Bosch

ONDRIX
(ONDANSETRON HCl)

4mg/5mL Syrup
(Oral Solution)

اُونڈرکس
۴ ملی گرام/۵ ملی لیٹر سیرپ
(اورل سلوشن)
(اونڈسٹرون ہائیڈروکلورائیڈ)

QUALITATIVE AND QUANTITATIVE COMPOSITION
Ondrix 4mg/5mL Syrup (Oral Solution)
Each 5mL contains:
Ondansetron Hydrochloride USP
equivalent to Ondansetron……4mg
(Product Specs.: USP)

PHARMACEUTICAL FORM
Oral solution

CLINICAL PARTICULARS
Therapeutic indications
Ondrix is indicated for the prevention of nausea and vomiting associated with:
- Highly emetogenic cancer chemotherapy, including cisplatin greater than or equal to 50mg/m^2.
- Initial and repeat courses of moderately emetogenic cancer chemotherapy.
- Radiotherapy in patients receiving either total body irradiation, single high-dose fraction to the abdomen, or daily fractions to the abdomen.
- Indicated for the prevention of postoperative nausea and/or vomiting.

Posology and Method of Administration
Adult Recommended Dosage Regimen for Prevention of Nausea and Vomiting

Indication	Dosage Regimen
Highly emetogenic cancer chemotherapy	A single 24mg dose administered 30 minutes before the start of single-day highly emetogenic chemotherapy, including cisplatin greater than or equal to 50mg/m^2.
Moderately emetogenic cancer chemotherapy	8 mg administered 30 minutes before the start of chemotherapy, with a subsequent 8 mg dose 8 hours after the first dose. Then administer 8 mg twice a day (every 12 hours) for 1 to 2 days after completion of chemotherapy.
Radiotherapy	For total body irradiation: 8mg administered 1 to 2 hours before each fraction of radiotherapy each day. For single high-dose fraction radiotherapy to the abdomen: 8mg administered 1 to 2 hours before radiotherapy, with subsequent 8 mg doses every 8 hours after the first dose for 1 to 2 days after completion of radiotherapy. For daily fractionated radiotherapy to the abdomen: 8mg administered 1 to 2 hours before radiotherapy, with subsequent 8mg doses every 8 hours after the first dose for each day radiotherapy is given.
Postoperative	16mg administered 1 hour before induction of anesthesia.

Pediatric Recommended Dosage Regimen for Prevention of Nausea and Vomiting

Indication	Dosage Regimen
Moderately Emetogenic Cancer Chemotherapy	12 to 17 years of age: 8mg administered 30 minutes before the start of chemotherapy, with a subsequent 8 mg dose 8 hours after the first dose. Then administer 8mg twice a day (every 12 hours) for 1 to 2 days after completion of chemotherapy. 4 to 11 years of age: 4mg administered 30 minutes before the start of chemotherapy, with a subsequent 4mg dose 4 and 8 hours after the first dose. Then administer 4mg three times a day for 1 to 2 days after completion of chemotherapy.

Special populations
Patients with Renal impairment: No alteration of daily dosage or frequency of dosing, or route of administration are required.
Patients with Hepatic impairment: Clearance of ondansetron is significantly reduced and serum half-life significantly prolonged in patients with moderate or severe impairment of hepatic function. In such patients a total daily dose of 8mg should not be exceeded and therefore parenteral or oral administration is recommended.

Patients with poor Sparteine/Debrisoquine Metabolism: No alteration of daily dosage or frequency of dosing is required.

Elderly: There is limited experience in the use of ondansetron in the prevention and treatment of post-operative nausea and vomiting (PONV) in the elderly, however ondansetron is well tolerated in patients over 65 years receiving chemotherapy.

Paediatric population: Patients receiving ondansetron with hepatotoxic chemotherapeutic agents should be monitored closely for impaired hepatic function.

Contraindications
- Hypersensitivity to ondansetron.
- Concomitant use with apomorphine is contraindicated.

Special warnings and precautions for use
- Hypersensitivity reactions have been reported in patients who have exhibited hypersensitivity to other selective 5-HT3 receptor antagonists. Respiratory events should be treated symptomatically and clinicians should pay particular attention to them as precursors of hypersensitivity reactions.

- Avoid ondansetron in patients with congenital long QT syndrome. Ondansetron should be administered with caution to patients who have or may develop prolongation of QTc, including patients with electrolyte abnormalities, congestive heart failure, bradyarrhythmias or patients taking other medicinal products that lead to QT prolongation or electrolyte abnormalities.

- Cases of myocardial ischemia have been reported in patients treated with ondansetron. In some patients, especially in the case of intravenous administration, symptoms appeared immediately. Patients should be alerted to the signs and symptoms of myocardial ischemia.

- Hypokalaemia and hypomagnesaemia should be corrected prior to ondansetron administration.

- If concomitant treatment with ondansetron and other serotonergic drugs is clinically warranted, appropriate observation of the patient is advised.

- Ondansetron is known to increase large bowel transit time, patients with signs of subacute intestinal obstruction should be monitored following administration.

- In patients with adenotonsillar surgery prevention of nausea and vomiting with ondansetron may mask occult bleeding. Therefore, such patients should be followed carefully after ondansetron.

Interaction with other medicinal products and other forms of interaction
Cytochrome P-450 enzymes: Ondansetron is metabolised by multiple hepatic cytochrome P-450 enzymes; CYP3A4, CYP2D6 ,CYP1A2 and is normally compensated by other enzymes and should result in little or no significant change in overall ondansetron clearance or dose requirement.

Serotonergic Drugs (e.g. SSRIs and SNRIs): There have been reports describing patients with serotonin syndrome (including altered mental status, autonomic instability and neuromuscular abnormalities) following the concomitant use of ondansetron and other serotonergic drugs (including SSRIs and SNRIs).

Apomorphine: Profound hypotension and loss of consciousness when ondansetron was administered with apomorphine hydrochloride, concomitant use with apomorphine is contraindicated.

Phenytoin, Carbamazepine and Rifampicin: In patients treated with potent inducers of CYP3A4 (i.e. phenytoin, carbamazepine, and rifampicin), the oral clearance of ondansetron is increased and ondansetron blood concentrations is decreased.

Tramadol: Ondansetron may reduce the analgesic effect of tramadol.

QT prolonging drugs: Caution should be exercised when ondansetron is coadministered with drugs that prolong the QT interval and/or cause electrolyte abnormalities. Use of ondansetron with QT prolonging drugs may result in additional QT prolongation.

Cardiotoxic Drugs, Antibiotics, Antifungals, Antiarrhythmics: Concomitant use of ondansetron with cardiotoxic drugs (e.g. anthracyclines (such as doxorubicin, daunorubicin or trastuzumab), antibiotics (such as erythromycin), antifungals (such as ketoconazole), antiarrhythmics (such as amiodarone) and beta blockers (such as atenolol or timolol) may increase the risk of arrhythmias.

Pregnancy, Lactation and Fertility
Pregnancy: Ondansetron is suspected to cause orofacial malformations when administered during the first trimester of pregnancy. It should not be used during the first trimester of pregnancy.

Lactation: It is recommended that mothers receiving ondansetron should not breast-feed their babies.

Fertility: There is no information on the effects of ondansetron on human fertility.

Effects on ability to drive and use machines
Ondansetron has no or negligible influence on the ability to drive and use machines. In psychomotor testing ondansetron does not impair performance nor cause sedation. No detrimental effects on such activities are predicted from the pharmacology of ondansetron.

Undesirable Effects
Immune system disorders *Rare:* Immediate hypersensitivity reactions sometimes severe, including anaphylaxis.

Nervous system disorders: *Very common:* Headache, *Uncommon:* Seizures, movement disorders (including extrapyramidal reactions (such as oculogyric crisis, dystonic reactions and dyskinesia).
Cardiac disorders: *Uncommon:* Arrhythmias, chest pain with or without ST segment depression, bradycardia, *Rare:* QTc prolongation (including Torsade de Pointes), *Not known:* Myocardial ischemia.

Vascular disorders: *Common:* Sensation of warmth or flushing.
Uncommon: Hypotension.

Respiratory, thoracic and mediastinal disorders: *Uncommon:* Hiccups.

Gastrointestinal disorders: *Common:* Constipation. Ondansetron is known to increase the large bowel transit time and may cause constipation in some patients.

Hepatobiliary disorders: *Uncommon:* Asymptomatic increases in liver function tests.

Overdose
Ondansetron prolongs the QT interval in a dose-dependent fashion. ECG monitoring is recommended in cases of overdose.

Pediatric cases consistent with serotonin syndrome have been reported after inadvertent oral overdoses of ondansetron (exceeded estimated ingestion of 4mg/kg) in infants and children aged 12 months to 2 years.
There is no specific antidote for ondansetron, therefore in all cases of suspected overdose, symptomatic and supportive therapy should be given as appropriate.

PHARMACOLOGICAL PROPERTIES
Pharmacodynamic properties
Pharmacotherapeutic group: Serotonin (5-HT3) antagonists,

ATC Code: A04AA01

Mechanism of action: Ondansetron is a potent, highly selective 5-HT3 receptor-antagonist. Its precise mode of action in the control of nausea and vomiting is not known. Chemotherapeutic agents and radiotherapy may cause release of 5-HT in the small intestine initiating a vomiting reflex by activating vagal afferents via 5-HT3 receptors.

Ondansetron blocks the initiation of this reflex. Activation of vagal afferents may also cause a release of 5-HT in the area postrema, located on the floor of the fourth ventricle, and this may also promote emesis through a central mechanism. Thus, the effect of ondansetron in the management of the nausea and vomiting induced by cytotoxic chemotherapy and radiotherapy is probably due to antagonism of 5-HT3 receptors on neurons located both in the peripheral and central nervous system.
The mechanisms of action in post-operative nausea and vomiting are not known but there may be common pathways with cytotoxic induced nausea and vomiting. Ondansetron does not alter plasma prolactin concentrations.

Pharmacokinetic properties
Absorption: Following oral administration, ondansetron is passively and completely absorbed from the gastrointestinal tract and undergoes first pass metabolism. Peak plasma concentrations of about 30mg/mL are attained approximately 1.5 hours after an 8mg dose. For doses above 8mg the increase in ondansetron systemic exposure with dose is greater than proportional; this may reflect some reduction in first pass metabolism at higher oral doses. The disposition of ondansetron following oral, intramuscular (IM) and intravenous (IV) dosing is similar with a terminal half-life of about 3 hours and steady state volume of distribution of about 140L.

Distribution: Ondansetron is not highly protein bound (70-76%).

Biotransformation and Elimination: Ondansetron is cleared from the systemic circulation predominantly by hepatic metabolism through multiple enzymatic pathways. Less than 5% of the absorbed dose is excreted unchanged in the urine.

Special Patient Populations
Gender: Females have a greater rate and extent of absorption following an oral dose and reduced systemic clearance and volume of distribution (adjusted for weight).

Hepatic impairment: Following oral, intravenous or intramuscular dosing in patients with severe hepatic impairment, ondansetron's systemic clearance is markedly reduced with prolonged elimination half-lives (15-32 hours) and an oral bioavailability approaching 100% due to reduced pre-systemic metabolism.

PHARMACEUTICAL PROPERTIES
Incompatibilities
None

Shelf life: As provided on pack

Special precautions for storage
Protect from light, heat & moisture, store below 30°C.
Do not take if seal is broken.
Close the cap properly after use.
Keep out of the reach of children.
To be sold on the prescription of a registered medical practitioner only.

Nature and contents of container
50mL in amber glass bottle.

REGISTRATION HOLDER / MARKETING AUTHORIZATION HOLDER
Bosch Pharmaceuticals (Pvt.) Ltd.
221-223, Sector-23, Korangi Industrial Area, Karachi-Pakistan.

Manufacturer:
Wimits Pharmaceuticals (Pvt.) Ltd.
Plot No. 129 Sundar Industrial Estate, Lahore, Pakistan.

REGISTRATION / MARKETING AUTHORIZATION NUMBER
128071

DATE FROM WHICH MARKETING IS AUTHORIZED/RENEWAL OF THE AUTHORIZATION
04-07-2025

DATE OF REVISION OF THE TEXT
25-02-2026

ہدایات:
روشنی، گرمی اور نمی سے محفوظ ۳۰ ڈگری سینٹی گریڈ سے کم درجہ حرارت پر رکھیں۔
صرف سیل بند بوتل خریدیں۔ استعمال کے بعد ڈھکن کو اچھی طرح بند رکھیں۔
بچوں کی پہنچ سے دور رکھیں۔
صرف مستند ڈاکٹر کے نسخے پر فروخت کے لئے۔

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Manufactured for:
Bosch Pharmaceuticals (Pvt.) Ltd.
221-223, Sector 23, Korangi Industrial Area,
Karachi - Pakistan.
Manufactured by:
Wimits Pharmaceuticals (Pvt.) Ltd.,
Plot No.129, Sundar Industrial Estate, Lahore, Pakistan