ULORIC® (febuxostat) 40 mg or 80 mg Once Daily for the Chronic Management of Hyperuricemia in Patients With Gout.

ULORIC is not recommended for the treatment of asymptomatic hyperuricemia.

ULORIC is not for everyone. Individual results may vary.

Please see page 6 for Important Safety Information.

SPECIAL ADVERTISING SECTION:
This product information guide is funded by Takeda Pharmaceuticals America, Inc.
ULORIC is a trademark of Teijin Pharma Limited registered with the U.S. Patent and Trademark Office and used under license by Takeda Pharmaceuticals America, Inc.
ULORIC®
(febuxostat) 40 mg or 80 mg Once Daily for the Chronic Management of Hyperuricemia in Patients With Gout

ULORIC 40 mg or 80 mg was approved by the FDA in February 2009 for the treatment of hyperuricemia in patients with gout.

Gout is a common form of arthritis and occurs in 6.1 million Americans.¹ The symptoms of gout include an acute, extremely painful attack of arthritis accompanied by erythema, elevated temperature, swelling, and edema of the skin.²⁻⁴ In 85% to 90% of gout cases, the initial presentation of gout affects only one joint in the lower limbs. This is often the first metatarsophalangeal joint. This condition is known as podagra.²⁻³ The other joints that are most frequently affected are the midtarsi, ankles, knees, and arms.⁵

Hyperuricemia is a metabolic disorder in which serum urate levels exceed 6.8 mg/dL.⁵ At this concentration, uric acid can begin to precipitate.⁵ The resulting precipitate, monosodium urate crystals, can be deposited in the synovial fluid and cartilage of peripheral joints, the helix (pinna) of the ear, and the olecranon (elbow) bursa.²⁻³ When this becomes symptomatic in a patient, gout is diagnosed.²⁻³⁻⁶

Indication: ULORIC is a xanthine oxidase (XO) inhibitor indicated for the chronic management of hyperuricemia in patients with gout. ULORIC is not recommended for the treatment of asymptomatic hyperuricemia. Important Safety Information:

• ULORIC is contraindicated in patients being treated with azathioprine, mercaptopurine, or theophylline.
• The most common adverse reactions are liver function abnormalities, nausea, arthralgia, and rash.

Please see page 6 for Important Safety Information.
Hyperuricemia predisposes affected individuals to gout, but does not inevitably cause the disease.6,7

Hyperuricemia can be the result of increased production and/or decreased elimination of uric acid. About 90% of the hyperuricemic cases are due to decreased excretion of renal uric acid. Urate is primarily produced in the liver. About 33% of it is excreted in the gastrointestinal (GI) tract, and the remaining 67% in the kidneys.5 Uric acid levels can be increased by the ingestion of certain foods. These foods include red meat, seafood, beverages containing a lot of fructose (i.e., soft drinks), and alcohol. Beer, including nonalcoholic beer, raises the uric acid levels more than any other alcoholic beverage due to its high levels of purine.8 Consuming low-fat dairy products, vitamin C, and coffee (including noncaffeinated) can result in lower uric acid levels.3,8 Some factors can impair renal excretion of uric acid. These include dehydration, lactic acid and ketoacids, some toxins such as lead, and certain drugs. Some of the drugs that can raise urate levels are thiazide diuretics, tacrolimus, cyclosporine, ethambutol, pyrazinamide, cytotoxic chemotherapy, levodopa, interferon, and teriparatide.2,3 Because cyclosporine and tacrolimus are capable of raising serum urate levels, hyperuricemia is a common problem in transplant patients who take these drugs.5,4,6 Some factors can impair renal excretion of uric acid. These include dehydration, lactic acid and ketoacids, some toxins such as lead, and certain drugs. Some of the drugs that can raise urate levels are thiazide diuretics, tacrolimus, cyclosporine, ethambutol, pyrazinamide, cytotoxic chemotherapy, levodopa, interferon, and teriparatide.2,3 Because cyclosporine and tacrolimus are capable of raising serum urate levels, hyperuricemia is a common problem in transplant patients who take these drugs.5,4,6

Diagnosis
The symptoms mentioned above (acute arthritic attack along with erythema, elevated temperature, swelling, and edema of the skin over the affected joint) with documented hyperuricemia in the past strongly suggest gout. However, the uric acid level may be normal during an acute attack.2,3 In 2006 the European League Against Rheumatism (EULAR) developed some guidelines for the diagnosis of gout. These guidelines were based on information from both clinical practice and the best available evidence. They recommended aspiration of the synovial fluid from the inflamed joints.3 If monosodium urate crystals are present in the fluid it allows for a definitive diagnosis. Since septic arthritis can present like gout, the sample should be cultured, even when crystals are present. Gout and septic arthritis can also coexist.9

Treatment
Gout management strategy involves treating both acute gout flares and chronic gout. The chief objective of therapy in acute gout is to achieve the rapid, safe resolution of pain and functional debility.6 Nonsteroidal anti-inflammatory drugs (NSAIDs), colchicine, corticosteroids, and analgesics are commonly used in the acute treatment of gout. Chronic gout management may include the long-term use of urate-lowering agents after an attack is treated.6 The prophylactic therapy should be administered at the initiation of urate-lowering therapy. Maintaining a healthy lifestyle and diet are also an important part of the treatment plan.3

Focus on ULORIC
ULORIC 40 mg and 80 mg received approval by the FDA for the chronic management of hyperuricemia in patients with gout. ULORIC is not recommended for the treatment of asymptomatic hyperuricemia.

Pharmacology
Uloric inhibits xanthine oxidase (XO), the enzyme that is responsible for the production of uric acid. ULORIC, an XO inhibitor, achieves its therapeutic
**ULORIC® (febuxostat) for Chronic Management of Hyperuricemia in Gout**

effect by decreasing serum uric acid. ULORIC is not expected to inhibit other enzymes involved in purine and pyrimidine synthesis and metabolism at therapeutic concentrations.10

**Pharmacokinetic Profile**
The absorption of radio-labeled febuxostat was estimated to be at least 49% following oral dose administration. The time to maximum plasma levels is between 1 and 1.5 hours. $C_{\text{max}}$ increases proportionally to increases in the dose. There is no accumulation of ULORIC following multiple therapeutic doses.10 A 49% decrease in $C_{\text{max}}$ and 18% decrease in the AUC were demonstrated after multiple once-daily 80-mg doses were given with a high-fat meal. However, this did not result in a clinically significant decrease in the percent of uric acid lowering. Therefore, ULORIC may be given with or without food. ULORIC is metabolized extensively in the liver by conjugation via uridine diphosphate glucuronosyltransferase enzymes and by oxidation via cytochrome P450 (CYP) enzymes, including CYP1A2, 2C8, and 2C9 as well as non-P450 enzymes.10

**Clinical Trial Results**
A randomized, double-blinded study was conducted using ULORIC 40 mg, ULORIC 80 mg, or allopurinol (300 mg for patients with estimated creatinine clearance ($\text{Cl}_{\text{cr}}$) $\geq$60 mL/min or 200 mg for patients with $\text{Cl}_{\text{cr}}$ $\geq$30 mL/min and $\leq$59 mL/min) once daily in 2,268 patients. The primary endpoint was the proportion of patients who reached the targeted serum uric acid level of less than 6 mg/dL at final visit.11 Study participants also received naproxen 250 mg twice daily or colchicine 0.6 mg once or twice daily for 6 months for prophylaxis (of an acute gout attack). The study found 45% of ULORIC 40 mg patients, 67% of ULORIC 80 mg patients, and 42% of allopurinol patients met the primary endpoint at the end of 6 months. This study also looked at patients with mild to moderate renal impairment (baseline estimated creatinine clearance greater than or equal to 30 and less than 90 mL per minute) and found 50% of ULORIC 40 mg patients ($N = 479$), 72% of ULORIC 80 mg patients ($N = 503$) versus 42% of patients on allopurinol ($N = 501$) achieved serum uric acid levels less than 6 mg/dL at final visit.10 There are insufficient data in patients with severe renal impairment and no data in patients with severe hepatic impairment. Caution should be exercised in these patients.

Another double-blinded study randomized 643 patients to placebo, ULORIC, or allopurinol (300 mg for those with a baseline serum creatinine $\leq$1.5 mg/dL or 100 mg for patients with a serum creatinine $>1.5$ mg/dL and $\leq$2 mg/dL) once daily. In this study participants received naproxen 250 mg twice daily or colchicine 0.6 mg once or twice daily for 8 weeks for prophylaxis. The study lasted 6 months and found 72% of ULORIC 80 mg patients achieved serum uric acid levels less than 6 mg/dL versus 39% of the allopurinol patients at final visit.10

In a 1-year study of 491 patients given the same prophylaxis regimen as above for 8 weeks, participants were randomized to receive ULORIC or allopurinol. The study found 74% of the ULORIC 80 mg group reached uric acid levels below 6 mg/dL versus 36% of the allopurinol group at final visit.10

**Contraindications**
ULORIC is contraindicated in patients taking azathioprine, mercaptopurine, or theophylline.10

**Indication:** ULORIC is a xanthine oxidase (XO) inhibitor indicated for the chronic management of hyperuricemia in patients with gout. ULORIC is not recommended for the treatment of asymptomatic hyperuricemia.

**Important Safety Information:**
- ULORIC is contraindicated in patients being treated with azathioprine, mercaptopurine, or theophylline.
- The most common adverse reactions are liver function abnormalities, nausea, arthralgia, and rash.

Please see page 6 for Important Safety Information.
Indication: ULORIC is a xanthine oxidase (XO) inhibitor indicated for the chronic management of hyperuricemia in patients with gout. ULORIC is not recommended for the treatment of asymptomatic hyperuricemia.

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Please see page 6 for Important Safety Information.
INDICATION
ULORIC® (febuxostat) is a xanthine oxidase (XO) inhibitor indicated for the chronic management of hyperuricemia in patients with gout. ULORIC is not recommended for the treatment of asymptomatic hyperuricemia.

IMPORTANT SAFETY INFORMATION
• ULORIC is contraindicated in patients being treated with azathioprine, mercaptopurine, or theophylline.

• An increase in gout flares is frequently observed during initiation of anti-hyperuricemic agents, including ULORIC. If a gout flare occurs during treatment, ULORIC need not be discontinued. Prophylactic therapy (i.e. - NSAIDs or colchicine) upon initiation of treatment may be beneficial for up to six months.

• Cardiovascular Events: In randomized controlled studies, there was a higher rate of cardiovascular thromboembolic events (cardiovascular deaths, non-fatal myocardial infarctions, and non-fatal strokes) in patients treated with ULORIC [0.74 per 100P-Y (95% CI 0.36-1.37)] than allopurinol [0.60 per 100 P-Y (95% CI 0.16-1.53)]. A causal relationship with ULORIC has not been established. Monitor for signs and symptoms of MI and stroke.

• Liver Enzyme Elevations: In randomized controlled studies, transaminase elevations greater than 3 times the upper limit of normal (ULN) were observed (AST: 2%, 2% and ALT: 3%, 2% in ULORIC and allopurinol-treated patients, respectively). No dose-effect relationship for these transaminase elevations was noted. Laboratory assessment of liver function is recommended at, for example, 2 and 4 months following initiation of ULORIC and periodically thereafter.

• Adverse reactions occurring in at least 1% of ULORIC-treated patients, and, at least 0.5% greater than placebo, are liver function abnormalities, nausea, arthralgia, and rash.

Please see the accompanying complete prescribing information for ULORIC.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

Resources on Gout

American College of Rheumatology
1800 Century Place, Suite 250
Atlanta, GA 30345-4300
1-404-633-3777
www.rheumatology.org

Arthritis Foundation
P.O. Box 7669
Atlanta, GA 30357-0699
1-800-283-7800
www.arthritis.org

National Institute of Arthritis and Musculoskeletal and Skin Diseases
1 AMS Circle
Bethesda, MD 20892-3675
1-877-226-4267
www.niams.nih.gov

Gout.com
Takeda Pharmaceuticals North America, Inc.
One Takeda Parkway
Deerfield, IL 60015
1-224-554-6500
www.gout.com

Indication: ULORIC is a xanthine oxidase (XO) inhibitor indicated for the chronic management of hyperuricemia in patients with gout. ULORIC is not recommended for the treatment of asymptomatic hyperuricemia. Important Safety Information:
• ULORIC is contraindicated in patients being treated with azathioprine, mercaptopurine, or theophylline.
• The most common adverse reactions are liver function abnormalities, nausea, arthralgia, and rash.
HIGHLIGHTS OF PRESCRIBING INFORMATION
These HIGHLIGHTS do not include all the information needed to use ULORIC safely and effectively. See full prescribing information for ULORIC.

ULORIC (febuxostat) tablet for oral use Initial U.S. Approval: 2009

INDICATIONS AND USAGE
ULORIC is a xanthine oxidase (XO) inhibitor indicated for the chronic management of hyperuricemia in patients with gout. (1)

ULORIC is not recommended for the treatment of asymptomatic hyperuricemia. (1)

DOSEAGE AND ADMINISTRATION

2.1 Recommended Dose

- ULORIC is recommended at 40 mg or 80 mg once daily. The recommended starting dose of ULORIC is 40 mg once daily. For patients who do not achieve a serum uric acid (sUA) less than 6 mg per dL after 2 weeks with 40 mg, ULORIC 80 mg is recommended. (2.4, 5.1)

- Cardiovascular Events: A higher rate of cardiovascular thromboembolic events was observed in patients treated with ULORIC than allopurinol in clinical trials. Monitor for signs and symptoms of MI and stroke. (5.2)

- Liver Enzyme Elevation: Transaminase elevations have been observed in ULORIC-treated patients. Monitor liver function tests periodically. (5.3)

ADVERSE REACTIONS

Adverse reactions occurring in at least 1% of ULORIC-treated patients, and at least 0.5% greater than placebo, are liver function abnormalities, nausea, arthralgia, and rash. (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact Takeda Pharmaceuticals at 1.877.825.3327 or FDA at 1.800.FDA.1088 or www.fda.gov/medwatch.

DRUG INTERACTIONS

Concomitant administration of ULORIC with XO substrate drugs, azathioprine, mercaptopurine, or theophylline could increase plasma concentrations of these drugs resulting in severe toxicity. (7)

USE IN SPECIFIC POPULATIONS

- There is insufficient data in patients with severe renal impairment. No studies have been conducted in patients with severe hepatic impairment. Caution should be exercised in these patients. (6.6, 8.7)

- No studies have been conducted in patients with secondary hyperuricemia (including patients being treated for Lesch-Nyhan syndrome or malignant tumors). ULORIC is contraindicated in patients with secondary hyperuricemia. (8.8)

- See 17 for PATIENT COUNSELING INFORMATION and FDA-approved patient labeling. Revised: February 2009

FULL PRESCRIBING INFORMATION: CONTENTS*

1 INDICATIONS AND USAGE
2 DOSAGE AND ADMINISTRATION
2.1 Recommended Dose
2.2 Special Populations
8.1 Gout Flare
8.8 Secondary Hyperuricemia
17.1 General Information

3 DOSAGE FORMS AND STRENGTHS

- Tablet: 40 mg, 80 mg. (3)

CONTRAINDICATIONS

- ULORIC is contraindicated in patients being treated with azathioprine, mercaptopurine, or theophylline. (4)

WARNINGS AND PRECAUTIONS

- Gout Flare: An increase in gout flares is frequently observed during initiation of anti-hyperuricemic agents, including ULORIC. If a gout flare occurs during treatment of ULORIC, ULORIC need not be discontinued. Prophylactic therapy (i.e., non-steroidal anti-inflammatory drug [NSAID] or colchicine) is recommended for use in these patients. (8.8)

- See 17 for PATIENT COUNSELING INFORMATION and FDA-approved patient labeling.

DOSAGE FORMS AND STRENGTHS

- 40 mg tablets, light green to green, round shaped, debossed with “TAP” and “40.”

- 80 mg tablets, light green to green, teardrop shaped, debossed with “TAP” and “80.”

CONTRAINDICATIONS

- ULORIC is contraindicated in patients being treated with azathioprine, mercaptopurine, or theophylline. (see Drug Interactions (7))

WARNINGS AND PRECAUTIONS

- Gout Flare

After initiation of ULORIC, an increase in gout flares is frequently observed. This increase is due to reduction in serum uric acid levels resulting in mobilization of urate from tissue deposits. In order to prevent gout flares when ULORIC is initiated, concurrent prophylactic treatment with an NSAID or colchicine is recommended (see Dosage and Administration (2.4)).

- Cardiovascular Events

In the randomized controlled studies, there was a higher rate of cardiovascular thromboembolic events (cardiovascular deaths, non-fatal myocardial infarctions, and non-fatal strokes) in patients treated with ULORIC [0.74 per 100 P-Y (95% CI 0.36-1.37)] than allopurinol [0.60 per 100 P-Y (95% CI 0.16-1.53)] (see Adverse Reactions (6.1)). A causal relationship with ULORIC has not been established. Monitor for signs and symptoms of myocardial infarction (MI) and stroke.

- Liver Enzyme Elevations

During randomized controlled studies, transaminase elevations greater than 3 times the upper limit of normal (ULN) were observed (AST: 2%, ALT: 3%, 2% in ULORIC and allopurinol-treated patients, respectively). No dose-effect relationship for these transaminase elevations was noted. Laboratory assessment of liver function is recommended at, for example, 2 and 4 months following initiation of ULORIC and periodically thereafter.

ADVERSE REACTIONS

- Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

A total of 2757 subjects with hyperuricemia and gout were treated with ULORIC 40 mg or 80 mg daily in clinical studies. For ULORIC 40 mg, 559 patients were treated for ≥ 6 months. For ULORIC 80 mg, 1377 subjects were treated for ≥ 8 months, 674 patients were treated for ≥ 1 year and 515 patients were treated for ≥ 2 years.

Most Common Adverse Reactions

In three randomized, controlled clinical studies (Studies 1, 2 and 3), which were 6 to 12 months in duration, the following adverse reactions were reported by the treating physician as related to study drug. Table 1 summarizes adverse reactions reported at a rate of at least 1% in ULORIC treatment groups and at least 0.5% greater than placebo.
Table 1: Adverse Reactions Occurring in ≥1% of ULORIC-Treated Patients and at Least 0.5% Greater than Seen in Patients Receiving Placebo in Controlled Studies

<table>
<thead>
<tr>
<th></th>
<th>Placebo</th>
<th>ULORIC</th>
<th>allopurinol*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adverse Reactions</strong></td>
<td><strong>(N=134)</strong></td>
<td><strong>(N=757)</strong></td>
<td><strong>(N=1279)</strong></td>
</tr>
<tr>
<td>Liver Function Abnormalities</td>
<td>0.7%</td>
<td>6.6%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Nausea</td>
<td>0.7%</td>
<td>1.1%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Arthralgia</td>
<td>0%</td>
<td>1.1%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Rash</td>
<td>0.7%</td>
<td>0.5%</td>
<td>1.6%</td>
</tr>
</tbody>
</table>

Of the subjects who received allopurinol, 10 received 100 mg, 145 received 200 mg, and 1122 received 300 mg, based on level of renal impairment.

The most common adverse reaction leading to discontinuation from therapy was liver function abnormalities in 1.8% of ULORIC 40 mg, 1.2% of ULORIC 80 mg, and in 0.9% of allopurinol-treated subjects.

In addition to the adverse reactions presented in Table 1, dizziness was reported in more than 1% of ULORIC-treated subjects although not at a rate more than 0.5% greater than placebo.

**Less Common Adverse Reactions**

In phase 2 and 3 clinical studies the following adverse reactions occurred in less than 1% of subjects and in more than one subject treated with doses ranging from 40 mg to 240 mg of ULORIC. This list also includes adverse reactions (less than 1% of subjects) associated with organ systems from Warnings and Precautions.

**Blood and Lymphatic System Disorders**: anemia, leukopenia, neutropenia, thrombocytopenia, eosinophilia.

**Cardiac Disorders**: angina pectoris, atrial fibrillation/flutter, cardia dysrhythmia, ECG abnormal, palpitations, sinus bradycardia, tachycardia.

**Ear and Labyrinth Disorders**: deafness, tinnitus, vertigo.

**Eye Disorders**: vision blurred.

**Gastrointestinal Disorders**: abdominal distension, abdominal pain, constipation, dry mouth, dyspepsia, flatulence, frequent stools, gastritis, gastrointestinal reflux disease, gastrointestinal discomfort, gingival pain, haematemesis, hyperchloremic acidosis, hepatitis, mucositis, nausea, oral ulceration, pancreatitis, peptic ulcer, vomiting.

**General Disorders and Administration Site Conditions**: asthenia, chest pain/dyspnea, fatigue, feeling abnormal, gait disturbance, influenza-like symptoms, mass, pain, thirst.

**Hepatobiliary Disorders**: cholelithiasis/cholecystitis, hepatic steatosis, hepatitis, hepatomegaly.

**Immune System Disorder**: hypersensitivity.

**Infections and Infestations**: herpes zoster.

**Procedural Complications**: contusion.

**Metabolism and Nutrition Disorders**: anorexia, appetite decreased/increased, dehydration, diabetes mellitus, hypercholesterolemia, hyperglycemia, hyperlipidemia, hypertyglyceridemia, hypokalemia, weight decreased/increased.

**Musculoskeletal and Connective Tissue Disorders**: arthralgia, joint stiffness, joint swelling, muscle spasms/twitching/tightness/weakness, muscle cramps, muscle strain/rupture, myalgia.

**Nervous System Disorders**: altered taste, balance disorder, cerebrovascular accident, Guillain-Barré syndrome, headache, hemiparesis, hypotension, hyponatremia, lacunar infarction, lethargy, mental impairment, migraine, paresthesia, somnolence, transient ischemic attack, tremor.

**Psychiatric Disorders**: agitation, anxiety, depression, insomnia, irritability, libido decreased, nervousness, panic attack, personality change.

**Renal and Urinary Disorders**: hematuria, nephrolithiasis, pollakiuria, proteinuria, renal failure, renal insufficiency, urgency, incontinence.

**Reproductive System and Breast Changes**: breast pain, erectile dysfunction, gynecomastia.

**Respiratory, Thoracic and Mediastinal Disorders**: bronchitis, cough, dyspnea, epistaxis, nasal dryness, paranasal sinus hyperection, pharyngalgia edema, respiratory tract congestion, sneezing, throat irritation, upper respiratory tract infection.

**Skin and Subcutaneous Tissue Disorders**: alopecia, angio-edema, dermatitis, dermographism, ecchymosis, exanthema, hair color changes, hair growth abnormal, hyperhidrosis, peeling skin, petechiae, photosensitivity, pruritus, purpura, skin discoloration/alteration pigmentation, skin lesion, skin odor abnormal, urticaria.

**Vascular Disorders**: flushing, hot flush, hypertension, hypotension.

**Laboratory Parameters**: activated partial thromboplastin time prolonged, creatine increased, bicarbonate decreased, sodium increased, EGG abnormal, glucose increased, cholesterol increased, triglycerides increased, amylase increased, potassium increased, TSH increased, platelet count decreased, hemocrit decreased, hemoglobin decreased, MCV increased, RBC decreased, creatinine increased, blood urea increased, BUN/creatinine ratio increased, creatine phosphokinase (CPK) increased, alkaline phosphatase increased, LDH increased, PSA increased, urine output increased/decreased, lymphocyte count decreased, neutrophil count decreased, WBC increased/decreased, coagulation test abnormal, low density lipoprotein (LDL) increased, prothrombin time prolonged, urinary casts, urine positive for white blood cells and protein.

**Cardiovascular Safety**

Cardiovascular events and deaths were adjudicated to one of the predefined endpoints from the Anti-Platelet Trialists’ Collaborations (APT) (cardiovascular death, non-fatal myocardial infarction, stroke) in the randomized controlled and long-term extension studies. In the Phase 3 randomized controlled studies, the incidences of adjudicated APTC events per 100 patient-years of exposure were: Placebo 0 (95% CI 0.00-6.16), ULORIC 40 mg (95% CI 0.00-1.08), ULORIC 80 mg 1.09 (95% CI 0.44-2.24), and allopurinol 0.60 (95% CI 0.16-1.53).

In the long-term extension studies, the incidences of adjudicated APTC events were: ULORIC 80 mg 0.97 (95% CI 0.57-1.56), and allopurinol 0.58 (95% CI 0.02-3.24).

Overall, a higher rate of APTC events was observed in ULORIC than in allopurinol-treated patients. A causal relationship with ULORIC has not been established. Monitor for signs and symptoms of MI and stroke.

**7. DRUG INTERACTIONS**

**7.1 Xanthine Oxidase Substrate Drugs**

ULORIC is an XO inhibitor. Drug interaction studies of ULORIC with drugs that are metabolized by XO (e.g., theophylline, mercaptopurine, azathioprine) have not been conducted. Inhibition of XO by ULORIC may cause increased plasma concentrations of these drugs leading to toxicities (see Clinical Pharmacology (12.3)). Therefore, ULORIC may be used concomitantly with these medications.

**7.2 Cytotoxic Chemotherapy Drugs**

Drug interaction studies of ULORIC with cytotoxic chemotherapy have not been conducted. No data are available regarding the safety of ULORIC during cytotoxic chemotherapy.

**7.3 In Vivo Drug Interaction Studies**

Based on drug interaction studies in healthy subjects, ULORIC does not have clinically significant interactions with colchicine, naproxen, indomethacin, hydrochlorothiazide, warfarin or desipramine (see Clinical Pharmacology (12.3)). Therefore, ULORIC may be used concomitantly with these medications.

**8. USE IN SPECIFIC POPULATIONS**

**8.1 Pregnancy**

Pregnancy Category C. There are no adequate and well-controlled studies in pregnant women. ULORIC should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Febuxostat was not teratogenic in rats and rabbits at oral doses up to 48 mg per kg (40 and 51 times the human plasma exposure at 80 mg per day for equal body surface area, respectively) during organogenesis. However, increased neonatal mortality and a reduction in the neonatal body weight gain were observed when pregnant rats were treated with oral doses up to 48 mg per kg (40 times the human plasma exposure at 80 mg per day) during organogenesis and through lactation period.

**8.2 Nursing Mothers**

Febuxostat is excreted in the milk of rats. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when ULORIC is administered to a nursing woman.

**8.4 Pediatric Use**

Safety and effectiveness in pediatric patients under 18 years of age have not been established.

**8.5 Geriatric Use**

No dose adjustment is necessary in elderly patients. Of the total number of subjects in clinical studies of ULORIC, 16 percent were 65 and over, while 4 percent were 75 and over. Comparing subjects in different age groups, no clinically significant differences in safety or effectiveness were observed but greater sensitivity of some older individuals cannot be ruled out. The Cmax and AUC0-24 of febuxostat following multiple oral doses up to 48 mg per day were similar to those in younger subjects (18-40 years) (see Clinical Pharmacology (12.3)).

**8.6 Renal Impairment**

No dose adjustment is necessary in patients with mild or moderate renal impairment (Clcr 30-89 mL per min). The recommended starting dose of ULORIC is 40 mg once daily. For patients who do not achieve a sUA less than 6 mg per dl after 2 weeks with 40 mg, ULORIC 80 mg is recommended.

There are insufficient data in patients with severe renal impairment (Clcr less than 30 mL per min); therefore, caution should be exercised in these patients (see Clinical Pharmacology (12.3)).

**8.7 Hepatic Impairment**

No dose adjustment is necessary in patients with mild or moderate hepatic impairment (Child-Pugh Class A or B). No studies have been
conducted in patients with severe hepatic impairment (Child-Pugh Class C); therefore, caution should be exercised in these patients. [see Clinical Pharmacology (12.3)].

8.8 Secondary Hyperuricemia

No studies have been conducted in patients with secondary hyperuricemia (including organ transplant recipients); ULORIC is not recommended for use in patients whom the rate of urate formation is greatly increased (e.g., malignant disease and its treatment, Lesch-Nyhan syndrome). The concentration of xanthine in urine can, in rare cases, rise sufficiently to allow deposition in the urinary tract.

10 OVERDOSAGE

ULORIC was studied in healthy subjects in doses up to 300 mg daily for seven days without evidence of dose-limiting toxicities. No overdose of ULORIC was observed in terms of urate metabolism. Patients should be managed by symptomatic and supportive care should there be an overdose.

11 DESCRIPTION

ULORIC (febuxostat) is a xanthine oxidase inhibitor. The active ingredient in ULORIC is 2-[3-cyano-4-(2-methylpropoxy) phenyl]-4-methylthiazole-5-carboxylic acid, with a molecular weight of 316.38. The empirical formula is C22H19N5O3S.

The chemical structure is:

Febuxostat is a non-hygroscopic, white crystalline powder that is freely soluble in dimethylformamide; soluble in dimethylsulfoxide; sparingly soluble in ethanol; slightly soluble in methanol and acetonitrile; and practically insoluble in water. The melting range is 205°C to 208°C.

ULORIC tablets for oral use contain the active ingredient, febuxostat, and are available in two dosage strengths, 40 mg and 80 mg. Inactive ingredients include lactose monohydrate, microcrystalline cellulose, hydroxypropyl cellulose, sodium croscarmellose, silicon dioxide and magnesium stearate. ULORIC tablets are coated with Opadry II, green.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

ULORIC, a xanthine oxidase inhibitor, achieves its therapeutic effect by inhibiting the enzymes involved in purine and pyrimidine synthesis and metabolism at therapeutic concentrations.

12.2 Pharmacodynamics

Effect on Uric Acid and Xanthine Concentrations: In healthy subjects, ULORIC resulted in a dose dependent decrease in 24-hour mean serum uric acid concentrations, and an increase in 24-hour mean serum xanthine concentrations. In addition, there was a decrease in the total daily urinary uric acid excretion. Also, there was an increase in total daily urinary xanthine excretion. Percent reduction in 24-hour mean serum uric acid concentrations was between 40% to 55% at the exposure levels of 40 mg and 80 mg daily doses.

Effect on Cardiac Repolarization: The effect of ULORIC on cardiac repolarization as assessed by the QTc interval was evaluated in normal healthy subjects and in patients with gout. ULORIC in doses up to 300 mg daily, at steady state, did not demonstrate an effect on the QTc interval.

12.3 Pharmacokinetics

In healthy subjects, maximum plasma concentrations (Cmax) and AUC of febuxostat increased in a dose proportional manner following single and multiple doses of 10 mg to 120 mg. There is no accumulation when therapeutic doses are administered every 24 hours. Febuxostat has an apparent mean terminal elimination half-life (t1/2) of approximately 5 to 8 hours. Febuxostat pharmacokinetic parameters for patients with hyperuricemia and gout estimated by population pharmacokinetic analyses were similar to those estimated in healthy subjects.

Absorption: The absorption of radiolabeled febuxostat following oral dose administration was estimated to be at least 49% (based on total radioactivity recovered in urine). Maximum plasma concentrations of febuxostat occurred between 1 to 1.5 hours post-dose. After multiple oral 40 mg and 80 mg once daily doses, Cmax is approximately 1.6 ± 0.6 mcg per mL (N=30), and 2.6 ± 1.7 mcg per mL (N=227), respectively. Absolute bioavailability of the febuxostat tablet has not been studied.

Following multiple 80 mg once daily doses with a high fat meal, there was a 49% decrease in Cmax, and an 18% decrease in AUC, respectively. However, no clinically significant change in the percent decrease in serum uric acid concentration was observed (58% fed vs. 51% fasting).

Thus, ULORIC may be taken without regard to food.

Concomitant ingestion of an antacid containing magnesium hydroxide and aluminum hydroxide with an 80 mg single dose of ULORIC has been shown to delay absorption of febuxostat (approximately 1 hour) and to cause a 31% decrease in Cmax and a 15% decrease in AUC. As AUC rather than Cmax was related to drug effect, change observed in AUC was not clinically significant. Therefore, ULORIC may be taken without regard to antacid use.

Distribution: The mean apparent steady state volume of distribution (Vss/F) of febuxostat was approximately 50 L (CV ~ 40%). The plasma protein binding of febuxostat is approximately 99.2%, (primarily to albumin), and is constant over the concentration range achieved with 40 mg and 80 mg daily doses.

Metabolism: Febuxostat is extensively metabolized by both conjugation via uridine diphosphoglucuronyltransferase (UGT) enzymes including UGT1A1, UGT1A3, UGT1A9, and UGT2B7 and oxidation via cytochrome P450 (CYP) enzymes including CYP1A2, 2C8 and 2C9 and non-P450 enzymes. The relative contribution of each enzyme isoform in the metabolisation of febuxostat is not clear. The oxidation of the butyrolactone side chain leads to the formation of four pharmacologically active hydroxy metabolites, all of which occur in plasma of humans at a much lower extent than febuxostat.

In urine and feces, acyl glucuronide metabolites of febuxostat (~ 35% of the dose), and oxidative metabolites 67M-1 (~ 10% of the dose), 67M-2 (~ 11% of the dose), and 67M-4, a secondary metabolite (3%) in addition to the urinary excretion, approximately 45% of the dose was recovered in the feces as the uncharged febuxostat (12%), the acyl glucuronide of the drug (1%), its known oxidative metabolites and their conjugates (25%), and other unknown metabolites (7%).

The apparent mean terminal elimination half-life (t1/2) of febuxostat was approximately 5 to 8 hours.

Special Populations: The pharmacokinetics of ULORIC in patients under the age of 18 years have not been studied.

Geriatric Use: The Cmax and AUC of febuxostat and its metabolites following multiple oral doses of ULORIC in geriatric subjects (≥ 65 years) were similar to those in younger subjects (18-40 years). In addition, the percent decrease in serum uric acid concentration was similar between elderly and younger subjects. No dose adjustment is necessary in geriatric patients. [see Use in Special Populations (8.7)].

Renal Impairment: Following multiple 80 mg doses of ULORIC in healthy subjects with mild (ClCr 50-80 mL per min), moderate (ClCr 30-49 mL per min) or severe renal impairment (ClCr ≤ 10 mL per min) or severe renal impairment (ClCr ≤ 10 mL per min), the Cmax of febuxostat did not change relative to subjects with normal renal function (ClCr greater than 80 mL per min). AUC and half-life of febuxostat increased in subjects with renal impairment in comparison to subjects with normal renal function, but values were similar among three renal impairment groups. Mean febuxostat AUC values were up to 1.8 times higher in subjects with renal impairment compared to those with normal renal function. 3 active metabolites increased up to 2- and 4-fold, respectively. However, the percent decrease in serum uric acid concentration for subjects with renal impairment was comparable to those with normal renal function (58% in normal renal function group and 55% in the severe renal function group).

No dose adjustment is necessary in patients with mild to moderate renal impairment [see Dosage and Administration (2) and Use in Specific Populations (8.6)]. The recommended starting dose of ULORIC is 40 mg once daily. For patients who do not achieve a sUA less than 6 mg per dL after 2 weeks with 40 mg, ULORIC 80 mg is recommended. There is insufficient data in patients with severe renal impairment; caution should be exercised in those patients [see Use in Specific Populations (8.6)].

ULORIC has not been studied in end stage renal impairment patients who are on dialysis.

Hepatic Impairment: Following multiple 80 mg doses of ULORIC in patients with mild (Child-Pugh Class A) or moderate (Child-Pugh Class B) hepatic impairment and severe hepatic impairment of Child-Pugh Class C. [see Use in Specific Populations (8.7)].

Gender: Following multiple oral doses of ULORIC, the Cmax and AUC of febuxostat were 30% and 14% higher in females than in males, respectively. However, weight-corrected Cmax and AUC were similar between the genders. In addition, the percent decrease in serum uric acid concentrations was similar between genders. No dose adjustment is necessary based on gender.
Febuxostat is metabolized by conjugation and oxidation via multiple P450 substrates. Theophylline is a CYP1A2 and xanthine oxidase (XO) substrate. Although no ULORIC drug interaction studies with theophylline and mercaptopurine have been conducted, concomitant administration of allopurinol, a xanthine oxidase inhibitor, has been reported to substantially increase plasma concentrations of these drugs. Because ULORIC is a xanthine oxidase inhibitor, it could inhibit the XO-mediated metabolism of azathioprine and mercaptopurine leading to increased plasma concentrations of azathioprine or mercaptopurine that could result in severe toxicity.

Theophylline is a CYP1A2 and XO substrate. Although no ULORIC drug interaction study with theophylline has been conducted, concomitant administration of theophylline with allopurinol, a xanthine oxidase inhibitor at doses ≥ 600 mg per day, has been reported to increase theophylline plasma concentrations. Because ULORIC is a xanthine oxidase inhibitor and theophylline is a low therapeutic index drug, ULORIC could inhibit the XO-mediated metabolism of theophylline leading to increased plasma concentrations of theophylline that could induce severe theophylline toxicity.

P450 Substrate Drugs: In vitro studies have shown that febuxostat does not inhibit P450 enzymes CYP1A2, 2C9, 2C19, 2D6, or 3A4 and it also does not induce CYP1A2, 2B6, 2C19, 2C9, 2D6, or 3A4 at clinically relevant concentrations. As such, pharmacokinetic interactions between ULORIC and drugs metabolized by these CYP enzymes are unlikely.

Effect of Other Drugs on ULORIC
Febuxostat is metabolized by conjugation and oxidation via multiple metabolizing enzymes. The relative contribution of each enzyme isoform is still not clear. Drug interactions between ULORIC and a drug that inhibits or induces one particular enzyme isoform is in general not expected.

In vivo Drug Interaction Studies
Colchicine: No dose adjustment is necessary for either ULORIC or colchicine when the two drugs are co-administered. Administration of ULORIC (40 mg once daily) with colchicine (0.6 mg twice daily) resulted in an increase of 12% in Cmax and 7% in AUC of febuxostat. In addition, administration of colchicine (0.6 mg twice daily) with ULORIC (120 mg daily) resulted in less than 11% change in Cmax or AUC of colchicine for both AM and PM doses. These changes were not considered clinically significant.

Naproxen: No dose adjustment is necessary for ULORIC or naproxen when these two drugs are co-administered. Administration of ULORIC (80 mg once daily) with naproxen (500 mg twice daily) resulted in a 28% increase in Cmax and a 40% increase in AUC of febuxostat. The increases were not considered clinically significant. In addition, there were no significant changes in Cmin or AUC of naproxen (less than 2%).

Indomethacin: No dose adjustment is necessary for either ULORIC or indomethacin. In these two double-blind, placebo-controlled studies, administration of ULORIC (80 mg once daily) with indomethacin (50 mg twice daily) did not result in any significant changes in Cmax or AUC of febuxostat or indomethacin (less than 7%).

Hydrochlorothiazide: No dose adjustment is necessary for ULORIC when co-administered with hydrochlorothiazide. Administration of ULORIC (80 mg) with hydrochlorothiazide (50 mg) did not result in any clinically significant changes in Cmax or AUC of febuxostat (less than 4%), and serum uric acid concentrations were not substantially affected.

Warfarin: No dose adjustment is necessary for warfarin when co-administered with ULORIC. Administration of ULORIC (80 mg once daily) with warfarin had no effect on the pharmacokinetics of warfarin in healthy subjects. INR and Factor VII activities were also not affected by the co-administration of ULORIC.

Desipramine: Co-administration of drugs that are CYP2D6 substrates (such as desipramine) with ULORIC are not expected to require dose adjustment. Febuxostat was shown to be a weak inhibitor of CYP2D6 in vitro. Administration of ULORIC (120 mg once daily) with desipramine (25 mg) resulted in an increase in Cmax (15%) and AUC (22%) of desipramine, which was associated with a 17% decrease in the 2-hydroxydesipramine to desipramine metabolic ratio (based on AUC).

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility
Carcinogenesis: Two-year carcinogenicity studies were conducted in F344 rats and B6C3F1 mice. Increased transitional cell papilloma and carcinoma of urinary bladder was observed at 24 mg per kg (25 times the human plasma exposure at maximum recommended human dose of 80 mg per day) and 18.75 mg per kg (12.5 times the human plasma exposure at 80 mg per day) in male rats and female mice, respectively. The urinary bladder neoplasms were secondary to calculus formation in the kidney and urinary bladder.

Mutagenesis: Febuxostat showed a positive mutagenic response in a chromosomal aberration assay in a Chinese hamster lung fibroblast cell line with and without metabolic activation in vitro. Febuxostat was not mutagenic in the Ames or chromosomal aberration test in human peripheral lymphocytes, and LS178Y mouse lymphoma cell line, and in vivo tests in mouse micronucleus, rat unscheduled DNA synthesis and rat bone marrow cells.

Impairment of Fertility: Febuxostat at oral doses up to 48 mg per kg per day (approximately 35 times the human plasma exposure at 80 mg per day) had no effect on fertility and reproductive performance of male and female rats.

14 CLINICAL STUDIES
A serum uric acid level of less than 6 mg per dL is the goal of anti-hyperuricemic therapy and has been established as appropriate for the treatment of gout.

14.1 Management of Hyperuricemia in Gout
The efficacy of ULORIC was demonstrated in three randomized, double-blind, controlled trials in patients with hyperuricemia and gout. Hyperuricemia was defined as a baseline serum uric acid level ≥ 8 mg per dL.

Study 1 randomized patients to: ULORIC 40 mg daily, ULORIC 80 mg daily, or allopurinol (300 mg daily) for patients with estimated creatinine clearance (CrCl) ≥ 60 mL per min or 200 mg daily for patients with estimated CrCl ≤ 60 mL per min and ≤ 59 mL per min).

The duration of Study 1 was 6 months.

Study 2 randomized patients to: placebo, ULORIC 80 mg daily, ULORIC 120 mg daily, ULORIC 240 mg daily or allopurinol (300 mg daily for patients with estimated creatinine clearance (CrCl) ≥ 60 mL per min or 100 mg daily for patients with estimated CrCl ≤ 60 mL per min and ≤ 59 mL per min).

The duration of Study 2 was 6 months.

Study 3, a 1-year study, randomized patients to: ULORIC 80 mg daily, ULORIC 120 mg daily, or allopurinol 300 mg daily. Subjects who completed Study 2 and Study 3 were eligible to enroll in a phase 3 long-term extension study in which subjects received treatment with ULORIC for over three years.

In all three studies, subjects received naproxen 250 mg twice daily or colchicine 0.6 mg once or twice daily for gout flare prophylaxis. In Study 1 the duration of prophylaxis was 6 months; in Study 2 and Study 3 the duration of prophylaxis was 8 weeks.

The efficacy of ULORIC was also evaluated in a 4 week dose ranging study which randomized patients to: placebo, ULORIC 40 mg daily, ULORIC 80 mg daily, or ULORIC 120 mg daily. Subjects who completed this study were eligible to enroll in a long-term extension study in which subjects received treatment with ULORIC for up to five years.

Patients in these studies were representative of the patient population for which ULORIC use is intended. Table 2 summarizes the demographics and baseline characteristics for the subjects enrolled in the studies.

Table 2: Patient Demographics and Baseline Characteristics in Study 1, Study 2 and Study 3

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Study 1</th>
<th>Study 2</th>
<th>Study 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
</tr>
<tr>
<td>Race:</td>
<td>Caucasian</td>
<td>African American</td>
<td>Hispanic or Latino</td>
</tr>
<tr>
<td></td>
<td>80%</td>
<td>80%</td>
<td>10%</td>
</tr>
<tr>
<td>Ethnicity: Hispanic or Latino</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Alcohol Use</td>
<td>67%</td>
<td>67%</td>
<td>67%</td>
</tr>
<tr>
<td>Mild to Moderate Renal Insufficiency [percent with estimated CrCl &lt; 90 mL per min]</td>
<td>59%</td>
<td>59%</td>
<td>59%</td>
</tr>
<tr>
<td>History of Hypertension</td>
<td>49%</td>
<td>49%</td>
<td>49%</td>
</tr>
<tr>
<td>History of Hyperlipidemia</td>
<td>38%</td>
<td>38%</td>
<td>38%</td>
</tr>
<tr>
<td>BMI ≥ 30 kg per m²</td>
<td>63%</td>
<td>63%</td>
<td>63%</td>
</tr>
<tr>
<td>Mean BMI</td>
<td>33 kg per m²</td>
<td>33 kg per m²</td>
<td>33 kg per m²</td>
</tr>
<tr>
<td>Baseline sUA ≥ 10 mg per dL</td>
<td>36%</td>
<td>36%</td>
<td>36%</td>
</tr>
<tr>
<td>Mean baseline sUA</td>
<td>9.7 mg per dL</td>
<td>9.7 mg per dL</td>
<td>9.7 mg per dL</td>
</tr>
<tr>
<td>Experienced a gout flare in previous year</td>
<td>85%</td>
<td>85%</td>
<td>85%</td>
</tr>
</tbody>
</table>

Serum Uric Acid Level less than 6 mg per dL at Final Visit: ULORIC 80 mg was superior to allopurinol in lowering serum uric acid to less than 6 mg per dL at the final visit. ULORIC 40 mg daily, although not superior to allopurinol, was effective in lowering serum uric acid to less than 6 mg per dL at the final visit (Table 3).
ULORIC® tablets are light green to green in color, teardrop shaped, debossed with “TAP” on one side and “80” on the other side and supplied as:

- 64764-677-13 Bottle of 100 Tablets
- 64764-677-30 Bottle of 30 Tablets
- 64764-677-11 Hospital Unit Dose Pack of 100 Tablets
- 64764-918-90 Bottle of 90 Tablets
- 64764-918-30 Bottle of 30 Tablets

ULORIC 80 mg tablets are light green to green in color, round shaped, debossed with “TAP” on one side and “80” on the other side and supplied as:

- 64764-677-13 Bottle of 100 Tablets
- 64764-677-30 Bottle of 30 Tablets
- 64764-677-11 Hospital Unit Dose Pack of 100 Tablets
- 64764-918-90 Bottle of 90 Tablets
- 64764-918-30 Bottle of 30 Tablets

### HOW SUPPLIED/STORAGE AND HANDLING

ULORIC 40 mg tablets are light green to green in color, round shaped, debossed with “TAP” on one side and “40” on the other side and supplied as:

- NDC Number Size
  - 64764-918-11 Hospital Unit Dose Pack of 100 Tablets
  - 64764-918-30 Bottle of 30 Tablets
  - 64764-918-90 Bottle of 90 Tablets
  - 64764-918-18 Bottle of 500 Tablets

ULORIC 80 mg tablets are light green to green in color, teardrop shaped, debossed with “TAP” on one side and “80” on the other side and supplied as:

- NDC Number Size
  - 64764-677-11 Hospital Unit Dose Pack of 100 Tablets
  - 64764-677-30 Bottle of 30 Tablets
  - 64764-677-13 Bottle of 100 Tablets
  - 64764-677-19 Bottle of 1000 Tablets

Protect from light. Store at 25°C (77°F); excursions permitted to 15° – 30°C (59° – 86°F) [See USP Controlled Room Temperature]

### PATIENT COUNSELING INFORMATION

[see FDA-Approved Patient Labeling (17.2)]

#### 16 HOW SUPPLIED/STORAGE AND HANDLING

#### 17 General Information

Patients should be advised of the potential benefits and risks of ULORIC. Patients should be informed about the potential for gout flares, elevated liver enzymes and adverse cardiovascular events after initiation of ULORIC therapy. Concomitant prophylaxis with an NSAID or colchicine for gout flares should be considered.

Patients should be instructed to inform their healthcare professional if they develop a rash, chest pain, shortness of breath or neurologic symptoms suggesting a stroke. Patients should be instructed to inform their healthcare professional of any other medications they are currently taking with ULORIC, including over-the-counter medications.

#### 17.2 FDA-Approved Patient Labeling

| Tablet Information ULORIC® (才发现 – 300 mg) (febuxostat) tablets |
|---|---|---|---|

Table 4: Proportion of Patients with Serum Uric Acid Levels Less Than 6 mg per dL in Patients with Mild or Moderate Renal Impairment at Final Visit

<table>
<thead>
<tr>
<th>Study</th>
<th>ULORIC 40 mg daily (N=479)</th>
<th>ULORIC 80 mg daily (N=503)</th>
<th>allopurinol* 300 mg daily (N=501)</th>
<th>Difference in Proportion (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1</td>
<td>50%</td>
<td>72%</td>
<td>42%</td>
<td>7% (1%, 14%)</td>
</tr>
<tr>
<td>Study 2</td>
<td>64%</td>
<td>72%</td>
<td>42%</td>
<td>7% (1%, 14%)</td>
</tr>
<tr>
<td>Study 3</td>
<td>74%</td>
<td>36%</td>
<td>38%</td>
<td>38% (30%, 46%)</td>
</tr>
</tbody>
</table>

* Allopurinol patients (n=145) with estimated Clcr ≥ 30 mL per min and Clcr ≤ 59 mL per min per d were dosed at 200 mg daily.

Table 3: Proportion of Patients with Serum Uric Acid Levels Less Than 6 mg per dL at Final Visit

<table>
<thead>
<tr>
<th>Study</th>
<th>ULORIC 40 mg daily</th>
<th>ULORIC 80 mg daily</th>
<th>allopurinol*</th>
<th>Difference in Proportion (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1</td>
<td>45%</td>
<td>67%</td>
<td>42%</td>
<td>3% (-2%, 8%)</td>
</tr>
<tr>
<td>Study 2</td>
<td>72%</td>
<td>39%</td>
<td>1%</td>
<td>33% (26%, 42%)</td>
</tr>
<tr>
<td>Study 3</td>
<td>74%</td>
<td>36%</td>
<td>38%</td>
<td>38% (30%, 46%)</td>
</tr>
</tbody>
</table>

* Randomization was balanced between treatment groups, except in Study 2 in which twice as many patients were randomized to each of the active treatment groups compared to placebo.

In 76% of ULORIC 80 mg patients, reduction in serum uric acid levels to less than 6 mg per dL was noted by the Week 2 visit. Average serum uric acid levels were maintained at 6 mg per dL or below throughout treatment in 83% of these patients.

In all treatment groups, fewer subjects with higher baseline serum urate levels (≥ 10 mg per dL) and/or tophi achieved the goal of lowering serum uric acid to less than 6 mg per dL at the final visit; however, a higher proportion achieved a serum uric acid less than 6 mg per dL with ULORIC 80 mg than with ULORIC 40 mg or allopurinol.

Study 1 evaluated efficacy in patients with mild to moderate renal impairment (i.e., baseline estimated Clcr less than 90 mL per minute). The results in this sub-group of patients are shown in Table 4.

The most common side effects of ULORIC include:

- liver problems
- nausea
- joint pain
- rash

Tell your healthcare provider if you have any side effect that bothers you or that does not go away. These are not all of the possible side effects of ULORIC. For more information, ask your healthcare provider or pharmacist.

Call your doctor for medical advice about side effects. You may report side effects to the FDA at 1-800-FDA-1088.

How should I store ULORIC?


### General Information about the safe and effective use of ULORIC

Medicines are sometimes prescribed for purposes other than those listed in a patient information leaflet. Do not use ULORIC for a condition for which it was not prescribed. Do not give ULORIC to other people, even if they have the same symptoms that you have. It may harm them.

This patient information leaflet summarizes the most important information about ULORIC. If you would like more information about ULORIC talk with your healthcare provider. You can ask your healthcare provider or pharmacist for information about ULORIC that is written for health professionals. For more information go to www.uloric.com, or call 1-877-825-3327.

### What are the ingredients in ULORIC?

Active Ingredient: febuxostat

Inactive ingredients include: lactose monohydrate, microcrystalline cellulose, hydroxypropyl cellulose, sodium croscarmellose, silicon dioxide, magnesium stearate, and Opadry II, green

Distributed by Takeda Pharmaceuticals America, Inc. Deerfield, IL 60015

U.S. Patent Nos. - 6,225,474; 7,361,676; 5,614,520.

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