

## HIGHLIGHTS OF PRESCRIBING INFORMATION

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

ELIDEL® (pimecrolimus) Cream, 1% for topical use

Initial U.S. Approval: 2001

**WARNING: LONG-TERM SAFETY OF TOPICAL CALCINEURIN INHIBITORS HAS NOT BEEN ESTABLISHED**  
See full prescribing information for complete boxed warning.

Although a causal relationship has not been established, rare cases of malignancy (e.g., skin and lymphoma) have been reported in patients treated with topical calcineurin inhibitors, including ELIDEL Cream, 1%. (5.1)

**Therefore:**

- Continuous long-term use of topical calcineurin inhibitors, including ELIDEL Cream, 1%, in any age group should be avoided and application limited to areas of involvement with atopic dermatitis. (2, 5.1)
- ELIDEL Cream, 1% is not indicated for use in children less than 2 years of age. (1, 5.1, 8.4)

## INDICATIONS AND USAGE

ELIDEL Cream, 1% is a calcineurin inhibitor immunosuppressant indicated as second-line therapy for the short-term and non-continuous chronic treatment of mild to moderate atopic dermatitis in non-immunocompromised adults and children 2 years of age and older, who have failed to respond adequately to other topical prescription treatments, or when those treatments are not advisable. (1)

## FULL PRESCRIBING INFORMATION: CONTENTS\*

**WARNING: LONG-TERM SAFETY OF TOPICAL CALCINEURIN INHIBITORS HAS NOT BEEN ESTABLISHED**

- 1 INDICATION AND USAGE
- 2 DOSAGE AND ADMINISTRATION
- 3 DOSAGE FORMS AND STRENGTHS
- 4 CONTRAINDICATIONS
- 5 WARNINGS AND PRECAUTIONS
  - 5.1 Risk of Immunosuppression
  - 5.2 Application to Malignant or Pre-malignant Skin Conditions
  - 5.3 Bacterial and Viral Skin Infections
  - 5.4 Patients with Lymphadenopathy
  - 5.5 Sun Exposure
  - 5.6 Immunocompromised Patients
- 6 ADVERSE REACTIONS
  - 6.1 Clinical Trials Experience
  - 6.2 Postmarketing Experience

## FULL PRESCRIBING INFORMATION

**WARNING: LONG-TERM SAFETY OF TOPICAL CALCINEURIN INHIBITORS HAS NOT BEEN ESTABLISHED**  
Although a causal relationship has not been established, rare cases of malignancy (e.g., skin and lymphoma) have been reported in patients treated with topical calcineurin inhibitors, including ELIDEL Cream, 1%. [see Warnings and Precautions (5.1)].

**Therefore:**

- Continuous long-term use of topical calcineurin inhibitors, including ELIDEL Cream, 1%, in any age group should be avoided and application limited to areas of involvement with atopic dermatitis [see Dosage and Administration (2), Warnings and Precautions (5.1)].
- ELIDEL Cream, 1% is not indicated for use in children less than 2 years of age [see Warnings and Precautions (5.1), Use in Specific Populations (8.4)].

## DOSAGE AND ADMINISTRATION

- Apply a thin layer of ELIDEL Cream, 1% to the affected skin twice daily. (2)
- If signs and symptoms persist beyond 6 weeks, patients should be re-examined. (2)
- Continuous long-term use of ELIDEL Cream, 1% should be avoided. (2)
- Avoid use with occlusive dressings. (2)

## DOSAGE FORMS AND STRENGTHS

Cream, 1%. (3)

## CONTRAINDICATIONS

ELIDEL Cream, 1% is contraindicated in individuals with a history of hypersensitivity to pimecrolimus or any of the components of the cream. (4, 6.2)

## WARNINGS AND PRECAUTIONS

- Should not be used in immunocompromised adults and children, including patients on systemic immunosuppressive medications. (5.1)
- Avoid treatment on malignant or pre-malignant skin conditions, as these can present as dermatitis. (5.2)
- Should not be used in patients with Netherton's Syndrome or skin diseases with a potential for increased systemic absorption. (5.2)

## ADVERSE REACTIONS

The most commonly reported adverse reactions (≥1%) were application site burning, headache, nasopharyngitis, cough, influenza, pyrexia and viral infection. (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact Valeant Pharmaceuticals North America LLC at 1-800-321-4576 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

See 17 for PATIENT COUNSELING INFORMATION and Medication Guide.

Revised: 12/2017

## 7 DRUG INTERACTIONS

## 8 USE IN SPECIFIC POPULATIONS

- 8.1 Pregnancy
- 8.3 Nursing Mothers
- 8.4 Pediatric Use
- 8.5 Geriatric Use

## 11 DESCRIPTION

## 12 CLINICAL PHARMACOLOGY

- 12.1 Mechanism of Action
- 12.3 Pharmacokinetics

## 13 NONCLINICAL TOXICOLOGY

- 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

## 14 CLINICAL STUDIES

## 16 HOW SUPPLIED/STORAGE AND HANDLING

## 17 PATIENT COUNSELING INFORMATION

\*Sections or subsections omitted from the full prescribing information are not listed.

## 1 INDICATIONS AND USAGE

ELIDEL® (pimecrolimus) Cream, 1% is indicated as second-line therapy for the short-term and non-continuous chronic treatment of mild to moderate atopic dermatitis in non-immunocompromised adults and children 2 years of age and older, who have failed to respond adequately to other topical prescription treatments, or when those treatments are not advisable.

ELIDEL Cream, 1% is not indicated for use in children less than 2 years of age [see Warnings and Precautions (5.1), Use in Specific Populations (8.4)].

## 2 DOSAGE AND ADMINISTRATION

Apply a thin layer of ELIDEL Cream, 1% to the affected skin twice daily. The patient should stop using ELIDEL Cream, 1% when signs and symptoms (e.g., itch, rash and redness) resolve and should be instructed on what actions to take if symptoms recur.

If signs and symptoms persist beyond 6 weeks, patients should be re-examined by their healthcare provider to confirm the diagnosis of atopic dermatitis.

Continuous long-term use of ELIDEL Cream, 1% should be avoided, and application should be limited to areas of involvement with atopic dermatitis [see Warnings and Precautions (5.1)].

The safety of ELIDEL Cream, 1% under occlusion, which may promote systemic exposure, has not been evaluated. Avoid use of ELIDEL Cream, 1% with occlusive dressings.

## 3 DOSAGE FORMS AND STRENGTHS

Cream, 1%.

Each gram of ELIDEL Cream, 1% contains 10 mg of pimecrolimus in a whitish cream base.

## 4 CONTRAINDICATIONS

ELIDEL Cream, 1% is contraindicated in individuals with a history of hypersensitivity to pimecrolimus or any of the components of the cream.

## 5 WARNINGS AND PRECAUTIONS

### 5.1 Risk of Immunosuppression

Prolonged systemic use of calcineurin inhibitors for sustained immunosuppression in animal studies and transplant patients following systemic administration has been associated with an increased risk of infections, lymphomas, and skin malignancies. These risks are associated with the intensity and duration of immunosuppression.

Based on this information and the mechanism of action, there is a concern about a potential risk with the use of topical calcineurin inhibitors, including ELIDEL Cream, 1%. While a causal relationship has not been established, rare cases of skin malignancy and lymphoma have been reported in patients treated with topical calcineurin inhibitors, including ELIDEL Cream, 1%. Therefore:

- Continuous long-term use of topical calcineurin inhibitors, including ELIDEL Cream, 1%, in any age group should be avoided, and application limited to areas of involvement with atopic dermatitis.
- ELIDEL Cream, 1% is not indicated for use in children less than 2 years of age.
- ELIDEL Cream, 1% should not be used in immunocompromised adults and children, including patients on systemic immunosuppressive medications.

- If signs and symptoms of atopic dermatitis do not improve within 6 weeks, patients should be re-examined by their healthcare provider and their diagnosis be confirmed.
- The safety of ELIDEL Cream, 1% has not been established beyond 1 year of non-continuous use.

### 5.2 Application to Malignant or Pre-malignant Skin Conditions

The use of ELIDEL Cream, 1% should be avoided on malignant or pre-malignant skin conditions. Malignant or pre-malignant skin conditions, such as cutaneous T-cell lymphoma (CTCL), can present as dermatitis.

ELIDEL Cream, 1% should not be used in patients with Netherton's Syndrome or other skin diseases where there is the potential for increased systemic absorption of pimecrolimus. The safety of ELIDEL Cream, 1% has not been established in patients with generalized erythroderma.

The use of ELIDEL Cream, 1% may cause local symptoms such as skin burning (burning sensation, stinging, soreness) or pruritus. Localized symptoms are most common during the first few days of ELIDEL Cream, 1% application and typically improve as the lesions of atopic dermatitis resolve [see Adverse Reactions (6.1)].

### 5.3 Bacterial and Viral Skin Infections

Before commencing treatment with ELIDEL Cream, 1%, bacterial or viral infections at treatment sites should be resolved. Trials have not evaluated the safety and efficacy of ELIDEL Cream, 1% in the treatment of clinically infected atopic dermatitis.

While patients with atopic dermatitis are predisposed to superficial skin infections including eczema herpeticum (Kaposi's varicelliform eruption), treatment with ELIDEL Cream, 1% may be independently associated with an increased risk of varicella zoster virus infection (chicken pox or shingles), herpes simplex virus infection, or eczema herpeticum.

In clinical trials, 15/1544 (1%) cases of skin papilloma (warts) were observed in subjects using ELIDEL Cream, 1%. The youngest subject was age 2 and the oldest was age 12. In cases where there is worsening of skin papillomas or they do not respond to conventional therapy, discontinuation of ELIDEL Cream, 1% should be considered until complete resolution of the warts is achieved.

### 5.4 Patients with Lymphadenopathy

In clinical trials, 14/1544 (0.9%) cases of lymphadenopathy were reported while using ELIDEL Cream, 1%. These cases of lymphadenopathy were usually related to infections and noted to resolve upon appropriate antibiotic therapy. Of these 14 cases, the majority had either a clear etiology or were known to resolve. Patients who receive ELIDEL Cream, 1% and who develop lymphadenopathy should have the etiology of their lymphadenopathy investigated. In the absence of a clear etiology for the lymphadenopathy, or in the presence of acute infectious mononucleosis, ELIDEL Cream, 1% should be discontinued. Patients who develop lymphadenopathy should be monitored to ensure that the lymphadenopathy resolves.

### 5.5 Sun Exposure

During the course of treatment, it is prudent for patients to minimize or avoid natural or artificial sunlight exposure, even while ELIDEL Cream, 1% is not on the skin. The potential effects of ELIDEL Cream, 1% on skin response to ultraviolet damage are not known.

### 5.6 Immunocompromised Patients

The safety and efficacy of ELIDEL Cream, 1% in immunocompromised patients have not been studied.

## 6 ADVERSE REACTIONS

### 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 practice.

No phototoxicity and no photoallergenicity were detected in clinical trials with 24 and 33 normal volunteers, respectively. In human dermal safety trials, ELIDEL Cream, 1% did not induce contact sensitization or cumulative irritation.

In a 1-year safety trial in pediatric subjects age 2-17 years old involving sequential use of ELIDEL Cream, 1% and a topical corticosteroid, 43% of ELIDEL Cream, 1% treated subjects and 68% of vehicle-treated subjects used corticosteroids during the trial. Corticosteroids were used for more than 7 days by 34% of ELIDEL Cream, 1% treated subjects and 54% of vehicle-treated subjects. An increased incidence of impetigo, skin infection, superinfection (infected atopic dermatitis), rhinitis, and urticaria were found in the subjects that had used ELIDEL Cream, 1% and topical corticosteroid sequentially as compared to ELIDEL Cream, 1% alone.

In three randomized, double-blind vehicle-controlled pediatric trials and one active-controlled adult trial, 843 and 328 subjects, respectively, were treated with ELIDEL Cream, 1%. In these clinical trials, 48 (4%) of the 1171 ELIDEL Cream, 1% treated subjects and 13 (3%) of 408 vehicle-treated subjects discontinued therapy due to adverse events. Discontinuations for AEs were primarily due to application site reactions and cutaneous infections. The most common application site reaction was application site burning, which occurred in 8%-26% of subjects treated with ELIDEL Cream, 1%.

Table 1 depicts the incidence of adverse events pooled across the two identically designed 6-week trials with their open label extensions and the 1-year safety trial for pediatric subjects ages 2-17. Data from the adult active-controlled trial are also included in Table 1. Adverse events are listed regardless of relationship to trial drug.

### 6.2 Postmarketing Experience

The following adverse reactions have been identified during post-approval use of ELIDEL Cream, 1%. 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.

**General:** Anaphylactic reactions, ocular irritation after application of the cream to the eye lids or near the eyes, angioneurotic edema, facial edema, skin flushing associated with alcohol use, skin discoloration.

**Hematology/Oncology:** Lymphomas, basal cell carcinoma, malignant melanoma, squamous cell carcinoma.

Table 1. Treatment Emergent Adverse Events (≥1%) in ELIDEL Cream, 1% Treatment Groups

	Pediatric Subjects* Vehicle-Controlled (6 weeks)	Pediatric Subjects* Open-Label (20 weeks)	Pediatric Subjects* Vehicle-Controlled (1 year)	Adult Active Comparator (1 year)		
	ELIDEL Cream, 1% (N=267) N (%)	Vehicle (N=136) N (%)	ELIDEL Cream, 1% (N=335) N (%)	ELIDEL Cream, 1% (N=272) N (%)	Vehicle (N=75) N (%)	ELIDEL Cream, 1% (N=328) N (%)
At least 1 AE	182 (68.2%)	97 (71.3%)	240 (72.0%)	230 (84.6%)	56 (74.7%)	256 (78.0%)
<b>Infections and Infestations</b>						
Upper Respiratory Tract Infection NOS	38 (14.2%)	18 (13.2%)	65 (19.4%)	13 (4.8%)	6 (8.0%)	14 (4.3%)
Nasopharyngitis	27 (10.1%)	10 (7.4%)	32 (19.6%)	72 (26.5%)	16 (21.3%)	25 (7.6%)
Skin Infection NOS	8 (3.0%)	9 (5.1%)	18 (5.4%)	6 (2.2%)	3 (4.0%)	21 (6.4%)
Influenza	8 (3.0%)	1 (0.7%)	22 (6.6%)	36 (13.2%)	3 (4.0%)	32 (9.8%)
Ear Infection NOS	6 (2.2%)	2 (1.5%)	19 (5.7%)	9 (3.3%)	1 (1.3%)	2 (0.6%)
Otitis Media	6 (2.2%)	1 (0.7%)	10 (3.0%)	8 (2.9%)	4 (5.3%)	2 (0.6%)
Impetigo	5 (1.9%)	3 (2.2%)	12 (3.6%)	11 (4.0%)	4 (5.3%)	8 (2.4%)
Bacterial Infection	4 (1.5%)	3 (2.2%)	4 (1.2%)	3 (1.1%)	0	6 (1.8%)
Folliculitis	3 (1.1%)	1 (0.7%)	3 (0.9%)	6 (2.2%)	3 (4.0%)	20 (6.1%)
Sinusitis	3 (1.1%)	1 (0.7%)	11 (3.3%)	6 (2.2%)	1 (1.3%)	2 (0.6%)
Pneumonia NOS	3 (1.1%)	1 (0.7%)	5 (1.5%)	0	1 (1.3%)	1 (0.3%)
Pharyngitis NOS	2 (0.7%)	2 (1.5%)	3 (0.9%)	22 (8.1%)	2 (2.7%)	3 (0.9%)
Pharyngitis Streptococcal	2 (0.7%)	2 (1.5%)	10 (3.0%)	0	<1%	0
Molluscum Contagiosum	2 (0.7%)	0	4 (1.2%)	5 (1.8%)	0	0
Staphylococcal Infection	1 (0.4%)	5 (3.7%)	7 (2.1%)	0	<1%	3 (0.9%)
Bronchitis NOS	1 (0.4%)	3 (2.2%)	4 (1.2%)	29 (10.7%)	6 (8.0%)	8 (2.4%)
Herpes Simplex	1 (0.4%)	0	4 (1.2%)	9 (3.3%)	2 (2.7%)	13 (4.0%)
Tonsillitis NOS	1 (0.4%)	0	3 (0.9%)	17 (6.3%)	0	2 (0.6%)
Viral Infection NOS	2 (0.7%)	1 (0.7%)	1 (0.3%)	18 (6.6%)	1 (1.3%)	0
Gastroenteritis NOS	0	3 (2.2%)	2 (0.6%)	20 (7.4%)	2 (2.7%)	6 (1.8%)
Chicken Pox	2 (0.7%)	0	3 (0.9%)	8 (2.9%)	3 (4.0%)	1 (0.3%)
Skin Papilloma	1 (0.4%)	0	2 (0.6%)	9 (3.3%)	<1%	0
Tonsillitis Acute NOS	0	0	0	7 (2.6%)	0	0
Upper Respiratory Tract Infection Viral NOS	1 (0.4%)	0	3 (0.9%)	4 (1.5%)	0	1 (0.3%)
Herpes Simplex Dermatitis	0	0	1 (0.3%)	4 (1.5%)	0	2 (0.6%)
Bronchitis Acute NOS	0	0	0	4 (1.5%)	0	0
Eye Infection NOS	0	0	0	3 (1.1%)	<1%	1 (0.3%)
<b>General Disorders and Administration Site Conditions</b>						
Application Site Burning	28 (10.4%)	17 (12.5%)	5 (1.5%)	23 (8.5%)	5 (6.7%)	85 (25.9%)
Pyrexia	20 (7.5%)	12 (8.8%)	41 (12.2%)	34 (12.5%)	4 (5.3%)	4 (1.2%)
Application Site Reaction NOS	8 (3.0%)	7 (5.1%)	7 (2.1%)	9 (3.3%)	2 (2.7%)	48 (14.6%)
Application Site Irritation	8 (3.0%)	8 (5.9%)	3 (0.9%)	1 (0.4%)	3 (4.0%)	21 (6.4%)
Influenza-Like Illness	1 (0.4%)	0	2 (0.6%)	5 (1.8%)	2 (2.7%)	6 (1.8%)
Application Site Erythema	1 (0.4%)	0	0	6 (2.2%)	0	7 (2.1%)
Application Site Pruritus	3 (1.1%)	2 (1.5%)	2 (0.6%)	5 (1.8%)	0	18 (5.5%)
<b>Respiratory, Thoracic and Mediastinal Disorders</b>						
Cough	31 (11.6%)	11 (8.1%)	31 (9.3%)	43 (15.8%)	8 (10.7%)	8 (2.4%)
Nasal Congestion	7 (2.6%)	2 (1.5%)	6 (1.8%)	4 (1.5%)	1 (1.3%)	2 (0.6%)
Rhinorrhea	5 (1.9%)	1 (0.7%)	3 (0.9%)	1 (0.4%)	1 (1.3%)	0
Asthma Aggravated	4 (1.5%)	3 (2.2%)	13 (3.9%)	3 (1.1%)	1 (1.3%)	0
Sinus Congestion	3 (1.1%)	1 (0.7%)	2 (0.6%)	<1%	<1%	3 (0.9%)
Rhinitis	1 (0.4%)	0	5 (1.5%)	12 (4.4%)	5 (6.7%)	7 (2.1%)
Wheezing	1 (0.4%)	1 (0.7%)	4 (1.2%)	2 (0.7%)	<1%	0
Asthma NOS	2 (0.7%)	1 (0.7%)	11 (3.3%)	10 (3.7%)	2 (2.7%)	8 (2.4%)
Epistaxis	0	1 (0.7%)	0	9 (3.3%)	1 (1.3%)	1 (0.3%)
Dyspnea NOS	0	0	0	5 (1.8%)	1 (1.3%)	2 (0.6%)
<b>Gastrointestinal Disorders</b>						
Abdominal Pain Upper	11 (4.1%)	6 (4.4%)	10 (3.0%)	15 (5.5%)	5 (6.7%)	1 (0.3%)
Sore Throat	9 (3.4%)	5 (3.7%)	22 (8.1%)	4 (1.5%)	4 (5.3%)	12 (3.7%)
Vomiting NOS	8 (3.0%)	6 (4.4%)	14 (4.2%)	18 (6.6%)	6 (8.0%)	2 (0.6%)
Diarrhea NOS	3 (1.1%)	1 (0.7%)	2 (0.6%)	21 (7.7%)	4 (5.3%)	7 (2.1%)

25329.1  
56US2069130-02

Nausea	1 (0.4%)	3 (2.2%)	4 (1.2%)	11 (4.0%)	5 (6.7%)	6 (1.8%)
Abdominal Pain NOS	1 (0.4%)	1 (0.7%)	5 (1.5%)	12 (4.4%)	3 (4.0%)	1 (0.3%)
Toothache	1 (0.4%)	1 (0.7%)	2 (0.6%)	7 (2.6%)	1 (1.3%)	2 (0.6%)
Constipation	1 (0.4%)	0	2 (0.6%)	10 (3.7%)	<1%	0
Loose Stools	0	1 (0.7%)	4 (1.2%)	<1%	<1%	0

## Reproductive System and Breast Disorders

Dysmenorrhea 3 (1.1%) 0 5 (1.5%) 3 (1.1%) 1 (1.3%) 4 (1.2%)

## Eye Disorders

Conjunctivitis NEC 2 (0.7%) 1 (0.7%) 7 (2.1%) 6 (2.2%) 3 (4.0%) 10 (3.0%)

## Skin and Subcutaneous Tissue Disorders

Urticaria 3 (1.1%) 0 1 (0.3%) 1 (0.4%) <1% 3 (0.9%)

## Immune System Disorders

Hypersensitivity NOS 11 (4.1%) 6 (4.4%) 16 (4.8%) 14 (5.1%) 1 (1.3%) 11 (3.4%)

## Injury and Poisoning

Accident NOS 3 (1.1%) 1 (0.7%) 1 (0.3%) <1% 1 (1.3%) 0

## Laceration

0 0 1 (0.3%) 3 (1.1%) 1 (1.3%) 5 (1.5%)

## Musculoskeletal, Connective Tissue and Bone Disorders

Back Pain 1 (0.4%) 2 (1.5%) 1 (0.3%) <1% 0 6 (1.8%)

## Arthralgias

0 0 1 (0.3%) 3 (1.1%) 1 (1.3%) 5 (1.5%)

## Ear and Labyrinth Disorders

Earache 2 (0.7%) 1 (0.7%) 0 8 (2.9%) 2 (2.7%) 0

## Nervous System Disorders

Headache 37 (13.9%) 12 (8.8%) 38 (11.3%) 69 (25.4%) 12 (16.0%) 23 (7.0%)

\*Ages 2-17 years

Two cases of septic arthritis have been reported in infants less than one year of age in clinical trials conducted with ELIDEL Cream, 1% (n = 2443). Causality has not been established.

## 7 DRUG INTERACTIONS

Potential interactions between ELIDEL Cream, 1% and other drugs, including immunizations, have not been systematically evaluated. Due to low blood levels of pimecrolimus detected in some patients after topical application, systemic drug interactions are not expected, but cannot be ruled out. The concomitant administration of known CYP3A family of inhibitors in patients with widespread and/or erythrodermic disease should be done with caution. Some examples of such drugs are erythromycin, itraconazole, ketoconazole, fluconazole, calcium channel blockers and cimetidine.

A second oral embryofetal development study was conducted in rats. Pimecrolimus was administered during the period of organogenesis (gestational days 6

At this time, a causal relationship between these findings and ELIDEL use cannot be ruled out.

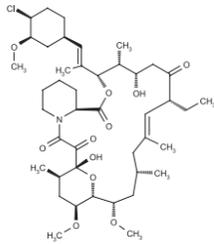
### 8.5 Geriatric Use

Nine (9) subjects >65 years old received ELIDEL Cream, 1% in Phase 3 trials. Clinical trials of ELIDEL Cream, 1% did not include sufficient numbers of subjects aged 65 and over to assess efficacy and safety.

### 11 DESCRIPTION

ELIDEL Cream, 1%, for topical use, contains the compound pimecrolimus, the immunosuppressant 33-epi-chloro-derivative of the macrolactam ascomycin.

Chemically, pimecrolimus is (1R,9S,12S,13R,14S,17R,18E,21S,23S,24R,25S,27R)-12-[(1E)-2-[(1R,3R,4S)-4-chloro-3-methoxycyclohexyl]-1-methylvinyl]-17-ethyl-1,14-dihydroxy-23,25-dimethoxy-13,19,21,27-tetramethyl-11,28-dioxo-4-aza-tricyclo [2.2.3.1.0<sub>4,9</sub>]octacos-18-ene-2,3,10,16-tetraone. The compound has the empirical formula C<sub>43</sub>H<sub>68</sub>ClNO<sub>11</sub> and the molecular weight of 810.47. The structural formula is:



Pimecrolimus is a white to off-white fine crystalline powder. It is soluble in methanol and ethanol and insoluble in water.

Each gram of ELIDEL Cream, 1% contains 10 mg of pimecrolimus in a whitish cream base of benzyl alcohol, cetyl alcohol, citric acid anhydrous, mono- and diglycerides, oleyl alcohol, propylene glycol, sodium cetostearyl sulphate, sodium hydroxide, stearyl alcohol, triglycerides and water.

### 12 CLINICAL PHARMACOLOGY

#### 12.1 Mechanism of Action

The mechanism of action of pimecrolimus in atopic dermatitis is not known. While the following have been observed, the clinical significance of these observations in atopic dermatitis is not known. It has been demonstrated that pimecrolimus binds with high affinity to macrophilin-12 (FKBP-12) and inhibits the calcium-dependent phosphatase, calcineurin. As a consequence, it inhibits T-cell activation by blocking the transcription of early cytokines. In particular, pimecrolimus inhibits at nanomolar concentrations Interleukin-2 and interferon gamma (Th1-type) and Interleukin-4 and Interleukin-10 (Th2-type) cytokine synthesis in human T-cells. In addition, pimecrolimus prevents the release of inflammatory cytokines and mediators from mast cells in vitro after stimulation by antigen/IgE.

#### 12.3 Pharmacokinetics

##### Absorption

In adult subjects (n=52) being treated for atopic dermatitis [13%-62% Body Surface Area (BSA) involvement] for periods up to a year, a maximum pimecrolimus concentration of 1.4 ng/mL was observed among those subjects with detectable blood levels. In the majority of samples in adult (91%; 1244/1362) subjects, blood concentrations of pimecrolimus were below 0.5 ng/mL. Data on blood levels of pimecrolimus measured in pediatric subjects are described in *Use in Specific Populations* (8.4).

##### Distribution

Laboratory in vitro plasma protein binding studies using equilibrium gel filtration have shown that 99.5% of pimecrolimus in plasma is bound to proteins over the pimecrolimus concentration range of 2-100 ng/mL tested. The major fraction of pimecrolimus in plasma appears to be bound to various lipoproteins. As with other topical calcineurin inhibitors, it is not known whether pimecrolimus is absorbed into cutaneous lymphatic vessels or in regional lymph nodes.

##### Metabolism

Following the administration of a single oral radiolabeled dose of

pimecrolimus, numerous circulating O-demethylation metabolites were seen. Studies with human liver microsomes indicate that pimecrolimus is metabolized in vitro by the CYP3A subfamily of metabolizing enzymes. No evidence of skin mediated drug metabolism was identified in vivo using the minipig or in vitro using stripped human skin.

##### Elimination

Based on the results of the aforementioned radiolabeled study, following a single oral dose of pimecrolimus, ~81% of the administered radioactivity was recovered, primarily in the feces (78.4%) as metabolites. Less than 1% of the radioactivity found in the feces was due to unchanged pimecrolimus.

### 13 NONCLINICAL TOXICOLOGY

#### 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

In a 2-year rat dermal carcinogenicity study using ELIDEL Cream, 1%, a statistically significant increase in the incidence of follicular cell adenoma of the thyroid was noted in low, mid and high dose male animals compared to vehicle and saline control male animals. Follicular cell adenoma of the thyroid was noted in the dermal rat carcinogenicity study at the lowest dose of 2 mg/kg/day [0.2% pimecrolimus cream; 1.5X the Maximum Recommended Human Dose (MRHD) based on AUC comparisons]. No increase in the incidence of follicular cell adenoma of the thyroid was noted in the oral carcinogenicity study in male rats up to 10 mg/kg/day (66X MRHD based on AUC comparisons). However, oral studies may not reflect continuous exposure or the same metabolic profile as by the dermal route. In a mouse dermal carcinogenicity study using pimecrolimus in an ethanolic solution, no increase in incidence of neoplasms was observed in the skin or other organs up to the highest dose of 4 mg/kg/day (0.32% pimecrolimus in ethanol) 27X MRHD based on AUC comparisons. However, lymphoproliferative changes (including lymphoma) were noted in a 13-week repeat dose dermal toxicity study conducted in mice using pimecrolimus in an ethanolic solution at a dose of 25 mg/kg/day (47X MRHD based on AUC comparisons). No lymphoproliferative changes were noted in this study at a dose of 10 mg/kg/day (17X MRHD based on AUC comparison). However, the latency time to lymphoma formation was shortened to 8 weeks after dermal administration of pimecrolimus dissolved in ethanol at a dose of 100 mg/kg/day (179-217X MRHD based on AUC comparisons).

In a mouse oral (gavage) carcinogenicity study, a statistically significant increase in the incidence of lymphoma was noted in high dose male and female animals compared to vehicle control male and female animals. Lymphomas were noted in the oral mouse carcinogenicity study at a dose of 45 mg/kg/day (258-340X MRHD based on AUC comparisons). No drug-related tumors were noted in the mouse oral carcinogenicity study at a dose of 15 mg/kg/day (60-133X MRHD based on AUC comparisons).

In an oral (gavage) rat carcinogenicity study, a statistically significant increase in the incidence of benign thymoma was noted in 10 mg/kg/day pimecrolimus treated male and female animals compared to vehicle control treated male and female animals. In addition, a significant increase in the incidence of benign thymoma was noted in another oral (gavage) rat carcinogenicity study in 5 mg/kg/day pimecrolimus treated male animals compared to vehicle control treated male animals. No drug-related tumors were noted in the rat oral carcinogenicity study at a dose of 1 mg/kg/day male animals (1.1X MRHD based on AUC comparisons) and at a dose of 5 mg/kg/day for female animals (21X MRHD based on AUC comparisons).

In a 52-week dermal photocarcinogenicity study, the median time to onset of skin tumor formation was decreased in hairless mice following chronic topical dosing with concurrent exposure to UV radiation (40 weeks of treatment followed by 12 weeks of observation) with the ELIDEL Cream, 1% vehicle alone. No additional effect on tumor development beyond the vehicle effect was noted with the addition of the active ingredient, pimecrolimus, to the vehicle cream.

A 39-week oral monkey toxicology study was conducted with pimecrolimus doses of 15, 45 and 120 mg/kg/day. A dose-dependent increase in expression of immunosuppressive-related lymphoproliferative disorder (IRLD) associated with lymphocryptovirus (a monkey strain of virus related to human Epstein Barr virus) was observed. IRLD in monkeys mirrors what has been noted in human transplant patients after chronic systemic immunosuppressive therapy, post-transplantation lymphoproliferative disease (PTLD), after treatment with chronic systemic immunosuppressive therapy. Both IRLD and PTLD can progress to lymphoma, which is dependent on the dose and duration of systemic immunosuppressive therapy. A dose-dependent increase in opportunistic infections (a signal of systemic immunosuppression) was also noted in

this monkey study. A no observed adverse effect level (NOAEL) for IRLD and opportunistic infections was not established in this study. IRLD occurred at the lowest dose of 15 mg/kg/day for 39 weeks [31X the Maximum Recommended Human Dose (MRHD) of ELIDEL Cream, 1% based on AUC comparisons] in this study. A partial recovery from IRLD was noted upon cessation of dosing in this study.

A battery of in vitro genotoxicity tests, including Ames assay, mouse lymphoma L5178Y assay, and chromosome aberration test in V79 Chinese hamster cells and an in vivo mouse micronucleus test revealed no evidence for a mutagenic or clastogenic potential for the drug.

An oral fertility and embryofetal developmental study in rats revealed estrus cycle disturbances, post-implantation loss and reduction in litter size at the 45 mg/kg/day dose (38X MRHD based on AUC comparisons). No effect on fertility in female rats was noted at 10 mg/kg/day (12X MRHD based on AUC comparisons). No effect on fertility in male rats was noted at 45 mg/kg/day (23X MRHD based on AUC comparisons), which was the highest dose tested in this study.

A second oral fertility and embryofetal developmental study in rats revealed reduced testicular and epididymal weights, reduced testicular sperm counts and motile sperm for males and estrus cycle disturbances, decreased corpora lutea, decreased implantations and viable fetuses for females at 45 mg/kg/day dose (123X MRHD for males and 192X MRHD for females based on AUC comparisons). No effect on fertility in female rats was noted at 10 mg/kg/day (5X MRHD based on AUC comparisons). No effect on fertility in male rats was noted at 2 mg/kg/day (0.7X MRHD based on AUC comparisons).

### 14 CLINICAL STUDIES

Three randomized, double-blind, vehicle-controlled, multi-center, Phase 3 trials were conducted in 589 pediatric subjects ages 3 months-17 years old to evaluate ELIDEL Cream, 1% for the treatment of mild to moderate atopic dermatitis. Two of the three trials support the use of ELIDEL Cream, 1% in subjects 2 years and older with mild to moderate atopic dermatitis [see *Warnings and Precautions* (5.1)]. Three other trials in 1619 pediatric and adult subjects provided additional data regarding the safety of ELIDEL Cream, 1% in the treatment of atopic dermatitis. Two of these other trials were vehicle-controlled with optional sequential use of a medium potency topical corticosteroid in pediatric subjects and one trial was an active comparator trial in adult subjects with atopic dermatitis [see *Warnings and Precautions* (5.1) and *Adverse Reactions* (6.1)].

Two identical 6-week, randomized, vehicle-controlled, multi-center, Phase 3 trials were conducted to evaluate ELIDEL Cream, 1% for the treatment of mild to moderate atopic dermatitis. A total of 403 pediatric subjects 2-17 years old were included in the trials. The male/female ratio was approximately 50% and 29% of the subjects were African American. At trial entry, 59% of subjects had moderate disease and the mean body surface area (BSA) affected was 26%. About 75% of subjects had atopic dermatitis affecting the face and/or neck region. In these trials, subjects applied either ELIDEL Cream, 1% or vehicle cream twice daily to 5% to 96% of their BSA for up to 6 weeks. At endpoint, based on the physician's global evaluation of clinical response, 35% of subjects treated with ELIDEL Cream, 1% were clear or almost clear of signs of atopic dermatitis compared to only 18% of vehicle-treated subjects. More ELIDEL subjects (57%) had mild or no pruritus at 6 weeks compared to vehicle subjects (34%). The improvement in pruritus occurred in conjunction with the improvement of the subjects' atopic dermatitis.

In these two 6-week trials of ELIDEL Cream, 1%, the combined efficacy results at endpoint are presented in Table 2 as follows:

**Table 2. Combined Efficacy Results at Endpoint for Two 6-week Trials of ELIDEL Cream, 1%**

Global Assessment	% Subjects	
	ELIDEL Cream, 1% (N=267)	Vehicle (N=136)
Clear	28 (10%)	5 (4%)
Clear or Almost Clear	93 (35%)	25 (18%)
Clear to Mild Disease	180 (67%)	55 (40%)

In the two pediatric trials that independently support the use of ELIDEL Cream, 1% in mild to moderate atopic dermatitis, a significant treatment effect was seen by day 15. Of the key signs of atopic dermatitis, erythema, infiltration/papulation, lichenification, and excoriations were reduced at day 8 when compared to vehicle.

Figure 1 depicts the time course of improvement in the percent body surface area affected as a result of treatment with ELIDEL Cream, 1% in 2-17 year olds.

**Figure 1**

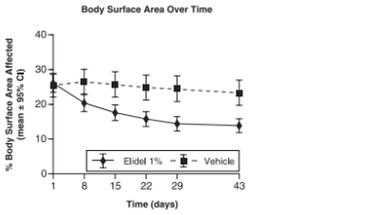
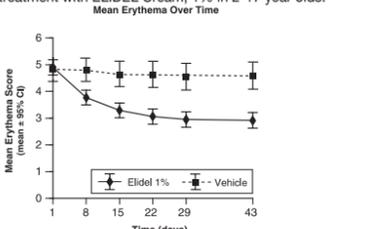


Figure 2 shows the time course of improvement in erythema as a result of treatment with ELIDEL Cream, 1% in 2-17 year olds.

**Figure 2**



- Wash hands before using ELIDEL Cream, 1%. When applying ELIDEL Cream, 1% after a bath or shower, the skin should be dry.
- Apply a thin layer of ELIDEL Cream, 1% only to the affected skin areas, twice a day, as directed by the physician.
- Use the smallest amount of ELIDEL Cream, 1% needed to control the signs and symptoms of eczema.
- A patient should not bathe, shower or swim right after applying ELIDEL Cream, 1%. This could wash off the cream.
- A patient can use moisturizers with ELIDEL Cream, 1%. They should be sure to check with the physician first about the products that are right for them. Because the skin of patients with eczema can be very dry, it is important they keep up good skin care practices. If a patient uses moisturizers, he or she should apply them after ELIDEL Cream, 1%.

**Manufactured for:**  
Valeant Pharmaceuticals North America LLC  
Bridgewater, NJ 08807 USA  
**By:**  
MEDA Manufacturing  
33700 MÉRIGNAC, France  
U.S. Patent 6,423,722  
Produced under license from MEDA Pharma S.A.R.L., Luxembourg, by Valeant International Bermuda.  
Elidel is a trademark of MEDA PHARMA S.A.R.L. used under license.  
©Valeant Pharmaceuticals North America LLC  
9460401 25329.1

## MEDICATION GUIDE

# ELIDEL® (EL-ee-del)

### (pimecrolimus) Cream, 1%

**Important: ELIDEL Cream, 1% is for use on the skin only (topical).** Do not get ELIDEL Cream, 1% in your eyes, nose, mouth, vagina, or rectum.

**What is the most important information I should know about ELIDEL Cream, 1%?**

It is not known if ELIDEL Cream, 1% is safe to use for a long period of time. A very small number of people who have used ELIDEL Cream, 1% have developed cancer (for example, skin cancer or lymphoma). But a link that ELIDEL Cream, 1% use caused these cancers has not been shown. Because of this concern:

- Do not use ELIDEL Cream, 1% continuously for a long time.
- Use ELIDEL Cream, 1% only on areas of your skin that have eczema.
- Do not use ELIDEL Cream, 1% on a child under 2 years of age.

**What is ELIDEL Cream, 1%?**

ELIDEL Cream, 1% is a prescription medicine used on the skin (topical) to treat mild to moderate eczema (atopic dermatitis). ELIDEL Cream, 1% is for adults and children age 2 years and older who do not have a weakened immune system. ELIDEL Cream, 1% is used on the skin for short periods, and if needed, treatment may be repeated with breaks in between. ELIDEL Cream, 1% is for use after other prescription medicines have not worked for you or if you

**Manufactured for:**  
Valeant Pharmaceuticals North America LLC  
Bridgewater, NJ 08807 USA  
**By:**  
MEDA Manufacturing  
33700 MÉRIGNAC, France  
U.S. Patent 6,423,722  
Produced under license from MEDA Pharma S.A.R.L., Luxembourg, by Valeant International Bermuda.  
Elidel is a trademark of MEDA PHARMA S.A.R.L. used under license.  
©Valeant Pharmaceuticals North America LLC  
9460401 25329.1

**Manufactured for:**  
Valeant Pharmaceuticals North America LLC  
Bridgewater, NJ 08807 USA  
**By:**  
MEDA Manufacturing  
33700 MÉRIGNAC, France  
U.S. Patent 6,423,722  
Produced under license from MEDA Pharma S.A.R.L., Luxembourg, by Valeant International Bermuda.  
Elidel is a trademark of MEDA PHARMA S.A.R.L. used under license.  
©Valeant Pharmaceuticals North America LLC  
9460401 25329.1

doctor recommends that other prescription medicines should not be used. It is not known if ELIDEL Cream, 1% is safe and effective in people who have a weakened immune system. ELIDEL Cream, 1% is not for use in children under 2 years of age.

**Who should not use ELIDEL Cream, 1%?**

**Do not use ELIDEL Cream, 1%** if you are allergic to pimecrolimus or any of the ingredients in ELIDEL Cream, 1%. See the end of this Medication Guide for a complete list of ingredients in ELIDEL Cream, 1%.

**What should I tell my doctor before using ELIDEL Cream, 1%?**

**Before using ELIDEL Cream, 1%, tell your doctor about all of your medical conditions, including if you:**

- have a skin disease called Netherton's syndrome (a rare inherited condition).
- have any infection on your skin including chicken pox or herpes.
- have been told you have a weakened immune system.
- are pregnant or plan to become pregnant. It is not known if ELIDEL Cream, 1% will harm your unborn baby.
- are breastfeeding or plan to breastfeed. It is not known if ELIDEL Cream, 1% passes into your breast milk. You and your doctor should decide if you will use ELIDEL Cream, 1% or breastfeed. You should not do both.
- Tell your doctor about all the medicines you take,** including prescription and over-the-counter medicines, vitamins, and

herbal supplements. Tell your doctor about all the skin medicines and products you use. Know the medicines you take. Keep a list of them with you to show your doctor and pharmacist each time you get a new medicine.

**How should I use ELIDEL Cream, 1%?**

- Use ELIDEL Cream, 1% exactly as your doctor tells you to use it.
- Stop ELIDEL Cream, 1% when the signs and symptoms of eczema, such as itching, rash, and redness go away, or as directed by your doctor.
- Wash your hands before using ELIDEL Cream, 1%. If you apply ELIDEL Cream, 1% after a bath or shower, make sure your skin is dry.
- Apply a thin layer of ELIDEL Cream, 1% only to the affected skin areas, two times each day, as directed by your doctor.
- Use the smallest amount of ELIDEL Cream, 1% to help control the signs and symptoms of eczema.
- If you apply ELIDEL Cream, 1% to another person, or if you have eczema and are not treating your hands, it is important for you to wash your hands with soap and water after applying ELIDEL Cream, 1%. This should remove any cream left on your hands.
- Do not bathe, shower or swim right after applying ELIDEL Cream, 1%. This could wash off the cream.
- You can use moisturizers with ELIDEL Cream, 1%. Ask your doctor first about the products that are right for you. People with eczema can have very dry skin, so it is important to keep up good skin care practices. If you use moisturizers, apply them after ELIDEL Cream, 1%.
- Call your doctor if your symptoms get worse with ELIDEL Cream, 1% or your symptoms do not improve after 6 weeks of treatment.**
- What should I avoid while using ELIDEL Cream, 1%?**
- You should not use sun lamps, tanning beds, or get treatment with ultraviolet light therapy during treatment with ELIDEL Cream, 1%.
- Limit your time in the sun during treatment with ELIDEL Cream, 1% even when the medicine is not on your skin. If you need to be outdoors after applying ELIDEL Cream,

1%, wear loose fitting clothing that protects the treated area from the sun. Ask your doctor what other types of protection from the sun you should use. It is not known how ELIDEL Cream, 1% may affect your skin with exposure to ultraviolet light.

- Do not cover the skin being treated with bandages, dressings or wraps. You can wear normal clothing.
- ELIDEL Cream, 1% is for use on the skin only. Do not get ELIDEL Cream, 1% in your eyes, nose, mouth, vagina, or rectum (mucous membranes). If you get ELIDEL Cream, 1% in any of these areas, burning or irritation can happen. Wipe off any ELIDEL Cream, 1% from the affected area and then rinse the area well with cold water.
- Do not swallow ELIDEL Cream, 1%. If you do, call your doctor.
- Avoid using ELIDEL Cream, 1% on skin areas that have cancers or pre-cancers.

**What are the possible side effects of ELIDEL Cream, 1%?**

**ELIDEL Cream, 1% may cause serious side effects.**

**See “What is the most important information I should know about ELIDEL Cream, 1%?”**

- The most common side effect at the skin application site is burning or a feeling of warmth. These side effects are usually mild or moderate, happen during the first few days of treatment, and usually clear up in a few days.

**Other common side effects include:**

- headache
  - common cold or stuffy nose, sore throat
  - cough
  - flu (influenza)
  - fever
  - viral infection. Some people may get viral skin infections (like cold sores, chicken pox, shingles, or warts) or swollen lymph nodes (glands).
- Tell your doctor if you get a skin infection or if you have any side effect (for example, swollen glands) that bothers you or that does not go away.

These are not all the possible side effects with ELIDEL Cream, 1%. Ask your doctor or pharmacist for more information. 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 ELIDEL Cream, 1%?**

- Store ELIDEL Cream, 1% at room temperature between 68° to 77°F (20° to 25°C).
- Do not freeze ELIDEL Cream, 1%.

**Keep ELIDEL Cream, 1% and all medicines out of the reach of children.**

**General information about the safe and effective use of ELIDEL Cream, 1%**

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. Do not use ELIDEL Cream, 1% for conditions other than which it was prescribed. Do not give ELIDEL Cream, 1% to other people even if they have the same symptoms you have. It may harm them. You can ask your doctor or pharmacist for information about ELIDEL Cream, 1% that is written for health professionals. For more information, go to [www.Elidel.com](http://www.Elidel.com) or call 1-800-321-4576.

**What are the ingredients in ELIDEL Cream, 1%?**

**Active ingredient:** pimecrolimus  
**Inactive ingredients:** benzyl alcohol, cetyl alcohol, citric acid anhydrous, mono- and diglycerides, oleyl alcohol, propylene glycol, sodium cetostearyl sulphate, sodium hydroxide, stearyl alcohol, triglycerides and water

This Medication Guide has been approved by the U.S. Food and Drug Administration.

**Manufactured for:**  
Valeant Pharmaceuticals North America LLC  
Bridgewater, NJ 08807 USA

**By:**  
MEDA Manufacturing  
33700 MÉRIGNAC, France  
U.S. Patent 6,423,722

Produced under license from MEDA Pharma S.A.R.L., Luxembourg, by Valeant International Bermuda.

Elidel is a trademark of MEDA PHARMA S.A.R.L. used under license.

©Valeant Pharmaceuticals North America LLC  
Rev. 12/2017 9460401 25329.1