

ANNEX I
SUMMARY OF PRODUCT CHARACTERISTICS

▼ This medicinal product is subject to additional monitoring. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse reactions. See section 4.8 for how to report adverse reactions.

1. NAME OF THE MEDICINAL PRODUCT

Jinarc 15 mg tablets
Jinarc 30 mg tablets
Jinarc 15 mg tablets + Jinarc 45 mg tablets
Jinarc 30 mg tablets + Jinarc 60 mg tablets
Jinarc 30 mg tablets + Jinarc 90 mg tablets

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Jinarc 15 mg tablets

Each tablet contains 15 mg of tolvaptan.

Excipient(s) with known effect

Each 15 mg tablet contains approximately 35 mg lactose (as monohydrate).

Jinarc 30 mg tablets

Each tablet contains 30 mg of tolvaptan.

Excipient(s) with known effect

Each 30 mg tablet contains approximately 70 mg lactose (as monohydrate).

Jinarc 15 mg tablets + Jinarc 45 mg tablets

Each 15 mg tablet contains 15 mg of tolvaptan.

Each 45 mg tablet contains 45 mg of tolvaptan.

Excipient(s) with known effect

Each 15 mg tablet contains approximately 35 mg lactose (as monohydrate).

Each 45 mg tablet contains approximately 12 mg lactose (as monohydrate).

Jinarc 30 mg tablets + Jinarc 60 mg tablets

Each 30 mg tablet contains 30 mg of tolvaptan.

Each 60 mg tablet contains 60 mg of tolvaptan.

Excipient(s) with known effect

Each 30 mg tablet contains approximately 70 mg lactose (as monohydrate).

Each 60 mg tablet contains approximately 16 mg lactose (as monohydrate).

Jinarc 30 mg tablets + Jinarc 90 mg tablets

Each 30 mg tablet contains 30 mg of tolvaptan.

Each 90 mg tablet contains 90 mg of tolvaptan.

Excipient(s) with known effect

Each 30 mg tablet contains approximately 70 mg lactose (as monohydrate).

Each 90 mg tablet contains approximately 24 mg lactose (as monohydrate).

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Tablet.

Jinarc 15 mg tablets

Blue, triangular (major axis: 6.58 mm, minor axis: 6.20 mm), shallow-convex, debossed with “OTSUKA” and “15” on one side.

Jinarc 30 mg tablets

Blue, round (diameter: 8 mm), shallow-convex, debossed with “OTSUKA” and “30” on one side.

Jinarc 15 mg tablets + Jinarc 45 mg tablets

15 mg tablet: blue, triangular (major axis: 6.58 mm, minor axis: 6.20 mm), shallow-convex, debossed with “OTSUKA” and “15” on one side.

45 mg tablet: blue, square (6.8 mm on a side, major axis 8.2 mm), shallow-convex, debossed with “OTSUKA” and “45” on one side

Jinarc 30 mg tablets + Jinarc 60 mg tablets

30 mg tablet: blue, round (diameter: 8 mm), shallow-convex, debossed with “OTSUKA” and “30” on one side.

60 mg tablet: blue, modified rectangular (major axis 9.9 mm, minor axis 5.6 mm), shallow-convex, debossed with “OTSUKA” and “60” on one side

Jinarc 30 mg tablets + Jinarc 90 mg tablets

30 mg tablet: blue, round (diameter: 8 mm), shallow-convex, debossed with “OTSUKA” and “30” on one side.

90 mg tablet: blue, pentagonal (major axis 9.7 mm, minor axis 9.5 mm), shallow-convex, debossed with “OTSUKA” and “90” on one side

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Jinarc is indicated to slow the progression of cyst development and renal insufficiency of autosomal dominant polycystic kidney disease (ADPKD) in adults with CKD stage 1 to 3 at initiation of treatment with evidence of rapidly progressing disease (see section 5.1).

4.2 Posology and method of administration

Tolvaptan treatment must be initiated and monitored under the supervision of physicians with expertise in managing ADPKD and a full understanding of the risks of tolvaptan therapy including hepatic toxicity and monitoring requirements (see section 4.4).

Posology

Jinarc is to be administered twice daily in split dose regimens of 45 mg + 15 mg, 60 mg + 30 mg or 90 mg + 30 mg. The morning dose is to be taken at least 30 minutes before the morning meal. The second daily dose can be taken with or without food. According to these split dose regimens the total daily doses are 60, 90, or 120 mg.

Dose titration

The initial dose is 60 mg tolvaptan per day as a split-dose regimen of 45 mg + 15 mg (45 mg taken upon waking and prior the morning meal and 15 mg taken 8 hours later). The initial dose is to be titrated upward to a split-dose regimen of 90 mg tolvaptan (60 mg + 30 mg) per day and then to a target split-dose regimen of 120 mg tolvaptan (90 mg + 30 mg) per day, if tolerated, with at least weekly intervals between titrations. Dose titration has to be performed cautiously to ensure that high doses are not poorly tolerated through overly rapid up-titration. Patients may down-titrate to lower doses based on tolerability. Patients have to be maintained on the highest tolerable tolvaptan dose. The aim of dose titration is to block activity of vasopressin at the renal V₂ receptor as completely and constantly as possible, while maintaining acceptable fluid balance (see section 4.4). Measurements of urine osmolality are recommended to monitor the adequacy of vasopressin inhibition. Periodic monitoring of plasma osmolality or serum sodium (to calculate plasma osmolality) and/or body weight

should be considered to monitor the risk of dehydration secondary to the aquaretic effects of tolvaptan in case of patient's insufficient water intake.

The safety and efficacy of Jinarc in CKD stage 5 have not been adequately explored and therefore tolvaptan treatment should be discontinued if renal insufficiency progresses to CKD stage 5.

The morning dose of Jinarc is to be taken at least 30 minutes before the morning meal. The second daily dose can be taken with or without food.

Therapy must be interrupted if the ability to drink or the accessibility to water is limited (see section 4.4). Tolvaptan must not be taken with grapefruit juice (see section 4.5). Patients must be instructed to drink sufficient amounts of water or other aqueous fluids (see section 4.4).

Dose adjustment for patients taking strong CYP3A inhibitors

In patients taking strong CYP3A inhibitors (see section 4.5), tolvaptan doses have to be reduced as follows:

Tolvaptan daily split-dose	Reduced dose (once daily)
90+30 mg	30 mg (further reduction to 15 mg if 30 mg are not well tolerated)
60+30 mg	30 mg (further reduction to 15 mg if 30 mg are not well tolerated)
45+15 mg	15 mg

Dose adjustment for patients taking moderate CYP3A inhibitors

In patients taking moderate CYP3A inhibitors, tolvaptan doses have to be reduced as follows:

Tolvaptan daily split-dose	Reduced split-dose
90+30 mg	45+15 mg
60+30 mg	30+15 mg
45+15 mg	15+15 mg

Further reductions have to be considered if patients cannot tolerate the reduced tolvaptan doses.

Elderly population

Increasing age has no effect on tolvaptan plasma concentrations. However, the safety and effectiveness of tolvaptan in ADPKD patients aged over 50 years has not yet been established.

Renal impairment

Tolvaptan is contraindicated in anuric patients (see section 4.3).

Dose adjustment is not required in patients with renal impairment. No clinical trials in subjects with a creatinine clearance < 10 mL/min or in patients undergoing dialysis have been conducted. The risk of hepatic damage in patients with severely reduced renal function (i.e. eGFR < 20) may be increased; these patients should be carefully monitored for hepatic toxicity. Data for patients in CKD stage 3 are more limited than for patients in stage 1 or 2 (see section 5.1).

Hepatic impairment

In patients with severe hepatic impairment the benefits and risks of treatment with Jinarc must be evaluated carefully. Patients must be managed carefully and liver enzymes must be monitored regularly (see section 4.4).

Jinarc is contraindicated in patients with elevated liver enzymes and/or signs or symptoms of liver injury prior to initiation of treatment that meet the requirements for permanent discontinuation of tolvaptan (see sections 4.3 and 4.4).

No dose adjustment is needed in patients with mild or moderate hepatic impairment (Child-Pugh classes A and B).

Paediatric population

The safety and efficacy of tolvaptan in children and adolescents has not yet been established. No data are available. Tolvaptan is not recommended in the paediatric age group.

Method of administration

Oral use.

Tablets must be swallowed without chewing and with a glass of water.

4.3 Contraindications

- Hypersensitivity to the active substance or to any of the excipients listed in section 6.1 or to benzazepine or benzazepine derivatives (see section 4.4)
- Elevated liver enzymes and/or signs or symptoms of liver injury prior to initiation of treatment that meet the requirements for permanent discontinuation of tolvaptan (see section 4.4)
- Anuria
- Volume depletion
- Hyponatraemia
- Patients who cannot perceive or respond to thirst
- Pregnancy (see section 4.6)
- Breast-feeding (see section 4.6)

4.4 Special warnings and precautions for use

Idiosyncratic hepatic toxicity

Tolvaptan has been associated with idiosyncratic elevations of blood alanine and aspartate aminotransferases (ALT and AST) with infrequent cases of concomitant elevations in bilirubin-total (BT).

In a double-blind, placebo-controlled trial in patients with ADPKD, elevation ($> 3 \times$ upper limit of normal [ULN]) of ALT was observed in 4.4 % (42/958) of patients on tolvaptan and 1.0 % (5/484) of patients on placebo, while elevation ($> 3 \times$ ULN) of AST was observed in 3.1 % (30/958) of patients on tolvaptan and 0.8 % (4/484) patients on placebo. Two (2/957, 0.2 %) of these tolvaptan treated-patients, as well as a third patient from an extension open label trial, exhibited increases in hepatic enzymes ($> 3 \times$ ULN) with concomitant elevations in BT ($> 2 \times$ ULN). The period of onset of hepatocellular injury (by ALT elevations $> 3 \times$ ULN) was within 3 to 14 months after initiating treatment and these increases were reversible, with ALT returning to $< 3 \times$ ULN within 1 to 4 months. While these concomitant elevations were reversible with prompt discontinuation of tolvaptan, they represent a potential for significant liver injury. Similar changes with other medicinal products have been associated with the potential to cause irreversible and potentially life-threatening liver injury.

Prescribing physicians must comply fully with the safety measures required below.

To mitigate the risk of significant and/or irreversible liver injury, blood testing for hepatic transaminases and bilirubin is required prior to initiation of Jinarc, continuing monthly for 18 months and at regular 3-monthly intervals thereafter. Concurrent monitoring for symptoms that may indicate liver injury (such as fatigue, anorexia, nausea, right upper abdominal discomfort, vomiting, fever, rash, pruritus, dark urine or jaundice) is recommended.

If a patient shows abnormal ALT, AST or BT levels prior to initiation of treatment which fulfil the criteria for permanent discontinuation (see below) the use of tolvaptan is contraindicated (see section 4.3). In case of abnormal baseline levels below the limits for permanent discontinuation treatment can only be initiated if the potential benefits of treatment outweigh the potential risks and liver function testing must continue at increased time frequency. The advice of a hepatologist is recommended.

During the first 18 months of treatment, Jinarc can only be supplied to patients whose physician has determined that liver function supports continued therapy.

At the onset of symptoms or signs consistent with hepatic injury or if abnormal ALT or AST increases are detected during treatment, Jinarc administration must be interrupted and repeat tests including ALT, AST, BT and alkaline phosphatase (AP) must be obtained as soon as possible (ideally within

48-72 hours). Testing must continue at increased time frequency until symptoms/signs/laboratory abnormalities stabilise or resolve, at which point Jinarc may be reinitiated.

If ALT and AST levels remain below 3-times the upper limit of normal (ULN), Jinarc therapy may be cautiously continued, with frequent monitoring at the same or lower doses, as transaminase levels appear to stabilise during continued therapy in some patients.

Current clinical practice suggests that Jinarc therapy is to be interrupted upon confirmation of sustained or increasing transaminase levels and permanently discontinued if significant increases and/or clinical symptoms of hepatic injury persist.

Recommended guidelines for permanent discontinuation include:

- ALT or AST > 8-times ULN
- ALT or AST > 5-times ULN for more than 2 weeks
- ALT or AST > 3-times ULN and (BT > 2-times ULN or International Normalized Ratio [INR] > 1.5)
- ALT or AST > 3-times ULN with persistent symptoms of hepatic injury noted above.

Access to water

Tolvaptan may cause adverse reactions related to water loss such as thirst, polyuria, nocturia, and pollakiuria (see section 4.8). Therefore, patients must have access to water (or other aqueous fluids) and be able to drink sufficient amounts of these fluids (see section 4.2). Patients have to be instructed to drink water or other aqueous fluids at the first sign of thirst in order to avoid excessive thirst or dehydration.

Additionally, patients have to drink 1-2 glasses of fluid before bedtime regardless of perceived thirst and replenish fluids overnight with each episode of nocturia.

Dehydration

Volume status must be monitored in patients taking tolvaptan because treatment with tolvaptan may result in severe dehydration which constitutes a risk factor for renal dysfunction. If dehydration becomes evident, take appropriate action which may include the need to interrupt or reduce the dose of tolvaptan and increase fluid intake. Special care must be taken in patients having diseases that impair appropriate fluid intake or who are at an increased risk of water loss e.g. in case of vomiting or diarrhoea.

Urinary outflow obstruction

Urinary output must be secured. Patients with partial obstruction of urinary outflow, for example patients with prostatic hypertrophy or impairment of micturition, have an increased risk of developing acute retention.

Fluid and electrolyte balance

Fluid and electrolyte status must be monitored in all patients. Administration of tolvaptan induces copious aquaresis and may cause dehydration and increases in serum sodium (see section 4.8) and is contraindicated in hypernatraemic patients (see section 4.3). Therefore, serum creatinine, electrolytes and symptoms of electrolyte imbalances (e.g. dizziness, fainting, palpitations, confusion, weakness, gait instability, hyper-reflexia, seizures, coma) have to be assessed prior to and after starting tolvaptan to monitor for dehydration.

During long-term treatment electrolytes have to be monitored at least every three months.

Serum sodium abnormalities

Pretreatment sodium abnormalities (hyponatraemia or hypernatraemia) must be corrected prior to initiation with tolvaptan therapy.

Anaphylaxis

In post-marketing experience, anaphylaxis (including anaphylactic shock and rash generalised) has been reported very rarely following administration of tolvaptan. This type of reaction occurred after

the first administration of tolvaptan. Patients have to be carefully monitored during treatment. Patients with known hypersensitivity reactions to benzazepines or benzazepine derivatives (e.g. benazepril, conivaptan, fenoldopam mesylate or mirtazapine) may be at risk for hypersensitivity reaction to tolvaptan (see section 4.3 Contraindications).

If an anaphylactic reaction or other serious allergic reactions occur, administration of tolvaptan must be discontinued immediately and appropriate therapy initiated. Since hypersensitivity is a contraindication (see section 4.3) treatment must never be restarted after an anaphylactic reaction or other serious allergic reactions.

Lactose

Jinarc contains lactose as an excipient. Patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency or glucose-galactose malabsorption should not take this medicine.

Diabetes mellitus

Diabetic patients with an elevated glucose concentration (e.g. in excess of 300 mg/dl) may present with pseudohyponatraemia. This condition must be excluded prior and during treatment with tolvaptan.

Tolvaptan may cause hyperglycaemia (see section 4.8). Therefore, diabetic patients treated with tolvaptan must be managed cautiously. In particular this applies to patients with inadequately controlled type II diabetes.

Uric acid increases

Decreased uric acid clearance by the kidney is a known effect of tolvaptan. In a double-blind, placebo-controlled trial of patients with ADPKD, potentially clinically significant increased uric acid (greater than 10 mg/dL) was reported at a higher rate in tolvaptan-patients (6.2 %) compared to placebo-treated patients (1.7 %). Adverse reactions of gout were reported more frequently in tolvaptan-treated patients (28/961, 2.9 %) than in patients receiving placebo (7/483, 1.4 %). In addition, increased use of allopurinol and other medicinal products used to manage gout were observed in the double-blind, placebo-controlled trial. Effects on serum uric acid are attributable to the reversible renal hemodynamic changes that occur in response to tolvaptan effects on urine osmolality and may be clinically relevant. However, events of increased uric acid and/or gout were not serious and did not cause discontinuation of therapy in the double-blind, placebo-controlled trial. Uric acid concentrations are to be evaluated prior to initiation of Jinarc therapy, and as indicated during treatment based on symptoms.

Effect of tolvaptan on glomerular filtration rate (GFR)

A reversible reduction in GFR has been observed in ADPKD trials at the initiation of tolvaptan treatment.

4.5 Interaction with other medicinal products and other forms of interaction

Effect of other medicinal products on the pharmacokinetics of tolvaptan

CYP3A inhibitors

Concomitant use of medicinal products that are moderate (e.g. amprenavir, aprepitant, atazanavir, ciprofloxacin, crizotinib, darunavir/ritonavir, diltiazem, erythromycin, fluconazole, fosamprenavir, imatinib, verapamil) or strong (e.g., itraconazole, ketoconazole, ritonavir, clarithromycin) CYP3A inhibitors increase tolvaptan exposure. Co-administration of tolvaptan and ketoconazole resulted in a 440 % increase in area under time-concentration curve (AUC) and 248 % increase in maximum observed plasma concentration (C_{max}) for tolvaptan.

Co-administration of tolvaptan and fluconazole, a moderate CYP3A inhibitor, produced a 200 % and 80 % increase in tolvaptan AUC and C_{max} , respectively.

Co-administration of tolvaptan with grapefruit juice, a moderate to strong CYP3A inhibitor, produced a doubling of peak tolvaptan concentrations (C_{max}).

Dose reduction of tolvaptan is recommended for patients while taking moderate or strong CYP3A inhibitors (see section 4.2). Patients taking moderate or strong CYP3A inhibitors must be managed cautiously, in particular if the inhibitors are taken more frequently than once a day.

CYP3A inducers

Concomitant use of medicinal products that are potent CYP3A inducers (e.g., rifampicin) will decrease tolvaptan exposure and efficacy. Co-administration of tolvaptan with rifampicin reduces C_{max} and AUC for tolvaptan by about 85 %. Therefore, concomitant administration of tolvaptan with potent CYP3A inducers (e.g., rifampicin, rifabutin, rifapentin, phenytoin, carbamazepine, and St. John's Wort) is to be avoided.

Co-administration with medicinal products that increase serum sodium concentration

There is no experience from controlled clinical trials with concomitant use of tolvaptan and hypertonic sodium chloride solution, oral sodium formulations, and medicinal products that increase serum sodium concentration. Medicinal products with high sodium content such as effervescent analgesic preparations and certain sodium containing treatments for dyspepsia may also increase serum sodium concentration. Concomitant use of tolvaptan with medicinal products that increase serum sodium concentration may result in a higher risk for developing hypernatraemia (see section 4.4) and is therefore not recommended.

Diuretics

Tolvaptan has not been extensively studied in ADPKD in combination with diuretics. While there does not appear to be a synergistic or additive effect of concomitant use of tolvaptan with loop and thiazide diuretics, each class of agent has the potential to lead to severe dehydration, which constitutes a risk factor for renal dysfunction. If dehydration or renal dysfunction becomes evident, appropriate action must be taken which may include the need to interrupt or reduce doses of tolvaptan and/or diuretics and increased fluid intake. Other potential causes of renal dysfunction or dehydration must be evaluated and addressed.

Effect of tolvaptan on the pharmacokinetics of other products

CYP3A substrates

In healthy subjects, tolvaptan, a CYP3A substrate, had no effect on the plasma concentrations of some other CYP3A substrates (e.g. warfarin or amiodarone). Tolvaptan increased plasma levels of lovastatin by 1.3- to 1.5-fold. Even though this increase has no clinical relevance, it indicates tolvaptan can potentially increase exposure to CYP3A4 substrates.

Transporter substrates

In vitro studies indicate that tolvaptan is a substrate and competitive inhibitor of P-glycoprotein (P-gp). *In vitro* studies indicate that tolvaptan or its oxobutyric metabolite may have the potential to inhibit OATP1B1, OATP1B3, OAT3, BCRP and OCT1 transporters.

Steady state digoxin concentrations were increased (1.3-fold in maximum observed plasma concentration [C_{max}] and 1.2-fold in area under the plasma concentration-time curve over the dosing interval [AUC_{τ}]) when co administered with multiple once daily 60 mg doses of tolvaptan. Patients receiving digoxin or other narrow therapeutic P-gp substrates (e.g., dabigatran) must therefore be managed cautiously and evaluated for excessive effects when treated with tolvaptan.

Statins commonly used in the tolvaptan phase 3 pivotal trial (e.g., rosuvastatin and pitavastatin) are OATP1B1 or OATP1B3 substrates, however no difference in AE profile was observed during the phase 3 pivotal trial for tolvaptan in ADPKD.

If OATP1B1 and OATP1B3 substrates (e.g., statins such as rosuvastatin and pitavastatin), OAT3 substrates (e.g., methotrexate, ciprofloxacin), BCRP substrates (e.g. sulfasalazine) or OCT1 substrates (e.g. metformin) are co-administered with tolvaptan, patients must be managed cautiously and evaluated for excessive effects of these medicinal products.

Diuretics or non-diuretic anti-hypertensive medicinal product(s)

Standing blood pressure was not routinely measured in ADPKD trials, therefore a risk of orthostatic/postural hypotension due to a pharmacodynamic interaction with tolvaptan cannot be excluded.

Co-administration with vasopressin analogues

In addition to its renal aquaretic effect, tolvaptan is capable of blocking vascular vasopressin V2 receptors involved in the release of coagulation factors (e.g., von Willebrand factor) from endothelial cells. Therefore, the effect of vasopressin analogues such as desmopressin may be attenuated in patients using such analogues to prevent or control bleeding when co-administered with tolvaptan. It is not recommended to administer Jinarc with vasopressin analogues.

Smoking and alcohol

Data related to smoking or alcohol history in ADPKD trials are too limited to determine possible interactions of smoking or alcohol with efficacy and safety of ADPKD treatment with tolvaptan.

4.6 Fertility, pregnancy and lactation

Pregnancy

There are no adequate data from the use of tolvaptan in pregnant women. Studies in animals have shown reproductive toxicity (see section 5.3). The potential risk for humans is unknown.

Women of childbearing potential must use adequate contraceptive measures during Jinarc use. Jinarc must not be used during pregnancy (see section 4.3).

Breast-feeding

It is unknown whether tolvaptan is excreted in human breast milk. Studies in rats have shown excretion of tolvaptan in milk.

The potential risk for humans is unknown. Jinarc is contraindicated during breast-feeding (see section 4.3).

Fertility

Studies in animals showed effects on fertility (see section 5.3). The potential risk for humans is unknown.

4.7 Effects on ability to drive and use machines

Jinarc has minor influence on the ability to drive or use machines. However, when driving vehicles or using machines it has to be taken into account that occasionally dizziness, asthenia or fatigue may occur.

4.8 Undesirable effects

Summary of the safety profile

The pharmacodynamically predictable and most commonly reported adverse reactions are thirst, polyuria, nocturia, and pollakiuria occurring in approximately 55 %, 38 %, 29 % and 23 % of patients, respectively. Furthermore, tolvaptan has been associated with idiosyncratic elevations of blood alanine and aspartate aminotransferases (ALT and AST) with infrequent cases of concomitant elevations in bilirubin-total (BT).

Tabulated list of adverse reactions

The adverse reaction profile of tolvaptan in the ADPKD indication is based on a clinical trial database of 1,444 treated patients (961 patients treated with tolvaptan, 483 treated with placebo) and is consistent with the pharmacology of the active substance. Adverse reactions associated with tolvaptan obtained from ADPKD clinical studies are tabulated below.

The frequencies of the adverse reactions correspond with very common ($\geq 1/10$), common ($\geq 1/100$ to $< 1/10$), uncommon ($\geq 1/1,000$ to $< 1/100$) and not known (cannot be estimated from the available

data). Within each frequency grouping, adverse reactions are presented in order of decreasing seriousness.

System Organ Class	Frequency
Metabolism and nutrition disorders	Very common: Polydipsia Common: Dehydration, Hyponatraemia, Decreased appetite, Hyperuricaemia, Hyperglycaemia
Psychiatric disorders	Common: Insomnia
Nervous system disorders	Very common: Headache, Dizziness
Cardiac disorders	Common: Palpitations
Respiratory, thoracic and mediastinal disorders	Common: Dyspnoea
Gastrointestinal disorders	Very common: Diarrhoea, Dry mouth Common: Abdominal distension, Constipation, Dyspepsia, Gastroesophageal reflux disease
Hepatobiliary disorders	Common: Abnormal hepatic function
Skin and subcutaneous tissue disorders	Common: Rash, Pruritus
Musculoskeletal and connective tissue disorders	Common: Muscle spasms
Renal and urinary disorders	Very common: Nocturia, Pollakiuria, Polyuria
General disorders and administration site conditions	Very common: Fatigue, Thirst Common: Asthenia
Investigations	Common: Alanine aminotransferase increased, Aspartate aminotransferase increased, Weight decreased Uncommon: Bilirubin increased

Description of selected adverse reactions

To mitigate the risk of significant or irreversible liver injury, blood testing for hepatic transaminases is required prior to initiation of Jinarc treatment, continuing monthly for 18 months and at regular 3-monthly intervals thereafter (see section 4.4).

The most frequent adverse reactions are related to water loss. It is therefore of greatest importance that patients have access to water and are able to drink sufficient amounts of fluids. The volume status of patients taking tolvaptan must be monitored to prevent dehydration (see section 4.4).

Post-marketing

The following adverse reactions have been reported during post-marketing surveillance of tolvaptan approved for other indications.

System Organ Class	Frequency
Immune system disorders	Not known: Anaphylactic shock, generalised rash

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via [the national reporting system listed in Appendix V](#).

4.9 Overdose

Single oral doses up to 480 mg (4 times the maximum recommended daily dose) and multiple doses up to 300 mg once daily for 5 days have been well tolerated in trials in healthy subjects. There is no specific antidote for tolvaptan intoxication. The signs and symptoms of an acute overdose can be anticipated to be those of excessive pharmacologic effect: a rise in serum sodium concentration, polyuria, thirst and dehydration/hypovolemia.

No mortality was observed in rats or dogs following single oral doses of 2,000 mg/kg (maximum feasible dose). A single oral dose of 2,000 mg/kg was lethal in mice and symptoms of toxicity in affected mice included decreased locomotor activity, staggering gait, tremor and hypothermia. In patients with suspected tolvaptan overdose, assessment of vital signs, electrolyte concentrations, ECG and fluid status is recommended. Appropriate replacement of water and/or electrolytes must continue until aquaresis abates. Dialysis may not be effective in removing tolvaptan because of its high binding affinity for human plasma protein (> 98 %).

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Diuretics, vasopressin antagonists, ATC code: C03XA01.

Mechanism of action

Tolvaptan is a vasopressin antagonist that specifically blocks the binding of arginine vasopressin (AVP) at the V2 receptors of the distal portions of the nephron. Tolvaptan affinity for the human V2 receptor is 1.8 times that of native AVP.

Pharmacodynamic effects

The pharmacodynamic effects of tolvaptan have been determined in healthy subjects and subjects with ADPKD across CKD stages 1 to 4. Effects on free water clearance and urine volume are evident across all CKD stages with smaller absolute effects observed at later stages, consistent with the declining number of fully functioning nephrons. Acute reductions in mean total kidney volume were also observed following 3 weeks of therapy in all CKD stages, ranging from -4.6 % for CKD stage 1 to -1.9 % for CKD stage 4.

Clinical efficacy and safety

The primary focus of the clinical program for development of tolvaptan tablets for the treatment of ADPKD is a single pivotal, multinational, phase 3, randomised, placebo controlled trial in which the long-term safety and efficacy of oral split dose tolvaptan regimens (titrated between 60 mg/day and 120 mg/day) were compared with placebo in 1,445 adult subjects with ADPKD. In total, 14 clinical trials involving tolvaptan have been completed worldwide in support of the ADPKD indication, including 8 trials in the US, 1 in the Netherlands, 3 in Japan, 1 in Korea, and the multinational phase 3 pivotal trial.

The phase 3 pivotal trial (TEMPO 3:4, 156-04-251) included subjects from 129 centres in the Americas, Japan, Europe and other countries. The primary objective of this trial was to evaluate the long-term efficacy of tolvaptan in ADPKD through rate of total kidney volume (TKV) change (%) for tolvaptan-treated compared with placebo-treated subjects. In this trial a total of 1,445 adult patients (age 18-50 years) with evidence of rapidly-progressing, early ADPKD (meeting modified Ravine criteria, total kidney volume (TKV) \geq 750 mL, estimated creatinine clearance \geq 60 mL/min) were randomized 2:1 to treatment with tolvaptan or placebo. Patients were treated for up to 3 years.

'Tolvaptan (N = 961) and placebo (N = 484) groups were well matched in terms of gender with an average age of 39 years. The inclusion criteria identified patients who at baseline had evidence of early disease progression. At baseline, patients had average estimated glomerular filtration rate (eGFR) of 82 mL/min/1.73 m² (CKD-EPI) with 79 % having hypertension and a mean TKV of 1,692 mL (height adjusted 972 mL/m). Approximately 35 % of subjects were chronic kidney disease (CKD) stage 1, 48 % CKD stage 2, and 17 % CKD stage 3 (eGFR_{CKD-EPI}). While these criteria were useful in enriching the study population with patients who were rapidly progressing, subgroup analyses based on stratification criteria (age, TKV, GFR, Albuminuria, Hypertension) indicated the presence of such risk factors at younger ages predicts more rapid disease progression.

The results of the primary endpoint, the rate of change in TKV for subjects randomised to tolvaptan (normalised as percentage) to the rate of change for subjects on placebo, were highly statistically significant. The rate of TKV increase over 3 years was significantly less for tolvaptan-treated subjects than for subjects receiving placebo: 2.80 % per year vs 5.51 % per year, respectively (ratio of geometric mean 0.974; 95 % CI 0.969 to 0.980; p < 0.0001).

Pre-specified secondary endpoints were tested sequentially. The key secondary composite endpoint (ADPKD progression) was time to multiple clinical progression events of:

- 1) worsening kidney function (defined as a persistent [reproduced over at least 2 weeks] 25 % reduction in reciprocal serum creatinine during treatment [from end of titration to last on-medical product visit])
- 2) medically significant kidney pain (defined as requiring prescribed leave, last-resort analgesics, narcotic and anti-nociceptive, radiologic or surgical interventions)
- 3) worsening hypertension
- 4) worsening albuminuria

The relative rate of ADPKD-related events was decreased by 13.5 % in tolvaptan-treated patients, (hazard ratio, 0.87; 95 % CI, 0.78 to 0.97; p = 0.0095).

The result of the key secondary composite endpoint is primarily attributed to effects on worsening kidney function and medically significant kidney pain. The renal function events were 61.4 % less likely for tolvaptan compared with placebo (hazard ratio, 0.39; 95 % CI, 0.26 to 0.57; nominal p < 0.0001), while renal pain events were 35.8 % less likely in tolvaptan-treated patients (hazard ratio, 0.64; 95 % CI, 0.47 to 0.89; nominal p = 0.007). In contrast, there was no effect of tolvaptan on either progression of hypertension or albuminuria.

TEMPO 4:4 is an open-label extension study that included 871 subjects that completed TEMPO 3:4 from 106 centres across 13 countries. This trial evaluated the effects of tolvaptan on safety, TKV and eGFR in subjects receiving active treatment for 5 years (early-treated), compared with subjects treated with placebo for 3 years, then switched to active treatment for 2 years (delayed-treated).

The primary end point for TKV did not distinguish a difference in change (-1.7 %) over the 5 year treatment between early- and delayed-treated subjects at the pre-specified threshold of statistical significance (p = 0.3580). Both groups' TKV growth trajectory was slowed, relative to placebo in the first 3 years, suggesting both early- and delayed- tolvaptan treated subjects benefitted to a similar degree.

A secondary endpoint testing the persistence of positive effects on renal function indicated that the preservation of eGFR observed by the end of the TEMPO 3:4 pivotal trial (3.01 to 3.34 mL/min/1.73 m² at follow-up visits 1 and 2) could be preserved during open-label treatment. This difference was maintained in the pre-specified MMRM analysis (3.15 mL/min/1.73 m², 95 % CI 1.462 to 4.836, p = 0.0003) and with sensitivity analyses where baseline eGFR data were carried forward (2.64 mL/min/1.73 m², 95 % CI 0.672 to 4.603, p = 0.0086). These data suggest that Jinarc can slow the rate of renal function decline, and that these benefits persist over the duration of therapy.

Longer term data are not currently available to show whether long-term therapy with Jinarc continues to slow the rate of renal function decline and affect clinical outcomes of ADPKD, including delay in the onset of end-stage renal disease.

Genotyping for PKD1 and PKD2 genes was conducted in a majority of patients entering the open-label extension study (TEMPO 4:4) but the results are not yet known.

Following an additional 2 years of tolvaptan treatment, resulting in a total of 5 years on tolvaptan therapy no new safety signals were identified.

Paediatric population

The European Medicines Agency has deferred the obligation to submit the results of studies with tolvaptan in one or more subsets of the paediatric population in polycystic kidney disease (see section 4.2 for information on paediatric use).

5.2 Pharmacokinetic properties

Absorption

After oral administration, tolvaptan is rapidly absorbed with peak plasma concentrations occurring about 2 hours after dosing. The absolute bioavailability of tolvaptan is about 56 %. Co-administration of tolvaptan with a high-fat meal increased peak concentrations of tolvaptan up to 2-fold but left AUC unchanged. Even though the clinical relevance of this finding is not known, to minimise the unnecessary risk of increasing the maximal exposure the morning dose should be taken under fasted conditions (see section 4.2).

Distribution

Following single oral doses of ≥ 300 mg, peak plasma concentrations appear to plateau, possibly due to saturation of absorption. Tolvaptan binds reversibly (98 %) to plasma proteins.

Biotransformation

Tolvaptan is extensively metabolised in the liver almost exclusively by CYP3A. Tolvaptan is a weak CYP3A4 substrate and does not appear to have any inhibitory activity.

In vitro studies indicated that tolvaptan has no inhibitory activity for CYP3A. Fourteen metabolites have been identified in plasma, urine and faeces; all but one were also metabolised by CYP3A. Only the oxobutyric acid metabolite is present at greater than 10 % of total plasma radioactivity; all others are present at lower concentrations than tolvaptan.

Tolvaptan metabolites have little to no contribution to the pharmacological effect of tolvaptan; all metabolites have no or weak antagonist activity for human V2 receptors when compared with tolvaptan. The terminal elimination half-life is about 8 hours and steady-state concentrations of tolvaptan are obtained after the first dose.

Elimination

Less than 1 % of intact active substance is excreted unchanged in the urine. Radio labelled tolvaptan experiments showed that 40 % of the radioactivity was recovered in the urine and 59 % was recovered in the faeces, where unchanged tolvaptan accounted for 32 % of radioactivity. Tolvaptan is only a minor component in plasma (3 %).

Linearity

Following single oral doses, C_{max} values show less than dose proportional increases from 30 to 240 mg and then a plateau at doses from 240 to 480 mg, AUC increases linearly.

Following multiple once daily dosing of 300 mg, tolvaptan exposure was only increased 6.4-fold when compared to a 30 mg dose. For split-dose regimens of 30, 60 and 120 mg/day in ADPKD patients, tolvaptan exposure (AUC) increases linearly.

Pharmacokinetics in special populations

Age

Clearance of tolvaptan is not significantly affected by age.

Hepatic impairment

The effect of mildly or moderately impaired hepatic function (Child-Pugh classes A and B) on the pharmacokinetics of tolvaptan was investigated in 87 patients with liver disease of various origins. No clinically significant changes have been seen in clearance for doses ranging from 5 to 60 mg. Very limited information is available in patients with severe hepatic impairment (Child-Pugh class C). In a population pharmacokinetic analysis in patients with hepatic oedema, AUC of tolvaptan in severely (Child-Pugh class C) and mildly or moderately (Child-Pugh classes A and B) hepatic impaired patients were 3.1 and 2.3 times higher than that in healthy subjects.

Renal impairment

In a population pharmacokinetic analysis for patients with ADPKD, tolvaptan concentrations were increased, compared to healthy subjects, as renal function decreased below eGFR of 60 mL/min/1.73 m². An eGFR_{CKD-EPI} decrease from 72.2 to 9.79 (mL/min/1.73 m²) was associated with a 32 % reduction in total body clearance.

5.3 Preclinical safety data

Non-clinical data revealed no special hazard for humans based on conventional studies of safety pharmacology, repeated dose toxicity, genotoxicity or carcinogenic potential.

Teratogenicity was noted in rabbits given 1,000 mg/kg/day (7.5 times the exposure from the 120 mg/day human dose on an AUC basis). No teratogenic effects were seen in rabbits at 300 mg/kg/day (about 1.25 to 2.65 times the exposure in humans at the 120 mg/day dose, based on AUC).

In a peri- and post-natal study in rats, delayed ossification and reduced pup bodyweight were seen at the high dose of 1,000 mg/kg/day.

Two fertility studies in rats showed effects on the parental generation (decreased food consumption and body weight gain, salivation), but tolvaptan did not affect reproductive performance in males and there were no effects on the foetuses. In females, abnormal oestrus cycles were seen in both studies.

The no observed adverse effect level (NOAEL) for effects on reproduction in females (100 mg/kg/day) was about 8-times the maximum human recommended dose of 120 mg/day on a mg/m² basis.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Maize starch
Hydroxypropylcellulose
Lactose monohydrate
Magnesium stearate
Microcrystalline cellulose
Indigo carmine aluminium lake

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

4 years

6.4 Special precautions for storage

Store in the original package in order to protect from light and moisture.

6.5 Nature and contents of container

Jinarc 15 mg tablets

7 or 28 tablets in PVC/aluminium foil blister

Jinarc 30 mg tablets

7 or 28 tablets in PVC/aluminium foil blister

Jinarc 15 mg tablets + Jinarc 45 mg tablets

14 tablets in 1 PVC/aluminium foil blister with 7 × 15 mg and 7 × 45 mg tablets

28 tablets in 2 PVC/aluminium foil blisters with 7 × 15 mg and 7 × 45 mg tablets

56 tablets in 4 PVC/aluminium foil blisters with 7 × 15 mg and 7 × 45 mg tablets

Jinarc 30 mg tablets + Jinarc 60 mg tablets

14 tablets in 1 PVC/aluminium foil blister with 7 × 30 mg and 7 × 60 mg tablets

28 tablets in 2 PVC/aluminium foil blisters with 7 × 30 mg and 7 × 60 mg tablets

56 tablets in 4 PVC/aluminium foil blisters with 7 × 30 mg and 7 × 60 mg tablets

Jinarc 30 mg tablets + Jinarc 90 mg tablets

14 tablets in 1 PVC/aluminium foil blister with 7 × 30 mg and 7 × 90 mg tablets

28 tablets in 2 PVC/aluminium foil blisters with 7 × 30 mg and 7 × 90 mg tablets

56 tablets in 4 PVC/aluminium foil blisters with 7 × 30 mg and 7 × 90 mg tablets

Not all pack sizes may be marketed.

6.6 Special precautions for disposal

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

Otsuka Pharmaceutical Europe Ltd.

Gallions, Wexham Springs

Framework Road

Wexham

SL3 6PJ

United Kingdom

8. MARKETING AUTHORISATION NUMBER(S)

Jinarc 15 mg tablets

EU/1/15/1000/001-002

Jinarc 30 mg tablets

EU/1/15/1000/003-004

Jinarc 15 mg tablets + Jinarc 45 mg tablets

EU/1/15/1000/005-007

Jinarc 30 mg tablets + Jinarc 60 mg tablets

EU/1/15/1000/008-010

Jinarc 30 mg tablets + Jinarc 90 mg tablets

EU/1/15/1000/011-013

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 27/05/2015

10. DATE OF REVISION OF THE TEXT

Detailed information on this medicinal product is available on the website of the European Medicines Agency <http://www.ema.europa.eu>.

ANNEX II

- A. MANUFACTURERS RESPONSIBLE FOR BATCH RELEASE**
- B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE**
- C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION**
- D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT**

A. MANUFACTURERS RESPONSIBLE FOR BATCH RELEASE

Name and address of the manufacturer(s) responsible for batch release

AndersonBrecon (UK) Limited
Units 2-7, Wye Valley Business Park,
Brecon Road
Hay-on-Wye, Hereford, Herefordshire
HR3 5PG
United Kingdom

Almac Pharma Services Ltd
Almac House,
20 Seagoe Industrial State
Craigavon
BT63 5QD
United Kingdom

The printed package leaflet of the medicinal product must state the name and address of the manufacturer responsible for the release of the concerned batch.

B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE

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

C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION

- **Periodic Safety Update Reports**

The marketing authorisation holder shall submit the first periodic safety update report for this product within 6 months following authorisation.

D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT

- **Risk Management Plan (RMP)**

The MAH shall perform the required pharmacovigilance activities and interventions detailed in the agreed RMP presented in Module 1.8.2 of the Marketing Authorisation and any agreed subsequent updates of the RMP.

An updated RMP should be submitted:

- At the request of the European Medicines Agency;
- Whenever the risk management system is modified, especially as the result of new information being received that may lead to a significant change to the benefit/risk profile or as the result of an important (pharmacovigilance or risk minimisation) milestone being reached.
- **Additional risk minimisation measures**

Prior to launch of Jinarc in each Member State the Marketing Authorisation Holder must agree the content and format of the educational programme, including communication media and distribution modalities with each National Competent Authority. The MAH must ensure that all healthcare

professionals and patients/carers who are expected to prescribe and/or use JINARC have access to/are provided with the following educational package

- Physician educational material
- Patient information pack

The educational programme is aimed at ensuring awareness about the potential risk of hepatotoxicity and providing guidance on how to manage this risk and the importance of pregnancy prevention prior to the initiation and during the treatment with Jinarc.

The physician educational material should contain:

- The Summary of product Characteristics
- Healthcare professionals training material

The healthcare professional training material shall contain the following key elements

- the risk of hepatotoxicity associated with the use of Jinarc
- the importance of pregnancy prevention, before and during treatment with Jinarc

The patient information pack should contain:

- The Patient information leaflet
- Patient/Carer educational material
- A Patient Alert Card

The Patient/Carer educational material shall contain the following key messages:

- the risk of hepatotoxicity associated with the use of Jinarc
- the importance of pregnancy prevention, before and during treatment with Jinarc

The Patient Alert Card shall contain the following key messages:

- Signs or symptoms of liver toxicity and severe dehydration
- Advice if such symptoms occur

- **Obligation to conduct post-authorisation measures**

The MAH shall complete, within the stated timeframe, the below measures:

Description	Due date
<p>A non-interventional post-authorisation safety study (PASS) to investigate the risks of:</p> <ul style="list-style-type: none"> • Hepatotoxicity • Basal cell carcinoma • Glaucoma <p>associated with the use of Jinarc.</p> <p>In addition the study should also provide information on</p> <ul style="list-style-type: none"> • Pregnancy outcomes, in patients treated with Jinarc • Patterns of medicinal product utilisation, especially with regards to off-label use and use in patients over 50 years old • ADRs associated with long term use of Jinarc <p>Final study report should be submitted by:</p>	<p>4 Quarter 2022</p>
<p>Post-authorisation efficacy study (PAES): In order to further define the efficacy of tolvaptan in patients with more advanced renal dysfunction on a primary endpoint related to GFR rather than TKV the MAH should submit the Final study report of Study 156-13-210 by:</p>	<p>Feb-2018</p>

ANNEX III
LABELLING AND PACKAGE LEAFLET

A. LABELLING

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

OUTER CARTON

1. NAME OF THE MEDICINAL PRODUCT

Jinarc 15 mg tablets

tolvaptan

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each tablet contains 15 mg tolvaptan.

3. LIST OF EXCIPIENTS

Contains lactose. See leaflet for further information.

4. PHARMACEUTICAL FORM AND CONTENTS

7 tablets

28 tablets

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Read the package leaflet before use.

Oral use.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

Store in the original package in order to protect from light and moisture.

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

Otsuka Pharmaceutical Europe Ltd.
Gallions, Wexham Springs
Framewood Road
Wexham
SL3 6PJ
United Kingdom

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/15/1000/001 7 tablets
EU/1/15/1000/002 28 tablets

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

15. INSTRUCTIONS ON USE

16. INFORMATION IN BRAILLE

Jinarc 15 mg

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC:
SN:
NN:

MINIMUM PARTICULARS TO APPEAR ON BLISTERS OR STRIPS
--

BLISTERS

1. NAME OF THE MEDICINAL PRODUCT

Jinarc 15 mg tablets

tolvaptan

2. NAME OF THE MARKETING AUTHORISATION HOLDER
--

Otsuka

3. EXPIRY DATE

EXP

4. BATCH NUMBER

Lot

5. OTHER

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

OUTER CARTON

1. NAME OF THE MEDICINAL PRODUCT

Jinarc 30 mg tablets

tolvaptan

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each tablet contains 30 mg tolvaptan.

3. LIST OF EXCIPIENTS

Contains lactose. See leaflet for further information.

4. PHARMACEUTICAL FORM AND CONTENTS

7 tablets

28 tablets

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Read the package leaflet before use.

Oral use.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

Store in the original package in order to protect from light and moisture.

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

Otsuka Pharmaceutical Europe Ltd.
Gallions, Wexham Springs
Framewood Road
Wexham
SL3 6PJ
United Kingdom

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/15/1000/003 7 tablets
EU/1/15/1000/004 28 tablets

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

15. INSTRUCTIONS ON USE

16. INFORMATION IN BRAILLE

Jinarc 30 mg

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC:
SN:
NN:

MINIMUM PARTICULARS TO APPEAR ON BLISTERS OR STRIPS
--

BLISTERS

1. NAME OF THE MEDICINAL PRODUCT

Jinarc 30 mg tablets

tolvaptan

2. NAME OF THE MARKETING AUTHORISATION HOLDER
--

Otsuka

3. EXPIRY DATE

EXP

4. BATCH NUMBER

Lot

5. OTHER

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

OUTER CARTON

1. NAME OF THE MEDICINAL PRODUCT

Jinarc 15 mg tablets
Jinarc 45 mg tablets

tolvaptan

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each 15 mg tablet contains 15 mg tolvaptan. Each 45 mg tablet contains 45 mg tolvaptan.

3. LIST OF EXCIPIENTS

Contains lactose. See leaflet for further information.

4. PHARMACEUTICAL FORM AND CONTENTS

7 × 15 mg tablets and 7 × 45 mg tablets
14 × 15 mg tablets and 14 × 45 mg tablets
28 × 15 mg tablets and 28 × 45 mg tablets

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Read the package leaflet before use.
Oral use.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

Store in the original package in order to protect from light and moisture.

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

Otsuka Pharmaceutical Europe Ltd.
Gallions, Wexham Springs
Framewood Road
Wexham
SL3 6PJ
United Kingdom

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/15/1000/005 14 tablets (7 × 15 mg + 7 × 45 mg)
EU/1/15/1000/006 28 tablets (14 × 15 mg + 14 × 45 mg)
EU/1/15/1000/007 56 tablets (28 × 15 mg + 28 × 45 mg)

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

15. INSTRUCTIONS ON USE

16. INFORMATION IN BRAILLE

Jinarc 15 mg
Jinarc 45 mg

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC:
SN:
NN:

MINIMUM PARTICULARS TO APPEAR ON BLISTERS OR STRIPS

BLISTERS

1. NAME OF THE MEDICINAL PRODUCT

Jinarc 15 mg tablets

Jinarc 45 mg tablets

tolvaptan

2. NAME OF THE MARKETING AUTHORISATION HOLDER

Otsuka

3. EXPIRY DATE

EXP

4. BATCH NUMBER

Lot

5. OTHER

*
C

Mon.

Tue.

Wed.

Thu.

Fri.

Sat.

Sun.

Information in braille:

Jinarc 15 mg

Jinarc 45 mg

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

OUTER CARTON

1. NAME OF THE MEDICINAL PRODUCT

Jinarc 30 mg tablets
Jinarc 60 mg tablets

tolvaptan

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each 30 mg tablet contains 30 mg tolvaptan. Each 60 mg tablet contains 60 mg tolvaptan.

3. LIST OF EXCIPIENTS

Contains lactose. See leaflet for further information.

4. PHARMACEUTICAL FORM AND CONTENTS

7 × 30 mg tablets and 7 × 60 mg tablets
14 × 30 mg tablets and 14 × 60 mg tablets
28 × 30 mg tablets and 28 × 60 mg tablets

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Read the package leaflet before use.
Oral use.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

Store in the original package in order to protect from light and moisture.

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

Otsuka Pharmaceutical Europe Ltd.
Gallions, Wexham Springs
Framewood Road
Wexham
SL3 6PJ
United Kingdom

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/15/1000/008 14 tablets (7 × 30 mg + 7 × 60 mg)
EU/1/15/1000/009 28 tablets (14 × 30 mg + 14 × 60 mg)
EU/1/15/1000/010 56 tablets (28 × 30 mg + 28 × 60 mg)

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

15. INSTRUCTIONS ON USE

16. INFORMATION IN BRAILLE

Jinarc 30 mg
Jinarc 60 mg

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC:
SN:
NN:

MINIMUM PARTICULARS TO APPEAR ON BLISTERS OR STRIPS

BLISTERS

1. NAME OF THE MEDICINAL PRODUCT

Jinarc 30 mg tablets

Jinarc 60 mg tablets

tolvaptan

2. NAME OF THE MARKETING AUTHORISATION HOLDER

Otsuka

3. EXPIRY DATE

EXP

4. BATCH NUMBER

Lot

5. OTHER

*
C

Mon.

Tue.

Wed.

Thu.

Fri.

Sat.

Sun.

Information in braille:

Jinarc 30 mg

Jinarc 60 mg

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

OUTER CARTON

1. NAME OF THE MEDICINAL PRODUCT

Jinarc 30 mg tablets

Jinarc 90 mg tablets

tolvaptan

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each 30 mg tablet contains 30 mg tolvaptan. Each 90 mg tablet contains 90 mg tolvaptan.

3. LIST OF EXCIPIENTS

Contains lactose. See leaflet for further information.

4. PHARMACEUTICAL FORM AND CONTENTS

7 × 30 mg tablets and 7 × 90 mg tablets

14 × 30 mg tablets and 14 × 90 mg tablets

28 × 30 mg tablets and 28 × 90 mg tablets

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Read the package leaflet before use.

Oral use.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

Store in the original package in order to protect from light and moisture.

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

Otsuka Pharmaceutical Europe Ltd.
Gallions, Wexham Springs
Framewood Road
Wexham
SL3 6PJ
United Kingdom

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/15/1000/011 14 tablets (7 × 30 mg + 7 × 90 mg)
EU/1/15/1000/012 28 tablets (14 × 30 mg + 14 × 90 mg)
EU/1/15/1000/013 56 tablets (28 × 30 mg + 28 × 90 mg)

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

15. INSTRUCTIONS ON USE

16. INFORMATION IN BRAILLE

Jinarc 30 mg
Jinarc 90 mg

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC:
SN:
NN:

MINIMUM PARTICULARS TO APPEAR ON BLISTERS OR STRIPS

BLISTERS

1. NAME OF THE MEDICINAL PRODUCT

Jinarc 30 mg tablets

Jinarc 90 mg tablets

tolvaptan

2. NAME OF THE MARKETING AUTHORISATION HOLDER

Otsuka

3. EXPIRY DATE

EXP

4. BATCH NUMBER

Lot

5. OTHER

*
C

Mon.

Tue.

Wed.

Thu.

Fri.

Sat.

Sun.

Information in braille:

Jinarc 30 mg

Jinarc 90 mg

B. PACKAGE LEAFLET

Package leaflet: Information for the patient

Jinarc 15 mg tablets
Jinarc 30 mg tablets
Jinarc 45 mg tablets
Jinarc 60 mg tablets
Jinarc 90 mg tablets
Tolvaptan

▼ This medicine is subject to additional monitoring. This will allow quick identification of new safety information. You can help by reporting any side effects you may get. See the end of section 4 for how to report side effects.

Read all of this leaflet carefully before you start taking this medicine because it contains important information for you.

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Jinarc is and what it is used for
2. What you need to know before you take Jinarc
3. How to take Jinarc
4. Possible side effects
5. How to store Jinarc
6. Contents of the pack and other information

1. What Jinarc is and what it is used for

Jinarc is a medicine used to treat a disease called “autosomal dominant polycystic kidney disease” (ADPKD). This disease causes growth of fluid-filled cysts in the kidneys which put pressure on surrounding tissues and reduce kidney function, possibly leading to kidney failure. Jinarc is used to treat ADPKD in adults with chronic kidney disease (CKD) stages 1 to 3 with evidence of rapidly progressing disease.

Jinarc contains the active substance tolvaptan which blocks the effect of vasopressin, a hormone involved in the formation of cysts in the kidneys of ADPKD patients. By blocking the effect of vasopressin, Jinarc slows the development of kidney cysts in patients with ADPKD, reduces symptoms of the disease and increases urine production.

2. What you need to know before you take Jinarc

Do not take Jinarc:

- if you are allergic to tolvaptan or any of the other ingredients of this medicine (listed in section 6) or if you are allergic to benzazepine or benzazepine derivatives (e.g. benazepril, conivaptan, fenoldopam mesylate or mirtazapine)
- if you have been told that you have raised levels of liver enzymes in your blood which do not allow treatment with tolvaptan
- if your kidneys do not work (no urine production)
- if you have a condition which is associated with a very low blood volume (e.g. severe dehydration or bleeding)
- if you have a condition which increases the sodium in your blood

- if you do not realise when you are thirsty
- if you are pregnant (see “Pregnancy and breast-feeding”)
- if you are breastfeeding (see “Pregnancy and breast-feeding”).

Warnings and precautions

Talk to your doctor before taking Jinarc

- if you suffer from liver disease.
- if you cannot drink enough water (see “drinking enough water” below) or if you have to restrict your fluid intake.
- if you have difficulties urinating or have an enlarged prostate.
- if you suffer from too high or too low blood sodium.
- if you had an allergic reaction in the past to benzazepine, tolvaptan or other benzazepine derivatives (e.g. benazepril, conivaptan, fenoldopam mesylate or mirtazapine), or to any of the other ingredients of this medicine (listed in section 6).
- if you have diabetes.
- if you have been told you have high levels of a chemical called uric acid in your blood (which may have caused attacks of gout).

Jinarc may cause your liver to not work properly. Therefore, please inform your doctor immediately if you have signs that could indicate potential liver problems such as:

- nausea
- vomiting
- fever
- tiredness
- loss of appetite
- pain in the abdomen
- dark urine
- jaundice (yellowing of skin or eyes)
- itching of your skin
- flu-like syndrome (joint and muscle pain with fever)

During treatment with Jinarc, your doctor will arrange monthly blood tests to check for changes in your liver function.

Drinking enough water

Jinarc causes water loss because it increases your urine production. This water loss may result in side effects such as dry mouth and thirst or even more severe side effects like kidney problems (see section 4). It is therefore important that you have access to water and that you are able to drink sufficient amounts when you feel thirsty.

Before bedtime you must drink 1 or 2 glasses of water even if you do not feel thirsty and you must also drink water after you urinating at night.

Special care must be taken if you have a disease that reduces appropriate fluid intake or if you are at an increased risk of water loss e.g. in case of vomiting or diarrhoea.

Due to the increased urine production it is also important that you always have access to a toilet.

Children and adolescents

Jinarc has not been studied in children and adolescents (under age 18) and its use is therefore not recommended in these age groups.

Other medicines and Jinarc

Tell your doctor or pharmacist if you are taking, have recently taken or might take any other medicines, including medicines obtained without a prescription.

In particular let your doctor know if you are taking:

- treatments containing ketoconazole for fungal infections, macrolide antibiotics like clarithromycin, or diltiazem as a treatment for high blood pressure and chest pain. These may increase the effects of Jinarc.

- medicines which increase the level of sodium in your blood or which contain large amounts of salt, like tablets that dissolve in water and indigestion remedies. These may increase the effect of Jinarc.
- digoxin (a medicine for the treatment of irregular heart beat and heart failure), dabigatran (used to thin the blood), rosuvastatin or pitavastatin (used to lower blood cholesterol) methotrexate (used to treat cancer, arthritis), ciprofloxacin (an antibiotic), sulfasalazine (for treatment of inflammatory bowel disease or rheumatoid arthritis) or metformin (for treatment of diabetes). Jinarc may increase the effect of these medicines.
- phenytoin or carbamazepine (medicines for the treatment of epilepsy), rifampicin (a medicine for treatment of tuberculosis) or St. John's wort (a traditional herbal medicinal product for the relief of slightly low mood and mild anxiety). The use of any of these medicines together with Jinarc is to be avoided because this may reduce the effects of Jinarc.
- diuretics (used to increase your urine production). Taken with Jinarc these may increase the risk of side effects due to water loss.
- diuretics or other medicines for the treatment of high blood pressure. Taken with Jinarc these may increase the risk of low blood pressure when you stand up from sitting or lying down.
- desmopressin (used to increase blood clotting factors or to control urine output or bedwetting). Jinarc may reduce the effect of desmopressin.

It may still be alright for you to take these medicines and Jinarc together. Your doctor will be able to decide what is suitable for you.

Jinarc with food and drink

Do not drink grapefruit juice when taking Jinarc.

Pregnancy and breast-feeding

Do not take this medicine if you are pregnant or breast-feeding.

Women of childbearing age must use reliable contraceptive measures during use of this medicine.

If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before taking this medicine.

Driving and using machines

Some people may feel dizzy, weak or tired after being given Jinarc. If this happens to you, do not drive or use any tools or machines.

Jinarc contains lactose

If you have been told by your doctor that you have an intolerance to some sugars, contact your doctor before taking this medicine.

3. How to take Jinarc

Jinarc can only be prescribed by doctors who are specialised in the treatment of ADPKD. Always take this medicine exactly as your doctor has told you. Check with your doctor or pharmacist if you are not sure.

Dose

The daily amount of Jinarc is split into two doses, one bigger than the other. The higher dose should be taken in the morning when you wake up, at least 30 minutes before the morning meal. The lower dose is taken 8 hours later.

The dose combinations are:

45 mg + 15 mg

60 mg + 30 mg

90 mg + 30 mg

Your treatment will normally start with a dose of 45 mg in the morning and 15 mg eight hours later. Your doctor may gradually increase your dose up to a maximum combination of 90 mg on waking and 30 mg after 8 hours. To find the best dose your doctor will regularly check how well you are tolerating a prescribed dose. You should always take the highest tolerable dose combination prescribed by your doctor.

If you take other medicines which can increase the effects of Jinarc you may receive lower doses. In this case your doctor may prescribe you Jinarc tablets with 30 mg or 15 mg tolvaptan which have to be taken once a day in the morning.

Method of administration

Swallow the tablets without chewing, with a glass of water.

The morning dose is to be taken at least 30 minutes before the morning meal. The second daily dose can be taken with or without food.

If you take more Jinarc than you should

If you have taken more tablets than your prescribed dose, **drink plenty of water and contact your doctor or your local hospital immediately**. Remember to take the medicine pack with you so that it is clear what you have taken. If you take the higher dose very late in the day you may have to go to the toilet at night more frequently.

If you forget to take Jinarc

If you forget to take your medicine you should take the dose as soon as you remember on the same day. If you do not take your tablets on one day, take your normal dose on the next day. **DO NOT** take a double dose to make up for forgotten individual doses.

If you stop taking Jinarc

If you stop taking Jinarc your kidney cysts may grow as fast as they did before you started treatment with Jinarc. Therefore, you should only stop taking Jinarc if you notice side effects requiring urgent medical attention (see section 4) or if your doctor tells you to.

If you have any further questions on the use of this medicine, ask your doctor or pharmacist.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Serious side effects:

If you notice any of the following side effects, you may need urgent medical attention. Stop taking Jinarc and immediately contact a doctor or go to the nearest hospital if you:

- find it difficult to urinate.
- experience swelling of the face, lips or tongue, itching, generalised rash, or severe wheezing or breathlessness (symptoms of an allergic reaction).

Jinarc may cause your liver not to work properly.

Consult your doctor if symptoms of nausea, vomiting, fever, tiredness, loss of appetite, pain in the abdomen, dark urine, jaundice (yellowing of skin or eyes), itching of your skin or joint and muscle pain with fever occur.

Other side effects:

Very common: may affect more than 1 in 10 people

- thirst (requiring excessive drinking of water)
- headache

- dizziness
- diarrhoea
- dry mouth
- increased need to urinate, to urinate at night, or to urinate more frequently
- fatigue

Common: may affect up to 1 in 10 people

- dehydration
- high levels of sodium, uric acid and blood sugar
- decreased appetite
- difficulty sleeping
- heart pounding
- shortness of breath
- full or bloated or uncomfortable feeling in the stomach
- constipation
- heartburn
- liver function abnormal
- rash
- itching
- muscle spasms
- general weakness
- raised levels of liver enzymes in the blood
- weight loss

Uncommon: may affect up to 1 in 100 people

- increase of bilirubin (a substance that can cause yellowing of skin or eyes) in the blood

Not known: frequency cannot be estimated from the available data

- allergic reactions (see above)

Reporting of side effects

If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via [the national reporting system listed in Appendix V](#). By reporting side effects you can help provide more information on the safety of this medicine.

5. How to store Jinarc

Keep this medicine out of the sight and reach of children.

Do not use this medicine after the expiry date which is stated on the carton and the blister after EXP. The expiry date refers to the last day of that month.

Store in the original package in order to protect from light and moisture.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. Contents of the pack and other information

What Jinarc contains

The active substance is tolvaptan.

Each Jinarc 15 mg tablet contains 15 mg tolvaptan.

Each Jinarc 30 mg tablet contains 30 mg tolvaptan.

Each Jinarc 45 mg tablet contains 45 mg tolvaptan.

Each Jinarc 60 mg tablet contains 60 mg tolvaptan.

Each Jinarc 90 mg tablet contains 90 mg tolvaptan.

The other ingredients are lactose monohydrate (see section 2), maize starch, microcrystalline cellulose, hydroxypropylcellulose, magnesium stearate, indigo carmine aluminium lake.

What Jinarc looks like and contents of the pack

The different strengths of Jinarc tablets have different shapes and embossing:

15 mg tablet: blue, triangular, with “OTSUKA” and “15” on one side.

30 mg tablet: blue, round, with “OTSUKA” and “30” on one side.

45 mg tablet: blue, square, with “OTSUKA” and “45” on one side

60 mg tablet: blue, modified rectangular, with “OTSUKA” and “60” on one side

90 mg tablet: blue, pentagonal, debossed with “OTSUKA” and “90” on one side

Your medicine is supplied in the following pack sizes:

Jinarc 15 mg tablets: blisters with 7 or 28 tablets

Jinarc 30 mg tablets: blisters with 7 or 28 tablets

Jinarc 45 mg tablets + Jinarc 15 mg tablets: blisters with 14 (7 tablets of the higher strength + 7 tablets of the lower strength), 28 (14 tablets of the higher strength + 14 tablets of the lower strength) or 56 (28 tablets of the higher strength + 28 tablets of the lower strength) tablets

Jinarc 60 mg tablets + Jinarc 30 mg tablets: blisters with 14 (7 tablets of the higher strength + 7 tablets of the lower strength), 28 (14 tablets of the higher strength + 14 tablets of the lower strength) or 56 (28 tablets of the higher strength + 28 tablets of the lower strength) tablets

Jinarc 90 mg tablets + Jinarc 30 mg tablets: blisters with 14 (7 tablets of the higher strength + 7 tablets of the lower strength), 28 (14 tablets of the higher strength + 14 tablets of the lower strength) or 56 (28 tablets of the higher strength + 28 tablets of the lower strength) tablets

Not all pack sizes may be marketed.

Marketing Authorisation Holder

Otsuka Pharmaceutical Europe Ltd.
Gallions, Wexham Springs
Framewood Road
Wexham
SL3 6PJ
United Kingdom

Manufacturer

AndersonBrecon (UK) Ltd.
Wye Valley Business Park
Brecon Road
Hay-on-Wye
Hereford

HR3 5PG
United Kingdom

or

Almac Pharma Services Ltd.
Almac House
20 Seagoe Industrial Estate
Craigavon
BT63 5QD
United Kingdom

For any information about this medicine, please contact the local representative of the Marketing Authorisation Holder:

België/Belgique/Belgien

Otsuka Pharmaceutical Europe Ltd
Tél/Tel: +44 203 747 5000

България

Otsuka Pharmaceutical Europe Ltd
Тел: +44 203 747 5000

Česká republika

Otsuka Pharmaceutical Europe Ltd
Tel: +44 203 747 5000

Danmark

Otsuka Pharma Scandinavia AB
Tlf: +46854 528 660

Deutschland

Otsuka Pharma GmbH
Tel: +49691 700 860

Eesti

Otsuka Pharmaceutical Europe Ltd
Tel: + 441895 207 100

Ελλάδα

Otsuka Pharmaceutical Europe Ltd
Τηλ: +44 203 747 5000

España

Otsuka Pharmaceutical S.A
Tel: +3493 2081 020

France

Otsuka Pharmaceutical France SAS
Tél: +33147 080 000

Hrvatska

Otsuka Pharmaceutical Europe Ltd
Tel: +44 (0)203 747 5000

Lietuva

Otsuka Pharmaceutical Europe Ltd
Tel: +44 203 747 5000

Luxembourg/Luxemburg

Otsuka Pharmaceutical Europe Ltd
Tel/ Tél: +44 203 747 5000

Magyarország

Otsuka Pharmaceutical Europe Ltd
Tel: +44 203 747 5000

Malta

Otsuka Pharmaceutical Europe Ltd
Tel: +44 203 747 5000

Nederland

Otsuka Pharmaceutical Europe Ltd
Tel: +44 203 747 5000

Norge

Otsuka Pharma Scandinavia AB
Tlf: +46854 528 660

Österreich

Otsuka Pharmaceutical Europe Ltd
Tel: +44 203 747 5000

Polska

Otsuka Pharmaceutical Europe Ltd
Tel: +44 203 747 5000

Portugal

Otsuka Pharmaceutical Europe Ltd
Tel: +44 203 747 5000

România

Otsuka Pharmaceutical Europe Ltd
Tel: +44 203 747 5000

Ireland

Otsuka Pharmaceuticals (UK) Ltd
Tel: +44 (0)203 747 5300

Ísland

Otsuka Pharma Scandinavia AB
Tlf: +46854 528 660

Italia

Otsuka Pharmaceutical Italy S.r.l.
Tel: +39 02 00 63 27 10

Κύπρος

Otsuka Pharmaceutical Europe Ltd
Thλ: +44 203 747 5000

Latvija

Otsuka Pharmaceutical Europe Ltd
Tel: +44 203 747 5000

Slovenija

Otsuka Pharmaceutical Europe Ltd
Tel: +44 203 747 5000

Slovenská republika

Otsuka Pharmaceutical Europe Ltd
Tel: +44 203 747 5000

Suomi/Finland

Otsuka Pharma Scandinavia AB
Tel/ Puh: +46854 528 660

Sverige

Otsuka Pharma Scandinavia AB
Tel: +46854 528 660

United Kingdom

Otsuka Pharmaceuticals (UK) Ltd
Tel: +44 (0)203 747 5300

This leaflet was last revised in

Other sources of information

Detailed information on this medicine is available on the European Medicines Agency web site:
<http://www.ema.europa.eu>.