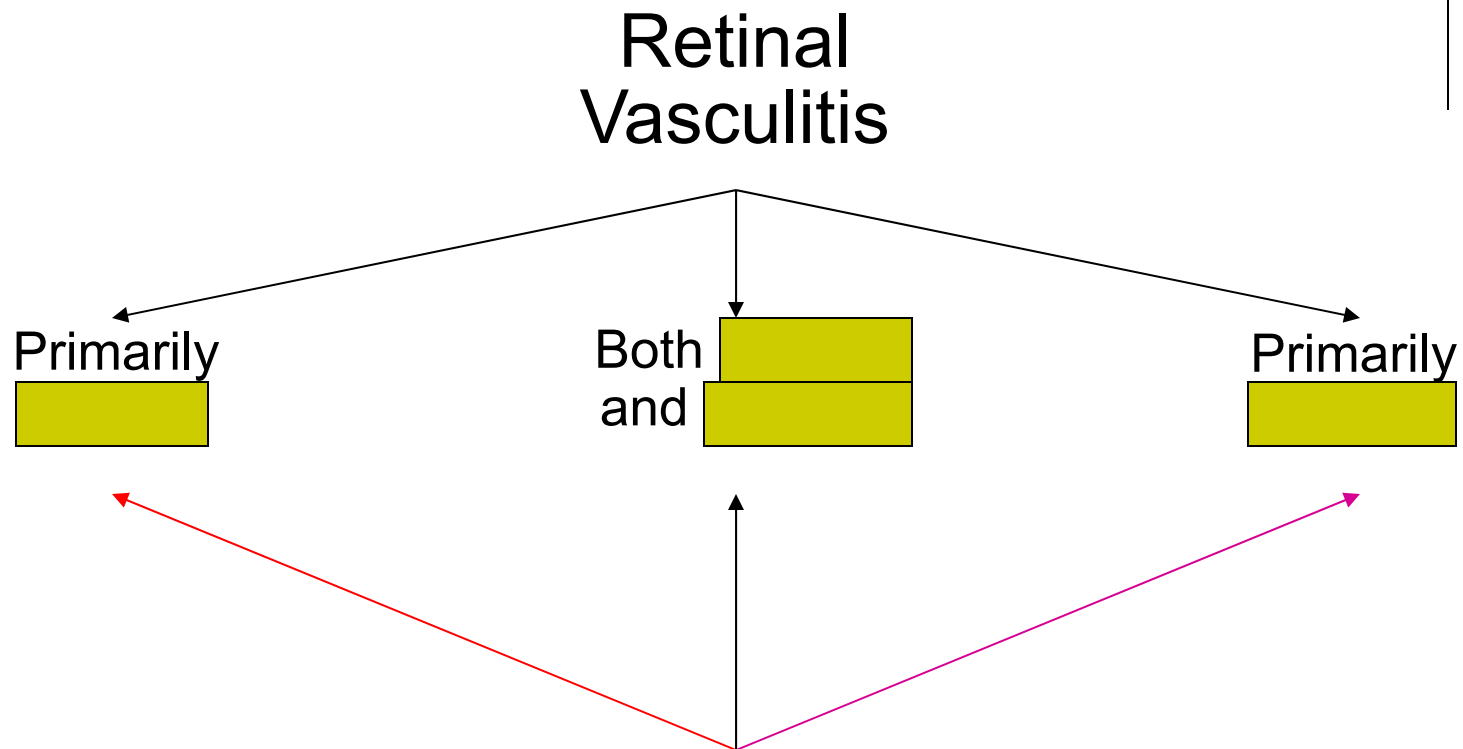


Retinal Vasculitis

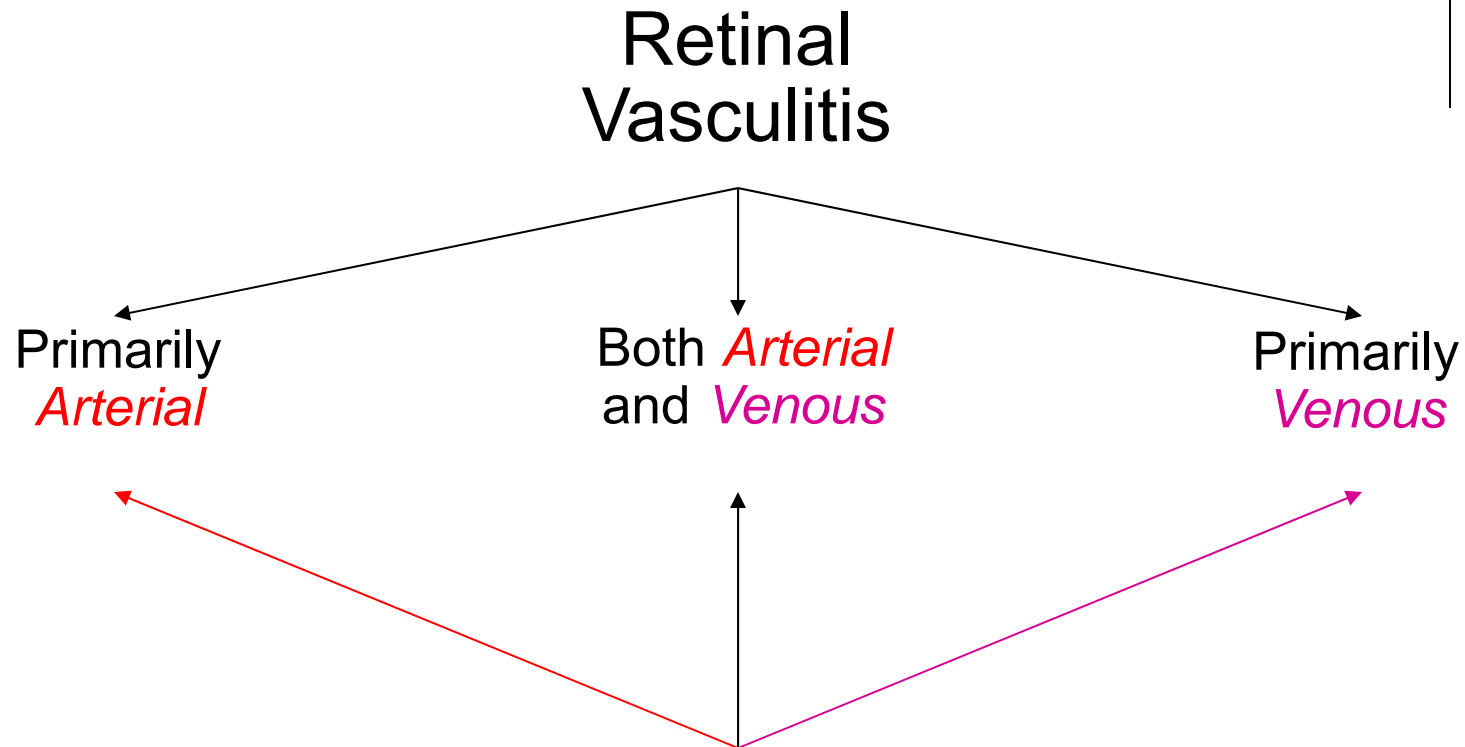
1



Per Stephen Foster MD: When confronted with a retinal vasculitis, the first step is to determine to which of these categories it belongs



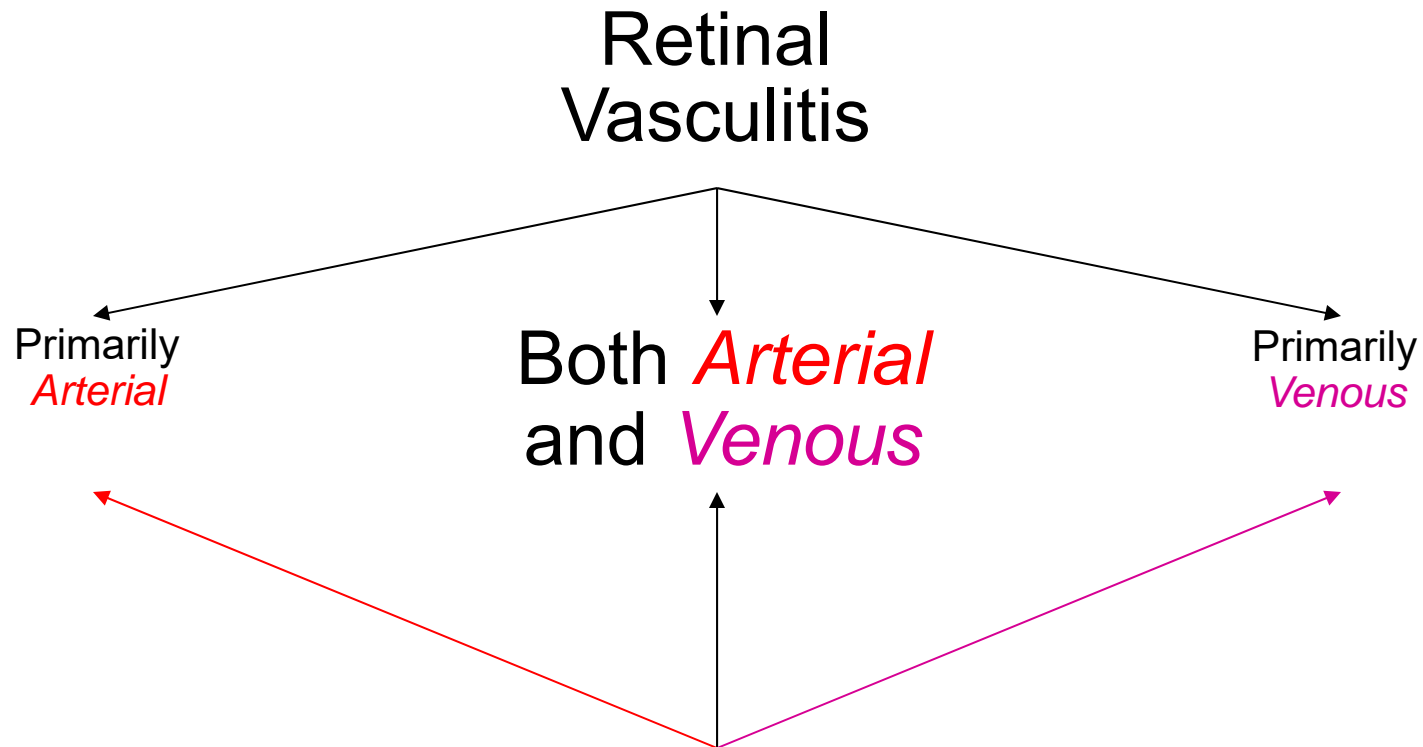
Retinal Vasculitis



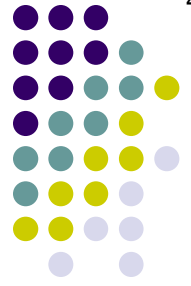
Per Stephen Foster MD: When confronted with a retinal vasculitis, the first step is to determine to which of these categories it belongs



Retinal Vasculitis



(Note: The BCSC *Retina* book asserts that simultaneous involvement of both retinal arterioles and venules is the rule, and that isolated disease of either is distinctly uncommon)



Retinal Vasculitis

Retinal Vasculitis

Primarily
Arterial:

Think of these **3** diseases:

- ?
- ?
- ?

Both *Arterial*
and *Venous*

Primarily
Venous



Retinal Vasculitis

Retinal Vasculitis

Primarily
Arterial:

Think of these **3** diseases:

- **SLE** (*systemic lupus erythematosus*)
- **PAN** (*polyarteritis nodosa*)
- **Churg-Strauss**

Both *Arterial*
and *Venous*

Primarily
Venous



Retinal Vasculitis

Retinal Vasculitis

Primarily
Arterial:

Think of these **2** diseases:

SLE

PAN

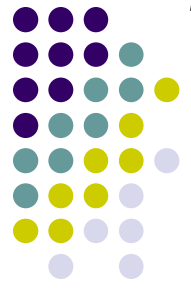
~~Churg-Strauss~~

Both *Arterial*
and *Venous*

Primarily
Venous

Neither the *Retina* nor *Uveitis* book addresses Churg-Strauss, so with all due respect to Dr. Foster, we will not consider it further. Just file it away as a very rare cause of retinal arteritis.

Retinal Vasculitis



7

Retinal Vasculitis

Primarily
Arterial:

Think of these **2** diseases:

- SLE
- PAN

Both *Arterial*
and *Venous*

Primarily
Venous:

Think of these **3** diseases:

- ?
- ?
- ?



Retinal Vasculitis

Retinal Vasculitis

Primarily
Arterial:

Think of these **2** diseases:

- SLE
- PAN

Both *Arterial*
and *Venous*

Primarily
Venous:

Think of these **3** diseases:

- Sarcoid
- Multiple sclerosis
- Birdshot



Retinal Vasculitis

Retinal Vasculitis

Primarily
Arterial:

Think of these **2** diseases:

SLE

PAN

Both *Arterial*
and *Venous*

Primarily
Venous:

Think of these **2** diseases:

Sarcoid

Multiple sclerosis

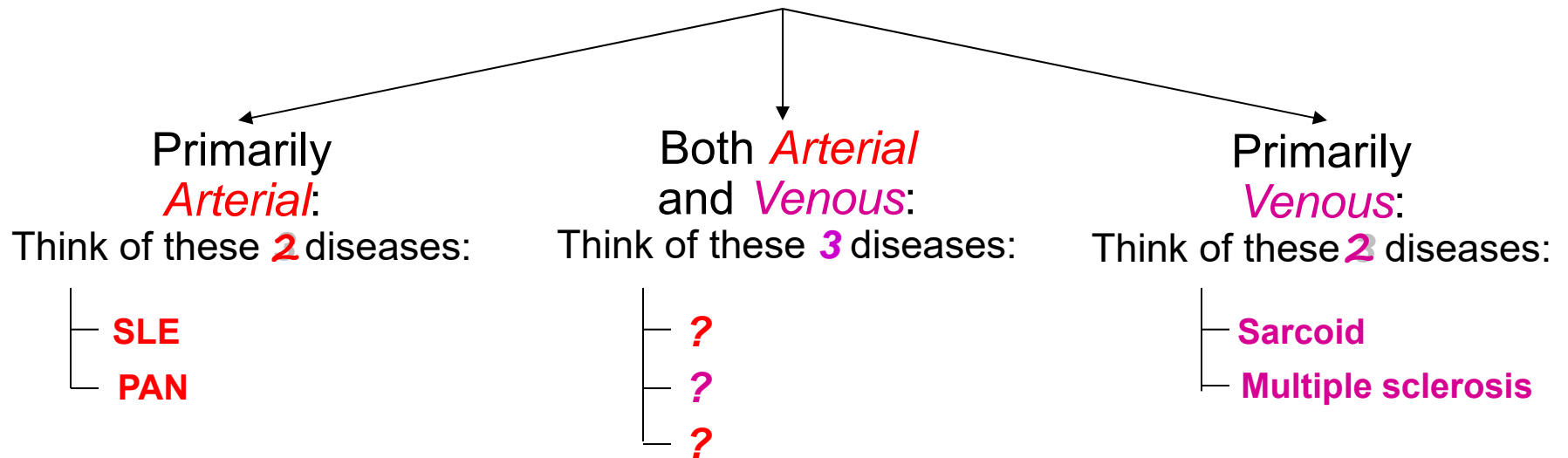
~~Birdshot~~

Birdshot is addressed in detail in the set entitled White Dot Syndromes



Retinal Vasculitis

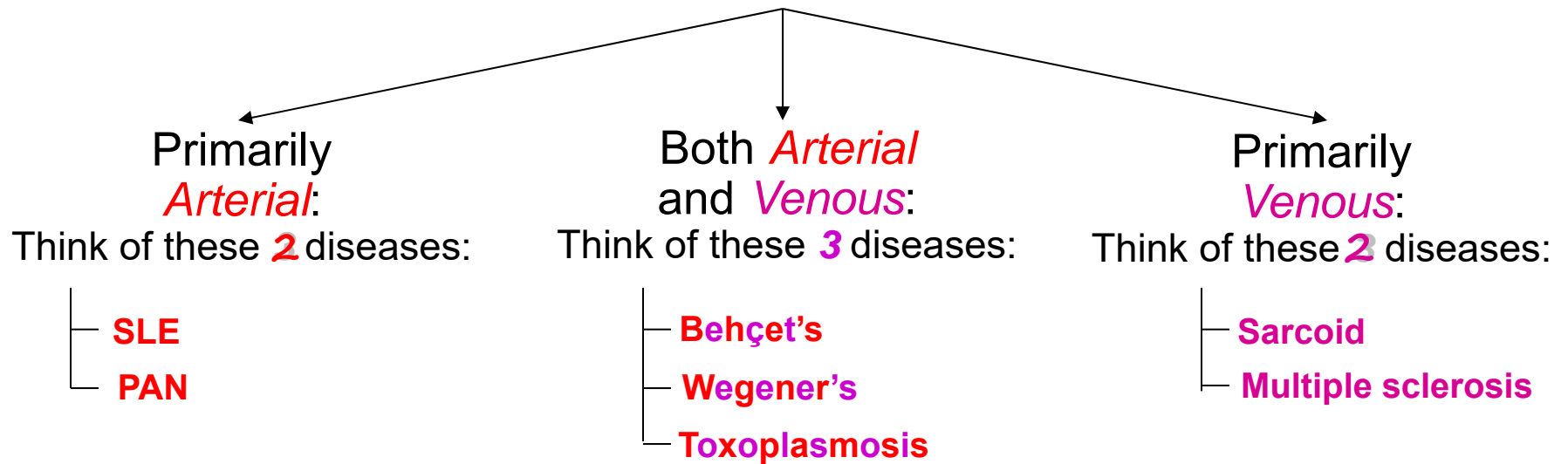
Retinal Vasculitis





Retinal Vasculitis

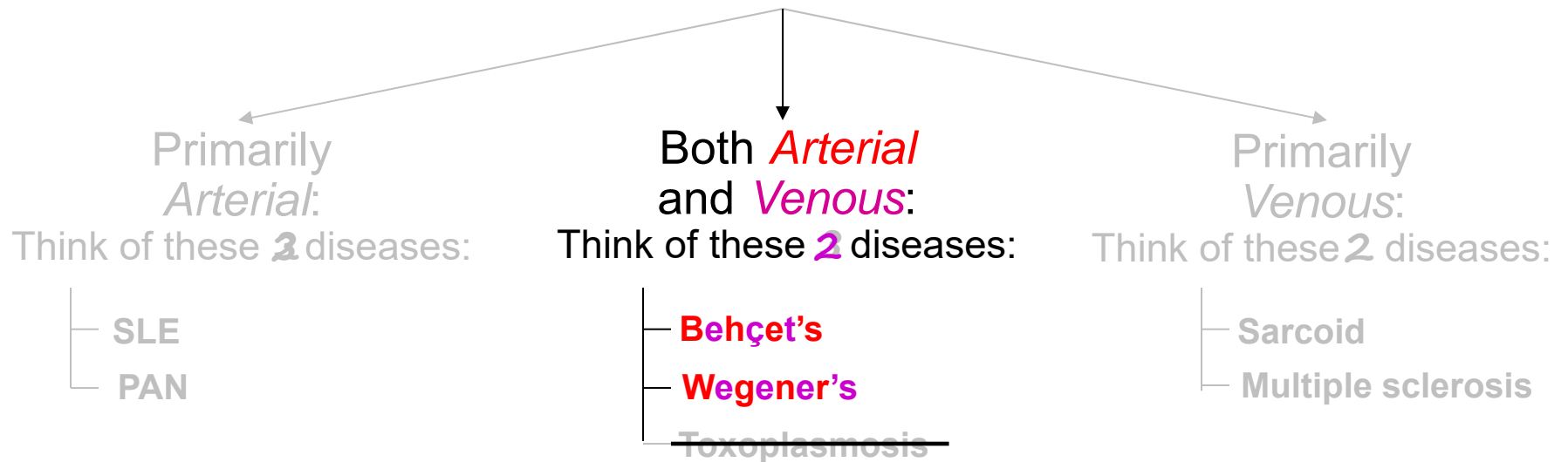
Retinal Vasculitis



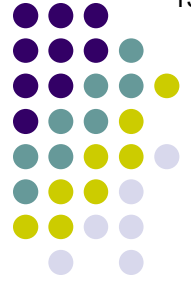


Retinal Vasculitis

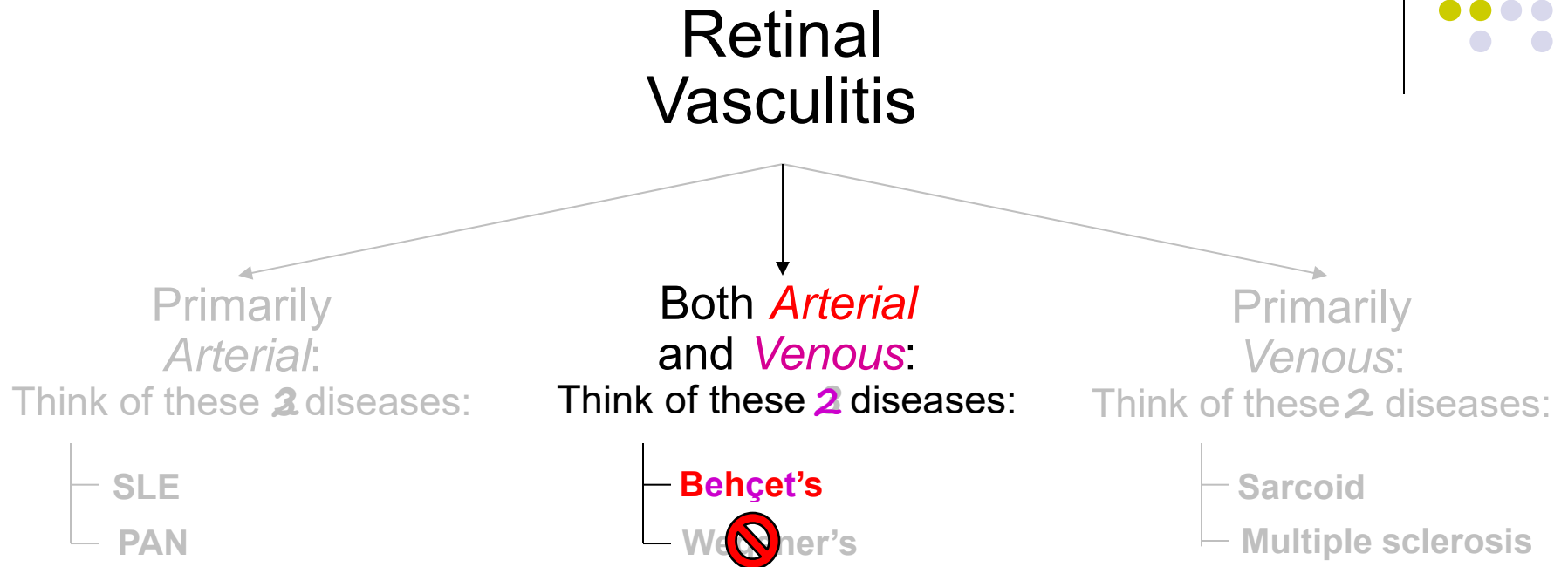
Retinal Vasculitis



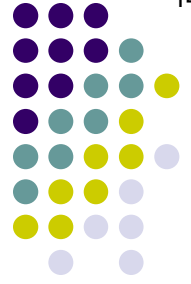
Toxoplasmosis is addressed in detail in its own slide-set



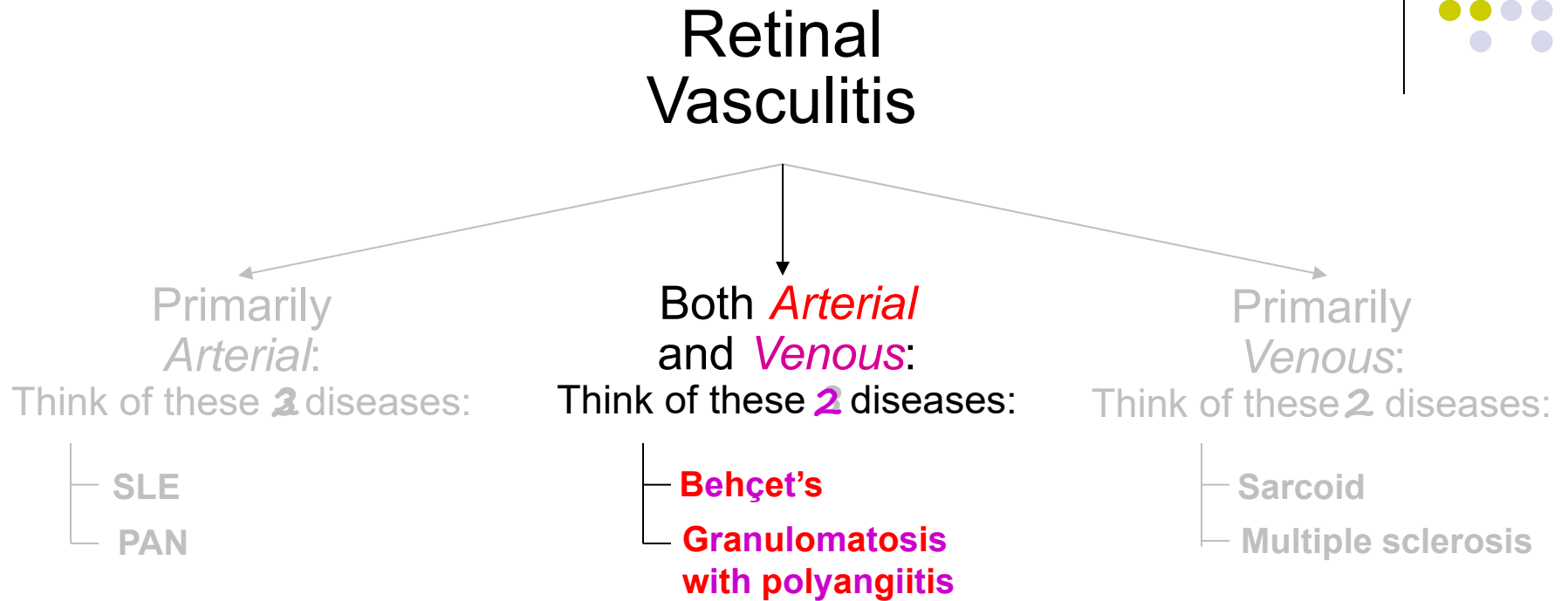
Retinal Vasculitis



*The term 'Wegener's granulomatosis' has fallen out of favor.
What term is preferred in its place?*



Retinal Vasculitis

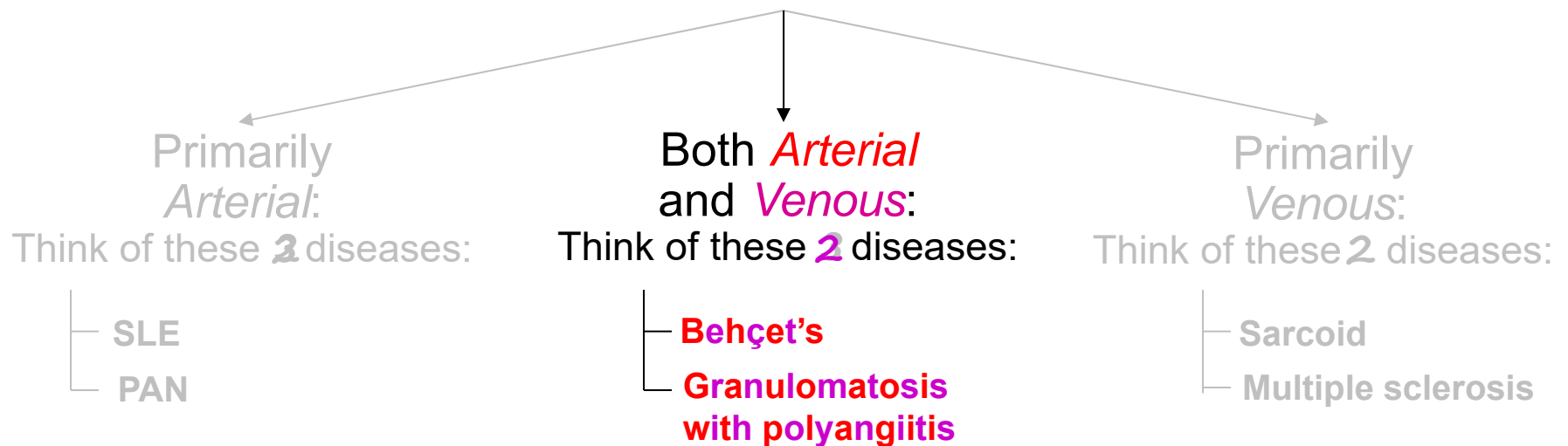


*The term 'Wegener's granulomatosis' has fallen out of favor.
What term is preferred in its place?
'Granulomatosis with polyangiitis'*



Retinal Vasculitis

Retinal Vasculitis



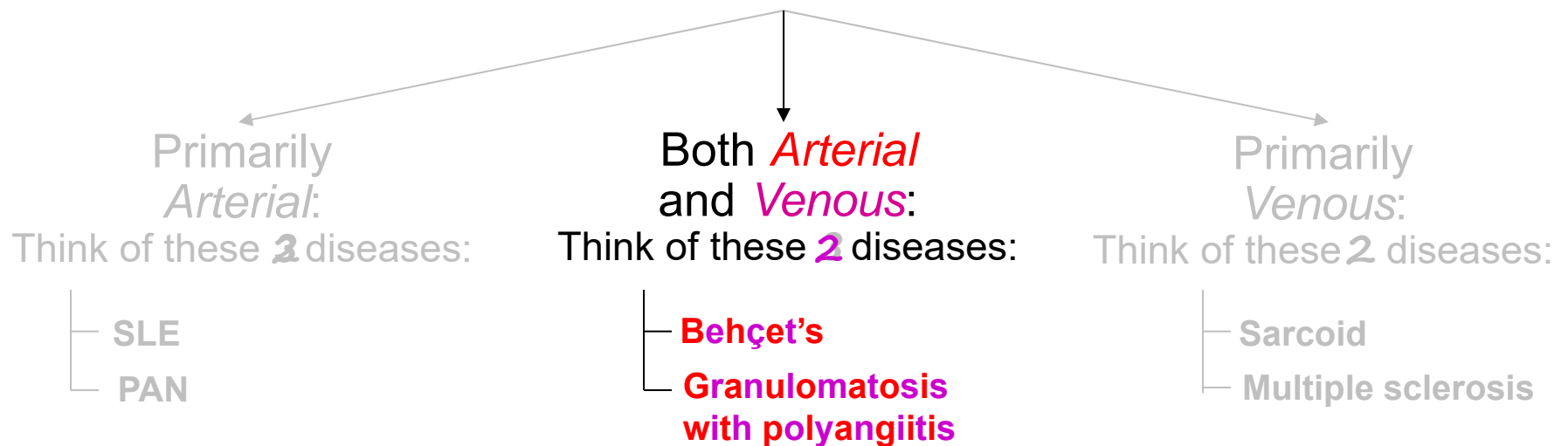
The term '*Wegener's granulomatosis*' has **fallen out of favor**.

What is the reason for this? Why is the name 'Wegener's granulomatosis' no longer preferred?



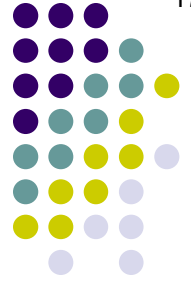
Retinal Vasculitis

Retinal Vasculitis



The term '*Wegener's granulomatosis*' has **fallen out of favor**.

What is the reason? Why is the name 'Wegener's granulomatosis' no longer preferred?
 'Granulomatosis with polyangiitis' Because Dr. Wegener was a Nazi



Retinal Vasculitis

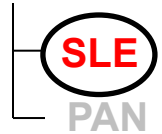
Retinal Vasculitis

Who is the classic lupus pt?

Prim

Arte

Think of these



y
s:
diseases:

sclerosis



Retinal Vasculitis

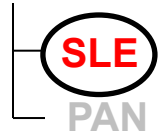
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Prim

Arte

Think of these



y
s:
diseases:

sclerosis



Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?

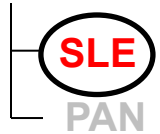
A woman of childbearing age

Is there a racial predilection?

Prim

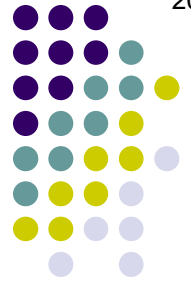
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Think of these



y
s:
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Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?

A woman of childbearing age

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Arte

Think of these

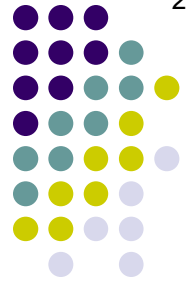


Is there a racial predilection?

Yes, [] and [] women are at greater risk than are [] women

y
s:
diseases:

sclerosis



Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?

A woman of childbearing age

Is there a racial predilection?

Yes, black and Hispanic women are at greater risk than are white women

Prim

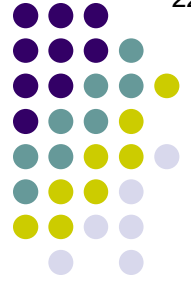
Arte

Think of these



y
s:
diseases:

sclerosis



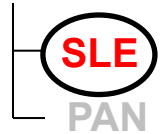
Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

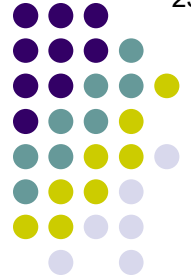
Prim
Arter

Think of the:



Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?

--
--



Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Prim
Arter

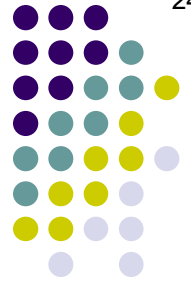
Think of the:

SLE
PAN

Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?

- Skin lesions (eg, the classic malar rash)
- Arthralgias

Retinal Vasculitis



SLE: Malar rash



Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?

A woman of childbearing age

Prim

Arto

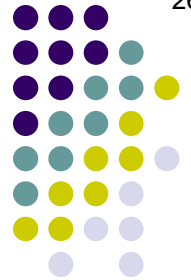
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Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?

- Skin lesions (eg, the classic malar rash)
- Arthralgias

What proportion of pts will manifest ophthalmic findings?



Retinal Vasculitis

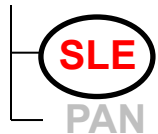
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Prim

Arto

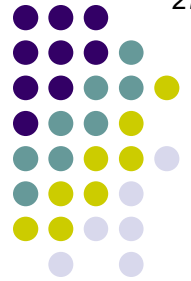
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Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?

- Skin lesions (eg, the classic malar rash)
- Arthralgias

What proportion of pts will manifest ophthalmic findings?
About half



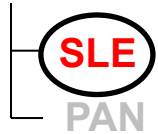
Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Prim
Arter

Think of the:



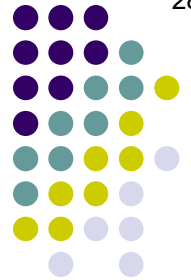
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What proportion of pts will manifest ophthalmic findings?
About half

Lupus' ophthalmic manifestations are protean. Which two are most common?

-
-



Retinal Vasculitis

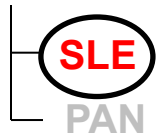
Retinal Vasculitis

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Arto

Think of the:

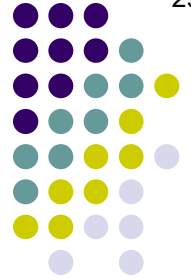


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- Skin lesions (eg, the classic malar rash)
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What proportion of pts will manifest ophthalmic findings?
About half

Lupus' ophthalmic manifestations are protean. Which two are most common?
--Lid-skin involvement in a rash
--Sjögren syndrome



Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?

A woman of childbearing age

Is there a racial predilection?

Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?

Prim

Arte

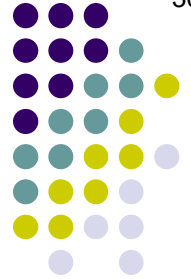
Think of these

SLE

PAN

y
s:
diseases:

sclerosis



Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?

A woman of childbearing age

Is there a racial predilection?

Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?

About 3-30%

Prim

Arte

Think of these

SLE

PAN

y
s:
diseases:

sclerosis



Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?

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Prim

Arte

Think of these

SLE

PAN

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What proportion of lupus pts manifest retinal findings?

About **3-30%**

This range represents a compromise between inconsistencies in the *BCSC* books:

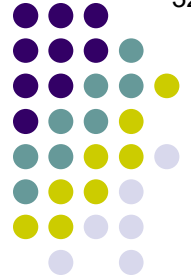
--Rate of lupus retinopathy per the *Retina* book: 3-10%

--Rate per the *Uveitis* book: 3-29%

(I rounded to 30 to make it easier to remember)

y
s:
diseases:

sclerosis



Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?

A woman of childbearing age

Prim

Arte

Think of these

SLE

PAN

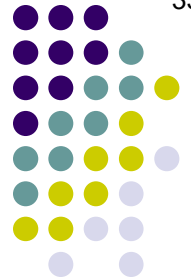
Is there a racial predilection?

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*What proportion of lupus pts manifest **retinal findings**?*

About 3-30%

What retinal findings may occur?



Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?

A woman of childbearing age

Prim

Arte

Think of these

SLE

PAN

Is there a racial predilection?

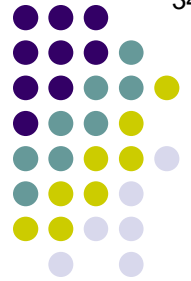
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*What proportion of lupus pts manifest **retinal findings**?*

About 3-30%

What retinal findings may occur?

Occlusive events: Asymptomatic cotton wool spots
if 'lucky,' an infarcted macula if not



Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?

A woman of childbearing age

Prim

Arte

Think of these

SLE

PAN

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*What proportion of lupus pts manifest **retinal findings**?*

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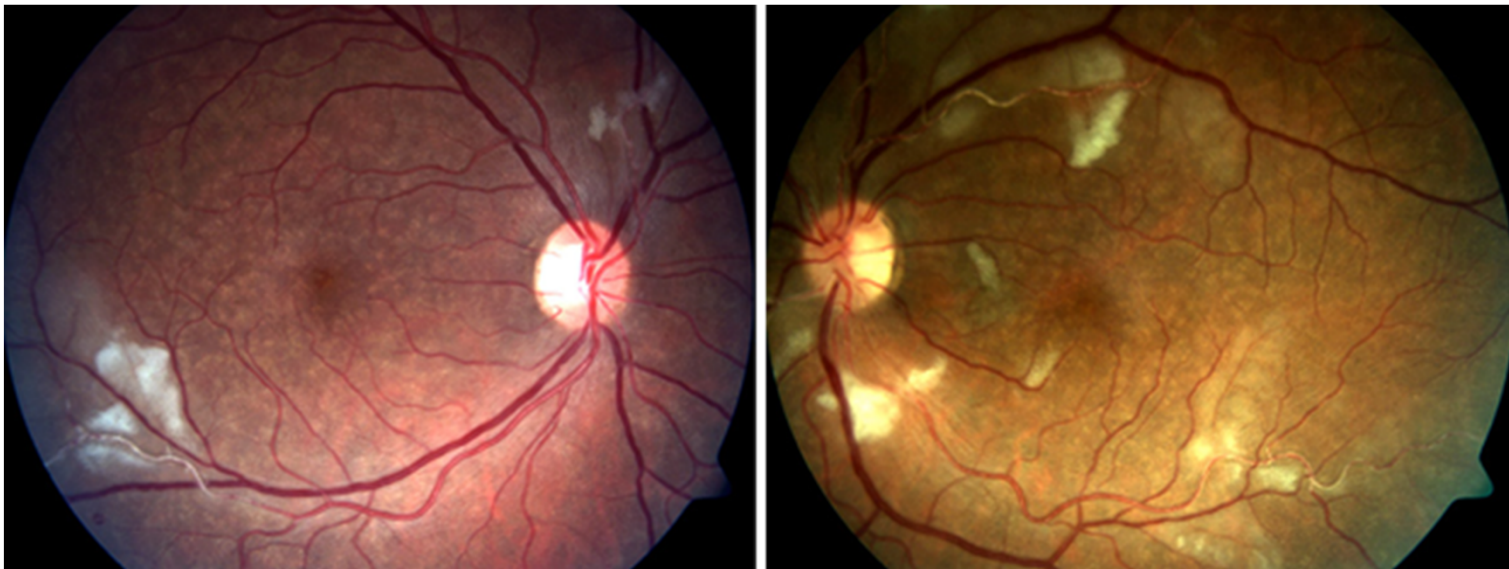
CWS are **the** classic manifestation of lupus retinopathy!

Occlusive events: Asymptomatic if 'lucky,' an infarcted macula if not **cotton wool spots**

(No question—proceed when ready)

Retinal Vasculitis

35



SLE: CWS



Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?

A woman of childbearing age

Prim

Arte

Think of these

SLE

PAN

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CWS are **the** classic manifestation of lupus retinopathy!

Occlusive events: Asymptomatic cotton wool spots if 'lucky,' an **infarcted macula** if not

Is macular infarction also a classic manifestation of lupus retinopathy?



Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?

A woman of childbearing age

Prim

Arte

Think of these

SLE

PAN

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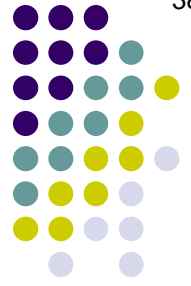
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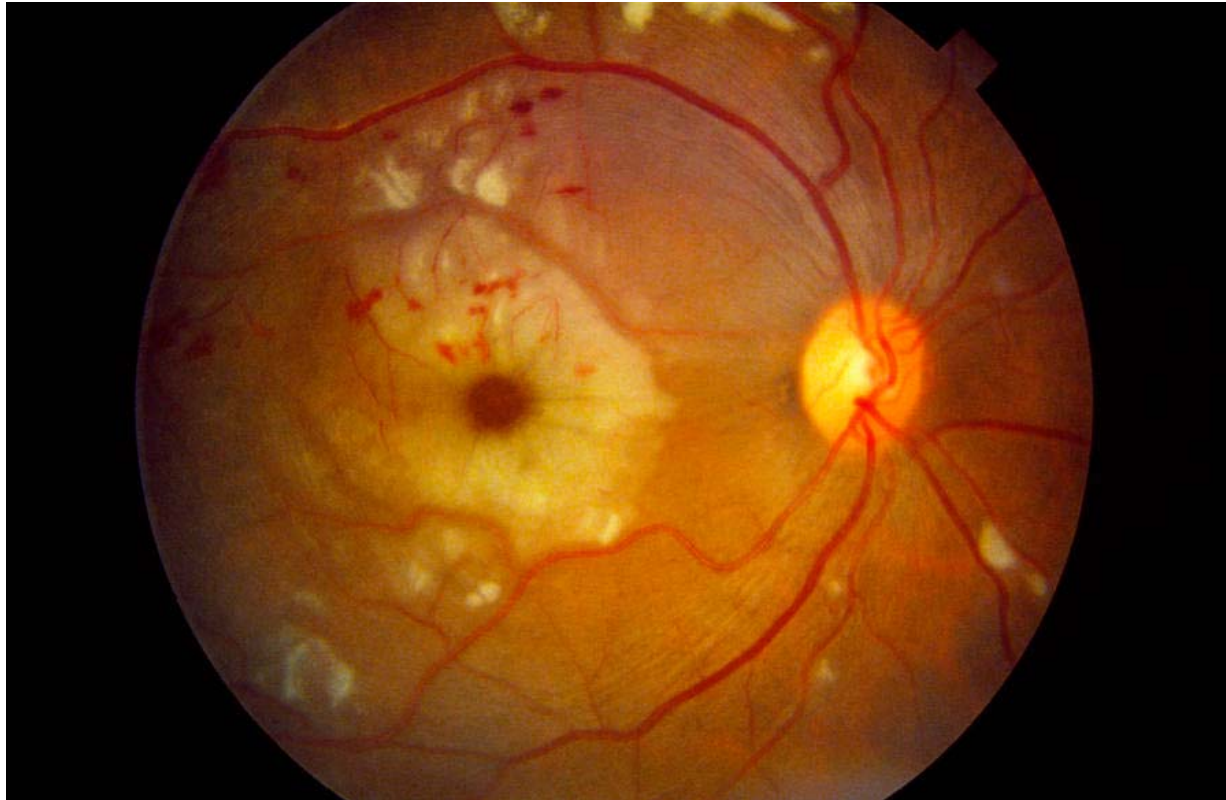
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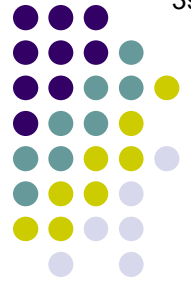
Thankfully no—it is quite rare



Retinal Vasculitis



SLE: Macular infarction



Retinal Vasculitis

Retinal Vasculitis

Prim

Who is the classic lupus pt?
A woman of childbearing age

What is the fundamental difference between the pathophysiology of CWS and macular infarction?

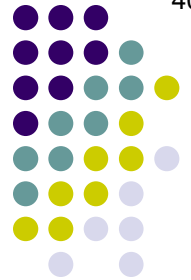
Th

CWS are **the** classic manifestation of lupus retinopathy!

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Retinal Vasculitis

Retinal Vasculitis

Prim

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A woman of childbearing age

Th

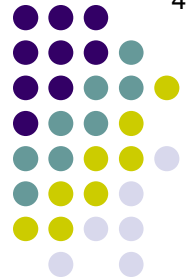
What is the fundamental difference between the pathophysiology of CWS and macular infarction?
It's the size of the vessel involved. CWS result from infarction of tiny end-arterioles of the arterial tree, whereas macular infarction involves the relatively ginormous central retinal artery, or an immediate branch thereof.

CWS are **the** classic manifestation of lupus retinopathy!

Occlusive events: Asymptomatic if 'lucky,' an **infarcted macula** if not

cotton wool spots

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Retinal Vasculitis

Retinal Vasculitis

Prim

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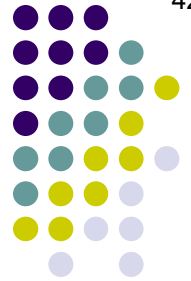
How does this explain the fact that CWS are vastly more common than macular infarction?

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Retinal Vasculitis

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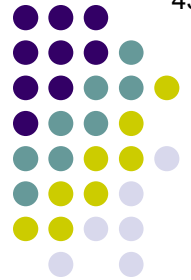
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How does this explain the fact that CWS are vastly more common than macular infarction?
It's because lupus is a microvasculopathy, and thus much more likely to affect end-arterioles

CWS are **the** classic manifestation of lupus retinopathy!

Occlusive events: Asymptomatic if 'lucky,' an **infarcted macula** if not **cotton wool spots**

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Retinal Vasculitis

Retinal Vasculitis

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A woman of childbearing age

Is there a racial predilection?

Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?

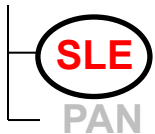
About 3-30%

Why is lupus-associated retinal arteritis an ominous finding?

Prim

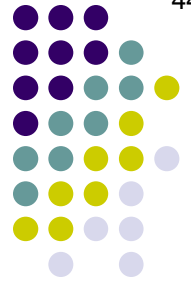
Arte

Think of these



y
s:
diseases:

sclerosis



Retinal Vasculitis

Retinal Vasculitis

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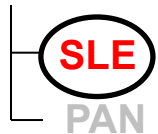
Why is lupus-associated retinal arteritis an ominous finding?

It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality

Prim

Arte

Think of these



y
s:
diseases:

sclerosis



Retinal Vasculitis

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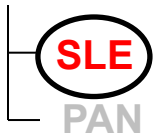
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Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?

Prim

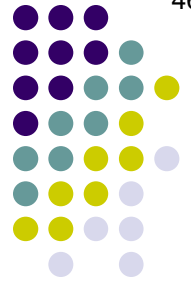
Arte

Think of these



y
s:
diseases:

sclerosis



Retinal Vasculitis

Retinal Vasculitis

Who is the classic lupus pt?

A woman of childbearing age

Is there a racial predilection?

Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?

About 3-30%

Why is lupus-associated retinal arteritis an ominous finding?

It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality

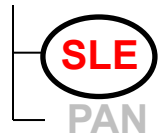
Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?

With the big dogs: Plasmapheresis + IV cyclophosphamide acutely

Prim

Arte

Think of these



y
s:
diseases:

sclerosis



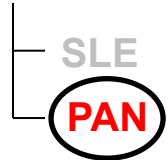
Retinal Vasculitis

Retinal Vasculitis

Primary *In a nutshell, what is the pathophysiology of PAN?*

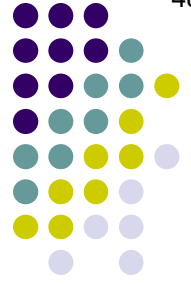
Arteritis

Think of these



ily
S:
diseases:

sclerosis



Retinal Vasculitis

Retinal Vasculitis

Primary

Arteritis

Think of these

SLE

PAN

In a nutshell, what is the pathophysiology of PAN?

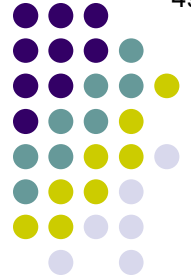
Subacute episodes of focal necrotizing inflammation of arteries

family

syndromes:

systemic diseases:

arteriosclerosis



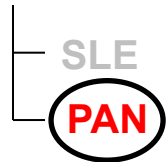
Retinal Vasculitis

Retinal Vasculitis

Primary

Arteritis

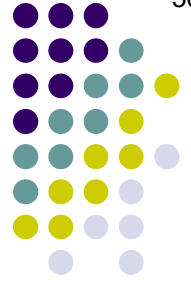
Think of these



In a nutshell, what is the pathophysiology of PAN?

Subacute episodes of focal necrotizing inflammation of arteries

Once considered a single entity, PAN is now subdivided into two conditions—what are they?



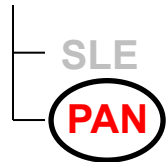
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Think of these



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Once considered a single entity, PAN is now subdivided into two conditions—what are they?
 'Classic' PAN, and microscopic polyangiitis (MP)



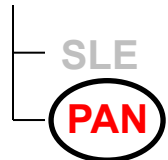
Retinal Vasculitis

Retinal Vasculitis

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Arteritis

Think of these

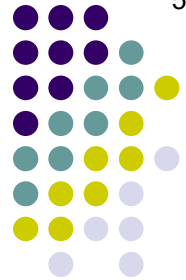


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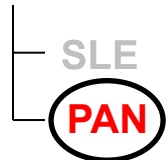


Retinal Vasculitis

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Primary *In a nutshell, what is the pathophysiology of PAN?*
 Arteritis Subacute episodes of focal necrotizing inflammation of arteries

Think of these



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 'Classic' PAN, and microscopic polyangiitis (MP)

What is the difference between the two?
 Classic PAN affects medium and small arteries, whereas MP affects smaller arteries



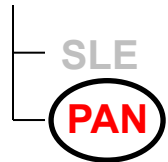
Retinal Vasculitis

Retinal Vasculitis

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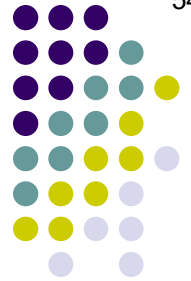
Subacute episodes of focal necrotizing inflammation of arteries

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



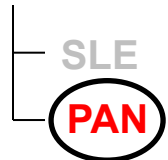
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What is the difference between the two?

Classic PAN affects medium and **small arteries**, whereas MP affects **smaller arteries**

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

Rule of thumb: Classic PAN only affects arteries large enough to be named, whereas MP only affects vessels smaller than that



Retinal Vasculitis

Retinal Vasculitis

Primary

Arteritis

Think of these

SLE

PAN

In a nutshell, what is the pathophysiology of PAN?

Subacute episodes of focal necrotizing inflammation of arteries

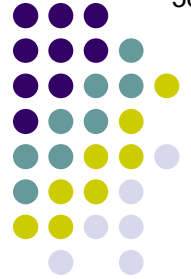
Is it a common, or uncommon condition?

family

dis:

diseases:

sclerosis



Retinal Vasculitis

Retinal Vasculitis

Primary

Arteritis

Think of these

SLE

PAN

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Subacute episodes of focal necrotizing inflammation of arteries

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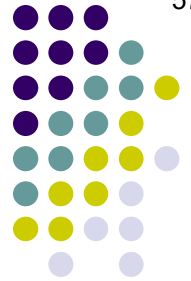
Uncommon

ily

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Uncommon

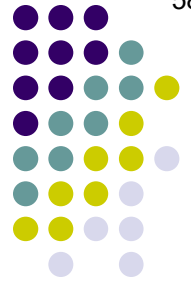
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ily

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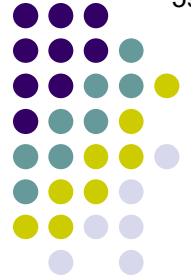
A male between 40 and 60 years old

ily

S:

diseases:

sclerosis



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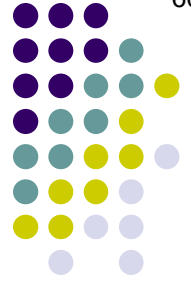
Is there a racial predilection?

ily

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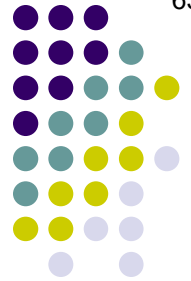
Hepatitis

ily

S:

diseases:

sclerosis



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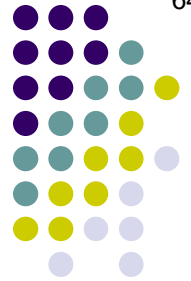
Hepatitis B

ily

S:

diseases:

sclerosis



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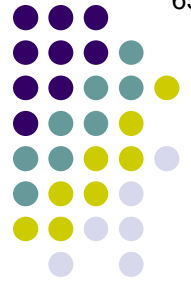
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family

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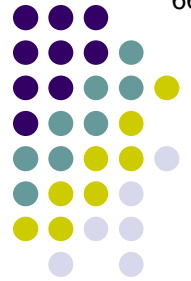
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A About 20%

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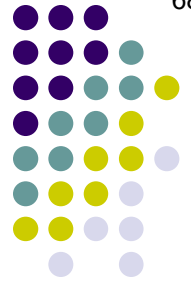
Hepatitis B

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PAN is strongly associated with seropositivity for what virus?

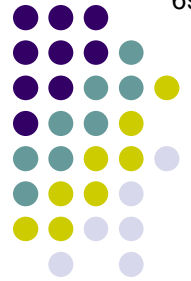
Hepatitis B

ily

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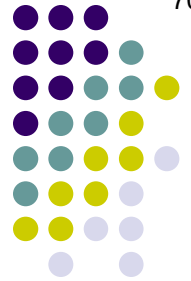
Hepatitis B

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What is the 5 year survival rate of treated PAN?

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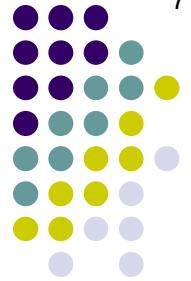
Hepatitis B

ily

s:

diseases:

sclerosis



Retinal Vasculitis

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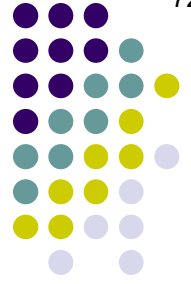
Hepatitis B

ily

s:

diseases:

sclerosis



Retinal Vasculitis

Retinal Vasculitis

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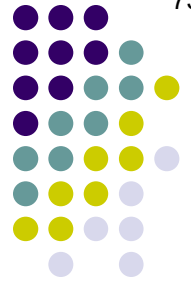
Is there a racial predisposition?

No

PAN is strongly associated with

Hepatitis B

What is the typical ocular presentation of PAN? (Head's up: It's probably not what you think.)



Retinal Vasculitis

Retinal Vasculitis

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Peripheral ulcerative keratitis (PUK). It can cause scleritis (both anterior and posterior) as well.

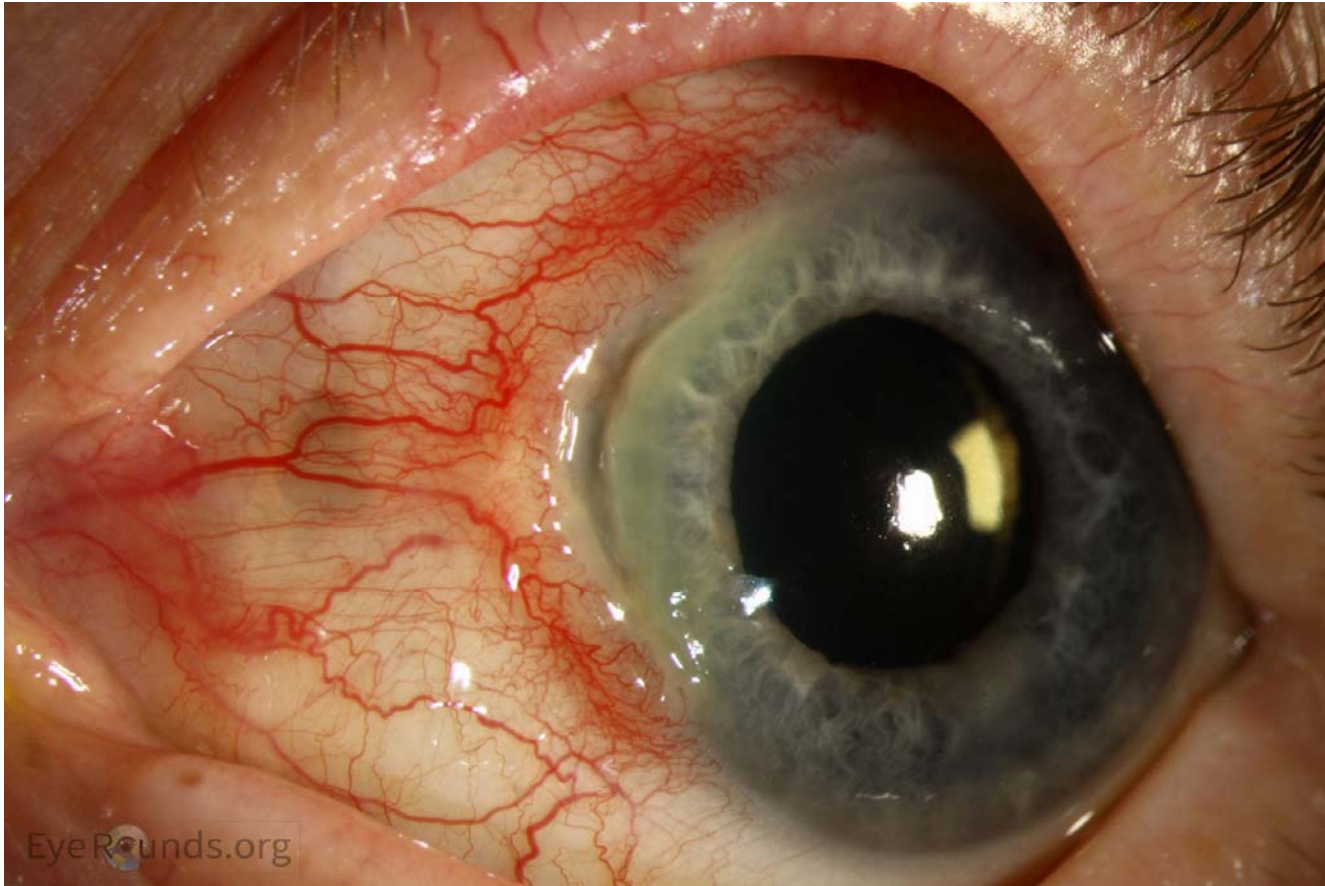
family

disorders:

connective tissue diseases:

scleritis

Retinal Vasculitis

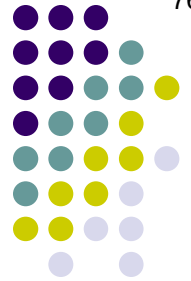


PUK (full disclosure: I don't think it's 2ndry to PAN)

Retinal Vasculitis



Scleritis (same disclosure)



Retinal Vasculitis

Retinal Vasculitis

Primary

Arteritis

Think of these

SLE

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What proportion of PAN pts develop ocular involvement?

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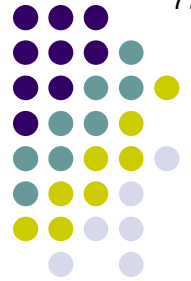
PAN is strongly associated with

Hepatitis B

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OK fine. What is the typical posterior-pole presentation of PAN?



Retinal Vasculitis

Retinal Vasculitis

Primary

Arteritis

Think of these

SLE

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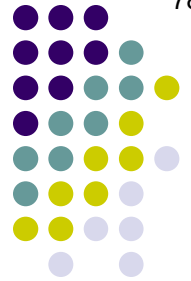
Hepatitis B

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OK fine. What is the typical posterior-pole presentation of PAN?

In a manner consistent with severe HTN



Retinal Vasculitis

Retinal Vasculitis

Primary

Arteritis

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Advance to the next slide to see what this entails...

PAN is strongly associated with Hepatitis B

OK fine. What is the typical posterior pole presentation of PAN?

In a manner consistent with severe HTN

Retinal Vasculitis

Acute, severe HTN



*What process mediates damage
caused by acute, severe HTN?*



?



Retinal Vasculitis

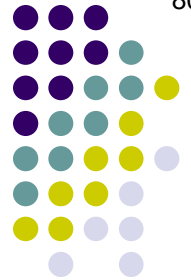
Acute, severe HTN

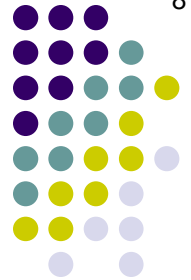


*What process mediates damage
caused by acute, severe HTN?*



Vasospasm
of arterioles





Retinal Vasculitis

Acute, severe HTN



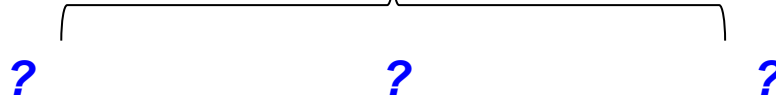
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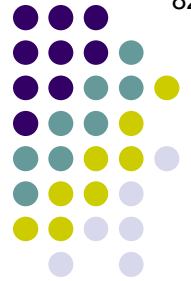


Vasospasm
of arterioles



What categories of pathology can result?





Retinal Vasculitis

Acute, severe HTN



*What process mediates damage
caused by acute, severe HTN?*



Vasospasm
of arterioles



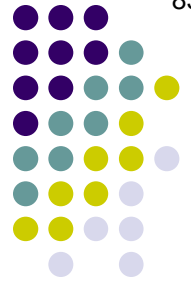
What categories of pathology can result?



Retinopathy

Choroidopathy

Optic Neuropathy



Retinal Vasculitis

Acute, severe HTN



*What process mediates damage
caused by acute, severe HTN?*



Vasospasm
of arterioles



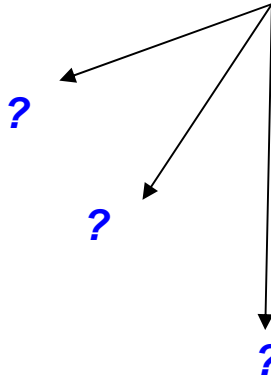
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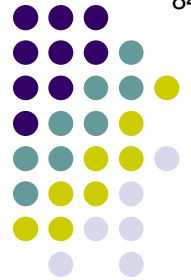


Retinopathy

Choroidopathy

Optic Neuropathy





Retinal Vasculitis

Acute, severe HTN

*What process mediates damage
caused by acute, severe HTN?*

Vasospasm
of arterioles

What categories of pathology can result?

Retinopathy

Choroidopathy

Optic Neuropathy

Cotton-
wool spots

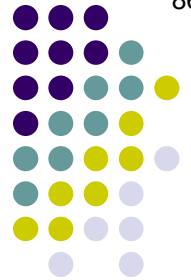
Retinal
hemorrhages

Macular star

Retinal Vasculitis



HTN retinopathy



Retinal Vasculitis

Acute, severe HTN

*What process mediates damage
caused by acute, severe HTN?*

Vasospasm
of arterioles

What categories of pathology can result?

Retinopathy

Choroidopathy

Optic Neuropathy

Cotton-
wool spots

Retinal
hemorrhages

Macular star

Leads to...

?

Leads to...

?



Retinal Vasculitis

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Leads to...

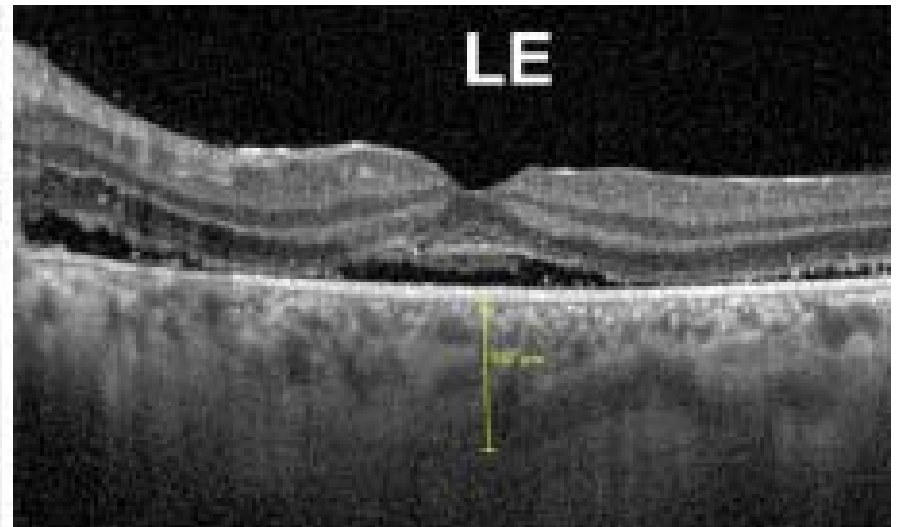
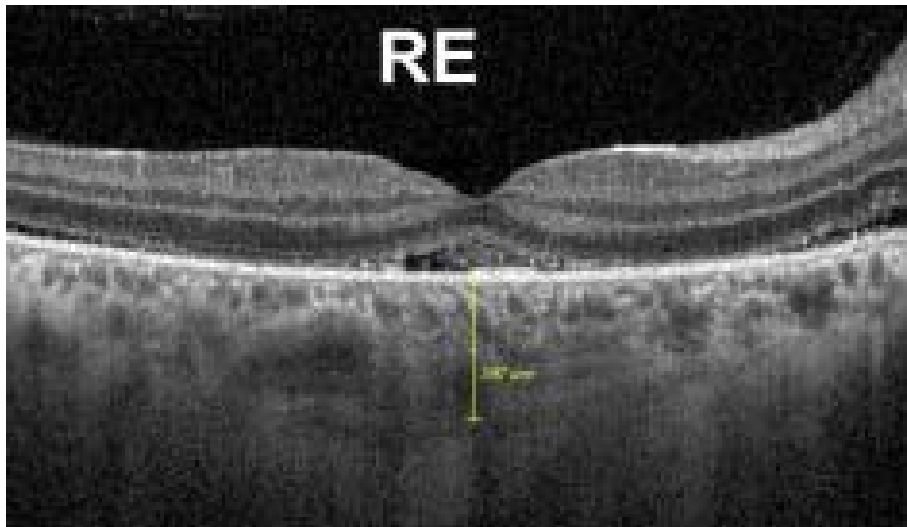
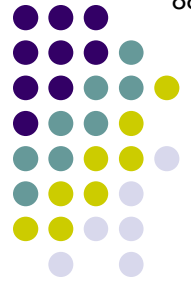
Choroidal infarction

Leads to...

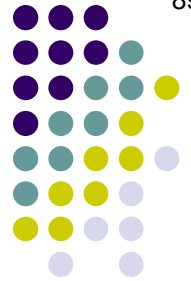
Exudative RD

Retinal Vasculitis

88



HTN choroidopathy with exudative RD



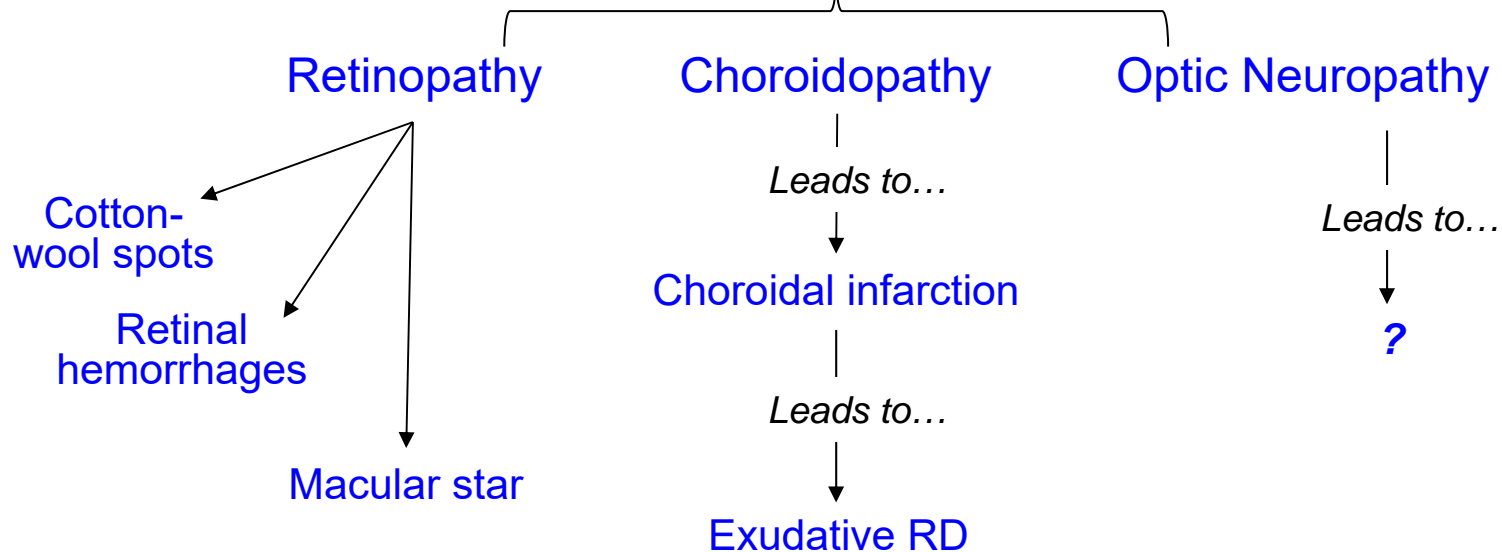
Retinal Vasculitis

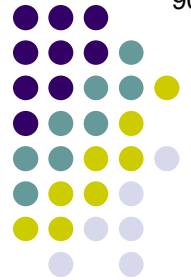
Acute, severe HTN

*What process mediates damage
caused by acute, severe HTN?*

Vasospasm
of arterioles

What categories of pathology can result?





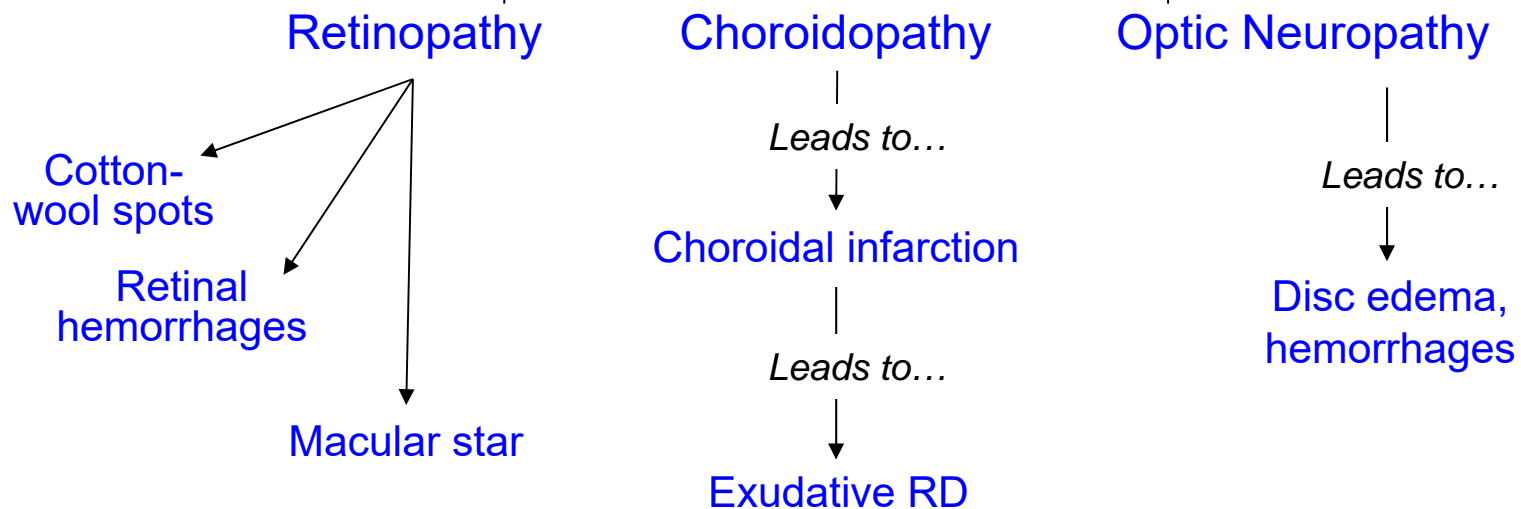
Retinal Vasculitis

Acute, severe HTN

*What process mediates damage
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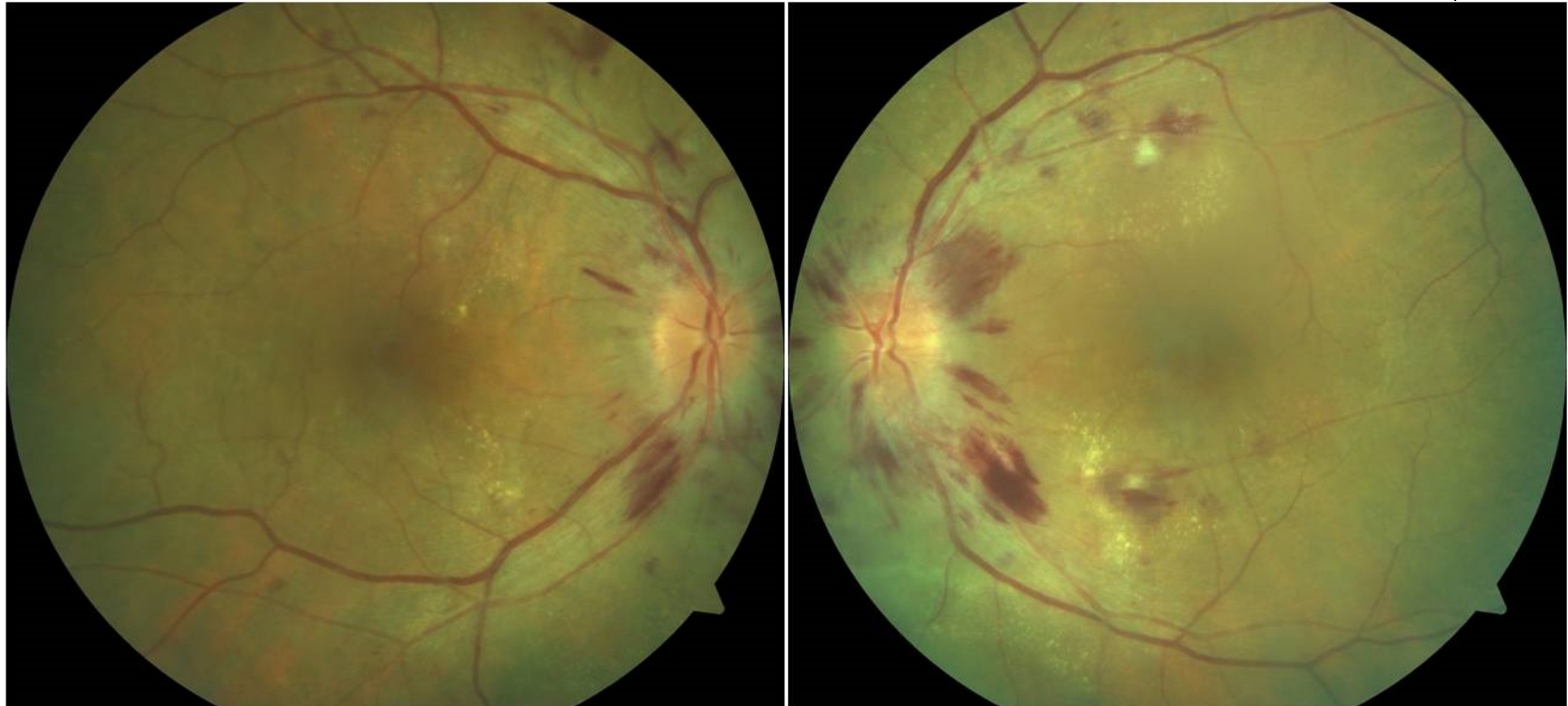
Vasospasm
of arterioles

What categories of pathology can result?

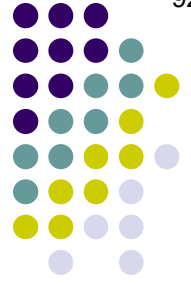




Retinal Vasculitis

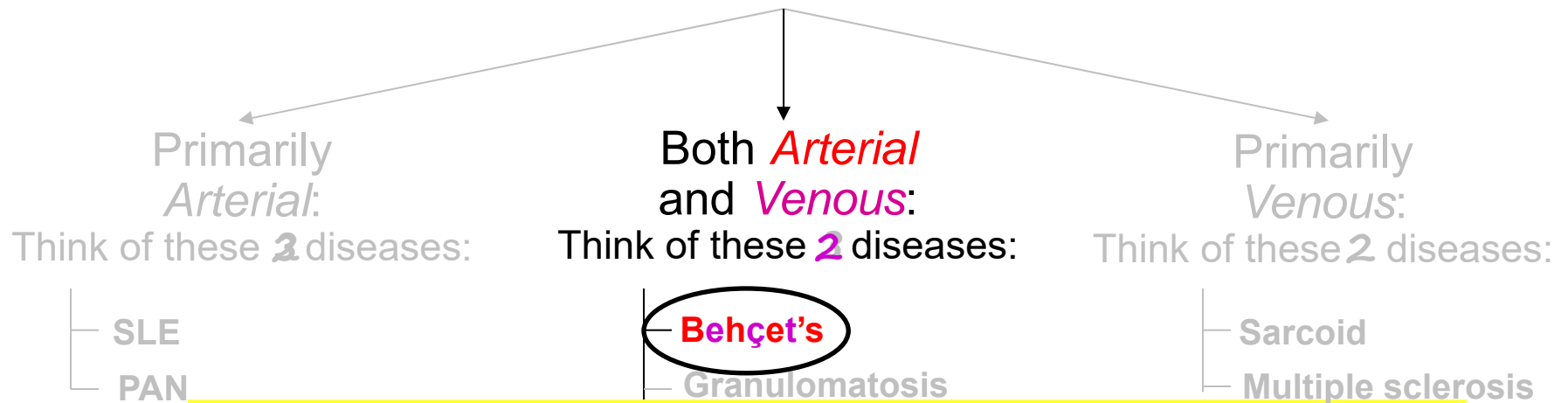


HTN optic neuropathy

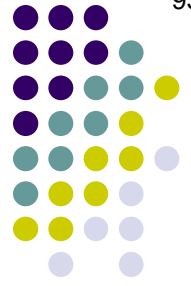


Retinal Vasculitis

Retinal Vasculitis

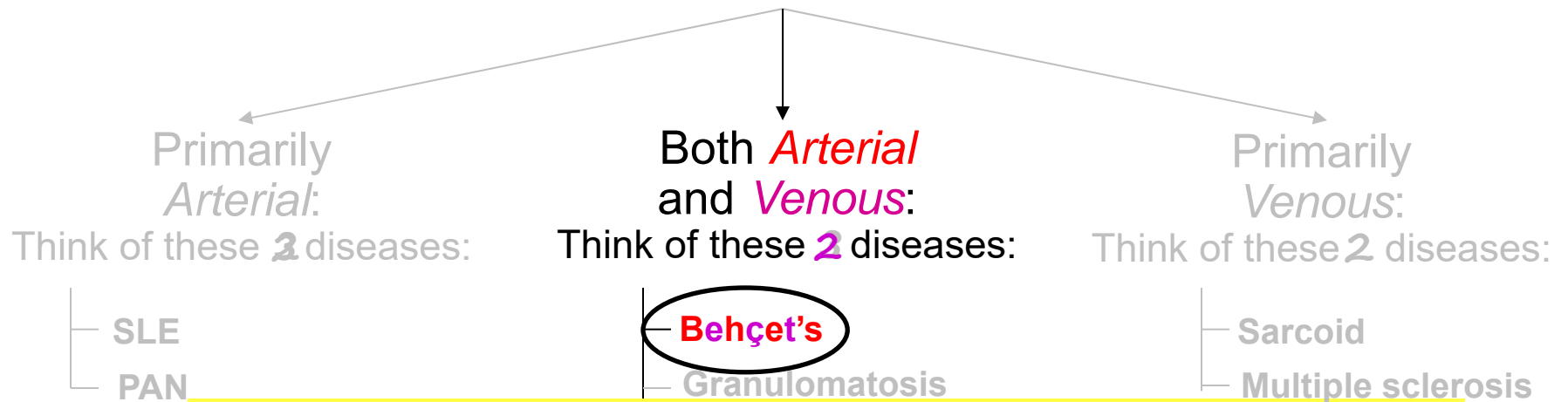


Who is the typical Bechet's disease (BD) pt?

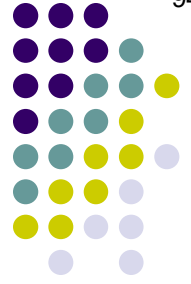


Retinal Vasculitis

Retinal Vasculitis

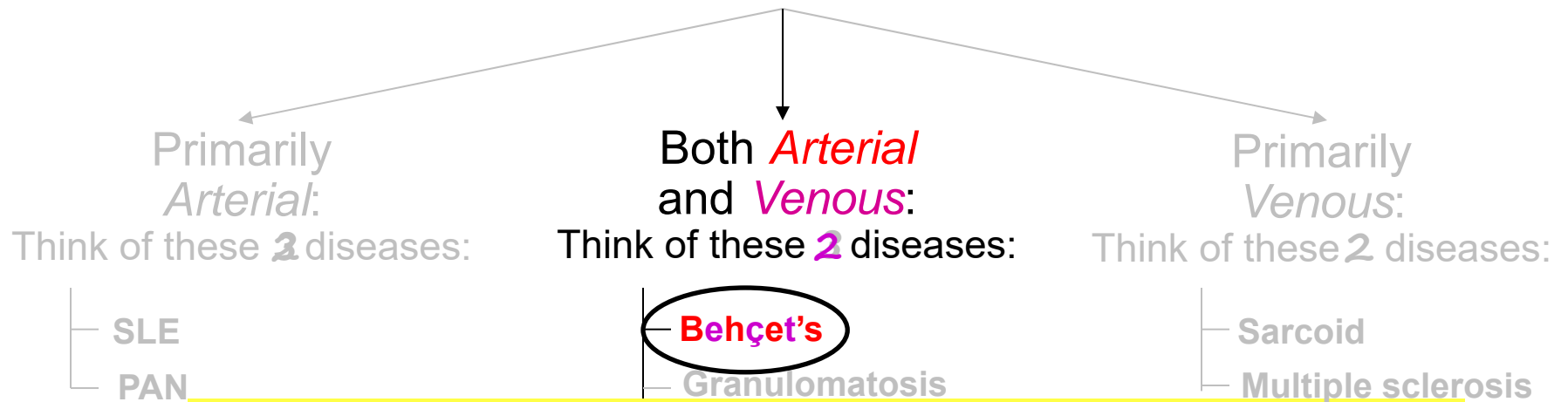


Who is the typical Bechet's disease (BD) pt?
An individual of 'Silk Road' descent age 25-35



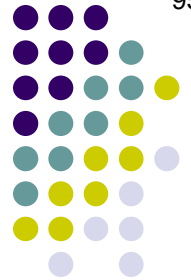
Retinal Vasculitis

Retinal Vasculitis



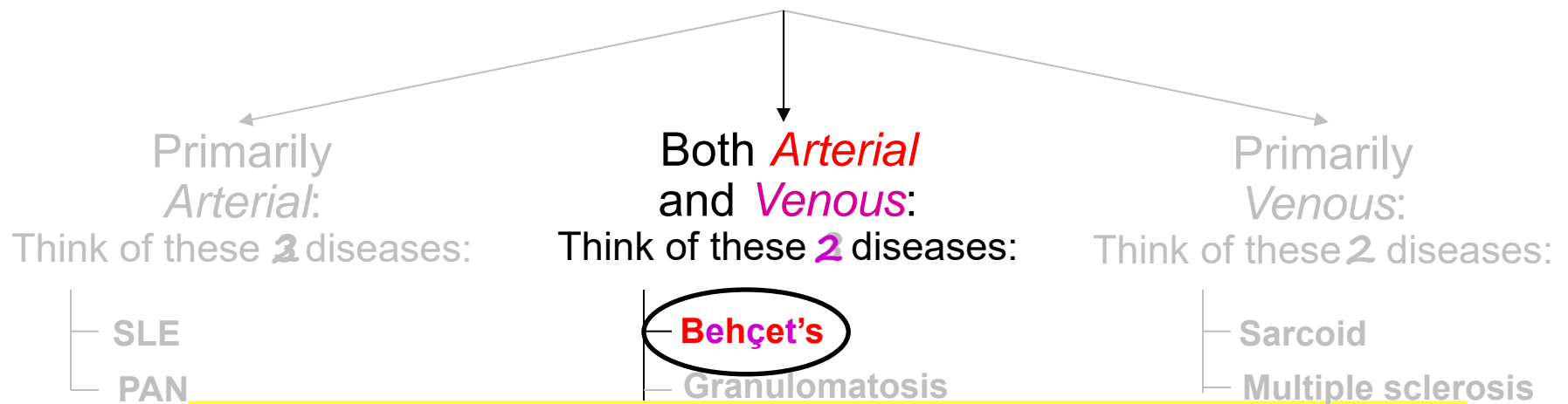
Who is the typical Behçet's disease (BD) pt?
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What is/was the Silk Road?



Retinal Vasculitis

Retinal Vasculitis

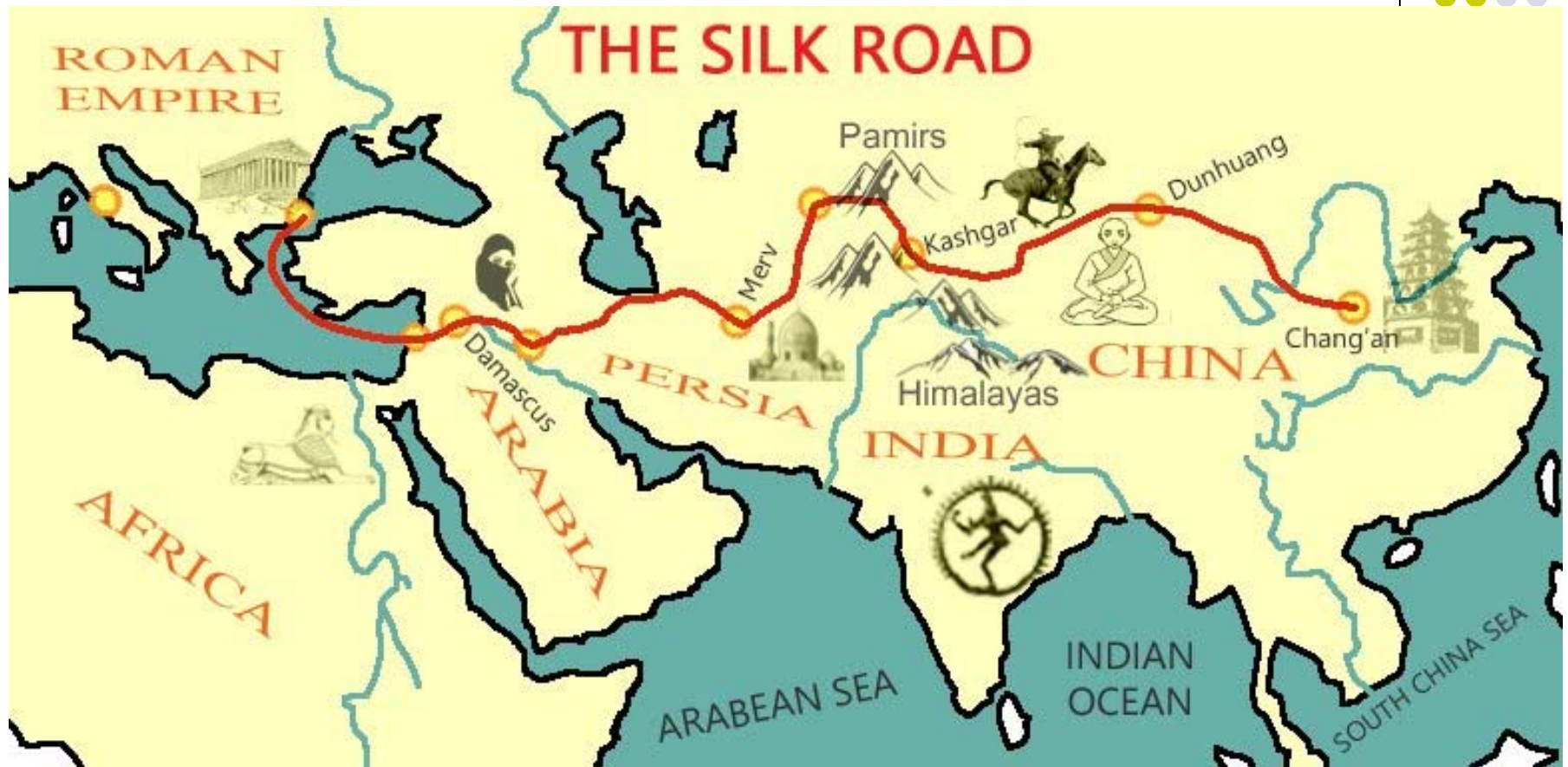


Who is the typical Behçet's disease (BD) pt?
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What is/was the Silk Road?

An ancient trading route extending from the eastern Mediterranean to the Far East

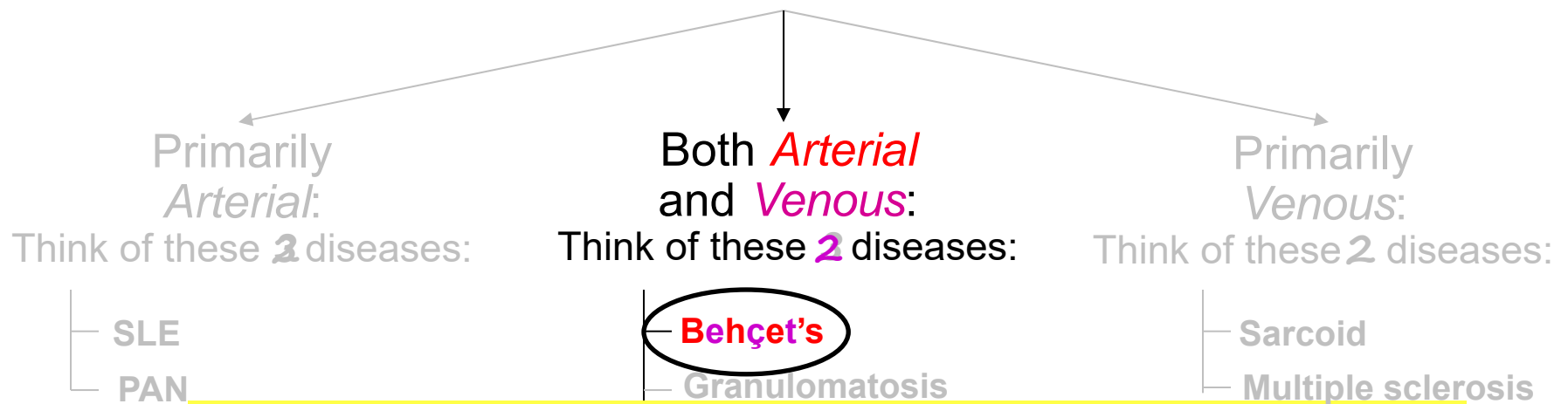
Retinal Vasculitis





Retinal Vasculitis

Retinal Vasculitis

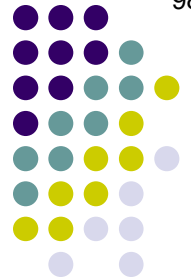


Who is the typical Behçet's disease (BD) pt?
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What is/was the Silk Road?

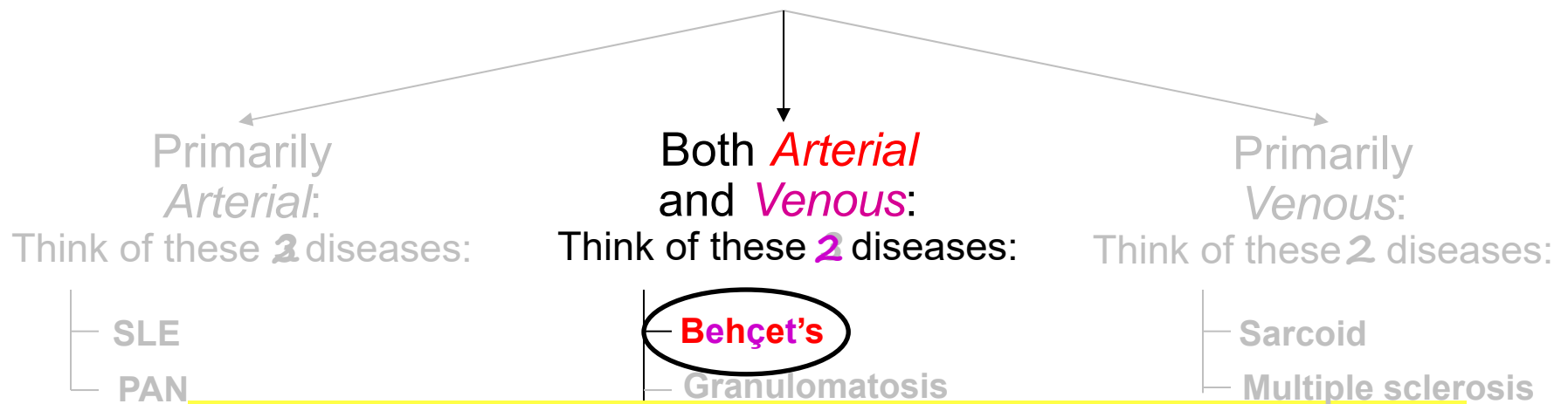
An ancient trading route extending from the eastern Mediterranean to the Far East

What regions/countries are found along the Silk Road?



Retinal Vasculitis

Retinal Vasculitis



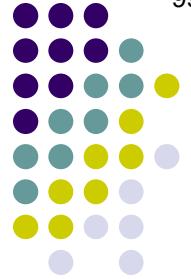
Who is the typical Behçet's disease (BD) pt?
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An ancient trading route extending from the eastern Mediterranean to the Far East

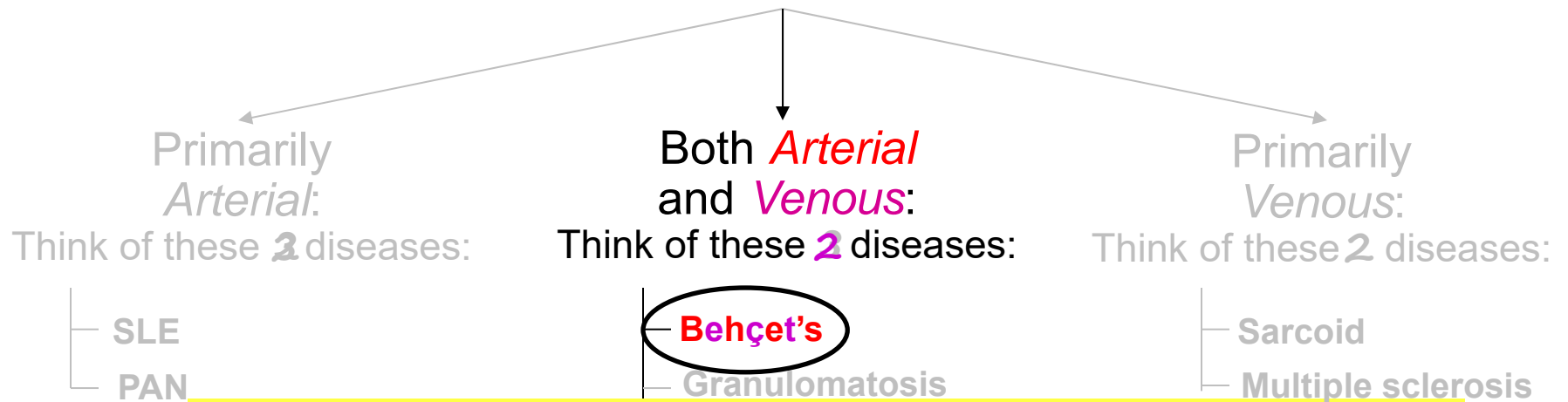
What regions/countries are found along the Silk Road?

The Middle East; Turkey; China; Korea; Japan



Retinal Vasculitis

Retinal Vasculitis



Who is the typical Behçet's disease (BD) pt?
An individual of 'Silk Road' descent age 25-35

What is/was the Silk Road?

Which of these areas has the highest rate of BD?

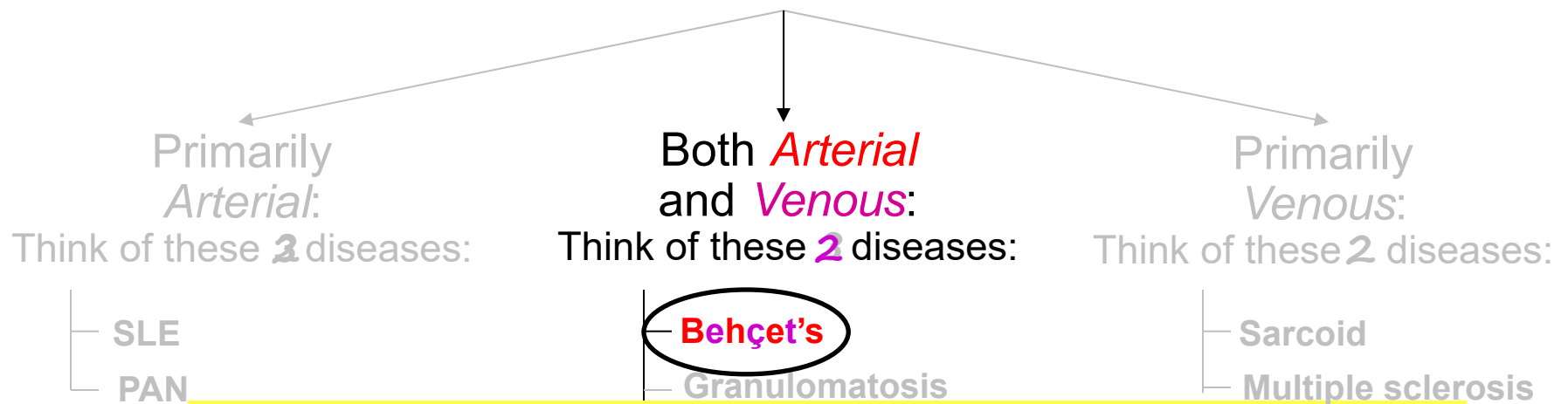
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Retinal Vasculitis

Retinal Vasculitis

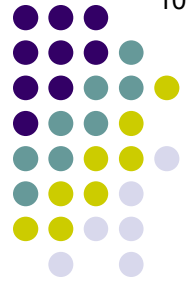


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What is/was the Silk Road?

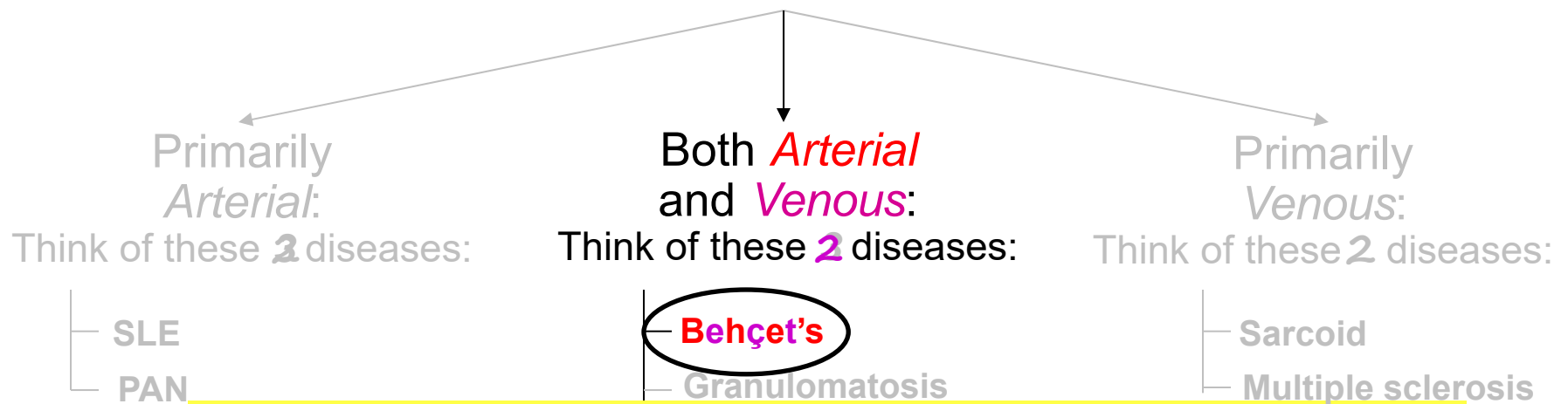
Which of these areas has the highest rate of BD?
Turkey

What regions/countries are found along the Silk Road?
The Middle East, **Turkey**, China; Korea; Japan



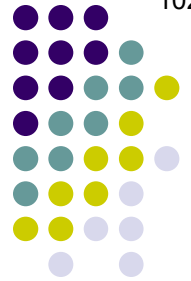
Retinal Vasculitis

Retinal Vasculitis



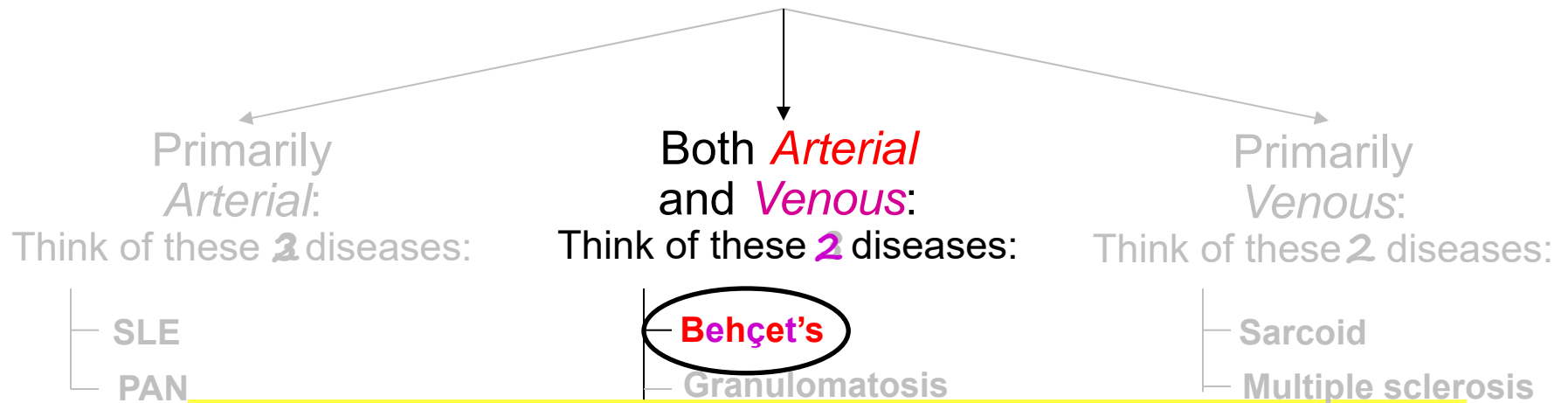
Who is the typical Bechet's disease (BD) pt?
 An individual of 'Silk Road' descent age 25-35

What the classic nonocular complaint in BD?



Retinal Vasculitis

Retinal Vasculitis



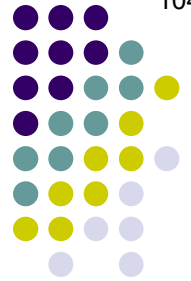
Who is the typical Bechet's disease (BD) pt?
An individual of 'Silk Road' descent age 25-35

What the classic nonocular complaint in BD?
Recurrent oral ulcers

Retinal Vasculitis

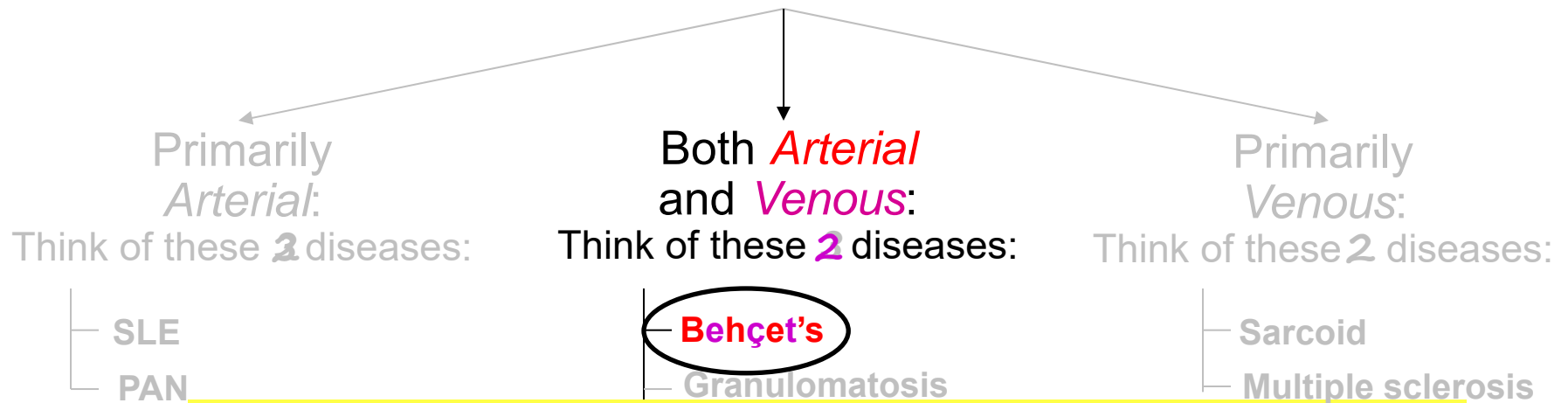


Behçet: Oral aphthae



Retinal Vasculitis

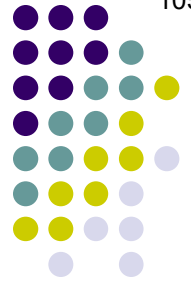
Retinal Vasculitis



Who is the typical Bechet's disease (BD) pt?
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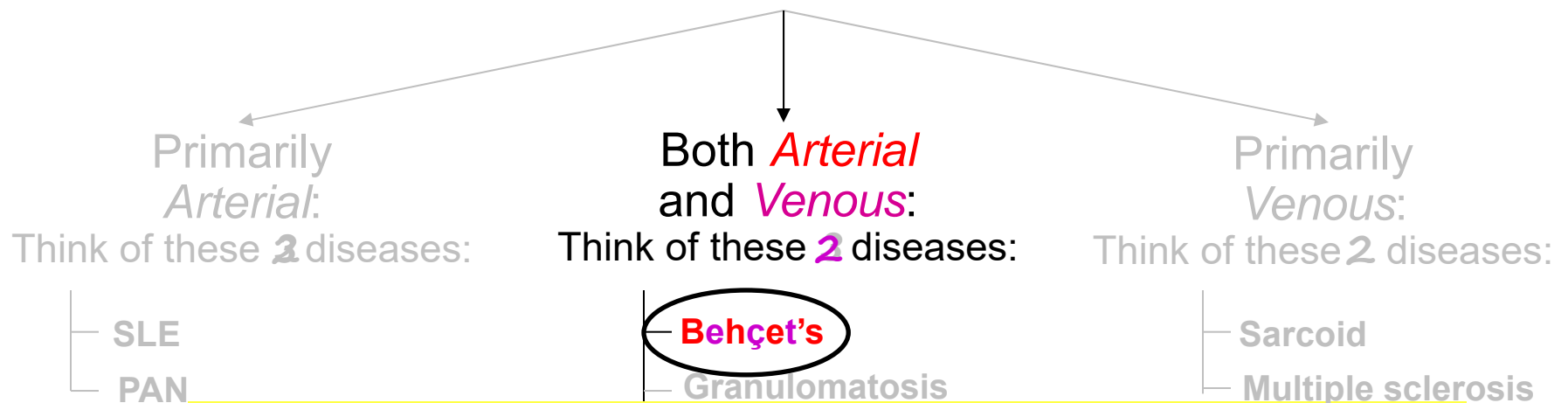
What the classic nonocular complaint in BD?
Recurrent **oral ulcers**

Are the oral ulcers painful?



Retinal Vasculitis

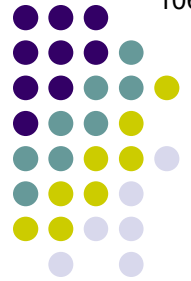
Retinal Vasculitis



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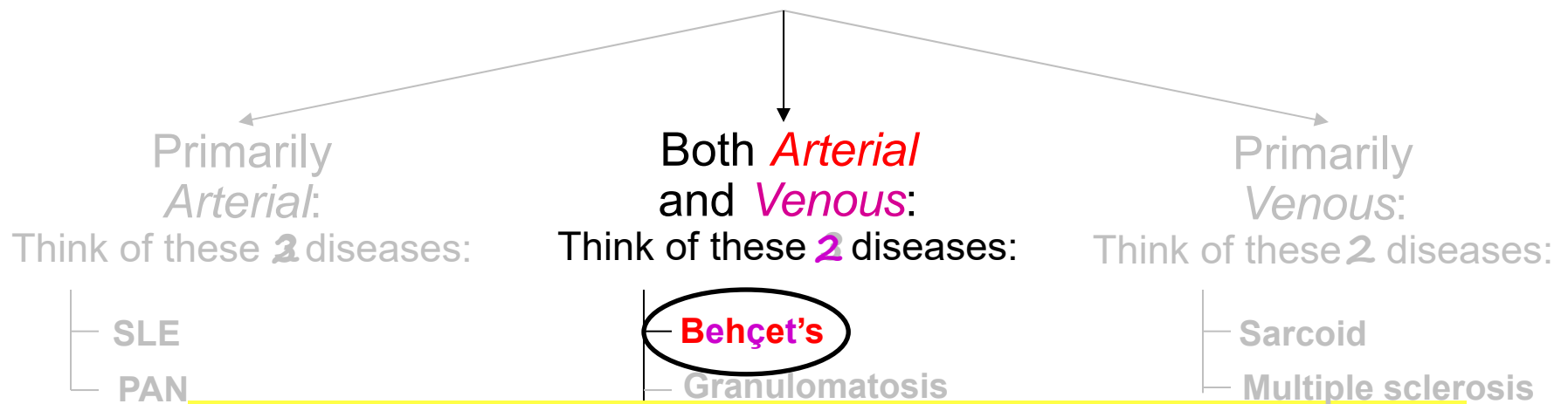
What the classic nonocular complaint in BD?
Recurrent **oral ulcers**

Are the oral ulcers painful?
Yes, very



Retinal Vasculitis

Retinal Vasculitis

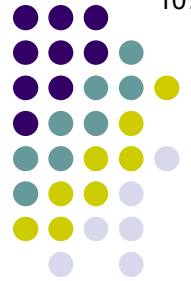


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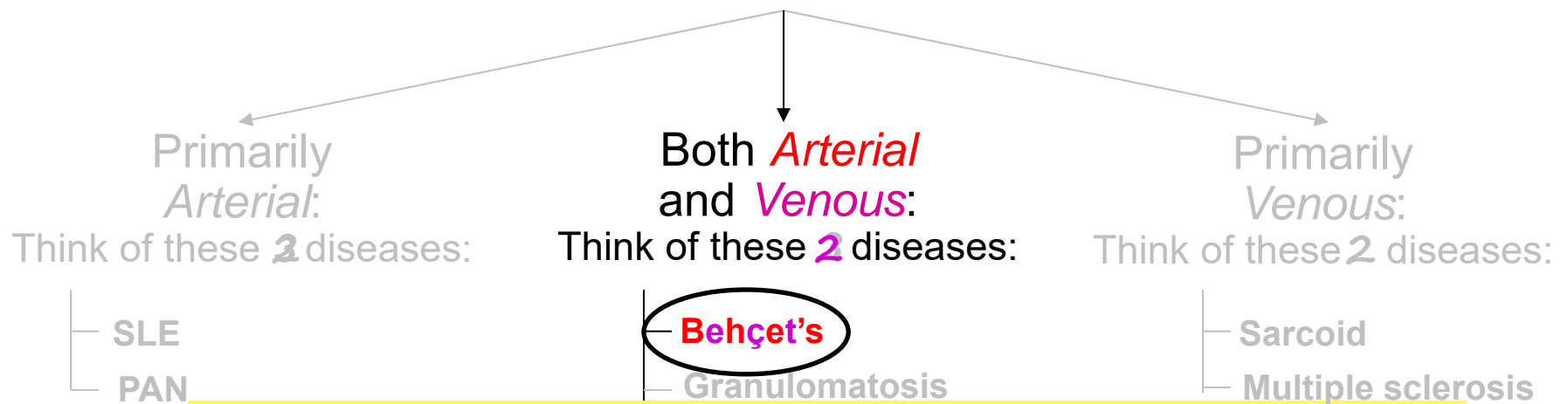
In addition to oral ulcers, what three other nonocular findings are common?

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Retinal Vasculitis

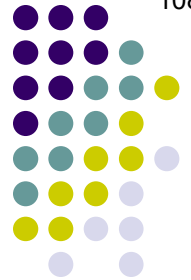
Retinal Vasculitis



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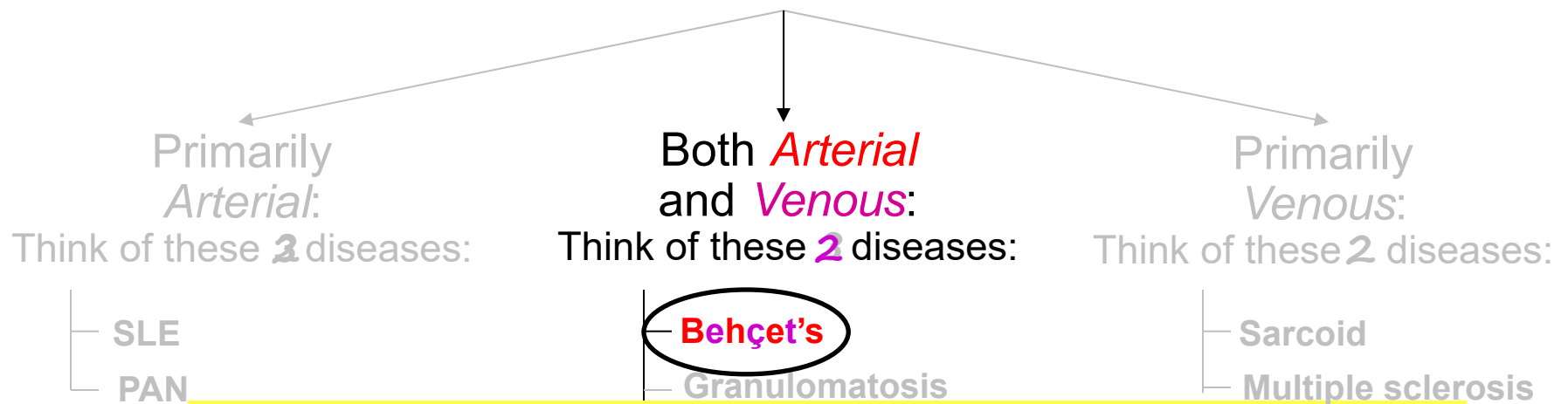
What the classic nonocular complaint in BD?
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In addition to oral ulcers, what three other nonocular findings are common?
--Skin rash
--Genital ulcers
--Arthralgias



Retinal Vasculitis

Retinal Vasculitis



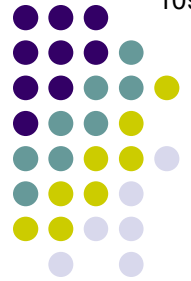
Who is the typical Bechet's disease (BD) pt?
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What the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to --**Skin rash**--
--Genital ulcer--
--Arthralgias--

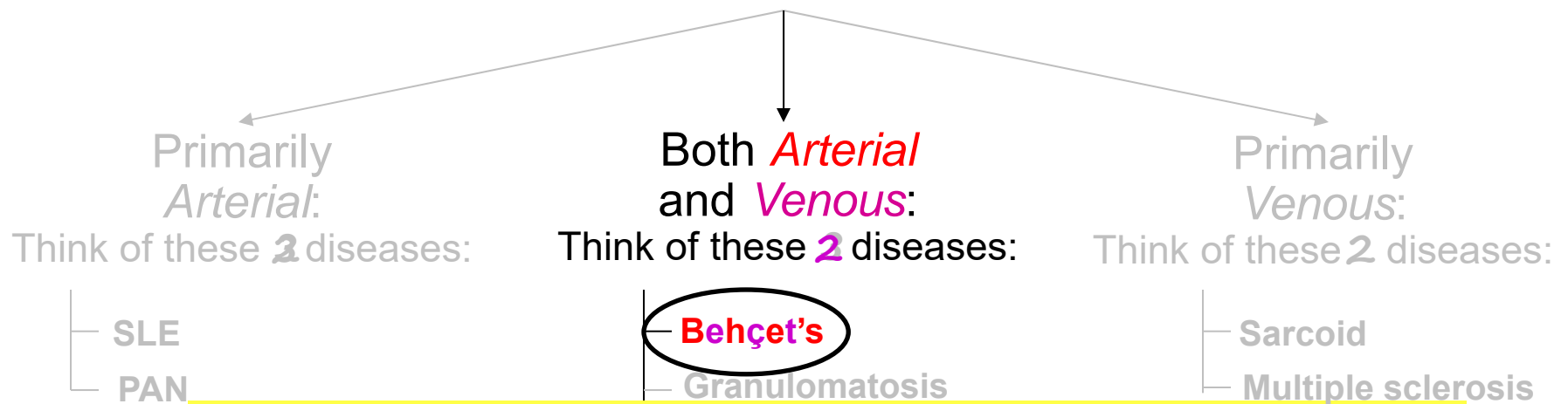
What is the classic rash?

monocular findings are common?



Retinal Vasculitis

Retinal Vasculitis



Who is the typical Bechet's disease (BD) pt?
An individual of 'Silk Road' descent age 25-35

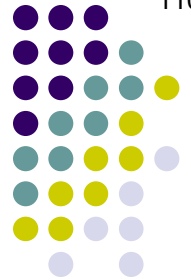
What the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to **Skin rash**

- Genital ulcer
- Arthralgias

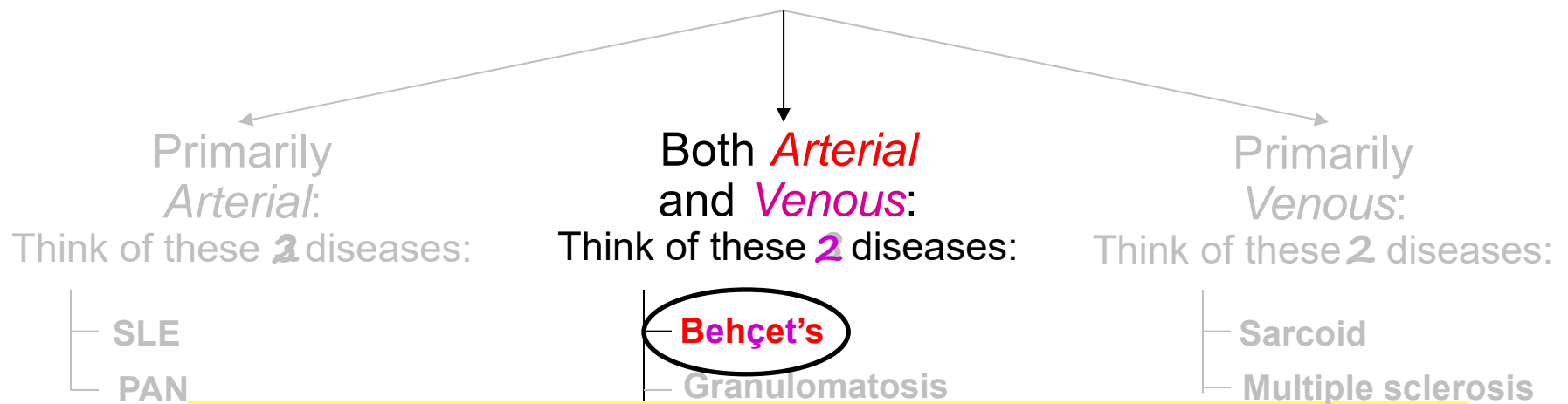
What is the classic rash?
Erythema nodosum

monocular findings are common?



Retinal Vasculitis

Retinal Vasculitis



Who is the typical Bechet's disease (BD) pt?
An individual of 'Silk Road' descent age 25-35

What the classic nonocular complaint in BD?
Recurrent oral ulcers

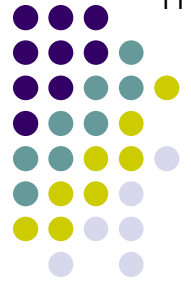
In addition to

- Skin rash
- Genital ulcers
- Arthralgias

What is the classic rash?
Erythema nodosum

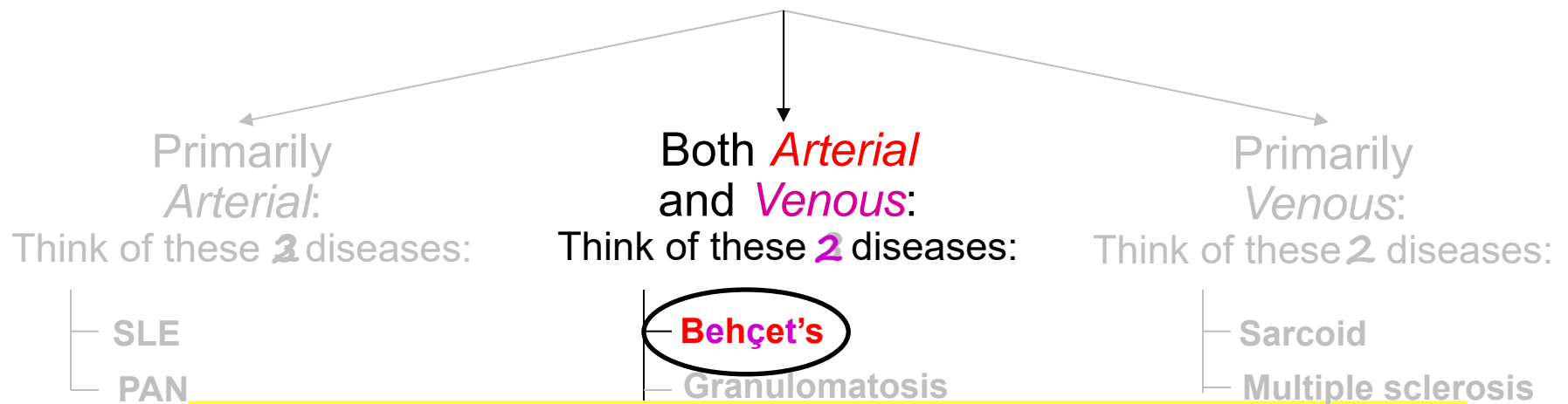
Where is the classic location?

monocular findings are common?



Retinal Vasculitis

Retinal Vasculitis



Who is the typical Bechet's disease (BD) pt?
An individual of 'Silk Road' descent age 25-35

What the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to **Skin rash**

- Genital ulcers
- Arthralgias

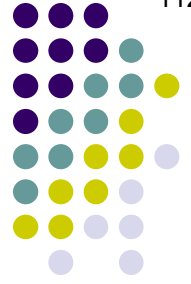
What is the classic rash?
Erythema nodosum

Where is the classic location?
The pre-tibial region

monocular findings are common?

Retinal Vasculitis

112

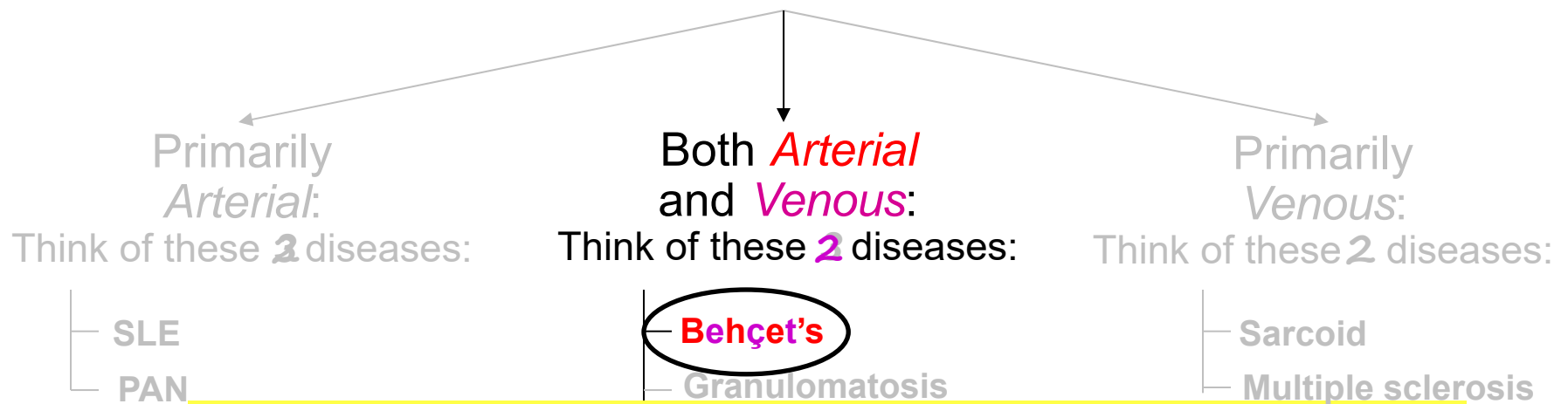


Erythema nodosum in Behçet



Retinal Vasculitis

Retinal Vasculitis



Who is the typical Behçet's disease (BD) pt?

An individual of 'Silk Road'

What is the cause of BD?

What the classic nonocular complaint in BD?

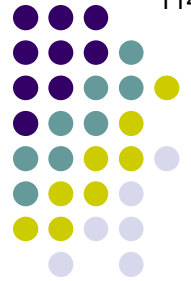
Recurrent oral ulcers

In addition to oral ulcers, what three other nonocular findings are common?

--Skin rash

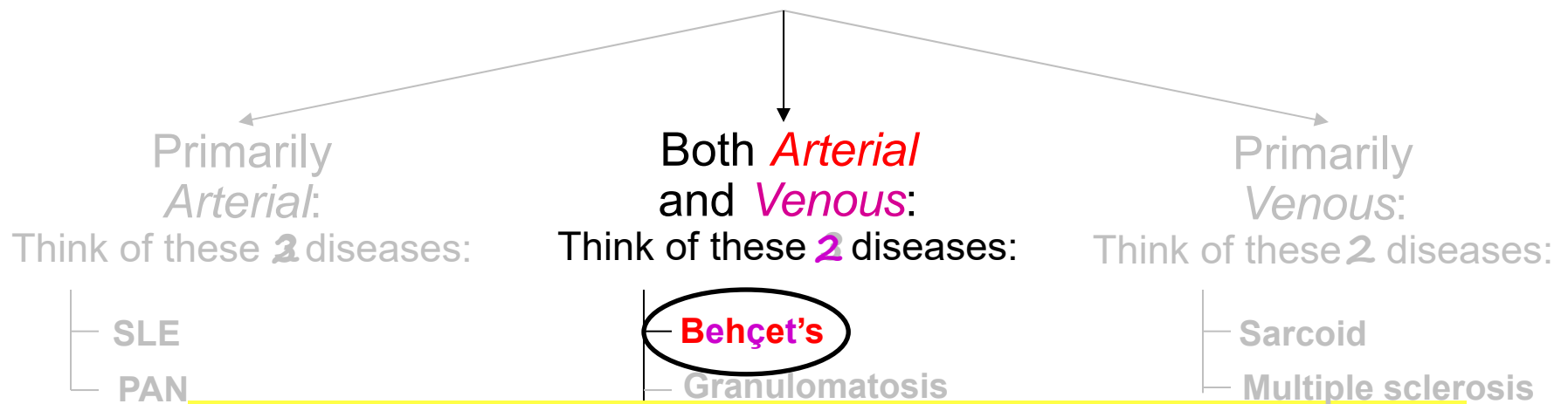
--Genital ulcers

--Arthralgias



Retinal Vasculitis

Retinal Vasculitis



Who is the typical Behçet's disease (BD) pt?

An individual of 'Silk Road'

What is the cause of BD?
It is unknown at this time

What the classic nonocular complaint in BD?

Recurrent oral ulcers

In addition to oral ulcers, what three other nonocular findings are common?

--Skin rash

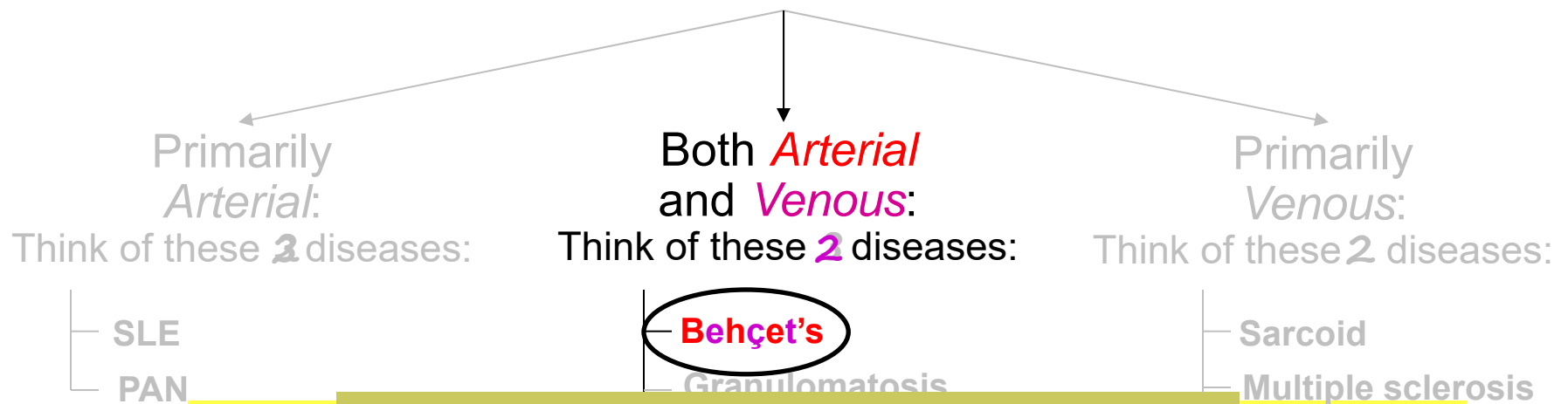
--Genital ulcers

--Arthralgias



Retinal Vasculitis

Retinal Vasculitis

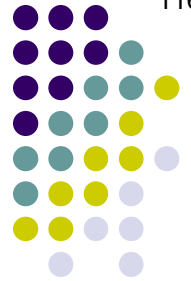


Who is t
An indiv

What th
Recurr

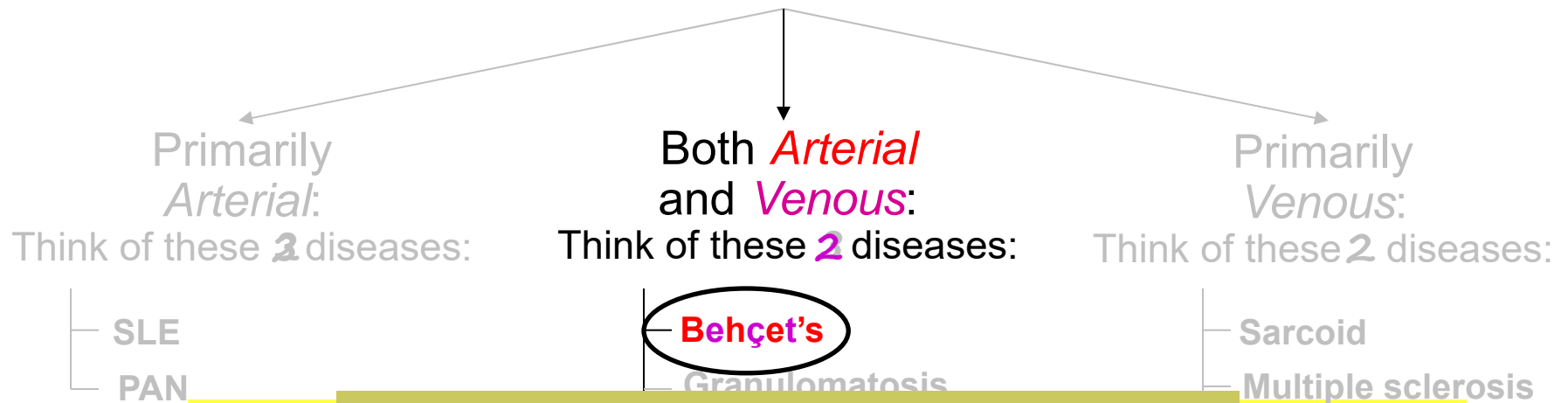
In addition to oral ulcers, what three other nonocular findings are common?

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Retinal Vasculitis

Retinal Vasculitis



Who is it?
An individual

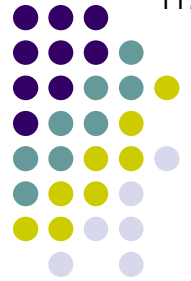
What the
Recurrent

Is ocular involvement common in BD?

Yes; estimates of ocular involvement run as high as 70%

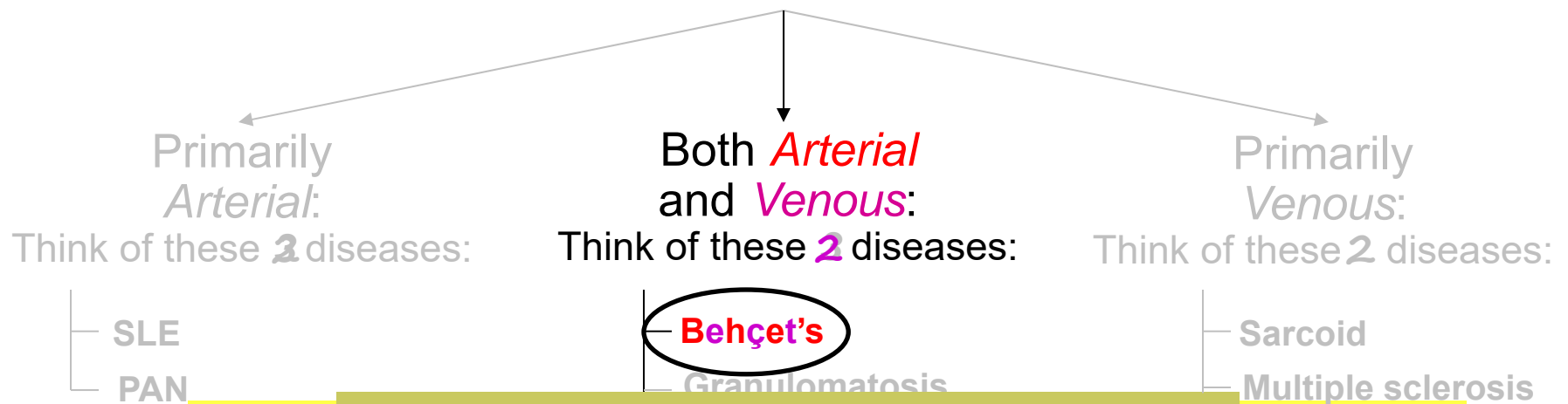
In addition to oral ulcers, what three other nonocular findings are common?

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Retinal Vasculitis

Retinal Vasculitis



Who is it?

An individual

What the

Recurrent

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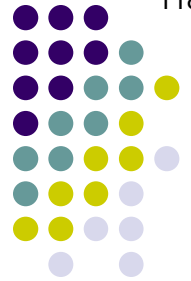
Does BD pose a significant threat to long-term ocular health, and/or vision?

In addition to oral ulcers, what three other nonocular findings are common?

--Skin rash

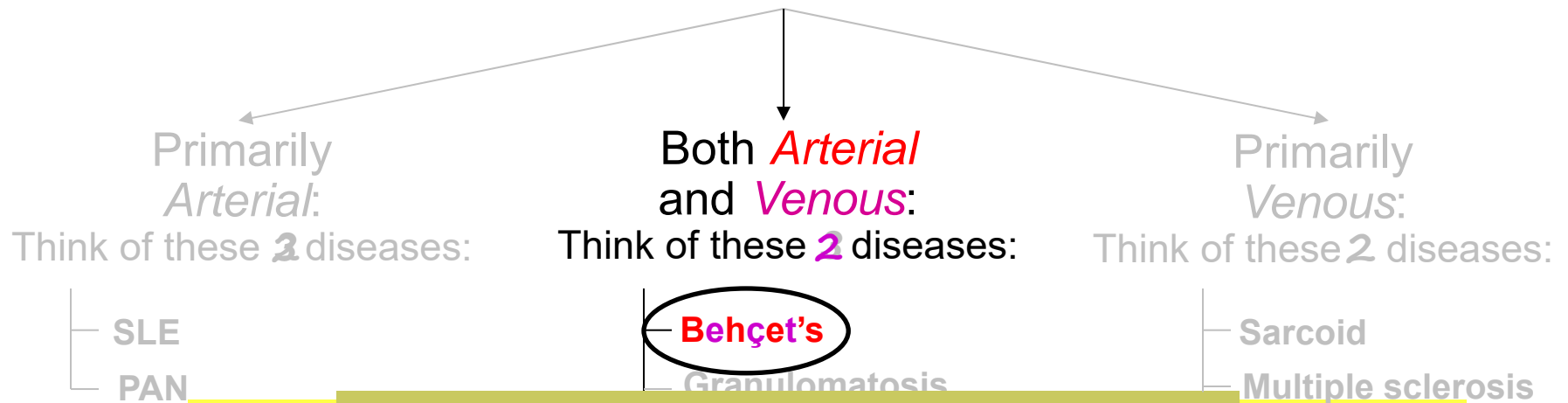
--Genital ulcers

--Arthralgias



Retinal Vasculitis

Retinal Vasculitis



Who is t
An indiv

Is ocular involvement common in BD?

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What th
Recurr

Does BD pose a significant threat to long-term ocular health, and/or vision?

Mos def--severe vision loss results in as many as 25% of ocular BD cases

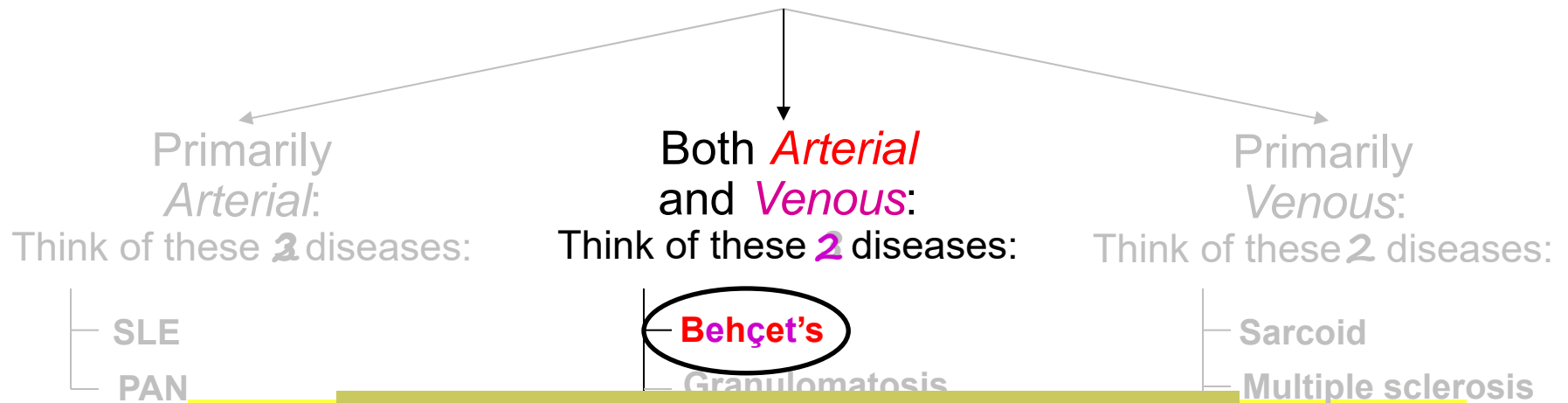
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Retinal Vasculitis

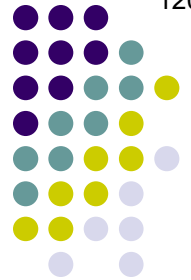
Retinal Vasculitis



What is the most common form of ocular involvement? (It's not retinal vasculitis.)

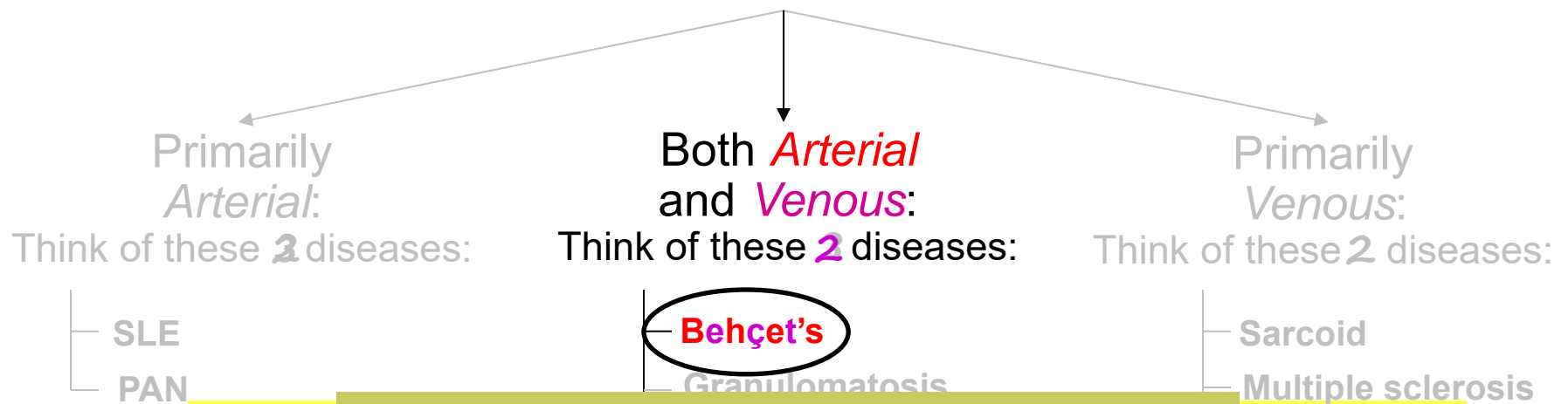
Does BD pose a significant threat to long-term ocular health, and/or vision?
 Recurrence of severe vision loss results in as many as 25% of ocular BD cases

In addition to oral ulcers, what three other nonocular findings are common?
 --Skin rash
 --Genital ulcers
 --Arthralgias



Retinal Vasculitis

Retinal Vasculitis



What is the most common form of ocular involvement? (It's not retinal vasculitis.)

acute v
chronic

granulomatous vs
nongranulomatous

anterior uveitis, often with a

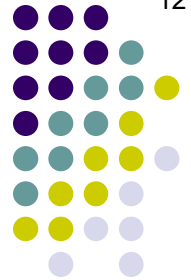
classic finding

Does BD pose a significant threat to long-term ocular health, and/or vision?

Recurrent Mos def--severe vision loss results in as many as 25% of ocular BD cases

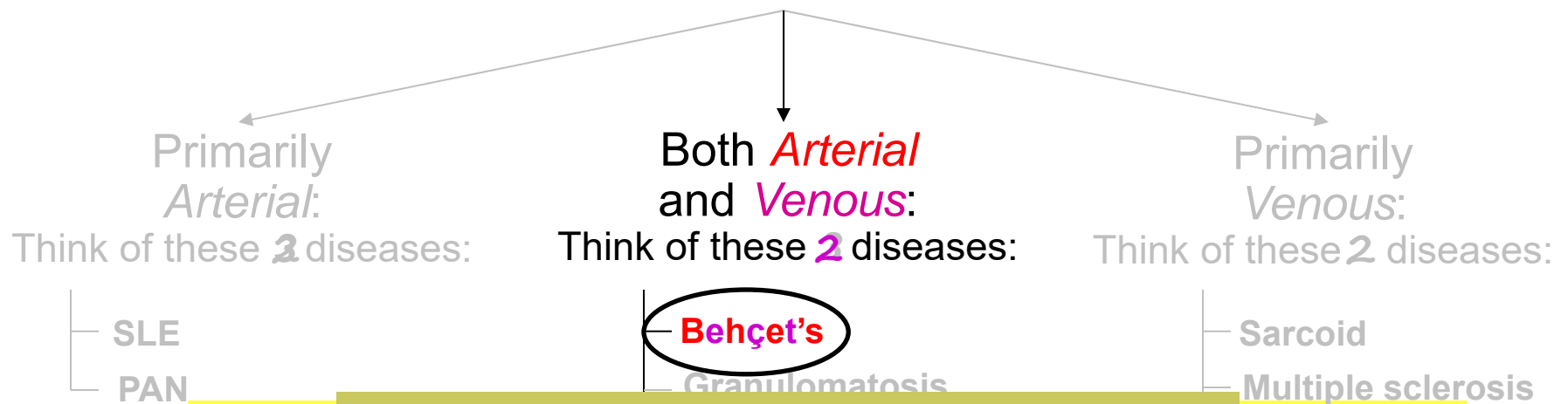
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- Arthralgias



Retinal Vasculitis

Retinal Vasculitis

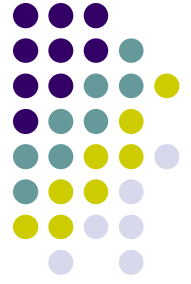


What is the most common form of ocular involvement? (It's not retinal vasculitis.)
 Acute nongranulomatous anterior uveitis, often with a hypopyon

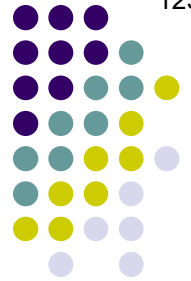
Does BD pose a significant threat to long-term ocular health, and/or vision?
 Mos def--severe vision loss results in as many as 25% of ocular BD cases

In addition to oral ulcers, what three other nonocular findings are common?
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Retinal Vasculitis

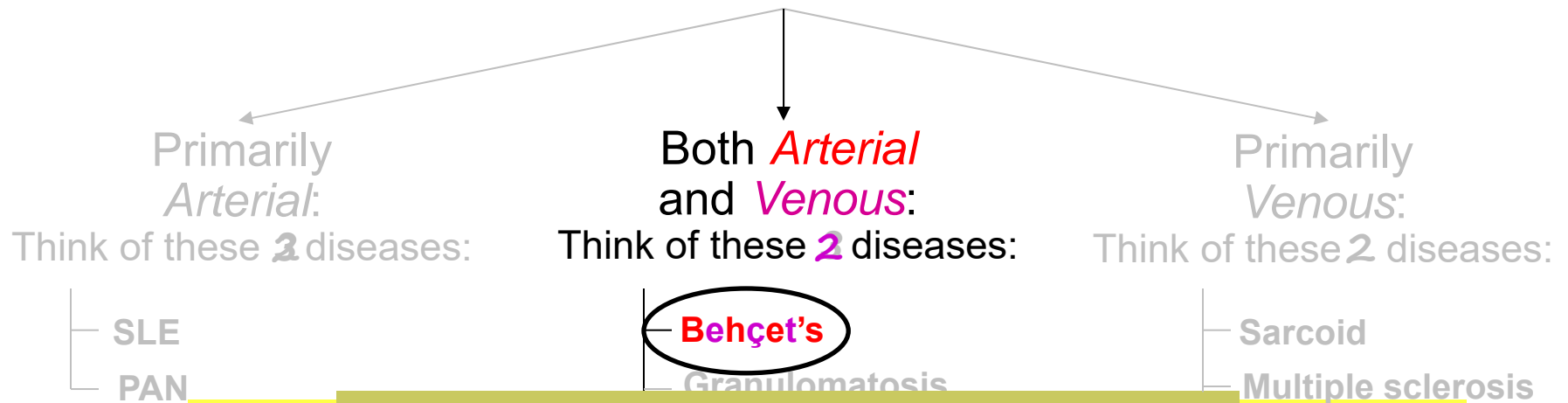


BD: Hypopyon



Retinal Vasculitis

Retinal Vasculitis

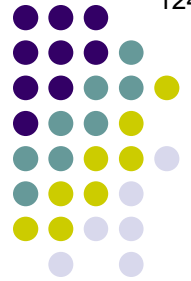


What is the most common form of ocular involvement? (It's not retinal vasculitis.)
Acute nongranulomatous anterior uveitis, often with a hypopyon

Does BD pose a significant threat to long-term ocular health, and/or vision?
What th
Recurr
Mos def--severe vision loss results in as many as 25% of ocular BD cases

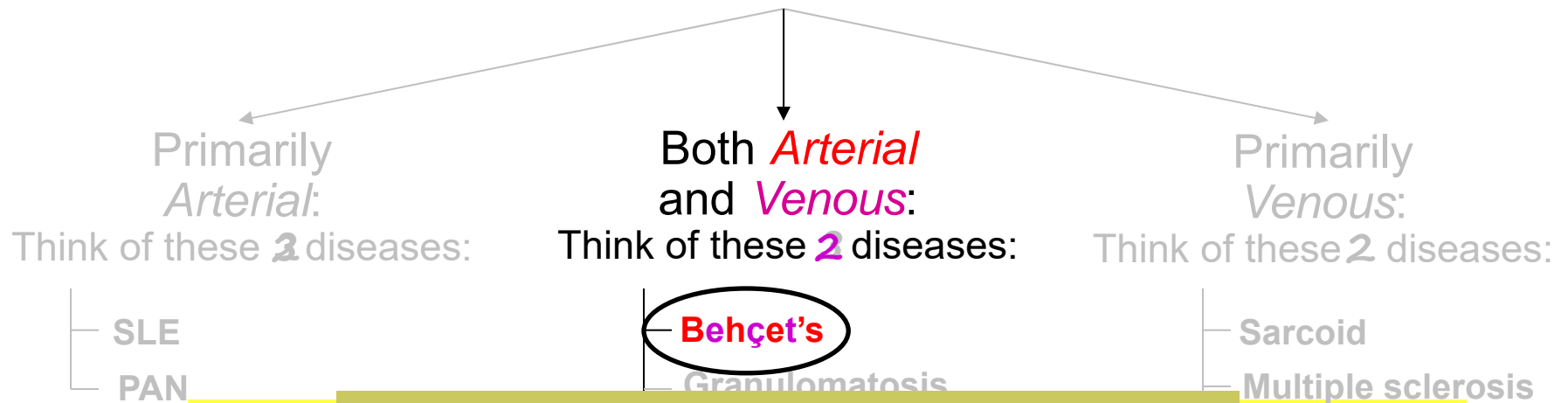
In addition to oral ulcers, what three other nonocular findings are common?

Can BD retinal vasculitis lead to retinal ischemia with subsequent neovascularization?



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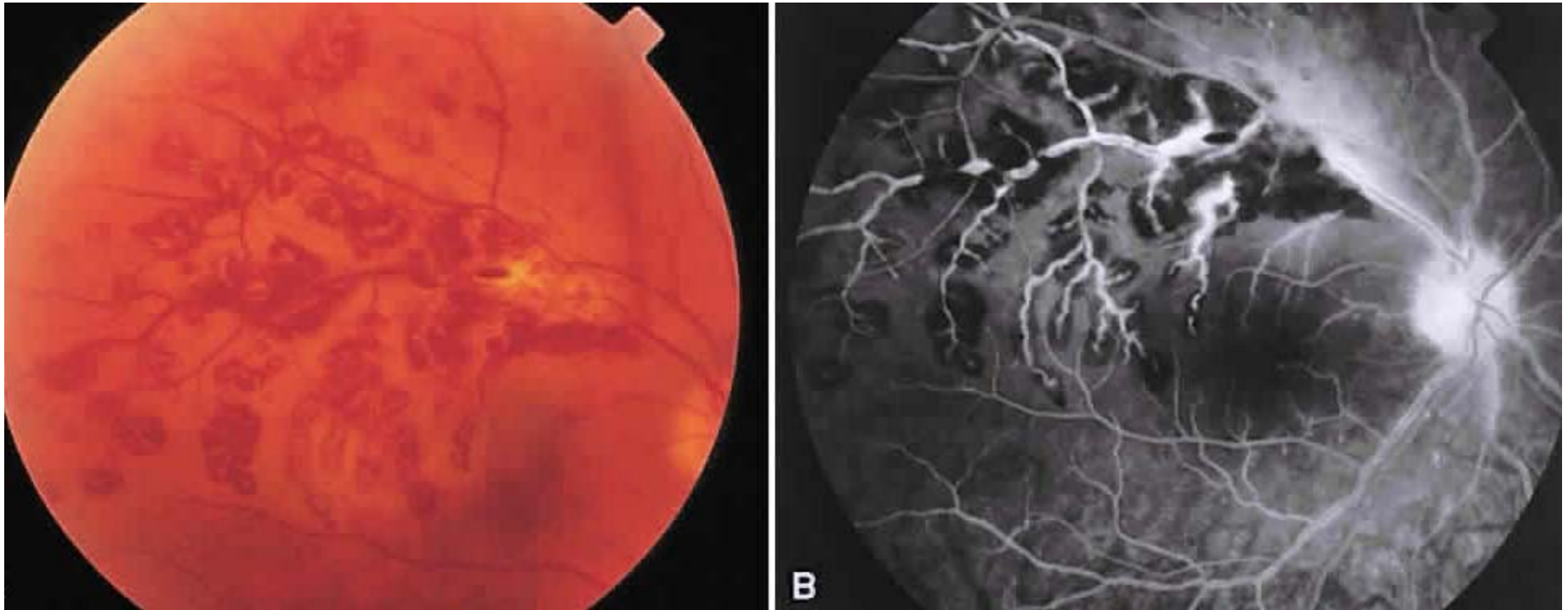
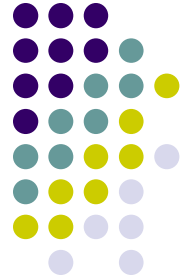
Does BD pose a significant threat to long-term ocular health, and/or vision?

Recurrent disease—most definitely—severe vision loss results in as many as 25% of ocular BD cases

In addition to oral ulcers, what three other nonocular findings are common?

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Yes—it is an occlusive vasculitis, so ischemia is a common occurrence, and is a significant cause of ocular morbidity and vision loss

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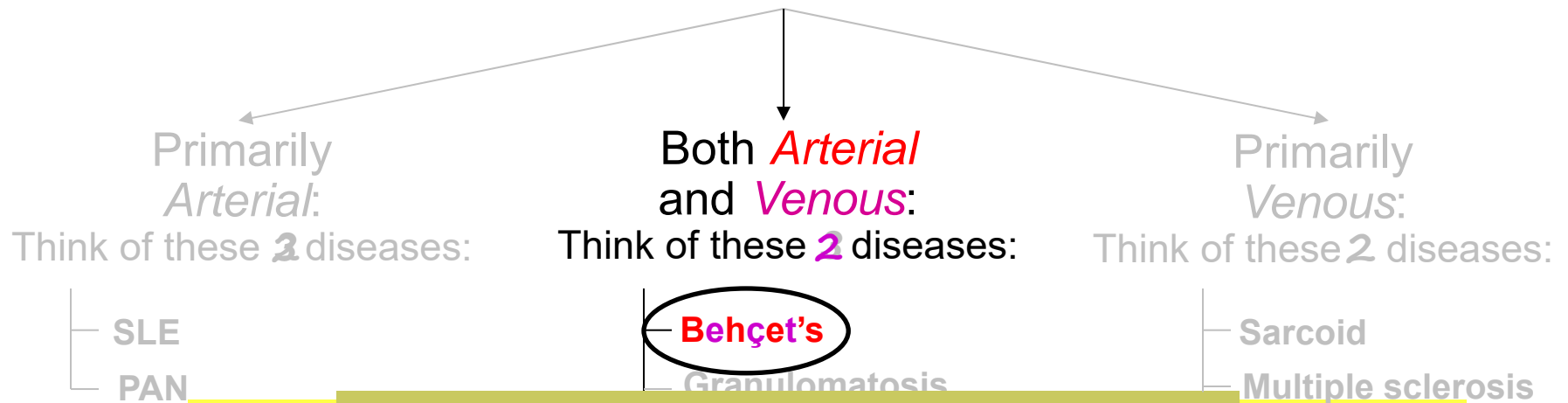


BD: Occlusive vasculitis



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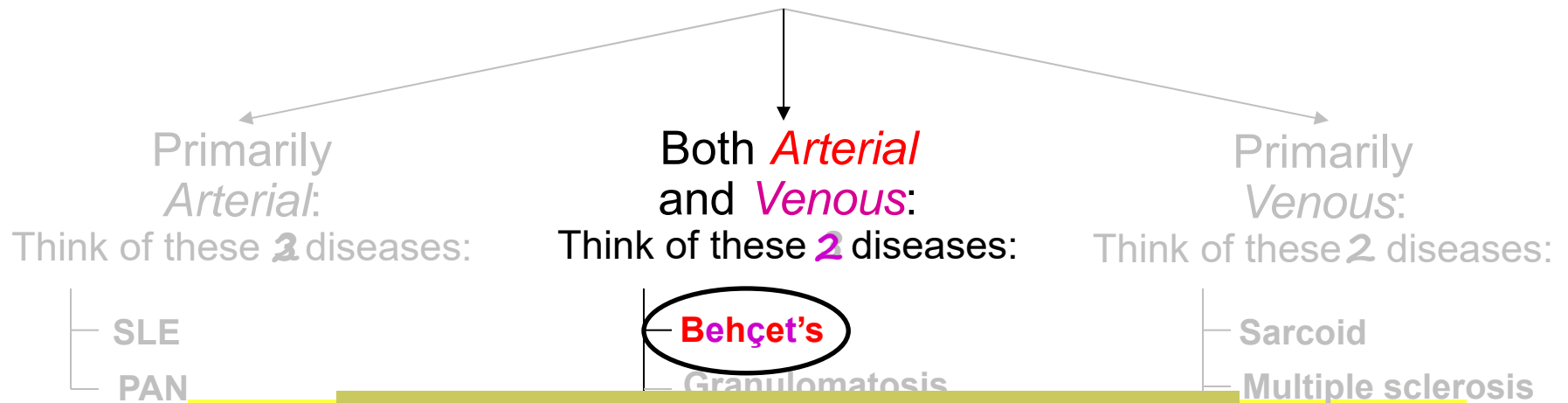
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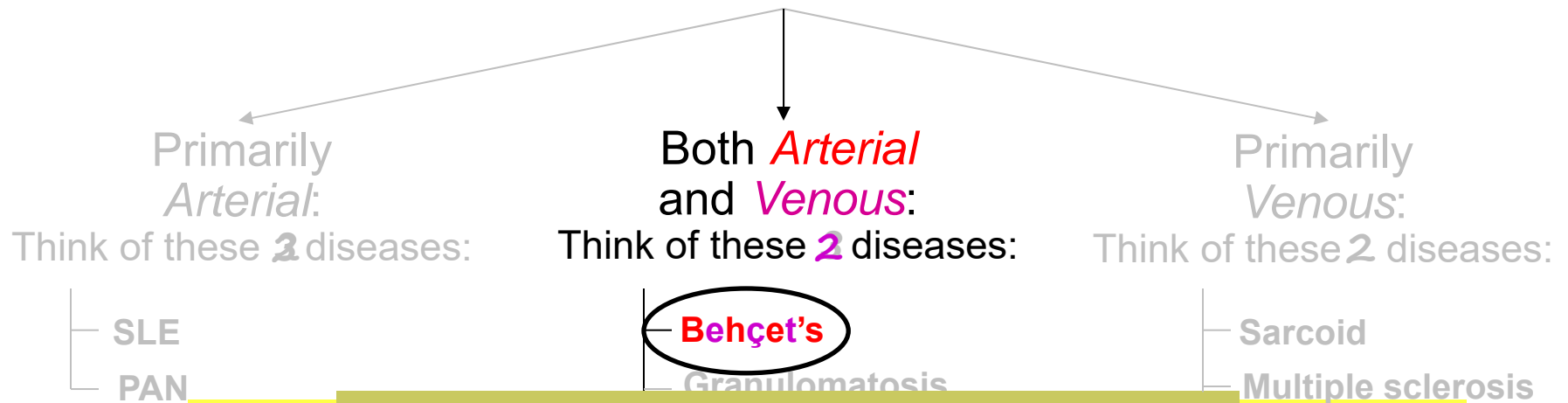
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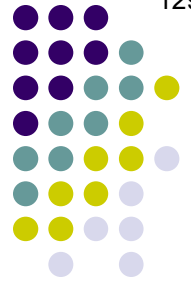
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What is the HLA association for BD?

In addition

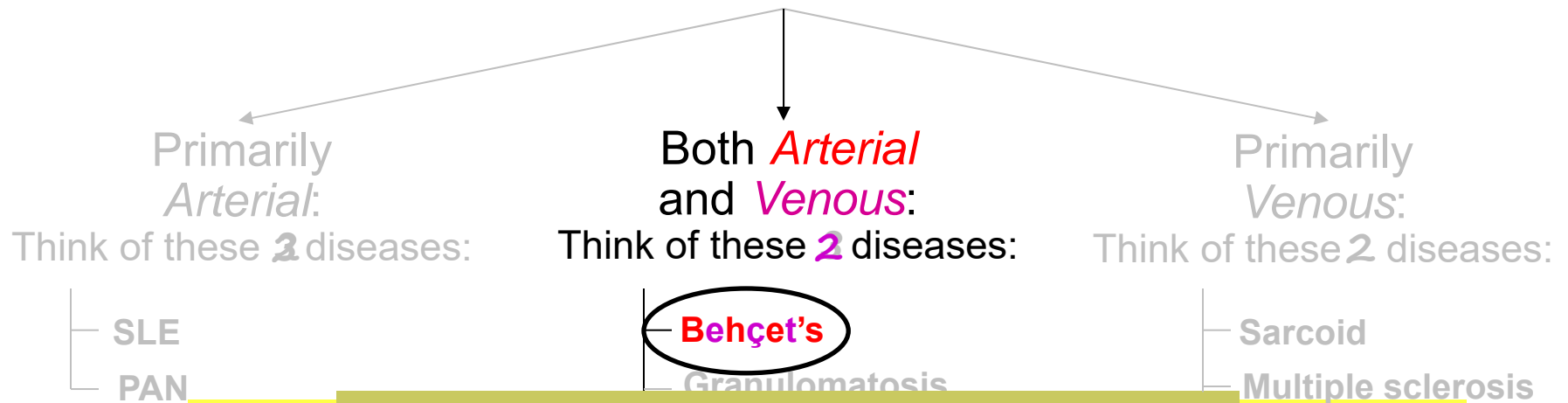
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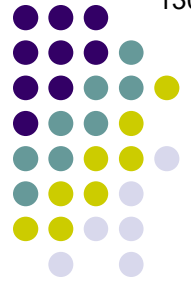
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There are several; **HLA-B51** is associated with ocular BD

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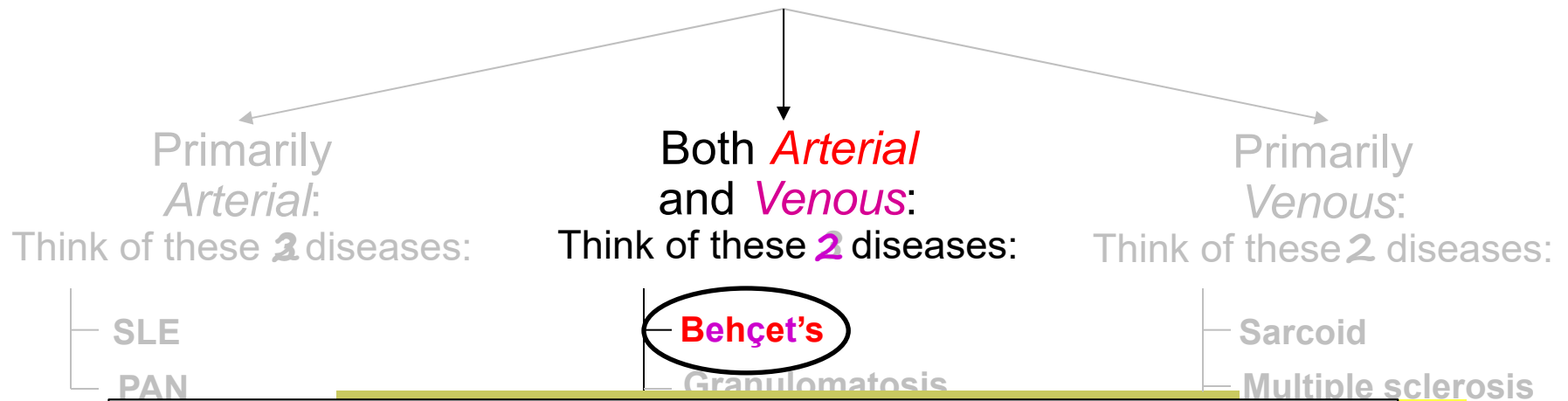
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For more on **Behçet's**, see the self-titled slide-set

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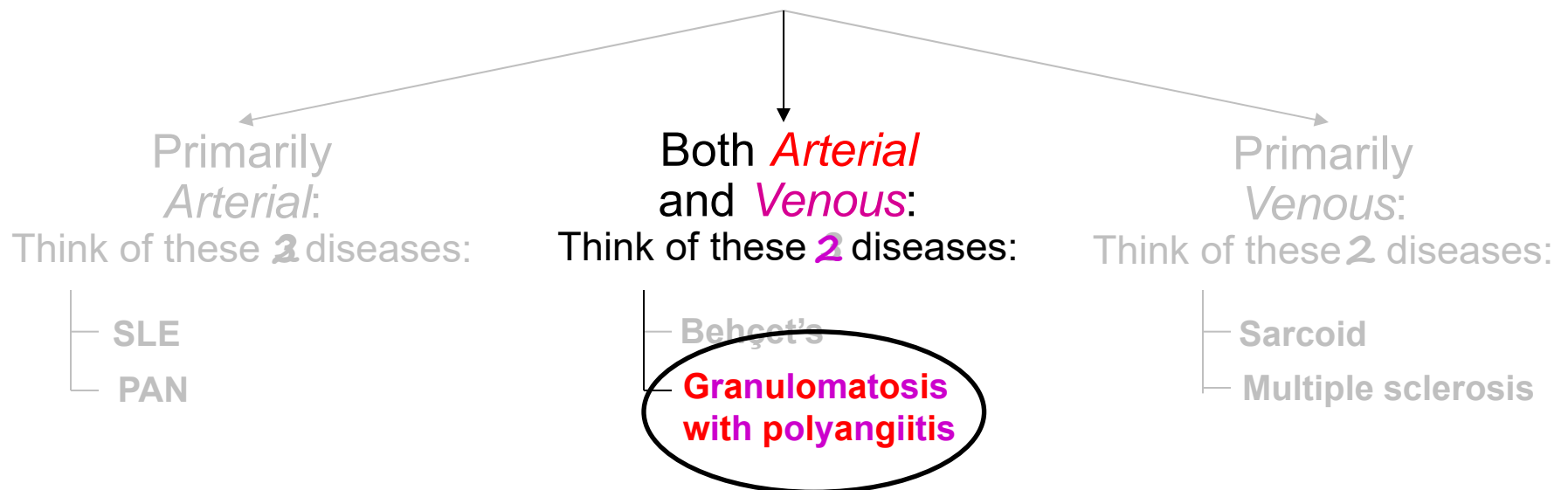
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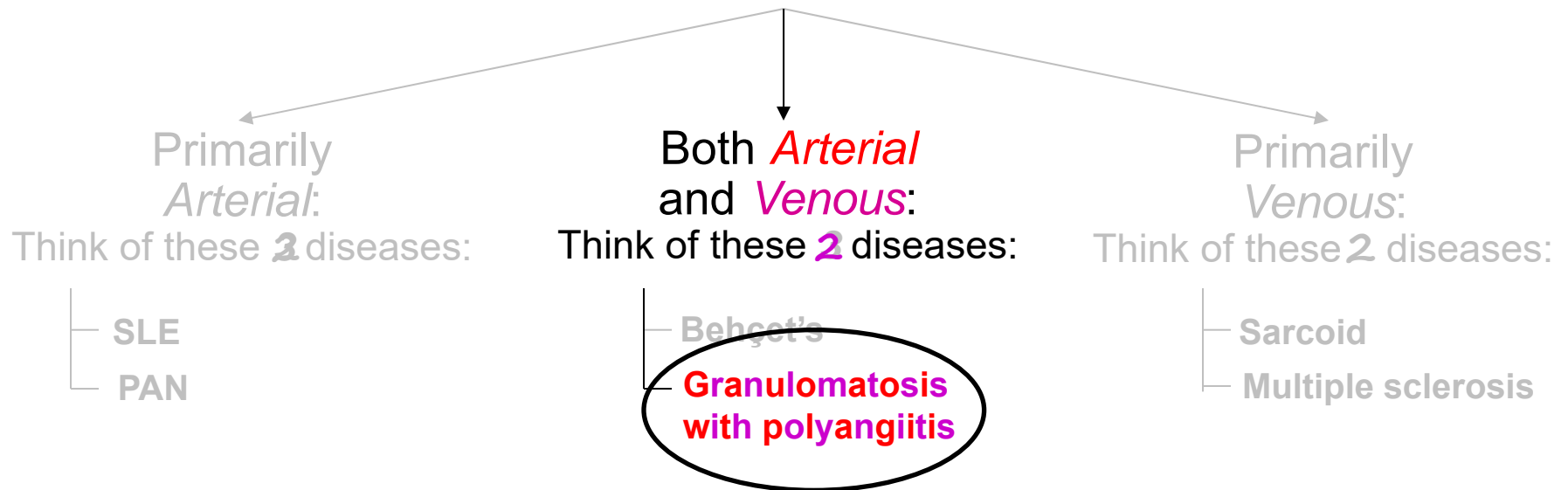
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If you're having trouble remembering that granulomatosis with polyangiitis (GwP) is the entity formerly known as Wegener's...



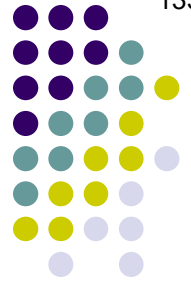
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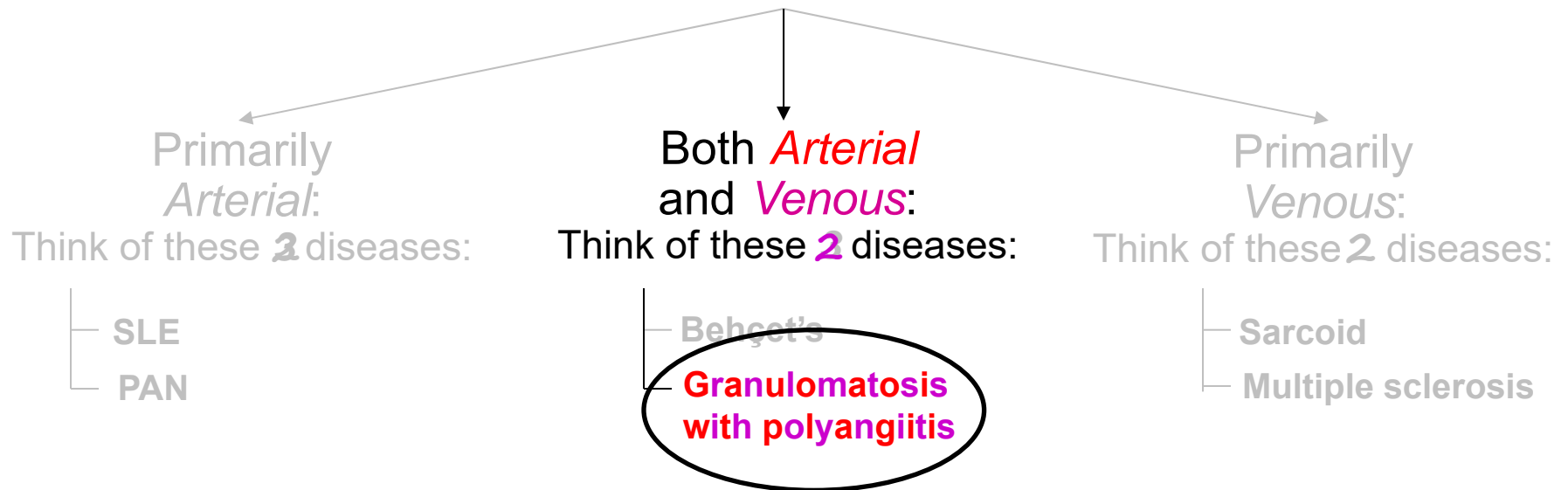
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think of the little 'w' as standing for 'Wegener's'*



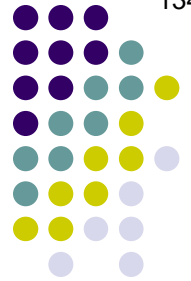
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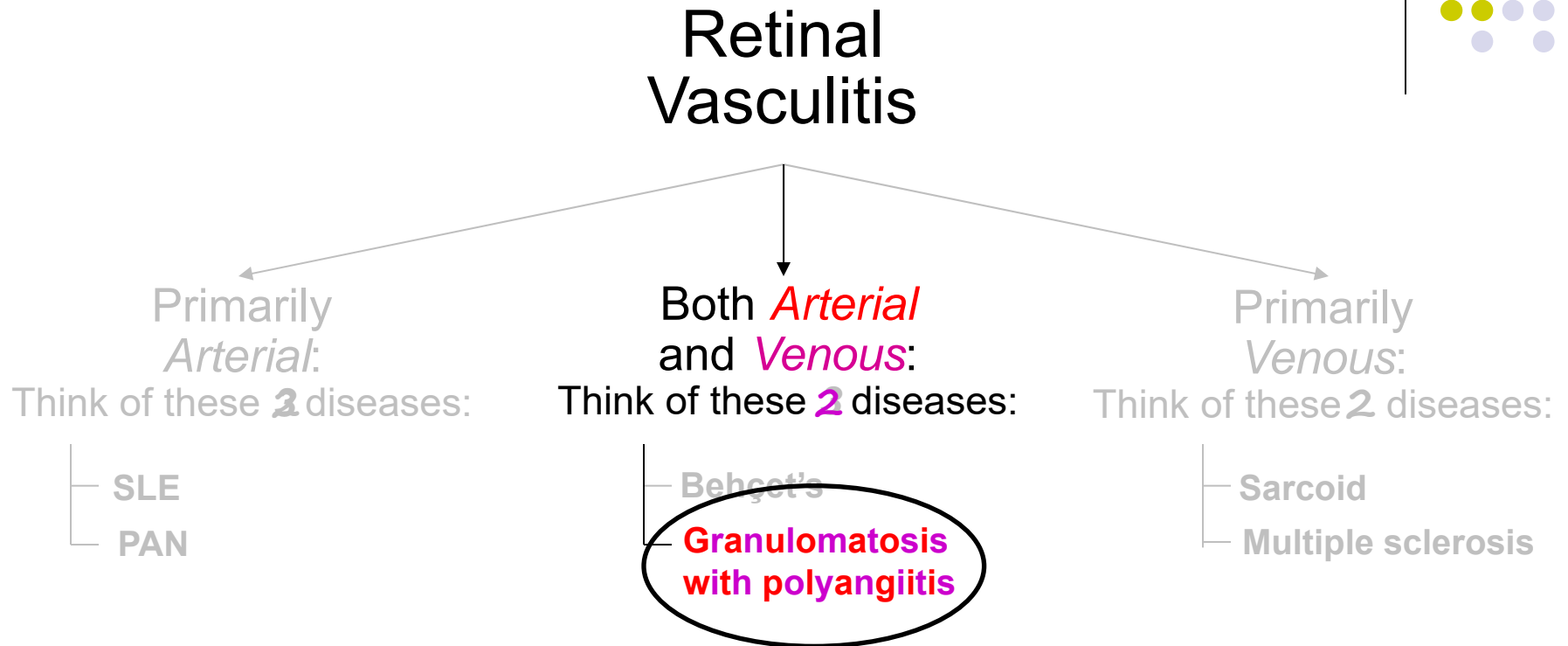


What is the classic triad of granulomatosis with polyangiitis (GwP)?

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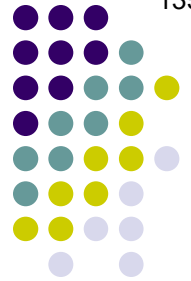
Retinal Vasculitis



What is the classic triad of granulomatosis with polyangiitis (GwP)?

Necrotizing vasculitis of:

- the upper and lower respiratory tract
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- small and medium-sized arteries and veins



Retinal Vasculitis

Retinal Vasculitis

Primarily
Arterial:

Think of these **2** diseases:

What is the classic presentation of upper respiratory tract involvement?

Both *Arterial*
and *Venous*:

Think of these **2** diseases:

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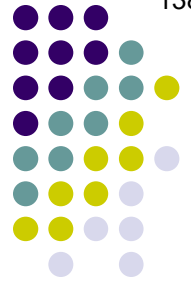
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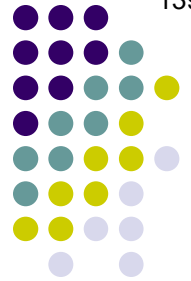
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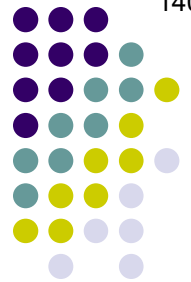
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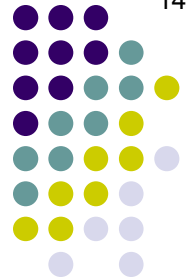
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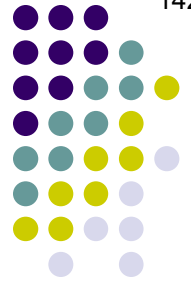
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Of the three, which does the Uveitis book describe as "the most characteristic clinical feature" of GwP?

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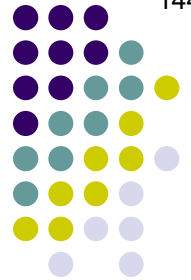
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Next Q

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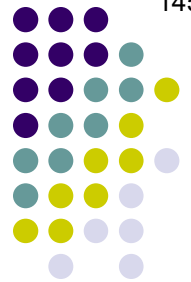
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What is the classic finding on CT?
Bony destruction of the sinuses

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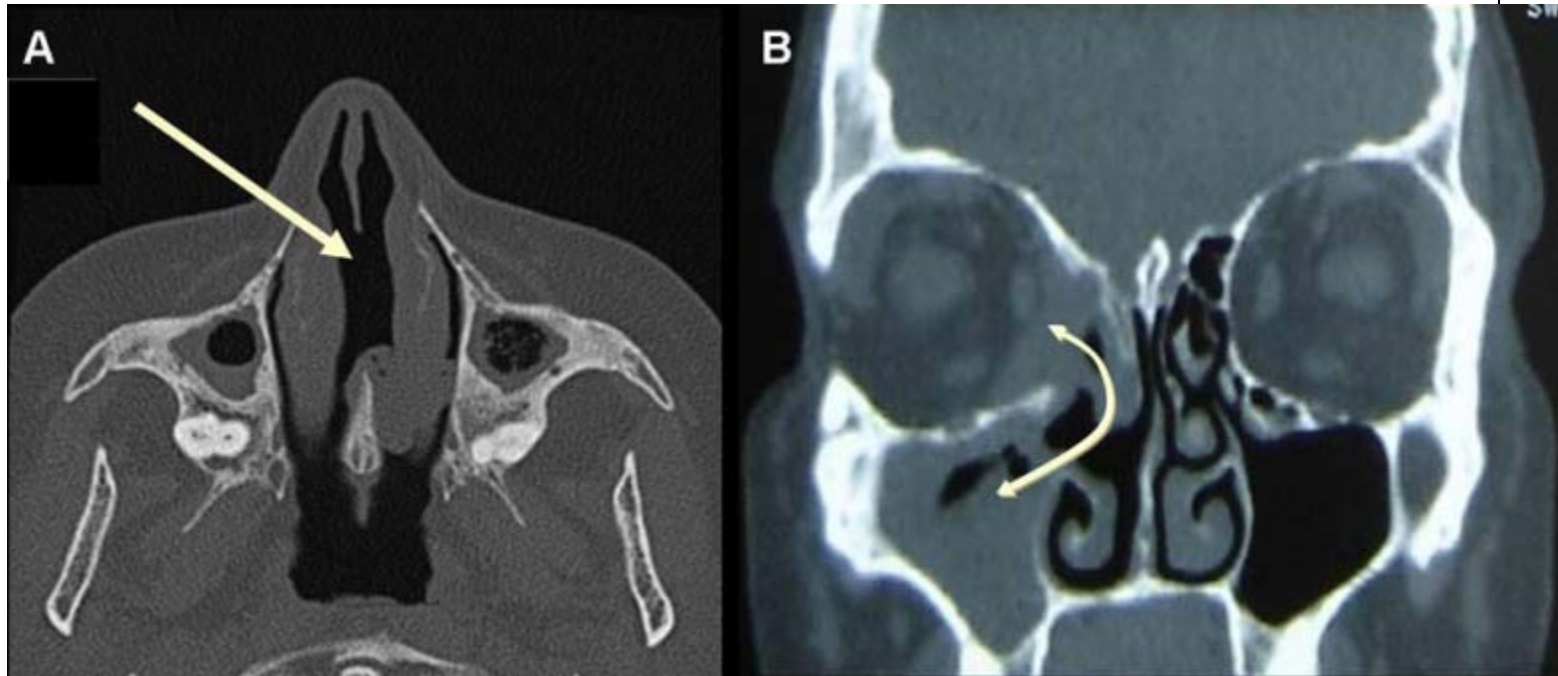
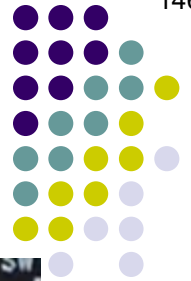
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A) CT scan of the sinus in a patient with GwP, showing nasal septum perforation (arrow) and maxillary sinusitis with some degree of maxillary sinusitis and atrophy, with osteosclerosis and bony thickening of the paranasal sinuses. B) CT scan of the sinus in a patient with GwP showing sinusitis and sinus wall erosion leading to the formation of a communication (fistula) between right maxillary sinus, nasal cavity and orbit (double-headed arrow)

GwP: Sinusitis

Retinal Vasculitis

Retinal

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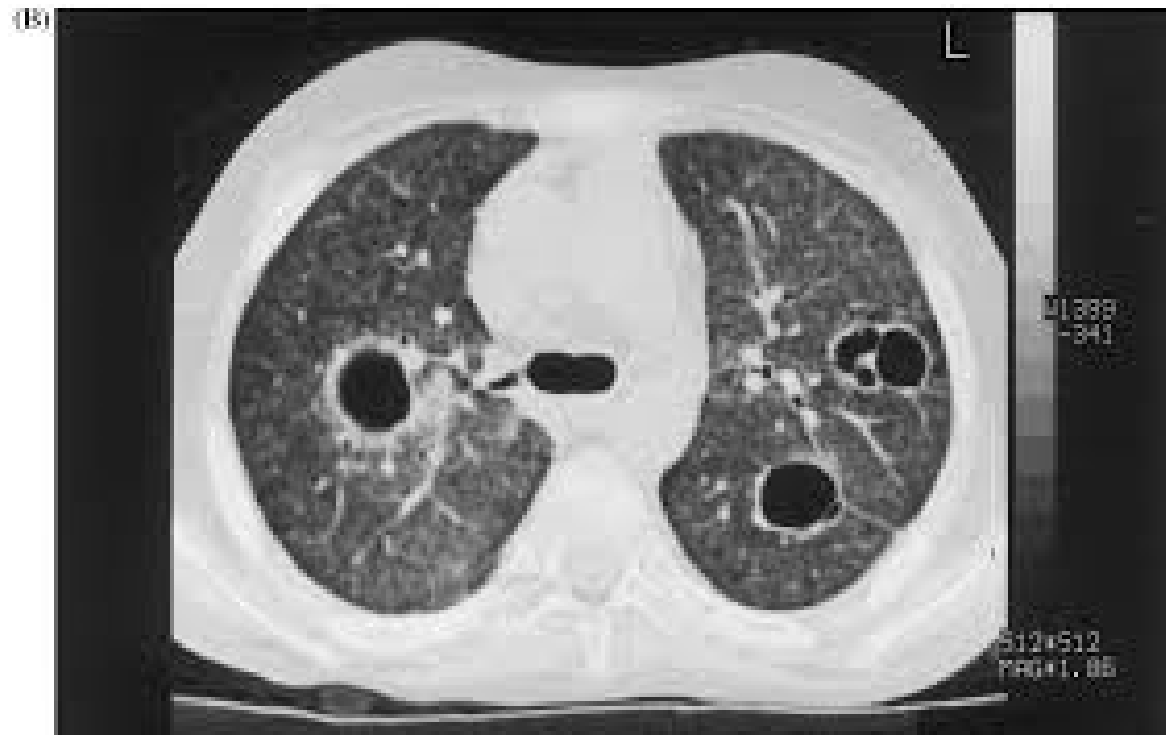
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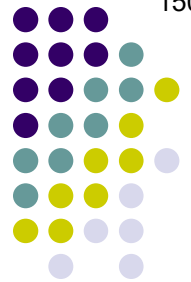
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149



GwP: Cavitory lung lesions



Retinal Vasculitis

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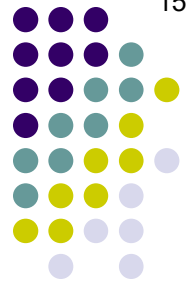
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What lab findings result?

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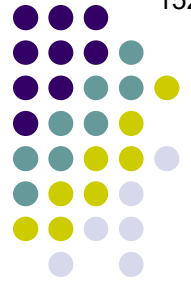
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What lab findings result?
Hematuria and proteinuria

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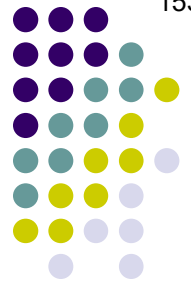
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What specific pathologic renal
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Two other manifestations are common as well—what are they?

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Next Q



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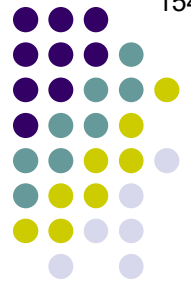
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--Rash
--Arthralgias

Next Q

Retinal Vasculitis



What proportion of GwP pts have ophthalmic involvement?

What is the classic
Bony destruction of

Arter

Think of these

What is the classic presentation of
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Sinusitis with bloody discharge

Behçet's

**Granulomatosis
with polyangiitis**

Sarcoid

Multiple sclerosis

What lab findings result?
Hematuria and proteinuria

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Necrotizing vasculitis of:

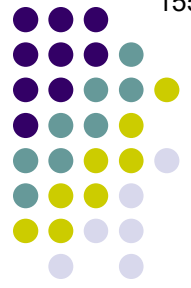
--the **upper and lower respiratory tract**
--the **kidneys**

What specific pathologic renal
condition is caused by GwP?
Glomerulonephritis

Two other manifestations are common as well—what are they?

--Rash
--Arthralgias

Retinal Vasculitis



What proportion of GwP pts have ophthalmic involvement?
About half

What is the classic
Bony destruction of

Arter

Think of these

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(It's not retinal.)

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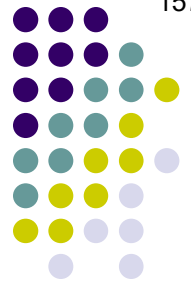
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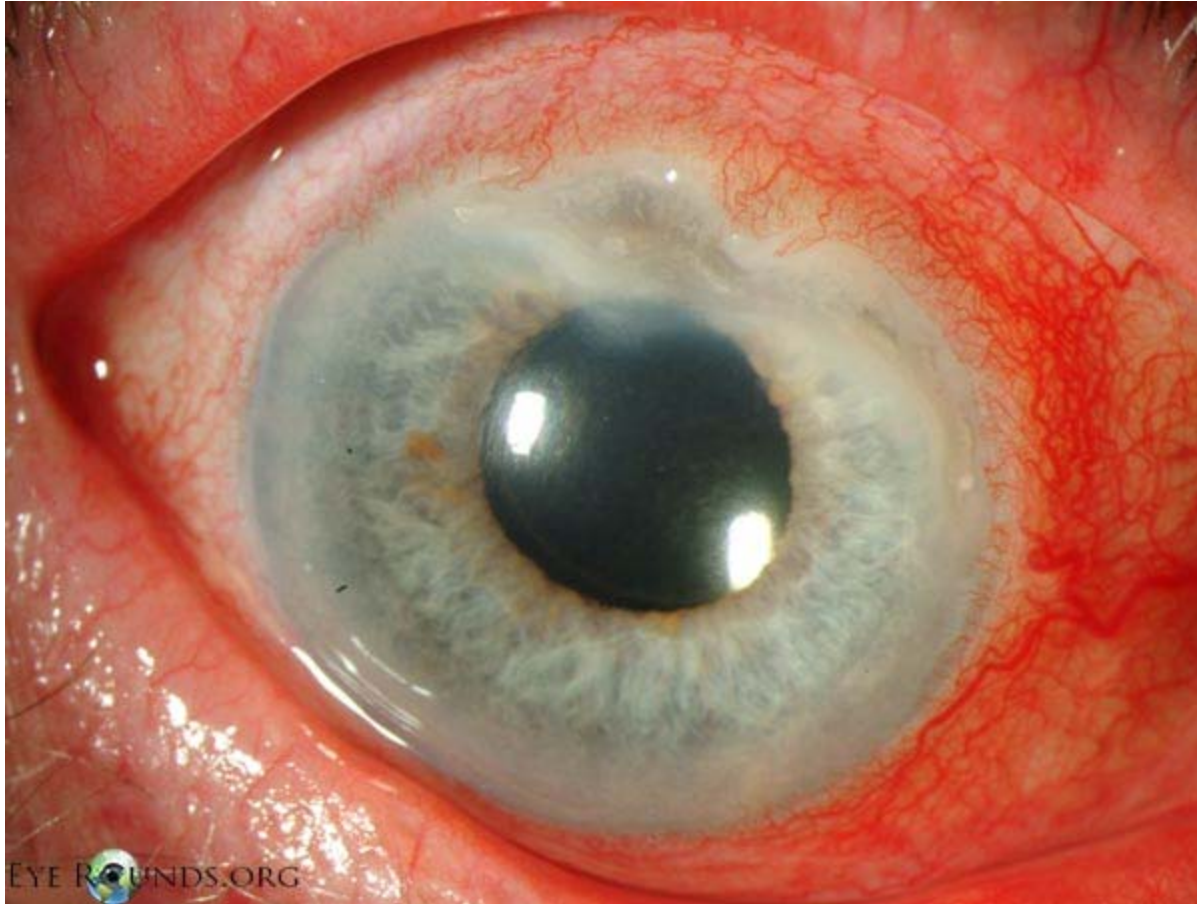
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Retinal Vasculitis



GwP: PUK

Retinal Vasculitis

OK then, what proportion of GwP pts manifest vasculitis?

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Ab

W.

(It's not retinal.)

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Scleritis (including PUK)

What is the prognosis for untreated GwP?

Dismal—the 1-yr mortality rate is 80%

What is the treatment of choice?

Steroids + cyclophosphamide

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Cyclophosphamide is an extremely harsh drug—
why not tx with steroids alone?

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Scleritis (including PUK)

Steroid monotherapy?

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Scleritis (including PUK)

Cyclophosphamide is an extremely harsh drug—
why not tx with steroids alone?

Because steroid monotherapy for GwP is
associated with an **increased** risk of mortality

Steroid monotherapy? No!

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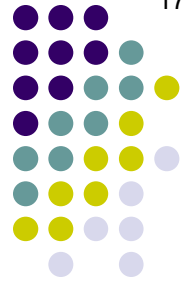
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Retinal Vasculitis

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In broadest terms, how would you describe sarcoid?

Primarily
Venous:

Think of these **2** diseases:

Sarcoid

Multiple sclerosis

Think of

SL

PA



Retinal Vasculitis

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In broadest terms, how would you describe sarcoid?

It is a multi-organ disease characterized by the presence of

histology (two words)

Primarily

Venous:

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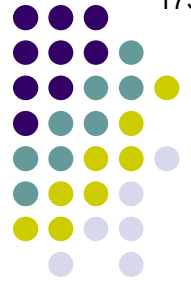
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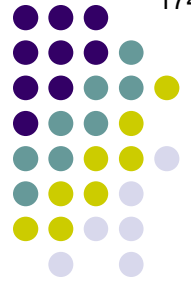
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What is the cause?

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What is the cause?

As of this writing, it is unknown

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The lungs

Primarily

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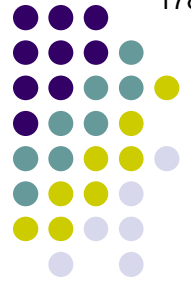
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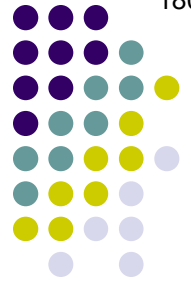
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Primarily

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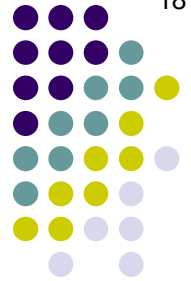
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Pretty much all of them

What percentage of sarcoid pts have ocular involvement?

About 50

Primarily

Venous:

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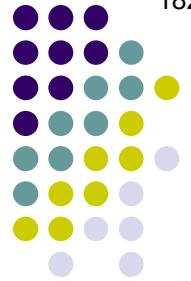
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Who is the typical sarcoid pt in the US?

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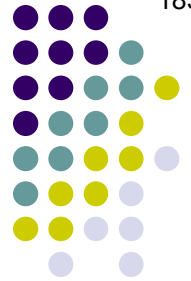
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Who is the typical sarcoid pt in the US?

An African-American

Primarily

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The lungs

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What percentage of sarcoid pts have ocular involvement?

About 50

Who is the typical sarcoid pt, world-wide? in the US?

An African-American

How about world-wide? Which ethnic group has the highest prevalence of sarcoid?

Primarily
Venous:

Think of these **2** diseases:

Sarcoid

Multiple sclerosis



Retinal Vasculitis

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Who is the typical sarcoid pt ^{world-wide?} in the US?

An African-American

How about world-wide? Which ethnic group has the highest prevalence of sarcoid?

Whites residing in

direction + continent

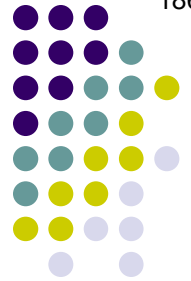
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What percentage of sarcoid pts have ocular involvement?

About 50

Who is the typical sarcoid pt ^{world-wide?} in the US?

An African-American

How about world-wide? Which ethnic group has the highest prevalence of sarcoid?

Whites residing in Northern Europe

Primarily
Venous:

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Who is the typical sarcoid pt in the US?

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During what age-range does dz onset typically occur?

Primarily

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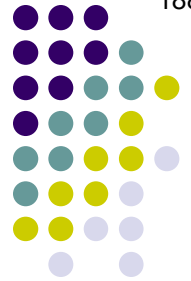
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What is the cause?

As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?

The lungs

Which other organ systems can be involved?

Pretty much all of them

What percentage of sarcoid pts have ocular involvement?

About 50

Who is the typical sarcoid pt in the US?

An African-American

During what age-range does dz onset typically occur?

Usually 20 to 50

Primarily

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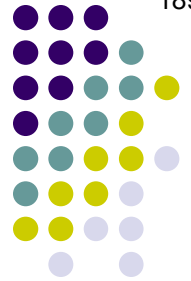
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What is the cause?

As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?

The lungs

Which other organs are commonly involved?

Pretty much all

What percentage of patients have ocular involvement?

About 50

Who is the typical patient?

An African-Am

During what age range does it typically present?

Usually 20 to 5

Primarily

Venous:

Think of these **2** diseases:

Sarcoid

cleriosis

What is the single-best screening test for sarcoid?



Retinal Vasculitis

Retinal Vasculitis

In broadest terms, how would you describe sarcoid?

It is a multi-organ disease characterized by the presence of noncaseating granulomas

What is the cause?

As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?

The lungs

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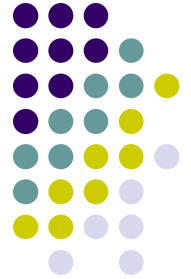
Chest X-ray

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Bilateral hilar adenopathy

cleriosis

Retinal Vasculitis



Sarcoid: Bilateral hilar adenopathy



Retinal Vasculitis

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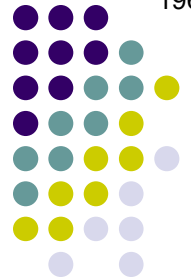
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cleriosis



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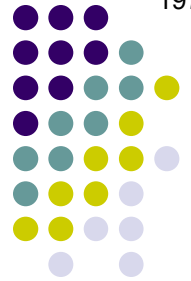
What is the only way to definitively diagnose sarcoidosis?

Primarily
Venous:

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Sarcoid

Scleritis



Retinal Vasculitis

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What is the cause?

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The lungs

Which other organs are commonly involved?

Pretty much all

What percentage of patients have systemic involvement?

About 50

Who is the typical patient?

An African-American

During what age range does sarcoidosis typically present?

Usually 20 to 50

What is the single-best screening test for sarcoid?

Chest X-ray

What is the classic CXR finding?

Bilateral hilar adenopathy

If CXR is read as normal, but clinical suspicion for sarcoidosis remains high, what other imaging modality should be considered?

Thin cut CT of the chest

What is the only way to definitively diagnose sarcoidosis?

Via biopsy demonstrating the presence of noncaseating granulomas

Primarily

Venous:

Think of these **2** diseases:

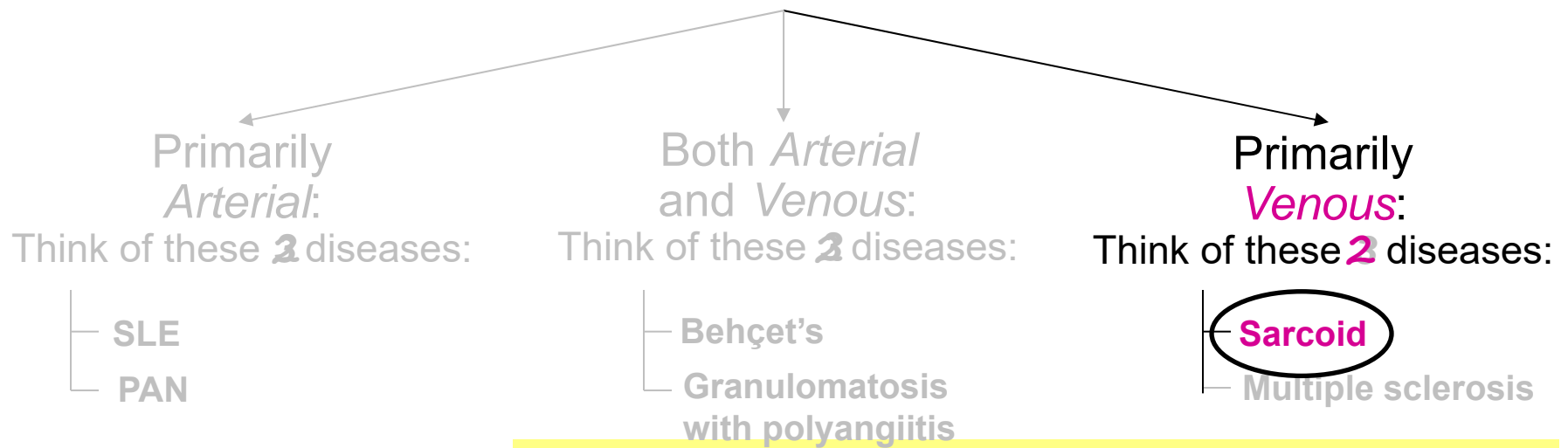
Sarcoid

Scleritis

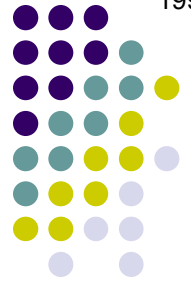


Retinal Vasculitis

Retinal Vasculitis

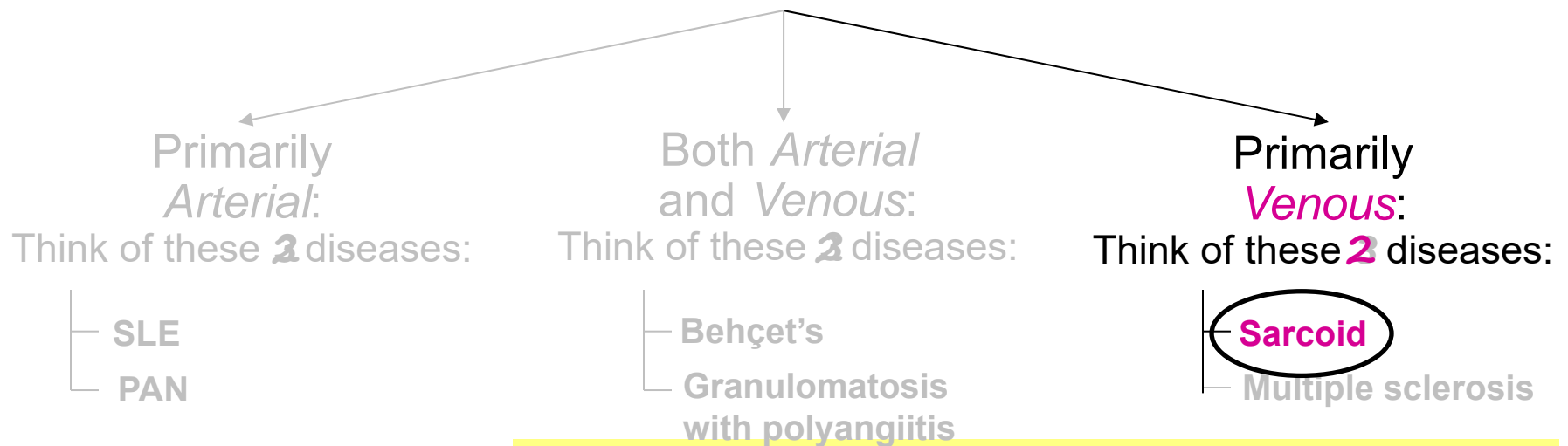


What percentage of sarcoid uveitis pts have posterior manifestations?



Retinal Vasculitis

Retinal Vasculitis

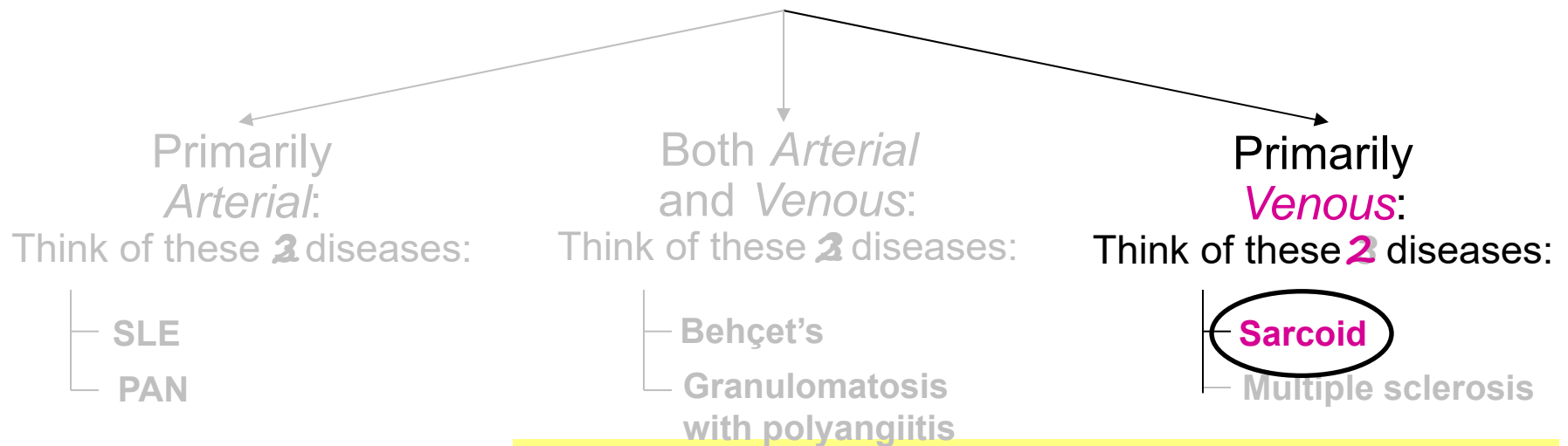


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Retinal Vasculitis

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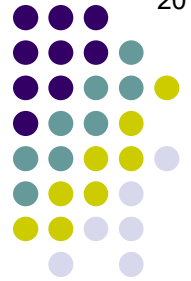


What percentage of sarcoid uveitis pts have posterior manifestations?
About 20

What are the two most common posterior manifestations?

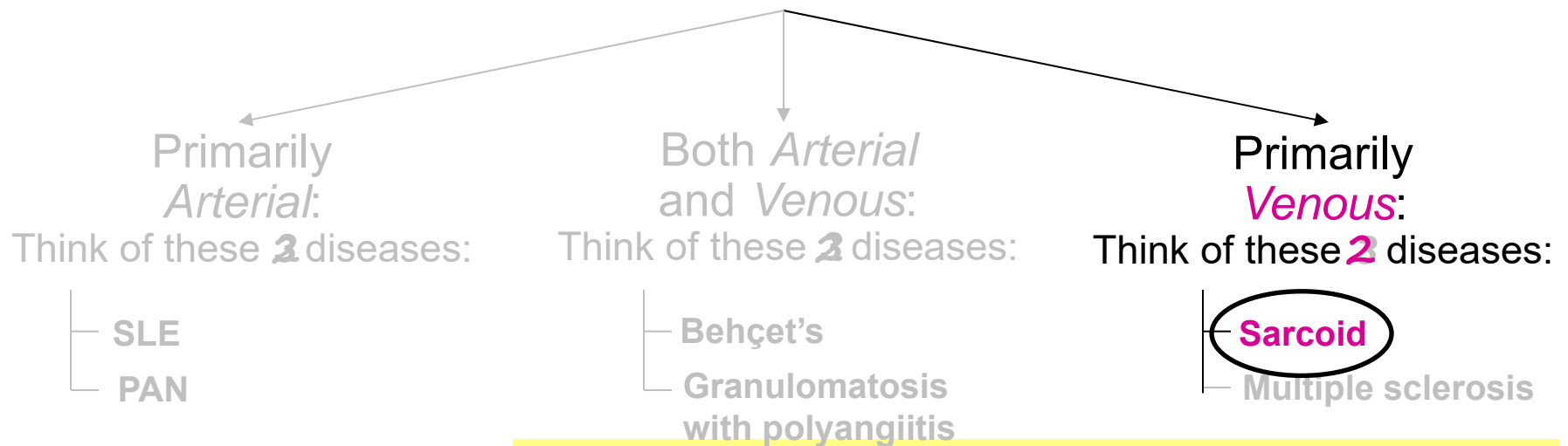
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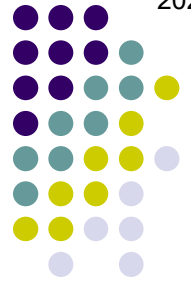
Retinal Vasculitis

Retinal Vasculitis



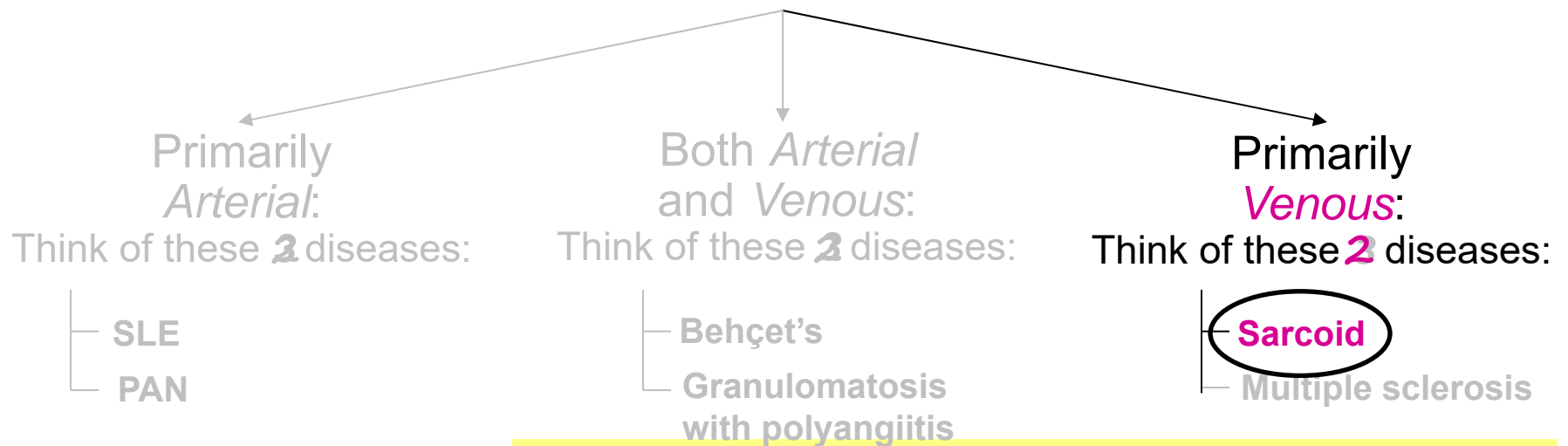
What percentage of sarcoid uveitis pts have posterior manifestations?
About 20

What are the two most common posterior manifestations?
 --Granulomas of the [], [] and/or []
 --Retinal []



Retinal Vasculitis

Retinal Vasculitis



What percentage of sarcoid uveitis pts have posterior manifestations?
About 20

What are the two most common posterior manifestations?
--Granulomas of the choroid, retina and/or optic nerve
--Retinal vasculitis

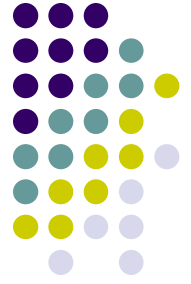
Retinal Vasculitis



Choroidal granulomas in sarcoid

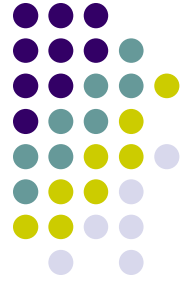


Retinal Vasculitis



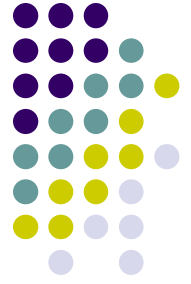
Choroidal granulomas in sarcoid. Note the 'punched out' appearance

Retinal Vasculitis

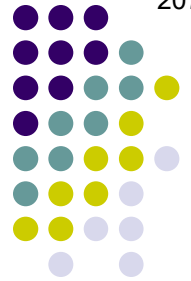


ONH granuloma in sarcoid

Retinal Vasculitis



ONH granuloma with neuroretinitis



Retinal Vasculitis

Retinal Vasculitis

Primarily

Both Arterial

Primarily

Is the vasculitis primarily an arteritis, a phlebitis, or both?

Venous:

Think of these 2 diseases:

Sarcoid

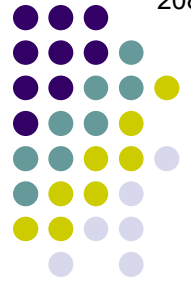
Multiple sclerosis

What are the two most common posterior manifestations?

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Retinal Vasculitis

Retinal Vasculitis

Primarily

Both Arterial

Primarily

Venous:

Is the vasculitis primarily an arteritis, a phlebitis, or both?

Sarcoid tends to cause a phlebitis (more specifically, a [redacted])

Think of these **2** diseases:

Sarcoid

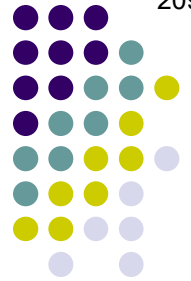
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Sarcoid

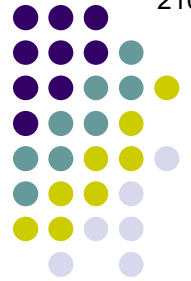
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Is the vasculitis primarily an arteritis, a phlebitis, or both?

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Think of these **2** diseases:

What is the classic appearance of sarcoid periphlebitis?

Sarcoid

Multiple sclerosis

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Retinal Vasculitis

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Is the vasculitis primarily an arteritis, a phlebitis, or both?

Sarcoid tends to cause a phlebitis (more specifically, a **periphlebitis**)

Think of these **2** diseases:

Sarcoid

Multiple sclerosis

What is the classic appearance of sarcoid periphlebitis?

Small yellowish-white nodular granulomas accumulate along venules in a pattern referred to as

three words

What are the two most common posterior manifestations?

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Retinal Vasculitis

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Sarcoid tends to cause a phlebitis (more specifically, a **periphlebitis**)

Think of these **2** diseases:

Sarcoid

Multiple sclerosis

What is the classic appearance of sarcoid periphlebitis?

Small yellowish-white nodular granulomas accumulate along venules in a pattern referred to as **candle-wax drippings**

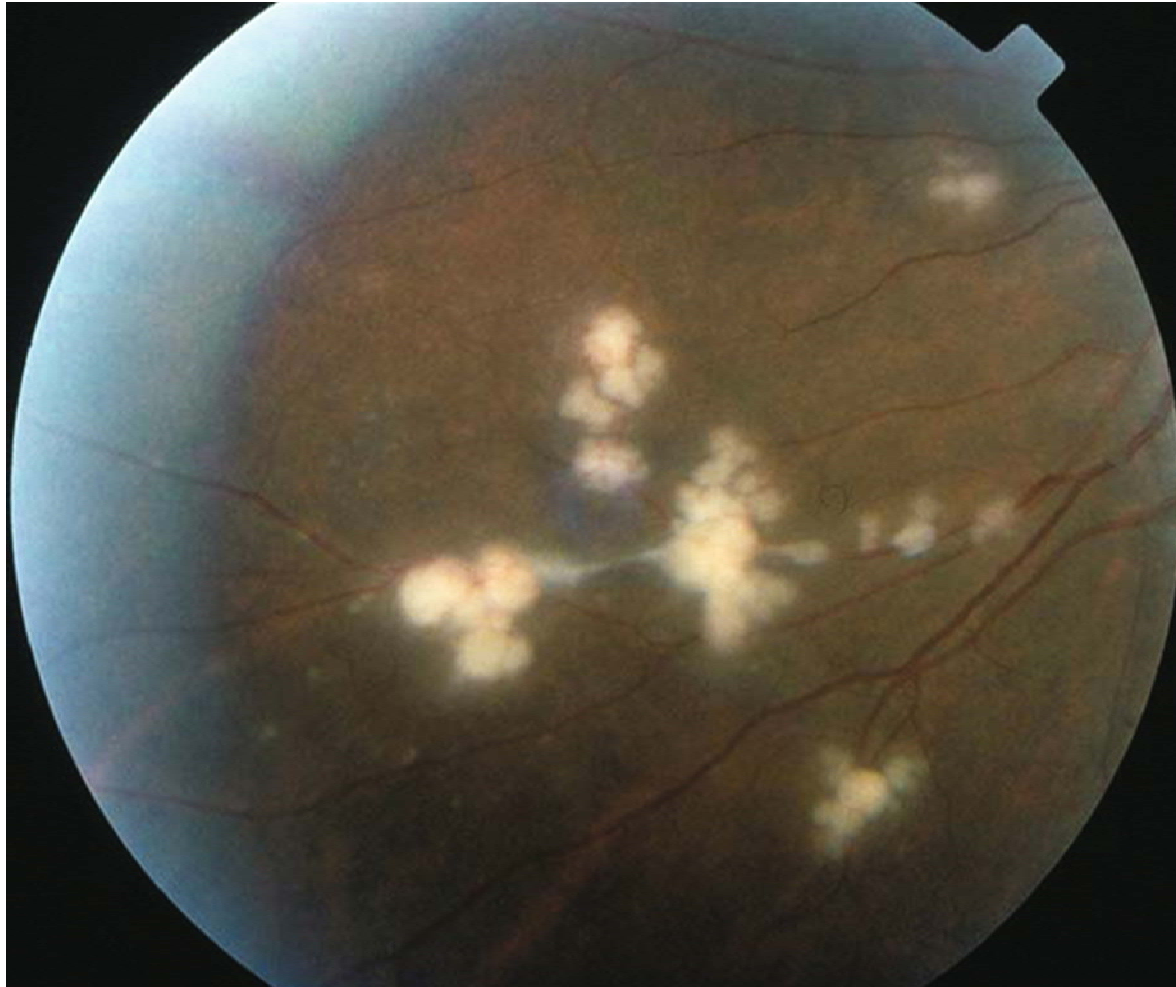
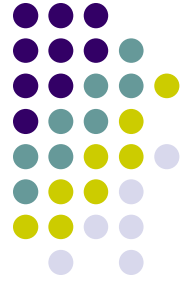
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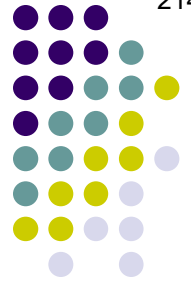
--Granulomas of the choroid, retina and/or optic nerve

--**Retinal vasculitis**

Retinal Vasculitis



Sarcoid periphlebitis: 'candle-wax drippings'



Retinal Vasculitis

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Both Arterial

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Venous:

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Sarcoid

Multiple sclerosis

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What bougie term (it's French) for candle-wax drippings is encountered frequently in the ophthalmic literature?

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Taches de bougie

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Retinal Vasculitis

Retinal Vasculitis

What is the first-line med for sarcoid uveitis?

Primarily

Venous:

Think of these **2** diseases:

Sarcoid

Multiple sclerosis

Think



Retinal Vasculitis

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What is the first-line med for sarcoid uveitis?
Steroids

Primarily
Venous:

Think of these 2 diseases:

Sarcoid

Multiple sclerosis

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Retinal Vasculitis

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What is the first-line med for sarcoid uveitis?
Steroids

Topical, periocular or systemic?

Primarily

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Retinal Vasculitis

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What is the first-line med for sarcoid uveitis?
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Multiple sclerosis

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Retinal Vasculitis

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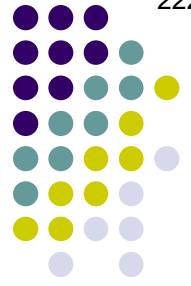
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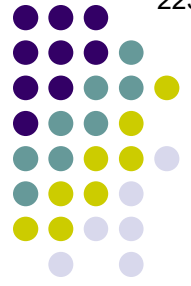
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What about biologics--are they useful in controlling sarcoid uveitis?

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Multiple sclerosis

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Retinal Vasculitis

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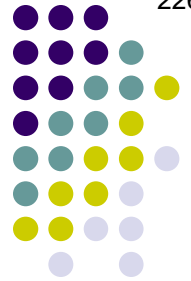
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Multiple sclerosis

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Retinal Vasculitis

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For more on **Sarcoid, see its self-titled slide-set**

Think

Retinal Vasculitis

227



Who is the typical multiple sclerosis pt?

Primarily
Venous:
k of these 2 diseases:

Sarcoid

Multiple sclerosis

Retinal Vasculitis



Who is the typical multiple sclerosis pt?
A young to middle-age white female

Specific age range per:
--the *Uveitis* book: 20-50
--the *Neuro-Oph* book: 25-40
--EyeWiki: 15-45

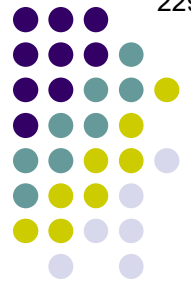
Primarily
Venous:
k of these 2 diseases:

Sarcoid

Multiple sclerosis

Retinal Vasculitis

229



Who is the typical multiple sclerosis pt?

A young to middle-age white female

Is there a geographic association?

Primarily

Venous:

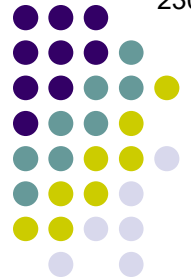
Most of these 2 diseases:

Sarcoid

Multiple sclerosis

Retinal Vasculitis

230



Who is the typical multiple sclerosis pt?

A young to middle-age white female

Is there a geographic association?

Yes, it is more common among individuals who live relatively
the equator

far from vs
near to

Primarily

Venous:

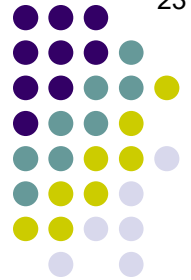
1/3 of these 2 diseases:

Sarcoid

Multiple sclerosis

Retinal Vasculitis

231



Who is the typical multiple sclerosis pt?

A young to middle-age white female

Is there a geographic association?

Yes, it is more common among individuals who live relatively far from the equator

Primarily

Venous:

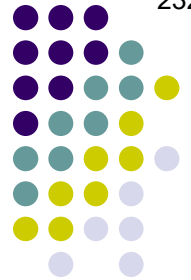
Most of these 2 diseases:

Sarcoid

Multiple sclerosis

Retinal Vasculitis

232



Who is the typical multiple sclerosis pt?

A young to middle-age white female

Is there a geographic association?

Yes, it is more common among individuals who live relatively far from the equator

What is the cause?

Primarily

Venous:

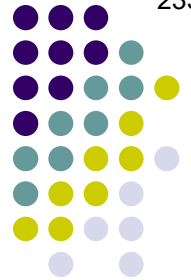
Most of these 2 diseases:

Sarcoid

Multiple sclerosis

Retinal Vasculitis

233



Who is the typical multiple sclerosis pt?

A young to middle-age white female

Is there a geographic association?

Yes, it is more common among individuals who live relatively far from the equator

What is the cause?

It is unknown at this time

Primarily

Venous:

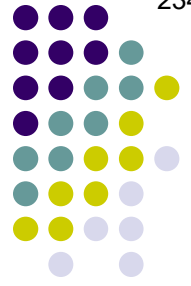
Most of these 2 diseases:

Sarcoid

Multiple sclerosis

Retinal Vasculitis

234



Who is the typical multiple sclerosis pt?

A young to middle-age white female

Is there a geographic association?

Yes, it is more common among individuals who live relatively far from the equator

What is the cause?

It is unknown at this time

Is there a genetic component?

Primarily

Venous:

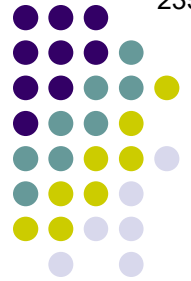
Most of these 2 diseases:

Sarcoid

Multiple sclerosis

Retinal Vasculitis

235



Who is the typical multiple sclerosis pt?

A young to middle-age white female

Is there a geographic association?

Yes, it is more common among individuals who live relatively far from the equator

What is the cause?

It is unknown at this time

Is there a genetic component?

Yes, but it is complex and multifactorial. Further, environmental factors most definitely play a role as well.

Primarily

Venous:

Most of these 2 diseases:

Sarcoid

Multiple sclerosis

Retinal Vasculitis

236



Who is the typical multiple sclerosis pt?

A young to middle-age white female

Is there a geographic association?

Yes, it is more common among individuals who live relatively far from the equator

What is the cause?

It is unknown at this time

Is there a genetic component?

Yes, but it is complex and multifactorial. Further, environmental factors most definitely play a role as well.

In a nutshell, what pathologic process is the culprit in MS?

Primarily

Venous:

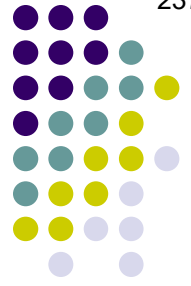
Two of these 2 diseases:

Sarcoid

Multiple sclerosis

Retinal Vasculitis

237



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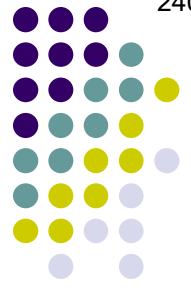
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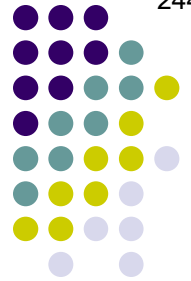
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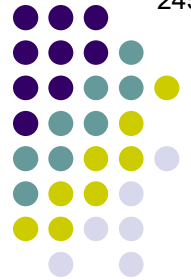
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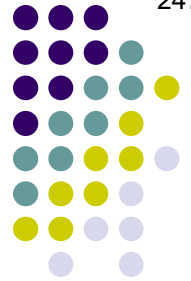
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Per the *Neuro-Oph* book: 25%

Per EyeWiki: 20%

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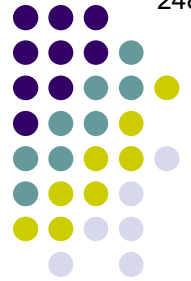
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Very much so

Is

Yes

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What is the most common presenting symptom of optic neuritis?

Optic neuritis

Does optic neuritis in MS present unilaterally, or bilaterally?

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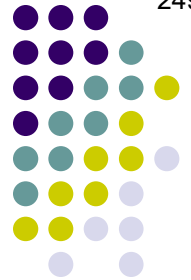
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What is the most common presenting symptom of MS?

Optic neuritis

Does optic neuritis in MS present unilaterally, or bilaterally?

It is almost always unilateral

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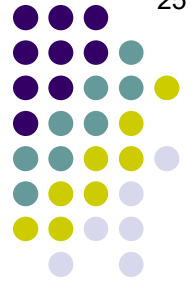
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How common is uveitis in MS?

Estimates vary widely, ranging from <1% to 30%

Per the *Neuro-Oph* book: 0.4-26%

Per the *Uveitis* book: 'Up to 30%'

Per EyeWiki: 1-2%

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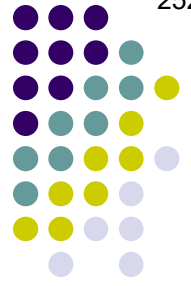
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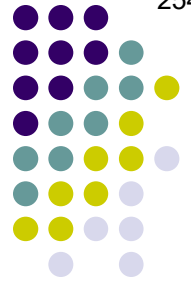
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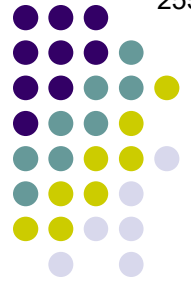
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Does intermediate uveitis in MS present unilaterally, like optic neuritis does?

Just the opposite—it is almost always bilateral

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At long last, a retinal vasculitis question: What proportion of MS pts manifest evidence of phlebitis?

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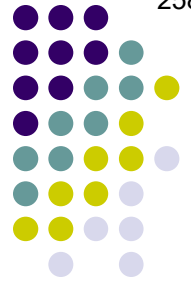
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5-10%

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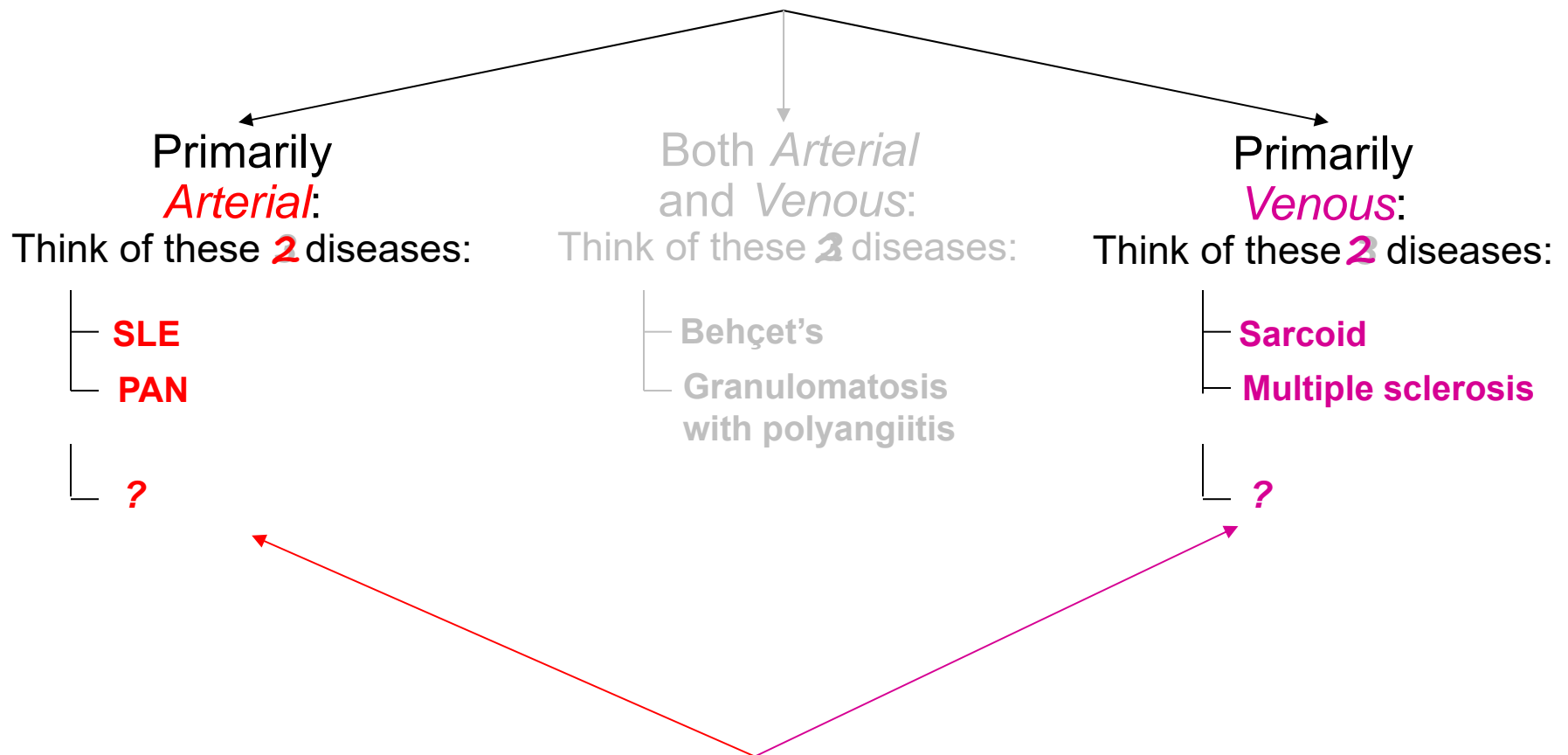
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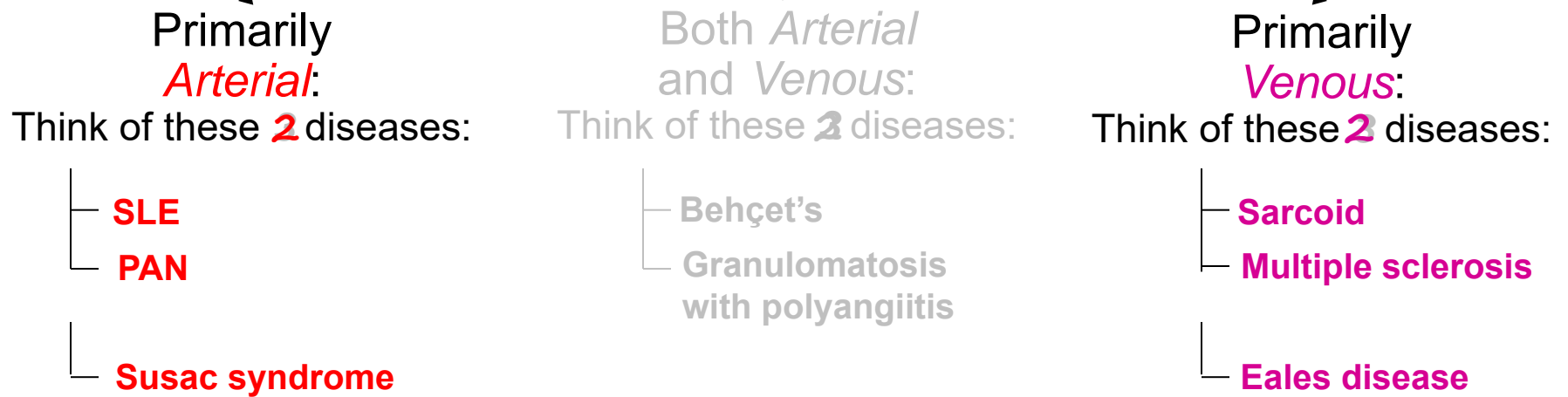


Two more conditions worth discussing (by way of a hint: both names are eponyms)

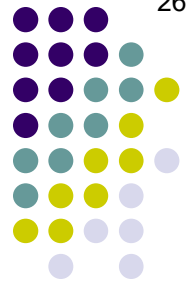


Retinal Vasculitis

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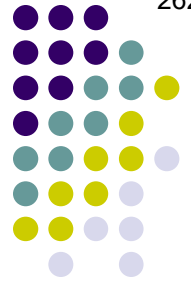
Retinal Vasculitis

What is Susac syndrome?

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Susac syndrome

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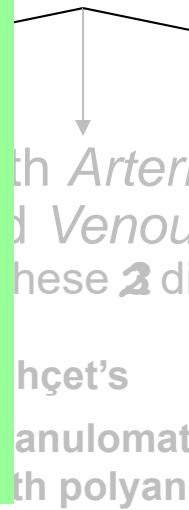


Retinal Vasculitis



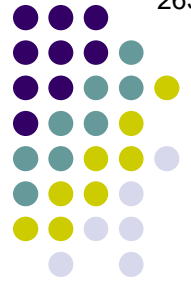
What is Susac syndrome?
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Retinal Vasculitis



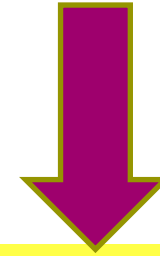
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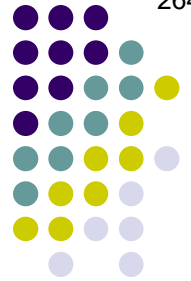
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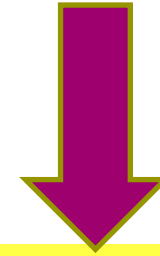
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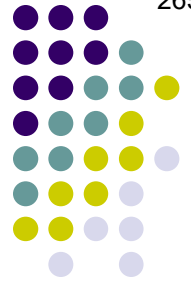


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Retinal Vasculitis



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What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?

What is Eales disease?
An obliterative retinal vasculitis

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Retinal Vasculitis



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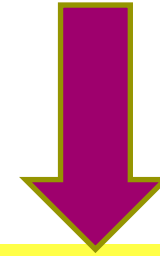
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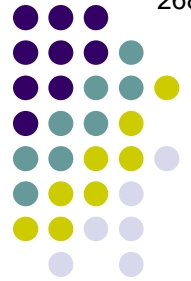
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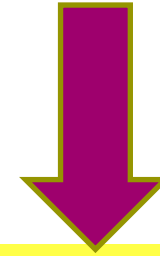
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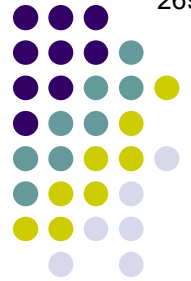
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Who is the classic patient?

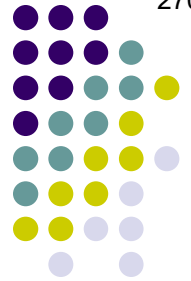
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Does it present unilaterally, or bilaterally?
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Eales disease



Retinal Vasculitis



Retinal Vasculitis

What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult female

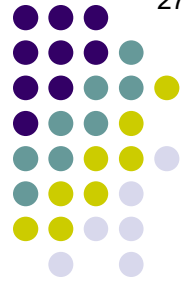
Susac syndrome

Who: Young adult **females**

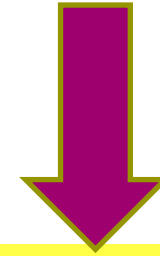
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Does it present unilaterally, or bilaterally?
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Eales disease



Retinal Vasculitis



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Young-adult female

Susac syndrome

Who: Young adult **females**

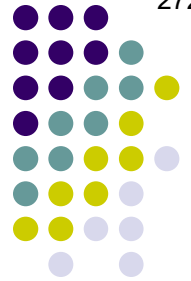
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Retinal Vasculitis



Retinal Vasculitis

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Susac syndrome

Who: Young adult **females**

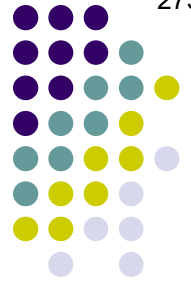
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Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult male from India

Eales disease

Who: Young adult **males**



Retinal Vasculitis



Retinal Vasculitis

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Who is the classic patient?
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What is the classic retinal finding?

Susac syndrome

Who: Young adult **females**

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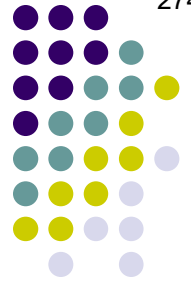
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An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult female

What is the classic retinal finding?
Multiple BRAOs occurring at non-branch points

Susac syndrome

Who: Young adult **females**

What: **Multiple BRAOs**

What is Eales disease?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult male from India

Eales disease

Who: Young adult **males**

Retinal Vasculitis

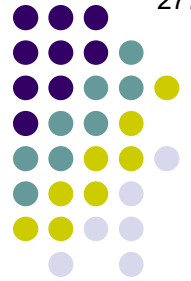


Susac syndrome. Note the area of infarct doesn't correspond to a branch-point blockage

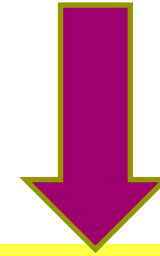
Retinal Vasculitis



Susac syndrome. Note the multiple areas of arteriolar inflammation and blockage at non-branch points



Retinal Vasculitis



Retinal Vasculitis

What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

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Young-adult female

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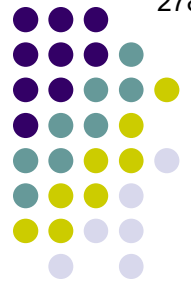
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Young-adult male from India

What is the classic retinal finding?

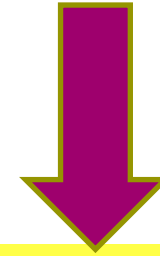
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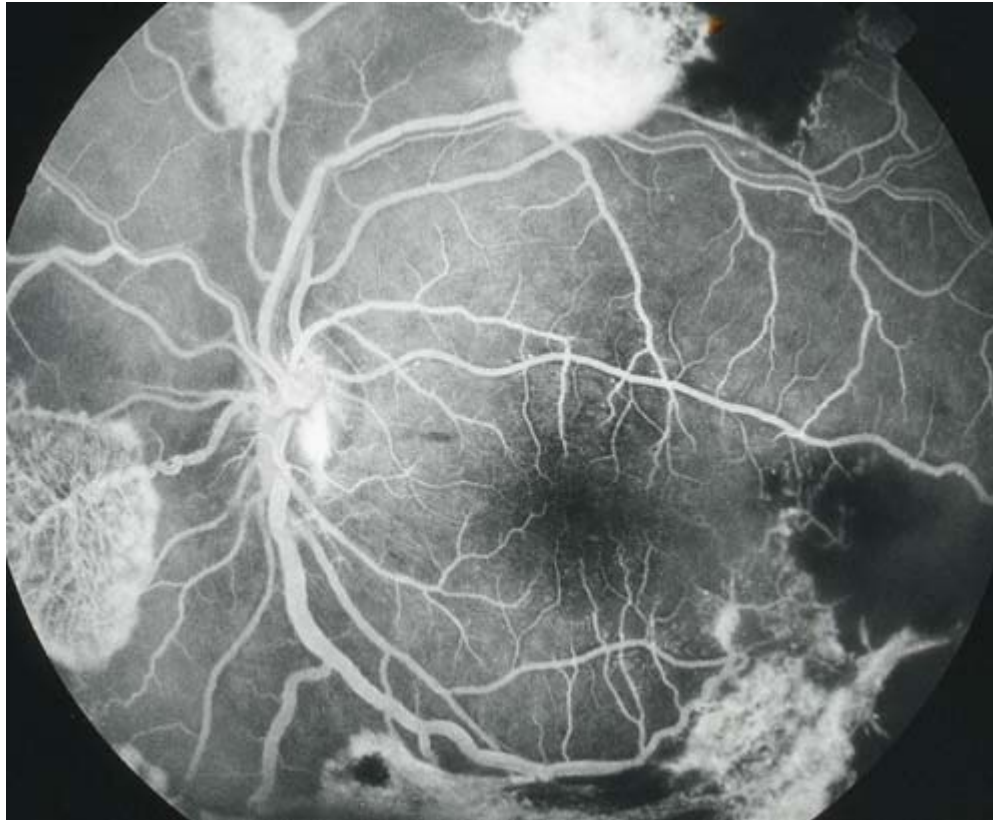
What is the classic retinal finding?
Peripheral neovascularization

Eales disease

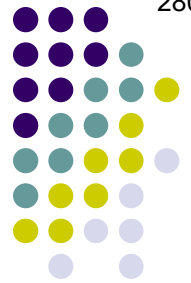
Who: Young adult **males**

What: **Peripheral neo**

Retinal Vasculitis



Eales disease: Peripheral neo



Retinal Vasculitis



Retinal Vasculitis

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Classic associations (Note: there are two)?

Susac syndrome

Who: Young adult **females**

What: **Multiple BRAOs**

Associated with:

What is Eales disease?
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Does it present unilaterally, or bilaterally?
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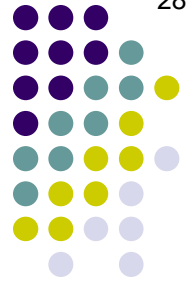
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Eales disease

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Retinal Vasculitis



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Classic associations (Note: there are two)?
Sensorineural hearing loss; encephalopathy

Susac syndrome

Who: Young adult **females**

What: **Multiple BRAOs**

Associated with: **Hearing loss;**
encephalopathy

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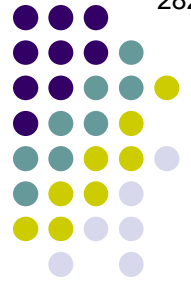
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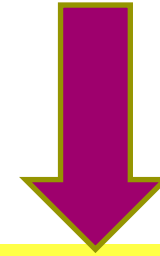
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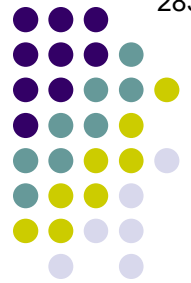
Classic association?

Eales disease

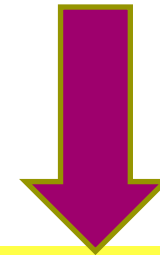
Who: Young adult **males**

What: **Peripheral neo**

Associated with:



Retinal Vasculitis



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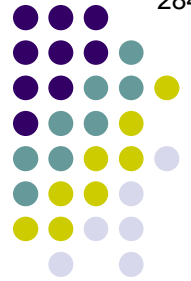
Classic association?
Tests positive for TB

Eales disease

Who: Young adult **males**

What: **Peripheral neo**

Associated with: **TB positivity**



Retinal Vasculitis

Retinal Vasculitis

