Concerning PUK

(Peripheral Ulcerative Keratitis)

- Autoimmune PUK is usually unilateral and circumferential extent.
Autoimmune PUK is usually **unilateral** and **sectoral**.
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **improvement vs worsening** of systemic disease
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of systemic disease
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.

With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of **systemic disease**

*With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?* Pretty much all of them
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.

With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?
Pretty much all of them.

Which three conditions are most likely to present with PUK?

- Rheumatoid arthritis
- Wegener’s granulomatosis
- Polyarteritis nodosa

If a PUK pt does not carry a CTD/autoimmune diagnosis, what should the ophthalmologist do?
Initiate a diagnostic workup (or promptly arrange for a rheumatologist to do so).
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of **systemic disease**

*With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?*
Pretty much all of them

*Which three conditions are most likely to present with PUK?*
Rheumatoid arthritis, Wegener’s granulomatosis, and polyarteritis nodosa
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.

With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated? Pretty much all of them.

Which three conditions are most likely to present with PUK? Rheumatoid arthritis, Wegener’s granulomatosis, and polyarteritis nodosa.

Of these three, which is most likely to be associated with PUK? Rheumatoid arthritis, by a substantial margin.
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.

*With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?* Pretty much all of them.

*Which three conditions are most likely to present with PUK?* Rheumatoid arthritis, Wegener’s granulomatosis, and polyarteritis nodosa.

*Of these three, which is most likely to be associated with PUK?* RA, by a substantial margin.
Autoimmune PUK is usually **unilateral** and **sectoral**.

It often heralds **exacerbation** of **systemic disease**.

*With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?* Pretty much all of them.

*Which three conditions are most likely to present with PUK?* **Rheumatoid arthritis**, Wegener’s granulomatosis, and polyarteritis nodosa.

*Of these three, which is most likely to be associated with PUK?* RA, by a substantial margin.

*What percentage of PUK pts have RA as their underlying condition?*
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.

With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?
Pretty much all of them.

Which three conditions are most likely to present with PUK?
Rheumatoid arthritis, Wegener’s granulomatosis, and polyarteritis nodosa.

Of these three, which is most likely to be associated with PUK?
RA, by a substantial margin.

What percentage of PUK pts have RA as their underlying condition?
30-40.
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of **systemic disease**

**With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?**
Pretty much all of them

**Which three conditions are most likely to present with PUK?**
**Rheumatoid arthritis**, Wegener’s granulomatosis, and polyarteritis nodosa

**Of these three, which is most likely to be associated with PUK?**
RA, by a substantial margin

**What percentage of PUK pts have RA as their underlying condition?**
30-40

**In addition to the peripheral cornea, what other ocular structure is commonly affected in these pts?**
Autoimmune PUK is usually unilateral and sectoral. It often heralds exacerbation of systemic disease.

With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated? Pretty much all of them.

Which three conditions are most likely to present with PUK? Rheumatoid arthritis, Wegener's granulomatosis, and polyarteritis nodosa.

Of these three, which is most likely to be associated with PUK? RA, by a substantial margin.

What percentage of PUK pts have RA as their underlying condition? 30-40.

In addition to the peripheral cornea, what other ocular structure is commonly affected in these pts? The sclera (ie, concurrent scleritis is the rule).
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.

With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?
Pretty much all of them.

Which three conditions are most likely to present with PUK?
**Rheumatoid arthritis**, Wegener’s granulomatosis, and polyarteritis nodosa.

Is PUK the most common ocular manifestation of RA?

Sociated with PUK?

30-40%

In addition to the peripheral cornea, what other ocular structure is commonly affected in these pts?
The sclera (i.e., concurrent scleritis is the rule).
Autoimmune PUK is usually **unilateral** and **sectoral**. It often heralds **exacerbation** of **systemic disease**.

**Concerning PUK**

*With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?*  
Pretty much all of them

*Which three conditions are most likely to present with PUK?*  
**Rheumatoid arthritis**, Wegener’s granulomatosis, and polyarteritis nodosa

*Is PUK the most common ocular manifestation of RA?*  
No

*What percentage of PUK pts have RA as their underlying condition?*  
30-40%

*In addition to the peripheral cornea, what other ocular structure is commonly affected in these pts?*  
The sclera (ie, concurrent scleritis is the rule)
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.

With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?
Pretty much all of them.

Which three conditions are most likely to present with PUK?
Rheumatoid arthritis, Wegener's granulomatosis, and polyarteritis nodosa.

Is PUK the most common ocular manifestation of RA?
No.

What is, then?
30-40%

In addition to the peripheral cornea, what other ocular structure is commonly affected in these pts?
The sclera (ie, concurrent scleritis is the rule).
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of **systemic disease**

**With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?** Pretty much all of them

**Which three conditions are most likely to present with PUK?**
**Rheumatoid arthritis**, Wegener's granulomatosis, and polyarteritis nodosa

Is PUK the most common ocular manifestation of RA?
No

What is, then?
Keratoconjunctivitis sicca

30-40%

In addition to the peripheral cornea, what other ocular structure is commonly affected in these pts?
The sclera (ie, concurrent scleritis is the rule)
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of **systemic disease**

*With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?*
Pretty much all of them

*Which three conditions are most likely to present with PUK?*
Rheumatoid arthritis, Wegener’s granulomatosis, and polyarteritis nodosa

*If a PUK pt does not carry a CTD/autoimmune diagnosis, what should the ophthalmologist do?*
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.

With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated? Pretty much all of them.

Which three conditions are most likely to present with PUK? Rheumatoid arthritis, Wegener’s granulomatosis, and polyarteritis nodosa.

If a PUK pt does not carry a CTD/autoimmune diagnosis, what should the ophthalmologist do? Initiate a diagnostic workup (or promptly arrange for a rheumatologist to do so).
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.

With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated? Pretty much all of them.

Which three conditions are most likely to present with PUK? Rheumatoid arthritis, Wegener's granulomatosis, and polyarteritis nodosa.

If a PUK pt does not carry a CTD/autoimmune diagnosis, what should the ophthalmologist do? Initiate a diagnostic workup (or promptly arrange for a rheumatologist to do so).

If the workup is negative, what non-autoimmune diagnosis should you consider?
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.

With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated? Pretty much all of them.

Which three conditions are most likely to present with PUK? Rheumatoid arthritis, Wegener’s granulomatosis, and polyarteritis nodosa.

If a PUK pt does not carry a CTD/autoimmune diagnosis, what should the ophthalmologist do? Initiate a diagnostic workup (or promptly arrange for a rheumatologist to do so).

If the workup is negative, what non-autoimmune diagnosis should you consider? Infectious PUK.
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of **systemic disease**

**With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?**
Pretty much all of them

**Which three conditions are most likely to present with PUK?**
Rheumatoid arthritis, Wegener’s granulomatosis, and polyarteritis nodosa

**If a PUK pt does not carry a CTD/autoimmune diagnosis, what should the ophthalmologist do?**
Initiate a **diagnostic workup** (or promptly arrange for a rheumatologist to do so)

**If the workup is negative, what non-autoimmune diagnosis should you consider?**
Infectious PUK

**If the PUK is associated with copious mucopurulent discharge, what infectious etiology should you consider?**
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.

**With which connective-tissue diseases (CTDs) and/or vasculitides has PUK been associated?**
Pretty much all of them.

**Which three conditions are most likely to present with PUK?**
Rheumatoid arthritis, Wegener’s granulomatosis, and polyarteritis nodosa.

If a PUK pt does not carry a CTD/autoimmune diagnosis, what should the ophthalmologist do?
- **diagnostic workup** (or promptly arrange for a rheumatologist to do so).

If the workup is negative, what non-autoimmune diagnosis should you consider?
Infectious PUK.

If the PUK is associated with copious mucopurulent discharge, what infectious etiology should you consider?
Gonococcal disease.
- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of systemic disease
- The treatment goal is to stop K melting through 3 maneuvers:
  1) Improve wetting
  2) Promote re-epithelialization via lubes, BCL, patching
  3) Suppress systemic inflammation

Concerning PUK

4 treatment maneuvers
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of systemic disease
- The treatment goal is to stop K melting through 3 maneuvers:
  1) Improve **wetting**
  2) Promote **re-epithelialization** via lubes, BCL, patching, glue
     \[ (\text{bandage contact lens}) \]
  3) Suppress **systemic inflammation**
Autoimmune PUK is usually unilateral and sectoral. It often heralds exacerbation of systemic disease. The treatment goal is to stop K melting through 3 maneuvers:

1) Improve wetting
2) Promote re-epithelialization
3) Suppress systemic inflammation

Of these three maneuvers, which is paramount?
Autoimmune PUK is usually unilateral and sectoral.

It often heralds exacerbation of systemic disease.

The treatment goal is to stop K melting through 3 maneuvers:
1) Improve wetting
2) Promote re-epithelialization via lubes, BCL, patching, glue
3) Suppress systemic inflammation

Of these three maneuvers, which is paramount? Controlling the underlying disease process—without this, the other maneuvers are akin to re-arranging the deck chairs on the *Titanic*.
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of systemic disease
- The treatment goal is to stop K melting through 3 maneuvers:
  1) **Improve wetting**
  2) Promote re-epithelialization via lubes, BCG, patching, glue
  3) Suppress systemic inflammation if local maneuvers are ineffective

*How should one improve wetting?*
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of systemic disease
- The treatment goal is to stop K melting through 3 maneuvers:
  1) **Improve wetting**
  2) Promote re-epithelialization via lubes, BCL, patching, glue
  3) Suppress systemic inflammation if local maneuvers are insufficient

*How should one improve wetting?*
With frequent dosing of preservative-free artificial tears (PF ATs)
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of systemic disease
- The treatment goal is to stop K melting through 3 maneuvers:
  1) Improve **wetting**
  2) Promote re-epithelialization via lubes, BCL, patching, glue
- You should also consider stopping topical steroids, which can delay re-epithelialization. As a general rule: If the cornea is significantly thinned, avoid topical steroids.

**How should one improve wetting?**
With frequent dosing of preservative-free artificial tears (PF ATs)

**In addition to improving wetting, what other benefit derives from frequent PF AT use?**
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of systemic disease
- The treatment goal is to stop K melting through 3 maneuvers:
  1. **Improve wetting**
  2. Promote re-epithelialization via lubes, BCL, patching, glue
  3. Suppress systemic inflammation if local maneuvers are insufficient

**How should one improve wetting?**
With frequent dosing of preservative-free artificial tears (PF ATs)

**In addition to improving wetting, what other benefit derives from frequent PF AT use?**
They will remove inflammatory cytokines from the ocular surface
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral
- It often heralds exacerbation of systemic disease
- The treatment goal is to stop K melting through 3 maneuvers:
  1) Improve wetting
  2) Promote re-epithelialization via lubes, BCL, patching
  3) Suppress systemic inflammation

What specific sort of glue is being referred to here?
Autoimmune PUK is usually unilateral and sectoral. It often heralds exacerbation of systemic disease. The treatment goal is to stop K melting through 3 maneuvers:

1) Improve wetting
2) Promote re-epithelialization via lubes, BCL, patching
3) Suppress systemic inflammation

Concerning PUK:

What specific sort of glue is being referred to here?
Cyanoacrylate adhesive
Autoimmune PUK is usually unilateral and sectoral.
It often heralds exacerbation of systemic disease.
The treatment goal is to stop K melting through 3 maneuvers:
1) Improve wetting
2) Promote re-epithelialization via lubes, BCL, patching, glue.
3) Suppress systemic inflammation.

**What specific sort of glue is being referred to here?**
Cyanoacrylate adhesive

**How does glue assist in PUK healing?**
1)
2)
Autoimmune PUK is usually unilateral and sectoral. It often heralds exacerbation of systemic disease. The treatment goal is to stop K melting through 3 maneuvers:

1) Improve wetting
2) Promote re-epithelialization via lubes, BCL, patching, glue
3) Suppress systemic inflammation

What specific sort of glue is being referred to here?
Cyanoacrylate adhesive

How does glue assist in PUK healing?
1) It provides tectonic stability, thereby reducing the risk of perforation
2) It acts as a barrier preventing PMNs from reaching (and destroying) corneal stroma
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of systemic disease
- The treatment goal is to stop K melting through 3 maneuvers:
  1) Improve **wetting**
  2) Promote **re-epithelialization** via lubes, BCL, patching

*What specific sort of glue is being referred to here?*
Cyanoacrylate adhesive

*How does glue assist in PUK healing?*
1) It provides tectonic stability, thereby reducing the risk of perforation
2) It acts as a barrier preventing PMNs from reaching (and destroying) corneal stroma

*Use of cyanoacrylate adhesive mandates that what other therapeutic maneuver be applied as well?*
Autoimmune PUK is usually unilateral and sectoral. It often heralds exacerbation of systemic disease. The treatment goal is to stop K melting through 3 maneuvers:
1) Improve wetting
2) Promote re-epithelialization via lubes, BCL, patching, glue
3) Suppress systemic inflammation

Concerning PUK:

What specific sort of glue is being referred to here?
Cyanoacrylate adhesive

How does glue assist in PUK healing?
1) It provides tectonic stability, thereby reducing the risk of perforation
2) It acts as a barrier preventing PMNs from reaching (and destroying) corneal stroma

Use of cyanoacrylate adhesive mandates that what other therapeutic maneuver be applied as well?
A BCL must be placed over the glued cornea.
Autoimmune PUK is usually unilateral and sectoral. It often heralds exacerbation of systemic disease. The treatment goal is to stop corneal melting through 3 maneuvers:

1. Improve wetting
2. Promote re-epithelialization via lubes, BCL, patching, glue
3. Suppress systemic inflammation

Concerning PUK:

What specific sort of glue is being referred to here?
Cyanoacrylate adhesive

How does glue assist in PUK healing?
1) It provides tectonic stability, thereby reducing the risk of perforation
2) It acts as a barrier preventing PMNs from reaching (and destroying) corneal stroma

Use of cyanoacrylate adhesive mandates that what other therapeutic maneuver be applied as well?
A BCL must be placed over the glued cornea

Use of a BCL mandates that what other therapeutic maneuver be applied as well?
Autoimmune PUK is usually unilateral and sectoral. It often heralds exacerbation of systemic disease. The treatment goal is to stop K melting through 3 maneuvers:

1) Improve wetting
2) Promote re-epithelialization via lubes, BCL, patching, glue
3) Suppress systemic inflammation

What specific sort of glue is being referred to here?
Cyanoacrylate adhesive

How does glue assist in PUK healing?
1) It provides tectonic stability, thereby reducing the risk of perforation
2) It acts as a barrier preventing PMNs from reaching (and destroying) corneal stroma

Use of cyanoacrylate adhesive mandates that what other therapeutic maneuver be applied as well?
A BCL must be placed over the glued cornea

Use of a BCL mandates that what other therapeutic maneuver be applied as well?
An antibiotic drop should be used to prophylax against the possibility of a BCL-induced bacterial superinfection
Autoimmune PUK is usually unilateral and sectoral. It often heralds exacerbation of systemic disease. The treatment goal is to stop K melting through 3 maneuvers:

1) Improve wetting
2) Promote re-epithelialization via lubes, BCL, patching
3) Suppress systemic inflammation

Concerning PUK

What specific sort of glue is being referred to here?
Cyanoacrylate adhesive

How does glue assist in PUK healing?
1) It provides tectonic stability, thereby reducing the risk of perforation
2) It acts as a barrier preventing PMNs from reaching (and destroying) corneal stroma

Use of cyanoacrylate adhesive mandates that what other therapeutic maneuver be applied as well?
A BCL must be placed over the glued cornea

Use of a BCL mandates that what other therapeutic maneuver be applied as well?
An antibiotic drop should be used to prophylax against the possibility of a BCL-induced bacterial superinfection

What bacteria species must you be certain is adequately covered by the antibiotic?
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.
- The treatment goal is to stop K melting through 3 maneuvers:
  1. Improve wetting
  2. Promote re-epithelialization via lubes, BCL, patching, glue
  3. Suppress systemic inflammation

What specific sort of glue is being referred to here?
Cyanoacrylate adhesive

How does glue assist in PUK healing?
1. It provides tectonic stability, thereby reducing the risk of perforation.
2. It acts as a barrier preventing PMNs from reaching (and destroying) corneal stroma.

Use of cyanoacrylate adhesive mandates that what other therapeutic maneuver be applied as well?
A BCL must be placed over the glued cornea.

Use of a BCL mandates that what other therapeutic maneuver be applied as well?
An antibiotic drop should be used to prophylax against the possibility of a BCL-induced bacterial superinfection.

What bacteria species must you be certain is adequately covered by the antibiotic? Pseudomonas.
Autoimmune PUK is usually **unilateral** and **sectoral**.

It often heralds **exacerbation** of systemic disease.

The treatment goal is to stop K melting through 3 maneuvers:

1. Improve **wetting**
2. Promote **re-epithelialization** via lubes, BCL, patching, glue
   - You should also consider stopping **topical steroids**, which can delay re-epithelialization. As a general rule: If the cornea is significantly thinned, avoid **topical steroids**.
3. Suppress **systemic inflammation**
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of systemic disease
- The treatment goal is to stop K melting through 3 maneuvers:
  1) Improve **wetting**
  2) Promote **re-epithelialization** via lubes, BCL, patching, glue
     - You should also consider stopping **topical steroids**, which can delay re-epithelialization. As a general rule: If the cornea is significantly thinned, avoid **topical steroids**.
  3) Suppress **systemic inflammation**
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.
- The treatment goal is to stop K melting through 3 maneuvers:
  1. Improve wetting
  2. Promote re-epithelialization via lubes, BCL, patching, glue
     - You should also consider stopping topical steroids, which can delay re-epithelialization. As a general rule: If the cornea is significantly thinned, avoid topical steroids.
  3. Suppress systemic inflammation
  4. Conj flap over the peripheral defect?

What about using a conj flap to cover the peripheral defect?
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.
- The treatment goal is to stop K melting through 3 maneuvers:
  1) Improve wetting.
  2) Promote re-epithelialization via lubes, BCL, patching, glue.
     - You should also consider stopping topical steroids, which can delay re-epithelialization. As a general rule: If the cornea is significantly thinned, avoid topical steroids.
  3) Suppress systemic inflammation.
  4) Conj flap over the peripheral defect? NO!

What about using a conj flap to cover the peripheral defect? Conj flaps are contraindicated in autoimmune PUK because they bring the conj vasculature (and thus all those nasty blood-borne inflammatory mediators) even closer to the melt.
Concerning PUK

- Autoimmune PUK is usually unilateral and sectoral.
- It often heralds exacerbation of systemic disease.
- The treatment goal is to stop K melting through 3 maneuvers:
  1. Improve wetting.
  2. Promote re-epithelialization via lubes, BCL, patching, glue.
     - You should also consider stopping topical steroids, which can delay re-
  3. Suppress systemic inflammation.
  4. Conj flap over the peripheral defect? **YES!**

*In what clinical scenario might a conj flap over a PUK defect be an appropriate treatment maneuver?*

What about using a conj flap to cover the peripheral defect?
Conj flaps are contraindicated in autoimmune PUK because they bring the conj vasculature (and thus all those nasty blood-borne inflammatory mediators) even closer to the melt.
Autoimmune PUK is usually unilateral and sectoral. It often heralds exacerbation of systemic disease. The treatment goal is to stop K melting through 3 maneuvers:

1) Improve wetting
2) Promote re-epithelialization via lubes, BCL, patching, glue
   - You should also consider stopping topical steroids, which can delay re-
3) Suppress systemic inflammation
4) Conj flap over the peripheral defect? YES!

In what clinical scenario might a conj flap over a PUK defect be an appropriate treatment maneuver?
In infectious PUK, especially when the organism is...

What about using a conj flap to cover the peripheral defect? Conj flaps are contraindicated in autoimmune PUK because they bring the conj vasculature (and thus all those nasty blood-borne inflammatory mediators) even closer to the melt.
Autoimmune PUK is usually unilateral and sectoral. It often heralds exacerbation of systemic disease. The treatment goal is to stop K melting through 3 maneuvers:

1) Improve wetting
2) Promote re-epithelialization via lubes, BCL, patching, glue
   - You should also consider stopping topical steroids, which can delay re-
3) Suppress systemic inflammation
4) Conj flap over the peripheral defect? YES!

In what clinical scenario might a conj flap over a PUK defect be an appropriate treatment maneuver? In infectious PUK, especially when the organism is fungal.

What about using a conj flap to cover the peripheral defect? Conj flaps are contraindicated in autoimmune PUK because they bring the conj vasculature (and thus all those nasty blood-borne inflammatory mediators) even closer to the melt.
Autoimmune PUK is usually **unilateral** and **sectoral**.

It often heralds **exacerbation** of systemic disease.

The treatment goal is to stop K melting through 3 maneuvers:

1. Improve **wetting**
2. Promote **re-epithelialization** via lubes, BCL, patching, glue
   - You should also consider stopping **topical steroids**, which can delay re-epithelialization. As a general rule: If the cornea is significantly thinned, avoid topical steroids.
3. Suppress **systemic inflammation**

4. **Conj surgery**:

   *What about using a conj flap to cover the peripheral defect?* 
   Conj flaps are contraindicated in autoimmune PUK because they bring the conj vasculature (and thus all those nasty blood-borne inflammatory mediators) even closer to the melt.

*What conj surgery is very helpful in autoimmune PUK?*
Concerning PUK

- Autoimmune PUK is usually **unilateral** and **sectoral**
- It often heralds **exacerbation** of systemic disease
- The treatment goal is to stop K melting through 3 maneuvers:
  1. **Improve wetting**
  2. **Promote re-epithelialization** via lubes, BCL, patching, glue
     - You should also consider stopping **topical steroids**, which can delay re-epithelialization. As a general rule: If the cornea is significantly thinned, avoid topical steroids.
  3. **Suppress systemic inflammation**
  4. **Conj surgery: Sectoral conj resection**

*What about using a conj flap to cover the peripheral defect?*
Conj flaps are contraindicated in autoimmune PUK because they bring the conj vasculature (and thus all those nasty blood-borne inflammatory mediators) even closer to the melt.

*What conj surgery is very helpful in autoimmune PUK?*
Sectoral conj resection (ie, cutting the conj away from the PUK zone) can be very effective.
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  
Rheumatoid arthritis (RA)  
Mooren’s ulcer (MU)  
Relapsing polychondritis (RP)  
Wegener’s granulomatosis (WG)  
Churg-Strauss (CS)

- Saddle-nose deformity (2):
A

For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  Relapsing polychondritis (RP)
Rheumatoid arthritis (RA)  Wegener’s granulomatosis (WG)
Mooren’s ulcer (MU)  Churg-Strauss (CS)

● Saddle-nose deformity (2): RP; WG
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  
Rheumatoid arthritis (RA)  
Mooren’s ulcer (MU)  
Relapsing polychondritis (RP)  
Wegener’s granulomatosis (WG)  
Churg-Strauss (CS)

● **Saddle-nose deformity** (2): RP; WG

If a pt with a saddle nose had interstitial keratitis rather than PUK, what diagnosis should you consider?
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

**Polyarteritis nodosa (PAN)**
**Relapsing polychondritis (RP)**
**Rheumatoid arthritis (RA)**
**Wegener’s granulomatosis (WG)**
**Mooren’s ulcer (MU)**
**Churg-Strauss (CS)**

- **Saddle-nose deformity** (2): RP; WG

If a pt with a saddle nose had interstitial keratitis rather than PUK, what diagnosis should you consider?

**Congenital syphilis**
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Polyarteritis nodosa (PAN)
- Rheumatoid arthritis (RA)
- Mooren’s ulcer (MU)
- Relapsing polychondritis (RP)
- Wegener’s granulomatosis (WG)
- Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia:
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Polyarteritis nodosa (PAN)
- Rheumatoid arthritis (RA)
- Mooren’s ulcer (MU)
- Relapsing polychondritis (RP)
- Wegener’s granulomatosis (WG)
- Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  
Relapsing polychondritis (RP)  
Rheumatoid arthritis (RA)  
Wegener’s granulomatosis (WG)  
Mooren’s ulcer (MU)  
Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae:
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  
Rheumatoid arthritis (RA)  
Mooren’s ulcer (MU)  
Relapsing polychondritis (RP)  
Wegener’s granulomatosis (WG)  
Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saddle-nose deformity (2)</td>
<td>RP; WG</td>
</tr>
<tr>
<td>Asthma and eosinophilia</td>
<td>CS</td>
</tr>
<tr>
<td>Deformed auricular pinnae</td>
<td>RP</td>
</tr>
<tr>
<td>Ulcer has overhanging edge (2)</td>
<td></td>
</tr>
</tbody>
</table>
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  
Rheumatoid arthritis (RA)  
Mooren’s ulcer (MU)  
Relapsing polychondritis (RP)  
Wegener’s granulomatosis (WG)  
Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Disease</th>
<th>Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyarteritis nodosa (PAN)</td>
<td>Relapsing polychondritis (RP)</td>
</tr>
<tr>
<td>Rheumatoid arthritis (RA)</td>
<td>Wegener’s granulomatosis (WG)</td>
</tr>
<tr>
<td>Mooren’s ulcer (MU)</td>
<td>Churg-Strauss (CS)</td>
</tr>
</tbody>
</table>

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN

What is the classic description regarding the pattern of progression for PUK in both Mooren’s and PAN?
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer):

<table>
<thead>
<tr>
<th>Saddle-nose deformity (2): RP; WG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma and eosinophilia: CS</td>
</tr>
<tr>
<td>Deformed auricular pinnae: RP</td>
</tr>
<tr>
<td>Ulcer has overhanging edge (2): MU; PAN</td>
</tr>
</tbody>
</table>

What is the classic description regarding the pattern of progression for PUK in both Mooren’s and PAN?

1) Starts __________ then
2) progresses __________ then
3) progresses __________ then
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyarteritis nodosa (PAN)</td>
</tr>
<tr>
<td>Rheumatoid arthritis (RA)</td>
</tr>
<tr>
<td>Mooren’s ulcer (MU)</td>
</tr>
<tr>
<td>Relapsing polychondritis (RP)</td>
</tr>
<tr>
<td>Wegener’s granulomatosis (WG)</td>
</tr>
<tr>
<td>Churg-Strauss (CS)</td>
</tr>
</tbody>
</table>

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN

What is the classic description regarding the pattern of progression for PUK in both Mooren’s and PAN?

1) Starts **sectoral**, then
2) progresses **circumferentially**, then
3) progresses **centrally**
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Polyarteritis nodosa (PAN)
- Rheumatoid arthritis (RA)
- Mooren’s ulcer (MU)
- Relapsing polychondritis (RP)
- Wegener’s granulomatosis (WG)
- Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved:
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyarteritis nodosa (PAN)</td>
</tr>
<tr>
<td>Rheumatoid arthritis (RA)</td>
</tr>
<tr>
<td>Mooren’s ulcer (MU)</td>
</tr>
<tr>
<td>Relapsing polychondritis (RP)</td>
</tr>
<tr>
<td>Wegener’s granulomatosis (WG)</td>
</tr>
<tr>
<td>Churg-Strauss (CS)</td>
</tr>
</tbody>
</table>

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  
Rheumatoid arthritis (RA)  
Mooren’s ulcer (MU)  
Relapsing polychondritis (RP)  
Wegener’s granulomatosis (WG)  
Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- **Sclera never** involved: MU

Take note! This is a key factor differentiating between Mooren’s and other forms of PUK. In the vast majority of autoimmune PUK cases (including those secondary to PAN), the adjacent sclera will be involved, but **not** in Mooren’s.
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer):

- Polyarteritis nodosa (PAN)
- Rheumatoid arthritis (RA)
- Mooren’s ulcer (MU)
- Relapsing polychondritis (RP)
- Wegener’s granulomatosis (WG)
- Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2):
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS

(Hey, what about PAN??!! Un momento, por favor)
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  
Relapsing polychondritis (RP)  
Rheumatoid arthritis (RA)  
Wegener’s granulomatosis (WG)  
Mooren’s ulcer (MU)  
Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS

What does ANCA stand for?

Antineutrophil cytoplasmic antibodies
Autoantibodies against antigens found within the cytoplasm of neutrophils

Wegener’s: Cytoplasmic (c-ANCA)
Churg-Strauss: Perinuclear (p-ANCA)
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS

What does ANCA stand for?
Antineutrophil cytoplasmic antibodies
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Polyarteritis nodosa (PAN)
- Rheumatoid arthritis (RA)
- Relapsing polychondritis (RP)
- Wegener’s granulomatosis (WG)
- Mooren’s ulcer (MU)
- Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS

What does ANCA stand for?
Antineutrophil cytoplasmic antibodies

What are they?
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS

**What does ANCA stand for?**
Antineutrophil cytoplasmic antibodies

**What are they?**
Autoantibodies against antigens found within the cytoplasm of neutrophils
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  
Rheumatoid arthritis (RA)  
Mooren’s ulcer (MU)  
Relapsing polychondritis (RP)  
Wegener’s granulomatosis (WG)  
Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS

*What does ANCA stand for?*
Antineutrophil cytoplasmic antibodies

*What are they?*
Autoantibodies against antigens found within the cytoplasm of neutrophils

*With which specific ANCA pattern is each condition associated?*
Wegener’s: Cytoplasmic (c-ANCA)
Churg-Strauss: Perinuclear (p-ANCA)
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS

**What does ANCA stand for?**
Antineutrophil cytoplasmic antibodies

**What are they?**
Autoantibodies against antigens found within the cytoplasm of neutrophils

**With which specific ANCA pattern is each condition associated?**
- Wegener’s: Cytoplasmic (c-ANCA)
- Churg-Strauss: Perinuclear (p-ANCA)
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Polyarteritis nodosa (PAN)</th>
<th>Relapsing polychondritis (RP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rheumatoid arthritis (RA)</td>
<td>Wegener’s granulomatosis (WG)</td>
</tr>
<tr>
<td>Mooren’s ulcer (MU)</td>
<td>Churg-Strauss (CS)</td>
</tr>
</tbody>
</table>

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; PAN?

What about PAN? I thought it was ANCA-positive as well.
### A/G

<table>
<thead>
<tr>
<th>Condition</th>
<th>Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyarteritis nodosa (PAN)</td>
<td>Relapsing polychondritis (RP)</td>
</tr>
<tr>
<td>Rheumatoid arthritis (RA)</td>
<td>Wegener’s granulomatosis (WG)</td>
</tr>
<tr>
<td>Mooren’s ulcer (MU)</td>
<td>Churg-Strauss (CS)</td>
</tr>
</tbody>
</table>

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; \( \text{PAN?} \)

**What about PAN? I thought it was ANCA-positive as well.**

This is a sticky widget. In the 1990s, rheumatologists determined that the label *PAN* was being applied to conditions that were actually separate disease entities. Thus, *PAN* was subdivided into several conditions:

- **Classic PAN**, which affects only medium- and small-sized ‘muscular’ arteries; and
- **Microscopic polyangiitis**, which affects smaller arteries, arterioles, capillaries and venules.
A

For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  Relapsing polychondritis (RP)
Rheumatoid arthritis (RA)  Wegener’s granulomatosis (WG)
Mooren’s ulcer (MU)  Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; PAN?

What about PAN? I thought it was ANCA-positive as well.
This is a sticky widget. In the 1990s, rheumatologists determined that the label PAN was being applied to conditions that were actually separate disease entities. Thus, PAN was subdivided into several conditions:
- **Classic PAN**, which affects only medium- and small-sized ‘muscular’ arteries; and
- **Microscopic polyangiitis**, which affects smaller arteries, arterioles, capillaries and venules.
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; **PAN?**

**What about PAN? I thought it was ANCA-positive as well.**
This is a sticky widget. In the 1990s, rheumatologists determined that the label PAN was being applied to conditions that were actually separate disease entities. Thus, PAN was subdivided into several conditions:

-- **Classic PAN**, which affects only medium- and small-sized ‘muscular’ arteries; and
-- **Microscopic polyangiitis**, which affects smaller arteries, arterioles, capillaries and venules.

It turns out microscopic polyangiitis is strongly ANCA-positive, but classic PAN is not. (Because of its ANCA-positivity, microscopic angiitis is now considered to be more closely related to Churg-Strauss, and especially Wegener’s, than it is to PAN).
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; PAN?

What about PAN? I thought it was ANCA-positive as well.

This is a sticky widget. In the 1990s, rheumatologists determined that the label PAN was being applied to conditions that were actually separate disease entities. Thus, PAN was subdivided into several conditions:

-- **Classic PAN**, which affects only medium- and small-sized ‘muscular’ arteries; and
-- **Microscopic polyangiitis**, which affects smaller arteries, arterioles, capillaries and venules.

It turns out microscopic polyangiitis is strongly ANCA-positive, but classic PAN is not. (Because of its ANCA-positivity, microscopic polyangiitis is considered to be more closely related to Churg-Strauss, and especially Wegener's, than it is to PAN.)

What’s the difference between a ‘small-sized’ artery and a ‘smaller’ artery?

---

Q: What’s the difference between a ‘small-sized’ artery and a ‘smaller’ artery?

A: Rule of thumb: Classic PAN only affects arteries large enough to be named, whereas microscopic angiitis only affects vessels smaller than that.
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer):

- Polyarteritis nodosa (PAN)
- Rheumatoid arthritis (RA)
- Mooren’s ulcer (MU)
- Relapsing polychondritis (RP)
- Wegener’s granulomatosis (WG)
- Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; **PAN?**

---

What about PAN? I thought it was ANCA-positive as well.

This is a sticky widget. In the 1990s, rheumatologists determined that the label PAN was being applied to conditions that were actually separate disease entities. Thus, PAN was subdivided into several conditions:

- **Classic PAN**, which affects only medium- and small-sized ‘muscular’ arteries; and
- **Microscopic polyangiitis**, which affects smaller arteries, arterioles, capillaries and venules.

It turns out microscopic polyangiitis is strongly ANCA-positive, but classic PAN is not. (Because of its ANCA-positivity, microscopic polyangiitis is now considered to be more closely related to Churg-Strauss, and especially Wegener’s.)

What’s the difference between a ‘small-sized’ artery and a ‘smaller’ artery?

Rule of thumb: Classic PAN only affects arteries large enough to be named, whereas microscopic angiitis only affects vessels smaller than that.
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyarteritis nodosa (PAN)</td>
<td></td>
</tr>
<tr>
<td>Rheumatoid arthritis (RA)</td>
<td></td>
</tr>
<tr>
<td>Mooren’s ulcer (MU)</td>
<td></td>
</tr>
<tr>
<td>Relapsing polychondritis (RP)</td>
<td></td>
</tr>
<tr>
<td>Wegener’s granulomatosis (WG)</td>
<td></td>
</tr>
<tr>
<td>Churg-Strauss (CS)</td>
<td></td>
</tr>
</tbody>
</table>

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; **PAN**?

**What about PAN? I thought it was ANCA-positive as well.**

This is a sticky widget. In the 1990s, rheumatologists determined that the label PAN was being applied to conditions that were actually separate disease entities. Thus, PAN was subdivided into several conditions:

-- **Classic PAN**, which affects only medium- and small-sized ‘muscular’ arteries; and
-- **Microscopic polyangiitis**, which affects smaller arteries, arterioles, capillaries and venules.

It turns out microscopic polyangiitis is strongly ANCA-positive, but classic PAN is not. (Because of its ANCA-positivity, microscopic angiitis is now considered to be more closely related to Churg-Strauss, and especially Wegener’s, than it is to PAN).

**Got it. So if it’s ANCA+ it’s not PAN, right?**
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Cause</th>
<th>PAN</th>
<th>RP</th>
<th>WG</th>
<th>RA</th>
<th>MU</th>
<th>CS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saddle-nose deformity (2)</td>
<td></td>
<td>RP;</td>
<td>WG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asthma and eosinophilia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CS</td>
</tr>
<tr>
<td>Deformed auricular pinnae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ulcer has overhanging edge (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MU;</td>
<td></td>
</tr>
<tr>
<td>Sclera never involved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANCA positive (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What about PAN? I thought it was ANCA-positive as well.

This is a sticky widget. In the 1990s, rheumatologists determined that the label PAN was being applied to conditions that were actually separate disease entities. Thus, PAN was subdivided into several conditions:

- **Classic PAN**, which affects only medium- and small-sized ‘muscular’ arteries; and
- **Microscopic polyangiitis**, which affects smaller arteries, arterioles, capillaries and venules.

It turns out microscopic polyangiitis is strongly ANCA-positive, but classic PAN is not. (Because of its ANCA-positivity, microscopic angiitis is now considered to be more closely related to Churg-Strauss, and especially Wegener’s, than it is to PAN).

Got it. So if it’s ANCA+ it’s not PAN, right?

Unfortunately, no. Per the BCSC *Uveitis* book, ~10% of PAN pts will be c- or p-ANCA positive.
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Polyarteritis nodosa (PAN)
- Relapsing polychondritis (RP)
- Rheumatoid arthritis (RA)
- Wegener’s granulomatosis (WG)
- Deformed auricular pinnae: RP
- Churg-Strauss (CS)
- Ulcer has overhanging edge (2): MU; PAN
- ANCA positive (2): WG; CS; PAN (10% of cases)
- Sclera never involved: MU
- 

**Q**

Saddle-nose deformity (2): RP; WG

Asthma and eosinophilia: CS

Deformed auricular pinnae: RP

Ulcer has overhanging edge (2): MU; PAN

Sclera never involved: MU

ANCA positive (2): WG; CS; PAN (10% of cases)

**What about PAN? I thought it was ANCA-positive as well.**

This is a sticky widget. In the 1990s, rheumatologists determined that the label PAN was being applied to conditions that were actually separate disease entities. Thus, PAN was subdivided into two main conditions:

---**Classic PAN**, which affects only medium- and small-sized 'muscular' arteries;

---**Microscopic polyangiitis**, which affects smaller arteries, arterioles, capillaries and venules.

It turns out microscopic polyangiitis is strongly ANCA-positive, but classic PAN is not. (Because of its ANCA-positivity, microscopic angiitis is now considered to be more closely related to Churg-Strauss, and especially Wegener’s, than it is to PAN).

Got it. So if it’s ANCA+ it’s not PAN, right? 

Unfortunately, no. Per the BCSC Uveitis book, ~10% of PAN pts will be c- or p-ANCA positive.
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; PAN (10% of cases)

What about PAN? I thought it was ANCA-positive as well.
This is a sticky widget. In the 1990s, rheumatologists determined that the label PAN was being applied to conditions that were actually separate disease entities. Thus, PAN was subdivided into two conditions:

---Classic PAN, which affects only medium- and small-sized 'muscular' arteries;
---Microscopic polyangiitis, which affects smaller arteries, arterioles, capillaries and venules.

It turns out microscopic polyangiitis is strongly ANCA-positive, but classic PAN is not. (Because of its ANCA-positivity, microscopic angiitis is now considered to be more closely related to Churg-Strauss, and especially Wegener's, than it is to PAN).

OK, tell me this much at least--are both classic PAN and microscopic angiitis associated with PUK?
Yes

Got it. So if it's ANCA+ it's not PAN, right?
Unfortunately, no. Per the BCSC Uveitis book, ~10% of PAN pts will be c- or p-ANCA positive.
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Causes of PUK</th>
<th>PAN</th>
<th>RP</th>
<th>WG</th>
<th>CS</th>
<th>RA</th>
<th>MU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saddle-nose deformity (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asthma and eosinophilia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deformed auricular pinnae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ulcer has overhanging edge (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sclera never involved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANCA positive (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Is a diagnosis of exclusion:

- *PAN (10% of cases)*
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Cause</th>
<th>PAN</th>
<th>RP</th>
<th>CS</th>
<th>WG</th>
<th>RA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyarteritis nodosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rheumatoid arthritis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mooren’s ulcer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relapsing polychondritis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wegener’s granulomatosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Churg-Strauss</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; **PAN (10% of cases)**
- Is a diagnosis of exclusion: MU
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

| Saddle-nose deformity (2): RP; WG |
| Asthma and eosinophilia: CS |
| Deformed auricular pinnae: RP |
| Ulcer has overhanging edge (2): MU; PAN |
| Sclera never involved: MU |
| ANCA positive (2): WG; CS; PAN (10% of cases) |
| Is a diagnosis of exclusion: MU |
| Chest X-ray likely abnormal (3): |
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; PAN (10% of cases)
- Is a diagnosis of exclusion: MU
- Chest X-ray likely abnormal (3): WG; CS; RP
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer):

- Polyarteritis nodosa (PAN)
- Rheumatoid arthritis (RA)
- Mooren’s ulcer (MU)
- Relapsing polychondritis (RP)
- Wegener’s granulomatosis (WG)
- Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; **PAN (10% of cases)**
- Is a diagnosis of exclusion: MU
- Chest X-ray likely abnormal (3): WG; CS; RP
- Associated with hepatitis seropositivity:
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- **Polyarteritis nodosa (PAN)**
- **Rheumatoid arthritis (RA)**
- **Mooren’s ulcer (MU)**
- **Relapsing polychondritis (RP)**
- **Wegener’s granulomatosis (WG)**
- **Churg-Strauss (CS)**

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; **PAN (10% of cases)**
- Is a diagnosis of exclusion: MU
- Chest X-ray likely abnormal (3): WG; CS; RP
- Associated with hepatitis seropositivity: PAN
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  
Rheumatoid arthritis (RA)  
Mooren’s ulcer (MU)  
Relapsing polychondritis (RP)  
Wegener’s granulomatosis (WG)  
Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; PAN (10% of cases)
- Is a diagnosis of exclusion: MU
- Chest X-ray likely abnormal (3): WG; CS; RP
- Associated with hepatitis seropositivity: PAN

*Which hepatitis virus is definitely associated with PAN?*
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Polyarteritis nodosa (PAN)</th>
<th>Relapsing polychondritis (RP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rheumatoid arthritis (RA)</td>
<td>Wegener’s granulomatosis (WG)</td>
</tr>
<tr>
<td>Mooren’s ulcer (MU)</td>
<td>Churg-Strauss (CS)</td>
</tr>
</tbody>
</table>

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; **PAN (10% of cases)**
- Is a diagnosis of exclusion: MU
- Chest X-ray likely abnormal (3): WG; CS; RP
- Associated with **hepatitis seropositivity: PAN**

**Which hepatitis virus is definitely associated with PAN?**
Hepatitis B
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Cause</th>
<th>Pan</th>
<th>UA</th>
<th>CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saddle-nose deformity</td>
<td>RP; WG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asthma and eosinophilia</td>
<td>CS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deformed auricular pinnae</td>
<td>RP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ulcer has overhanging edge</td>
<td>MU; PAN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sclera never involved</td>
<td>MU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANCA positive</td>
<td>WG; CS; PAN</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Is a diagnosis of exclusion</td>
<td>MU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chest X-ray likely abnormal</td>
<td>WG; CS; RP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associated with <strong>hepatitis seropositivity</strong>: PAN</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which hepatitis virus is definitely associated with PAN?
Hepatitis B

What percent of PAN pts test positive for are Hep B surface Ag?
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Cause</th>
<th>PAN</th>
<th>RP</th>
<th>WG</th>
<th>CS</th>
<th>MU</th>
<th>PAN (10% of cases)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saddle-nose deformity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asthma and eosinophilia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deformed auricular pinnae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ulcer has overhanging edge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sclera never involved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANCA positive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is a diagnosis of exclusion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chest X-ray likely abnormal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associated with [hepatitis seropositivity: PAN]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which hepatitis virus is definitely associated with PAN?
- Hepatitis B

What percent of PAN pts test positive for are Hep B surface Ag?
- About 10
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; PAN (10% of cases)
- Is a diagnosis of exclusion: MU
- Chest X-ray likely abnormal (3): WG; CS; RP
- Associated with *hepatitis seropositivity*: PAN

*Which hepatitis virus is definitely associated with PAN?*
Hepatitis B

*Which form is probably associated, but the evidence is not as strong as for B?*
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saddle-nose deformity (2)</td>
<td>RP; WG</td>
</tr>
<tr>
<td>Asthma and eosinophilia</td>
<td>CS</td>
</tr>
<tr>
<td>Deformed auricular pinnae</td>
<td>RP</td>
</tr>
<tr>
<td>Ulcer has overhanging edge (2)</td>
<td>MU; PAN</td>
</tr>
<tr>
<td>Sclera never involved</td>
<td>MU</td>
</tr>
<tr>
<td>ANCA positive (2)</td>
<td>WG; CS; PAN (10% of cases)</td>
</tr>
<tr>
<td>Is a diagnosis of exclusion</td>
<td>MU</td>
</tr>
<tr>
<td>Chest X-ray likely abnormal (3)</td>
<td>WG; CS; RP</td>
</tr>
<tr>
<td>Associated with hepatitis seropositivity</td>
<td>PAN</td>
</tr>
</tbody>
</table>

Which hepatitis virus is definitely associated with PAN?
Hepatitis B

Which form is probably associated, but the evidence is not as strong as for B?
Hepatitis C
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  
Relapsing polychondritis (RP)  
Rheumatoid arthritis (RA)  
Wegener’s granulomatosis (WG)  
Mooren’s ulcer (MU)  
Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; PAN (10% of cases)
- Is a diagnosis of exclusion: MU
- Chest X-ray likely abnormal (3): WG; CS; RP
- Associated with hepatitis seropositivity: PAN
- Associated with helminthic seropositivity:
<table>
<thead>
<tr>
<th>Cause</th>
<th>Associated Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saddle-nose deformity (2)</td>
<td>RP; WG</td>
</tr>
<tr>
<td>Asthma and eosinophilia</td>
<td>CS</td>
</tr>
<tr>
<td>Deformed auricular pinnae</td>
<td>RP</td>
</tr>
<tr>
<td>Ulcer has overhanging edge (2)</td>
<td>MU; PAN</td>
</tr>
<tr>
<td>Sclera never involved</td>
<td>MU</td>
</tr>
<tr>
<td>ANCA positive (2)</td>
<td>WG; CS; PAN (10% of cases)</td>
</tr>
<tr>
<td>Is a diagnosis of exclusion</td>
<td>MU</td>
</tr>
<tr>
<td>Chest X-ray likely abnormal (3)</td>
<td>WG; CS; RP</td>
</tr>
<tr>
<td>Associated with hepatitis seropositivity</td>
<td>PAN</td>
</tr>
<tr>
<td>Associated with helminthic seropositivity</td>
<td>MU</td>
</tr>
</tbody>
</table>
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer):

<table>
<thead>
<tr>
<th>Condition</th>
<th>Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saddle-nose deformity (2)</td>
<td>RP; WG</td>
</tr>
<tr>
<td>Asthma and eosinophilia</td>
<td>CS</td>
</tr>
<tr>
<td>Deformed auricular pinnae</td>
<td>RP</td>
</tr>
<tr>
<td>Ulcer has overhanging edge (2)</td>
<td>MU; PAN</td>
</tr>
<tr>
<td>Sclera never involved</td>
<td>MU</td>
</tr>
<tr>
<td>ANCA positive (2)</td>
<td>WG; CS; PAN <strong>PAN (10% of cases)</strong></td>
</tr>
<tr>
<td>Is a diagnosis of exclusion</td>
<td>MU</td>
</tr>
<tr>
<td>Chest X-ray likely abnormal (3)</td>
<td>WG; CS; RP</td>
</tr>
<tr>
<td>Associated with hepatitis seropositivity</td>
<td>PAN</td>
</tr>
<tr>
<td>Associated with helminthic seropositivity</td>
<td>MU</td>
</tr>
<tr>
<td>Renal function may be impaired (4):</td>
<td></td>
</tr>
</tbody>
</table>
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  
Rheumatoid arthritis (RA)  
Mooren’s ulcer (MU)  
Relapsing polychondritis (RP)  
Wegener’s granulomatosis (WG)  
Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; **PAN (10% of cases)**
- Is a diagnosis of exclusion: MU
- Chest X-ray likely abnormal (3): WG; CS; RP
- Associated with hepatitis seropositivity: PAN
- Associated with helminthic seropositivity: MU
- Renal function may be impaired (4): WG; PAN; CS; RP
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

<table>
<thead>
<tr>
<th>Cause</th>
<th>PAN</th>
<th>RP</th>
<th>WG</th>
<th>CS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saddle-nose deformity (2)</td>
<td></td>
<td>RP</td>
<td>WG</td>
<td></td>
</tr>
<tr>
<td>Asthma and eosinophilia</td>
<td></td>
<td></td>
<td></td>
<td>CS</td>
</tr>
<tr>
<td>Deformed auricular pinnae</td>
<td></td>
<td>RP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ulcer has overhanging edge (2)</td>
<td>MU</td>
<td>PAN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sclera never involved</td>
<td>MU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANCA positive (2)</td>
<td>WG</td>
<td>CS</td>
<td>PAN</td>
<td></td>
</tr>
<tr>
<td>Is a diagnosis of exclusion</td>
<td>MU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chest X-ray likely abnormal (3)</td>
<td>WG</td>
<td>CS</td>
<td>RP</td>
<td></td>
</tr>
<tr>
<td>Associated with hepatitis seropositivity</td>
<td>PAN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associated with helminthic seropositivity</td>
<td>MU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renal function may be impaired (4)</td>
<td>WG</td>
<td>PAN</td>
<td>CS</td>
<td>RP</td>
</tr>
<tr>
<td>Chronic, tx-resistant sinusitis common</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer)

Polyarteritis nodosa (PAN)  Relapsing polychondritis (RP)
Rheumatoid arthritis (RA)  Wegener’s granulomatosis (WG)
Mooren’s ulcer (MU)  Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; PAN (10% of cases)
- Is a diagnosis of exclusion: MU
- Chest X-ray likely abnormal (3): WG; CS; RP
- Associated with hepatitis seropositivity: PAN
- Associated with helminthic seropositivity: MU
- Renal function may be impaired (4): WG; PAN; CS; RP
- Chronic, tx-resistant sinusitis common: WG
For each statement, identify which of these causes of PUK is/are associated (some will more than one answer):

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; PAN (10% of cases)
- Is a diagnosis of exclusion: MU
- Chest X-ray likely abnormal (3): WG; CS; RP
- Associated with hepatitis seropositivity: PAN
- Associated with helminthic seropositivity: MU
- Renal function may be impaired (4): WG; PAN; CS; RP
- Chronic, tx-resistant sinusitis common: WG
- Extremely painful:
For each statement, identify which of these causes of PUK is/are associated (some will will more than one answer)

Polyarteritis nodosa (PAN)  
Rheumatoid arthritis (RA)  
Mooren’s ulcer (MU)  
Relapsing polychondritis (RP)  
Wegener’s granulomatosis (WG)  
Churg-Strauss (CS)

- Saddle-nose deformity (2): RP; WG
- Asthma and eosinophilia: CS
- Deformed auricular pinnae: RP
- Ulcer has overhanging edge (2): MU; PAN
- Sclera never involved: MU
- ANCA positive (2): WG; CS; PAN (10% of cases)
- Is a diagnosis of exclusion: MU
- Chest X-ray likely abnormal (3): WG; CS; RP
- Associated with hepatitis seropositivity: PAN
- Associated with helminthic seropositivity: MU
- Renal function may be impaired (4): WG; PAN; CS; RP
- Chronic, tx-resistant sinusitis common: WG
- **Extremely** painful: MU

(All forms of inflammatory PUK are painful, but Mooren’s is considered to be exceptionally so.)
With respect to manifesting PUK, which of the following doesn’t belong, and why?

- RA, Mooren’s, Behçet, IBD  
  *(IBD = Inflammatory bowel disease)*
With respect to manifesting PUK, which of the following doesn’t belong, and why?

- RA, **Mooren’s**, Behçet, IBD
Concerning PUK

- With respect to manifesting PUK, which of the following doesn’t belong, and why?
  - RA, Mooren’s, Behçet, IBD

Why is Mooren’s the oddball in this group?
Concerning PUK

- With respect to manifesting PUK, which of the following doesn’t belong, and why?
  - RA, **Mooren’s**, Behçet, IBD

*Why is Mooren’s the oddball in this group?*
PUK in the others is due to a systemic condition, whereas Mooren’s is, by definition, ocular only
 Concerning PUK

- With respect to manifesting PUK, which of the following doesn’t belong, and why?
  - RA, Mooren’s, Behçet, IBD

- And in this group?
  - Mooren’s, Terrien’s marginal, Sarcoid, SLE
Concerning PUK

- With respect to manifesting PUK, which of the following doesn’t belong, and why?
  - RA, Mooren’s, Behçet, IBD

- And in this group?
  - Mooren’s, Terrien’s marginal, Sarcoid, SLE
With respect to manifesting PUK, which of the following doesn’t belong, and why?

- RA, Mooren’s, Behçet, IBD

And in this group?

- Mooren’s, **Terrien’s marginal**, Sarcoid, SLE

*Why is Terrien’s the oddball in this group?*
Concerning PUK

- With respect to manifesting PUK, which of the following doesn’t belong, and why?
  - RA, Mooren’s, Behçet, IBD

- And in this group?
  - Mooren’s, Terrien’s marginal, Sarcoid, SLE

Why is Terrien’s the oddball in this group?
Two reasons:
--PUK in the others is an inflammatory process; Terrien’s is noninflammatory
--As implied by the word ‘ulcerative’ in the name, the corneal epithelium is disrupted in PUK. In contrast, the epithelium is intact in Terrien’s
Q

Which of the following doesn’t belong, and why?

RA, Mooren’s, Behçet, IBD

And in this group?

Mooren’s, Terrien’s marginal, Sarcoid, SLE

PUK in the others is due to a systemic condition; Mooren’s is, by definition, ocular only.

PUK in the others is an inflammatory process; Terrien’s is noninflammatory.

Speaking of Terrien’s…

Is it a common, or an uncommon condition?

Rare

Does it have a gender predilection?

Yes, males are more commonly affected

Is it unilateral, or bilateral?

Bilateral, although involvement can be asymmetric

Which sector of the cornea is involved first, and how does it progress?

It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

Is the involved epithelium absent, or intact?

Intact (Terrien’s is a stromal, not epithelial condition)

Does it affect vision? If so, how?

Yes, by inducing high astigmatism
Speaking of Terrien’s…

*Is it a common, or an uncommon condition?*

Uncommon

- **PUK in the others is an inflammatory process; Terrien’s is noninflammatory**

**Mooren’s, Terrien’s marginal, Sarcoid, SLE**

**PUK in the others is due to a systemic condition; Mooren’s is, by definition, ocular only**

- **Speaking of Terrien’s…**
  - **Is it a common, or an uncommon condition?**
    - Uncommon
  - **Does it have a gender predilection?**
    - Yes, males are more commonly affected
  - **Is it unilateral, or bilateral?**
    - Bilateral, although involvement can be asymmetric
  - **Which sector of the cornea is involved first, and how does it progress?**
    - It starts superiorly, then spreads circumferentially (but may not reach the inferior K)
  - **Is the involved epithelium absent, or intact?**
    - Intact (Terrien’s is a stromal, not epithelial condition)
  - **Does it affect vision? If so, how?**
    - Yes, by inducing high astigmatism
Which of the following doesn’t belong, and why?

RA, Mooren’s, Behçet, IBD

And in this group?

Mooren’s, Terrien’s marginal, Sarcoid, SLE

PUK in the others is due to a systemic condition; Mooren’s is, by definition, ocular only.

Speaking of Terrien’s…

Is it a common, or an uncommon condition?

Uncommon

Does it have a gender predilection?

Yes, males are more commonly affected.

Is it unilateral, or bilateral?

Bilateral, although involvement can be asymmetric.

Which sector of the cornea is involved first, and how does it progress?

It starts superiorly, then spreads circumferentially (but may not reach the inferior K).

Is the involved epithelium absent, or intact?

Intact (Terrien’s is a stromal, not epithelial condition).

Does it affect vision? If so, how?

Yes, by inducing high astigmatism.

PUK in the others is an inflammatory process; Terrien’s is noninflammatory.
Speaking of Terrien’s…

Is it a common, or an uncommon condition?
Uncommon

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal

PUK in the others is an inflammatory process; Terrien’s is noninflammatory
Speaking of Terrien’s…

Is it a common, or an uncommon condition?
Uncommon

Who is the typical Terrien’s pt?

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal

PUK in the others is an inflammatory process; Terrien’s is noninflammatory
Speaking of Terrien’s…

Is it a common, or an uncommon condition?
Uncommon

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal

Who is the typical Terrien’s pt?
A young adult (late teens - early 30s)

PUK in the others is an inflammatory process; Terrien’s is noninflammatory

- RA, Mooren’s, Behçet, IBD
- Mooren’s, Terrien’s marginal, Sarcoid, SLE

- And in this group?
  - Terrien’s marginal, Sarcoid, SLE
  - PUK in the others is an inflammatory process; Terrien’s is noninflammatory
Which of the following doesn’t belong, and why?
- RA, Mooren’s, Behçet, IBD

And in this group?
- Mooren’s, Terrien’s marginal, Sarcoid, SLE

PUK in the others is due to a systemic condition; Mooren’s is, by definition, ocular only.

PUK in the others is an inflammatory process; Terrien’s is noninflammatory.

Speaking of Terrien’s…

Is it a common, or an uncommon condition?
Uncommon

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal.

Is it unilateral, or bilateral?
Bilateral, although involvement can be asymmetric.

Concerning PUK

1. Speaking of Terrien’s…
   - Is it a common, or an uncommon condition? Uncommon
   - Does it have a gender predilection? While once thought to be more common in males, it is now considered equal
   - Is it unilateral, or bilateral? Bilateral, although involvement can be asymmetric

2. Concerning PUK
   - It starts superiorly, then spreads circumferentially (but may not reach the inferior K)
   - Is the involved epithelium absent, or intact? Intact (Terrien’s is a stromal, not epithelial condition)
   - Does it affect vision? If so, how? Yes, by inducing high astigmatism.
Speaking of Terrien’s…

*Is it a common, or an uncommon condition?*

Uncommon

*Does it have a gender predilection?*

While once thought to be more common in males, it is now considered equal

*Is it unilateral, or bilateral?*

Bilateral, although involvement can be asymmetric

PUK in the others is an inflammatory process; Terrien’s is noninflammatory

Mooren’s, **Terrien’s marginal**, Sarcoid, SLE
Speaking of Terrien’s…

*Is it a common, or an uncommon condition?*

Uncommon

*Does it have a gender predilection?*

While once thought to be more common in males, it is now considered equal

*Is it unilateral, or bilateral?*

Bilateral, although involvement can be asymmetric

*Which sector of the cornea is involved first, and how does it progress?*

It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

*Does it affect vision? If so, how?*

Yes, by inducing high astigmatism

PUK in the others is an **inflammatory** process; Terrien’s is **noninflammatory**
Speaking of Terrien’s…

Is it a common, or an uncommon condition?

Uncommon

Does it have a gender predilection?

While once thought to be more common in males, it is now considered equal

Is it unilateral, or bilateral?

Bilateral, although involvement can be asymmetric

Which sector of the cornea is involved first, and how does it progress?

It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

Is the involved epithelium absent, or intact?

Intact (Terrien’s is a stromal, not epithelial condition)

Does it affect vision? If so, how?

Yes, by inducing high astigmatism
Speaking of Terrien’s…

Is it a common, or an uncommon condition?
Uncommon

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal

Is it unilateral, or bilateral?
Bilateral, although involvement can be asymmetric

Which sector of the cornea is involved first, and how does it progress?
It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

Is the involved epithelium absent, or intact?
Intact (Terrien’s is a stromal, not epithelial condition)

Does it affect vision? If so, how?
Yes, by inducing high astigmatism

PUK in the others is an inflammatory process; Terrien’s is noninflammatory
Which of the following doesn’t belong, and why?

- RA,
- Mooren’s
- Behçet
- IBD

And in this group?

- Mooren’s,
- Terrien’s marginal
- Sarcoid
- SLE

PUK in the others is due to a systemic condition; Mooren’s is, by definition, ocular only.

PUK in the others is an inflammatory process; Terrien’s is noninflammatory.

---

Speaking of Terrien’s…

Is it a common, or an uncommon condition?

Uncommon

Does it have a gender predilection?

While once thought to be more common in males, it is now considered equal.

Is it unilateral, or bilateral?

Bilateral, although involvement can be asymmetric.

Which sector of the cornea is involved first, and how does it progress?

It starts superiorly, then spreads circumferentially (but may not reach the inferior K).

Is the involved epithelium absent, or intact?

Intact (Terrien’s is a stromal, not epithelial condition).

Is it a common, or an uncommon condition?

Uncommon

Does it have a gender predilection?

While once thought to be more common in males, it is now considered equal.

Is it unilateral, or bilateral?

Bilateral, although involvement can be asymmetric.

Which sector of the cornea is involved first, and how does it progress?

It starts superiorly, then spreads circumferentially (but may not reach the inferior K).

Is the involved epithelium absent, or intact?

Intact (Terrien’s is a stromal, not epithelial condition).

Does it affect vision? If so, how?

Yes, by inducing high astigmatism.
Q

Which of the following doesn’t belong, and why?
RA, Mooren’s, Behçet, IBD

And in this group?
Mooren’s, Terrien’s marginal, Sarcoid, SLE

PUK in the others is due to a systemic condition; Mooren’s is, by definition, ocular only.

PUK in the others is an inflammatory process; Terrien’s is noninflammatory.

Speaking of Terrien’s…
Is it a common, or an uncommon condition?
Uncommon

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal.

Is it unilateral, or bilateral?
Bilateral, although involvement can be asymmetric.

Which sector of the cornea is involved first, and how does it progress?
It starts superiorly, then spreads circumferentially (but may not reach the inferior K).

Is the involved epithelium absent, or intact?
Intact (Terrien’s is a stromal, not epithelial condition).

The leading edge is characterized by the presence of…

The trailing portion is characterized by the presence of…
A vascular pannus.

Is it a common, or an uncommon condition?
Uncommon.

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal.

Is it unilateral, or bilateral?
Bilateral, although involvement can be asymmetric.

Which sector of the cornea is involved first, and how does it progress?
It starts superiorly, then spreads circumferentially (but may not reach the inferior K).

Is the involved epithelium absent, or intact?
Intact (Terrien’s is a stromal, not epithelial condition).

The leading edge is characterized by the presence of…

The trailing portion is characterized by the presence of…
A vascular pannus.

PUK in the others is an inflammatory process; Terrien’s is noninflammatory.
Speaking of Terrien’s…

*Is it a common, or an uncommon condition?*
Uncommon

*Does it have a gender predilection?*
While once thought to be more common in males, it is now considered equal

*Is it unilateral, or bilateral?*
Bilateral, although involvement can be asymmetric

*Which sector of the cornea is involved first, and how does it progress?*
It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

*Is the involved epithelium absent, or intact?*
Intact (Terrien’s is a stromal, not epithelial condition)

*The leading edge is characterized by the presence of...Lipid*

**PUK in the others is an inflammatory process; Terrien’s is noninflammatory**
Speaking of Terrien’s…

Is it a common, or an uncommon condition?
Uncommon

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal

Is it unilateral, or bilateral?
Bilateral, although involvement can be asymmetric

Which sector of the cornea is involved first, and how does it progress?
It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

Is the involved epithelium absent, or intact?
Intact (Terrien’s is a stromal, not epithelial condition)

The leading edge is characterized by the presence of…Lipid

The trailing portion is characterized by the presence of…

Mooren’s, Terrien’s marginal, Sarcoid, SLE

PUK in the others is an inflammatory process; Terrien’s is noninflammatory
Which of the following doesn’t belong, and why?

RA, Mooren’s, Behçet, IBD

And in this group?

Mooren’s, Terrien’s marginal, Sarcoid, SLE

PUK in the others is an inflammatory process; Terrien’s is noninflammatory

Speaking of Terrien’s…

Is it a common, or an uncommon condition?

Uncommon

Does it have a gender predilection?

While once thought to be more common in males, it is now considered equal

Is it unilateral, or bilateral?

Bilateral, although involvement can be asymmetric

Which sector of the cornea is involved first, and how does it progress?

It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

Is the involved epithelium absent, or intact?

Intact (Terrien’s is a stromal, not epithelial condition)

The leading edge is characterized by the presence of…Lipid

The trailing portion is characterized by the presence of…A vascular pannus

Concerning PUK

129
Which of the following doesn’t belong, and why?
RA, Mooren’s, Behçet, IBD

And in this group?
Mooren’s, Terrien’s marginal, Sarcoid, SLE

PUK in the others is due to a systemic condition; Mooren’s is, by definition, ocular only.

PUK in the others is an inflammatory process; Terrien’s is noninflammatory.

Speaking of Terrien’s…

Is it a common, or an uncommon condition?
Uncommon

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal.

Is it unilateral, or bilateral?
Bilateral, although involvement can be asymmetric.

Which sector of the cornea is involved first, and how does it progress?
It starts superiorly, then spreads circumferentially (but may not reach the inferior K).

Is the involved epithelium absent, or intact?
Intact (Terrien’s is a stromal, not epithelial condition).

The leading edge is characterized by the presence of…
Lipid

The trailing portion is characterized by the presence of…
A vascular pannus

Is the pannus deep, or superficial?
Superficial

Does it affect vision? If so, how?
Yes, by inducing high astigmatism.

Concerning PUK

130

Is it a common, or an uncommon condition?
Uncommon

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal.

Is it unilateral, or bilateral?
Bilateral, although involvement can be asymmetric.

Which sector of the cornea is involved first, and how does it progress?
It starts superiorly, then spreads circumferentially (but may not reach the inferior K).

Is the involved epithelium absent, or intact?
Intact (Terrien’s is a stromal, not epithelial condition).

The leading edge is characterized by the presence of…
Lipid

The trailing portion is characterized by the presence of…
A vascular pannus

Is the pannus deep, or superficial?
Superficial

Does it affect vision? If so, how?
Yes, by inducing high astigmatism.

Concerning PUK

130
Speaking of Terrien’s…

*Is it a common, or an uncommon condition?*
Uncommon

*Does it have a gender predilection?*
While once thought to be more common in males, it is now considered equal

*Is it unilateral, or bilateral?*
Bilateral, although involvement can be asymmetric

*Which sector of the cornea is involved first, and how does it progress?*
It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

*Is the involved epithelium absent, or intact?*
Intact (Terrien’s is a stromal, not epithelial condition)

*The leading edge is characterized by the presence of…* Lipid
*The trailing portion is characterized by the presence of…* A vascular pannus

*Is the pannus deep, or superficial?*
Superficial

PUK in the others is an *inflammatory* process; Terrien’s is *noninflammatory*
Which of the following doesn’t belong, and why?

RA, Mooren’s, Behçet, IBD

And in this group?

Mooren’s, Terrien’s marginal, Sarcoid, SLE

PUK in the others is a systemic condition; Mooren’s is, by definition, ocular only.

PUK in the others is an inflammatory process; Terrien’s is noninflammatory.

Speaking of Terrien’s…

Is it a common, or an uncommon condition?

Uncommon

Does it have a gender predilection?

While once thought to be more common in males, it is now considered equal.

Is it unilateral, or bilateral?

Bilateral, although involvement can be asymmetric.

Which sector of the cornea is involved first, and how does it progress?

It starts superiorly, then spreads circumferentially (but may not reach the inferior K).

Is the involved epithelium absent, or intact?

Intact (Terrien’s is a stromal, not epithelial condition).

Does it affect vision? If so, how?

Yes, by inducing high astigmatism.
A

Speaking of Terrien’s…

Is it a common, or an uncommon condition?
Uncommon

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal

Is it unilateral, or bilateral?
Bilateral, although involvement can be asymmetric

Which sector of the cornea is involved first, and how does it progress?
It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

Is the involved epithelium absent, or intact?
Intact (Terrien’s is a stromal, not epithelial condition)

Does it affect vision? If so, how?
Yes, by inducing high astigmatism

PUK in the others is an inflammatory process; Terrien’s is noninflammatory

Mooren’s, Terrien’s marginal, Sarcoid, SLE
Speaking of Terrien’s…

Is it a common, or an uncommon condition?

Uncommon

Does it have a gender predilection?

While once thought to be more common in males, it is now considered equal

Is it unilateral, or bilateral?

Bilateral, although involvement can be asymmetric

Which sector of the cornea is involved first, and how does it progress?

It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

Is the involved epithelium absent, or intact?

Intact (Terrien’s is a stromal, not epithelial condition)

Does it affect vision? If so, how?

Yes, by inducing high astigmatism

Does Terrien’s render the cornea thinner than normal?

Yes

Is the thinned Terrien’s cornea at risk for rupture with mild trauma?

Yes

Do these pt need to wear protective eyewear?

Yes
Speaking of Terrien’s…

Is it a common, or an uncommon condition?
Uncommon

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal

Is it unilateral, or bilateral?
Bilateral, although involvement can be asymmetric

Which sector of the cornea is involved first, and how does it progress?
It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

Is the involved epithelium absent, or intact?
Intact (Terrien’s is a stromal, not epithelial condition)

Does it affect vision? If so, how?
Yes, by inducing high astigmatism

Does Terrien’s render the cornea thinner than normal?
Yes
Speaking of Terrien’s…

*Is it a common, or an uncommon condition?*
Uncommon

*Does it have a gender predilection?*
While once thought to be more common in males, it is now considered equal

*Is it unilateral, or bilateral?*
Bilateral, although involvement can be asymmetric

*Which sector of the cornea is involved first, and how does it progress?*
It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

*Is the involved epithelium absent, or intact?*
Intact (Terrien’s is a stromal, not epithelial condition)

*Does it affect vision? If so, how?*
Yes, by inducing high astigmatism

*Does Terrien’s render the cornea thinner than normal?*
Yes

*Is the thinned Terrien’s cornea at risk for rupture with mild trauma?*
Speaking of Terrien’s…

Is it a common, or an uncommon condition?
Uncommon

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal

Is it unilateral, or bilateral?
Bilateral, although involvement can be asymmetric

Which sector of the cornea is involved first, and how does it progress?
It starts superiority, then spreads circumferentially (but may not reach the inferior K)

Is the involved epithelium absent, or intact?
Intact (Terrien’s is a stromal, not epithelial condition)

Does it affect vision? If so, how?
Yes, by inducing high astigmatism

Does Terrien’s render the cornea thinner than normal?
Yes

Is the thinned Terrien’s cornea at risk for rupture with mild trauma?
Yes
Speaking of Terrien’s…

Is it a common, or an uncommon condition?
Uncommon

Does it have a gender predilection?
While once thought to be more common in males, it is now considered equal

Is it unilateral, or bilateral?
Bilateral, although involvement can be asymmetric

Which sector of the cornea is involved first, and how does it progress?
It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

Is the involved epithelium absent, or intact?
Intact (Terrien’s is a stromal, not epithelial condition)

Does it affect vision? If so, how?
Yes, by inducing high astigmatism

Does Terrien’s render the cornea thinner than normal?
Yes

Is the thinned Terrien’s cornea at risk for rupture with mild trauma?
Yes

Do these pt need to wear protective eyewear?
Yes
Speaking of Terrien’s…

*Is it a common, or an uncommon condition?*

Uncommon

*Does it have a gender predilection?*

While once thought to be more common in males, it is now considered equal

*Is it unilateral, or bilateral?*

Bilateral, although involvement can be asymmetric

*Which sector of the cornea is involved first, and how does it progress?*

It starts superiorly, then spreads circumferentially (but may not reach the inferior K)

*Is the involved epithelium absent, or intact?*

Intact (Terrien’s is a stromal, not epithelial condition)

*Does it affect vision? If so, how?*

Yes, by inducing high astigmatism

*Does Terrien’s render the cornea thinner than normal?*

Yes

*Is the thinned Terrien’s cornea at risk for rupture with mild trauma?*

Yes

*Do these pt need to wear protective eyewear?*

Yes
Speaking of Terrien’s…
*Is it a common, or an uncommon condition?*
Uncommon

*Does it have a gender predilection?*
While once thought to be more common in males, it is now considered equal

*Is it unilateral, or bilateral?*
Bilateral, although involvement can be asymmetric

*There is a lookalike condition--rarer than Terrien’s--which differs in that 1) it is more likely to occur in children, and 2) it is inflammatory in nature. What is it?*

Intact (Terrien’s is a stromal, not epithelial condition)

*Does it affect vision? If so, how?*
Yes, by inducing high astigmatism

*Does Terrien’s render the cornea thinner than normal?*
Yes

*Is the thinned Terrien’s cornea at risk for rupture with mild trauma?*
Yes

*Do these pt need to wear protective eyewear?*
Yes

---

Mooren’s, Terrien’s marginal, Sarcoid, SLE
Speaking of Terrien’s…

*Is it a common, or an uncommon condition?*

Uncommon

*Does it have a gender predilection?*

While once thought to be more common in males, it is now considered equal

*Is it unilateral, or bilateral?*

Bilateral, although involvement can be asymmetric

*There is a lookalike condition—rarer than Terrien’s—which differs in that 1) it is more likely to occur in children, and 2) it is inflammatory in nature. What is it?*

**Fuchs’ superficial marginal keratitis**

Is the involved epithelium absent, or intact?

Intact (Terrien’s is a stromal, not epithelial condition)

*Does it affect vision? If so, how?*

Yes, by inducing high astigmatism

*Does Terrien’s render the cornea thinner than normal?*

Yes

*Is the thinned Terrien’s cornea at risk for rupture with mild trauma?*

Yes

*Do these pt need to wear protective eyeware?*

Yes
All of the following are true concerning Mooren’s ulcer except (could be more than one):

- Cause is unknown
- One clinical type presents as a unilateral PUK in the elderly
- The other type presents as bilateral disease in young African women
- Patients with the ‘African’ variety often have a history of systemic helminth infection
- Mooren’s responds readily to aggressive local therapy
All of the following are true concerning Mooren’s ulcer except (could be more than one):

- Cause is unknown  
- One clinical type presents as a unilateral PUK in the elderly
- The other type presents as bilateral disease in young African women
- Patients with the ‘African’ variety often have a history of systemic helminth infection
- Mooren’s responds poorly to aggressive local therapy
All of the following are true concerning Mooren’s ulcer except (could be more than one):

- Cause is unknown  
- One clinical type presents as a unilateral PUK in the elderly  
- The other type presents as bilateral disease in young African women  
- Patients with the ‘African’ variety often have a history of systemic helminth infection  
- Mooren’s responds readily to aggressive local therapy

Mooren’s ulcer is a  PUK.
All of the following are true concerning Mooren’s ulcer except (could be more than one):

- Cause is unknown  \( T \)
- One clinical type presents as a unilateral PUK in the elderly  \( T \) men
- The other type presents as bilateral disease in young African women
- Patients with the ‘African’ variety often have a history of systemic helminth infection  \( T \) poorly
- Mooren’s responds readily to aggressive local therapy

Mooren’s ulcer is a chronic, progressive PUK.
All of the following are true concerning Mooren’s ulcer *except* (could be more than one):

- Cause is unknown **T**
- One clinical type presents as a unilateral PUK in the elderly **T**
- The other type presents as bilateral disease in young African women
- Patients with the ‘African’ variety often have a history of systemic helminth infection **T poorly**
- Mooren’s responds readily to aggressive local therapy

Mooren’s ulcer is a chronic, progressive PUK. By definition, the cause is unknown. It starts, progresses, and then finally...
All of the following are true concerning Mooren’s ulcer *except* (could be more than one):

- Cause is unknown  **T**
- One clinical type presents as a unilateral PUK in the elderly  **T**  **men**
- The other type presents as bilateral disease in young African women  **men**
- Patients with the ‘African’ variety often have a history of systemic helminth infection  **T**  **poorly**
- Mooren’s responds readily to aggressive local therapy  **A**

Mooren’s ulcer is a chronic, progressive PUK. By definition, the cause is unknown. It starts sectorally, progresses circumferentially, then finally centrally.
All of the following are true concerning Mooren’s ulcer \textit{except} (could be more than one):
\begin{itemize}
  \item Cause is unknown \checkmark
  \item One clinical type presents as a unilateral PUK in the elderly \checkmark men
  \item The other type presents as bilateral disease in young African women
  \item Patients with the ‘African’ variety often have a history of systemic helminth infection \checkmark poorly
  \item Mooren’s responds readily to aggressive local therapy
\end{itemize}

Mooren’s ulcer is a chronic, progressive PUK. By definition, the cause is unknown. It starts sectorally, progresses circumferentially, then finally centrally. The leading edge is and .
All of the following are true concerning Mooren’s ulcer except (could be more than one):

- Cause is unknown \( T \)
- One clinical type presents as a unilateral PUK in the elderly \( T \) \( \text{men} \)
- The other type presents as bilateral disease in young African women
- Patients with the ‘African’ variety often have a history of systemic helminth infection \( T \) \( \text{poorly} \)
- Mooren’s responds readily to aggressive local therapy

Mooren’s ulcer is a chronic, progressive PUK. By definition, the cause is unknown. It starts sectorally, progresses circumferentially, then finally centrally. The leading edge is undermined and de-epithelialized.
Mooren’s ulcer is a chronic, progressive PUK. By definition, the cause is unknown. It starts sectorally, progresses circumferentially, then finally centrally. The leading edge is undermined and de-epithelialized. Two clinical varieties are recognized: Unilateral disease in the elderly, and the rapidly progressive, severe bilateral disease that strikes young African men. These men usually are seropositive for helminthic disease.
All of the following are true concerning Mooren’s ulcer *except* (could be more than one):

- Cause is unknown  **T**
- One clinical type presents as a unilateral PUK in the elderly  **men**
- The other type presents as bilateral disease in young African women
- Patients with the ‘African’ variety often have a history of systemic helminth infection  **poorly**
- Mooren’s responds readily to aggressive local therapy

Mooren’s ulcer is a chronic, progressive PUK. By definition, the cause is unknown. It starts sectorally, progresses circumferentially, then finally centrally. The leading edge is undermined and de-epithelialized. Two clinical varieties are recognized: Unilateral disease in the elderly, and the rapidly progressive, severe bilateral disease that strikes young African men. These men usually are seropositive for helminthic disease.

The plethora of treatments stands as gloomy testimony to the relative ineffectiveness of each. Ocular modalities include topical steroids, BCL, *n-acetylcysteine* drops, topical cyclosporine and conjunctival resection. Quite often, systemic immunosuppressives are needed: steroids, MTX and/or cyclophosphamide.