



Next Steps to Receive Your Erivedge Prescription



To receive Erivedge, your doctor's office will send your prescription to a specialty pharmacy

**Your specialty pharmacy will call you to confirm insurance and shipping details.
Make sure you return all calls and messages from the specialty pharmacy.**

Specialty Pharmacy

Phone Number

will call you to discuss:

- If you have any questions about your medicine
- How to have your Erivedge medicine sent to your home or doctor's office
- What type of insurance you have and how you will pay for your medicine
- If you need help paying for your medicine



If you need help paying for Erivedge, there may be options to help

**Your specialty pharmacy might be able to connect you with an assistance program.
Ask your specialty pharmacy representative for more information.**

Oncology Co-pay Assistance Program*

The Oncology Co-pay Assistance Program helps people with commercial health insurance. This might be a plan you get through your employer or one you purchased through a Health Insurance Marketplace. To qualify, you must also meet other criteria.

To learn more, call (855) 692-6729 or visit copayassistancenow.com.

*Eligibility criteria apply. Not valid for patients using federal or state government programs to pay for their Genentech medication. Patients must be taking the Genentech medicine for an FDA-approved indication. Please visit copayassistancenow.com for the full list of Terms and Conditions.

Referrals to Independent Co-pay Assistance Foundations†

An independent co-pay assistance foundation is a charitable organization that gives financial assistance for medicines. Independent co-pay assistance foundations help patients with public or commercial health insurance.

To get a list of independent co-pay assistance foundations, call (866) 422-2377 or visit Genentech-Access.com.

†Independent co-pay assistance foundations have their own rules for eligibility. Genentech has no involvement or influence in independent foundation decision-making or eligibility criteria and does not know if a foundation will be able to help you. We can only refer you to a foundation that supports your disease state. Genentech does not endorse or show preference for any particular foundation. The foundations we refer you to may not be the only ones that might be able to help you.

Indication and Important Safety Information

Indication

Erivedge is a prescription medicine used to treat adults with a type of skin cancer, called basal cell carcinoma, that has spread to other parts of the body or that has come back after surgery or that your healthcare provider decides cannot be treated with surgery or radiation. It is not known if Erivedge is safe and effective in children.

Serious Side Effects

Erivedge can cause your baby to die before it is born (be stillborn) or cause your baby to have severe birth defects.

Important Safety Information

What is the most important information I should know about Erivedge?

Erivedge can cause your baby to die before it is born (be stillborn) or cause your baby to have severe birth defects.

For females who can become pregnant:

- You should talk with your healthcare provider about the risks of Erivedge to your unborn child
- Your healthcare provider will do a pregnancy test within 7 days before you start taking Erivedge
- In order to avoid pregnancy, you should use birth control during treatment and for 24 months after your final dose of Erivedge. Talk with your healthcare provider about what birth control method is right for you during this time
- Talk to your healthcare provider right away if you have unprotected sex or if you think that your birth control has failed, or if you become pregnant or think that you may be pregnant
- Tell your healthcare provider right away if you become pregnant or think that you may be pregnant



How to take Erivedge: one capsule, once a day

Here are a few things to remember:

- Take 1 capsule every day, with or without food
- Be sure to swallow the capsule whole
- Do not open or crush the capsule

Your doctor will perform certain tests to check you for side effects before and during treatment with Erivedge. If you experience side effects that become bothersome or serious, your doctor may decide that you should take a break from treatment until they get better or go away.

If you happen to miss a dose:

- Skip the missed dose and take your next scheduled dose

Important Safety Information (cont'd)

For males:

- Erivedge is present in semen. Do not donate semen while you are taking Erivedge and for 3 months after your final dose
- You should always use a condom, even if you have had a vasectomy, during sex with female partners who are pregnant or who are able to become pregnant, during treatment with Erivedge, and for 3 months after your final dose to protect your female partner from being exposed to Erivedge
- Tell your healthcare provider right away if your partner becomes pregnant or thinks she is pregnant while you are taking Erivedge

Pregnancy Exposure Registry:

There is a Pregnancy Exposure Registry for females taking Erivedge who become pregnant. The purpose of this registry is to monitor the health of you and your unborn baby. If you think that you or your female partner may have been exposed to Erivedge during pregnancy, talk to your healthcare provider right away. If you become pregnant during treatment with Erivedge, you or your healthcare provider should report your pregnancy to Genentech at (888) 835-2555.

Before taking Erivedge, tell your healthcare provider about all of your medical conditions, including:

- **If you are pregnant or plan to become pregnant**
- **If you are breastfeeding or plan to breastfeed.** It is not known if Erivedge passes into your breast milk. You should not breastfeed during treatment and for 24 months after your final dose of Erivedge. Talk to your healthcare provider about the best way to feed your baby during this time
- **About all the medicines you take,** including prescription and over-the-counter medicines, vitamins, and herbal supplements

What should I avoid while taking Erivedge?

- Do not donate blood or blood products while you are taking Erivedge and for 24 months after your final dose
- Do not donate semen while you are taking Erivedge and for 3 months after your final dose

What are the possible side effects of Erivedge?

- **Severe skin reactions:** Severe skin reactions have happened in some people taking Erivedge. You may need to be treated in a hospital because these severe skin reactions can be life-threatening or lead to death

Tell your healthcare provider right away if you develop any of the following signs or symptoms of a severe skin reaction, including:

- Blisters or peeling of your skin
- Blisters on your lip, or around your mouth or eyes
- Mouth sores or genital sores
- High fever or flu-like symptoms
- Enlarged lymph nodes
- Skin pain and burning

Your healthcare provider may permanently stop Erivedge if you develop a severe skin reaction.

- **Muscle problems:** Muscle problems are common with Erivedge, but can also sometimes be serious. Erivedge can increase your risk of muscle spasms or muscle pain. Tell your healthcare provider right away if you develop any new or worsening muscle pain, tenderness, or weakness during or after treatment with Erivedge. Your healthcare provider should do a blood test to check for muscle problems and to check your kidney function before you start taking Erivedge, and as needed during treatment if you develop muscle problems
- **Bone growth problems:** Bone growth problems have happened in children who have been exposed to Erivedge. These problems may continue even after stopping treatment with Erivedge
- The most common side effects of Erivedge are:

- | | | |
|---|---------------|----------------------|
| – Muscle spasms | – Weight loss | – Decreased appetite |
| – Hair loss | – Tiredness | – Constipation |
| – Change in how things taste or loss of taste | – Nausea | – Joint pain |
| | – Diarrhea | – Vomiting |

Erivedge can cause absence of menstrual periods (amenorrhea) in females who are able to become pregnant. It is not known if amenorrhea is permanent. Talk to your healthcare provider if you have concerns about fertility.

These are not all of the possible side effects of Erivedge. Because everyone is different, it is not possible to predict what side effects any one person will have or how severe they may be. Call your doctor for medical advice about side effects.

You may report side effects to the FDA at (800) FDA-1088 or www.fda.gov/medwatch.

You may also report side effects to Genentech at (888) 835-2555.

Please see accompanying full Prescribing Information for additional Important Safety Information, including serious side effects, and the Medication Guide.

HIGHLIGHTS OF PRESCRIBING INFORMATION

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

ERIVEDGE® (vismodegib) capsules, for oral use
Initial U.S. Approval: 2012

WARNING: EMBRYO-FETAL TOXICITY

See full prescribing information for complete boxed warning.

- ERIVEDGE can cause embryo-fetal death or severe birth defects when administered to a pregnant woman. ERIVEDGE is embryotoxic, fetotoxic, and teratogenic in animals. Teratogenic effects included severe midline defects, missing digits, and other irreversible malformations. (5.1, 8.1)
- Verify the pregnancy status of females of reproductive potential within 7 days prior to initiating ERIVEDGE. Advise pregnant women of the potential risks to a fetus. Advise females of reproductive potential to use effective contraception during and after ERIVEDGE. (2.1, 5.1, 8.1, 8.3)
- Advise males of the potential risk of ERIVEDGE exposure through semen and to use condoms with a pregnant partner or a female partner of reproductive potential. (5.1, 8.3)

RECENT MAJOR CHANGES

Dosage and Administration (2.3)	3/2023
Warnings and Precautions (5.3)	3/2023

INDICATIONS AND USAGE

ERIVEDGE® (vismodegib) is a hedgehog pathway inhibitor indicated for the treatment of adults with metastatic basal cell carcinoma, or with locally advanced basal cell carcinoma that has recurred following surgery or who are not candidates for surgery and who are not candidates for radiation. (1)

DOSAGE AND ADMINISTRATION

The recommended dosage is 150 mg orally once daily. (2)

DOSAGE FORMS AND STRENGTHS

150 mg capsules. (3)

CONTRAINDICATIONS

None.

WARNINGS AND PRECAUTIONS

- Embryo-Fetal Toxicity:
 - Advise patients not to donate blood or blood products while receiving ERIVEDGE and for 24 months after the final dose of ERIVEDGE (5.1)
 - Advise males not to donate semen during and for 3 months after therapy (5.1, 8.3)
- Severe Cutaneous Adverse Reactions: Permanently discontinue ERIVEDGE in patients with these reactions (5.2)
- Musculoskeletal Adverse Reactions: Temporary dose interruption or discontinuation may be required for these reactions (5.3)
- Premature fusion of the epiphyses (5.4, 8.4)

ADVERSE REACTIONS

The most common adverse reactions (incidence of $\geq 10\%$) are muscle spasms, alopecia, dysgeusia, weight loss, fatigue, nausea, diarrhea, decreased appetite, constipation, arthralgias, vomiting, and ageusia.

To report SUSPECTED ADVERSE REACTIONS, contact Genentech, Inc. at 1-888-835-2555 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

USE IN SPECIFIC POPULATIONS

- Lactation: Breastfeeding not recommended. (8.2)
- Females and Males of Reproductive Potential: May cause amenorrhea in females. (8.3)

See 17 for PATIENT COUNSELING INFORMATION and Medication Guide.

Revised: 3/2023

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FULL PRESCRIBING INFORMATION

WARNING: EMBRYO-FETAL TOXICITY

- **ERIVEDGE can cause embryo-fetal death or severe birth defects when administered to a pregnant woman. ERIVEDGE is embryotoxic, fetotoxic, and teratogenic in animals. Teratogenic effects included severe midline defects, missing digits, and other irreversible malformations [see Warnings and Precautions (5.1), Use in Specific Populations (8.1)].**
- **Verify the pregnancy status of females of reproductive potential within 7 days prior to initiating ERIVEDGE. Advise pregnant women of the potential risks to a fetus. Advise females of reproductive potential to use effective contraception during and after ERIVEDGE [see Dosage and Administration (2.1), Warnings and Precautions (5.1), Use in Specific Populations (8.1, 8.3)].**
- **Advise males of the potential risk of ERIVEDGE exposure through semen and to use condoms with a pregnant partner or a female partner of reproductive potential [see Warnings and Precautions (5.1), Use in Specific Populations (8.3)].**

1 INDICATIONS AND USAGE

ERIVEDGE is indicated for the treatment of adults with metastatic basal cell carcinoma, or with locally advanced basal cell carcinoma that has recurred following surgery or who are not candidates for surgery and who are not candidates for radiation.

2 DOSAGE AND ADMINISTRATION

2.1 Important Safety Information

Verify pregnancy status of females of reproductive potential within 7 days prior to initiating ERIVEDGE [see Use in Specific Populations (8.1, 8.3)].

2.2 Recommended Dosage

The recommended dosage of ERIVEDGE is 150 mg taken orally once daily, with or without food, until disease progression or until unacceptable toxicity.

Swallow capsules whole. **Do not open or crush capsules.**

If a dose of ERIVEDGE is missed, resume dosing with the next scheduled dose.

2.3 Dosage Modifications for Adverse Reactions

Withhold ERIVEDGE for up to 8 weeks for intolerable adverse reactions until improvement or resolution. Treatment durations shorter than 8 weeks prior to interruptions have not been studied.

Permanently discontinue ERIVEDGE if patients experience severe cutaneous adverse reactions (SCARs) including Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN), or drug reaction with eosinophilia and systemic symptoms (DRESS) [see Warnings and Precautions (5.2)].

Interrupt ERIVEDGE for severe or intolerable musculoskeletal adverse reactions. Permanently discontinue ERIVEDGE for recurrent, severe or intolerable musculoskeletal adverse reactions [see Warnings and Precautions (5.3)].

3 DOSAGE FORMS AND STRENGTHS

Capsules: 150 mg with “150 mg” printed on pink opaque body and “VISMO” printed on grey opaque cap in black ink.

4 CONTRAINDICATIONS

None.

5 WARNINGS AND PRECAUTIONS

5.1 Embryo-Fetal Toxicity

Based on its mechanism of action, ERIVEDGE can cause embryo-fetal death or severe birth defects when administered to a pregnant woman. In animal reproduction studies, vismodegib was embryotoxic, fetotoxic, and teratogenic at maternal exposures lower than the human exposures at the recommended dose of 150 mg once daily [*see Use in Specific Populations (8.1)*].

Females of Reproductive Potential

Verify the pregnancy status of females of reproductive potential within 7 days prior to initiating ERIVEDGE. Advise pregnant women of the potential risk to a fetus. Advise females of reproductive potential to use effective contraception during therapy with ERIVEDGE and for 24 months after the final dose [*see Use in Specific Populations (8.1, 8.3)*].

Males

Vismodegib is present in semen. It is not known if the amount of vismodegib in semen can cause embryo-fetal harm. Advise males to use condoms, even after a vasectomy, to avoid potential drug exposure in pregnant partners and female partners of reproductive potential during therapy and for 3 months after the final dose of ERIVEDGE. Advise male patients not to donate semen during and for 3 months after the final dose of ERIVEDGE [*see Use in Specific Populations (8.3)*].

Blood Donation

Advise patients not to donate blood or blood products while receiving ERIVEDGE and for 24 months after the final dose of ERIVEDGE.

5.2 Severe Cutaneous Adverse Reactions

Severe cutaneous adverse reactions (SCARs), including Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN) and drug reaction with eosinophilia and systemic symptoms (DRESS), which can be life-threatening or fatal, have been reported during treatment with ERIVEDGE [*see Adverse Reactions (6.2)*].

Permanently discontinue ERIVEDGE in patients with these reactions [*see Dosage and Administration (2.3)*].

5.3 Musculoskeletal Adverse Reactions

Musculoskeletal adverse reactions, which may be accompanied by serum creatine phosphokinase (CPK) elevations, have occurred with ERIVEDGE and other drugs which inhibit the hedgehog (Hh) pathway. In the pooled safety population in clinical trials of ERIVEDGE, musculoskeletal and connective tissue adverse reactions occurred in 78% of patients treated, with 7% (9/138)

reported as Grade 3. The most frequent manifestations of musculoskeletal and connective tissue adverse reactions (all grades) reported were muscle spasms (72%) and arthralgias (16%). In a post-approval clinical trial of 1232 patients, Grade 3 or 4 elevations in serum CPK laboratory values occurred in 2.4% of the 453 patients who had any CPK measurement [*see Adverse Reactions (6.1)*].

Obtain baseline serum creatine phosphokinase (CPK) and creatinine levels and as clinically indicated (e.g., if muscle symptoms are reported). Depending on the severity of symptoms, temporary dose interruption or discontinuation may be required for musculoskeletal adverse reactions or serum CPK elevation [*see Dosage and Administration (2.3)*].

5.4 Premature Fusion of the Epiphyses

Premature fusion of the epiphyses has been reported in pediatric patients exposed to ERIVEDGE. In some cases, fusion progressed after drug discontinuation [*see Use in Specific Populations (8.4)*]. ERIVEDGE is not indicated for pediatric patients.

6 ADVERSE REACTIONS

The following clinically significant adverse reactions are described elsewhere in the labeling:

- Embryo-Fetal Toxicity [*see Warnings and Precautions (5.1)*]
- Severe Cutaneous Adverse Reactions [*see Warnings and Precautions (5.2)*]
- Musculoskeletal Adverse Reactions [*see Warnings and Precautions (5.3)*]
- Premature Fusion of the Epiphyses [*see Warnings and Precautions (5.4)*]

6.1 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 clinical practice.

The safety data described below reflect exposure to ERIVEDGE in 138 patients with advanced basal cell carcinoma (BCC) who received ERIVEDGE at doses ≥ 150 mg orally daily in four open-label, uncontrolled, dose-ranging or fixed single dose clinical trials [Study SHH3925g, SHH4437g, SHH4476g and SHH4610g]. The median age of these patients was 61 years (range 21 to 101 years), 100% were White (including Hispanics), and 64% were male. The median duration of treatment was approximately 10 months (range 21 days to 36 months); 111 patients received ERIVEDGE for 6 months or longer.

The most common adverse reactions ($\geq 10\%$) were muscle spasms, alopecia, dysgeusia, weight loss, fatigue, nausea, diarrhea, decreased appetite, constipation, arthralgias, vomiting, and ageusia (Table 1).

Table 1: Adverse Reactions Occurring in $\geq 10\%$ of Patients with Advanced Basal Cell Carcinoma

Adverse Reaction	ERIVEDGE (N = 138)		
	All Grades ¹ (%)	Grade 3 (%)	Grade 4 (%)
Gastrointestinal			
Nausea	30%	0.7%	-
Diarrhea	29%	0.7%	-
Constipation	21%	-	-
Vomiting	14%	-	-
General			
Fatigue	40%	5%	0.7%
Investigations			
Weight loss	45%	7%	-
Metabolism and nutrition			
Decreased appetite	25%	2.2%	-
Musculoskeletal and connective tissue			
Muscle spasms	72%	3.6%	-
Arthralgias	16%	0.7%	-
Nervous system			
Dysgeusia	55%	-	-
Ageusia	11%	-	-
Skin and subcutaneous tissue			
Alopecia	64%	-	-

¹ Grading according to National Cancer Institute-Common Terminology Criteria for Adverse Events version 3.0.

Amenorrhea

Among patients from the clinical trials included in the pooled safety data analysis, 30% of 10 pre-menopausal women developed amenorrhea while receiving ERIVEDGE.

Laboratory Abnormalities

Grade 3 laboratory abnormalities observed in clinical trials were hyponatremia (4%), azotemia (2%) and hypokalemia (1%).

Additionally, in a post-approval clinical trial conducted in 1232 patients with locally advanced or metastatic BCC treated with ERIVEDGE, a subset of 29 patients had baseline values for blood creatine phosphokinase (CPK) reported. Within this subset of patients, 38% had a shift from baseline, including Grade 3 (3%) increased CPK. Grade 3 or 4 increased CPK occurred in 2.4% of the 453 patients across the entire study population with any CPK measurement.

6.2 Postmarketing Experience

The following adverse reactions have been identified during post-approval use of ERIVEDGE. 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.

Hepatobiliary disorders: Drug-induced liver injury

Skin and subcutaneous tissue disorders: Stevens-Johnson syndrome/toxic epidermal necrolysis, drug reaction with eosinophilia and systemic symptoms [see *Warnings and Precautions* (5.2)].

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Pregnancy Exposure Registry

There is a pregnancy exposure registry that monitors pregnancy outcomes in women exposed to ERIVEDGE during pregnancy. Report pregnancies to Genentech at 1-888-835-2555.

Risk Summary

Based on its mechanism of action and findings from animal reproduction studies, ERIVEDGE can cause fetal harm when administered to a pregnant woman [see *Clinical Pharmacology* (12.1)]. In animal reproduction studies, oral administration of vismodegib during organogenesis at doses below the 150 mg clinical dose resulted in embryotoxicity, fetotoxicity, and teratogenicity in rats (see *Data*). There are no human data on the use of ERIVEDGE in pregnant women. Advise pregnant women of the potential risk to a fetus.

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

Data

Animal Data

In an embryo-fetal toxicity study, pregnant rats were administered vismodegib orally at doses of 10, 60, or 300 mg/kg/day during the period of organogenesis. Pre- and post-implantation loss were increased at doses of ≥ 60 mg/kg/day [approximately 2 times the human exposure at the 150 mg clinical dose based on area under the curve (AUC)], which included early resorption of 100% of the fetuses. A dose of 10 mg/kg/day [approximately 0.2 times the human exposure (AUC) at the recommended 150 mg clinical dose] resulted in malformations (including missing and/or fused digits, open perineum and craniofacial anomalies) and retardations or variations (including dilated renal pelvis, dilated ureter, and incompletely or unossified sternal elements, centra of vertebrae, or proximal phalanges and claws).

8.2 Lactation

No data are available regarding the presence of vismodegib in human milk, the effects of the drug on the breastfed child, or the effects of the drug on milk production. Because of the potential for serious adverse reactions in breastfed infants from ERIVEDGE, advise women that breastfeeding is not recommended during therapy with ERIVEDGE and for 24 months after the final dose.

8.3 Females and Males of Reproductive Potential

Pregnancy Testing

Verify the pregnancy status of females of reproductive potential within 7 days prior to initiating ERIVEDGE.

Contraception

Based on its mechanism of action and animal data, ERIVEDGE can cause fetal harm when administered to a pregnant woman [*see Use in Specific Populations (8.1)*].

Females

Advise females of reproductive potential to use effective contraception during therapy with ERIVEDGE and for 24 months after the final dose.

Males

Vismodegib is present in semen [*see Clinical Pharmacology (12.3)*]. It is not known if the amount of vismodegib in semen can cause embryo-fetal harm. Advise male patients to use condoms, even after a vasectomy, to avoid drug exposure to pregnant partners and female partners of reproductive potential during therapy with and for 3 months after the final dose of ERIVEDGE. Advise males of the potential risk to an embryo or fetus if a female partner of reproductive potential is exposed to ERIVEDGE. Advise males not to donate semen during therapy with ERIVEDGE and for 3 months after the final dose.

Infertility

Females

Amenorrhea can occur in females of reproductive potential. Reversibility of amenorrhea is unknown [*see Adverse Reactions (6.1)*].

8.4 Pediatric Use

The safety and effectiveness of ERIVEDGE have not been established in pediatric patients.

Premature fusion of the epiphyses [*see Warnings and Precautions (5.3)*] and precocious puberty have been reported in pediatric patients exposed to ERIVEDGE. In some cases, epiphyseal fusion progressed after drug discontinuation.

Juvenile Animal Toxicity Data

In repeat-dose toxicology studies in rats, administration of oral vismodegib resulted in toxicities in bone and teeth. Effects on bone consisted of closure of the epiphyseal growth plate when oral vismodegib was administered for 26 weeks at ≥ 50 mg/kg/day (approximately ≥ 0.4 times the human exposure (AUC) at the 150 mg clinical dose). Abnormalities in growing incisor teeth (including degeneration/necrosis of odontoblasts, formation of fluid-filled cysts in the dental pulp, ossification of the root canal, and hemorrhage resulting in breakage or loss of teeth) were observed after administration of oral vismodegib at ≥ 15 mg/kg/day (approximately ≥ 0.2 times the human exposure (AUC) at the 150 mg clinical dose).

8.5 Geriatric Use

Clinical studies of ERIVEDGE did not include sufficient numbers of patients aged 65 and over to determine whether they respond differently from younger patients.

8.6 Hepatic Impairment

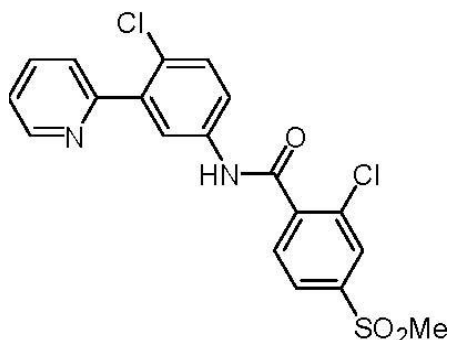
No dose adjustment is required in patients with hepatic impairment [see *Clinical Pharmacology* (12.3)].

8.7 Renal Impairment

No dose adjustment is required in patients with renal impairment [see *Clinical Pharmacology* (12.3)].

11 DESCRIPTION

Vismodegib is a hedgehog (Hh) pathway inhibitor, which is described chemically as 2-Chloro-*N*-(4-chloro-3-(pyridin-2-yl)phenyl)-4-(methylsulfonyl)benzamide. The molecular formula is C₁₉H₁₄Cl₂N₂O₃S. The molecular weight is 421.3 g/mol and the structural formula is:



Vismodegib is a crystalline free base with a pK_a (pyridinium cation) of 3.8, appearing as a white to tan powder. The solubility of vismodegib is pH dependent with 0.1 µg/mL at pH 7 and 0.99 mg/mL at pH 1. The partition coefficient (log P) is 2.7.

ERIVEDGE (vismodegib) for oral administration is supplied in capsules containing 150 mg vismodegib and the following inactive ingredients: microcrystalline cellulose, lactose monohydrate, sodium lauryl sulfate, povidone, sodium starch glycolate, talc, and magnesium stearate (non-bovine). The capsule shell contains gelatin, titanium dioxide, red iron oxide, and black iron oxide. The black printing ink contains shellac and black iron oxide.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Vismodegib is an inhibitor of the Hedgehog pathway. Vismodegib binds to and inhibits Smoothened, a transmembrane protein involved in Hedgehog signal transduction.

12.2 Pharmacodynamics

Cardiac Electrophysiology

ERIVEDGE did not prolong the QT interval to any clinically relevant extent following 7 days of 150 mg once-daily dosing (at steady state) .

12.3 Pharmacokinetics

The pharmacokinetics of vismodegib were studied in healthy subjects and patients. Following daily oral dosing, the pharmacokinetics of vismodegib appear to be nonlinear with steady state achieved within 7 days. Increasing the dose from 150 mg to 540 mg (1 to 3.6 times the recommended dose) does not result in higher steady state plasma concentrations. Average plasma concentration of vismodegib at steady state ($C_{ss,avg}$) is ~23 μ M following 150 mg once daily dose.

Absorption

The single dose absolute bioavailability of vismodegib is 32%. Absorption is saturable as evidenced by the lack of dose proportional increase in exposure after a single dose of 270 mg or 540 mg vismodegib.

Effect of Food

C_{max} and AUC_{0-24hr} of vismodegib at steady state are not affected by food.

Distribution

The volume of distribution of vismodegib ranges from 16.4 to 26.6 L. Vismodegib plasma protein binding in patients is > 99%. Vismodegib binds to both human serum albumin and alpha-1-acid glycoprotein (AAG) and binding to AAG is saturable.

Male patients had an average concentration of vismodegib in semen on day 8 that was 6.5% of the average steady state concentration (C_{ss}) observed in plasma.

Elimination

The estimated elimination half-life ($t_{1/2}$) of vismodegib is 4 days after continuous once-daily dosing and 12 days after a single dose.

Metabolism

Greater than 98% of the total circulating drug-related components are the parent drug. Metabolic pathways of vismodegib in humans include oxidation, glucuronidation, and pyridine ring cleavage. The two most abundant oxidative metabolites recovered in feces are produced in vitro by recombinant CYP2C9 and CYP3A.

Excretion

Vismodegib and its metabolites are eliminated primarily by the hepatic route with 82% of the administered dose recovered in the feces and 4.4% recovered in urine.

Specific Populations

Weight (41-140 kg), age (26-89 years), sex, mild to moderate renal impairment (creatinine clearance of 30 to 79 mL/min), mild hepatic impairment (normal total bilirubin and aspartate transaminase (AST) > upper limit of normal (ULN) or total bilirubin > 1 to 1.5 times ULN), moderate hepatic impairment (total bilirubin > 1.5 to 3 times ULN), or severe hepatic impairment (total bilirubin > 3 to 10 times ULN) had no clinically relevant effects on the systemic exposure of vismodegib. The impact of severe renal impairment on the pharmacokinetics of vismodegib is unknown.

Drug Interaction Studies

Clinical Studies

No clinically significant differences in vismodegib pharmacokinetics were observed when used concomitantly with fluconazole (moderate CYP2C9 and CYP3A4 inhibitor), itraconazole (strong CYP3A4 inhibitor and P-gp inhibitor) and rabeprazole (gastric acid reducing agent, proton pump inhibitor).

No clinically significant differences in the pharmacokinetics of the following drugs were observed when used concomitantly with vismodegib: rosiglitazone (a CYP2C8 substrate) or ethinyl estradiol and norethindrone (oral contraceptive).

In Vitro Studies

Vismodegib is an inhibitor of the transporter BCRP and is not an inducer of CYP1A2, CYP2B6, or CYP3A.

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Carcinogenicity studies were performed in mice and rats. No carcinogenic potential was identified in either species. Vismodegib was not mutagenic in the in vitro bacterial reverse mutation (Ames) assay and was not clastogenic in the in vitro human chromosomal aberration assay in human peripheral blood lymphocytes or in the in vivo rat bone marrow micronucleus assay.

In a dedicated 26-week rat fertility study, no effects on male reproductive organs or fertility endpoints were observed at vismodegib doses of 100 mg/kg/day [approximately 1.3 times the human exposure (steady state AUC_{0-24hr}) at the 150 mg clinical dose] either at the end of dosing or following a 16-week recovery phase. While there were increased numbers of degenerating germ cells and hypospermia in sexually immature dogs observed at ≥ 50 mg/kg/day in the 4-week general toxicity study, there were no effects on male reproductive organs in sexually mature rats and dogs, in the vismodegib general toxicity studies of up to 26-weeks.

In a female fertility study, treatment of rats with vismodegib at 100 mg/kg/day [approximately 1.2-times the human exposure (steady state AUC_{0-24hr}) at the 150 mg clinical dose] for 26-weeks prior to mating resulted in decreased implantations, increased percent preimplantation loss, and decreased numbers of dams with viable embryos. No vismodegib-related changes in fertility were observed following a 16-week recovery period. In a 26-week general toxicity study in rats, decreased numbers of corpora lutea were observed at 100 mg/kg/day; the effect was not reversed by the end of an 8-week recovery period.

13.2 Animal Toxicology and/or Pharmacology

Neurologic effects characterized as limb or body tremors or twitching were observed in rats administered oral vismodegib for 4 weeks or longer at ≥ 50 mg/kg/day (approximately ≥ 0.4 times the human exposure (AUC) at the 150 mg clinical dose). These observations resolved upon discontinuation of dosing and were not associated with microscopic findings.

14 CLINICAL STUDIES

A single, international, single-arm, multi-center, open-label, 2-cohort trial [SHH4476g (NCT00833417)] was conducted in 104 patients with either metastatic basal cell carcinoma (mBCC) (n = 33) or locally advanced BCC (laBCC) (n = 71). Patients with laBCC were required to have lesions that had recurred after radiotherapy, unless radiotherapy was contraindicated or inappropriate (e.g. Gorlin syndrome; limitations because of location of tumor or cumulative prior radiotherapy dose), and where the lesions were either unresectable or surgical resection would result in substantial deformity. Patients were to receive ERIVEDGE 150 mg orally once daily until disease progression or unacceptable toxicity.

The major efficacy outcome measure was objective response rate (ORR) as assessed by an independent review facility (IRF). In the mBCC cohort, tumor response was assessed according to the Response Evaluation Criteria in Solid Tumors (RECIST) version 1.0. In the laBCC cohort, tumor response evaluation included measurement of externally assessable tumor (including scar) and assessment for ulceration in photographs, radiographic assessment of target lesions (if appropriate), and tumor biopsy. An objective response in laBCC required at least one of the following criteria and absence of any criterion for disease progression: (1) $\geq 30\%$ reduction in lesion size [sum of the longest diameter (SLD)] from baseline in target lesions by radiographic assessment; (2) $\geq 30\%$ reduction in SLD from baseline in externally visible dimension of target lesions; (3) complete resolution of ulceration in all target lesions. Complete response was defined as objective response (as defined above) with no residual BCC on sampling tumor biopsy. Disease progression was defined as any of the following: (1) $\geq 20\%$ increase in the SLD from nadir in target lesions (either by radiography or by externally visible dimension); (2) new ulceration of target lesions persisting without evidence of healing for at least 2 weeks; (3) new lesions by radiographic assessment or physical examination; (4) progression of non-target lesions by RECIST.

Of the 104 patients enrolled, 96 patients were evaluable for ORR. Twenty-one percent of patients carried a diagnosis of Gorlin syndrome. The median age of the efficacy evaluable population was 62 years (46% were at least 65 years old), 61% male and 100% White. For the mBCC cohort (n = 33), 97% of patients had prior therapy including surgery (97%), radiotherapy (58%), and systemic therapies (30%). For the laBCC cohort (n = 63), 94% of patients had prior therapies including surgery (89%), radiotherapy (27%), and systemic/topical therapies (11%). The median duration of treatment was 10.2 months (range 0.7 to 18.7 months).

The efficacy results are presented in Table 2.

Table 2: Efficacy Results for Evaluable Patients in Study SHH4476g¹

	mBCC (n = 33)	laBCC (n = 63)
IRF²-Confirmed ORR, n (%)	10 (30.3)	27 (42.9)
(95% CI)	(15.6, 48.2)	(30.5, 56.0)
Complete response ³	0 (0.0)	13 (20.6)
Partial response	10 (30.3)	14 (22.2)
Median Response Duration (months)	7.6	7.6
(95% CI⁵)	(5.6, NE ⁴)	(5.7, 9.7)

¹Patients who received at least one dose of ERIVEDGE with independent pathologist-confirmed diagnosis of BCC

²IRF = Independent Review Facility

³For laBCC, complete response was defined as objective response with no residual BCC on sampling tumor biopsy.

⁴NE = Not estimable

⁵CI = Confidence Interval

16 HOW SUPPLIED/STORAGE AND HANDLING

ERIVEDGE capsules have a pink opaque body and a grey opaque cap with "150 mg" printed on the capsule body and "VISMO" printed on the capsule cap in black ink.

ERIVEDGE capsules are available in bottles of 28 capsules (NDC 50242-140-01).

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

Keep the bottle tightly closed to protect from moisture.

17 PATIENT COUNSELING INFORMATION

Advise the patient to read the FDA-approved patient labeling (Medication Guide).

Embryo-Fetal Toxicity [see Warnings and Precautions (5.1), Use in Specific Populations (8.1, 8.3)]

Females of Reproductive Potential

- Advise women of the potential risk to a fetus. Advise female patients and female partners of male patients to contact their healthcare provider with a known or suspected pregnancy.
- Inform females there is a Pregnancy Exposure Registry that monitors pregnancy outcomes in females exposed to ERIVEDGE during pregnancy and that they can contact the Pregnancy Exposure Registry by calling 1-888-835-2555.
- Advise females of reproductive potential to use effective contraception during therapy with ERIVEDGE and for 24 months after the final dose.

Males

- Advise males, even those with prior vasectomy, to use condoms to avoid potential drug exposure in both pregnant partners and female partners of reproductive potential during therapy with ERIVEDGE and for 3 months after the final dose.
- Advise males not to donate semen during therapy with ERIVEDGE and for 3 months after the final dose.

Blood Donation

- Advise patients not to donate blood or blood products during therapy with ERIVEDGE and for 24 months after the final dose.

Lactation

- Advise women not to breastfeed during therapy with ERIVEDGE and for 24 months after the final dose [see Use in Specific Populations (8.2)].

Severe Cutaneous Reactions

- Inform patients of the signs and symptoms of severe cutaneous reactions. Advise patients to contact their healthcare provider immediately for signs and symptoms of severe cutaneous reactions [see Warnings and Precautions (5.2)].

Muscle-related adverse reactions

- Advise patients starting therapy with ERIVEDGE of the risk of muscle-related adverse reactions. Advise patients to contact their healthcare provider immediately for any new unexplained muscle pain, tenderness, or weakness occurring during treatment or that persists after discontinuing ERIVEDGE [see Warnings and Precautions (5.3)]

ERIVEDGE® (vismodegib) capsules

Manufactured by:

Patheon, Inc.

Mississauga, Canada

Distributed by:

Genentech USA, Inc.

A Member of the Roche Group

1 DNA Way

South San Francisco, CA 94080-4990

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MEDICATION GUIDE
ERIVEDGE® (EH-rih-vej)
(vismodegib)
Capsule

What is the most important information I should know about ERIVEDGE?

ERIVEDGE can cause your baby to die before it is born (be stillborn) or cause your baby to have severe birth defects.

For females who can become pregnant:

- You should talk with your healthcare provider about the risks of ERIVEDGE to your unborn child.
- Your healthcare provider will do a pregnancy test within 7 days before you start taking ERIVEDGE.
- In order to avoid pregnancy, you should use birth control during treatment and for 24 months after your final dose of ERIVEDGE. Talk with your healthcare provider about what birth control method is right for you during this time.
- Talk to your healthcare provider right away if you have unprotected sex or if you think that your birth control has failed.
- Tell your healthcare provider right away if you become pregnant or think that you may be pregnant.

For males:

- ERIVEDGE is present in semen. Do not donate semen while you are taking ERIVEDGE and for 3 months after your final dose.
- You should always use a condom, even if you have had a vasectomy, during sex with female partners who are pregnant or who are able to become pregnant, during treatment with ERIVEDGE and for 3 months after your final dose to protect your female partner from being exposed to ERIVEDGE.
- Tell your healthcare provider right away if your partner becomes pregnant or thinks she is pregnant while you are taking ERIVEDGE.

Pregnancy Exposure Registry:

There is a Pregnancy Exposure Registry for females taking ERIVEDGE who become pregnant. The purpose of this registry is to monitor the health of you and your unborn baby. If you think that you or your female partner may have been exposed to ERIVEDGE during pregnancy, talk to your healthcare provider right away. If you become pregnant during treatment with ERIVEDGE, you or your healthcare provider should report your pregnancy to Genentech at 1-888-835-2555.

What is ERIVEDGE?

ERIVEDGE is a prescription medicine used to treat adults with a type of skin cancer, called basal cell carcinoma, that has spread to other parts of the body, or that has come back after surgery or that your healthcare provider decides cannot be treated with surgery or radiation.

It is not known if ERIVEDGE is safe and effective in children.

Before taking ERIVEDGE, tell your healthcare provider about all of your medical conditions, including if you:

- **are pregnant or plan to become pregnant.** See **“What is the most important information I should know about ERIVEDGE?”**
- **are breastfeeding or plan to breastfeed.** It is not known if ERIVEDGE passes into your breast milk. You should not breastfeed during treatment and for 24 months after your final dose of ERIVEDGE. Talk to your healthcare provider about the best way to feed your baby during this time.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

How should I take ERIVEDGE?

- Take ERIVEDGE exactly as your healthcare provider tells you.
- You can take ERIVEDGE with or without food.
- Swallow ERIVEDGE capsules whole. **Do not open or crush the capsules.**
- Take ERIVEDGE 1 time each day.
- If you miss a dose, skip the missed dose. Just take your next scheduled dose.
- Your healthcare provider will perform certain tests to check you for side effects before and during treatment with ERIVEDGE.
- Your healthcare provider may temporarily or permanently stop treatment with ERIVEDGE if you have certain side effects. Do not stop taking ERIVEDGE unless your healthcare provider tells you to.

What should I avoid while taking ERIVEDGE?

- **Do not** donate blood or blood products while you are taking ERIVEDGE and for 24 months after your final dose.
- **For Males:** Do not donate semen while you are taking ERIVEDGE and for 3 months after your final dose.

What are the possible side effects of ERIVEDGE?

ERIVEDGE can cause serious side effects, including:

- See “What is the most important information I should know about ERIVEDGE?”
- **Severe skin reactions.** Severe skin reactions have happened in some people taking ERIVEDGE. You may need to be treated in a hospital because these severe skin reactions can be life-threatening or lead to death.
Tell your healthcare provider right away if you develop any of the following signs or symptoms of a severe skin reaction, including:
 - blisters or peeling of your skin
 - blisters on your lip, or around your mouth or eyes
 - mouth sores or genital sores
 - high fever or flu-like symptoms
 - enlarged lymph nodes
 - skin pain and burningYour healthcare provider may permanently stop ERIVEDGE if you develop a severe skin reaction.
- **Muscle Problems.** Muscle problems are common with ERIVEDGE, but can also sometimes be serious. ERIVEDGE can increase your risk of muscle spasms or muscle pain. Tell your healthcare provider right away if you develop any new or worsening muscle pain, tenderness, or weakness during or after treatment with ERIVEDGE. Your healthcare provider should do a blood test to check for muscle problems and to check your kidney function before you start taking ERIVEDGE, and as needed during treatment if you develop muscle problems.
- **Bone growth problems.** Bone growth problems have happened in children who have been exposed to ERIVEDGE. These problems may continue even after stopping treatment with ERIVEDGE.

The most common side effects of ERIVEDGE are:

- muscle spasms
- hair loss
- change in how things taste or loss of taste
- weight loss
- tiredness
- nausea
- diarrhea
- decreased appetite
- constipation
- joint pain
- vomiting

ERIVEDGE can cause absence of menstrual periods (amenorrhea) in females who are able to become pregnant. It is not known if amenorrhea is permanent. Talk to your healthcare provider if you have concerns about fertility.

These are not all the possible side effects of ERIVEDGE.

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

You may also report side effects to Genentech, Inc. at 1-888-835-2555.

How should I store ERIVEDGE?

- Store ERIVEDGE at room temperature between 68°F to 77°F (20°C to 25°C).
- Keep the bottle tightly closed to protect ERIVEDGE from moisture.

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

General information about the safe and effective use of ERIVEDGE.

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

What are the ingredients in ERIVEDGE?

Active ingredient: vismodegib

Inactive ingredients: microcrystalline cellulose, lactose monohydrate, sodium lauryl sulfate, povidone, sodium starch glycolate, talc, and magnesium stearate (non-bovine). The capsule shell contains gelatin, titanium dioxide, red iron oxide, and black iron oxide. The black printing ink contains shellac and black iron oxide.

Manufactured by: Patheon, Inc. Mississauga, Canada

Distributed by: Genentech USA, Inc. A Member of the Roche Group 1 DNA Way South San Francisco, CA 94080-4990

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For more information, call 1-855-737-4833 or go to www.erivedge.com