



ARTWORK APPROVAL FORM

Product Name: DGSON-5/10

Market: Francophone

Mfg. Location: Unit-3

Utilisation de cette notice réservée aux professionnels de santé homologués, hôpitaux, laboratoires ou utilisateurs du produit

Notice : Information de l'utilisateur DGSON-5/DGSON-10

DGSON-5
Dapagliflozine 5mg comprimé pelliculé
Chaque comprimé pelliculé contient:
Dapagliflozine Proprietary de Monohydraté 5mg
Excipients q.s.
Couleur : Dyoxyde de titane (E171), Oxyde de fer jaune (E172).

DGSON-10
Dapagliflozine 10mg comprimé pelliculé
Chaque comprimé pelliculé contient:
Dapagliflozine Proprietary de Monohydraté 10mg
Excipients q.s.
Couleur : Dyoxyde de titane (E171), Oxyde de fer jaune (E172).

Liste des excipients
Lactose Anhydre, Cellulose Microcristalline, Hydroxypropylcellulose Faiblement Substituée, Silice Colloïdale Anhydre, Stéarate de Zinc, Opadry II Jaune (85F520464)
Excipient à effet notoire : Chaque comprimé contient 75 849 mg de lactose anhydre.

Forme pharmaceutique
DGSON-5 : Comprimé pelliculé jaune, biconvexes, ronds, gravé « 15 » sur une face et lisses sur l'autre face.
DGSON-10 : Comprimé pelliculé jaune, biconvexes, en forme de losange, gravé « 10 » sur une face et lisses sur l'autre face.

Pharmacodynamique
Classe pharmacothérapeutique : médicaments utilisés dans le traitement du diabète, inhibiteurs du co-transporteur de sodium-glucose de type 2 (SGLT2), code ATC : A10BK01.

Mécanisme d'action
La dapagliflozine est un inhibiteur très puissant (Ki : 0,55 nM), sélectif et réversible du SGLT2. L'inhibition du SGLT2 réduit la réabsorption du glucose du filtrat glomérulaire dans le tubule rénal proximal avec une réduction concomitante de la réabsorption du sodium favorisant l'excrétion urinaire du glucose et la diurèse osmotique. La dapagliflozine augmente donc l'apport de sodium au niveau du tubule distal, ce qui augmente le rétrocontrôle tubulo-glomérulaire et réduit la pression intraglomérulaire. Ceci, combiné à une diurèse osmotique, entraîne une réduction de la surcharge volumique, une diminution de la pression artérielle et une réduction de la précharge et de la postcharge, et devrait conduire à des effets bénéfiques sur le remodelage cardiaque et la fonction diastolique et préserver la fonction rénale. Les bénéfices cardiaques et rénaux de la dapagliflozine ne dépendent pas uniquement de l'effet hypoglycémiant et ne sont pas limités aux patients diabétiques comme l'ont démontré les études DAPA-HF, DELIVER et DAPA-CKD. Les autres effets comprennent une augmentation de l'hémoglobine et une réduction du poids corporel.

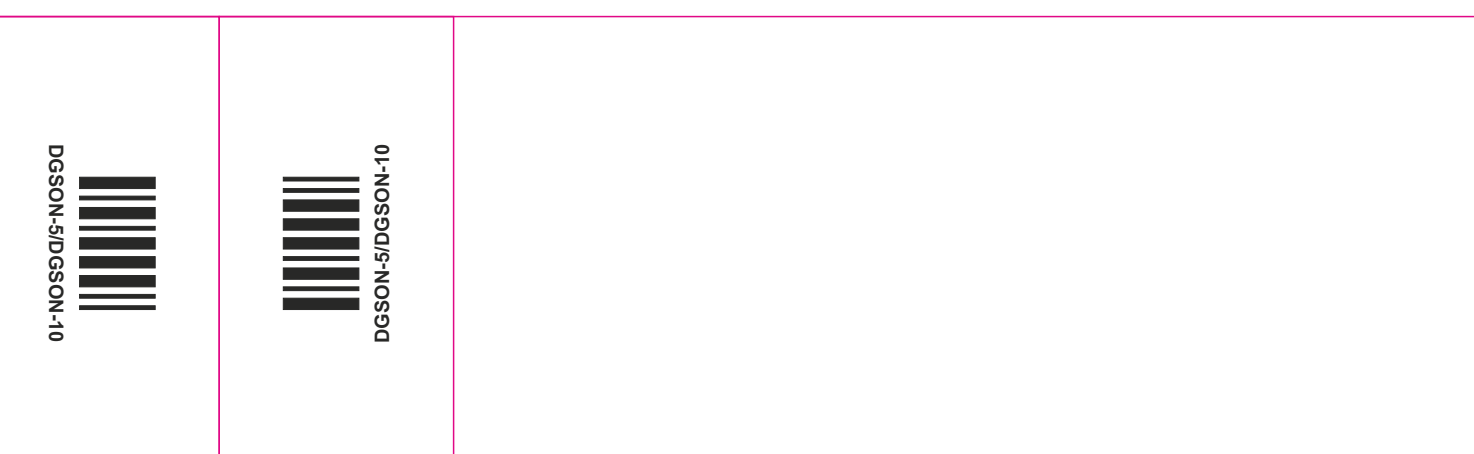
Pharmacocinétique
Absorption: La dapagliflozine est rapidement et bien absorbée après administration orale. Les concentrations plasmatiques maximales de dapagliflozine (Cmax) sont généralement atteintes dans les 2 heures suivant la prise à jeun. Les moyennes géométriques des valeurs Cmax et AUC à l'état d'équilibre avec une dose quotidienne de 10 mg de dapagliflozine ont été respectivement de 158 ng/mL et 628 ng.h/L. La biodisponibilité orale absolue de la dapagliflozine après administration d'une dose de 10 mg atteint 78 %. L'administration avec un repas à forte teneur en graisses a réduit la valeur Cmax de la dapagliflozine jusqu'à 50 % et prolongé la Tmax d'environ 1 heure, sans toutefois modifier l'AUC par rapport à une prise à jeun. Ces changements ne sont pas considérés comme cliniquement significatifs. Dapagliflozine peut donc être administré indifféremment au cours ou en dehors des repas.

Pharmacocinétique
Distribution: La dapagliflozine est liée à environ 91 % aux protéines. La liaison protéique n'a pas été modifiée dans diverses conditions pathologiques (par exemple, insuffisance rénale ou hépatique). Le volume moyen de distribution de la dapagliflozine à l'état d'équilibre était de 118 litres.
Biotransformation: La dapagliflozine est largement métabolisée, principalement sous forme de 3-O-glucuronide de dapagliflozine, un métabolite inactif. Le 3-O-glucuronide de dapagliflozine ou les autres métabolites ne 37 contribuent pas aux effets hypoglycémiants. La formation du 3-O-glucuronide de dapagliflozine est médiée par l'UGT1A9, une enzyme présente dans le foie et les reins. Le métabolisme médié par le CYP450 est considéré comme une voie de clairance mineure chez l'homme.

Indications
Diabète de type 2: Dapagliflozine est indiqué chez les adultes et chez les enfants de 10 ans et plus pour le traitement du diabète de type 2 insuffisamment contrôlé en complément d'un régime alimentaire et d'une insulinothérapie.
Insuffisance cardiaque: Dapagliflozine est indiqué chez les adultes pour le traitement de l'insuffisance cardiaque chronique symptomatique.
Maladie rénale chronique: Dapagliflozine est indiqué chez les adultes pour le traitement de la maladie rénale chronique.

Posologie et mode d'administration
Diabète de type 2: La dose recommandée est 10 mg de dapagliflozine une fois par jour.
Insuffisance cardiaque: La dose recommandée est 10 mg de dapagliflozine une fois par jour.
Maladie rénale chronique: La dose recommandée est 10 mg de dapagliflozine une fois par jour.

Contre-indications
Hypersensibilité à la substance active ou à l'un des excipients susmentionnés.
Mise en garde spéciales et précautions d'emploi
Généralités: La dapagliflozine ne doit pas être utilisée chez les patients atteints de diabète de type 1.
Insuffisance rénale: En raison d'une expérience limitée, il n'est pas recommandé d'initier un traitement par la dapagliflozine chez les patients ayant un DFG < 25 mL/min. L'efficacité glycémiq



Avant d'initier la dapagliflozine, il faut tenir compte des facteurs pouvant prédisposer à une acidocétose dans les antécédents médicaux du patient. Les patients qui peuvent être à risque accru d'ACD incluent les patients avec une faible réserve de cellules bêta fonctionnelles (p. ex. les patients avec un diabète de type 2 avec peu de peptides C ou un diabète auto-immun latent de l'adulte (LADA)) ou les patients avec un antécédent de pancréatite). Les patients dont les états conduisent à une absorption alimentaire réduite ou à une déshydratation sévère, les patients chez qui les doses d'insuline sont réduites et les patients avec des besoins accrus en insuline en raison d'une affection médicale aiguë, d'une intervention chirurgicale ou d'une consommation excessif

Interactions avec d'autres médicaments et autres formes d'interactions
Interactions pharmacodynamiques
Diurétiques: La dapagliflozine peut majorer l'effet diurétique des thiazidés et des diurétiques de l'anse et peut augmenter le risque de déshydratation et d'hypotension.
Insuline et sécrétagogues d'insuline: L'insuline et les sécrétagogues d'insuline, comme les sulfamides hypoglycémiants, entraînent une hypoglycémie. Ainsi, une dose plus faible d'insuline ou d'un sécrétagogue d'insuline peut être nécessaire pour réduire le risque d'hypoglycémie lorsqu'ils sont utilisés en association avec la dapagliflozine chez les patients atteints de diabète de type 2.

Grossesse et allaitement
Grossesse: La fréquence de l'hypoglycémie dépendait du type de traitement initial utilisé dans les études cliniques dans le diabète. Pour les études de la dapagliflozine en monothérapie, en association à la metformine ou en association à la sitagliptine (avec ou sans metformine), la fréquence des épisodes mineurs d'hypoglycémie est été plus fréquente (moins de 5 %) entre les groupes de traitement, y compris le placebo jusqu'à 102 semaines de traitement. Dans toutes les études, les événements majeurs d'hypoglycémie ont été peu fréquents et comparables entre les groupes traités par la dapagliflozine ou le placebo.

Effets sur l'aptitude à conduire des véhicules et à utiliser des machines
Dapagliflozine n'a pas d'effet ou un effet négligeable sur l'aptitude à conduire des véhicules et à utiliser des machines. Les patients doivent être informés du risque d'hypoglycémie lorsque la dapagliflozine est administrée en association avec des sulfamides hypoglycémiants de l'insuline.

Effets indésirables
Résumé du profil de sécurité
Diabète de type 2: Les effets indésirables les plus fréquemment rapportés dans les études cliniques étaient les infections génitales.
Insuffisance cardiaque: Les effets indésirables les plus fréquemment rapportés chez les patients atteints d'insuffisance cardiaque était cohérent avec le profil de sécurité connu de la dapagliflozine.
Maladie rénale chronique: Le profil de sécurité global de la dapagliflozine chez les patients atteints de maladie rénale chronique était cohérent avec le profil de sécurité connu de la dapagliflozine.

Présentation
3 plaquettes alu/alu dans une boîte en carton. Chaque plaquette en alu/alu contient 10 comprimés pour faire une boîte de 30 comprimés.

Précautions particulières de conservation
A conserver à une température ne dépassant pas 30°C, à l'abri de la lumière et de l'humidité. Garder le médicament hors de portée des enfants.

Conditions de prescription et de délivrance
Liste-I: Uniquement sur ordonnance.
Laboratoire Titulaire d'AMM et Fabricant / Marketing Authorization holder and Manufacturer : UNISON PHARMACEUTICALS PVT. LTD. Unit-III, C-7, 8/2, Steel Town, Opp. Nova Petro, Marajaya, Tara - Sarand, Dist.: Ahmedabad-382213, Gujarat, India.

Date de dernière révision du texte : septembre 2024

520 mm

400 mm French

Size: 520 x 400 mm
Colour: P P Black C

Pharmacode: 859

Do not print Outline

Font Type: Arial
Font Size: 6.5 pt
Brand Font Size: 7.5 pt

DATE: 01/10/2024 VERSION:01
DATE: 20/09/2024 VERSION:00

INSERT/PII/OUTSERT SPECIFICATION

Table with 10 columns: Artwork Code, Open Size, Close Size, Floding Condition, Type of Paper, GSM of Paper, Colour of Paper, Colour of Matter, Pharmacode, Any other special process, Old Artwork Code, Old Pharmacode, Reference Change Control no., of Plant.

Review & Approved By Contract Giver/Customer/Authority/MA Holder (If Applicable) :

Table for Sign & Date, Name, Designation, Department.



**ARTWORK APPROVAL FORM**

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**Market: Francophone**

**Mfg. Location: Unit-3**

Use of this notice reserved for approved health professionals, hospitals, laboratories or users of the product

Notice: User Information  
DGSON-5/DGSON-10

**DGSON-5**

**Dapagliflozin 5mg Film-Coated Tablets**

Each film coated tablet contains:  
Dapagliflozin Propanediol Monohydrate  
Equivalent to Dapagliflozin 5mg  
Excipients q.s.  
Colour: Titanium dioxide (E171), Iron Oxide Yellow (E172)

**DGSON-10**

**Dapagliflozin 10mg Film-Coated Tablets**

Each film coated tablet contains:  
Dapagliflozin Propanediol Monohydrate  
Equivalent to Dapagliflozin 10mg  
Excipients q.s.  
Colour: Titanium dioxide (E171), Iron Oxide Yellow (E172)

**List of excipients**

Anhydrous Lactose, Microcrystalline Cellulose, Hydroxypropyl Cellulose Low-substituted, Colloidal Anhydrous Silica, Zinc Stearate, Opadry II Yellow (85F920464), Purified Water  
Excipient with known effect: Each tablet contains 75.849 mg of lactose anhydrous  
Excipient with known effect: Each tablet contains 151.698 mg of lactose anhydrous

**Product description**

**DGSON-5**

Yellow, biconvex, round shaped, film-coated tablets with "5" engraved on one side and plain on other side.

**DGSON-10**

Yellow, biconvex, diamond-shaped, film-coated tablets with "10" engraved on one side and plain on other side.

Chemical name: (2S,3R,4R,5S,6R)-2-((4-Ethoxybenzyl)(4-chlorophenyl)-6-hydroxyethyl-tetrahydro-2H-pyran-3,4,5-triol) propanediol monohydrate; Molecular formula: C<sub>24</sub>H<sub>34</sub>ClO<sub>7</sub>; Molecular weight: 502.98 gm/mol.

**Pharmacodynamics**

**Pharmacotherapeutic Class:**  
Drugs used in diabetes, sodium-glucose co-transporter 2 (SGLT2) inhibitors, ATC code: A10BK01

**Mechanism of action**

Dapagliflozin is a highly potent (K<sub>i</sub> 0.55 nM), selective and reversible inhibitor of SGLT2. Inhibition of SGLT2 by dapagliflozin reduces reabsorption of glucose from the glomerular filtrate in the proximal renal tubule with a concomitant reduction in sodium reabsorption leading to urinary excretion of glucose and osmotic diuresis. Dapagliflozin therefore increases the delivery of sodium to the distal tubule which increases tubule glomerular feedback and reduces intra glomerular pressure. This combined with osmotic diuresis leads to a reduction in volume overload, reduced blood pressure, and lower preload and afterload, which may have beneficial effects on cardiac remodeling and diastolic function, and preserve renal function. The cardiac and renal benefits of dapagliflozin go beyond the blood glucose-lowering effect and are not limited to patients with diabetes as demonstrated in the DAPA-HF, DELIVER and DAPA-CKD studies. Other effects include an increase in haematocrit and reduction in body weight.

Dapagliflozin improves both fasting and post-prandial plasma glucose levels by reducing renal glucose reabsorption leading to urinary glucose excretion. The glucose excretion (glucosuric effect) is observed after the first dose, is continuous over the 24-hour dosing interval and is sustained for the duration of treatment. The amount of glucose removed by the kidney through this mechanism is dependent upon the blood glucose concentration and GFR. Thus, in subjects with normal blood glucose and/or low GFR, dapagliflozin has a low propensity to cause hypoglycaemia, as the amount of filtered glucose is small and can be reabsorbed by SGLT1 and unblocked SGLT2 transporters. Dapagliflozin does not impair normal endogenous glucose production in response to hypoglycaemia. Dapagliflozin acts independently of insulin secretion and insulin action. Improvement in homeostasis model assessment for beta cell function (HOMA beta-cell) has been observed in clinical studies with dapagliflozin.

The SGLT2 is selectively expressed in the kidney. Dapagliflozin does not inhibit other glucose transporters important for glucose transport into peripheral tissues and is > 1,400 times more selective for SGLT2 versus SGLT1, the major transporter in the gut responsible for glucose absorption.

**Pharmacodynamic effects**

Increases in the amount of glucose excreted in the urine were observed in healthy subjects and in subjects with type 2 diabetes mellitus following the administration of dapagliflozin. Approximately 70 g of glucose was excreted in the urine per day (corresponding to 280 kcal/day) at a dapagliflozin dose of 10 mg/day in subjects with type 2 diabetes mellitus for 12 weeks. Evidence of sustained glucose excretion was seen in subjects with type 2 diabetes mellitus given dapagliflozin 10 mg/day for up to 2 years.

This urinary glucose excretion with dapagliflozin also results in osmotic diuresis and increases in urinary volume in subjects with type 2 diabetes mellitus. Urinary volume increases in subjects with type 2 diabetes mellitus treated with dapagliflozin 10 mg were sustained at 12 weeks and amounted to approximately 375 mL/day. The increase in urinary volume was associated with a small and transient increase in urinary sodium excretion that was not associated with changes in serum sodium concentrations.

Urinary uric acid excretion was also increased transiently for 3-7 days and accompanied by a sustained reduction in serum uric acid concentration. At 24 weeks, reductions in serum uric acid concentrations ranged from -48.3 to -18.3 micromole/L (-0.87 to -0.33 mg/dL).

**Pharmacokinetics**

**Absorption**

Dapagliflozin was rapidly and well absorbed after oral administration. Maximum dapagliflozin plasma concentrations (C<sub>max</sub>) were usually attained within 2 hours after administration in the fasted state. Geometric mean steady-state dapagliflozin C<sub>max</sub> and AUC values following once daily 10 mg doses of dapagliflozin were 150 ng/mL and 629 ng/mL, respectively. The absolute oral bioavailability of dapagliflozin following the administration of a 10 mg dose is 78%. Administration with a high-fat meal decreased dapagliflozin C<sub>max</sub> by up to 50% and prolonged T<sub>max</sub> by approximately 1 hour, but did not alter AUC as compared with the fasted state. These changes are not considered to be clinically meaningful. Hence, Dapagliflozin Tablets can be administered with or without food.

**Distribution**

Dapagliflozin is approximately 91% protein bound. Protein binding was not altered in various disease states (e.g. renal/hepatic impairment). The mean steady-state volume of distribution of dapagliflozin was 119 liters.

**Biotransformation**

Dapagliflozin is extensively metabolized, primarily to yield dapagliflozin 3-O-glucuronide, which is an inactive metabolite. Dapagliflozin 3-O-glucuronide or other metabolites do not contribute to the glucose-lowering effects. The formation of dapagliflozin 3-O-glucuronide is mediated by UGT1A9, an enzyme present in the liver and kidney, and CYP-mediated metabolism was a minor clearance pathway in humans.

**Elimination**

The mean plasma terminal half-life (t<sub>1/2</sub>) for dapagliflozin was 12.9 hours following a single oral dose of dapagliflozin 10mg to healthy subjects. The mean total systemic clearance of dapagliflozin administered intravenously was 207 mL/min. Dapagliflozin and related metabolites are primarily eliminated via urinary excretion with less than 2% as unchanged dapagliflozin. After administration of a 50 mg 14C-dapagliflozin dose, 56% was recovered, 75% in urine and 21% in feces. In fact, approximately 15% of the dose was excreted as parent drug.

**Linearity**

Dapagliflozin exposure increased proportional to the increment in dapagliflozin dose over the range of 0.1 to 500 mg and its pharmacokinetics did not change with time upon repeated daily dosing for up to 24 weeks.

**Special populations**

**Renal impairment**

At steady-state (20 mg once-daily dapagliflozin for 7 days), subjects with type 2 diabetes mellitus and mild, moderate or severe renal impairment (as determined by iohexol plasma clearance) had mean systemic exposures of dapagliflozin of 32%, 60% and 87% higher, respectively, than those of subjects with type 2 diabetes mellitus and normal renal function. The steady-state 24-hour urinary glucose excretion was highly dependent on renal function and 85, 52, 18 and 11 g of glucose/day was excreted by subjects with type 2 diabetes mellitus and normal renal function or mild, moderate or severe renal impairment, respectively. The impact of haemodialysis on dapagliflozin exposure is not known. The effect of reduced renal function on systemic exposure was evaluated in a population pharmacokinetic model. Consistent with previous results, model predicted AUC was higher in patients with chronic kidney disease compared with normal renal function, and was not meaningfully different in chronic kidney disease patients with type 2 diabetes mellitus and without diabetes.

**Hepatic impairment**

In subjects with mild or moderate hepatic impairment (Child-Pugh classes A and B), mean C<sub>max</sub> and AUC of dapagliflozin were up to 12% and 36% higher, respectively, compared to healthy matched control subjects. These differences were not considered to be clinically meaningful. In subjects with severe hepatic impairment (Child-Pugh class C) mean C<sub>max</sub> and AUC of dapagliflozin were 40% and 67% higher than matched healthy controls, respectively.

**Elderly (> 65 years)**

There is no clinically meaningful increase in exposure based on age alone in subjects up to 70 years old. However, an increased exposure due to age-related decrease in renal function can be expected. There are insufficient data to draw conclusions regarding exposure in patients > 70 years old.

**Paediatric population**

Pharmacokinetics and pharmacodynamics (glucosuria) in children with type 2 diabetes mellitus aged 10-17 years were similar to those observed in adults with type 2 diabetes mellitus.

**Gender**

The mean dapagliflozin AUCs in females was estimated to be about 22% higher than in males.

**Race**

There were no clinically relevant differences in systemic exposures between White, Black or Asian races.

**Body weight**

Dapagliflozin exposure was found to decrease with increased weight. Consequently, low-weight patients may have somewhat increased exposure and patients with high weight somewhat decreased exposure. However, the differences in exposure were not considered clinically meaningful.

**Indication**

**Type 2 diabetes mellitus**

Dapagliflozin Tablets is indicated in adults and children aged 10 years and above for the treatment of insufficiently controlled type 2 diabetes mellitus as an adjunct to diet and exercise

- as monotherapy when metformin is considered inappropriate due to intolerance.
- in addition to other medicinal products for the treatment of type 2 diabetes.

For study results with respect to combination of the therapies, effects on glycaemic control, cardiovascular and renal events, and the populations studied.

**Heart failure**

Dapagliflozin Tablets is indicated in adults for the treatment of symptomatic chronic heart failure.

**Chronic kidney disease**

Dapagliflozin Tablets is indicated in adults for the treatment of chronic kidney disease.

**Recommended dose**

**Posology**

**Type 2 diabetes mellitus**  
The recommended dose is 10 mg dapagliflozin once daily.

When dapagliflozin is used in combination with insulin or an insulin secretagogue, such as a sulphonylurea, a lower dose of insulin or insulin secretagogue may be considered to reduce the risk of hypoglycaemia.

**Heart failure**

The recommended dose is 10 mg dapagliflozin once daily.

**Chronic kidney disease**

The recommended dose is 10 mg dapagliflozin once daily.

**Special populations**

**Renal impairment**

No dose adjustment is required based on renal function.

It is not recommended to initiate treatment with dapagliflozin in patients with an estimated glomerular filtration rate (eGFR) < 15 mL/min/1.73m<sup>2</sup>.

In patients with type 2 diabetes mellitus, the glucose lowering efficacy of dapagliflozin is reduced when eGFR is < 45 mL/min/1.73m<sup>2</sup>, and is likely absent in patients with severe renal impairment. Therefore, if eGFR falls below 45 mL/min/1.73m<sup>2</sup>, additional glucose lowering treatment should be considered in patients with type 2 diabetes mellitus.

**Hepatic impairment**

No dose adjustment is necessary for patients with mild or moderate hepatic impairment. In patients with severe hepatic impairment, a starting dose of 5 mg is recommended. If well tolerated, the dose may be increased to 10 mg.

**Elderly (> 65 years)**

No dose adjustment is recommended based on age.

**Paediatric population**

No dose adjustment is required for the treatment of type 2 diabetes mellitus in children aged 10 years and above. No data are available for children below 10 years of age.

The safety and efficacy of dapagliflozin for the treatment of heart failure or for the treatment of chronic kidney disease in children < 18 years have not yet been established. No data are available.

**Method of administration**

Dapagliflozin Tablets can be taken orally once daily at any time of day with or without food. Tablets are to be swallowed whole.

**Contraindication**

Hypersensitivity to the active substance or to any of the excipients listed above.

**Warnings and precautions**

**Renal impairment**

There is limited experience with initiating treatment with dapagliflozin in patients with eGFR < 25 mL/min/1.73m<sup>2</sup>, and no experience with initiating treatment in patients with eGFR < 15 mL/min/1.73m<sup>2</sup>. Therefore, it is not recommended to initiate treatment with dapagliflozin in patients with eGFR < 15 mL/min/1.73m<sup>2</sup>.

The glucose lowering efficacy of dapagliflozin is dependent on renal function, and is reduced in patients with eGFR < 45 mL/min/1.73m<sup>2</sup> and is likely absent in patients with severe renal impairment.

In patients with moderate renal impairment (eGFR < 60 mL/min/1.73m<sup>2</sup>), a higher proportion of patients treated with dapagliflozin had adverse reactions of increase in parathyroid hormone (PTH) and hypotension, compared with placebo.

**Hepatic impairment**

There is limited experience in clinical studies in patients with hepatic impairment. Dapagliflozin exposure is increased in patients with severe hepatic impairment.

**Use in patients at risk for volume depletion and/or hypotension**

Due to its mechanism of action, dapagliflozin increases diuresis which may lead to the modest decrease in blood pressure observed in clinical studies. It may be more pronounced in patients with very high blood glucose concentrations.

Caution should be exercised in patients for whom a dapagliflozin-induced drop in blood pressure could pose a risk, such as patients on anti-hypertensive therapy with a history of hypotension or elderly patients.

**Diabetic ketoacidosis**

Rare cases of diabetic ketoacidosis (DKA), including life-threatening and fatal cases, have been reported in patients treated with sodium-glucose co-transporter 2 (SGLT2) inhibitors, including dapagliflozin. In a number of cases, the presentation of the condition was atypical with only moderately increased blood glucose values, below 14 mmol/L (250 mg/dL).

The risk of diabetic ketoacidosis must be considered in the event of non-specific symptoms such as nausea, vomiting, anorexia, abdominal pain, excessive thirst, difficulty breathing, confusion, unusual fatigue or sleepiness. Patients should be assessed for ketoacidosis immediately if these symptoms occur, regardless of blood glucose level.

**Neutrophilic fasciitis of the perineum (Fournier's gangrene)**

Neutrophilic fasciitis of the perineum (Fournier's gangrene) has been reported in female and male patients taking SGLT2 inhibitors.

Postmarketing cases of necrotising fasciitis of the perineum (also known as Fournier's gangrene) have been reported in female and male patients taking SGLT2 inhibitors. This is a rare but

serious and potentially life-threatening event that requires urgent surgical intervention and antibiotic treatment.

**Urinary tract infections**

Urinary glucose excretion may be associated with an increased risk of urinary tract infection; therefore, temporary interruption of dapagliflozin should be considered when treating pyelonephritis or urosepsis.

**Elderly (> 65 years)**

Elderly patients may be at a greater risk for volume depletion and are more likely to be treated with diuretics.

Elderly patients are more likely to have impaired renal function, and/or to be treated with anti-hypertensive medicinal products that may cause changes in renal function such as angiotensin-converting enzyme inhibitors (ACE-I) and angiotensin II type 1 receptor blockers (ARB). The same recommendations for renal function apply to elderly patients as to all patients.

**Cardiac failure**

Experience with dapagliflozin in NYHA class IV is limited.

**Chronic kidney disease**

There is no experience with dapagliflozin for the treatment of chronic kidney disease in patients without diabetes who do not have albuminuria.

Dapagliflozin has not been studied for the treatment of chronic kidney disease in patients with polycystic kidney disease, glomerulonephritis with flares (lupus nephritis or ANCA-associated vasculitis), ongoing or recent requirements of cytotoxic, immunosuppressive or other immunomodulating renal therapy, or in patients who received an organ transplant.

**Lower limb amputations**

An increase in cases of lower limb amputation (primarily of the toe) has been observed in long-term, clinical studies in type 2 diabetes mellitus with SGLT2 inhibitors. It is unknown whether this constitutes a class effect. It is important to counsel patients with diabetes on routine preventative foot care.

**Urine laboratory assessments**

Due to its mechanism of action, patients taking Dapagliflozin Tablets will test positive for glucose in their urine.

**Urine laboratory assessments**

The tablets contain lactose. Patients with rare hereditary problems of galactose intolerance, total lactase deficiency or glucose-galactose maldigestion should not take this medicinal product.

**Interaction with other medicinal products and other forms of interaction**

**Pharmacodynamic interactions**

**Diuretics**

Dapagliflozin may add to the diuretic effect of thiazide and loop diuretics and may increase the risk of dehydration and hypotension.

**Insulin and insulin secretagogues**

Insulin and insulin secretagogues, such as sulphonylureas, cause hypoglycaemia. Therefore, a lower dose of insulin or insulin secretagogue may be required to reduce the risk of hypoglycaemia when used in combination with dapagliflozin in patients with type 2 diabetes mellitus.

**Pharmacokinetic interactions**

The metabolism of dapagliflozin is primarily via glucuronide conjugation mediated by UDP-glucuronosyl transferase 1A9 (UGT1A9).

In *in vitro* studies, dapagliflozin neither inhibited cyclochrome P450 (CYP) 1A2, CYP2A6, CYP2B6, CYP2C8, CYP2C9, CYP2C19, CYP2D6, CYP3A4, nor induced CYP1A2, CYP2B6 or CYP3A4. Therefore, dapagliflozin is not expected to alter the metabolic clearance of coadministered medicinal products that are metabolised by these enzymes.

**Effect of other medicinal products on dapagliflozin**

Interaction studies conducted in healthy subjects, using mainly a single-dose design, suggest that the pharmacokinetics of dapagliflozin are not altered by metformin, pioglitazone, sitagliptin, glimepiride, voglibose, hydrochlorothiazide, bumetanide, valsartan, or simvastatin.

Following coadministration of dapagliflozin with filirapion (an inducer of various active transporters and drug-metabolising enzymes) a 22% decrease in dapagliflozin systemic exposure (AUC) was observed, but with no clinically meaningful effect on 24-hour urinary glucose excretion. No dose adjustment is recommended. A clinically relevant effect with other inducers (e.g. carbamazepine, phenytoin, phenobarbital) is not expected.

Following coadministration of dapagliflozin with metforminic acid (an inhibitor of UGT1A9), a 55% increase in dapagliflozin systemic exposure was seen, but with no clinically meaningful effect on 24-hour urinary glucose excretion. No dose adjustment is recommended.

**Effect of dapagliflozin on other medicinal products**

Dapagliflozin may increase renal lithium excretion and the blood lithium levels may be decreased. Serum concentration of lithium should be monitored more frequently after dapagliflozin initiation and dose changes. Please refer the patient to the lithium prescribing doctor in order to monitor serum concentration of lithium.

In interaction studies conducted in healthy subjects, using mainly a single-dose design, dapagliflozin did not alter the pharmacokinetics of metformin, pioglitazone, sitagliptin, glimepiride, hydrochlorothiazide, bumetanide, valsartan, digoxin (P-gp substrate) or warfarin (S-warfarin, a CYP2C9 substrate), or the anticoagulatory effects of warfarin as measured by INR. Combination of a single dose of dapagliflozin 20 mg and simvastatin (a CYP3A4 substrate) resulted in a 19% increase in AUC of simvastatin and 31% increase in AUC of simvastatin acid. The increase in simvastatin and simvastatin acid exposures are not considered clinically relevant.

Monitoring glycaemic control with 1,5-AG assay is not recommended as measurements of 1,5-AG are unreliable in assessing glycaemic control in patients taking SGLT2 inhibitors. Use of alternative methods to monitor glycaemic control is advised.

**Faeriatric population**

Interaction studies have only been performed in adults.

**Pregnancy and lactation**

**Pregnancy**

There are no data from the use of dapagliflozin in pregnant women. Studies in rats have shown toxicity to the developing kidney in the time period corresponding to the second and third trimester of human pregnancy. Therefore, the use of dapagliflozin is not recommended during the second and third trimesters of pregnancy.

**Breast-feeding**

It is unknown whether dapagliflozin and/or its metabolites are excreted in human milk. Available pharmacodynamic/toxicological data in animals have shown excretion of dapagliflozin/metabolites in milk, as well as pharmacologically-mediated effects in nursing offspring. A risk to the newborn/infants cannot be excluded. Dapagliflozin should not be used while breast-feeding.

**Fertility**

The effect of dapagliflozin on fertility in humans has not been studied. In male and female rats, dapagliflozin showed no effects on fertility at any dose studied.

**Effects on ability to drive and use machines**

Dapagliflozin Tablets has no or negligible influence on the ability to drive and use machines. Patients should be alerted to the risk of hypoglycaemia when dapagliflozin is used in combination with a sulphonylurea or insulin.

**Undesirable effects**

**Summary of the safety profile**

**Type 2 diabetes mellitus**

The most frequently reported adverse reactions across the clinical studies were genital infections.

**Heart failure**

The overall safety profile of dapagliflozin in patients with heart failure was consistent with the known safety profile of dapagliflozin.

**Description of selected adverse reactions**

**Yulovaginitis, balanitis and related genital infections**  
In the 13-study safety pool, vulvovaginitis, balanitis and related genital infections were reported in 5.5% and 0.6% of subjects who received dapagliflozin 10 mg and placebo, respectively.

**Necrotising fasciitis of the perineum (Fournier's gangrene)**

Cases of Fournier's gangrene have been reported postmarketing in patients taking SGLT2 inhibitors, including dapagliflozin.

**Hypoglycaemia**

The frequency of hypoglycaemia depended on the type of background therapy used in the clinical studies in diabetes mellitus.

For studies of dapagliflozin in monotherapy, as add-on to metformin or as add-on to sitagliptin (with or without metformin), the frequency of minor episodes of hypoglycaemia was similar (< 5%) between treatment groups, including placebo up to 102 weeks of treatment. Across all studies, major events of hypoglycaemia were uncommon and comparable between the groups treated with dapagliflozin or placebo.

**Urinary tract infections**

Minor infections were mild to moderate, and subjects