnings & precautions for use
Before therapy with Cefixime is instituted; careful inquiry should be made to determine whether the patient has had previous hypersensitivity reactions to cephalosporins, penicillins, or other drugs. If this product is to be given to penicillin-sensitive patients, caution should be exercised because cross hypersensitivity among beta-lactam antibiotics has been clearly documented and may occur in up to 10% of patients with a history of penicillin allergy. If an allergic reaction to Cefixime occurs, discontinue the drug. Serious acute hypersensitivity reactions may require treatment with epinephrine and other emergency measures, including oxygen, intravenous fluids, intravenous antihistamines, corticosteroids, pressor amines and airway management, as clinically indicated.
Anaphylactic/anaphylactoid reactions (including shock and fatalities) have been reported with the use of Cefixime. Antibiotics, including Cefixime, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs. Treatment with broad spectrum antibiotics, including Cefixime, alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is a primary cause of severe antibiotic-associated diarrhea including pseudomembranous colitis.

PRECAUTIONS
The possibility of the emergence of resistant organisms which might result in overgrowth should be kept in mind, particularly during prolonged treatment. In such use, careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken. The dose of Cefixime be adjusted in patients with renal impairment as well as those undergoing continuous ambulatory peritoneal dialysis (CAPD) and hemodialysis (HD). Patients on dialysis should be monitored carefully. Cefixime should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
Cephalosporins may be associated with a fall in prothrombin activity. Those at risk include patients with renal or hepatic impairment, or poor nutritional state, as well as patients receiving a protracted course of antimicrobial therapy, and patients

previously stabilized on anticoagulant therapy. Prothrombin time should be monitored in patients at risk and exogenous vitamin K administered as indicated. Prescribing Cefixime in the absence of a proven or strongly suspected bacterial infection or a prophylactic indication is unlikely to provide benefit to the patient and increases the risk of development of drug-resistant bacteria.

4.5 Interactions with other medicinal products and other forms of Interactions
Carbamazepine: Elevated carbamazepine levels have been reported in postmarketing experience when cefixime is administered concomitantly. Drug monitoring may be of assistance in detecting alterations in carbamazepine plasma concentrations.

Warfarin and Anticoagulants: Increased prothrombin time, with or without clinical bleeding, has been reported when cefixime is administered concomitantly.

Drug/Laboratory Test Interactions
A false-positive reaction for ketones in the urine may occur with tests using nitroprusside but not with those using nitroferricyanide.
The administration of cefixime may result in a false-positive reaction for glucose in the urine using Clinitest®, Benedict's solution, or Fehling's solution. It is recommended that glucose tests based on enzymatic glucose oxidase reactions (such as Clinistix® or TesTape®) be used. A false-positive direct Coombs test has been reported during treatment with other cephalosporin antibiotics; therefore, it should be recognized that a positive Coombs test may be due to the drug.

4.6 Pregnancy and Lactation
Pregnancy: There is insufficient evidence of safety for use during human pregnancy. Animal studies do not reveal a teratogenic effect.
Cefixime passes through the placenta. The risk/benefit of administration of cefixime should be highly critically considered, in particular during the first 3 months of pregnancy.
Lactation: No cefixime concentrations could be determined in breast milk. Nevertheless, until further clinical experience is available, cefixime should not be given to nursing mothers or they should use a breast pump for the duration of therapy and dispose of the milk.
Fertility: Reproduction studies performed in mice and rats have revealed no evidence of impaired fertility.

4.7 Effects on ability to drive and use machine*:
Cefixime has no or negligible influence on the ability to drive or use machines. However, cefixime may cause side effects influencing the capacity of reaction and the ability to drive and use machines.

4.8 Undesirable Effects*:
-*Gastrointestinal:* Diarrhea, loose or frequent stools, abdominal pain, dyspepsia, nausea and flatulence. Several cases of documented pseudomembranous colitis were identified during the studies. The onset of pseudomembranous colitis symptoms may occur during or after therapy.
-*Hypersensitivity Reactions:* Anaphylactic/anaphylactoid reactions (including shock and fatalities),

skin rashes, urticaria, drug fever, pruritus, angioedema, and facial edema. Erythema multiforme, Stevens-Johnson syndrome and serum sickness-like reactions have been reported.
-*Hepatic:* Transient elevations in SGPT, SGOT, alkaline phosphatase, hepatitis, jaundice.
-*Renal:* Transient elevations in BUN or creatinine, acute renal failure.
-*Central Nervous System:* Headaches, dizziness, seizures.
-*Hemic and Lymphatic Systems:* Transient thrombocytopenia, leukopenia, neutropenia, eosinophilia, elevated LDH, pancytopenia, agranulocytosis. Prolongation in prothrombin time was seen rarely.
-*Abnormal Laboratory Tests:* Hyperbilirubinemia.
-*Other:* Genital pruritus, vaginitis, candidiasis, toxic epidermal necrolysis.
In addition to the adverse reactions listed above which have been observed in patients treated with Cefixime, the following adverse reactions and altered laboratory tests have been reported for cephalosporin-class antibiotics:
Allergic reactions, superinfection, renal dysfunction, toxic nephropathy, hepatic dysfunction including cholestasis, aplastic anemia, hemolytic anemia, hemorrhage and colitis.
Several cephalosporins have been implicated in triggering seizures, particularly in patients with renal impairment when the dosage was not reduced. If seizures associated with drug therapy occur, the drug should be discontinued. Anticonvulsant therapy can be given if clinically indicated.

Reporting of suspected adverse reactions: Healthcare professionals are requested to report any suspected adverse reactions via pharmacy and poisons board, Pharmacovigilance Reporting System (PvERS) https://pv.pharmacyboardkenya.org.

4.9 Overdose:
Gastric lavage may be indicated; otherwise, no specific antidote exists. Cefixime is not removed in significant quantities from the circulation by hemodialysis or peritoneal dialysis.

5. Pharmacological properties:
5.1 Pharmacodynamic Properties:
-*Hepatic:* Transient elevations in SGPT, SGOT, alkaline phosphatase, hepatitis, jaundice.

-*Renal:* Transient elevations in BUN or creatinine, acute renal failure.

-*Central Nervous System:* Headaches, dizziness, seizures.

-*Hemic and Lymphatic Systems:* Transient thrombocytopenia, leukopenia, neutropenia, eosinophilia, elevated LDH, pancytopenia, agranulocytosis. Prolongation in prothrombin time was seen rarely.

-*Abnormal Laboratory Tests:* Hyperbilirubinemia.

-*Other:* Genital pruritus, vaginitis, candidiasis, toxic epidermal necrolysis.

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5. Pharmacological properties

5.1 Pharmacodynamic properties

General properties

Cefixime is an oral cephalosporin antibiotic similar in structure, bacterial spectrum and ß-lactamase stability to third generation parenteral cephalosporins of the cefotaxime type.

Pharmacotherapeutic group: Third generation cephalosporins. ATC Code: J01DD08

Mode of action

Cefixime demonstrates bactericidal action against both Gram-positive and -negative bacteria and has a high level of stability to many clinically relevant beta-lactamases. Cefixime works through an inhibition of the bacterial cell-wall synthesis by blocking of penicillin-binding proteins (PBP3, 1a and 1b). The antibacterial spectrum of cefixime is not however, as broad as that of the parenteral third generation cephalosporins. Antibacterial efficacy of cefixime mainly depends on the time period, in which its level is above the minimum inhibitory concentration (MIC).

Mechanisms of resistance

Resistance to cefixime in isolates of Haemophilus influenzae and Neisseria gonorrhoeae is most often associated with alterations in penicillin-binding proteins (PBPs). Cefixime may have limited activity against Enterobacteriaceae producing extended spectrum beta-lactamases (ESBLs). Pseudomonas species, Enterococcus species, strains of Group D streptococci, Listeria monocytogenes, most strains of staphylococci (including methicillin-resistant strains), most strains of Enterobacter species, most strains of Bacteroides fragilis, and most strains of Clostridium species are resistant to cefixime.

SPECTRUM OF ANTI BACTERIAL ACTIVITY

Cefixime has been shown to be active against most isolates of the following microorganisms, both in vitro and in clinical infections.

Gram-positive Bacteria

Streptococcus pneumoniae

Streptococcus pyogenes

Gram-negative Bacteria

Escherichia coli

Haemophilus influenzae

Moraxella catarrhalis

Neisseria gonorrhoeae

Proteus mirabilis

5.2 Pharmacokinetics Properties*:

Cefixime given orally, is about 40% to 50% absorbed whether administered with or without food. Approximately 50% of the absorbed dose is excreted unchanged in the urine in 24 hours. The serum half-life of Cefixime in healthy subjects is independent of dosage form and averages 3 to 4 hours, but may range up to 9 hours in some normal volunteers. In subjects with moderate impairment of renal function (20 to 40 ml/min creatinine clearance), the average serum half-life of Cefixime is prolonged to 6.4 hours. In severe renal impairment (5 to 20 ml/min creatinine clearance) the half-life increased to an average of 11.5 hours. The drug is not cleared significantly from the blood by hemodialysis.

5.3 Preclinical safety data
The investigations on toxicity after repeated application showed substance-related effects in the gastrointestinal system and in the kidneys. Cefixime is, as other cephalosporins, to be classified as potentially nephrotoxic

6. Pharmaceutical particulars:
6.1 List of Excipients:
Sucrose (P.G Sugar), Sucrose (P.G Sugar) (80mesh), Xanthan Gum, Colloidal Silicon dioxide, Pineapple Premium flavor, Banana Premium flavour and Tartrazine Lake.

6.2 Incompatibilities:
Not applicable

6.3 Shelf life:
24 months

6.4 Special Precautions for storage:
Store at temperature below 30°C. Protect from light.

6.5 Nature and contents of container:
Cefixime for Oral Suspension USP 100mg/5ml is available in 100ml HDPE bottle packed along with Leaflet in a Carton.

6.6 Special precautions for disposal:
No special requirements

7. Marketing Authorization Holder:
Sance Laboratories Private Limited, VI/51B, P.B. No: 2, Kozhuvanal - 686573, Pala, Kottayam District,Kerala, India.

Manufacturing Site Address:
Company name: Sance Laboratories Pvt. Ltd.
Address: VI/51B, P.B No.2, Kozhuvanal, Pala, Kottayam 686573, Kerala.
Country: India

8. Marketing Authorization Numbers:
H2022/CTD9830/22265

9. Date of first registration /renewal of the registration:
2023 March 13

10. Date of revision of text:
2023 March **13**