

HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use EZALLOR safely and effectively. See full prescribing information for EZALLOR.

EZALLOR™ (rosuvastatin) capsules, for oral use
Initial U.S. Approval: 2003

----- INDICATIONS AND USAGE -----

EZALLOR is an HMG Co-A reductase inhibitor indicated for:

- adult patients with hypertriglyceridemia as an adjunct to diet (1.1)
- adult patients with primary dysbetalipoproteinemia (Type III hyperlipoproteinemia) as an adjunct to diet (1.2)
- adult patients with homozygous familial hypercholesterolemia (HoFH) to reduce LDL-C, total-C, and ApoB (1.3)

Limitations of use (1.4):

- EZALLOR has not been studied in Fredrickson Type I and V dyslipidemias.

-----DOSAGE AND ADMINISTRATION-----

- EZALLOR can be taken with or without food, at any time of day. (2.1)
- Dose range: 5 mg to 40 mg once daily. Use 40 mg dose only for patients not reaching LDL-C goal with 20 mg. (2.1)
- **Adult HoFH:** Starting dose 20 mg once daily. (2.1)

-----DOSAGE FORMS AND STRENGTHS-----

Capsules: 5 mg, 10 mg, 20 mg, and 40 mg (3)

-----CONTRAINDICATIONS-----

- Known hypersensitivity to product components (4)
- Active liver disease, which may include unexplained persistent elevations in hepatic transaminase levels (4)
- Pregnancy (4, 8.1, 8.3)
- Lactation (4, 8.2)

-----WARNINGS AND PRECAUTIONS-----

- **Skeletal muscle effects (e.g., myopathy and rhabdomyolysis):** Risks increase with use of 40 mg dose, advanced age (≥ 65), hypothyroidism, renal impairment, and combination use with cyclosporine, atazanavir/ritonavir, lopinavir/ritonavir, or simeprevir. Cases of myopathy and rhabdomyolysis with acute renal failure secondary to myoglobinuria have been reported. Advise patients to promptly report to their physician unexplained and/or persistent muscle pain, tenderness, or weakness and discontinue EZALLOR if signs or symptoms appear. (5.1, 7.5, 7.6)

- **Liver enzyme abnormalities:** Persistent elevations in hepatic transaminases can occur. Perform liver enzyme tests before initiating therapy and as clinically indicated thereafter. (5.2)

-----ADVERSE REACTIONS-----

Most frequent adverse reactions (rate > 2%) are headache, myalgia, abdominal pain, asthenia, and nausea. (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact Sun Pharmaceutical Industries, Inc. at 1-800-818-4555 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

-----DRUG INTERACTIONS-----

- **Cyclosporine:** Combination increases rosuvastatin exposure. Limit EZALLOR dose to 5 mg once daily. (2.4, 5.1, 7.1, 12.3)
- **Gemfibrozil:** Combination should be avoided. If used together, limit EZALLOR dose to 10 mg once daily. (2.4, 5.1, 7.2)
- **Atazanavir/ritonavir, lopinavir/ritonavir, or simeprevir:** Combination increases rosuvastatin exposure. Limit EZALLOR dose to 10 mg once daily. (2.4, 5.1, 7.3, 12.3)
- **Coumarin anticoagulants:** Combination prolongs INR. Achieve stable INR prior to starting EZALLOR. Monitor INR frequently until stable upon initiation or alteration of EZALLOR therapy. (5.3, 7.4)
- **Concomitant lipid-lowering therapies:** Use with fibrates or lipid-modifying doses (≥ 1 g/day) of niacin increases the risk of adverse skeletal muscle effects. Caution should be used when prescribing with EZALLOR. (5.1, 7.5, 7.6)

-----USE IN SPECIFIC POPULATIONS-----

- **Females of reproductive potential:** Advise females of reproductive potential to use effective contraception during treatment with EZALLOR (8.3)
- **Severe renal impairment (not on hemodialysis):** Starting dose is 5 mg, not to exceed 10 mg. (2.5, 5.1, 8.6)
Asian population: Consider 5 mg starting dose. (2.3, 8.8)

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

Pediatric use information for patients 7 to 17 years of age is approved for AstraZeneca's CRESTOR (rosuvastatin calcium) tablets. However, due to AstraZeneca's marketing exclusivity rights, this drug product is not labeled with that pediatric information.

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FULL PRESCRIBING INFORMATION

1 INDICATIONS AND USAGE

Pediatric use information for patients 7 to 17 years of age is approved for AstraZeneca's CRESTOR (rosuvastatin calcium) tablets. However, due to AstraZeneca's marketing exclusivity rights, this drug product is not labeled with that pediatric information.

1.1 Hypertriglyceridemia

EZALLOR is indicated as adjunctive therapy to diet for the treatment of adult patients with hypertriglyceridemia.

1.2 Primary Dysbetalipoproteinemia (Type III Hyperlipoproteinemia)

EZALLOR is indicated as an adjunct to diet for the treatment of adult patients with primary dysbetalipoproteinemia (Type III Hyperlipoproteinemia).

1.3 Adult Patients with Homozygous Familial Hypercholesterolemia

EZALLOR is indicated as adjunctive therapy to other lipid-lowering treatments (e.g., LDL apheresis) or alone if such treatments are unavailable to reduce LDL-C, Total-C, and ApoB in adult patients with homozygous familial hypercholesterolemia.

1.4 Limitations of Use

EZALLOR has not been studied in Fredrickson Type I and V dyslipidemias.

2 DOSAGE AND ADMINISTRATION

2.1 General Dosing Information

The dose range for EZALLOR in adults is 5 mg to 40 mg orally once daily. The usual starting dose is 10 mg to 20 mg once daily. The usual starting dose in adult patients with homozygous familial hypercholesterolemia is 20 mg once daily. The maximum EZALLOR dose of 40 mg should be used only for those patients who have not achieved their LDL-C goal utilizing the 20 mg dose [*see Warnings and Precautions (5.1)*].

EZALLOR can be administered as a single dose at any time of day, with or without food. Swallow capsules whole. Do not crush or chew. For patients who cannot swallow capsules, the capsules can be opened for administration [*see Dosage and Administration (2.5)*].

When initiating EZALLOR therapy or switching from another HMG-CoA reductase inhibitor therapy, the appropriate EZALLOR starting dose should first be utilized, and only then titrated according to the patient's response and individualized goal of therapy.

After initiation or upon titration of EZALLOR, lipid levels should be analyzed within 2 to 4 weeks and the dosage adjusted accordingly.

Pediatric use information for patients 7 to 17 years of age is approved for AstraZeneca's CRESTOR (rosuvastatin calcium) tablets. However, due to AstraZeneca's marketing exclusivity rights, this drug product is not labeled with that pediatric information.

2.2 Dosing in Asian Patients

In Asian patients, consider initiation of EZALLOR therapy with 5 mg once daily due to increased rosuvastatin plasma concentrations. The increased systemic exposure should be taken into consideration when treating Asian patients not adequately controlled at doses up to 20 mg once daily [*see Use in Specific Populations (8.8) and Clinical Pharmacology (12.3)*].

2.3 Use with Concomitant Therapy

Patients taking cyclosporine

The dose of EZALLOR should not exceed 5 mg once daily [*see Warnings and Precautions (5.1), Drug Interactions (7.1) and Clinical Pharmacology (12.3)*].

Patients taking gemfibrozil

Avoid concomitant use of EZALLOR with gemfibrozil. If concomitant use cannot be avoided, initiate EZALLOR at 5 mg once daily. The dose of EZALLOR should not exceed 10 mg once daily [*see Warnings and Precautions (5.1), Drug Interactions (7.2) and Clinical Pharmacology (12.3)*].

Patients taking atazanavir and ritonavir, lopinavir and ritonavir, or simeprevir

Initiate EZALLOR therapy with 5 mg once daily. The dose of EZALLOR should not exceed 10 mg once daily [*see Warnings and Precautions (5.1), Drug Interactions (7.3) and Clinical Pharmacology (12.3)*].

2.4 Dosing in Patients with Severe Renal Impairment

For patients with severe renal impairment ($CL_{Cr} < 30 \text{ mL/min/1.73 m}^2$) not on hemodialysis, dosing of EZALLOR should be started at 5 mg once daily and not exceed 10 mg once daily [*see Use in Specific Populations (8.6) and Clinical Pharmacology (12.3)*].

2.5 Administration Options

See the EZALLOR full Instructions for Use for proper preparation and administration instructions.

Oral Administration

For patients who have difficulty swallowing capsules, the rosuvastatin capsule can be opened, the granules inside the capsule carefully emptied onto one teaspoon of applesauce. The granules with the applesauce should be swallowed immediately, without chewing. The granules with applesauce must be used immediately after preparation and not be stored for future use. If it is not used in its entirety, the remaining contents should be discarded immediately.

Nasogastric Tube (≥ 16 French) Administration

For patients who have a nasogastric tube in place, the rosuvastatin capsule can be opened and the intact granules emptied into a 60 mL catheter tipped syringe and add 40 mL of water. Replace the plunger and shake the syringe vigorously for 15 seconds. The granules in rosuvastatin may start dissolving which is acceptable. Attach the syringe to a nasogastric tube (≥ 16 -French) and deliver the contents of the syringe through the nasogastric tube into the stomach. After administering the granules, the nasogastric tube should be flushed with 20 mL of additional water. The mixture must be used immediately after preparation and not be stored for future use. If it is not used in its entirety, the remaining mixture should be discarded immediately. Use with any other liquids is not recommended.

3 DOSAGE FORMS AND STRENGTHS

5 mg: Hard gelatin capsule, Size “3” pink cap/off white body, imprinted axially with “984” on cap and body in black ink filled with yellow colored granules.

10 mg: Hard gelatin capsule, Size “3” purple cap/off white body, imprinted axially with “985” on cap and body in black ink filled with yellow colored granules.

20 mg: Hard gelatin capsule, Size “1” blue cap/off white body, imprinted axially with “986” on cap and body in black ink filled with yellow colored granules.

40 mg: Hard gelatin capsule, Size “0e1” green cap/white body, imprinted axially with “987” on cap and body in black ink filled with yellow colored granules.

4 CONTRAINDICATIONS

EZALLOR is contraindicated in the following conditions:

- Patients with a known hypersensitivity to any component of this product. Hypersensitivity reactions including rash, pruritus, urticaria, and angioedema have been reported with rosuvastatin [*see Adverse Reactions (6.1)*].
- Patients with active liver disease, which may include unexplained persistent elevations of hepatic transaminase levels [*see Warnings and Precautions (5.2)*].
- Pregnancy [*see Use in Specific Populations (8.1, 8.3)*].
- Lactation. Limited data indicate that rosuvastatin is present in human milk. Because statins have the potential for serious adverse reactions in nursing infants, women who require EZALLOR treatment should not breastfeed their infants [*see Use in Specific Populations (8.2)*].

5 WARNINGS AND PRECAUTIONS

5.1 Skeletal Muscle Effects

Cases of myopathy and rhabdomyolysis with acute renal failure secondary to myoglobinuria have been reported with HMG-CoA reductase inhibitors, including rosuvastatin. These risks can occur at any dose level, but are increased at the highest dose (40 mg).

EZALLOR should be prescribed with caution in patients with predisposing factors for myopathy (e.g., age \geq 65 years, inadequately treated hypothyroidism, renal impairment).

The risk of myopathy during treatment with EZALLOR may be increased with concurrent administration of some other lipid-lowering therapies (fibrates or niacin), gemfibrozil, cyclosporine, atazanavir/ritonavir, lopinavir/ritonavir, or simeprevir [*see Dosage and Administration (2) and Drug Interactions (7)*]. Cases of myopathy, including rhabdomyolysis, have been reported with HMG-CoA reductase inhibitors, including rosuvastatin, coadministered with colchicine, and caution should be exercised when prescribing EZALLOR with colchicine [*see Drug Interactions (7.7)*].

EZALLOR therapy should be discontinued if markedly elevated creatine kinase levels occur or myopathy is diagnosed or suspected. EZALLOR therapy should also be temporarily withheld in any patient with an acute, serious condition suggestive of myopathy or predisposing to the development of renal failure secondary to rhabdomyolysis (e.g., sepsis, hypotension, dehydration, major surgery, trauma, severe metabolic, endocrine, and electrolyte disorders, or uncontrolled seizures).

There have been rare reports of immune-mediated necrotizing myopathy (IMNM), an autoimmune myopathy, associated with statin use. IMNM is characterized by: proximal muscle weakness and elevated serum creatine kinase, which persist despite discontinuation of statin treatment; muscle biopsy showing necrotizing myopathy without significant inflammation; improvement with immunosuppressive agents.

All patients should be advised to promptly report to their physician unexplained muscle pain, tenderness, or weakness, particularly if accompanied by malaise or fever or if muscle signs and symptoms persist after discontinuing EZALLOR.

5.2 Liver Enzyme Abnormalities

It is recommended that liver enzyme tests be performed before the initiation of EZALLOR, and if signs or symptoms of liver injury occur.

Increases in serum transaminases [AST (SGOT) or ALT (SGPT)] have been reported with HMG-CoA reductase inhibitors, including rosuvastatin. In most cases, the elevations were transient and resolved or improved on continued therapy or after a brief interruption in therapy. There were two cases of jaundice, for which a relationship to rosuvastatin therapy could not be determined, which resolved after discontinuation of therapy. There were no cases of liver failure or irreversible liver disease in these trials.

In a pooled analysis of placebo-controlled trials, increases in serum transaminases to > 3 times the upper limit of normal occurred in 1.1% of patients taking rosuvastatin versus 0.5% of patients treated with placebo.

There have been rare postmarketing reports of fatal and non-fatal hepatic failure in patients taking statins, including rosuvastatin. If serious liver injury with clinical symptoms and/or hyperbilirubinemia or jaundice occurs during treatment with EZALLOR, promptly interrupt therapy. If an alternate etiology is not found, do not restart EZALLOR.

EZALLOR should be used with caution in patients who consume substantial quantities of alcohol and/or have a history of chronic liver disease [see *Clinical Pharmacology* (12.3)]. Active liver disease, which may include unexplained persistent transaminase elevations, is a contraindication to the use of EZALLOR [see *Contraindications* (4)].

5.3 Concomitant Coumarin Anticoagulants

Caution should be exercised when anticoagulants are given in conjunction with EZALLOR because of its potentiation of the effect of coumarin-type anticoagulants in prolonging the prothrombin time/INR. In patients taking coumarin anticoagulants and EZALLOR concomitantly, INR should be determined before starting EZALLOR and frequently enough during early therapy to ensure that no significant alteration of INR occurs [see *Drug Interactions* (7.4)].

5.4 Proteinuria and Hematuria

In the rosuvastatin clinical trial program, dipstick-positive proteinuria and microscopic hematuria were observed among rosuvastatin treated patients. These findings were more frequent in patients taking rosuvastatin 40 mg, when compared to lower doses of rosuvastatin or comparator HMG-CoA reductase inhibitors, though it was generally transient and was not associated with worsening renal function. Although the clinical significance of this finding is unknown, a dose reduction should be considered for patients on EZALLOR therapy with unexplained persistent proteinuria and/or hematuria during routine urinalysis testing.

5.5 Endocrine Effects

Increases in HbA1c and fasting serum glucose levels have been reported with HMG-CoA reductase inhibitors, including rosuvastatin. Based on clinical trial data with rosuvastatin, in some instances these increases may exceed the threshold for the diagnosis of diabetes mellitus [*see Adverse Reactions (6.1)*].

Although clinical studies have shown that rosuvastatin alone does not reduce basal plasma cortisol concentration or impair adrenal reserve, caution should be exercised if EZALLOR is administered concomitantly with drugs that may decrease the levels or activity of endogenous steroid hormones such as ketoconazole, spironolactone, and cimetidine.

6 ADVERSE REACTIONS

The following serious adverse reactions are discussed in greater detail in other sections of the label:

- Rhabdomyolysis with myoglobinuria and acute renal failure and myopathy (including myositis) [*see Warnings and Precautions (5.1)*]
- Liver enzyme abnormalities [*see Warnings and Precautions (5.2)*]

6.1 Clinical Studies Experience

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

In the rosuvastatin controlled clinical trials database (placebo or active-controlled) of 5,394 patients with a mean treatment duration of 15 weeks, 1.4% of patients discontinued due to adverse reactions. The most common adverse reactions that led to treatment discontinuation were:

- myalgia
- abdominal pain
- nausea

The most commonly reported adverse reactions (incidence $\geq 2\%$) in the rosuvastatin controlled clinical trial database of 5,394 patients were:

- headache
- myalgia
- abdominal pain

- asthenia
- nausea

Adverse reactions reported in $\geq 2\%$ of patients in placebo-controlled clinical studies and at a rate greater than placebo are shown in Table 1. These studies had a treatment duration of up to 12 weeks.

Table 1. Adverse Reactions¹ Reported in $\geq 2\%$ of Patients Treated with Rosuvastatin and > Placebo in Placebo-Controlled Trials (% of Patients)

Adverse Reactions	Rosuvastatin 5 mg N=291	Rosuvastatin 10 mg N=283	Rosuvastatin 20 mg N=64	Rosuvastatin 40 mg N=106	Total Rosuvastatin 5 mg to 40 mg N=744	Placebo N=382
Headache	5.5	4.9	3.1	8.5	5.5	5
Nausea	3.8	3.5	6.3	0	3.4	3.1
Myalgia	3.1	2.1	6.3	1.9	2.8	1.3
Asthenia	2.4	3.2	4.7	0.9	2.7	2.6
Constipation	2.1	2.1	4.7	2.8	2.4	2.4

¹ Adverse reactions by COSTART preferred term.

Other adverse reactions reported in clinical studies were abdominal pain, dizziness, hypersensitivity (including rash, pruritus, urticaria, and angioedema) and pancreatitis. The following laboratory abnormalities have also been reported: dipstick-positive proteinuria and microscopic hematuria [*see Warnings and Precautions (5.4)*]; elevated creatine phosphokinase, transaminases, glucose, glutamyl transpeptidase, alkaline phosphatase, and bilirubin; and thyroid function abnormalities.

In a clinical trial, involving 981 participants treated with rosuvastatin 40 mg (n=700) or placebo (n=281) with a mean treatment duration of 1.7 years, 5.6% of subjects treated with rosuvastatin versus 2.8% of placebo-treated subjects discontinued due to adverse reactions. The most common adverse reactions that led to treatment discontinuation were: myalgia, hepatic enzyme increased, headache, and nausea.

Adverse reactions reported in $\geq 2\%$ of patients and at a rate greater than placebo are shown in Table 2.

Table 2. Adverse Reactions¹ Reported in $\geq 2\%$ of Patients Treated with Rosuvastatin and > Placebo in a Trial (% of Patients)

Adverse Reactions	Rosuvastatin 40 mg N=700	Placebo N=281
Myalgia	12.7	12.1
Arthralgia	10.1	7.1
Headache	6.4	5.3
Dizziness	4.0	2.8
Increased CPK	2.6	0.7
Abdominal pain	2.4	1.8
ALT >3x ULN ²	2.2	0.7

¹ Adverse reactions by MedDRA preferred term.

² Frequency recorded as abnormal laboratory value.

In a clinical trial, 17,802 participants were treated with rosuvastatin 20 mg (n=8,901) or placebo (n=8,901) for a mean duration of 2 years. A higher percentage of rosuvastatin-treated patients versus placebo-treated patients, 6.6% and 6.2%, respectively, discontinued study medication due to an adverse event, irrespective of treatment causality. Myalgia was the most common adverse reaction that led to treatment discontinuation.

There was a significantly higher frequency of diabetes mellitus reported in patients taking rosuvastatin (2.8%) versus patients taking placebo (2.3%). Mean HbA1c was significantly increased by 0.1% in rosuvastatin-treated patients compared to placebo-treated patients. The number of patients with a HbA1c >6.5% at the end of the trial was significantly higher in rosuvastatin-treated versus placebo-treated patients [see *Warnings and Precautions (5.5)*].

Adverse reactions reported in $\geq 2\%$ of patients and at a rate greater than placebo are shown in Table 3.

Table 3. Adverse Reactions¹ Reported in $\geq 2\%$ of Patients Treated with Rosuvastatin and > Placebo in a Trial (% of Patients)

Adverse Reactions	Rosuvastatin 20 mg N=8,901	Placebo N=8,901
Myalgia	7.6	6.6
Arthralgia	3.8	3.2
Constipation	3.3	3.0
Diabetes mellitus	2.8	2.3
Nausea	2.4	2.3

¹ Treatment-emergent adverse reactions by MedDRA preferred term.

6.2 Postmarketing Experience

The following adverse reactions have been identified during postapproval use of rosuvastatin: arthralgia, fatal and non-fatal hepatic failure, hepatitis, jaundice, thrombocytopenia, depression, sleep disorders (including insomnia and nightmares), peripheral neuropathy, interstitial lung disease and gynecomastia. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

There have been rare reports of immune-mediated necrotizing myopathy associated with statin use [see *Warnings and Precautions (5.1)*].

There have been rare postmarketing reports of cognitive impairment (e.g., memory loss, forgetfulness, amnesia, memory impairment, and confusion) associated with statin use. These cognitive issues have been reported for all statins. The reports are generally nonserious, and reversible upon statin discontinuation, with variable times to symptom onset (1 day to years) and symptom resolution (median of 3 weeks).

7 DRUG INTERACTIONS

7.1 Cyclosporine

Cyclosporine increased rosuvastatin exposure and may result in increased risk of myopathy. Therefore, in patients taking cyclosporine, the dose of EZALLOR should not exceed 5 mg once daily [see *Dosage and Administration (2.4), Warnings and Precautions (5.1) and Clinical Pharmacology (12.3)*].

7.2 Gemfibrozil

Gemfibrozil significantly increased rosuvastatin exposure. Due to an observed increased risk of myopathy/rhabdomyolysis, combination therapy with EZALLOR and gemfibrozil should be avoided. If used together, the dose of EZALLOR should not exceed 10 mg once daily [see *Clinical Pharmacology (12.3)*].

7.3 Protease Inhibitors

Coadministration of rosuvastatin with certain protease inhibitors has differing effects on rosuvastatin exposure and may increase risk of myopathy. Simeprevir, which is a hepatitis C virus (HCV) protease inhibitor, or combinations of atazanavir/ritonavir or lopinavir/ritonavir, which are HIV-1 protease inhibitors, increase rosuvastatin exposure [see *Table 4 – Clinical Pharmacology (12.3)*]. For these protease inhibitors, the dose of EZALLOR should not exceed 10 mg once daily. The combinations of fosamprenavir/ritonavir or tipranavir/ritonavir, which are HIV-1 protease inhibitors, produce little or no change in rosuvastatin exposure. Caution should be exercised when EZALLOR is coadministered with protease inhibitors [see *Dosage and Administration (2.4), Warnings and Precautions (5.1) and Clinical Pharmacology (12.3)*].

7.4 Coumarin Anticoagulants

Rosuvastatin significantly increased INR in patients receiving coumarin anticoagulants. Therefore, caution should be exercised when coumarin anticoagulants are given in conjunction with EZALLOR. In patients taking coumarin anticoagulants and EZALLOR concomitantly, INR should be determined before starting EZALLOR and frequently enough during early therapy to ensure that no significant alteration of INR occurs [see *Warnings and Precautions (5.3) and Clinical Pharmacology (12.3)*].

7.5 Niacin

The risk of skeletal muscle effects may be enhanced when EZALLOR is used in combination with lipid-modifying doses (≥ 1 g/day) of niacin; caution should be used when prescribing with EZALLOR [see *Warnings and Precautions (5.1)*].

7.6 Fenofibrate

When rosuvastatin was coadministered with fenofibrate, no clinically significant increase in the AUC of rosuvastatin or fenofibrate was observed. Because it is known that the risk of myopathy during treatment with HMG-CoA reductase inhibitors is increased with concomitant use of fenofibrates, caution should be used when prescribing fenofibrates with EZALLOR [see *Warnings and Precautions (5.1) and Clinical Pharmacology (12.3)*].

7.7 Colchicine

Cases of myopathy, including rhabdomyolysis, have been reported with HMG-CoA reductase inhibitors, including rosuvastatin, coadministered with colchicine, and caution should be exercised when prescribing EZALLOR with colchicine [see *Warnings and Precautions (5.1)*].

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Risk Summary

EZALLOR is contraindicated for use in pregnant women since safety in pregnant women has not been established and there is no apparent benefit to therapy with EZALLOR during pregnancy. Because HMG-CoA reductase inhibitors decrease cholesterol synthesis and possibly the synthesis of other biologically active substances derived from cholesterol, EZALLOR may cause fetal harm when administered to pregnant women. EZALLOR should be discontinued as soon as pregnancy is recognized [see *Contraindications (4)*]. Limited published data on the use of rosuvastatin are insufficient to determine a drug-associated risk of major congenital malformations or miscarriage. In animal reproduction studies, there were no adverse developmental effects with oral administration of rosuvastatin during organogenesis at systemic exposures equivalent to a maximum recommended human dose (MRHD) of 40 mg/day in rats or rabbits (based on AUC and body surface area, respectively). In rats and rabbits, decreased pup/fetal survival occurred at 12 times and equivalent, respectively, to the MRHD of 40 mg/day [see *Data*].

The estimated background risk of major birth defects and miscarriage for the indicated population is unknown. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2 to 4% and 15 to 20%, respectively.

Data

Human Data

Limited published data on rosuvastatin have not shown an increased risk of major congenital malformations or miscarriage. Rare reports of congenital anomalies have been received following intrauterine exposure to other statins. In a review of approximately 100 prospectively followed pregnancies in women exposed to simvastatin or lovastatin, the incidences of congenital anomalies, spontaneous abortions, and fetal deaths/stillbirths did not exceed what would be expected in the general population. The number of cases is adequate to exclude a ≥ 3 to 4-fold increase in congenital anomalies over the background incidence. In 89% of the prospectively followed pregnancies, drug treatment was initiated prior to pregnancy and was discontinued at some point in the first trimester when pregnancy was identified.

Animal Data

Rosuvastatin crosses the placenta in rats and rabbits and is found in fetal tissue and amniotic fluid at 3% and 20%, respectively, of the maternal plasma concentration following a single 25 mg/kg oral gavage dose on gestation day 16 in rats. A higher fetal tissue distribution (25% maternal plasma concentration) was observed in rabbits after a single oral gavage dose of 1 mg/kg on gestation day 18.

Rosuvastatin administration did not indicate a teratogenic effect in rats at ≤ 25 mg/kg/day or in rabbits ≤ 3 mg/kg/day (doses equivalent to the MRHD of 40 mg/day based on AUC and body surface area, respectively).

In female rats given 5, 15 and 50 mg/kg/day before mating and continuing through to gestation day 7 resulted in decreased fetal body weight (female pups) and delayed ossification at 50 mg/kg/day (10 times the human exposure at the MRHD dose of 40 mg/day based on AUC).

In pregnant rats given 2, 10 and 50 mg/kg/day of rosuvastatin from gestation day 7 through lactation day 21 (weaning), decreased pup survival occurred at 50 mg/kg/day (dose equivalent to 12 times the MRHD of 40 mg/day based body surface area).

In pregnant rabbits given 0.3, 1, and 3 mg/kg/day of rosuvastatin from gestation day 6 to day 18, decreased fetal viability and maternal mortality was observed at 3 mg/kg/day (dose equivalent to the MRHD of 40 mg/day based on body surface area).

8.2 Lactation

Risk Summary

EZALLOR use is contraindicated during breastfeeding [*see Contraindications (4)*]. Limited data indicate that rosuvastatin is present in human milk. There is no available information on the effects of the drug on the breastfed infant or the effects of the drug on milk production. Because of the potential for serious adverse reactions in a breastfed infant, advise patients that breastfeeding is not recommended during treatment with EZALLOR.

8.3 Females and Males of Reproductive Potential

Contraception

EZALLOR may cause fetal harm when administered to a pregnant woman [*see Use in Specific Populations (8.1)*]. Advise females of reproductive potential to use effective contraception during treatment with EZALLOR.

8.4 Pediatric Use

Pediatric use information for patients 7 to 17 years of age is approved for AstraZeneca's CRESTOR (rosuvastatin calcium) tablets. However, due to AstraZeneca's marketing exclusivity rights, this drug product is not labeled with that pediatric information.

8.5 Geriatric Use

Of the 10,275 patients in clinical studies with rosuvastatin, 3,159 (31%) were 65 years and older, and 698 (6.8%) were 75 years and older. No overall differences in safety or effectiveness were observed between these subjects and younger subjects, and other reported clinical experience has not identified differences in responses between the elderly and younger patients, but greater sensitivity of some older individuals cannot be ruled out.

Elderly patients are at higher risk of myopathy and EZALLOR should be prescribed with caution in the elderly [see *Warnings and Precautions (5.1) and Clinical Pharmacology (12.3)*].

8.6 Renal Impairment

Rosuvastatin exposure is not influenced by mild to moderate renal impairment ($CL_{cr} \geq 30$ mL/min/1.73 m²). Exposure to rosuvastatin is increased to a clinically significant extent in patients with severe renal impairment ($CL_{cr} < 30$ mL/min/1.73 m²) who are not receiving hemodialysis and dose adjustment is required [see *Dosage and Administration (2.5), Warnings and Precautions (5.1) and Clinical Pharmacology (12.3)*].

8.7 Hepatic Impairment

EZALLOR is contraindicated in patients with active liver disease, which may include unexplained persistent elevations of hepatic transaminase levels. Chronic alcohol liver disease is known to increase rosuvastatin exposure; EZALLOR should be used with caution in these patients [see *Contraindications (4), Warning and Precautions (5.2) and Clinical Pharmacology (12.3)*].

8.8 Asian Patients

Pharmacokinetic studies have demonstrated an approximate 2-fold increase in median exposure to rosuvastatin in Asian subjects when compared with Caucasian controls. EZALLOR dosage should be adjusted in Asian patients [see *Dosage and Administration (2.3) and Clinical Pharmacology (12.3)*].

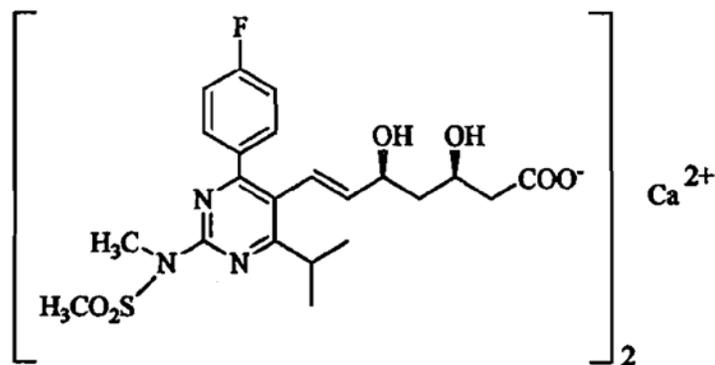
10 OVERDOSAGE

There is no specific treatment in the event of overdose. In the event of overdose, the patient should be treated symptomatically and supportive measures instituted as required. Hemodialysis does not significantly enhance clearance of rosuvastatin.

11 DESCRIPTION

Rosuvastatin calcium is a synthetic lipid-lowering agent for oral administration.

The chemical name for rosuvastatin calcium is bis[(E)-7-[4-(4-fluorophenyl)-6-isopropyl-2-[methyl(methylsulfonyl)amino] pyrimidin-5-yl]-(3R,5S)-3,5-dihydroxyhept-6-enoic acid] calcium salt with the following structural formula:



The molecular formula for rosuvastatin calcium is $(C_{22}H_{27}FN_3O_6S)_2 \cdot Ca$ and the molecular weight is 1,001.14. Rosuvastatin calcium is off-white to light yellow amorphous powder that is slightly soluble in water and methanol, and insoluble in ethanol. Rosuvastatin calcium is a hydrophilic compound with a partition coefficient (octanol/water) of 0.13 at pH of 7.

Each rosuvastatin capsule for oral administration contains 5 mg, 10 mg, 20 mg, or 40 mg of rosuvastatin (present as 5.198 mg, 10.395 mg, 20.790 mg, or 41.580 mg of rosuvastatin calcium) in the form of granules with the following inactive ingredients: microcrystalline cellulose, crospovidone, mannitol, magnesium oxide, ferric oxide, sodium citrate, hypromellose, polyethylene glycol 4000, and silicon dioxide. The capsule shells have the following inactive ingredients: gelatin, titanium dioxide, water, and sodium lauryl sulfate. Additionally following colorants are used in capsules: FD&C Red 40 (5 mg), FD&C Blue 1 (5 mg, 10 mg, 20 mg), D&C Red 28 (5 mg, 10 mg), FD&C Red 3 (20 mg), and FD&C Green 3 (40 mg). The imprinting black ink contains shellac, dehydrated alcohol, isopropyl alcohol, butyl alcohol, propylene glycol, strong ammonia solution, black iron oxide, purified water, and potassium hydroxide.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Rosuvastatin is a selective and competitive inhibitor of HMG-CoA reductase, the rate-limiting enzyme that converts 3-hydroxy-3-methylglutaryl coenzyme A to mevalonate, a precursor of cholesterol. *In vivo* studies in animals, and *in vitro* studies in cultured animal and human cells have shown rosuvastatin to have a high uptake into, and selectivity for, action in the liver, the target organ for cholesterol lowering. In *in vivo* and *in vitro* studies, rosuvastatin produces its lipid-modifying effects in two ways. First, it increases the number of hepatic LDL receptors on the cell-surface to enhance uptake and catabolism of LDL. Second, rosuvastatin inhibits hepatic synthesis of VLDL, which reduces the total number of VLDL and LDL particles.

12.2 Pharmacodynamics

Rosuvastatin dose dependently reduces elevated LDL-cholesterol and reduces total cholesterol and triglycerides and increases HDL-cholesterol [see *Clinical Studies (14)*]. A therapeutic response to rosuvastatin is evident within 1 week of commencing therapy and 90% of maximum response is usually achieved in 2 weeks. The maximum response is usually achieved by 4 weeks and is maintained after

that. Individualization of drug dosage should be based on the therapeutic response [see *Dosage and Administration (2)*].

12.3 Pharmacokinetics

Absorption

In clinical pharmacology studies in man, peak plasma concentrations of rosuvastatin were reached 3 to 5 hours following oral dosing. Both C_{max} and AUC increased in approximate proportion to rosuvastatin dose. The absolute bioavailability of rosuvastatin is approximately 20%.

Administration of rosuvastatin with food did not affect the AUC of rosuvastatin.

The AUC of rosuvastatin does not differ following evening or morning drug administration.

Distribution

Mean volume of distribution at steady-state of rosuvastatin is approximately 134 liters. Rosuvastatin is 88% bound to plasma proteins, mostly albumin. This binding is reversible and independent of plasma concentrations.

Elimination

Rosuvastatin is primarily eliminated by excretion in the feces. The elimination half-life of rosuvastatin is approximately 19 hours.

Metabolism

Rosuvastatin is not extensively metabolized; approximately 10% of a radiolabeled dose is recovered as metabolite. The major metabolite is N-desmethyl rosuvastatin, which is formed principally by cytochrome P450 \ 2C9, and *in vitro* studies have demonstrated that N-desmethyl rosuvastatin has approximately one-sixth to one-half the HMG-CoA reductase inhibitory activity of the parent compound. Overall, greater than 90% of active plasma HMG-CoA reductase inhibitory activity is accounted for by the parent compound.

Excretion

Following oral administration, rosuvastatin and its metabolites are primarily excreted in the feces (90%).

After an intravenous dose, approximately 28% of total body clearance was via the renal route, and 72% by the hepatic route.

Specific Populations

Racial or Ethnic Groups

A population pharmacokinetic analysis revealed no clinically relevant differences in pharmacokinetics among Caucasian, Hispanic, and Black or Afro-Caribbean groups. However, pharmacokinetic studies, including one conducted in the US, have demonstrated an approximate 2-fold elevation in median exposure (AUC and C_{max}) in Asian subjects when compared with a Caucasian control group.

Male and Female Patients

There were no differences in plasma concentrations of rosuvastatin between men and women.

Geriatric Patients

There were no differences in plasma concentrations of rosuvastatin between the nonelderly and elderly populations (age \geq 65 years).

Patients with Renal Impairment

Mild to moderate renal impairment ($CL_{cr} \geq 30$ mL/min/1.73 m²) had no influence on plasma concentrations of rosuvastatin. However, plasma concentrations of rosuvastatin increased to a clinically significant extent (about 3-fold) in patients with severe renal impairment ($CL_{cr} < 30$ mL/min/1.73 m²) not receiving hemodialysis compared with healthy subjects ($CL_{cr} > 80$ mL/min/1.73 m²).

Hemodialysis

Steady-state plasma concentrations of rosuvastatin in patients on chronic hemodialysis were approximately 50% greater compared with healthy volunteer subjects with normal renal function.

Patients with Hepatic Impairment

In patients with chronic alcohol liver disease, plasma concentrations of rosuvastatin were modestly increased.

In patients with Child-Pugh A disease, C_{max} and AUC were increased by 60% and 5%, respectively, as compared with patients with normal liver function. In patients with Child-Pugh B disease, C_{max} and AUC were increased 100% and 21%, respectively, compared with patients with normal liver function.

Drug Interaction Studies

Rosuvastatin clearance is not dependent on metabolism by cytochrome P450 3A4 to a clinically significant extent.

Rosuvastatin is a substrate for certain transporter proteins including the hepatic uptake organic anion-transporting polyproteins (OATP1B1, OATP1B3) and efflux transporter breast cancer resistance protein (BCRP). Concomitant administration of rosuvastatin with medications that are inhibitors of these transporter proteins (e.g., cyclosporine, certain HIV protease inhibitors) may result in increased rosuvastatin plasma concentrations [see *Dosage and Administration* (2.3) and *Drug Interactions* (7.1, 7.3)].

Table 4. Effect of Coadministered Drugs on Rosuvastatin Systemic Exposure

Coadministered drug and dosing regimen	Rosuvastatin		
		Mean Ratio (ratio with/without coadministered drug) No Effect = 1	
	Dose (mg) ¹	Change in AUC	Change in C_{max}
Cyclosporine - stable dose required (75 mg to 200 mg BID)	10 mg QD for 10 days	7.1 ²	11 ²

Atazanavir/ritonavir combination 300 mg/100 mg QD for 8 days	10 mg	3.1 ²	7 ²
Simeprevir 150 mg QD, 7 days	10 mg, single dose	2.8 ² (2.3 to 3.4) ³	3.2 ² (2.6 to 3.9) ³
Lopinavir/ritonavir combination 400 mg/100 mg BID for 17 days	20 mg QD for 7 days	2.1 ² (1.7 to 2.6) ³	5 ² (3.4 to 6.4) ³
Gemfibrozil 600 mg BID for 7 days	80 mg	1.9 ² (1.6 to 2.2) ³	2.2 ² (1.8 to 2.7) ³
Eltrombopag 75 mg QD, 5 days	10 mg	1.6 (1.4 to 1.7) ³	2 (1.8 to 2.3) ³
Darunavir 600 mg/ritonavir 100 mg BID, 7 days	10 mg QD for 7 days	1.5 (1 to 2.1) ³	2.4 (1.6 to 3.6) ³
Tipranavir/ritonavir combination 500 mg/200mg BID for 11 days	10 mg	1.4 (1.2 to 1.6) ³	2.2 (1.8 to 2.7) ³
Dronedarone 400 mg BID	10 mg	1.4	
Itraconazole 200 mg QD, 5 days	10 mg or 80 mg	1.4 (1.2 to 1.6) ³	1.4 (1.2 to 1.5) ³
		1.3 (1.1 to 1.4) ³	1.2 (0.9 to 1.4) ³
Ezetimibe 10 mg QD, 14 days	10 mg QD for 14 days	1.2 (0.9 to 1.6) ³	1.2 (0.8 to 1.6) ³
Fosamprenavir/ritonavir 700 mg/100 mg BID for 7 days	10 mg	1.1	1.5
Fenofibrate 67 mg TID for 7 days	10 mg	↔	1.2 (1.1 to 1.3) ³
Rifampicin 450 mg QD, 7 days	20 mg	↔	
Aluminum & magnesium hydroxide combination antacid Administered simultaneously	40 mg	0.5 ² (0.4 to 0.5) ³	0.5 ² (0.4 to 0.6) ³
	Administered 2 hours apart	40 mg	0.8 (0.7 to 1) ³
Ketoconazole 200 BID for 7 days	80 mg	1 (0.8 to 1.2) ³	1 (0.7 to 1.3) ³
Fluconazole 200 mg QD for 11 days	80 mg	1.1 (1 to 1.3) ³	1.1 (0.9 to 1.4) ³
Erythromycin 500 mg QID for 7 days	80 mg	0.8 (0.7 to 0.9) ³	0.7 (0.5 to 0.9) ³

¹ Single dose unless otherwise noted.

² Clinically significant [see *Dosage and Administration (2) and Warnings and Precautions (5)*]

³ Mean ratio with 90% CI (with/without coadministered drug, e.g., 1= no change, 0.7 = 30% decrease, 11=11 fold increase in exposure)

QD: Once daily

BID: 2 times a day

TID: 3 times a day

QID: 4 times a day

Table 5. Effect of Rosuvastatin Coadministration on Systemic Exposure to Other Drugs

Rosuvastatin Dosage Regimen	Coadministered Drug		
		Mean Ratio (ratio with/without coadministered drug) No Effect = 1	
	Name and Dose	Change in AUC	Change in C _{max}
40 mg QD for 10 days	Warfarin ¹ 25 mg single dose	R-Warfarin 1 (1 to 1.1) ² S-Warfarin 1.1 (1 to 1.1) ²	R-Warfarin 1 (0.9 to 1) ² S-Warfarin 1 (0.9 to 1.1) ²
40 mg QD for 12 days	Digoxin 0.5 mg single dose	1 (0.9 to 1.2) ²	1 (0.9 to 1.2) ²
40 mg QD for 28 days	Oral Contraceptive (ethinyl estradiol 0.035 mg & norgestrel 0.180, 0.215 and 0.250 mg) QD for 21 Days	EE 1.3 (1.2 to 1.3) ² NG 1.3 (1.3 to 1.4) ²	EE 1.3 (1.2 to 1.3) ² NG 1.2 (1.1 to 1.3) ²

EE = ethinyl estradiol, NG = norgestrel

¹ Clinically significant pharmacodynamic effects [see *Warnings and Precautions* (5.3)]

² Mean ratio with 90% CI (with/without coadministered drug, e.g., 1= no change, 0.7=30% decrease, 11=11-fold increase in exposure)

QD: Once daily

12.5 Pharmacogenomics

Disposition of HMG-CoA reductase inhibitors, including rosuvastatin, involves OATP1B1 and other transporter proteins. Higher plasma concentrations of rosuvastatin have been reported in very small groups of patients (n=3 to 5) who have two reduced function alleles of the gene that encodes OATP1B1 (*SLCO1B1* 521T > C). The frequency of this genotype (i.e., *SLCO1B1* 521 C/C) is generally lower than 5% in most racial/ethnic groups. The impact of this polymorphism on efficacy and/or safety of rosuvastatin has not been clearly established.

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

In a 104-week carcinogenicity study in rats at dose levels of 2, 20, 60, or 80 mg/kg/day by oral gavage, the incidence of uterine stromal polyps was significantly increased in females at 80 mg/kg/day at systemic exposure 20 times the human exposure at 40 mg/day based on AUC. Increased incidence of polyps was not seen at lower doses.

In a 107-week carcinogenicity study in mice given 10, 60 or 200 mg/kg/day by oral gavage, an increased incidence of hepatocellular adenoma/carcinoma was observed at 200 mg/kg/day at systemic exposures 20 times the human exposure at 40 mg/day based on AUC. An increased incidence of hepatocellular tumors was not seen at lower doses.

Rosuvastatin was not mutagenic or clastogenic with or without metabolic activation in the Ames test with *Salmonella typhimurium* and *Escherichia coli*, the mouse lymphoma assay, and the chromosomal aberration assay in Chinese hamster lung cells. Rosuvastatin was negative in the *in vivo* mouse micronucleus test.

In rat fertility studies with oral gavage doses of 5, 15, 50 mg/kg/day, males were treated for 9 weeks prior to and throughout mating and females were treated 2 weeks prior to mating and throughout mating until gestation day 7. No adverse effect on fertility was observed at 50 mg/kg/day (systemic exposures up to 10 times the human exposure at 40 mg/day based on AUC). In testicles of dogs treated with rosuvastatin at 30 mg/kg/day for one month, spermatidic giant cells were seen. Spermatidic giant cells were observed in monkeys after 6-month treatment at 30 mg/kg/day in addition to vacuolation of seminiferous tubular epithelium. Exposures in the dog were 20 times and in the monkey 10 times the human exposure at 40 mg/day based on body surface area. Similar findings have been seen with other drugs in this class.

13.2 Animal Toxicology and/or Pharmacology

Central Nervous System Toxicity

CNS vascular lesions, characterized by perivascular hemorrhages, edema, and mononuclear cell infiltration of perivascular spaces, have been observed in dogs treated with several other members of this drug class. A chemically similar drug in this class produced dose-dependent optic nerve degeneration (Wallerian degeneration of retinogeniculate fibers) in dogs, at a dose that produced plasma drug levels about 30 times higher than the mean drug level in humans taking the highest recommended dose. Edema, hemorrhage, and partial necrosis in the interstitium of the choroid plexus was observed in a female dog sacrificed moribund at day 24 at 90 mg/kg/day by oral gavage (systemic exposures 100 times the human exposure at 40 mg/day based on AUC). Corneal opacity was seen in dogs treated for 52 weeks at 6 mg/kg/day by oral gavage (systemic exposures 20 times the human exposure at 40 mg/day based on AUC). Cataracts were seen in dogs treated for 12 weeks by oral gavage at 30 mg/kg/day (systemic exposures 60 times the human exposure at 40 mg/day based on AUC). Retinal dysplasia and retinal loss were seen in dogs treated for 4 weeks by oral gavage at 90 mg/kg/day (systemic exposures 100 times the human exposure at 40 mg/day based on AUC). Doses \leq 30 mg/kg/day (systemic exposures \leq 60 times the human exposure at 40 mg/day based on AUC) did not reveal retinal findings during treatment for up to one year.

Juvenile Toxicology Study

In a juvenile study, rats were dosed by oral gavage with 10 or 50 mg/kg/day from weaning for 9 weeks prior to pairing, throughout pairing and up to the day before necropsy for males or up to gestation day 7 for females. No effects on sexual development, testicular and epididymal appearance or fertility were observed at either dose level.

Pediatric information is approved for AstraZeneca's CRESTOR (rosuvastatin calcium) tablets. However, due to AstraZeneca's marketing exclusivity rights, this drug product is not labeled with that pediatric information.

14 CLINICAL STUDIES

14.1 Hypertriglyceridemia

Dose-Response Study: In a double-blind, placebo-controlled dose-response study in patients with baseline TG levels from 273 to 817 mg/dL, rosuvastatin given as a single daily dose (5 mg to 40 mg) over 6 weeks significantly reduced serum TG levels (Table 9).

Table 9. Dose-Response in Patients with Primary Hypertriglyceridemia over 6 Weeks Dosing Median (Min, Max) Percent Change from Baseline

Dose	Placebo (n=26)	Rosuvastatin 5 mg (n=25)	Rosuvastatin 10 mg (n=23)	Rosuvastatin 20 mg (n=27)	Rosuvastatin 40 mg (n=25)
Triglycerides	1 (-40, 72)	-21 (-58, 38)	-37 (-65, 5)	-37 (-72, 11)	-43 (-80, -7)
nonHDL-C	2 (-13, 19)	-29 (-43, -8)	-49 (-59, -20)	-43 (-74, 12)	-51 (-62, -6)
VLDL-C	2 (-36, 53)	-25 (-62, 49)	-48 (-72, 14)	-49 (-83, 20)	-56 (-83, 10)
Total-C	1 (-13, 17)	-24 (-40, -4)	-40 (-51, -14)	-34 (-61, -11)	-40 (-51, -4)
LDL-C	5 (-30, 52)	-28 (-71, 2)	-45 (-59, 7)	-31 (-66, 34)	-43 (-61, -3)
HDL-C	-3 (-25, 18)	3 (-38, 33)	8 (-8, 24)	22 (-5, 50)	17 (-14, 63)

14.2 Primary Dysbetalipoproteinemia (Type III Hyperlipoproteinemia)

In a randomized, multicenter, double-blind crossover study, 32 patients (27 with ϵ_2/ϵ_2 and 4 with apo E mutation [Arg145Cys] with primary dysbetalipoproteinemia (Type III Hyperlipoproteinemia) entered a 6-week dietary lead-in period on the NCEP Therapeutic Lifestyle Change (TLC) diet. Following dietary lead-in, patients were randomized to a sequence of treatments in conjunction with the TLC diet for 6 weeks each: rosuvastatin 10 mg followed by rosuvastatin 20 mg or rosuvastatin 20 mg followed by rosuvastatin 10 mg. Rosuvastatin reduced non HDL-C (primary end point) and circulating remnant lipoprotein levels. Results are shown in the table below.

Table 10. Lipid-modifying Effects of Rosuvastatin 10 mg and 20 mg in Primary Dysbetalipoproteinemia (Type III hyperlipoproteinemia) After Six Weeks by Median Percent Change (95% CI) from Baseline (N=32)

	Median at Baseline (mg/dL)	Median percent change from baseline (95% CI) Rosuvastatin 10 mg	Median percent change from baseline (95% CI) Rosuvastatin 20 mg
Total-C	342.5	-43.3 (-46.9, -37.5)	-47.6 (-51.6, -42.8)
Triglycerides	503.5	-40.1 (-44.9, -33.6)	-43 (-52.5, -33.1)
NonHDL-C	294.5	-48.2 (-56.7, -45.6)	-56.4 (-61.4, -48.5)

VLDL-C + IDL-C	209.5	-46.8 (-53.7, -39.4)	-56.2 (-67.7, -43.7)
LDL-C	112.5	-54.4 (-59.1, -47.3)	-57.3 (-59.4, -52.1)
HDL-C	35.5	10.2 (1.9, 12.3)	11.2 (8.3, 20.5)
RLP-C	82	-56.4 (-67.1, -49)	-64.9 (-74, -56.6)
Apo-E	16	-42.9 (-46.3, -33.3)	-42.5 (-47.1, -35.6)

14.3 Homozygous Familial Hypercholesterolemia

Dose-Titration Study: In an open-label, forced-titration study, homozygous FH patients (n=40, 8 to 63 years) were evaluated for their response to rosuvastatin 20 mg to 40 mg titrated at a 6-week interval. In the overall population, the mean LDL-C reduction from baseline was 22%. About one-third of the patients benefited from increasing their dose from 20 mg to 40 mg with further LDL lowering of greater than 6%. In the 27 patients with at least a 15% reduction in LDL-C, the mean LDL-C reduction was 30% (median 28% reduction). Among 13 patients with an LDL-C reduction of < 15%, 3 had no change or an increase in LDL-C. Reductions in LDL-C of 15% or greater were observed in 3 of 5 patients with known receptor negative status.

Pediatric use information for patients 7 to 17 years of age is approved for AstraZeneca's CRESTOR (rosuvastatin calcium) tablets. However, due to AstraZeneca's marketing exclusivity rights, this drug product is not labeled with that pediatric information.

16 HOW SUPPLIED/STORAGE AND HANDLING

Rosuvastatin capsules 5 mg are hard gelatin capsule, Size “3” pink cap/off white body, imprinted axially with “984” on cap and body in black ink filled with yellow colored granules. They are available as follows:

- Bottles of 30’s with Child Resistant Closure NDC 47335-984-83
- Bottles of 90’s with Child Resistant Closure NDC 47335-984-81
- Unit-dose blister pack of 30 (3 × 10) capsules NDC 47335-984-64

Rosuvastatin capsules 10 mg are hard gelatin capsule, Size “3” purple cap/off white body, imprinted axially with “985” on cap and body in black ink filled with yellow colored granules. They are available as follows:

- Bottles of 30’s with Child Resistant Closure NDC 47335-985-83
- Bottles of 90’s with Child Resistant Closure NDC 47335-985-81
- Unit-dose blister pack of 30 (3 × 10) capsules NDC 47335-985-64

Rosuvastatin capsules 20 mg are hard gelatin capsule, Size “1” blue cap/off white body, imprinted axially with “986” on cap and body in black ink filled with yellow colored granules. They are available as follows:

- Bottles of 30’s with Child Resistant Closure NDC 47335-986-83
- Bottles of 90’s with Child Resistant Closure NDC 47335-986-81
- Unit-dose blister pack of 30 (3 × 10) capsules NDC 47335-986-64

Rosuvastatin capsules 40 mg are hard gelatin capsule, Size “0el” green cap/white body, imprinted axially with “987” on cap and body in black ink filled with yellow colored granules. They are available as follows:

- Bottles of 30's with Child Resistant Closure NDC 47335-987-83
- Bottles of 90's with Child Resistant Closure NDC 47335-987-81
- Unit-dose blister pack of 30 (3 × 10) capsules NDC 47335-987-64

Storage

Store rosuvastatin capsules at 20° to 25°C (68° to 77°F); excursions permitted between 15° and 30°C (59° and 86°F) [see USP Controlled Room Temperature].

Protect from moisture.

17 PATIENT COUNSELING INFORMATION

Advise the patient to read the FDA-approved patient labeling (Patient Information and Instructions for Use).

Skeletal Muscle Effects

Patients should be advised to report promptly unexplained muscle pain, tenderness, or weakness, particularly if accompanied by malaise or fever or if these muscle signs or symptoms persist after discontinuing EZALLOR.

Concomitant Use of Antacids

When taking EZALLOR with an aluminum and magnesium hydroxide combination antacid, the antacid should be taken at least 2 hours after EZALLOR administration.

Embryofetal Toxicity

Advise females of reproductive potential of the risk to a fetus, to use effective contraception during treatment, and to inform their healthcare provider of a known or suspected pregnancy. [see *Contraindications (4) and Use in Specific Populations (8.1, 8.3)*].

Lactation

Advise women not to breastfeed during treatment with EZALLOR [see *Contraindications (4) and Use in Specific Populations (8.2)*].

Liver Enzymes

It is recommended that liver enzyme tests be performed before the initiation of EZALLOR and if signs or symptoms of liver injury occur. All patients treated with EZALLOR should be advised to promptly report any symptoms that may indicate liver injury, including fatigue, anorexia, right upper abdominal discomfort, dark urine or jaundice.

Administration Information

Inform patients:

- EZALLOR can be administered as a single dose at any time of day, with or without food.
- Patients should be instructed not to take 2 doses of EZALLOR within 12 hours of each other.
- EZALLOR should not be crushed or chewed.

For Oral Administration Patients with Difficulty Swallowing Capsules

Instruct patients that the EZALLOR can be opened, the granules filled in the capsule carefully emptied onto one teaspoon of applesauce. The granules with applesauce should be swallowed immediately, without chewing. The mixture should not be stored for future use. If it is not used in its entirety, the remaining mixture should be discarded immediately.

For Nasogastric Tube (≥ 16 French) Administration

Instruct patients that EZALLOR can be opened and the intact granules emptied into a 60 mL catheter tipped syringe and add 40 mL of water. Replace the plunger and shake the syringe vigorously for 15 seconds. The granules in rosuvastatin may start dissolving which is acceptable. Attach the syringe to a nasogastric tube (≥ 16 -French) and deliver the contents of the syringe through the nasogastric tube into the stomach. After administering the granules, the nasogastric tube should be flushed with 20 mL of additional water. The mixture must be used immediately after preparation and not be stored for future use. If it is not used in its entirety, the remaining mixture should be discarded immediately. Use with any other liquids is not recommended.

Distributed by:

Sun Pharmaceutical Industries, Inc.
Cranbury, NJ 08512

Manufactured by:

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Halol-Baroda Highway,
Halol-389 350, Gujarat, India.

Version: 12/2018

PATIENT INFORMATION
EZALLOR (Ez-Aah-Lor)
rosuvastatin
capsules, for oral use

What is EZALLOR?

EZALLOR is a prescription medicine that contains a cholesterol-lowering medicine called rosuvastatin calcium. Most of the cholesterol in your blood is made in the liver. EZALLOR works by reducing cholesterol in two ways: EZALLOR blocks an enzyme in the liver causing the liver to make less cholesterol, and EZALLOR increases the uptake and breakdown by the liver of cholesterol already in the blood.

- EZALLOR is used in adults along with diet to:
 - lower the level of your “bad” cholesterol (LDL).
 - increase the level of your “good” cholesterol (HDL).
 - lower the level of fat in your blood (triglycerides).
- EZALLOR is used to treat:
 - adults who cannot control their cholesterol levels by diet and exercise alone.

Pediatric use information for patients 7 to 17 years of age is approved for AstraZeneca’s CRESTOR (rosuvastatin calcium) tablets. However, due to AstraZeneca’s marketing exclusivity rights, this drug product is not labeled with that pediatric information.

It is not known if EZALLOR is safe and effective in people who have Fredrickson Type I and V dyslipidemias (abnormal amounts of fat in the blood).

Do not take EZALLOR if you:

- are allergic to rosuvastatin calcium or any of the ingredients in EZALLOR. See the end of this leaflet for a complete list of ingredients in EZALLOR.
- have liver problems.
- are pregnant or think you may be pregnant or are planning to become pregnant. EZALLOR may harm your unborn baby. If you become pregnant, stop taking EZALLOR and call your doctor right away. If you are not planning to become pregnant you should use effective birth control (contraception) while you are taking EZALLOR.
- are breastfeeding. EZALLOR can pass into your breast milk and may harm your baby.

Before taking EZALLOR, tell your doctor about all of your medical conditions, including if you:

- have unexplained muscle aches or weakness.
- have or have had kidney problems.
- have had liver problems
- drink more than 2 glasses of alcohol daily.
- have thyroid problems.
- are 65 years of age or older.
- are of Asian descent.

Tell your doctor about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements. Talk to your doctor before you start taking any new medicines.

Taking EZALLOR with certain other medicines may affect each other causing side effects. EZALLOR may affect the way other medicines work, and other medicines may affect how EZALLOR works.

Especially tell your doctor if you take:

- cyclosporine (a medicine for your immune system)
- gemfibrozil (a fibric acid medicine for lowering cholesterol)
- anti-viral medicines including HIV or hepatitis C protease inhibitors (such as lopinavir, ritonavir, fosamprenavir, tipranavir, atazanavir, or simeprevir)
- certain anti-fungal medicines (such as itraconazole, ketoconazole and fluconazole)
- coumarin anticoagulants (medicines that prevent blood clots, such as warfarin)
- niacin or nicotinic acid
- fibric acid derivatives (such as fenofibrate)
- colchicine (a medicine used to treat gout)

Ask your doctor or pharmacist for a list of these medicines if you are not sure.

Know all of the medicines you take. Keep a list of them to show your doctor and pharmacist when you get new medicine.

How should I take EZALLOR?

- Take EZALLOR exactly as your doctor tells you to take it.
- Take EZALLOR, by mouth, 1 time each day. Swallow the capsule whole.
- **Do not** crush or chew EZALLOR.

- EZALLOR can be taken at any time of day, with or without food.
- If you have trouble swallowing a whole capsule, you can open the capsule and take the contents with applesauce. **See the “Instructions for Use”** at the end of this Patient Package Information for instructions on how to take EZALLOR with applesauce.
- **See the “Instructions for Use”** at the end of this Patient Package Information for instructions on how to mix and give EZALLOR through a nasogastric tube.
- **Do not** change your dose or stop EZALLOR without talking to your doctor.
- Your doctor may do blood tests to check your cholesterol levels before and during your treatment with EZALLOR. Your doctor may change your dose of EZALLOR if needed.
- Your doctor may start you on a cholesterol lowering diet before giving you EZALLOR. Stay on this diet when you take EZALLOR.
- Wait at least 2 hours after taking EZALLOR to take an antacid that contains a combination of aluminum and magnesium hydroxide.
- If you miss a dose of EZALLOR, take it as soon as you remember. **Do not take 2 doses of EZALLOR within 12 hours of each other.**
- If you take too much EZALLOR or overdose, call your doctor or go to the nearest hospital emergency room right away.

What are the possible side effects of EZALLOR?

EZALLOR may cause serious side effects, including:

- **Muscle pain, tenderness and weakness (myopathy).** Muscle problems, including muscle breakdown, can be serious in some people and rarely cause kidney damage that can lead to death. **Tell your doctor right away if:**
 - **you have unexplained muscle pain, tenderness, or weakness, especially if you have a fever or feel more tired than usual, while you take EZALLOR.**
 - you have muscle problems that do not go away even after your doctor has told you to stop taking EZALLOR. Your doctor may do further tests to diagnose the cause of your muscle problems.

Your chances of getting muscle problems are higher if you:

- are taking certain other medicines while you take EZALLOR
- are 65 years of age or older
- have thyroid problems (hypothyroidism) that are not controlled
- have kidney problems
- are taking higher doses of EZALLOR
- **Liver problems.** Your doctor should do blood tests to check your liver before you start taking EZALLOR and if you have symptoms of liver problems while you take EZALLOR. Call your doctor right away if you have any of the following symptoms of liver problems:
 - feel unusually tired or weak
 - loss of appetite
 - upper belly pain
 - dark urine
 - yellowing of your skin or the whites of your eyes

The most common side effects may include: headache, muscle aches and pains, abdominal (stomach) pain, weakness, and nausea.

Additional side effects that have been reported with EZALLOR include memory loss and confusion.

Tell your doctor if you have any side effect that bothers you or that does not go away.

These are not all the possible side effects of EZALLOR. Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

How should I store EZALLOR?

- Store EZALLOR at room temperature between 68°F to 77°F (20°C to 25°C).
- Store in a dry place.
- Safely throw away medicine that is out of date or no longer needed.

Keep EZALLOR and all medicines out of the reach of children.

General Information about the safe and effective use of EZALLOR.

Medicines are sometimes prescribed for purposes other than those listed in a Patient Information leaflet. Do not use EZALLOR for a condition for which it was not prescribed. Do not give EZALLOR to other people, even if they have the same symptoms that you have. It may harm them. You can ask your pharmacist or doctor for information about EZALLOR that is written for health professionals.

What are the Ingredients in EZALLOR?

Active Ingredient: rosuvastatin as rosuvastatin calcium

Inactive Ingredients: microcrystalline cellulose, crospovidone, mannitol, magnesium oxide, ferric oxide, sodium citrate, hypromellose, polyethylene glycol 4000, and silicon dioxide.

Capsule shell: gelatin, titanium dioxide, water, sodium lauryl sulfate and the following colorants: FD & C Red 40 (5 mg),

FD & C Blue 1 (5 mg, 10 mg, 20 mg), D & C Red 28 (5 mg, 10 mg), FD & C Red 3 (20 mg), and FD & C Green 3 (40 mg). The imprinting black ink contains shellac, dehydrated alcohol, isopropyl alcohol, butyl alcohol, propylene glycol, strong ammonia solution, black iron oxide, purified water, and potassium hydroxide.

Distributed by:

Sun Pharmaceutical Industries, Inc. Cranbury, NJ 08512

Manufactured by:

Sun Pharmaceutical Industries Ltd. Halol-Baroda Highway, Halol-389 350, Gujarat, India.

For more information, go to www.XXXX.com or call 1- 1-800-818-4555.

This Patient Information has been approved by the U.S. Food and Drug Administration

Issued: DATE 12/2018

INSTRUCTIONS FOR USE

EZALLOR (Ez-Aah-Lor) rosuvastatin capsules, for oral use

Taking EZALLOR with applesauce:

For people who have difficulty in swallowing capsules, EZALLOR may be given with applesauce as follows:

1. Carefully open the EZALLOR capsule.
2. Sprinkle the granules filled in the capsules on 1 teaspoonful of applesauce.
3. Swallow the applesauce and granules mixture right away. **Do not chew the granules.**
4. Do not save the applesauce and granules mixture for later use. Throw away any remaining applesauce and granules mixture.

Giving EZALLOR through a nasogastric tube (NG tube) 16 French or larger, as prescribed by your doctor:

For people who have a nasogastric tube in place, EZALLOR may be given as follows:

1. Remove the plunger from 60 mL catheter tipped syringe.
2. Carefully open the EZALLOR capsule and empty the granules into catheter tipped syringe barrel.
3. Add 40 mL of water to the granules that are inside of the catheter tipped syringe barrel. **Do not use other liquids.**
4. Replace the plunger and shake the catheter tipped syringe well for 15 seconds.
5. Attach the catheter tipped syringe to a nasogastric tube (≥ 16 -French).
6. Give the mixture right away through the nasogastric tube into the stomach. Do not save the mixture for later use. Throw away any remaining mixture.
7. After giving the mixture, the nasogastric tube should be flushed with 20 mL of additional water.

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