Acitretin Therapeutic Cheat Sheet

COMPILED BY: AZAM QURESHI, MD • **REVIEWED BY:** ADAM FRIEDMAN, MD

TRADE NAME

- Soriatane[1]

MECHANISM OF ACTION[1,2]

- Vitamin A derivative retinoic acid metabolite of etretinate
- First binds cytosolic retinoic acid-binding protein, which serves to facilitate transport to the nucleus, where subsequent binding to retinoic acid receptors (RARs) and retinoid X receptors (RXR) occurs, thereby serving to modulate nuclear transcription
- Normalizes keratinocyte differentiation in epithelium, reduces expression of proinflammatory cytokines (ex. IL-6), migration inhibitory factor-related protein-8 (MRP-8), and IFN-y, thereby exerting anti-inflammatory and anti-proliferative effects

FDA APPROVED FOR[1]

- Severe plaque-type psoriasis
- Generalized or localized pustular psoriasis

OFF-LABEL USES[3-5]

- Inflammatory dermatoses
  - Erythrodermic psoriasis
  - Nail psoriasis
  - Palmoplantar pustulosis
  - Pityriasis rubra pilaris
  - Lichen planus
  - Lichen nitidus
  - IgA pemphigus
  - Pemphigus vegetans
  - Darier's disease
  - Post-irradiation morphea
  - Granuloma annulare
  - Hyperkeratotic hand eczema
  - Acneiform eruptions secondary to EGFR inhibitors
  - Hidradenitis suppurativa
  - Erosive pustular dermatosis of scalp
- Ichthyoses and keratodermas
- Neoplastic diseases
  - Chemoprevention of non-melanoma skin cancer (NMSC) in transplant patients
  - Actinic keratosis
  - Bowen's disease
  - Langerhans cell histiocytosis
  - Porokeratosis
- Infectious conditions
  - Recalcitrant warts
  - Bowenoid papulosis
  - Buschke Lowenstein tumor
  - Blastomycosis-like pyoderma
- Connective tissue diseases
  - Lupus erythematosus
  - Lichen sclerosis
  - Graft versus host disease
- Mucosal disorders
  - Oral leukoplakia
- Genodermatoses
  - Pachyonychia congenita
  - Lipoid proteinosis
  - Acrokeratosis verruciformis
- Other
  - Elephantiasis nostras verrucosa
  - Keratosis lichenoides chronica
  - Lichen amyloidosis
  - Arsenical keratosis

DOSING[6-9]

- Psoriasis-related indications: 0.25-1mg/kg once daily with food
- Pityriasis rubra pilaris: 0.5mg/kg once daily with food
- Chemoprevention of NMSC in transplant patients: 0.2-0.4 mg/kg once daily with food
- Ichthyoses, keratodermas, other indications: variable dosing regimens have been reported, usually started at low dose and titrated upwards depending on disease response and toleration of medication
- Maximum recommended dose of 75mg daily

SIDE EFFECTS[1,3,10,11]

- Dose-dependent
- Severe birth defects in women pregnant while on medication or within 3 years of stopping medication
  - 2 negative pregnancy tests required prior to initiation of treatment
- Hepatotoxicity
- Hypertriglyceridemia, very rarely leading to pancreatitis
- Dry mouth, lips, nose, eyes, skin, pruritus
- Fragile skin
- Rhinorrhea, epistaxis
- Alopecia
- Arthralgias
- Myalgias
- Headaches
- Nausea
- Photosensitivity
- Reduced night vision
- Skeletal hyperostosis

WARNINGS[1]

- May cause increased sensitivity to ultraviolet light, which may warrant dose reduction in concurrent phototherapy treatments
- Avoid dietary supplements with vitamin A, which may exacerbate or trigger side effects of acitretin

CONTRAINDICATIONS[1]

- Women who are pregnant or desire to get pregnant within 3 years of stopping medication
- Severe renal or hepatic impairment
- Hypertriglyceridemia
- Concurrent use of methotrexate or tetracycline medications, which may increase risks of hepatitis and increased intracranial pressure, respectively
- Concurrent use of alcohol
- Previous allergy to acitretin

PREGNANCY & BREASTFEEDING[1]

- Pregnancy category X; contraindicated during pregnancy, within 3 years of pregnancy, and during breastfeeding

MONITORING[10]

- Baseline blood work, to be repeated every 3 months during treatment:
  - Fasting lipid profile, blood glucose
  - Liver function tests
  - Complete blood count
  - Serum creatinine
  - Serum pregnancy testing for women who are capable of getting pregnant (performed monthly during treatment, every 3 months for 3 years following completion of treatment