



# VisualDX

## 視覺化臨床決策系統

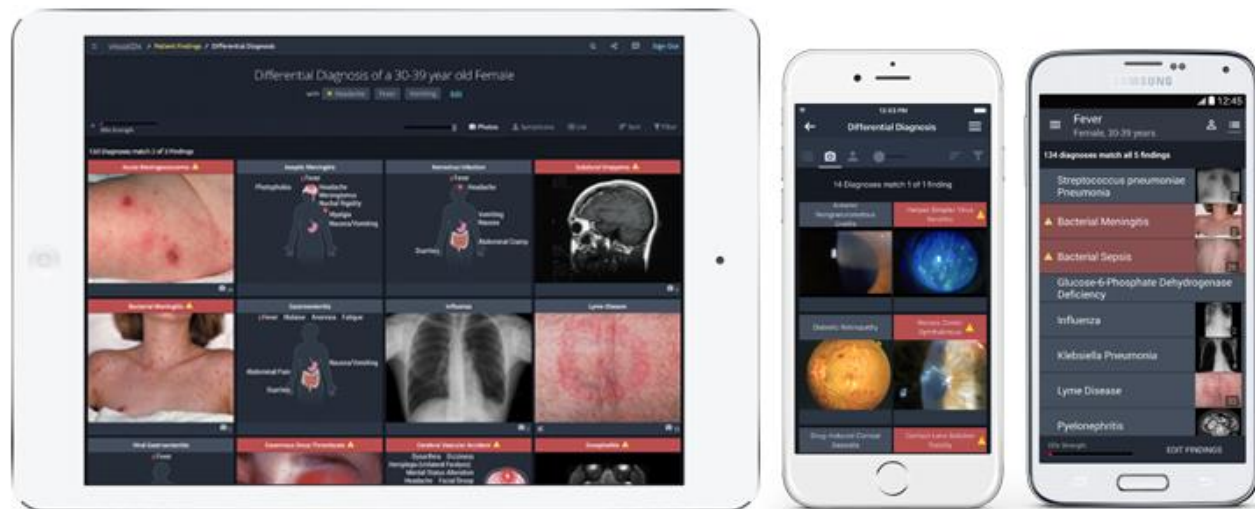
飛資得企業 李紹迪

[shaoti@flysheet.com.tw](mailto:shaoti@flysheet.com.tw)



# 關於VisualDx

- VisualDx是一個支援臨床診斷決策的線上系統，能夠有效提升診斷準確性，輔助醫療決策，加強病患安全
- 使用Visual Dx可以：
  - 獲取專業的醫學知識
  - 辨識疾病的多元性變化
  - 察覺藥物副作用徵兆
  - 增進病患衛教品質
  - 有助於快速、準確的臨床決策



# VisualDx特色

- VisualDx中所有文字內容均由醫學各領域專家撰寫，並由醫學圖書館員或醫學編輯進行評議和覆核，以確保全部資訊準確和時效性。
- 涵蓋超過2,800種疾病，提供超過 40,000張圖片，VisualDx提供詳細的疾病、症狀和醫療圖片等資訊，展示了疾病各種變異，以幫助醫護人員辨別並解決各種診療病例。

The screenshot displays the VisualDx interface for Stevens-Johnson Syndrome. On the left, a dark sidebar contains navigation links: Summary, Synopsis, Codes, Look For, Diagnostic Pearls, Differential Diagnosis & Pitfalls, Best Tests, Management Pearls, Therapy, References, and Associated Medications. Below these are 'Images & Sympticons (14)' and 'Other Resources' with links to UpToDate and PubMed. The main content area features the title 'Stevens-Johnson Syndrome' and a sub-heading 'Oral Mucosal Lesion'. A prominent red banner indicates 'POTENTIALLY LIFE-THREATENING EMERGENCY'. Below this, it lists contributors: Carl Allen DOS, MSD, Sook-Bin Woo MS, DMD, MMSc. The synopsis describes SJS as an acute, severe hypersensitivity reaction usually triggered by drugs, differentiating it from TEN based on the degree of skin involvement. It also lists implicated drugs and associated conditions. The right-hand panel, titled 'ALL IMAGES & SYMPTICONS (14)', includes a body map with markers for 'Bullae', 'Vesicles', 'Parent Appears', 'Lips', 'Eyelids', and 'Widespread', along with several clinical photographs showing oral mucosal lesions.

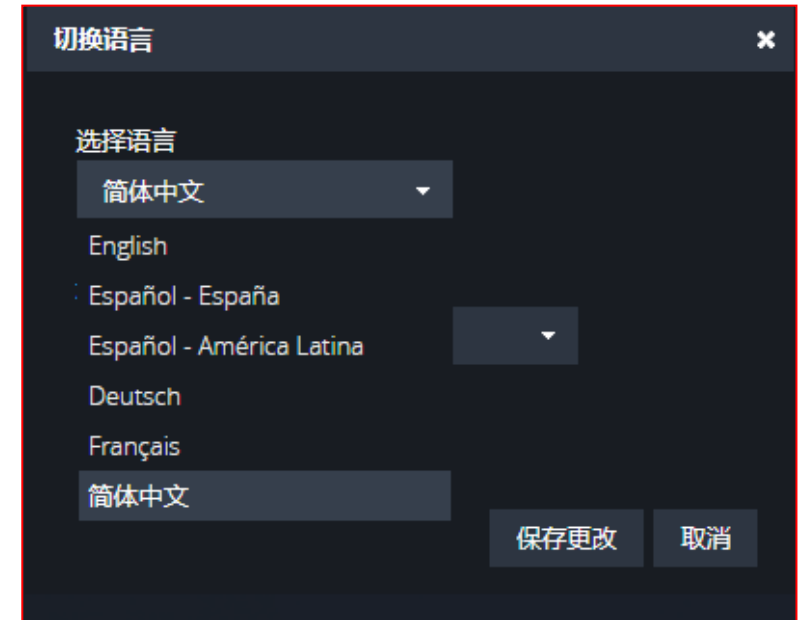


# 開始使用 VisualDx



# 自動偵測使用語文介面

- 語言設定
  - 第一次使用自動偵測系統使用語言
  - 若更改顯示語言，在未清除cookie下可保存設定
- 依語文介面不同輸入對應語文查詢
- 使用中可隨時更換顯示語言



# 病患主訴

- Vomiting 嘔吐
- Developed acutely 急性發作
- Fever 發燒
- Headache 頭疼
- Diarrhea 腹瀉
- Contaminated food exposure 被污染的食物

# 1. 輸入主要症狀或病徵

The image shows the visualDx interface for building a differential diagnosis. The main search bar is highlighted with a red box and contains the text "Enter a Symptom, Medication, or Diagnosis". Below it is a blue button labeled "Quick Start Differential Builder".

A red arrow points from the search bar to a search results panel. The search bar in this panel contains "vomit". The results are organized into two sections:

- Build a differential diagnosis**
  - vomiting
  - hematemesis (vomiting blood)
  - bilious emesis (vomiting bile)
- Diagnoses**
  - cyclic vomiting syndrome
  - drug-induced nausea or vomiting
  - hyperemesis gravidarum (excessive vomiting in pregnancy)

A green arrow points from the "Quick Start Differential Builder" button to a panel titled "Select a chief complaint to start building a custom differential". This panel lists various medical categories and symptoms:

- General Symptoms**
  - Fever
  - Arthralgia (Joint pain)
  - Headache
  - Lymphadenopathy
  - Low back pain
  - Myalgia
- Dermatology**
- ENT/Oral Medicine**
- Ophthalmology**
- Neurology/Psychiatric**
- Cardiopulmonary**
- Gastrointestinal**
- Genitourinary**

## 2. 確認病患資訊及相關檢查

visualDx. / Patient Findings Search Global Alert [Return to Ovid](#) | [Sign Out of Ovid](#)

Workup for Vomiting, Vomiting DDX STRENGTH: NONE [View this Differential](#)

Enter additional findings and/or use the workup questions below

**Appearance of patient**

- Onset of findings
- Associated symptoms
- Physical exam findings
- Laboratory findings
- Social history
- Negative findings
- Additional Findings

- Patient appears well ⓘ
- Patient appears ill
- Patient appears systemically ill - toxic
- None

**PATIENT INFO**

20-29 year old ▾ Female ▾

**FINDINGS**

● Vomiting ×

Toggle the ● to make the finding required ⓘ



# 3. 依序輸入病患相關症狀：發病時間

visualDx. / Patient Findings

DDX STRENGTH: NONE

View this Differential

Enter additional findings and/or use the workup questions below

Additional Findings

Appearance of patient

Onset of findings

- Developed acutely
- Developed chronically
- Recurring episodes or relapses
- Present at birth

Associated symptoms

Physical exam findings

Laboratory findings

Social history

Negative findings

Additional Findings

PATIENT INFO

20-29 year old

Female

FINDINGS

- Vomiting
- Developed acutely

Toggle the ● to make the finding required

# 3. 依序輸入病患相關症狀：相關症狀

visualDx. / Patient Findings DDX STRENGTH: NONE [Return to Ovid](#) | [Sign Out of Ovid](#)

## Workup for Vomiting, Vomiting

Enter additional findings and/or use the workup questions below

**Appearance of patient**

- Fever
- Headache
- Vertigo ?
- Diarrhea

**Associated symptoms**

**Physical exam findings**

**Laboratory findings**

**Social history**

**Negative findings**

**Additional Findings**

**PATIENT INFO**

20-29 year old Female

**FINDINGS**

Vomiting Fever

Headache Diarrhea

Toggle the ● to make the finding required ?

*Note: A red box highlights the 'Fever', 'Headache', and 'Diarrhea' checkboxes. A green box highlights the 'Vertigo' checkbox and the 'Spinning sensation' text input field, with an arrow pointing from the 'Vertigo' checkbox to the input field.*

# 3. 依序輸入病患相關症狀：社交歷史

visualDx. / Patient Findings

Return to Ovid | Sign Out of Ovid

Workup for Vomiting, Vomiting

DDX STRENGTH: WEAK

View this Differential

Enter additional findings and/or use the workup questions below

Additional Findings

Appearance of patient

Onset of findings

Associated symptoms

Physical exam findings

Laboratory findings

Social history

Negative findings

Additional Findings

Contaminated food exposure ▶

- Contaminated drinking water exposure
- Sewage exposure
- Animal exposure ▶
- Cigarette smoking
- Emotional stress or trauma
- Alcohol use

Contaminated food exposure

- Contaminated meat exposure
- Contaminated vegetable exposure
- Fish exposure
- Contaminated drinking water exposure
- Unpasteurized milk
- Undercooked or uncooked meat

PATIENT INFO

20-29 year old

Female

FINDINGS

- Vomiting
- Developed acutely
- Fever
- Headache
- Diarrhea
- Contaminated food exposure

Toggle the ● to make the finding required

# 4. DDX Strength 鑑別診斷強度

visualDx. / Patient Findings Search Return to Ovid | Sign Out of Ovid

Workup for Vomiting, Vomiting DDX STRENGTH: WEAK [View this Differential](#)

Enter additional findings and/or use the workup questions below

**Appearance of patient**

**Onset of findings**

**Associated symptoms**

**Physical exam findings**

**Laboratory findings**

**Social history**

**Negative findings**

> **Additional Findings**

**Enter additional findings through the search box above.**

**PATIENT INFO**

20-29 year old Female

**FINDINGS**

- Vomiting
- Developed acutely
- Fever
- Headache
- Diarrhea
- Contaminated food exposure

Toggle the  to make the finding required

# 5. 顯示診斷結果、符合病徵並可篩選瀏覽格式

visualDx / Patient Findings / Differential Diagnosis

Return to Ovid | Sign Out of Ovid

## Differential Diagnosis

DDX STRENGTH: WEAK

Vomiting, Developed acutely, Fever, Headache, Diarrhea, Contaminated food exposure, 20-29 year old Female

ADD OR REMOVE FINDINGS

18 CONSIDER 1<sup>st</sup> 66 CONSIDER 2<sup>nd</sup> 25 EMERGENCIES 65 INFECTIOUS 12 DRUG INDUCED 84 VIEW ALL

**CONSIDER 1<sup>st</sup> :** 顯示常見或重要的

**CONSIDER 2<sup>nd</sup> :** 顯示不常見或罕見的

**EMERGENCIES :** 顯示需要緊急處置的

**INFECTIOUS :** 顯示具有傳染性的

**DRUG INDUCED :** 顯示由藥物引起的

**VIEW ALL :** 查看所有符合的診斷

**PHOTOS** <

DEFAULT VIEW

PHOTOS ✓

SYMPTICONS

LIST

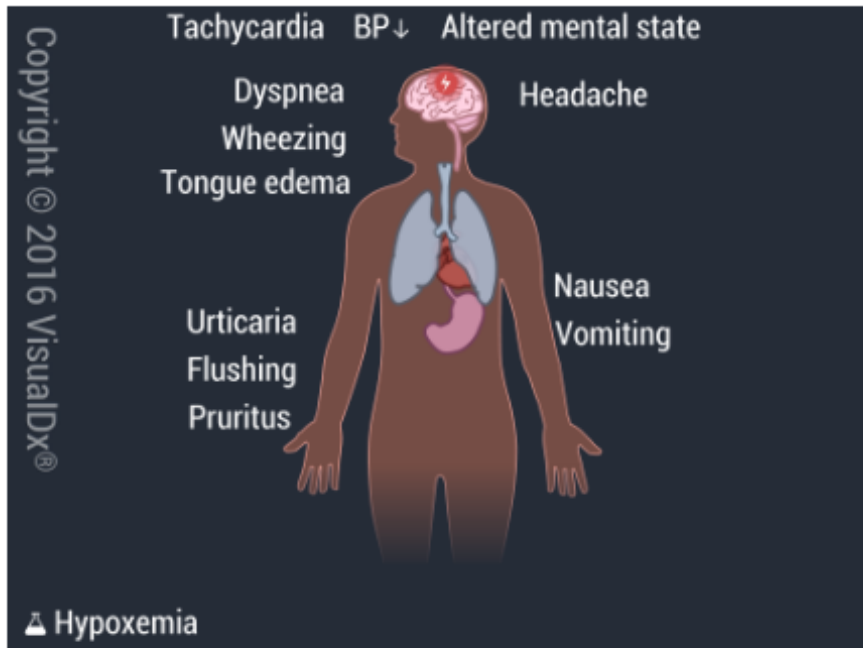
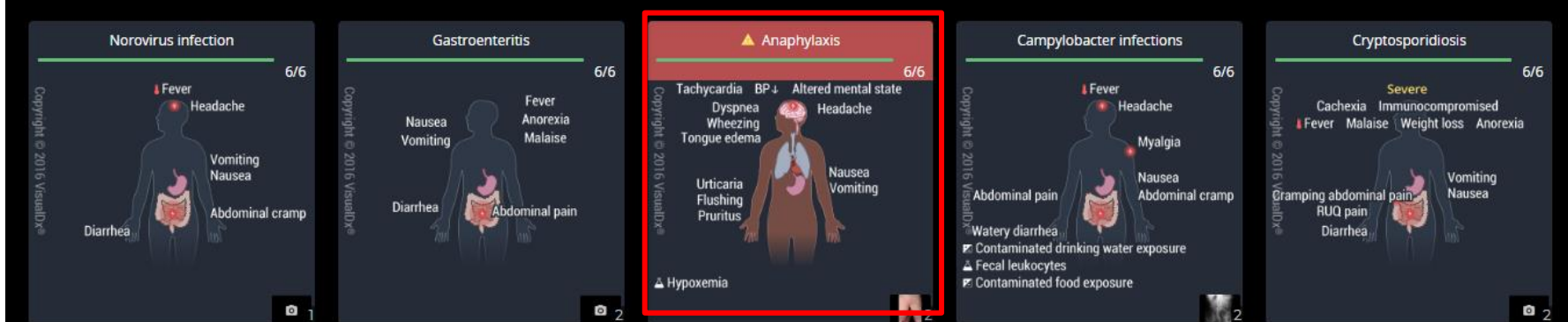
IMAGE SIZE:

MEDIUM

**Matched Findings:**

- Vomiting
- Developed acutely
- Fever
- Headache
- Diarrhea
- Contaminated food exposure

# 6. 檢視判斷



## Anaphylaxis ▲

POTENTIALLY LIFE-THREATENING EMERGENCY  
VERY COMMON - IMPORTANT

Anaphylaxis is an acute allergic reaction or hypersensitivity response that is a medical emergency. Eighty to ninety percent of cases involve sudden-onset cutaneous changes (pruritus, flushing, hives, and swelling of mouth, lips, tongue). Sudden onset of respiratory compromise or sudden drop in blood pressure with end-organ symptoms can occur and often present in a person with no prior history of severe reaction. Other findings are headache, periorbital edema, hypoxemia, dyspnea, hypotonia, tachycardia, altered mental state, wheezing, nausea, and vomiting. Anaphylactoid reactions mimic anaphylactic reactions but are not IgE mediated and occur without sensitization, as the offending trigger causes direct mast cell and basophil activation.

[More](#)

[See Full Article](#)

### Other Resources:

[UpToDate](#) [PubMed](#)

Matches 6 of 6 findings: [Edit findings](#)

Vomiting ✓

Developed acutely ✓

Fever ✓

Headache ✓

Diarrhea ✓

Contaminated food exposure ✓

[View All \(2\)](#)

# 7. 詳細的診斷及處置建議

- Contents
  - Synopsis
  - Codes
  - Look For
  - Diagnostic Pearls
  - Differential Diagnosis & Pitfalls
  - Best Tests
  - Management Pearls
  - Therapy
  - Drug Reaction Data
  - References

[View all Images \(2\)](#)

- Other Resources
  - [UpToDate](#)
  - [PubMed](#)

POTENTIALLY LIFE-THREATENING EMERGENCY ⚠

## Anaphylaxis

Print

[Images \(2\)](#)

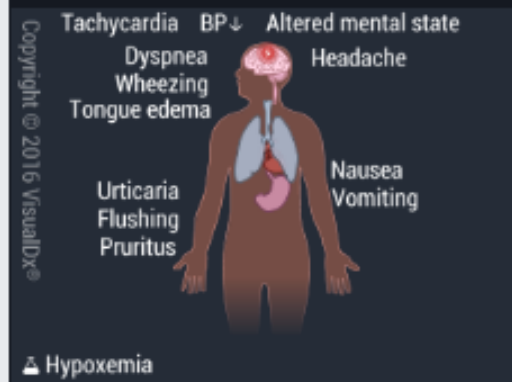
Contributors: Mary Anne Morgan MD, Paritosh Prasad MD

### Synopsis

Anaphylaxis is an acute allergic reaction or hypersensitivity response that may be fatal within minutes and is a medical emergency. Eighty to ninety percent of cases involve sudden-onset cutaneous changes (pruritus, flushing, hives, and swelling of mouth, lips, and tongue). These skin findings may present with sudden onset of respiratory compromise or sudden drop in blood pressure with end-organ symptoms, and often present in a person with no prior history of severe reaction. Gastrointestinal (GI) symptoms indicate a likely allergen exposure. Other signs and symptoms include headache, periorbital edema, hypoxemia, dyspnea, hypotonia, tachycardia, altered mental state, wheezing, nausea, and vomiting.

Foods and additives, inhalants, insect stings, and medications may be triggers. Pathogenesis involves mast cell degranulation, releasing histamine, which causes the symptoms of inflammation.

[View all Images \(2\)](#)



# 7. 詳細的診斷及處置建議：依年齡層提供

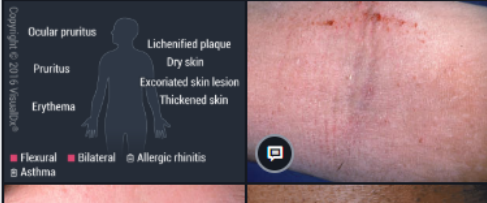
visualDx / Atopic dermatitis

**Atopic dermatitis in Adult**

See also in: [External and Internal Eye](#)

Print Patient Handout **Images (98)**

Contributors: [Azeen Sadeghian MD](#), [Whitney A. High MD, JD, MEng](#), [Susan Burgin MD](#)



Information for Patients

[View all Images \(98\)](#)

Other Resources

- [UpToDate](#)
- [PubMed](#)

### Synopsis

Atopic dermatitis (eczema) is a chronic, relapsing, pruritic condition characterized by (1) pruritus (itch); (2) facial and extensor involvement during infancy that changes to flexural involvement in late childhood; (3) a chronic relapsing course; and (4) a personal or family history of atopy (atopic dermatitis, food allergies, allergic rhinitis, and/or asthma).

Infants and children are most often affected, with 85% of cases appearing in the first year of life, and 95% of cases appearing by 5 years. Uncommonly, the condition may persist into, or even arise in, adulthood. Less than 1% of adults are affected by atopic dermatitis.

In infants, the disease involves primarily the face, scalp, torso, and extensor aspects of extremities. In children and adults, the disease usually involves chiefly the flexural aspects of extremities, but it may be more generalized. In adults, flexural skin may be clear, and disease may be focal or widespread. Follicular patterns of atopic dermatitis (ie, follicular eczema) are more common in persons with darker skin phototypes.

Atopic dermatitis may be categorized as follows:

- Acute – erythema, vesicles, bullae, weeping, crusting

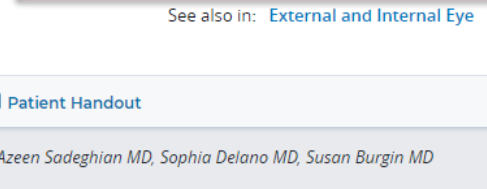
visualDx / Atopic dermatitis

**Atopic dermatitis in Infant/Neonate**

See also in: [External and Internal Eye](#)

Print Patient Handout **Images (87)**

Contributors: [Azeen Sadeghian MD](#), [Sophia Delano MD](#), [Susan Burgin MD](#)



Information for Patients

[View all Images \(87\)](#)

Other Resources

- [UpToDate](#)
- [PubMed](#)

### Synopsis

Atopic dermatitis (eczema) is a chronic, relapsing, pruritic condition characterized by (1) pruritus (itch); (2) facial and extensor involvement during infancy that changes to flexural involvement in late childhood; (3) a chronic relapsing course; and (4) a personal or family history of atopy (atopic dermatitis, food allergies, allergic rhinitis, and/or asthma).

Infants and children are most often affected, with 85% of cases appearing in the first year of life, and 95% of cases appearing by 5 years. Uncommonly, the condition may persist into, or even arise in, adulthood. Less than 1% of adults are affected by atopic dermatitis.

In infants, the disease involves primarily the face, scalp, torso, and extensor aspects of extremities. In children and adults, the disease usually involves chiefly the flexural aspects of extremities, but it may be more generalized. In adults, flexural skin may be clear, and disease may be focal or widespread. Follicular patterns of atopic dermatitis (ie, follicular eczema) are more common in persons with darker skin phototypes.


visualDx / Atopic dermatitis

**Atopic dermatitis in Infant/Neonate**

See also in: [External and Internal Eye](#)

Print Patient Handout **Images (87)**

Contributors: [Azeen Sadeghian MD](#), [Sophia Delano MD](#), [Susan Burgin MD](#)





# 8. 病患衛教：依年齡層提供



visualDx / Atopic dermatitis

Return to Ovid | Sign Out of Ovid

View all Images (98)

Print E-Mail English Images (98)

### Patient Information for Atopic dermatitis in Adult

#### Overview

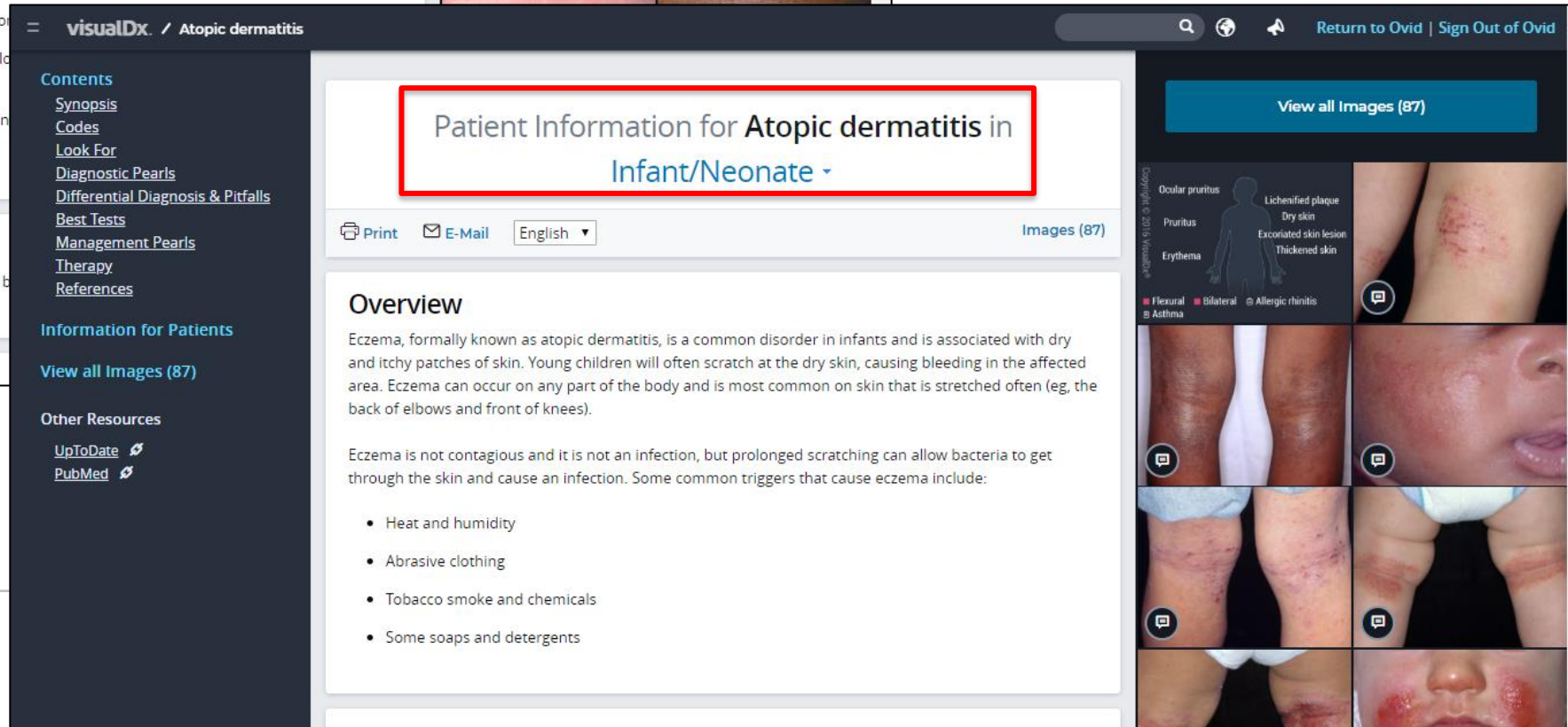
Eczema (atopic dermatitis) is a disorder associated with dry skin, which begins with intense itching that is aggravated by scratching. The exact cause of eczema is unknown, and there is no known cure.

- It is a condition primarily affecting allergy-prone individuals.
- Heat, humidity, detergents/soaps, abrasive clothing, and stress may trigger eczema.
- Scratching increases the chances of developing breaks in the skin.

Other Resources: UpToDate, PubMed

Information for Patients: View all Images (98)

Signs & Symptoms



visualDx / Atopic dermatitis

Return to Ovid | Sign Out of Ovid

View all Images (87)

Print E-Mail English Images (87)

### Patient Information for Atopic dermatitis in Infant/Neonate

#### Overview

Eczema, formally known as atopic dermatitis, is a common disorder in infants and is associated with dry and itchy patches of skin. Young children will often scratch at the dry skin, causing bleeding in the affected area. Eczema can occur on any part of the body and is most common on skin that is stretched often (eg, the back of elbows and front of knees).

Eczema is not contagious and it is not an infection, but prolonged scratching can allow bacteria to get through the skin and cause an infection. Some common triggers that cause eczema include:

- Heat and humidity
- Abrasive clothing
- Tobacco smoke and chemicals
- Some soaps and detergents

Other Resources: UpToDate, PubMed

Information for Patients: View all Images (87)

Signs & Symptoms

# 9. 其他連結

**VISUALDX**

- Start Over
- Visit VisualDx.com
- Diagnosis List**

**ABOUT VISUALDX**

- Terms of Use
- Image Contributors

**GET IN TOUCH**

- Share a Story
- Send Feedback

**HELP**

- Video Tutorials
- FAQs
- Contact Support

visualDx. Return to Ovid | Sign Out of Ovid

## Diagnosis List

# A B C D E F G H I J K L M  
N O P Q R S T U V W X Y Z

# [back to top](#)

- 11-beta-hydroxylase deficiency - Adult
- 21-hydroxylase deficiency - Adult

**A** [back to top](#)

- AA amyloidosis - Adult
- Abdominal aortic aneurysm - Adult
- Aberrant carotid artery - Adult
- Abrin poisoning - Adult
- Abscess of the newborn - Infant/Neonate
- Acalculous cholecystitis - Adult
- Acanthamoeba keratitis - External and Internal Eye
- Acanthosis nigricans - Adult

# 適用領域



**急症醫學**

Emergency Medicine



**兒科醫學**

Pediatric Medicine



**門診照護**

Ambulatory Care



**整合醫學**

Hospital Medicine



**基礎醫療**

Primary Care



**緊急照護**

Urgent Care



**病患衛教**

Patient Education



**家庭醫學**

Family Medicine



**公共衛生**

Public Health

# 每周一案例

- VisualDx Facebook
  - <https://www.facebook.com/VisualDx/>
- VisualDX Blog -- What's the Diagnosis?
  - <https://www.visualdx.com/visualdx-blog>



- A. Pellagra
- B. Hepatitis C
- C. Atopic dermatitis
- D. Hypereosinophilic syndrome

# 實例演練

- A 15-month-old infant came in on her third day of illness with a **fever**. She was coughing a little and had **diarrhea**. The **rash** was generalized confluent over her **hands, feet, groin area, and back**.
- It looked very much like hives, which can happen with just such a viral illness. So I sent her home with antihistamines and close follow up.
- The next day she came in again, this time her mom said the rash was worse and **her lips were a bit swollen**.





Search Texts for "rash"

### Build a differential diagnosis

- multiple skin lesions (rash)
- female genital (vulvar rash)
- lips (lip rash)
- morbilliform rash
- penis (penile rash)
- malar distribution (malar rash)
- limited rash pattern
- extensive rash pattern

### Diagnoses

- allergic contact dermatitis (allergic rash)
- acral erythema (hand-foot drug rash)
- phytophotodermatitis (lime rash)



### Workup for Multiple skin lesions, Multiple skin lesions

DDX STRENGTH: EXCELLENT

[View this Differential](#)

Enter additional findings and/or use the workup questions below

Additional Findings

#### Skin lesion type

Location of skin finding

Symptoms/signs

Appearance of patient

Onset of findings

Exposures

Medical history

Travel history

Negative findings

Additional Findings



Smooth Papule / Plaque



Scaly Papule / Plaque



Eschar



Erythema / Erythroderma



Purpura / Petechiae



Flat / Macular



#### PATIENT INFO

1 - 23 month old

Female

#### FINDINGS

Multiple skin lesions

Smooth papule/plaque

Hands

Foot or toes

Fever

Diarrhea

Lip edema

Toggle the ● to make the finding required



## Differential Diagnosis

Multiple skin lesions, Smooth papule/plaque, Hands, Foot or toes, Fever, Diarrhea, Lip edema, 1 - 23 month old Female

ADD OR REMOVE FINDINGS

12 CONSIDER 1<sup>st</sup>

53 CONSIDER 2<sup>nd</sup>

16 EMERGENCIES

31 INFECTIOUS

18 DRUG INDUCED

65 VIEW ALL

PHOTOS

BEST MATCH IS IN CONSIDER 2<sup>nd</sup>

Hand, foot, and mouth disease

6/7



31

Langerhans cell histiocytosis

6/7



45

Exanthematous drug eruption

5/7



35

▲ Anaphylaxis

5/7



2

Cellulitis

5/7



5

▲ Bacterial sepsis

Erythema multiforme

Leukocytoclastic vasculitis

Spider bite

Unilateral laterothoracic exanthem of c...



# Differential Diagnosis

DDX STRENGTH: EXCELLENT

Multiple skin lesions, Smooth papule/plaque, Hands, Foot or toes, Fever, Diarrhea, Lip edema, 1 - 23 month old Female

ADD OR REMOVE FINDINGS

12 CONSIDER 1<sup>st</sup>

53 CONSIDER 2<sup>nd</sup>

16 EMERGENCIES

31 INFECTIOUS

18 DRUG INDUCED

65 VIEW ALL

PHOTOS

⚠️ Kawasaki disease

7/7



📷 56

Acute graft-versus-host disease

6/7



📷 16

Hereditary angioedema

6/7



📷 4

⚠️ Disseminated candidiasis

6/7



📷 4

⚠️ Ecthyma gangrenosum

6/7



📷 5

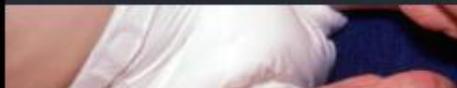
⚠️ Leptospirosis

6/7



Serum sickness

6/7



Spirillum minus rat-bite fever

6/7



Zika virus infection

6/7



⚠️ Toxic epidermal necrolysis

6/7




[View All \(56\)](#)

## Kawasaki disease ▲

**EMERGENCY: REQUIRES IMMEDIATE ATTENTION**  
UNCOMMON

A multisystem vasculitis that affects infants and children. The exact cause is unknown, although features of the disease suggest an infectious etiology that evokes an abnormal immunologic response in genetically susceptible individuals. The disease occurs primarily in children aged younger than 6 years. It is classically characterized by fever lasting at least 5 days, conjunctival injection without exudate, red lesions of the mouth or pharynx, acute hand and foot edema followed by peeling, polymorphous cutaneous eruption, and lymphadenopathy. Coronary artery aneurysms develop in 20%-25% of untreated patients. More prevalent in those of Japanese ancestry. [More](#)

[See Full Article](#)

### Other Resources:

[UpToDate](#) [PubMed](#)

Matches 7 of 7 findings: [Edit findings](#)

Multiple skin lesions ✓

Smooth papule/plaque ✓

Hands ✓

Foot or toes ✓

Fever ✓

Diarrhea ✓

Lip edema ✓

EMERGENCY: REQUIRES IMMEDIATE ATTENTION ⚠

## Kawasaki disease in Infant/Neonate ▾

See also in: [External and Internal Eye](#), [Anogenital](#), [Oral Mucosal Lesion](#)

 Print

[Images \(56\)](#)

Contributors: Tyler Werbel, Susan Burgin MD

### Synopsis

Kawasaki disease (KD), or mucocutaneous lymph node syndrome, is an idiopathic, multisystem vasculitis characterized by fever and mucocutaneous inflammation. It has a peak incidence in infants aged 9-11 months and is extremely rare in infants younger than 3 months of age. Most cases occur in individuals who live in East Asia or are of Asian ancestry. Although usually self-limited, potentially life-threatening coronary artery aneurysms may develop in 20%-25% of children without treatment (versus less than 5% with appropriate therapy). Mortality most often occurs within the first weeks to a year after KD due to ischemic heart disease caused by myointimal proliferation within persistent aneurysms. Infants younger than 6 months of age may be at increased risk for aneurysms.

The classic case definition of KD is fever lasting at least 5 days plus the presence of at least 4 of the following principal clinical criteria:

- Bilateral bulbar conjunctival injection without exudate

[View all Images \(56\)](#)



## Contents

[Synopsis](#)[Codes](#)[Look For](#)[Diagnostic Pearls](#)[Differential Diagnosis & Pitfalls](#)[Best Tests](#)[Management Pearls](#)[Therapy](#)[References](#)[View all Images \(56\)](#)

## Other Resources

[UpToDate](#)[PubMed](#)

## Look For

The classic case definition of KD should be used as a guideline to increase awareness of KD and prevent over-diagnosis. However, one should remember that (1) the principal clinical criteria are typically not all present at a single point of time; and (2) infants will often present with "incomplete" KD, in which criteria are not fulfilled but coronary artery abnormalities do develop. Therefore, all suspected cases should be diagnosed based on (1) ruling out alternative diagnoses; (2) assessment of principal clinical criteria over time; and (3) supportive clinical features and laboratory data.

Principal clinical criteria:

- **Fever:** Remittent and high spiking (greater than 39° C [102.2° F]); fever usually lasts 11 days without treatment or 2 days with appropriate therapy.
- **Extremity changes:** Erythema or firm induration of the palms and soles that may be painful is typical in the acute phase. Desquamation, usually beginning in the periungual region, occurs 2-3 weeks after disease onset.
- **Exanthem:** Within 5 days of fever onset, an erythematous, diffuse, nonspecific maculopapular eruption occurs, usually with accentuation in the perineal region. Occasionally, the rash is urticarial, scarlatiniform, erythema multiforme-like, or micropustular.
- **Bilateral conjunctival injection:** Bulbar injection usually begins shortly after fever onset, spares the limbus, and is not associated with pain, exudate, conjunctival edema, or corneal ulceration.
- **Oral mucosa changes:** Lips may be erythematous, dry, peeling, cracked, and bleeding. The tongue may be erythematous with prominent fungiform papillae ("strawberry tongue"). The oropharyngeal mucosae may be diffusely erythematous.
- **Cervical lymphadenopathy:** Nodes in the anterior cervical triangle may be unilaterally enlarged (greater than 1.5 cm). Lymph nodes are typically firm, nonfluctuant, and nontender.



# 實例演練

- A mother brought her **7-year-old** girl to her pediatrician after she noticed that several of the girl's **toenails** on each foot had white patches and appeared **short and broken**. They seemed to be **lifting** off the nail beds and looked thinner than usual.





Enter a Symptom, Medication, or Diagnosis

Quick Start Differential Builder

Select a chief complaint to start building a custom differential

General Symptoms

Multiple skin lesions (Rash)

> Dermatology

Single skin lesion

ENT/Oral Medicine

Fever and Rash

Ophthalmology

Nail lesion

Neurology/Psychiatric

Hair lesion

Cardiopulmonary

Gastrointestinal

Genitourinary



### Workup for Onycholysis - lifting nail, Onycholysis - lifting nail

DDX STRENGTH: STRONG

[View this Differential](#)

Enter additional findings and/or use the workup questions below

#### Nail lesions

Distribution

Symptoms/signs

Exposures

Onset of symptoms

Medical history

Laboratory

Medications

Negative findings

Additional Findings



Nail Bed Deformity



Nail Fold Change



Nail Shape Change



Nail Plate Deformity



Onycholysis - Lifting Nail



Nail Color Change

#### PATIENT INFO

2 - 12 year old

Female

#### FINDINGS

Onycholysis - lifting nail

Scattered nails or distal digits

Shortened broken nail

Toenails

Toggle the  to make the finding required

## Differential Diagnosis

Onycholysis - lifting nail, Scattered nails or distal digits, Shortened broken nail, Toenails, 2 - 12 year old Female

ADD OR REMOVE FINDINGS

19 CONSIDER 1<sup>st</sup>

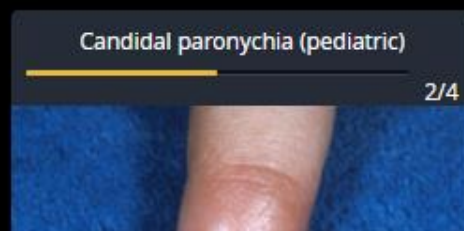
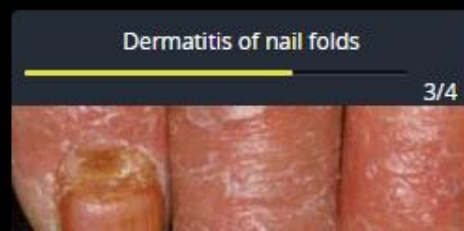
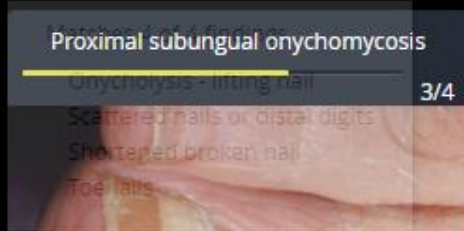
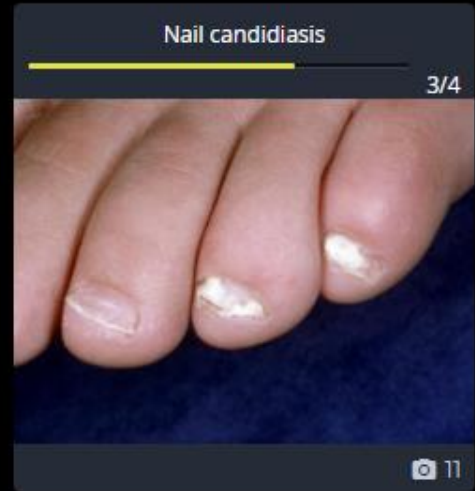
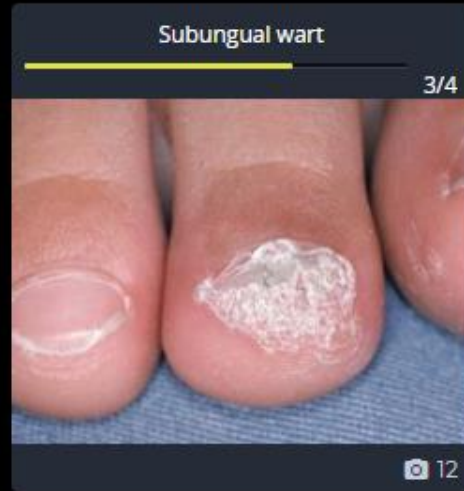
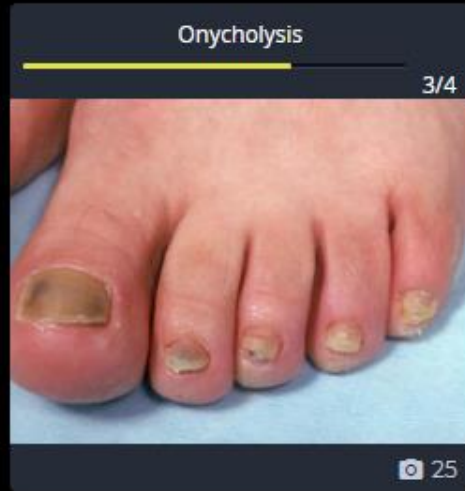
41 CONSIDER 2<sup>nd</sup>

10 INFECTIOUS

21 DRUG INDUCED

60 VIEW ALL

PHOTOS







## Onychomycosis

VERY COMMON

Infection of the nail caused by dermatophyte fungi (tinea unguium), nondermatophyte molds, or yeasts. More frequent in men and is commonly associated with concurrent tinea pedis. Fingernail infection is typically preceded by or associated with toenail infection. Distal lateral subungual onychomycosis is the most common form and begins with fungal invasion of the distal nail, mainly due to *Trichophyton rubrum*. Superficial white onychomycosis is due to fungal invasion of the superficial dorsal nail plate, typically caused by *T. rubrum* in HIV-infected patients and *Trichophyton mentagrophytes* in immunocompetent individuals. Proximal subungual onychomycosis is caused by invasion of the proximal nail fold. [More](#)

[See Full Article](#)

### Other Resources:

[UpToDate](#) [PubMed](#)

Matches 4 of 4 findings: [Edit findings](#)

Onycholysis - lifting nail ✓

Scattered nails or distal digits ✓

Shortened broken nail ✓

Toenails ✓



[View All \(21\)](#)

Contents

- [Synopsis](#)
- [Codes](#)
- [Look For](#)
- [Diagnostic Pearls](#)
- [Differential Diagnosis & Pitfalls](#)
- [Best Tests](#)
- [Management Pearls](#)
- [Therapy](#)
- [References](#)

Information for Patients

[View all Images \(21\)](#)

Other Resources

- [UpToDate](#)
- [PubMed](#)

# Onychomycosis - Nail and Distal Digit

See also in: [Overview](#)

[Print](#) [Patient Handout](#)

[Images \(21\)](#)

Contributors: Shari Lipner MD, PhD, Susan Burgin MD, Bertrand Richert MD, Robert Baran MD

## Synopsis

Onychomycosis is a fungal infection of the nail caused by dermatophyte fungi (*tinea unguium*) and, less frequently, by nondermatophyte molds or yeasts. Onychomycosis is more frequent in men and is commonly associated with concurrent [tinea pedis](#). The prevalence of onychomycosis in children varies from 0.2%-2.6% (mean 0.3%). The low prevalence in children as compared to adults is thought to be due to children's fast nail plate growth and their lower incidence of *tinea pedis* compared to adults.

Predisposing factors include diabetes mellitus, peripheral vascular disease, immunosuppression, genetic predisposition, atopic dermatitis, psoriasis, Down syndrome, occlusive footwear, trauma, and older age. It affects toenails more commonly than fingernails, and fingernail infection is typically preceded by or associated with toenail infection. Onychomycosis is classified into 7 patterns based on the route of fungal invasion into the nail unit: distal lateral subungual, proximal subungual, superficial, endonyx, mixed pattern, totally dystrophic, and secondary onychomycosis.

Distal lateral subungual onychomycosis (DLSO) is the most common form of onychomycosis and begins with fungal invasion of the distal nail (hyponychium). In Western countries, DLSO is mainly due to

[View all Images \(21\)](#)





## Contents

[Synopsis](#)[Codes](#)[Look For](#)[Diagnostic Pearls](#)[Differential Diagnosis & Pitfalls](#)[Best Tests](#)[Management Pearls](#)[Therapy](#)[References](#)

## Information for Patients

[View all Images \(21\)](#)

## Other Resources

[UpToDate](#) [PubMed](#) 

## Differential Diagnosis & Pitfalls

- Nail **psoriasis** – Multiple large, coarse, and deep pits randomly scattered on the nail plate; onycholysis (detachment of the nail plate from the nail bed) surrounded by an erythematous border; yellowish or salmon pink patches on the nail bed; subungual hyperkeratosis; and splinter hemorrhages.
- Trauma – Yellowing and thickening of the nail plate.
- **Subungual wart** – Thickening of the nail plate with subungual debris.
- **Lichen planus** – Thinning or ridging of the nail plate, dystrophic nail changes, and pterygium.
- **Twenty-nail dystrophy**, or trachyonychia – Characterized by rough nail surface with marked longitudinal striations resulting in splitting.
- **Pachyonychia congenita** – Marked subungual hyperkeratosis with accumulation of hard keratinous material resulting in uplifting of the nail plate.
- **Amelanotic melanoma / subungual melanoma**
- **Squamous cell carcinoma**

In children, also consider:

- **Subungual exostoses**
- **Paronychia** secondary to finger sucking or **nail biting**

# 實例演練

- A **33-year-old** woman went to her doctor after she developed multiple **blanching patches** on her **lower legs** over the course of 2 weeks. The lesions were **round** and tender. She had also been fighting a **fever** and **fatigue** over the same period. Her only current prescription was for **oral contraceptives**.



# Differential Diagnosis

Blanching patch, Multiple skin lesions, Lower leg, Round configuration, Fever, Fatigue, Oral contraceptives, Tender skin lesion, 30-39 year old Female

ADD OR REMOVE FINDINGS

35 CONSIDER 1<sup>st</sup>

51 CONSIDER 2<sup>nd</sup>

9 EMERGENCIES

20 INFECTIOUS

31 DRUG INDUCED

86 VIEW ALL

PHOTOS

Erythema nodosum 8/8



🔒 14 📷 53

Panniculitis 7/8



🔒 1 📷 40

Cutaneous breast cancer 6/8



🔒 3 📷 8

Cellulitis 6/8




📷 69

⚠️ Deep vein thrombosis 6/8



🔒 7 📷 8

Erythema multiforme 6/8



📷 69

Erysipelas 6/8




📷 69

Lyme disease 6/8



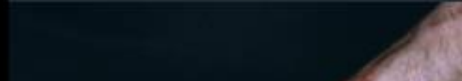
📷 69

⚠️ Necrotizing fasciitis 6/8



📷 69

Drug-induced lupus erythematosus 5/8



📷 69

Contents

- [Synopsis](#)
- [Codes](#)
- [Look For](#)
- [Diagnostic Pearls](#)
- [Differential Diagnosis & Pitfalls](#)
- [Best Tests](#)
- [Management Pearls](#)
- [Therapy](#)
- [Drug Reaction Data](#)
- [References](#)

Information for Patients

[View all Images \(53\)](#)

Other Resources

- [UpToDate](#)
- [PubMed](#)

# Erythema nodosum in Adult

[Print](#) [Patient Handout](#)

[Images \(53\)](#)

Contributors: Andrew Walls MD, Susan Burgin MD, Lowell A. Goldsmith MD, MPH

## Synopsis

Erythema nodosum (EN) represents the most common type of inflammatory panniculitis (inflammation of the fat). It is an inflammatory process, typically symmetrical, and located on the pretibial region. It represents a form of hypersensitivity reaction precipitated by infection, pregnancy, medications, connective tissue disease, or malignancy. Streptococcal infections are the most common etiologic factor in children. Sarcoidosis, inflammatory bowel disease, and medications (particularly oral contraceptive pills) are more commonly implicated in adults. Often a cause or trigger is never found.

Associated bacterial, viral, fungal, and protozoal infections are numerous and include *Streptococcus*, *Shigella*, *Yersinia*, *Histoplasma*, *Coccidioides*, human immunodeficiency virus (HIV), and *Giardia*. Tuberculosis remains an important cause in areas of endemic disease. Autoinflammatory associations include sarcoidosis, inflammatory bowel disease, Sjögren syndrome, reactive arthritis, Behçet syndrome, and Sweet syndrome. Malignancy, such as lymphoma, is a rare cause of EN.

The eruption typically persists for 3-6 weeks and spontaneously regresses without scarring or atrophy. Recurrences are sometimes seen, especially with reoccurrence of the precipitating factors.

Arthralgias are reported by a majority of patients, regardless of the etiology of EN. Upper respiratory tract

[View all Images \(53\)](#)



Contents

- [Synopsis](#)
- [Codes](#)
- [Look For](#)
- [Diagnostic Pearls](#)
- [Differential Diagnosis & Pitfalls](#)
- [Best Tests](#)
- [Management Pearls](#)
- [Therapy](#)
- [Drug Reaction Data](#)
- [References](#)

Information for Patients

[View all Images \(53\)](#)

Other Resources

- [UpToDate](#)
- [PubMed](#)


## Drug Reaction Data

Below is a list of drugs with literature evidence indicating an adverse association with this diagnosis. The list is continually updated through ongoing research and new medication approvals. Click on Citations to sort by number of citations or click on Medication to sort the medications alphabetically.

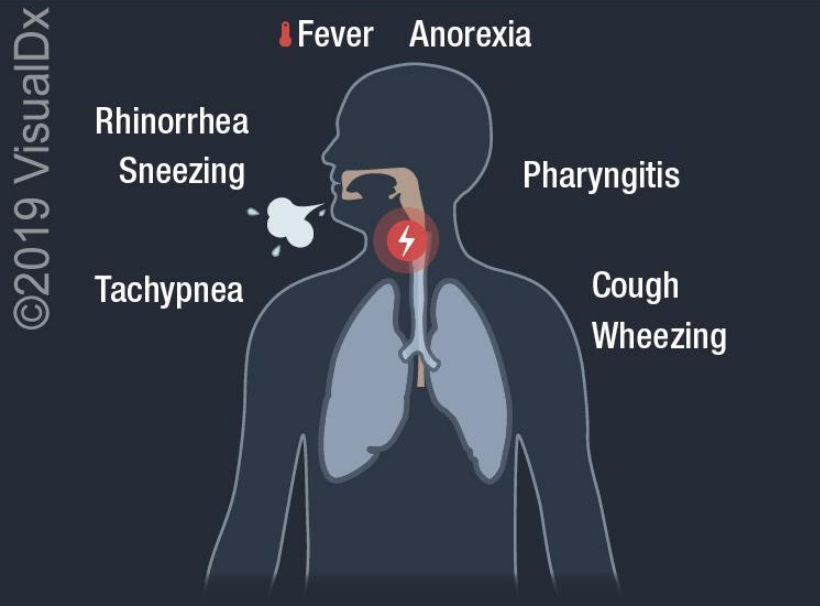
Medication ▾	Citations
abatacept	<a href="#">1</a>
acyclovir	<a href="#">1</a>
all-trans-retinoic acid (ATRA)	<a href="#">2</a>
amiodarone	<a href="#">1</a>
androgen	<a href="#">1</a>
Antiarrhythmic	<a href="#">1</a>
Anticonvulsant	<a href="#">3</a>
Antimetabolite	<a href="#">2</a>
Antimycobacterial	<a href="#">1</a>
Antiprotozoal	<a href="#">1</a>
Antiviral	<a href="#">1</a>
Aromatase inhibitor	<a href="#">1</a>
azacitidine	<a href="#">1</a>
.	-

# 實例演練

- Parents brought their **5-month-old** to his pediatrician after the **productive cough** he had had for **a few days** got significantly worse and he registered a **fever**. They could hear him wheezing, and he was **irritable** and **feeding poorly**. Normally, he was a very playful, active baby at home and day care, but now he just wanted to be held constantly by his parents. The doctor could hear **crackles** when listening to his breathing.

 **visualDx**. What's the diagnosis?

©2019 VisualDx



Fever Anorexia

Rhinorrhea Sneezing

Tachypnea

Pharyngitis

Cough Wheezing

A. Viral pneumonia  
B. RSV infection  
C. Common cold  
D. Influenza





## Workup for Productive cough, Productive cough

DDX STRENGTH: EXCELLENT

[View this Differential](#)

Enter additional findings and/or use the workup questions below

Additional Findings

### Type of cough

### Onset of findings

### Appearance of patient

### Associated symptoms

### Patient history

### > Lung exam findings

### Chest radiology findings

### Chest radiology distribution

### Laboratory

### Exposures

### Negative findings

### Travel history

Bronchophony ⓘ

Crackles

Decreased breath sounds

Dullness to percussion

Egophony

Pleural rub

Rhonchi ⓘ

Stridor ⓘ

Wheezing

### PATIENT INFO

1 - 23 month old ▾

Male ▾

### FINDINGS

Productive cough ×

Developed acutely ×

Fever ×

Crackles ×

Poor feeding ×

Irritability ×

Toggle the  to make the finding required ⓘ



# Differential Diagnosis

Productive cough, Developed acutely, Fever, Crackles, Poor feeding, Irritability, 1 - 23 month old Male

ADD OR REMOVE FINDINGS

17 CONSIDER 1<sup>st</sup>

44 CONSIDER 2<sup>nd</sup>

19 EMERGENCIES

42 INFECTIOUS

15 DRUG INDUCED

61 VIEW ALL

PHOTOS

**Respiratory syncytial virus infection** 6/6

↓ Fever Anorexia  
Rhinorrhea Sneezing Pharyngitis  
Tachypnea Cough Wheezing

Copyright © 2016 VisualDx®

**Common cold** 5/6

Fever Irritability  
Difficulty sleeping Nasal congestion Sneezing Cough  
Poor feeding Rhinorrhea

Copyright © 2016 VisualDx®

**Bronchiolitis** 5/6

Infant/Child  
Rhinorrhea Nasal congestion Cough Apnea  
Retractions Wheezing Crackles  
Cyanosis

Tachycardia Low-grade fever

Copyright © 2016 VisualDx®

**Influenza** 5/6

Young child  
Chills Fever  
Pharyngitis Nasal congestion Cough Myalgia

Copyright © 2016 VisualDx®

**Viral pneumonia** 5/6

Child  
Nasal congestion Rhinorrhea  
Cough  
Dyspnea Wheezing

Copyright © 2016 VisualDx®

**Streptococcus pneumoniae pneumonia** 4/6

↓ Fever Chills Fatigue  
Pleuritic chest pain Dyspnea Productive cough

Copyright © 2016 VisualDx®

**Adenovirus infection** 4/6

↓ Fever  
Conjunctival injection Pharyngitis  
Cough Myalgia Pneumonia

Copyright © 2016 VisualDx®

**Human metapneumovirus infection** 4/6

Infant  
Fever Failure to thrive  
Hoarseness Dyspnea Wheezing

Copyright © 2016 VisualDx®

**Parainfluenza virus infection** 4/6

Child  
Rhinorrhea Fever  
Barking cough Hoarseness  
Dyspnea Pharyngitis

Copyright © 2016 VisualDx®

**Infant pertussis** 4/6

Paroxysmal Stage  
Diaphoresis  
Paroxysmal cough Vomiting Inspiratory whoop

Copyright © 2016 VisualDx®



## Contents

- [Synopsis](#)
- [Codes](#)
- [Look For](#)
- [Diagnostic Pearls](#)
- [Differential Diagnosis & Pitfalls](#)
- [Best Tests](#)
- [Management Pearls](#)
- [Therapy](#)
- [References](#)

[View all Images \(3\)](#)

## Other Resources

- [UpToDate](#)
- [PubMed](#)

## Best Tests

Diagnostic tests involve detection of RSV antigen by rapid RSV antigen assays, positive RSV culture, or PCR-based assays. These are done on respiratory secretions, which may be a nasal wash, a naso-pharyngeal swab, or a throat swab in healthy children. In patients who are intubated or undergoing bronchoscopy, these tests can be done on the bronchoalveolar lavage fluid or a tracheal aspirate. In immunocompromised patients, lower respiratory tract secretions have a higher rate of positivity than nasal secretions.

RSV specific reverse transcription (RT)-PCR is more sensitive than rapid antigen or viral respiratory culture in the diagnosis and monitoring of RSV infection in adults with hematologic disease. However, neither a negative culture nor a negative rapid antigen test eliminates the diagnosis of RSV. Being highly contagious, RSV can cause nosocomial infections. Hence, infection control measures emphasize rapid diagnosis, hand washing, and gloves. Contact precautions, including surgical mask and eye protection, are recommended if there is concern for exposure to aerosols of infectious respiratory secretions.

## Management Pearls

Prevention is the goal, but no effective RSV vaccine is currently available. RSV may be spread by close contact and direct inoculation of large droplets from the secretions of an infected person, as well as indirectly through contact with hands or fomites previously exposed to infectious secretions.

In the home setting, general precautions may be useful against the spread of infectious secretions present on hands and fomites. These include good hand hygiene, use of hand-rub antiseptic products, and proper handling of objects contaminated with secretions.

RSV poses a particular threat for nosocomial transmission. Yearly outbreaks occur among both children and adults, including medical personnel. Lack of durable immunity to RSV results in a susceptible patient population of all ages.

# 實例演練

- A 13-year-old went to the pediatrician after she developed **scaling** and **fissures** on her **lips**. No matter what product she used to try to soothe the skin, the condition persisted. She noticed that it began **a month after** she had started using a **retinoid** cream prescribed for her acne.



# Differential Diagnosis

Retinoid, Reaction 1 month to 1 year after drug, Lip scaling, 13 - 19 year old Female

ADD OR REMOVE FINDINGS

36 CONSIDER 1<sup>st</sup>

38 CONSIDER 2<sup>nd</sup>

8 EMERGENCIES

4 INFECTIOUS

73 DRUG INDUCED

74 VIEW ALL

PHOTOS

Cheilitis 3/3



🔒 32 📷 4

Lobular capillary hemangioma 2/3



🔒 10 📷 37

Drug-induced diarrhea 2/3



Copyright © 2016 VisualDx®

🔒 7 📷 1

Drug-induced abdominal pain 2/3



Copyright © 2016 VisualDx®


🔒 4 📷 1

Acne vulgaris 2/3



🔒 2 📷 50

Achilles tendonitis 2/3




Foot pain


Folliculitis 2/3




Hordeolum and chalazion 2/3



Ingrown toenail 2/3



Nummular dermatitis 2/3



Contents

- [Synopsis](#)
- [Codes](#)
- [Look For](#)
- [Diagnostic Pearls](#)
- [Differential Diagnosis & Pitfalls](#)
- [Best Tests](#)
- [Management Pearls](#)
- [Therapy](#)
- [Drug Reaction Data](#)
- [References](#)

Information for Patients

[View all Images \(4\)](#)

Other Resources

- [UpToDate](#)
- [PubMed](#)

# Cheilitis in Child ▾

See also in: [Oral Mucosal Lesion](#)



Print



Patient Handout

[Images \(4\)](#)

Contributors: Carl Allen DDS, MSD, Sook-Bin Woo MS, DMD, MMSc

## Synopsis

Lips of patients with cheilitis appear dry and scaly and may have one or more fissures. Often the lips are painful, and there may or may not be associated edema and erythema.

Cheilitis is one of the more challenging oral problems to diagnose and treat. Many cases represent a factitious disorder related to lip-licking habits, and it can be difficult to convince patients that the vermilion zone of the lip should be dry (the "wet line" is the demarcation between the labial mucosa and vermilion zone).

Some cases of cheilitis are related to contact hypersensitivity reactions to compounds found in products that commonly come into contact with the vermilion zone of the lip, including cosmetics, lip balms, toothpastes, and sunscreens (oxybenzone [benzophenone-3]).


Other cases of cheilitis are due to candidal infection related to chronic lip-licking or to the use of petrolatum-based materials that are applied to the lips. The petrolatum seals in moisture, allowing the


[View all Images \(4\)](#)



# 實例演練

- A 43-year-old woman went to her primary care doctor after noticing that the skin on her hands had become taut and shiny and looked swollen. She complained of joint stiffness in both hands. Additionally, she had noticed some hypopigmented patches on her back, giving her skin a salt-and-pepper appearance. Other than fatigue and some muscle weakness, she hadn't noticed any other general symptoms.

 **visualDx**. What's the diagnosis?



© 2019 VisualDx

A. Rheumatoid arthritis      C. Polymyalgia rheumatica  
B. Scleroderma              D. Morphea



## Differential Diagnosis

Multiple skin lesions, Joint stiffness, Hypopigmented patch, Muscle weakness, Hand edema, 40-49 year old Female

ADD OR REMOVE FINDINGS

27 CONSIDER 1<sup>st</sup>

90 CONSIDER 2<sup>nd</sup>

12 EMERGENCIES

30 INFECTIOUS

38 DRUG INDUCED

117 VIEW ALL

PHOTOS

BEST MATCH IS IN CONSIDER 2<sup>nd</sup>

Sarcoidosis

3/5



220

Morphea

3/5



92

Osteomyelitis

3/5



3

Herpetic whitlow

2/5



37

Pityriasis alba

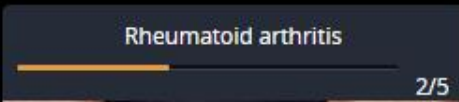
2/5



13

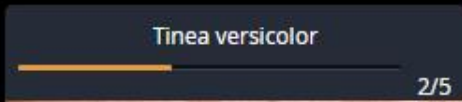
Rheumatoid arthritis

2/5



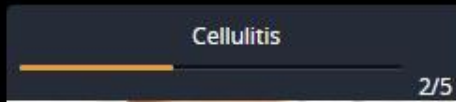
Tinea versicolor

2/5



Cellulitis

2/5



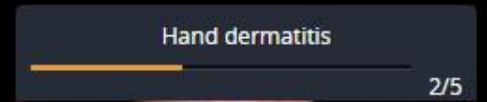
Futcher lines

2/5



Hand dermatitis

2/5







# Differential Diagnosis

DDX STRENGTH: EXCELLENT

Multiple skin lesions, Joint stiffness, Hypopigmented patch, Muscle weakness, Hand edema, 40-49 year old Female

ADD OR REMOVE FINDINGS

27 CONSIDER 1<sup>st</sup>

90 CONSIDER 2<sup>nd</sup>

12 EMERGENCIES

30 INFECTIOUS

38 DRUG INDUCED

117 VIEW ALL


PHOTOS

Scleroderma 5/5




133

Chronic graft-versus-host disease 4/5



36

Sclerodermatomyositis 4/5



17

Leprosy 3/5



63

Polymyalgia rheumatica 3/5



3


Drug-induced sclerodermoid reactions 3/5

Acrosclerosis




Copyright © 2018

Eosinophilic fasciitis 3/5




PAPA syndrome 3/5

Arthritis may precede skin involvement  
Severe acne Acne scars




Copyright © 2018

Trichinellosis 3/5



Type 1 lepra reaction 3/5



# Differential Diagnosis

DDX STRENGTH: EXCELLENT

Multiple skin lesions, Joint stiffness, Hypopigmented patch, Muscle weakness, Hand edema, 40-49 year old Female

ADD OR REMOVE FINDINGS

27 CONSIDER 1<sup>st</sup>

90 CONSIDER 2<sup>nd</sup>

12 EMERGENCIES


30 INFECTIOUS

38 DRUG INDUCED

117 VIEW ALL


PHOTOS

Scleroderma 5/5



133

Chronic graft-versus-host disease 4/5



36

Sclerodermatomyositis 4/5



17

Leprosy 3/5



63


Polymyalgia rheumatica 3/5



3


Drug-induced sclerodermoid reactions 3/5

Acrosclerosis




Copyright © 2021

Eosinophilic fasciitis 3/5




PAPA syndrome 3/5

Arthritis may precede skin involvement  
Severe acne Acne scars




Copyright © 2021

Trichinellosis 3/5



Type 1 lepra reaction 3/5





# Thank You

如需更多詳細內容

請洽飛資得醫學資訊 (02)2658-1258

