Uveitis

1) The uveitis is profiled
2) The profiled case is meshed
3) A differential diagnosis list is generated
4) Studies are obtained to identify the etiology
5) Treatment appropriate for the etiology is initiated

Rubella

When talking about the manifestations of rubella, this distinction must be considered first:
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Uveitis

1. The uveitis is profiled
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Acquired

Congenital

When talking about the manifestations of rubella, this distinction must be considered first:

Let’s talk about congenital rubella
Uveitis: **Rubella**  

**Congenital Rubella Syndrome**

*What are the ocular manifestations of congenital rubella syndrome (CRS)?*  

- Three ‘Cs’  
- Three ‘Es’
What are the ocular manifestations of congenital rubella syndrome (CRS)?

-- Chorioretinitis
-- Cataracts
-- Cloudy cornea
-- Eye is small (microphthalmia)
-- Esotropia
-- Elevated IOP (glaucoma)

Three ‘Cs’
Three ‘Es’
Uveitis: Rubella

Congenital Rubella Syndrome

What are the ocular manifestations of congenital rubella syndrome (CRS)?

- Chorioretinitis
- Cataracts
- Cloudy cornea
- Eye is small (microphthalmia)
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What sort of cataract is associated with congenital rubella (ie, nuclear, PSC, polar, suture, etc)?

Nuclear

What two words are often used to describe the NSCs associated with congenital rubella?

'Pearly white'
Uveitis: *Rubella*

**Congenital Rubella Syndrome**

- Chorioretinitis
- Cataracts
  - Cloudy cornea
  - Eye is small (microphthalmia)
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What are the ocular manifestations of congenital rubella syndrome (CRS)?

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Nuclear
Uveitis: **Rubella**

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Congenital rubella: Cataracts
Uveitis: **Rubella**

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Congenital rubella: Cloudy corneas
Uveitis: **Rubella**

**Congenital Rubella Syndrome**

What are the ocular manifestations of congenital rubella syndrome (CRS)?

-- Chorioretinitis?
-- Cataracts?
-- Cloudy cornea?
-- Eye is small (microphthalmia)?
-- Esotropia?
-- Elevated IOP (glaucoma)?

**Which ocular manifestation is most common?**

The chorioretinitis; it is found in up to half of CRS pts.

**Is it unilateral, or bilateral?**

It can present either way.

**What term is used to describe the classic appearance of CRS chorioretinitis?**

'Salt-and-pepper retinopathy,' although the appearance varies widely--from stippling, to RP-like.

A CRS pt with all the classic ocular findings has poor vision. **Is it attributable to the chorioretinitis?**

No--the chorioretinal changes generally are not visually significant. Cataract and/or microphthalmos are the more likely culprits.
Uveitis: **Rubella**

**Congenital Rubella Syndrome**

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Uveitis: *Rubella*

Congenital rubella retinopathy
**Uveitis: Rubella**

**Congenital Rubella Syndrome**

What are the ocular manifestations of congenital rubella syndrome (CRS)?

- **Chorioretinitis**!
- Cataracts
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What are the common nonocular manifestations of CRS?
--
--
--
Uveitis: **Rubella**

**Congenital Rubella Syndrome**

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--Chorioretinitis
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---

*Three ‘Cs’*

---

*What are the common nonocular manifestations of CRS?*

--Cardiac malformations
--Deafness
--Mental retardation
Uveitis: **Rubella**

**Congenital Rubella Syndrome**

What are the ocular manifestations of congenital rubella syndrome (CRS)?
-- Chorioretinitis
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What are the common nonocular manifestations of CRS?
-- Cardiac malformations?
-- Deafness?
-- Mental retardation?

Which nonocular manifestation is most common?

Three 'Cs'

Three 'Es'
Uveitis: **Rubella**

**Congenital Rubella Syndrome**

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What are the common nonocular manifestations of CRS?
- Cardiac malformations
- **Deafness!**
- Mental retardation

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*Which nonocular manifestation is most common?*

**Deafness**
Uveitis: **Rubella**

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**Congenital Rubella Syndrome**

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--Deafness
--Mental retardation

What is the well-known acronym for the DDx of a set of intrauterine infectious agents (including rubella) that present with a similar constellation of congenital anomalies?

**TORCHES**

What does **TORCHES** stand for (besides the **R** for rubella, duh)?

**T**uberculosis
**O**sler disease
**R**ubella
**C**iliates
**H**epatitis
**E**ntamoeba histolytica
**S**yphilis
Uveitis: Rubella

Congenital Rubella Syndrome

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--Chorioretinitis
--Cataracts
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TORCHES
Uveitis: **Rubella**

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T
O
R
C
H
E
S
Uveitis: **Rubella**

**Congenital Rubella Syndrome**

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- Deafness
- Mental retardation

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**What is the well-known acronym for the DDx of a set of intrauterine infectious agents (including rubella) that present with a similar constellation of congenital anomalies?**

**TORCHES**

**What does TORCHES stand for (besides the R for rubella, duh)?**

- Toxoplasmosis
- Other agents
- Rubella
- CMV
- Herpesviruses, including
- EBV
- Syphilis
1) The uveitis is profiled
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Uveitis

- Anterior
- Intermediate
- Posterior

Acquired Rubella
Uveitis: **Rubella**

**Acquired Rubella: Overview**

What is the layman’s term for the common form of acquired rubella?
Uveitis: **Rubella**

**Acquired Rubella: Overview**

*What is the layman’s term for the common form of acquired rubella?*

German measles
Uveitis: **Rubella**

**Acquired Rubella: Overview**

*What is the layman’s term for the common form of acquired rubella?*
German measles

*How does German measles present?*
--
--
Uveitis: **Rubella**

Acquired Rubella: Overview

*What is the layman’s term for the common form of acquired rubella?*
German measles

*How does German measles present?*
--A prodromal phase of fatigue and fever, followed shortly by…
--
What is the layman’s term for the common form of acquired rubella?
German measles

How does German measles present?
--A prodromal phase of fatigue and fever, followed shortly by…
--The appearance of the measles rash--first on the face, then spreading to involve the entire body
Uveitis: **Rubella**

Acquired rubella (German measles): Rash
**Uveitis: Rubella**

**Acquired Rubella: Overview**

*What is the layman’s term for the common form of acquired rubella?*
German measles

*How does German measles present?*
--A prodromal phase of fatigue and fever, followed shortly by…
--The appearance of the measles rash--first on the face, then spreading to involve the entire body

*What is the most common ocular manifestation of German measles?*
Uveitis: **Rubella**

Acquired Rubella: Overview

*What is the layman’s term for the common form of acquired rubella?*

German measles

*How does German measles present?*

--A prodromal phase of fatigue and fever, followed shortly by…
--The appearance of the measles rash--first on the face, then spreading to involve the entire body

*What is the most common ocular manifestation of German measles?*

Conjunctivitis
Uveitis

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Uveitis: Anterior

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Uveitis: **Anterior**

- Granulomatous
- Nongranulomatous

Basic division used by the Uveitis book

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Uveitis: **Anterior**

**Granulomatus**

**Nongranulomatus**

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Basic division used by the *Uveitis* book
Uveitis: Anterior

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- Granulomatous
- Nongranulomatous

  - Acute
  - Chronic

Basic division used by the *Uveitis* book
Uveitis: **Anterior**

- Granulomatous
- Nongranulomatous
  - Acute
  - Chronic

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Uveitis: **Anterior**

- **Granulomatous**
- **Nongranulomatous**
  - **Acute**
    - Unilateral
    - Etc.
  - **Chronic**
    - Bilateral

1) The uveitis is profiled
2) The profiled case is meshed
3) A differential diagnosis list is generated
4) Studies are obtained to identify the etiology
5) Treatment appropriate for the etiology is initiated
Chronic rubella infection has been implicated (not proven) as the cause of which of these uveitides?
Chronic rubella infection has been implicated (not proven) as the cause of which of these uveitides?
Fuchs heterochromic iridocyclitis
1) The uveitis is profiled
2) The profiled case is meshed
3) A differential diagnosis list is generated
4) Studies are obtained to identify the etiology
5) Treatment appropriate for the etiology is initiated

Acquired rubella is **not** known to present as an **intermediate uveitis**.
There are reports of acquired rubella causing a posterior uveitis (specifically, a multifocal chorioretinitis with serous RD) in adults. However, as this entity is not common (it isn’t mentioned in the BCSC Retina book), we will not dwell on it here.
Uveitis

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2) The profiled case is meshed
3) A differential diagnosis list is generated
4) Studies are obtained to identify the etiology
5) Treatment appropriate for the etiology is initiated

Acquired Rubella

Acquired rubella is **not** known to present as a *panuveitis*.
Uveitis: **Rubella**

Rubella: Diagnosis

How is CRS diagnosed?

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Uveitis: Rubella

Rubella: Diagnosis

How is CRS diagnosed?
By the constellation of findings coupled with a history of maternal exposure

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Uveitis: **Rubella**

**Rubella: Diagnosis**

*How is CRS diagnosed?*
By the constellation of findings coupled with a history of maternal exposure

*Are serologic tests useful in diagnosing rubella?*
How is CRS diagnosed?
By the constellation of findings coupled with a history of maternal exposure

Are serologic tests useful in diagnosing rubella?
Yes—Immunoglobulin studies, specifically IgG and IgM
Uveitis: **Rubella**

**Rubella: Diagnosis**

*How is CRS diagnosed?*
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Yes--Immunoglobulin studies, specifically IgG and IgM

**Rubella: Treatment**

*What is the preferred antiviral treatment for rubella?*
Rubella: Diagnosis

How is CRS diagnosed?
By the constellation of findings coupled with a history of maternal exposure

Are serologic tests useful in diagnosing rubella?
Yes--Immunoglobulin studies, specifically IgG and IgM

Rubella: Treatment

What is the preferred antiviral treatment for rubella?
There is none
There is a sound-alike viral condition that can affect the eye in manners similar to rubella. What is it?
Uveitis

There is a sound-alike viral condition that can affect the eye in manners similar to rubella. What is it?

Rubeola
Uveitis

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There is a sound-alike viral condition that can affect the eye in manners similar to rubella. What is it?

What is the common name for rubeola?

Rubeola
Uveitis

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There is a sound-alike viral condition that can affect the eye in manners similar to rubella. What is it?

What is the common name for rubeola?
Measles (not German measles--remember, that’s acquired rubella!)

Rubeola
Uveitis

When talking about the manifestations of rubeola, this distinction must be considered first:

Rubeola
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Let’s talk about congenital rubeola
Uveitis: **Rubeola**

**Congenital Measles**

What are the ocular manifestations of congenital measles?
Uveitis: **Rubeola**

**Congenital Measles**

*What are the ocular manifestations of congenital measles?*

- Bilateral widespread pigmentary retinopathy
- Cataracts
- Optic nerve head drusen
Uveitis: \textit{Rubeola}

\textbf{Congenital Measles}

\textit{What are the ocular manifestations of congenital measles?}
--Bilateral widespread pigmentary retinopathy
--Cataracts
--Optic nerve head drusen

\textit{Should it be considered as one of the Other Agents in the TORCHES differential?}
Uveitis: **Rubeola**

### Congenital Measles

*What are the ocular manifestations of congenital measles?*
-- Bilateral widespread pigmentary retinopathy
-- Cataracts
-- Optic nerve head drusen

*Should it be considered as one of the Other Agents in the TORCHES differential?*
Yes
Uveitis: *Rubeola*

**Acquired Rubeola: Overview**

What is the layman’s term for the common form of acquired rubeola?
Uveitis: **Rubeola**

Acquired Rubeola: Overview

What is the layman’s term for the common form of acquired rubeola?
Measles (again, **not** German measles)
Uveitis: **Rubeola**

**Acquired Rubeola: Overview**

*What is the layman’s term for the common form of acquired rubeola?*
Measles (again, **not** German measles)

*How does measles present?*

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--
Uveitis: **Rubeola**

**Acquired Rubeola: Overview**

*What is the layman’s term for the common form of acquired rubeola?*
Measles (again, **not** German measles)

*How does measles present?*
--A prodromal phase of fatigue, fever, and mucosal lesions (followed shortly by)
Uveitis: Rubeola

Acquired Rubeola: Overview

What is the layman’s term for the common form of acquired rubeola?
Measles (again, not German measles)

How does measles present?
--A prodromal phase of fatigue, fever, and mucosal lesions (followed shortly by)
--The appearance of the measles rash on the head, then spreading downward
Uveitis: *Rubeola*

Acquired rubeola (measles): Rash
Uveitis: **Rubeola**

**Acquired Rubeola: Overview**

What is the layman’s term for the common form of acquired rubeola?
Measles (again, **not** German measles)

How does measles present?
--A prodromal phase of fatigue, fever, and **mucosal lesions** (followed shortly by)
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*Which three mucosal surfaces are commonly affected?*
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Uveitis: **Rubeola**

**Acquired Rubeola: Overview**

What is the layman’s term for the common form of acquired rubeola?
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*Which three mucosal surfaces are commonly affected?*
--The conjunctiva
--The respiratory tract
--The oral cavity
Uveitis: **Rubeola**

**Acquired Rubeola: Overview**

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Measles (again, **not** German measles)

How does measles present?  
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--The appearance of the measles rash on the head, then spreading downward

**Which three mucosal surfaces are commonly affected?**  
--**The conjunctiva**  
--The respiratory tract  
--The oral cavity

How would you characterize the conjunctivitis (eg, mild/severe; papillary/follicular; watery/purulent)?
Uveitis: **Rubeola**

**Acquired Rubeola: Overview**

What is the layman's term for the common form of acquired rubeola? Measles (again, **not** German measles)

How does measles present?
--A prodromal phase of fatigue, fever, and **mucosal lesions** (followed shortly by)
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**Which three mucosal surfaces are commonly affected?**
--The conjunctiva
--The respiratory tract
--The oral cavity

**How would you characterize the conjunctivitis (eg, mild/severe; papillary/follicular; watery/purulent)?**
It is typically a mild, watery, papillary conjunctivitis
Uveitis: **Rubeola**

**Acquired Rubeola: Overview**

What is the layman’s term for the common form of acquired rubeola?
Measles (again, not German measles)

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**Which three mucosal surfaces are commonly affected?**
-- The conjunctiva
-- **The respiratory tract**
-- The oral cavity

**How does the respiratory-tract mucosal disease manifest?**
Uveitis: **Rubeola**

**Acquired Rubeola: Overview**

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Measles (again, not German measles)

How does measles present?
--A prodromal phase of fatigue, fever, and **mucosal lesions** (followed shortly by)
--The appearance of the measles rash on the head, then spreading downward

**Which three mucosal surfaces are commonly affected?**
--The conjunctiva
--The **respiratory tract**
--The oral cavity

**How does the respiratory-tract mucosal disease manifest?**
As a cough
Uveitis: **Rubeola**

**Acquired Rubeola: Overview**

What is the layman’s term for the common form of acquired rubeola? Measles (again, **not** German measles)

How does measles present?
-- A prodromal phase of fatigue, fever, and **mucosal lesions** (followed shortly by)
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**Which three mucosal surfaces are commonly affected?**
-- The conjunctiva
-- The respiratory tract
-- The oral cavity

**What is the classic oral-mucosal lesion?**

Koplik spots
- Small whitish lesions with a red ring
- Think ‘grain of sand’ or ‘grain of salt’
- Typically found on the buccal mucosa adjacent to the lower molars
- Yes
Uveitis: **Rubeola**

**Acquired Rubeola: Overview**

What is the layman’s term for the common form of acquired rubeola? Measles (again, **not** German measles)

How does measles present?
--A prodromal phase of fatigue, fever, and **mucosal lesions** (followed shortly by)
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**Which three mucosal surfaces are commonly affected?**
--The conjunctiva
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**What is the classic oral-mucosal lesion?**
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**What do Koplik spots look like?**

Small whitish lesions with a red ring

Think ‘grain of sand’ or ‘grain of salt’

Where are they typically found?
On the buccal mucosa adjacent to the lower molars

Are Koplik spots pathognomonic for measles?
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A stuffy/runny nose
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Can the retina be affected?
Yes but only rarely so
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**Acquired Rubeola: Overview**

*What is the rare-but-dreaded complication of measles?*
Uveitis: **Rubeola**

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*What is the rare-but-dreaded complication of measles?*
Subacute sclerosing panencephalitis (SSPE)
Uveitis: **Rubeola**

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What is the rare-but-dreaded complication of measles?  
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With cognitive/behavioral deterioration, eventually resulting in spasticity, dementia and death.
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Do the ocular symptoms come early or late in the disease process?
Early. They precede the neurological manifestations by at least weeks, and can be by years
Uveitis: **Rubeola**

**Rubeola: Diagnosis**

How is measles diagnosed?

- The uveitis is profiled
- The profiled case is meshed
- A differential diagnosis list is generated
- Studies are obtained to identify the etiology
- Treatment appropriate for the etiology is initiated
How is measles diagnosed?

By the constellation of clinical findings
Uveitis: *Rubeola*

**Rubeola: Diagnosis**

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*Are serologic tests useful in diagnosing measles?*
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**Rubeola: Treatment**

*What is the preferred antiviral treatment for rubeola?*
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