

Before you begin: This is a big topic, and big topics beget big slide-sets. There's a couple of natural breaks (around slides 207 and 389); *break time!* slides have been placed at those spots.

Q

TVL

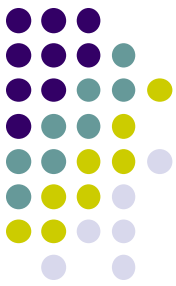
What does TVL stand for in this context?



A

TVL

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Transient visual loss



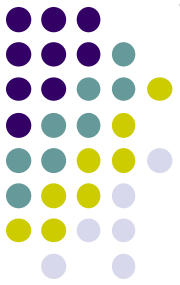
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How is the 'transient' in TVL defined?



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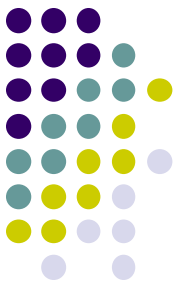
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How is the 'transient' in TVL defined?

Less than 24 hrs



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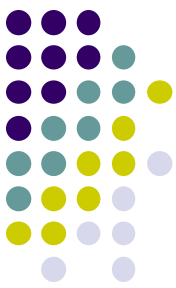
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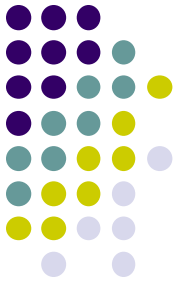
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How brief can the VL be?





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As little as a few seconds*

*We will expand on this assertion shortly

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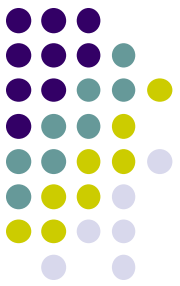
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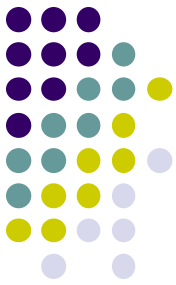
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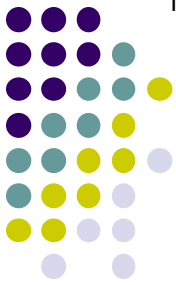
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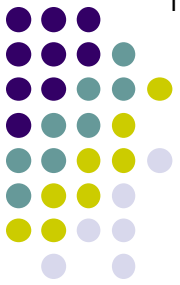
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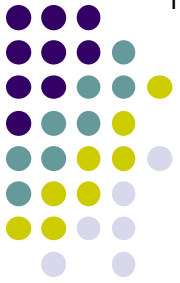
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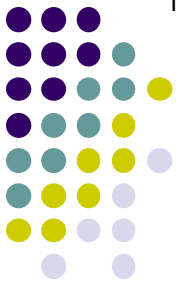
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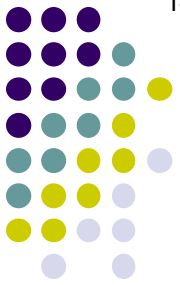
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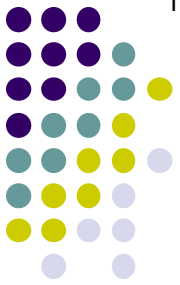
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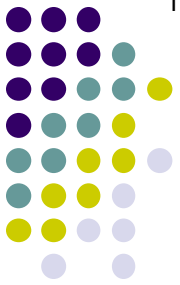
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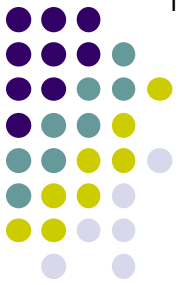
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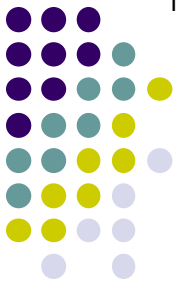
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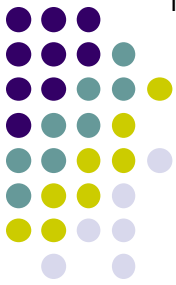
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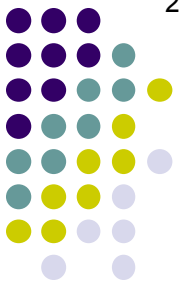
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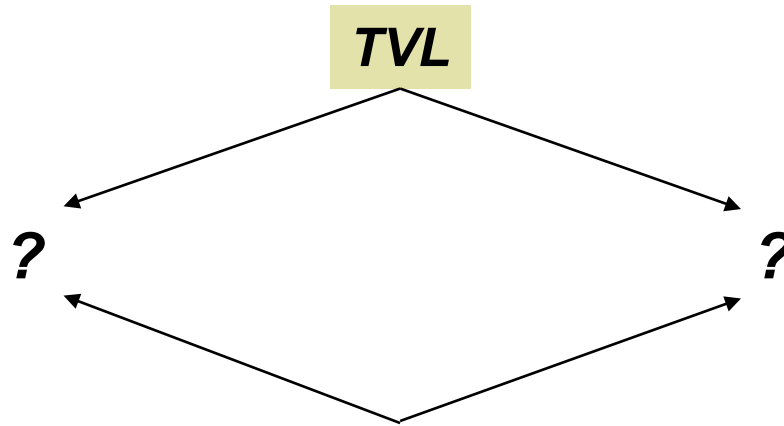
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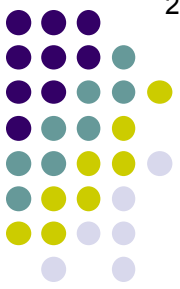
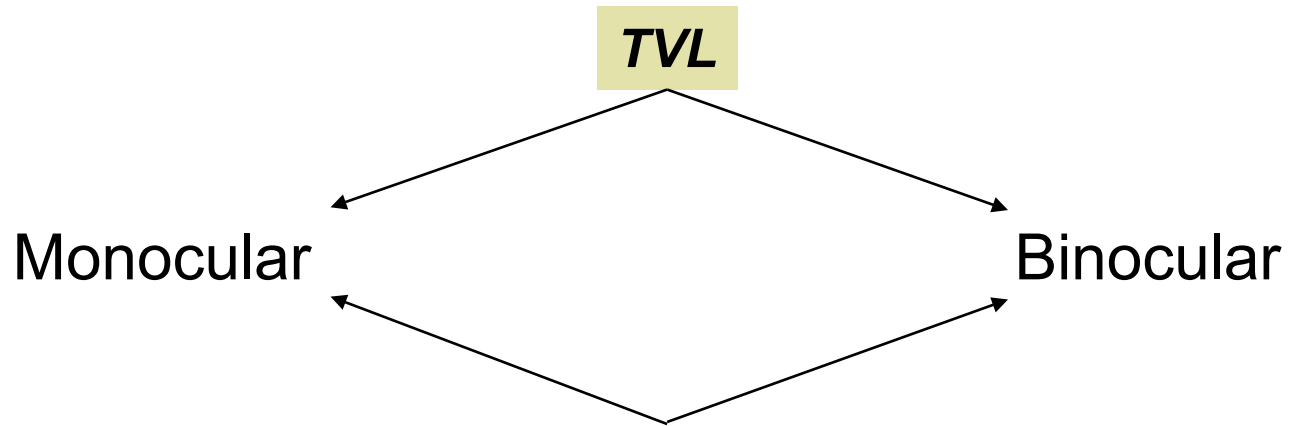
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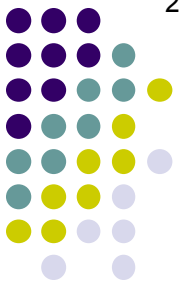
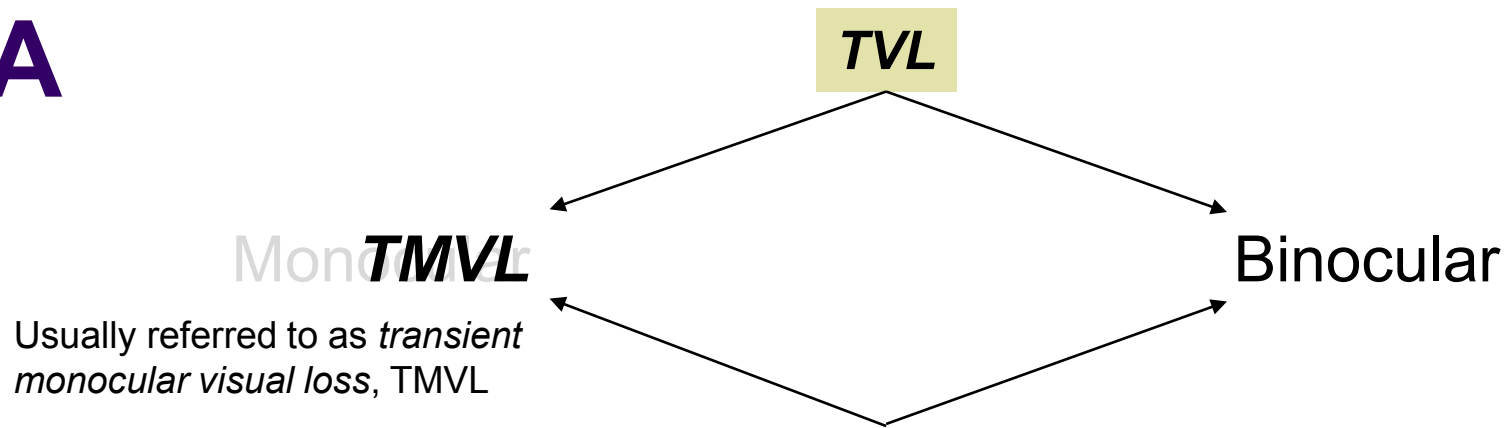
Q



There are lots of ways to categorize TVL, but one is fundamental—what is it?

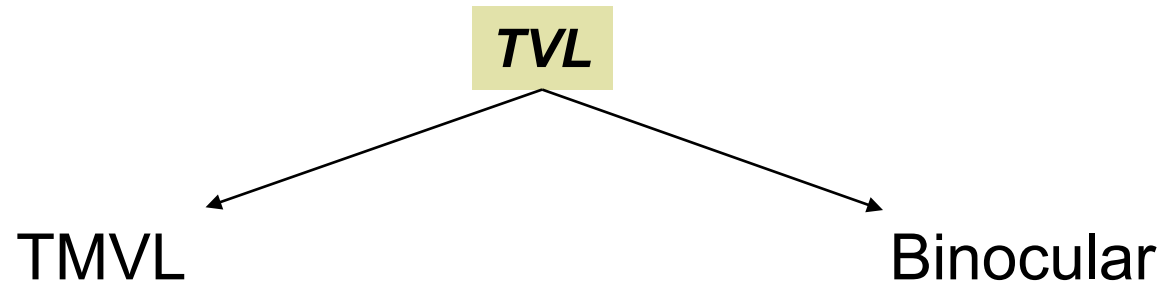
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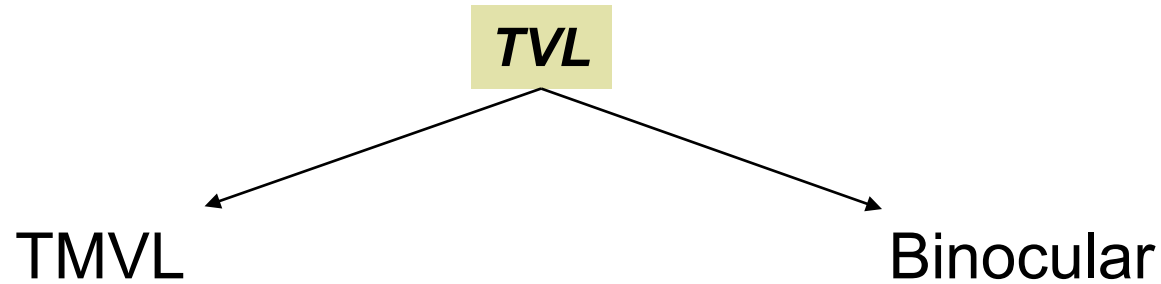
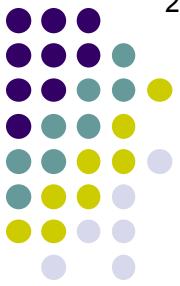
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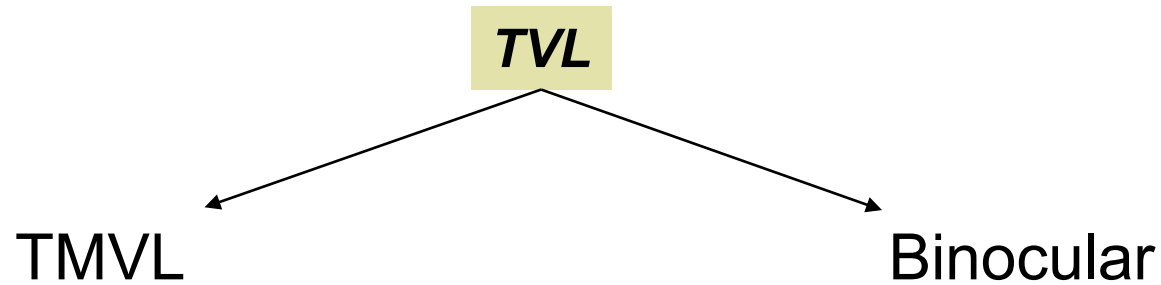




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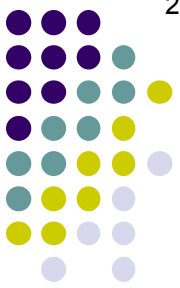
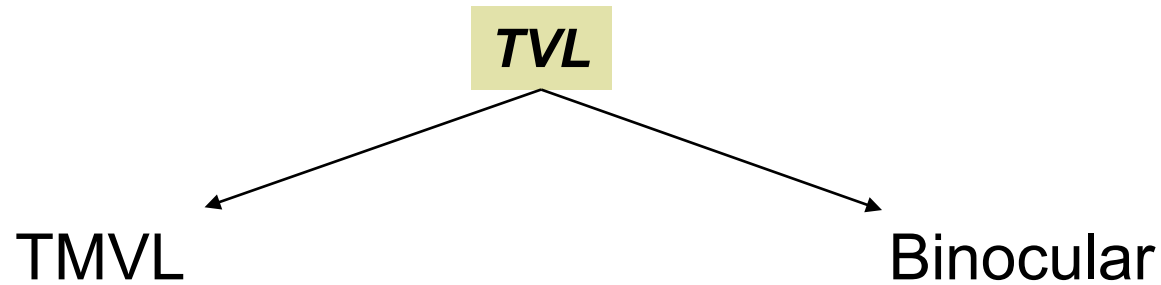
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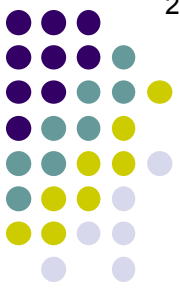
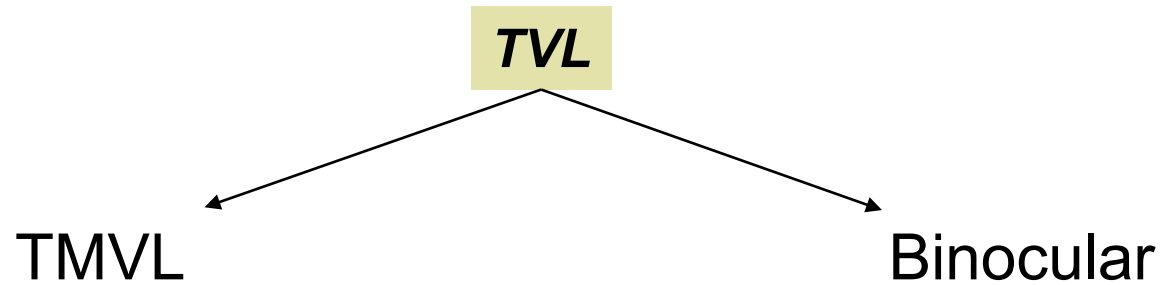
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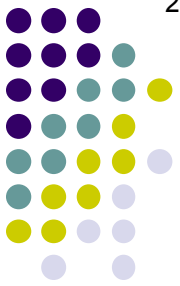
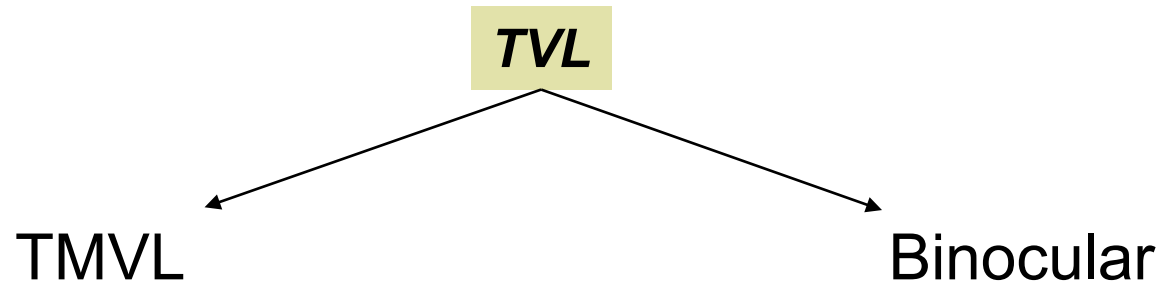
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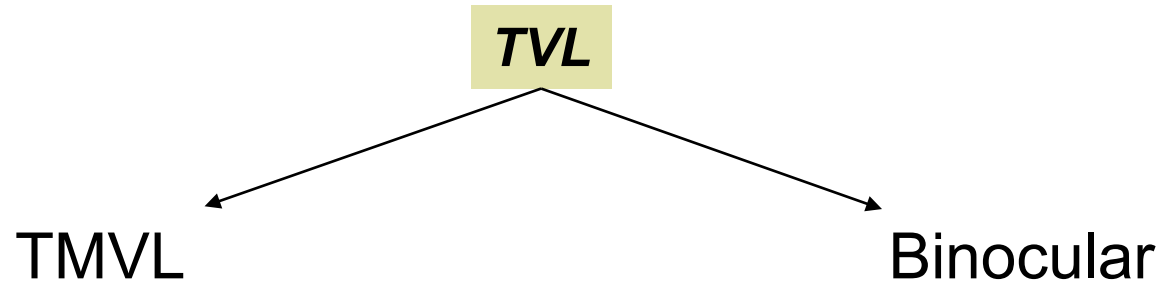
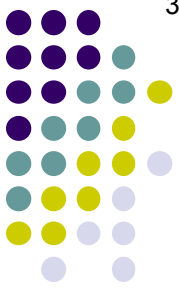


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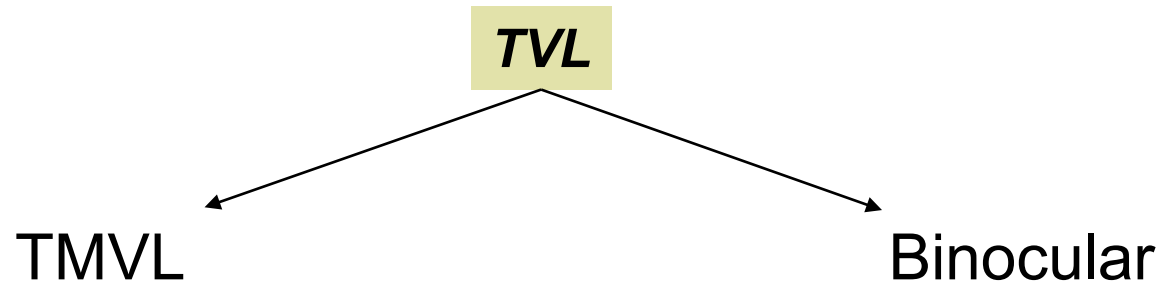
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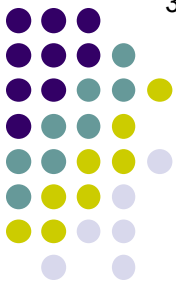
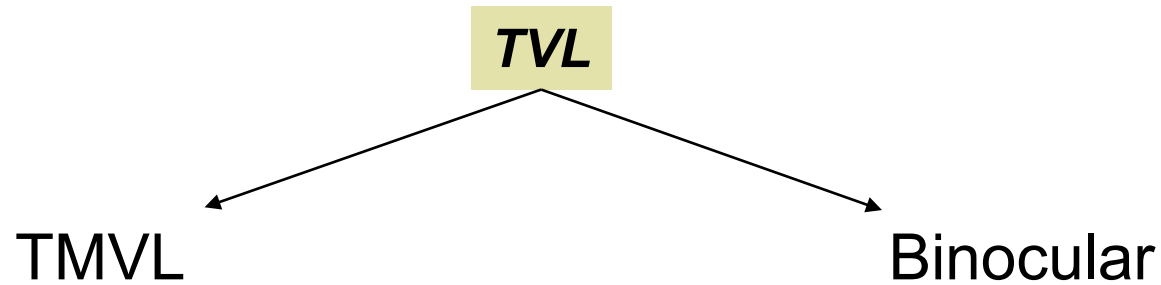
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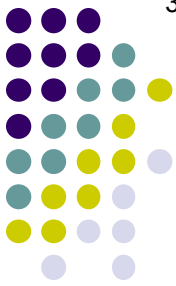
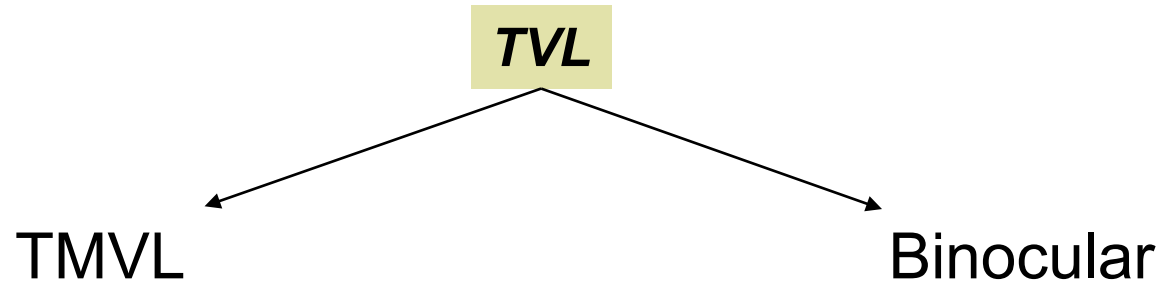
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When the pt has homonymous hemianopic loss. It is very common for such pts to (mis)interpret the hemifield loss as loss of vision in the eye with the temporal VF deficit; ie, a pt with left homonymous VF loss will present with a c/o 'loss of vision OS.' *Always check confrontational VFs! **

*And maybe even do formal VF testing

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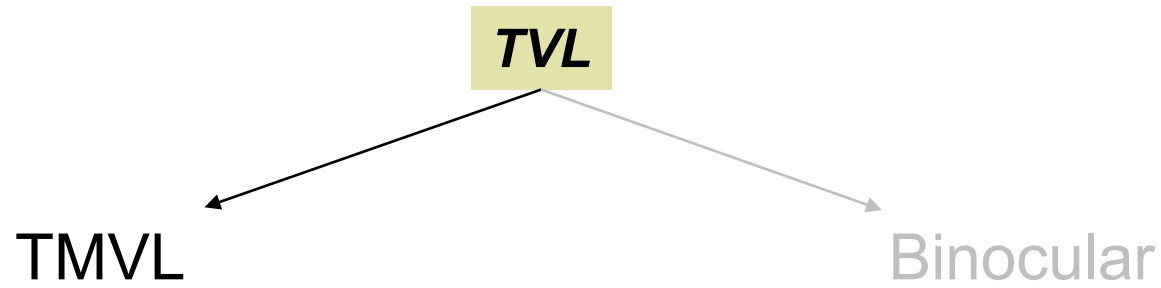
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Q

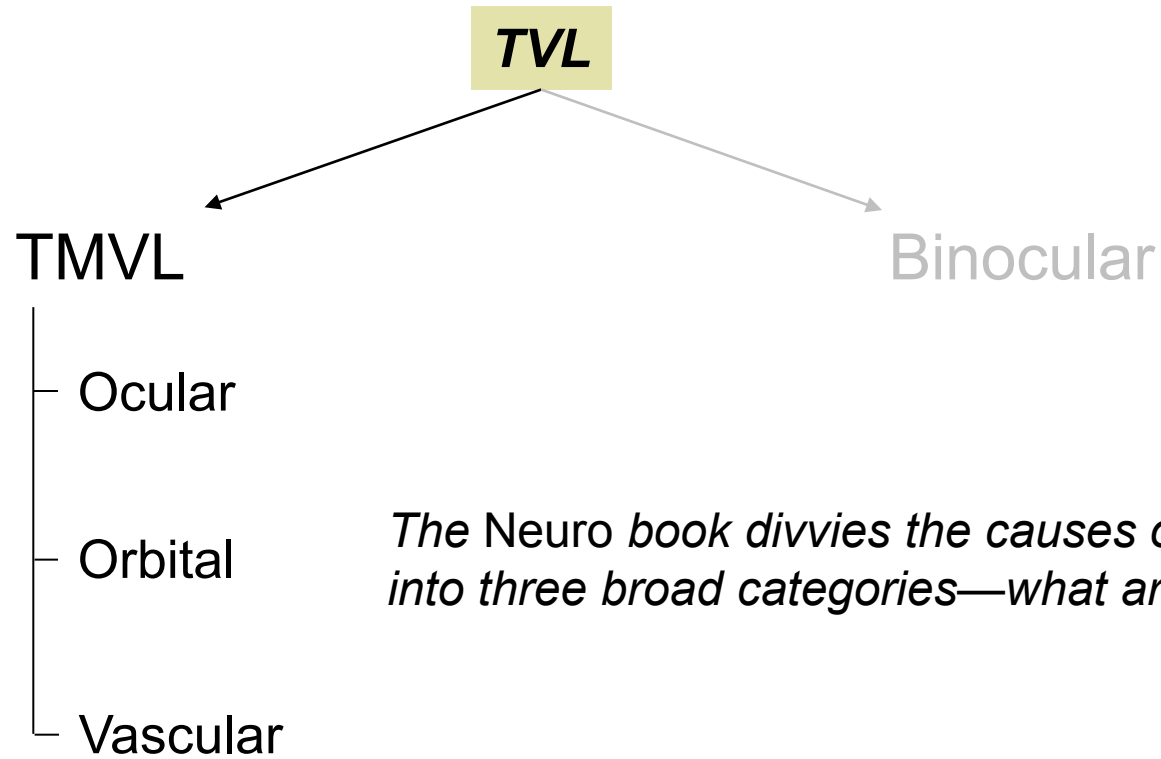


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The Neuro book divvies the causes of TMVL into three broad categories—what are they?

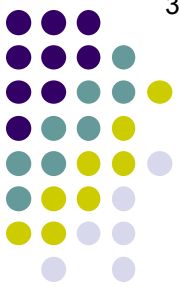
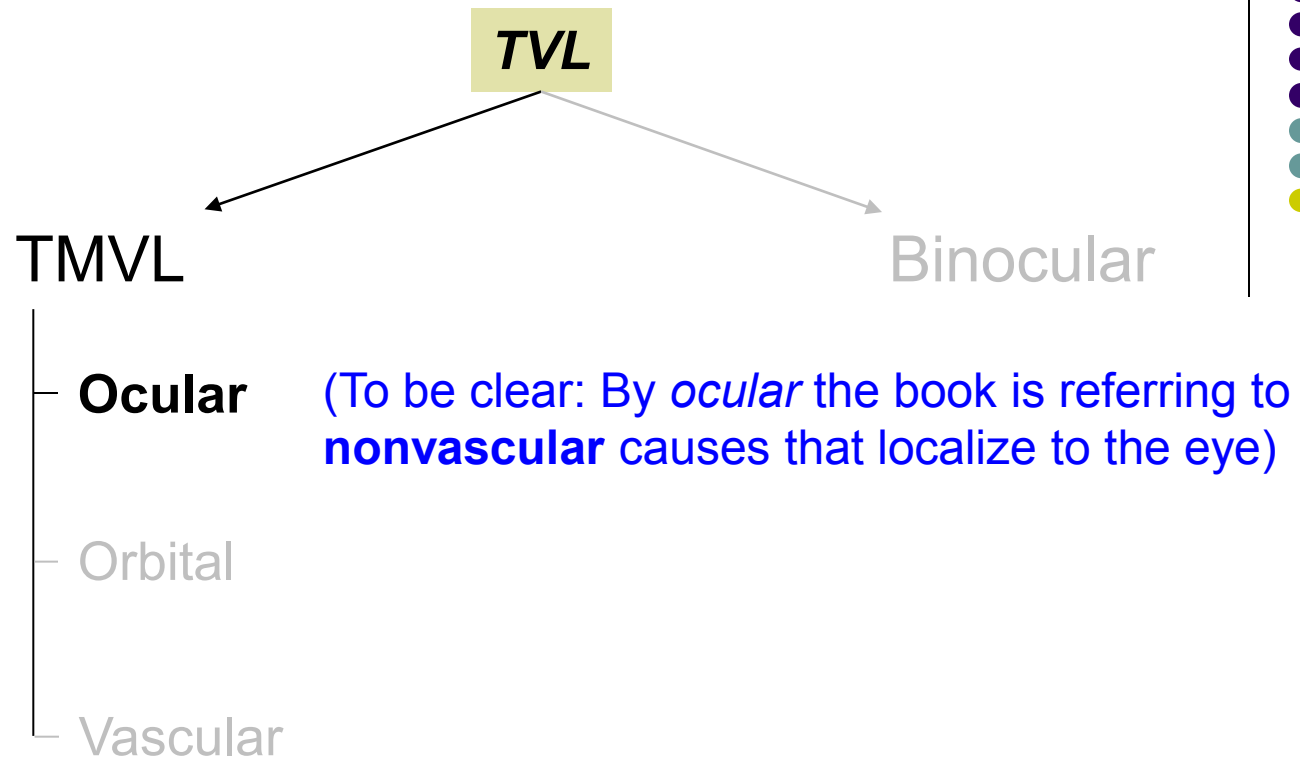


A

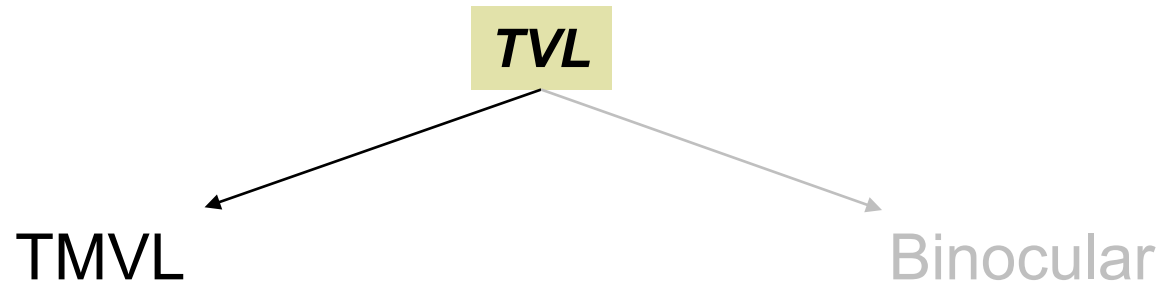


The Neuro book divvies the causes of TMVL into three broad categories—what are they?





Q

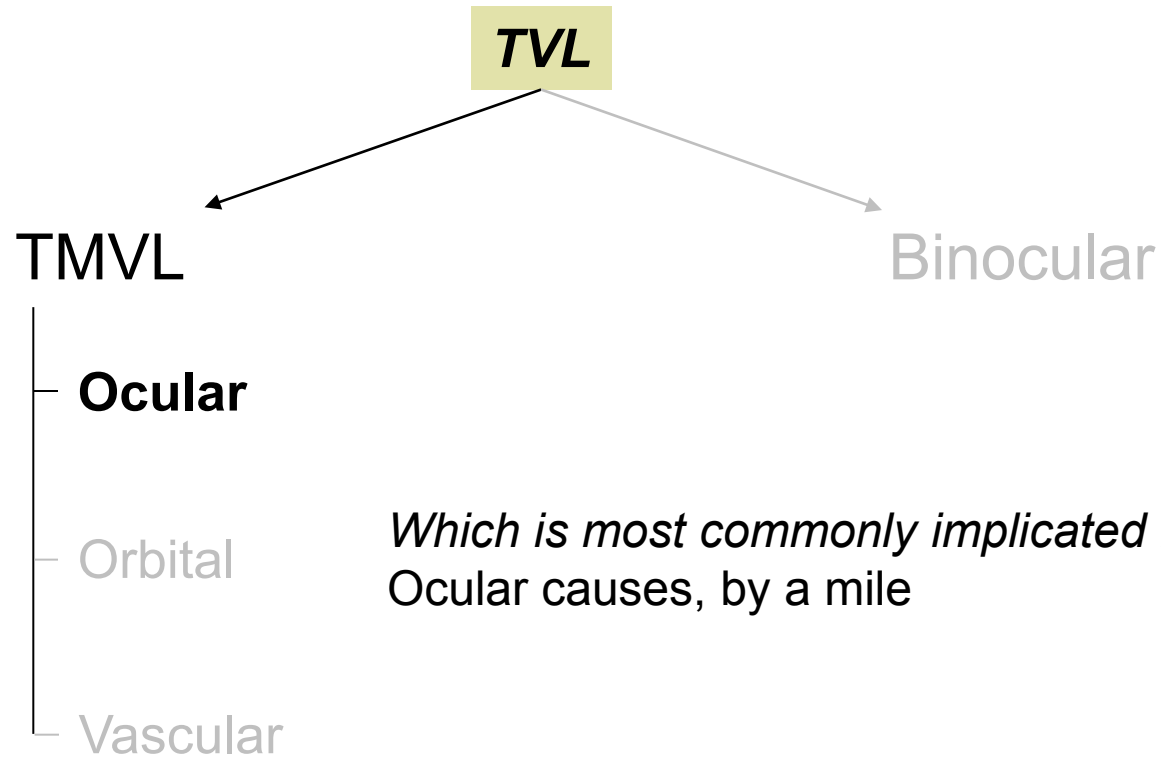


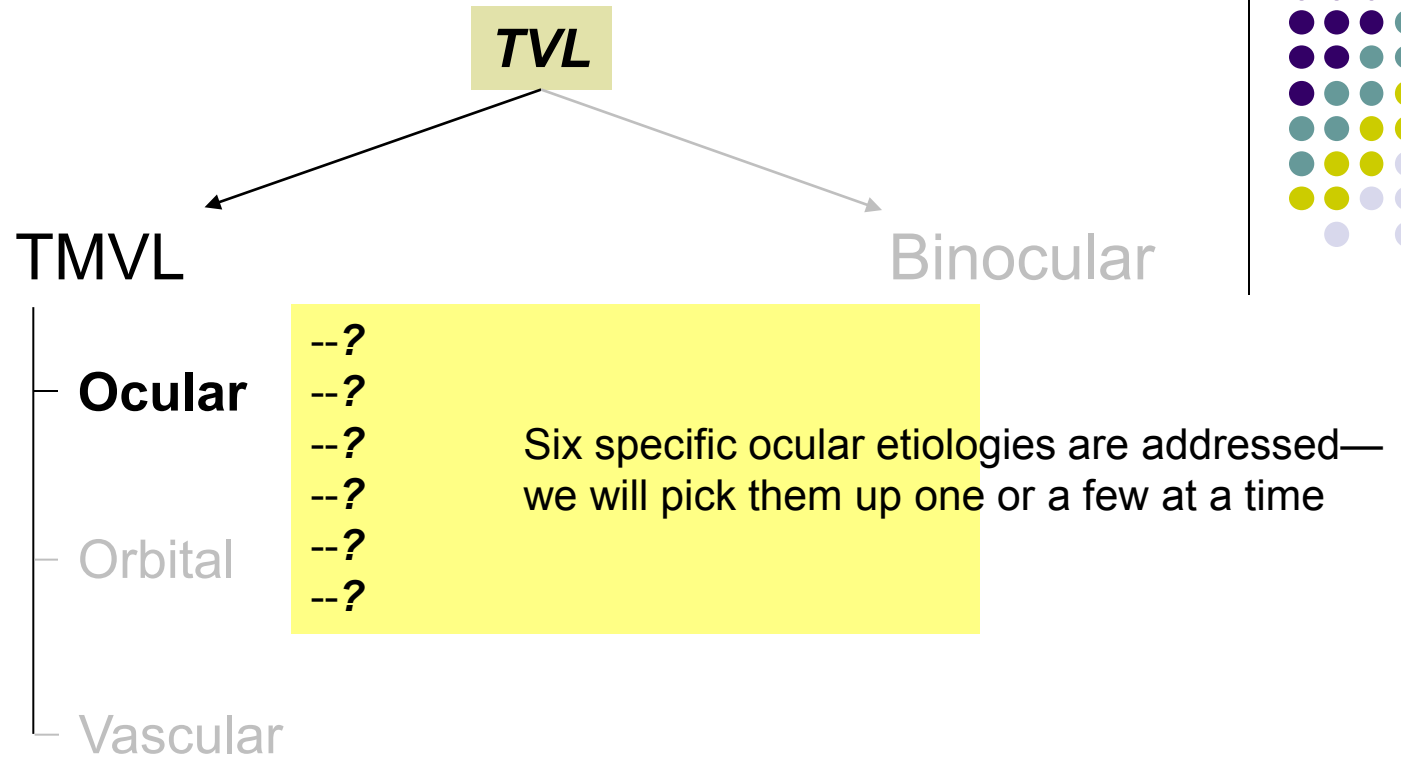
- Ocular?
- Orbital?
- Vascular?

Which is most commonly implicated in TMVL?

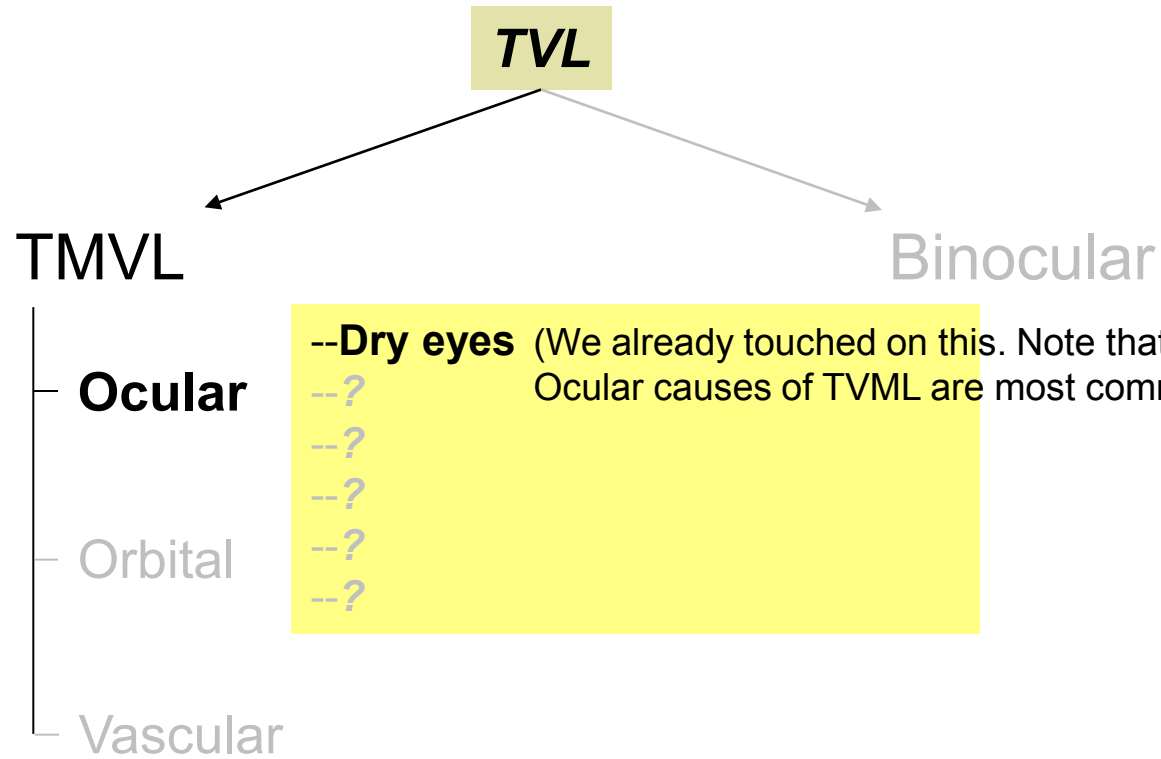


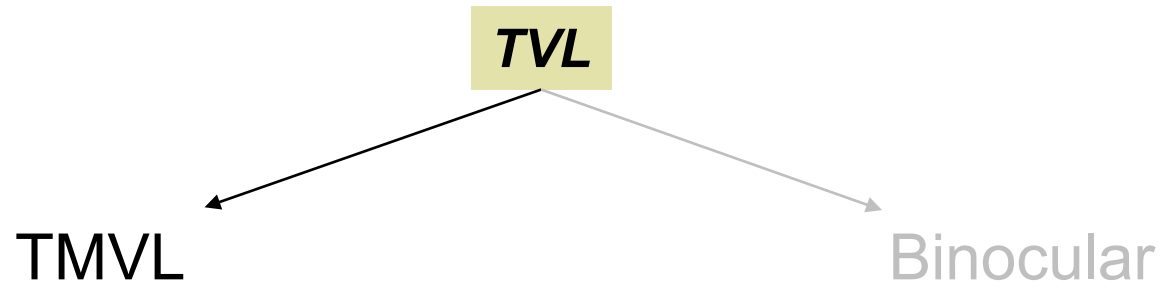
A





A





Ocular

--Dry eyes

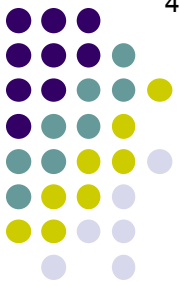
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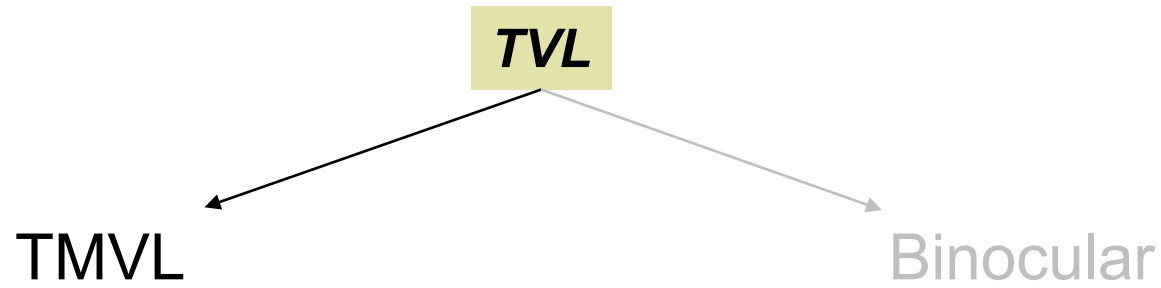
Orbital

The odds of this one go up considerably if your pt has an AC IOL or malpositioned PC IOL in the affected eye:

Vascular



A



Ocular

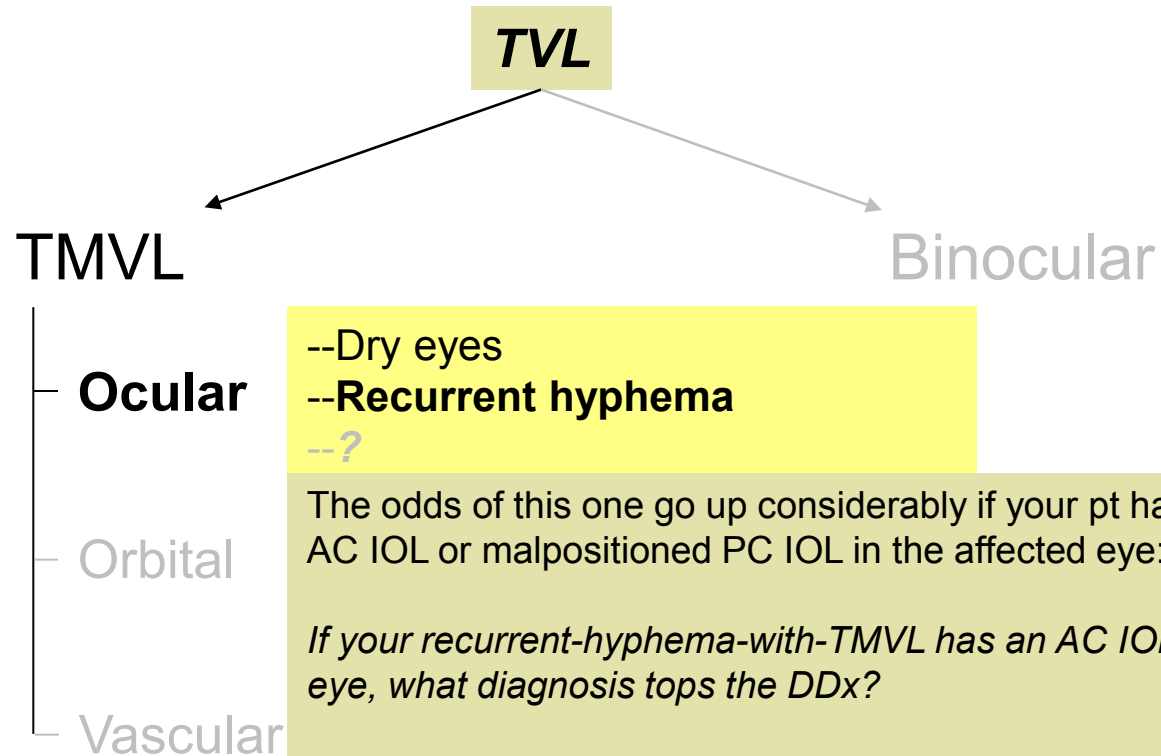
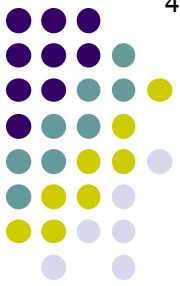
--Dry eyes
--**Recurrent hyphema**
--?

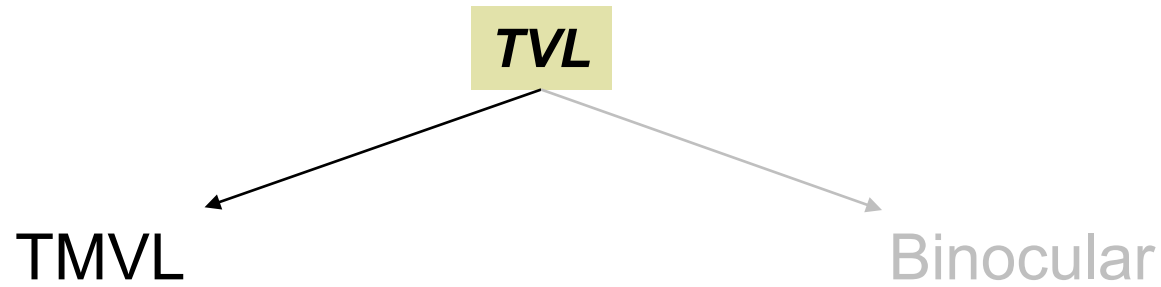
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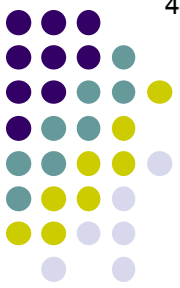
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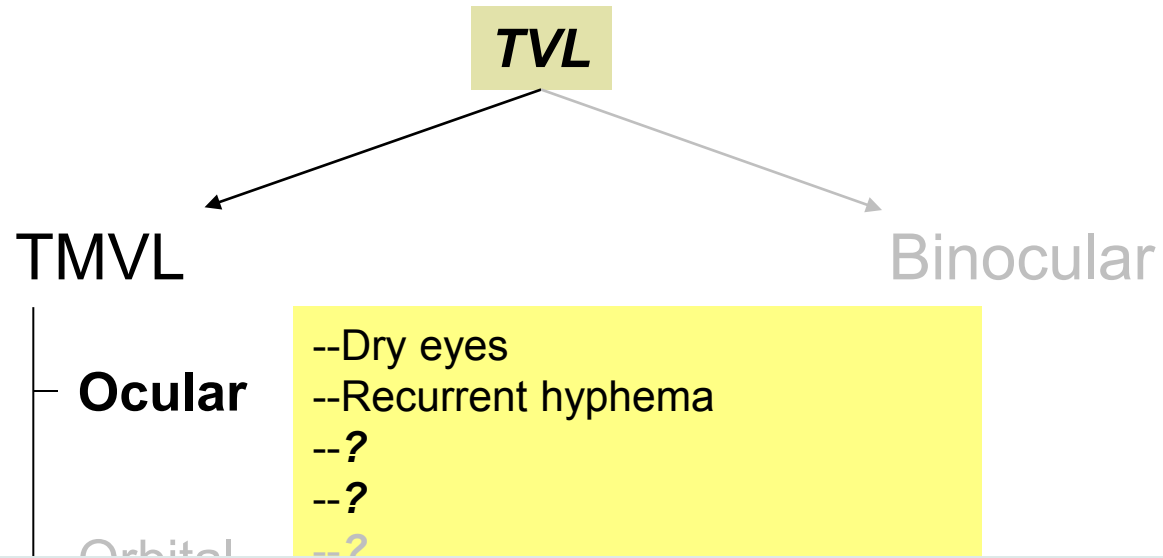
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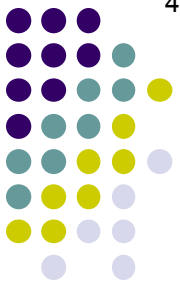
If your recurrent-hyphema-with-TMVL has an AC IOL in that eye, what diagnosis tops the DDx?
Uveitis-glaucoma-hyphema (UGH) syndrome (see slide-set L2 for a discussion thereof)



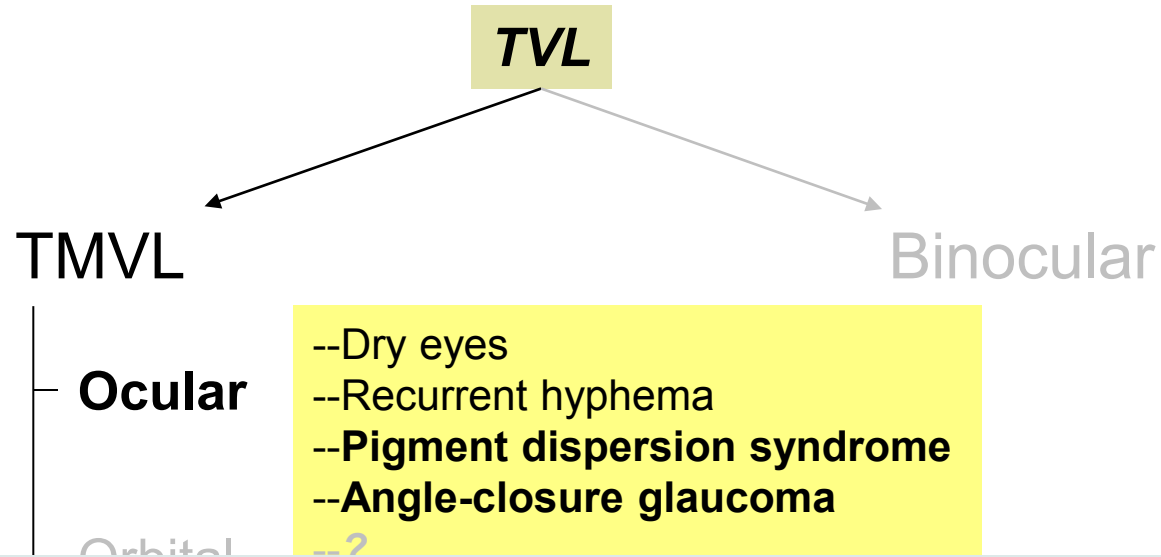
Q



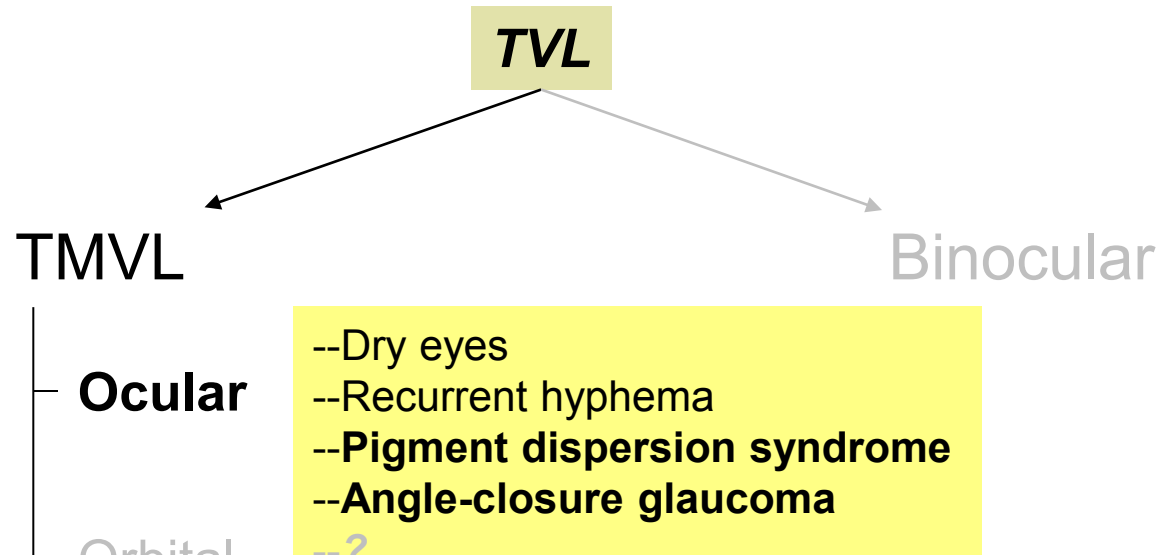
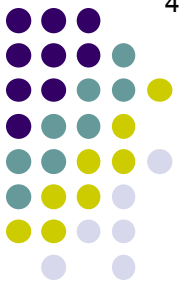
In these two, the pt will likely c/o halos around lights in the affected eye:



A

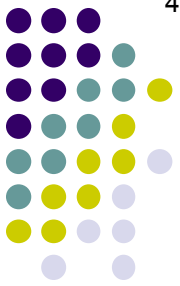


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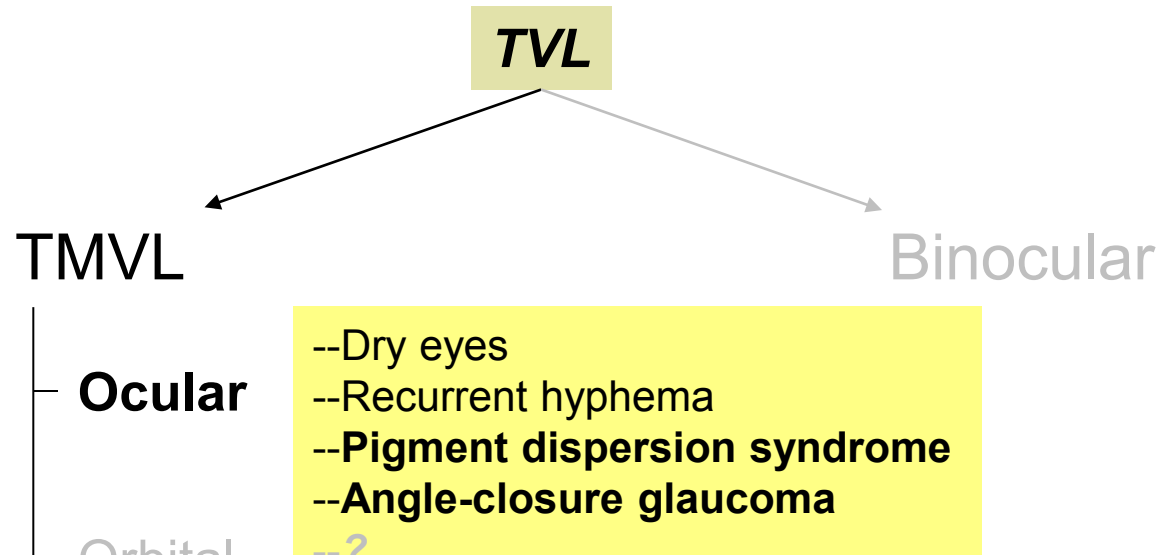


In these two, the pt will likely c/o halos around lights in the affected eye:

What ocular (but nonvisual) c/o do both conditions present with?



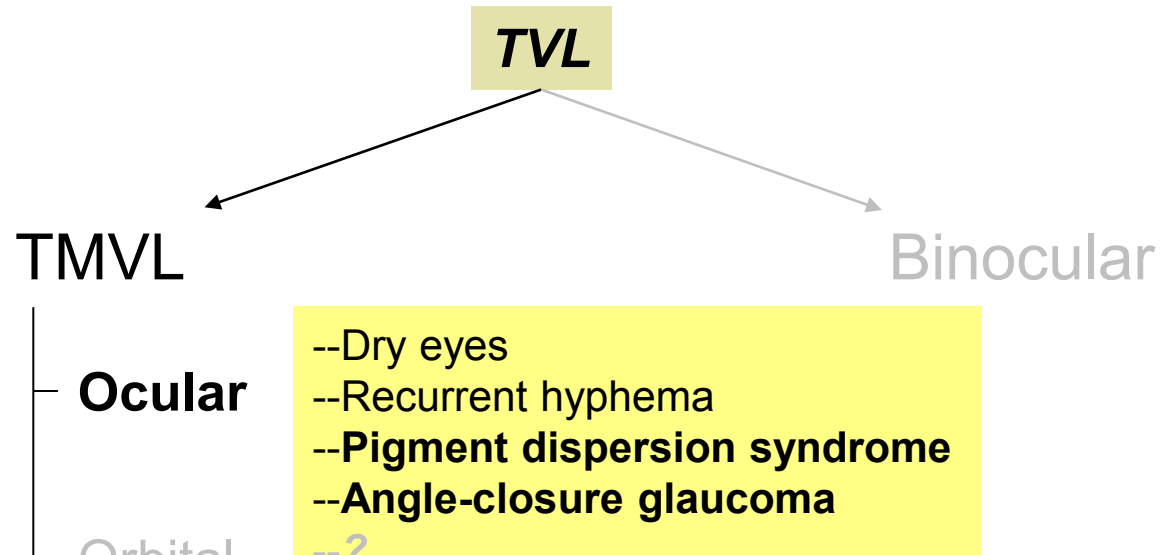
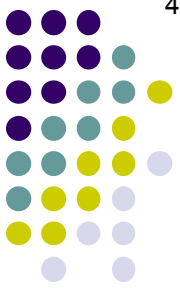
A



In these two, the pt will likely c/o halos around lights in the affected eye:

What ocular (but nonvisual) c/o do both conditions present with?

Ocular pain

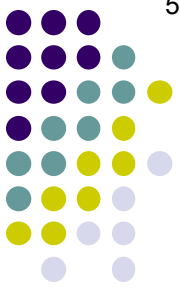


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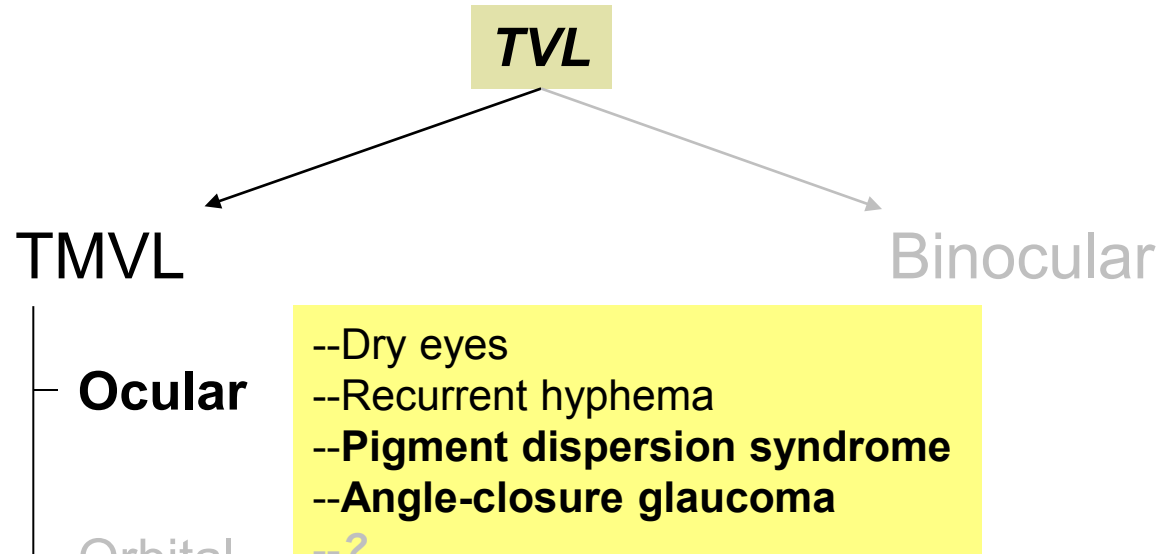
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Ocular pain

What causes the TMVL and light-haloes?



A



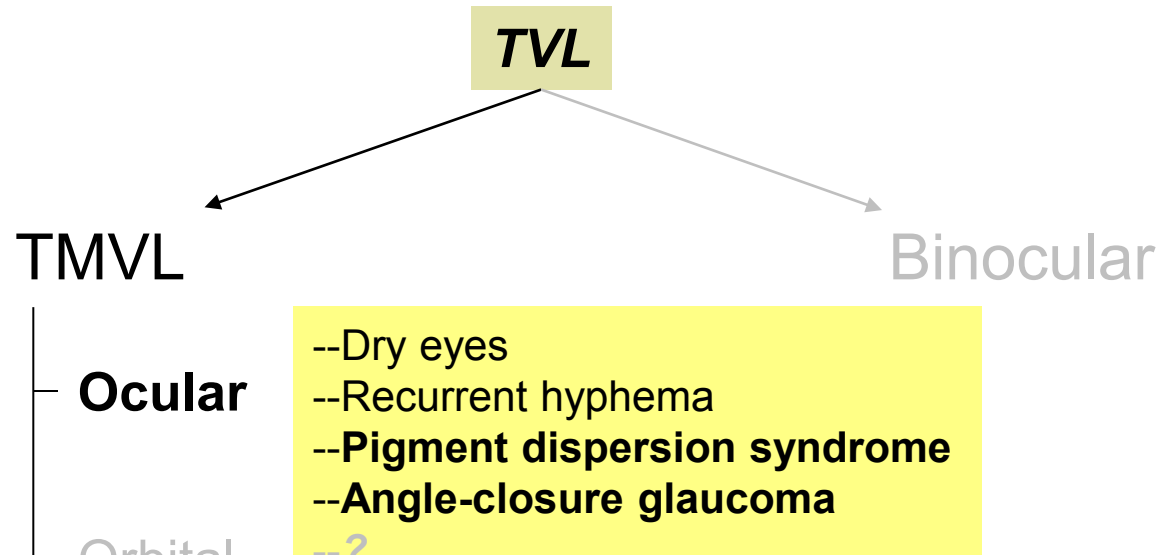
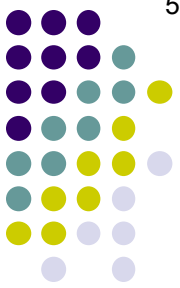
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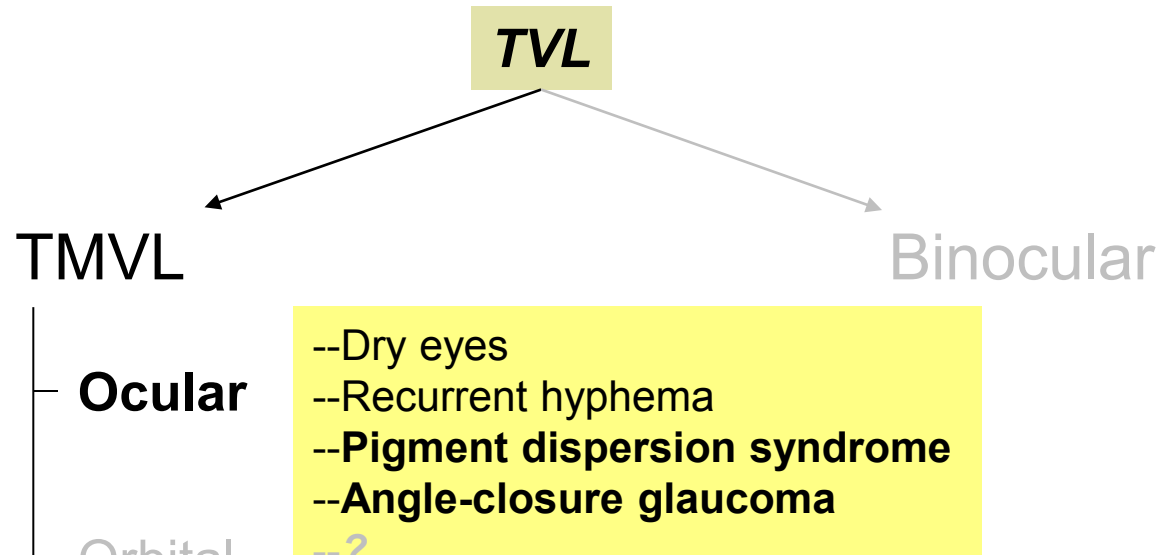
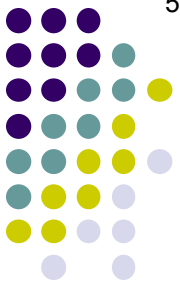
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What causes the corneal edema in:

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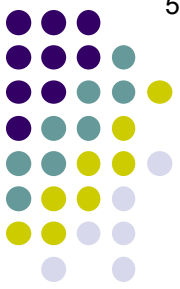
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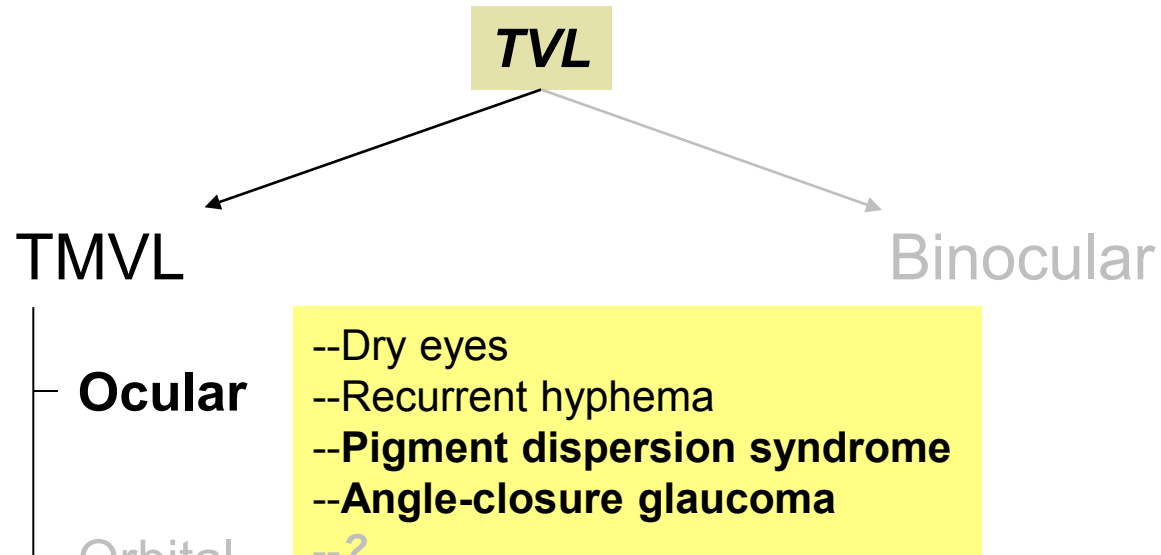
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A



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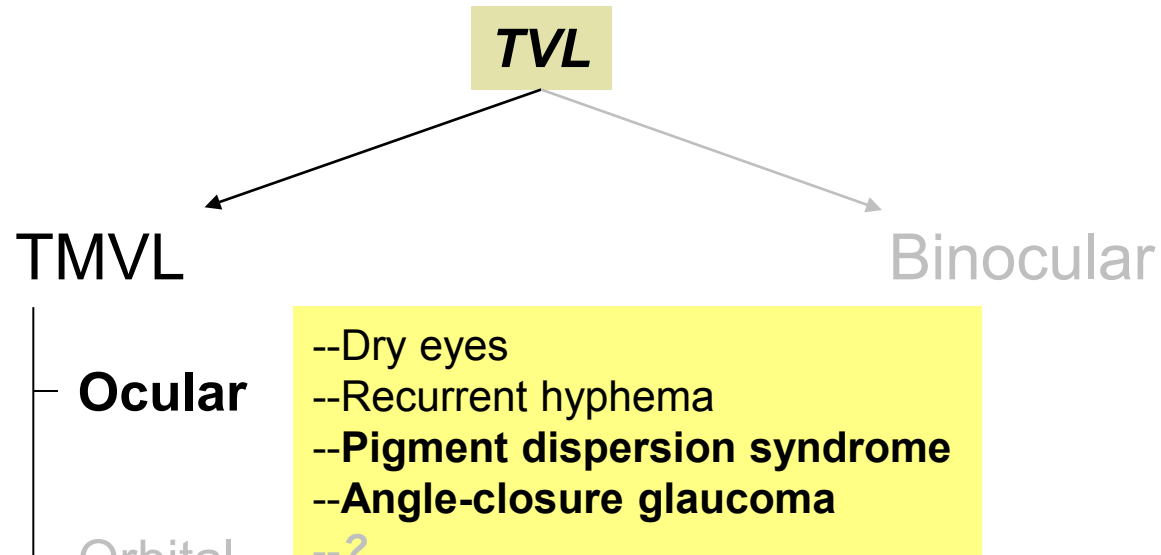
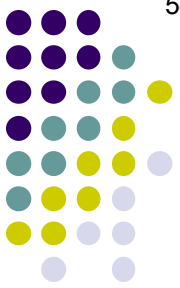
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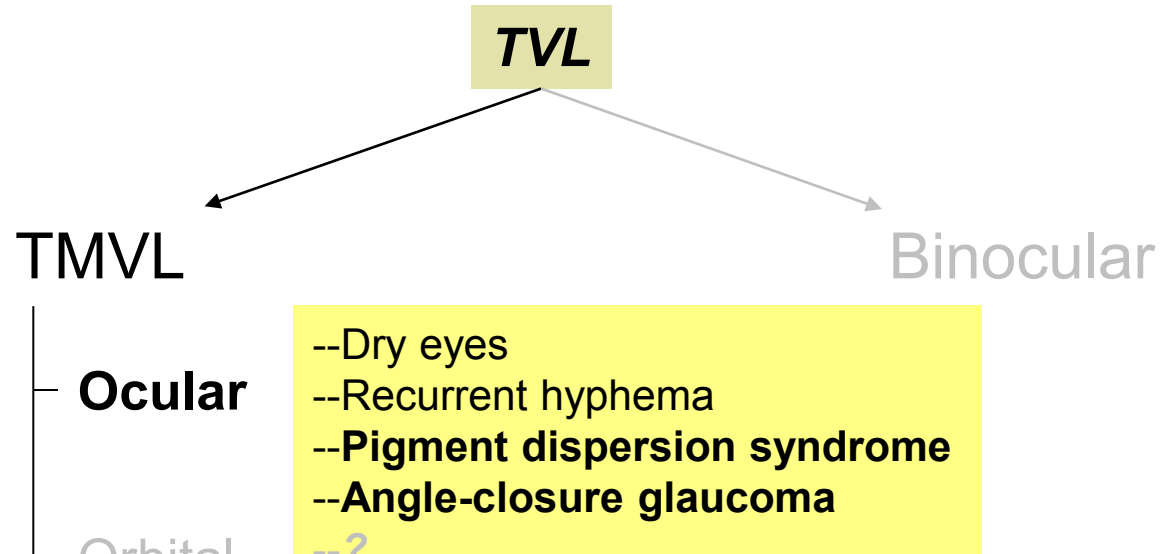
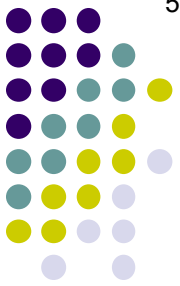
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What is the classic precipitating event for TMVL/halos/eye pain in each?

--Angle closure:

--PDS:



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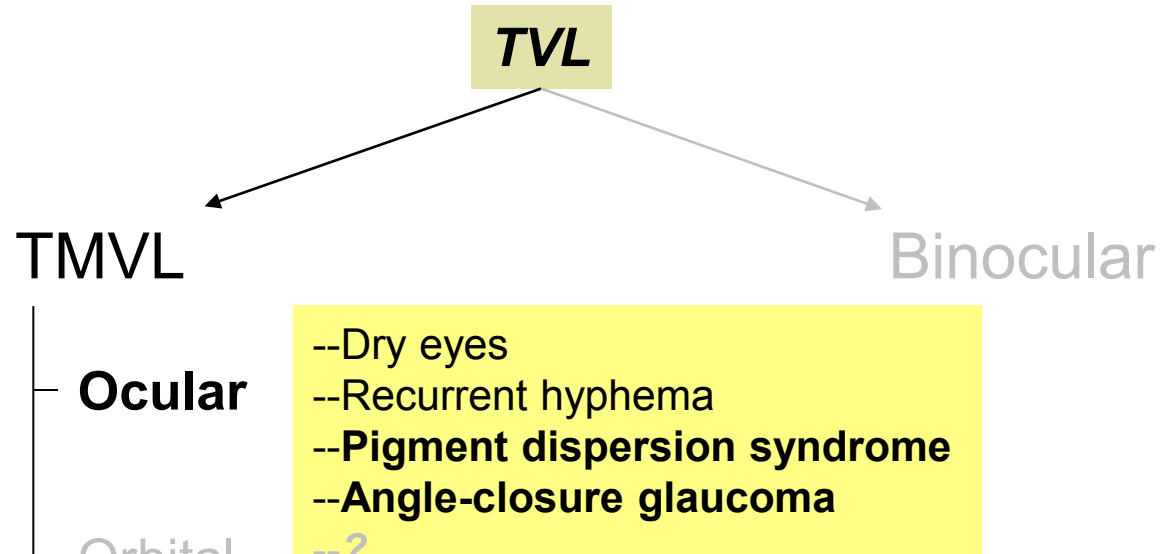
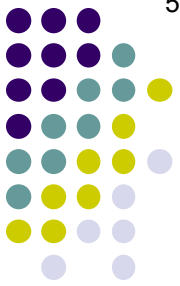
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miosis vs
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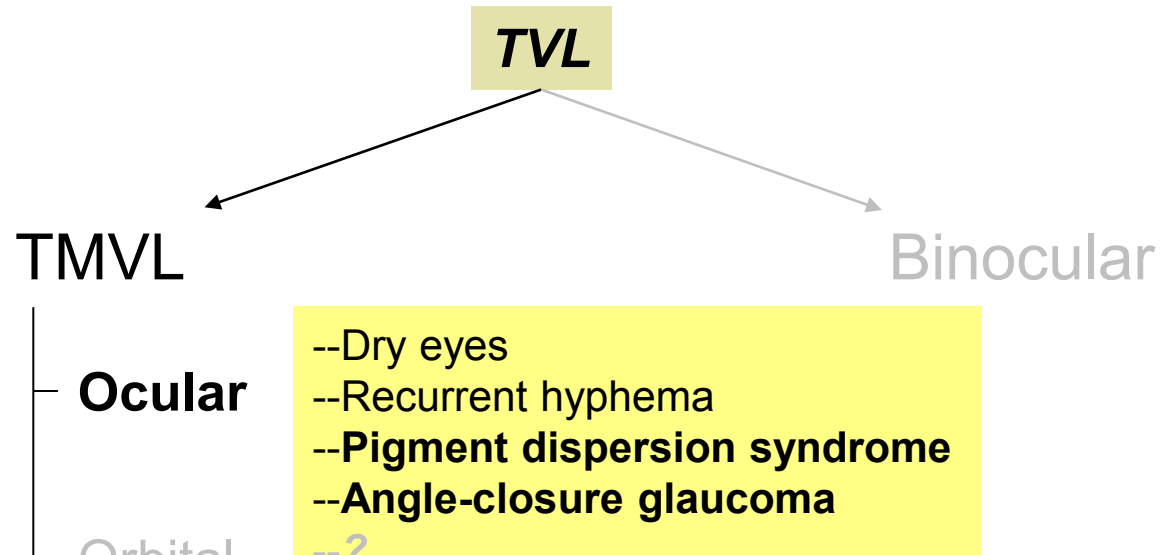
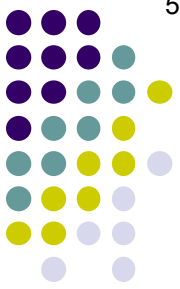
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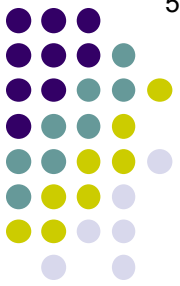
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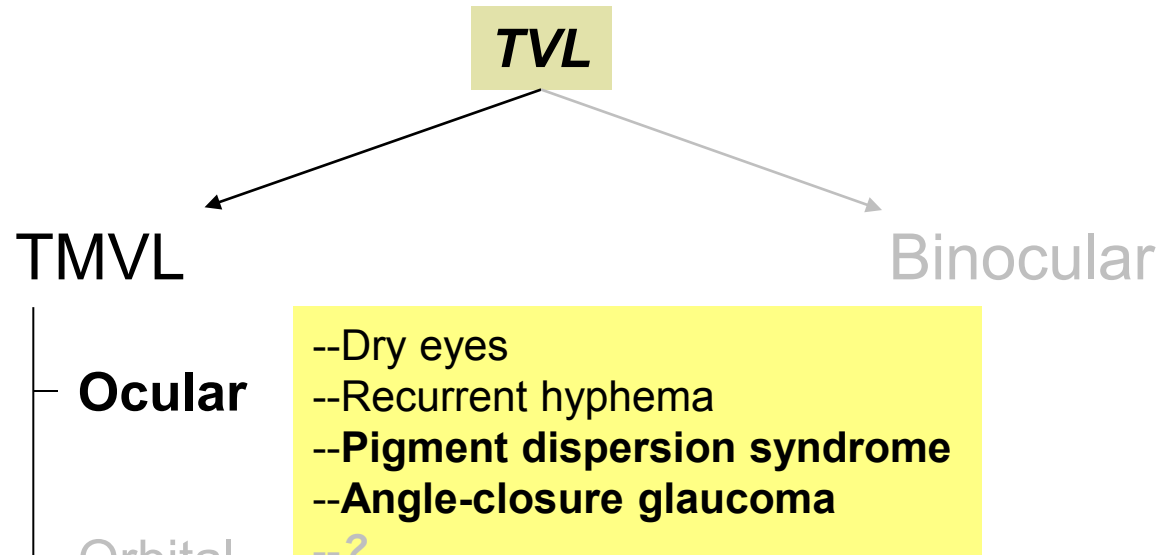
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A



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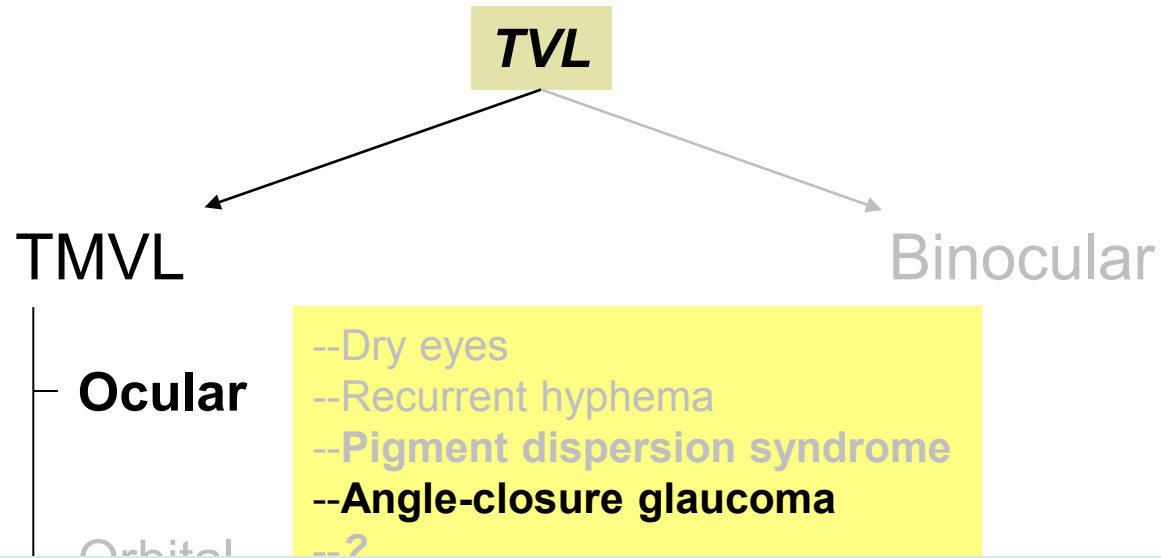
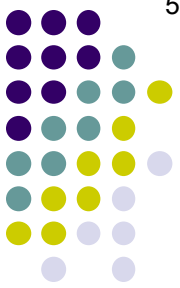
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--PDS: Exercise



In these two, the pt will likely c/o halos around lights in the affected eye:

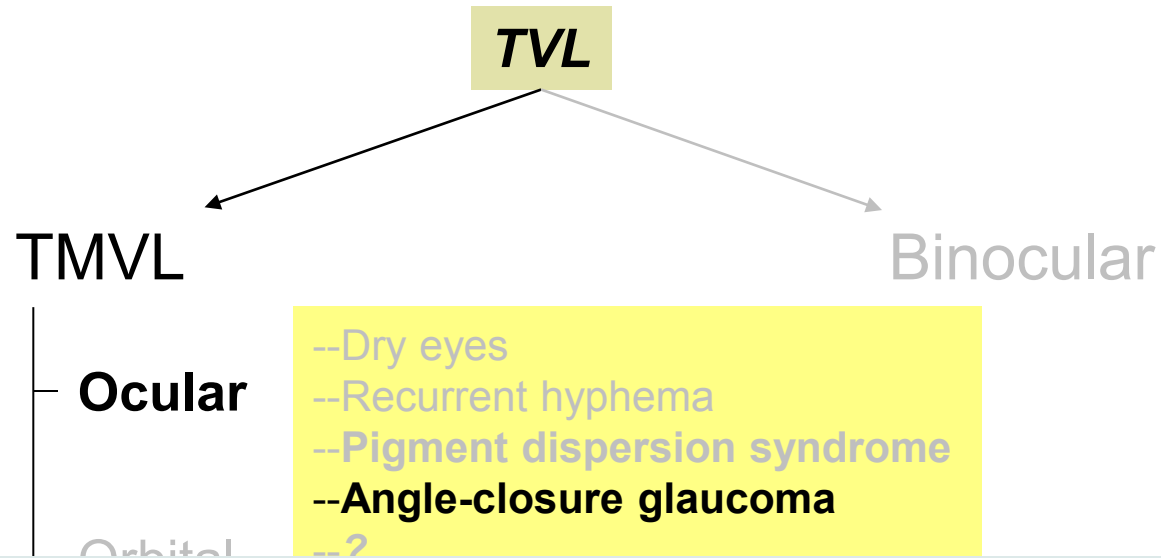
What lens-related sign is strong evidence supporting angle-closure glaucoma?

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A

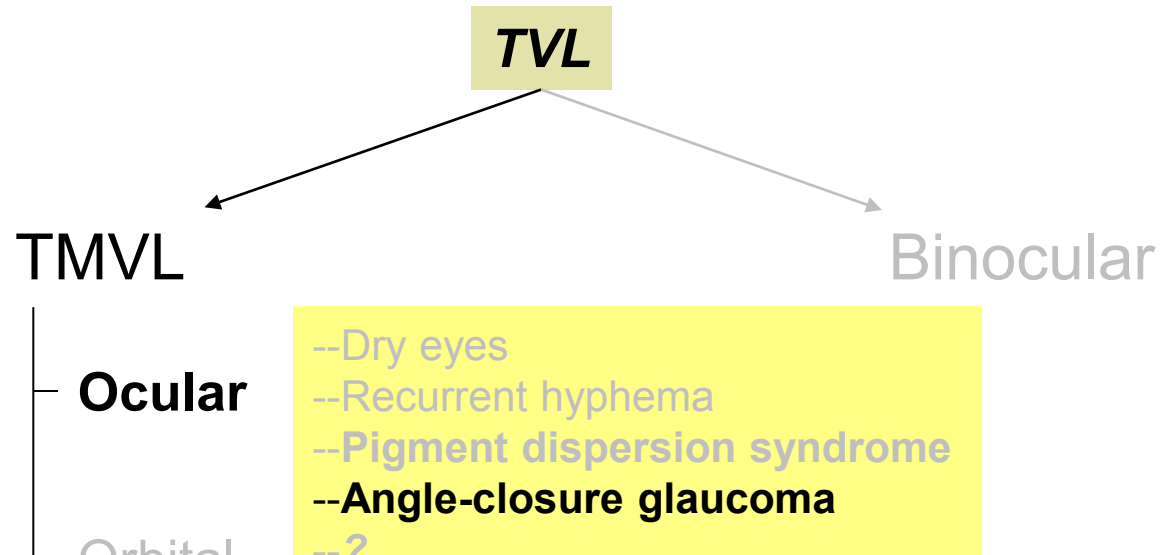
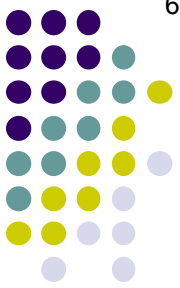


In these two, the pt will likely c/o halos around lights in the affected eye:

What lens-related sign is strong evidence supporting angle-closure glaucoma?
 The presence of glaukomflecken

--angle-closure glaucoma? A sharp increase in IOP
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What is the classic precipitating event for TMVL/halos/eye pain in each?
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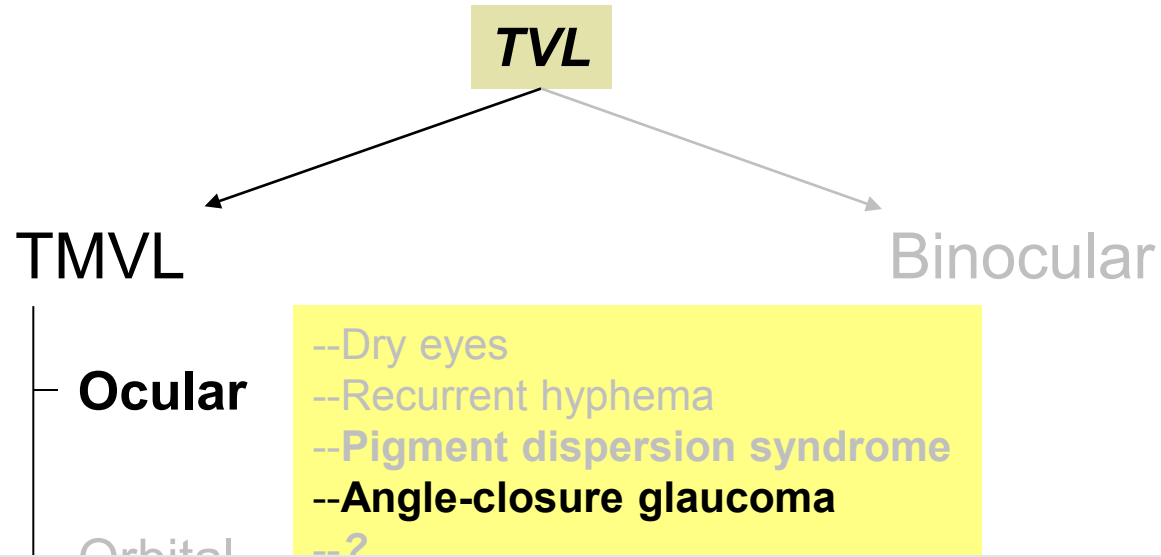
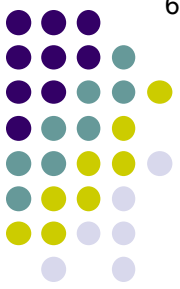
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--PDS: Exercise

A



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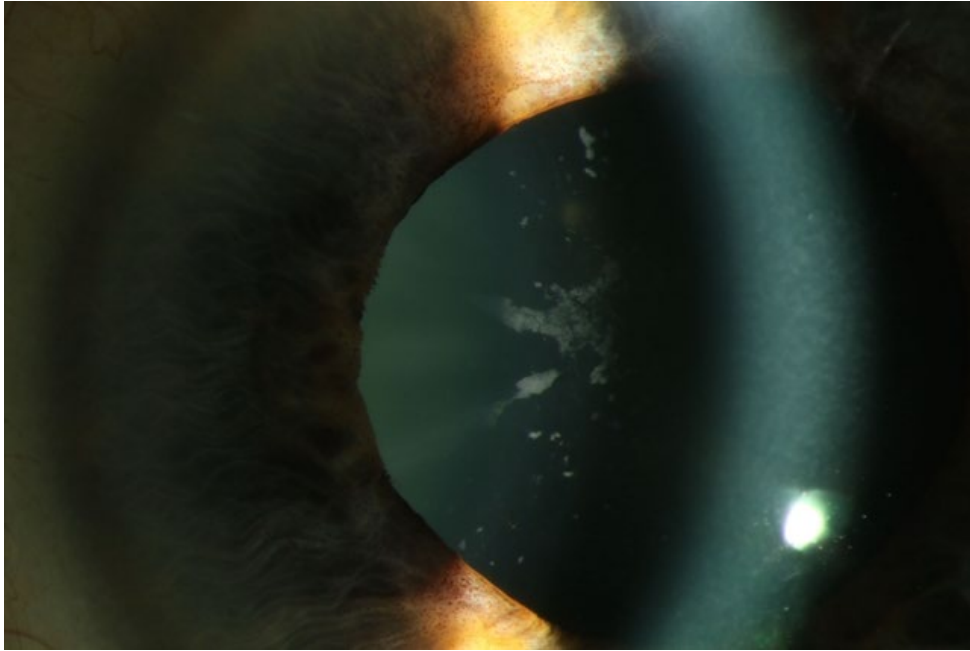
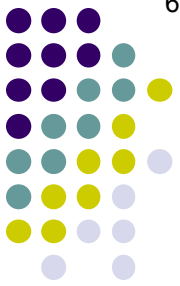
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What are glaukomflecken?
Opacities of the sub-anterior lens capsule

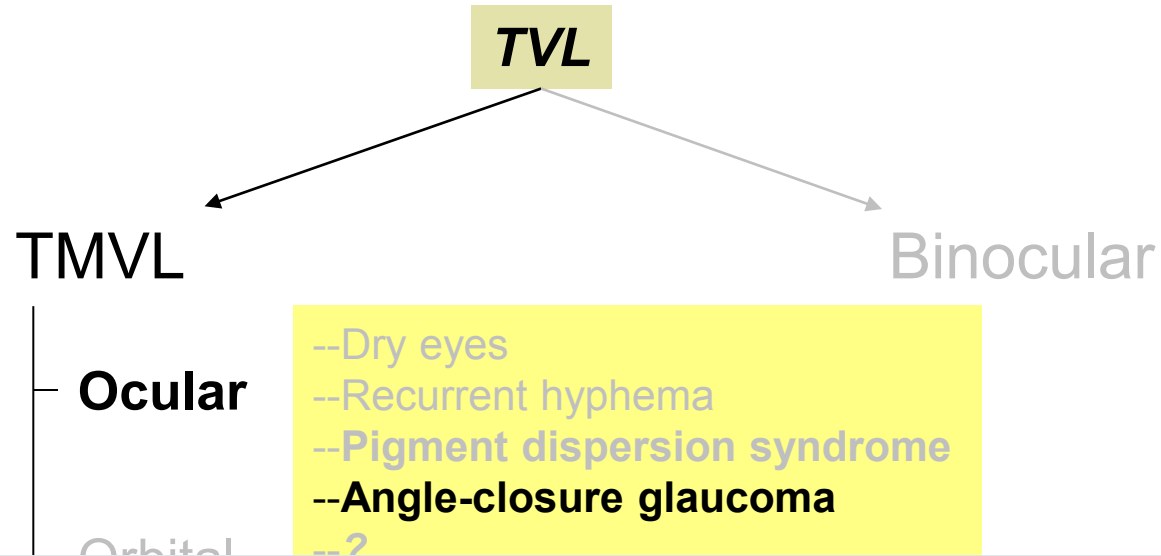
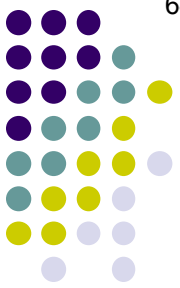
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What is the classic precipitating event for TMVL/halos/eye pain in each?
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--PDS: Exercise

TVL



Glaukomflecken



In these two, the pt will likely c/o halos around lights in the affected eye:

What lens-related sign is strong evidence supporting angle-closure glaucoma?

The presence of glaukomflecken

What are glaukomflecken?

Opacities of the sub-anterior lens capsule

Why do glaukomflecken strongly support a diagnosis of angle-closure glaucoma?

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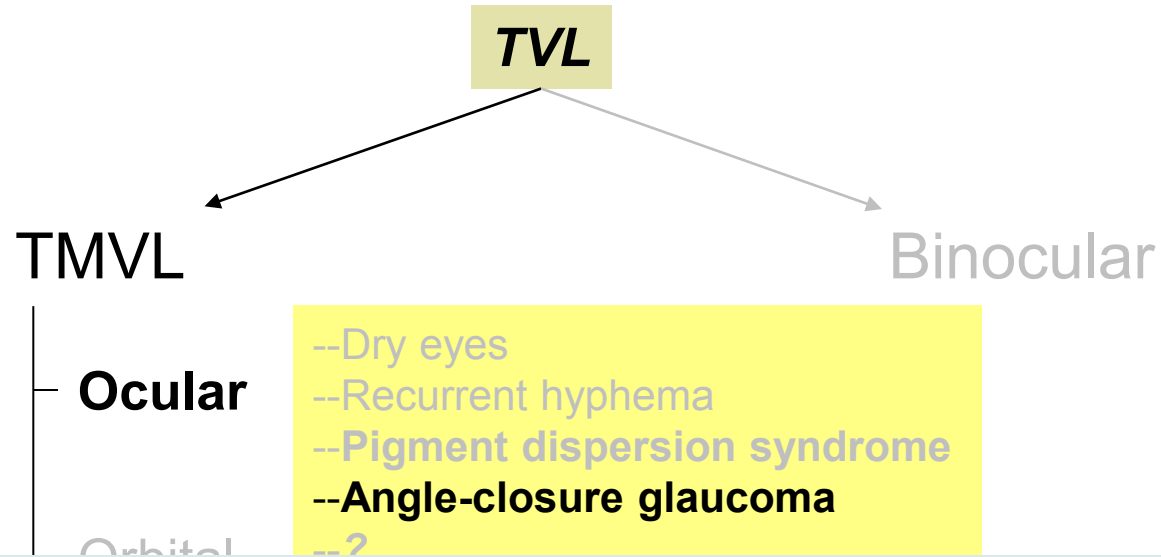
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--PDS: Exercise

A



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Why do glaukomflecken strongly support a diagnosis of angle-closure glaucoma?

Because they are a telltale sign of *previous* angle-closure events

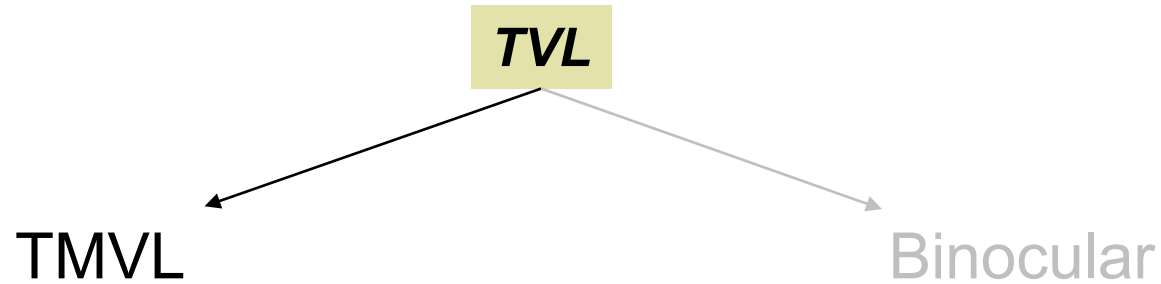
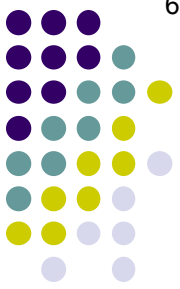
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What is the classic precipitating event for TMVL/halos/eye pain in each?

--Angle closure: An event that promotes pupil dilation

--PDS: Exercise



Ocular

- Dry eyes
- Recurrent hyphema
- Pigment dispersion syndrome**
- Angle-closure glaucoma**

Orbital

--?

In these two, the pt will likely c/o halos around lights in the affected eye:

What lens-related sign is strong evidence supporting angle-closure glaucoma?

The presence of **glaukomflecken**

What pathologic process causes glaukomflecken?

What are glaukomflecken?

Opacities of the sub-anterior lens capsule

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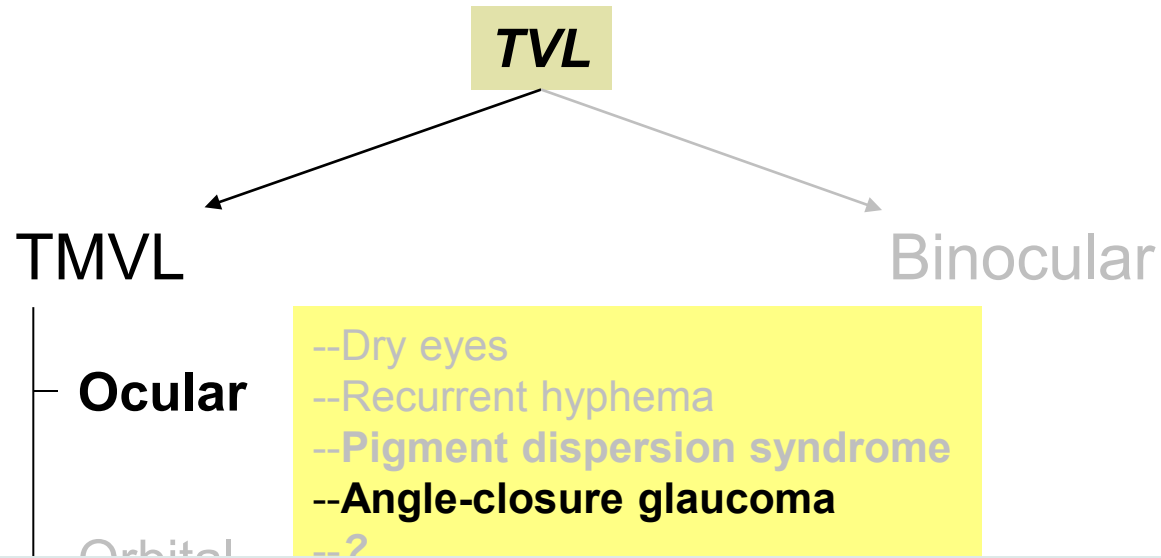
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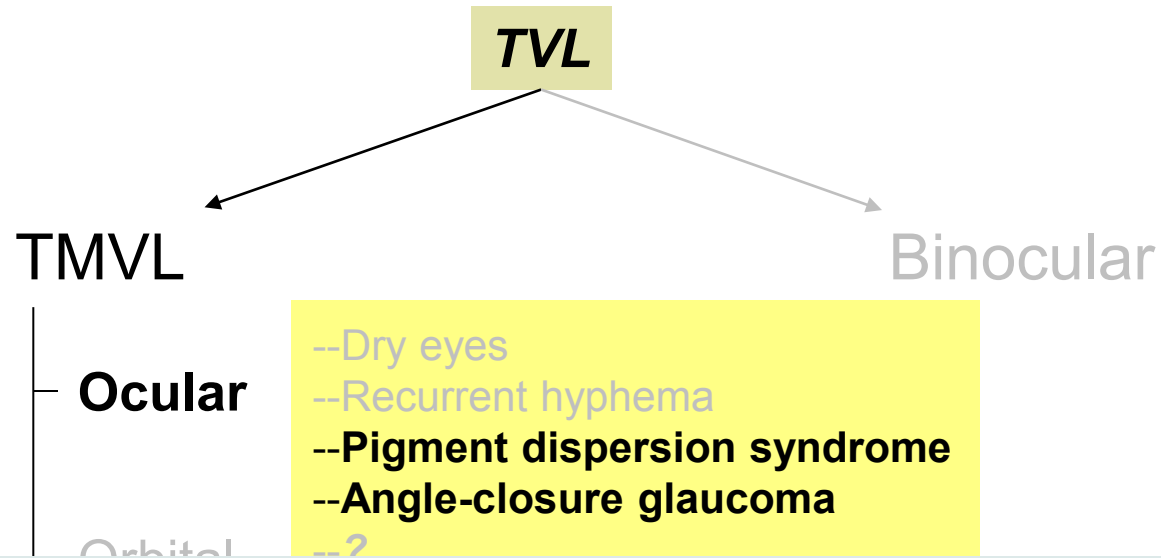
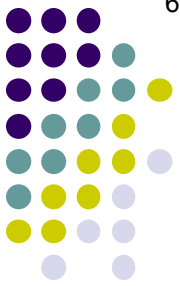
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--PDS: Exercise



In these two, the pt will likely c/o halos around lights in the affected eye:

For more info on...

PDS: see slide-set G4

Angle-closure glaucoma: Sets G16, 17, and 18

What causes the corneal edema in:

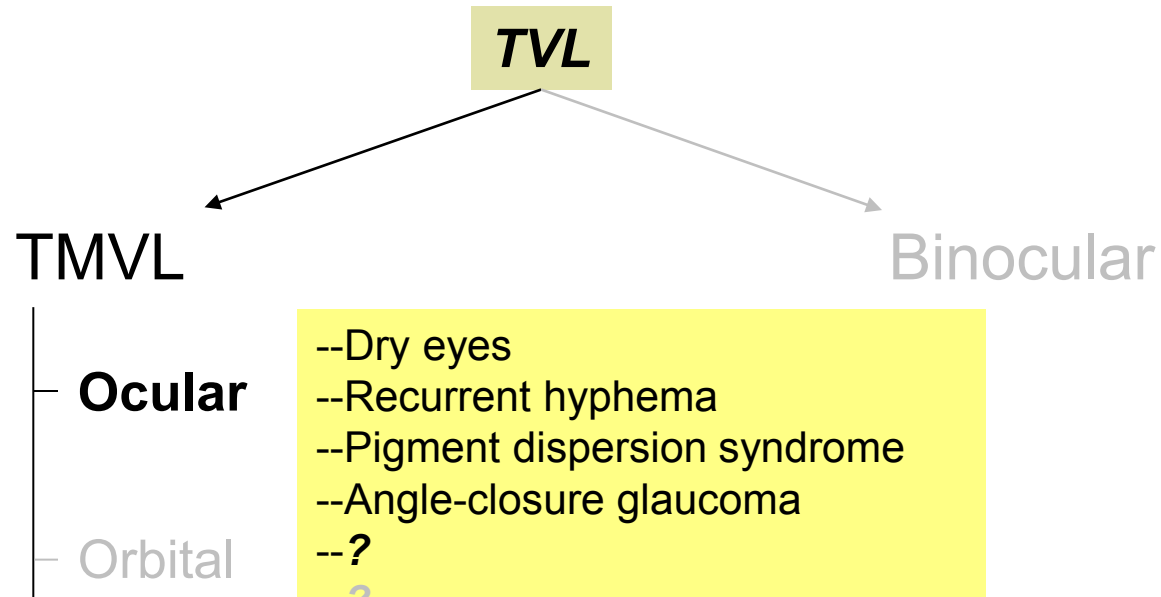
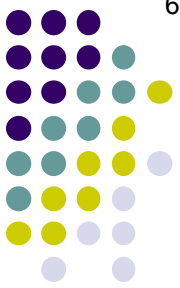
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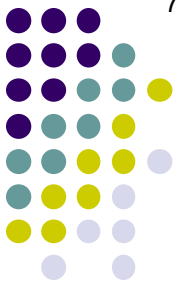
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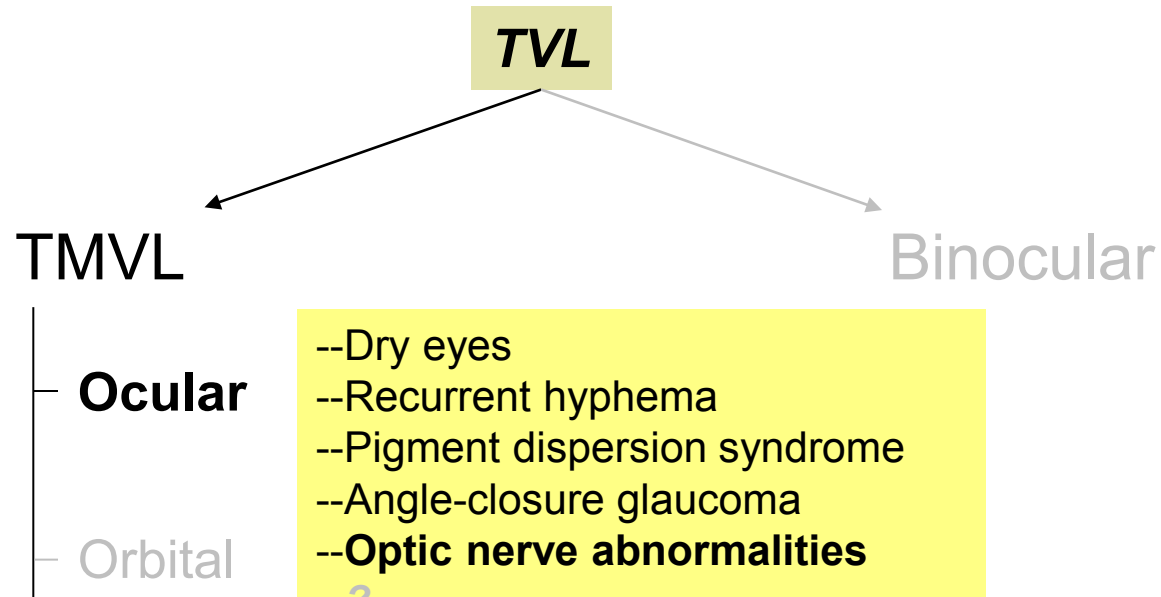
--PDS: Exercise



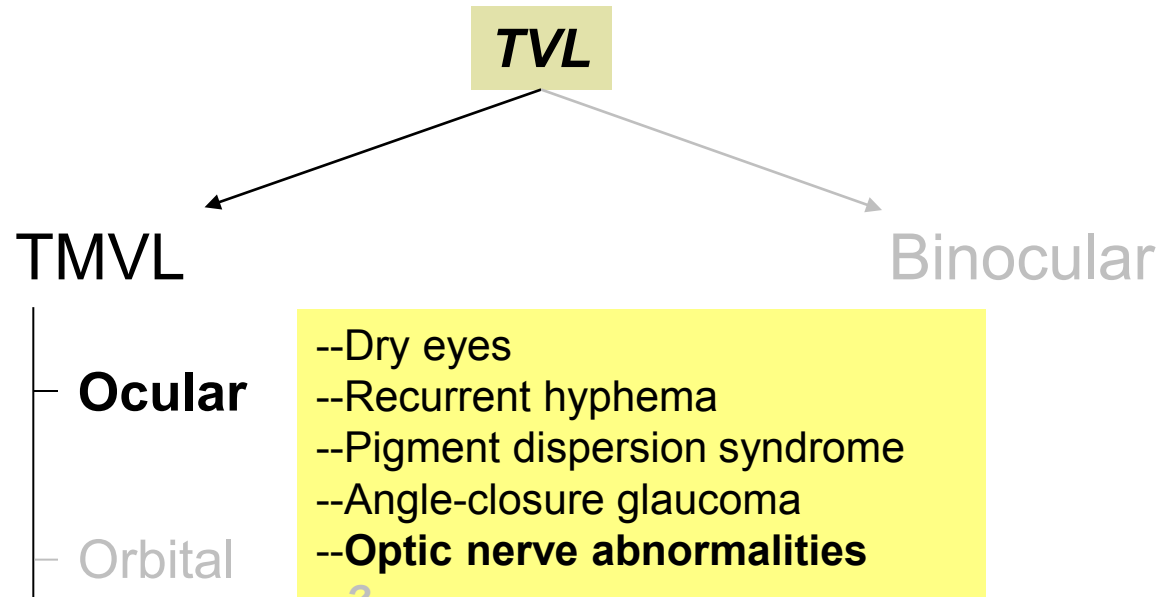
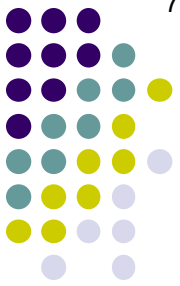
When this structure is implicated in TVL, the pt often reports that a change in posture precipitates the vision loss:



A



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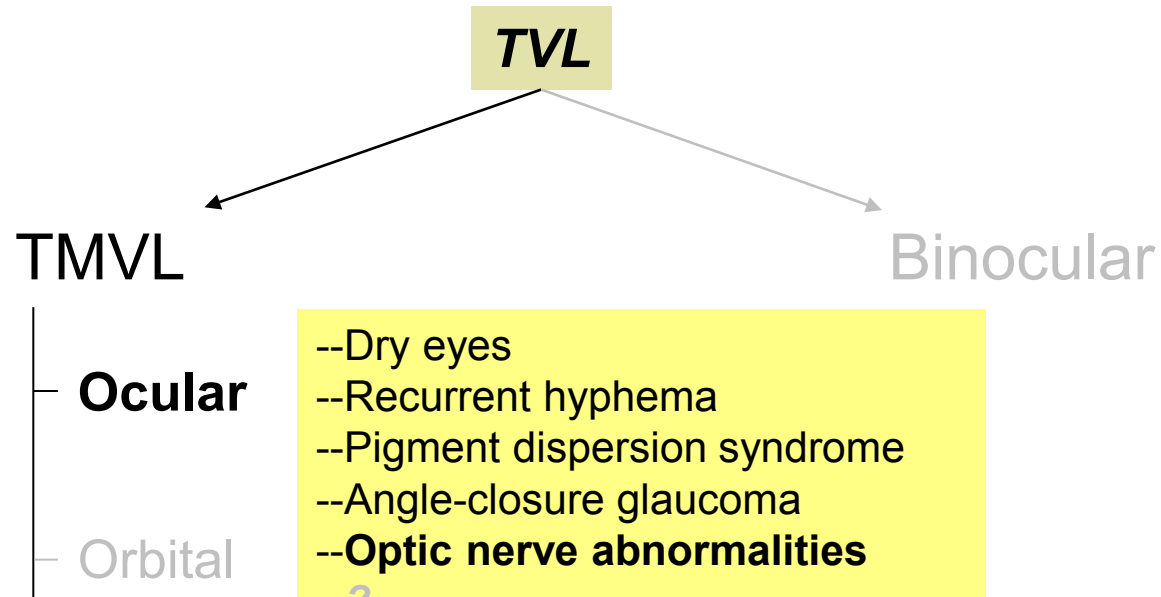
When this structure is implicated in TVL, the pt often reports that a change in posture precipitates the vision loss:

When you hear 'TVL associated with postural change,' two ONH conditions should come to mind. What are they?

--?

--?

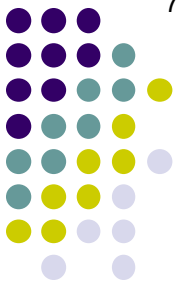
A

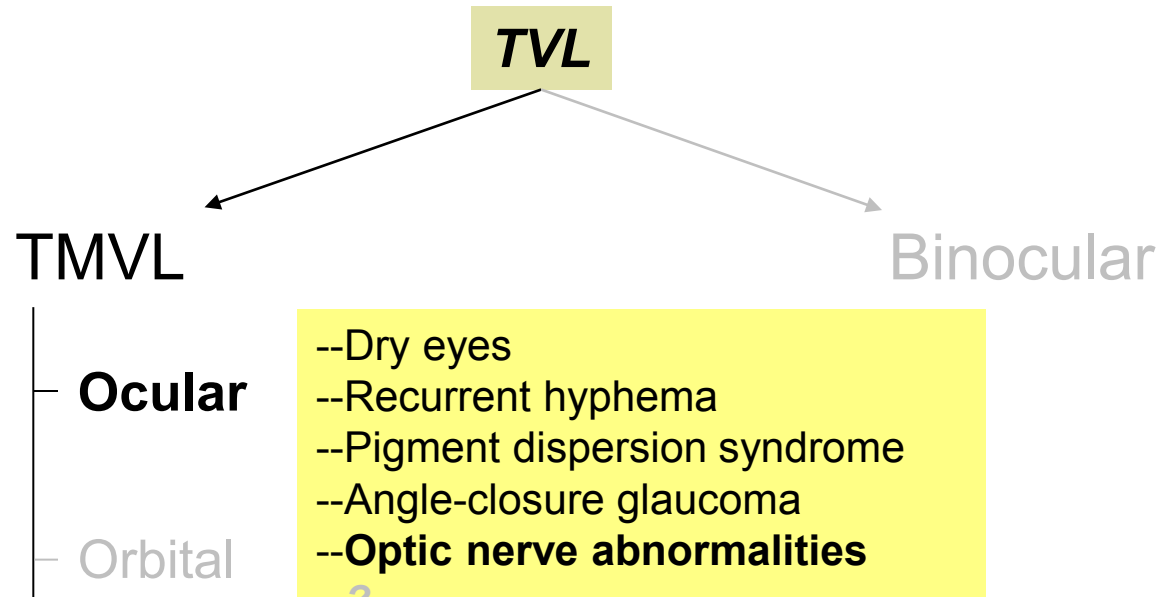
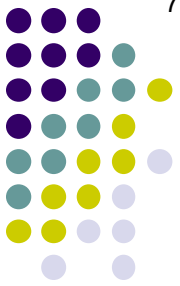


When this structure is implicated in TVL, the pt often reports that a change in posture precipitates the vision loss:

When you hear 'TVL associated with postural change,' two ONH conditions should come to mind. What are they?

- Papilledema
- Optic nerve drusen



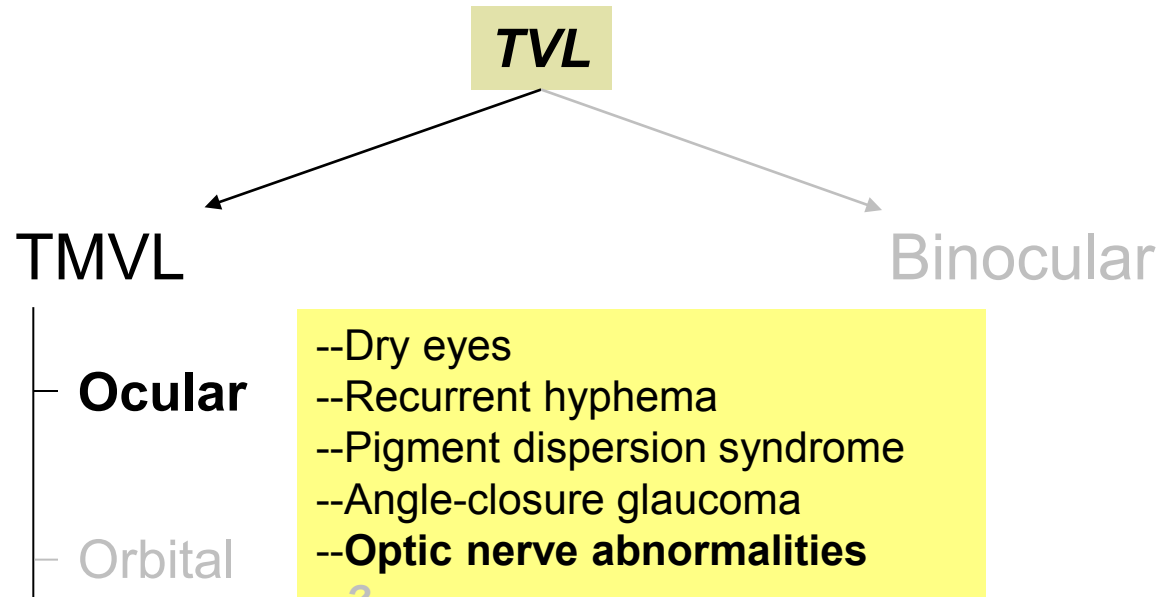
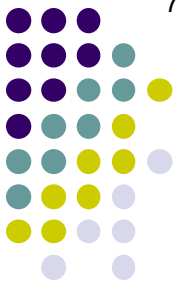


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How long do TVLs of this sort typically last?



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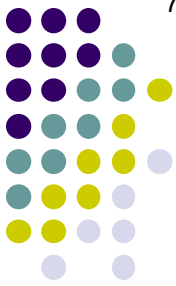
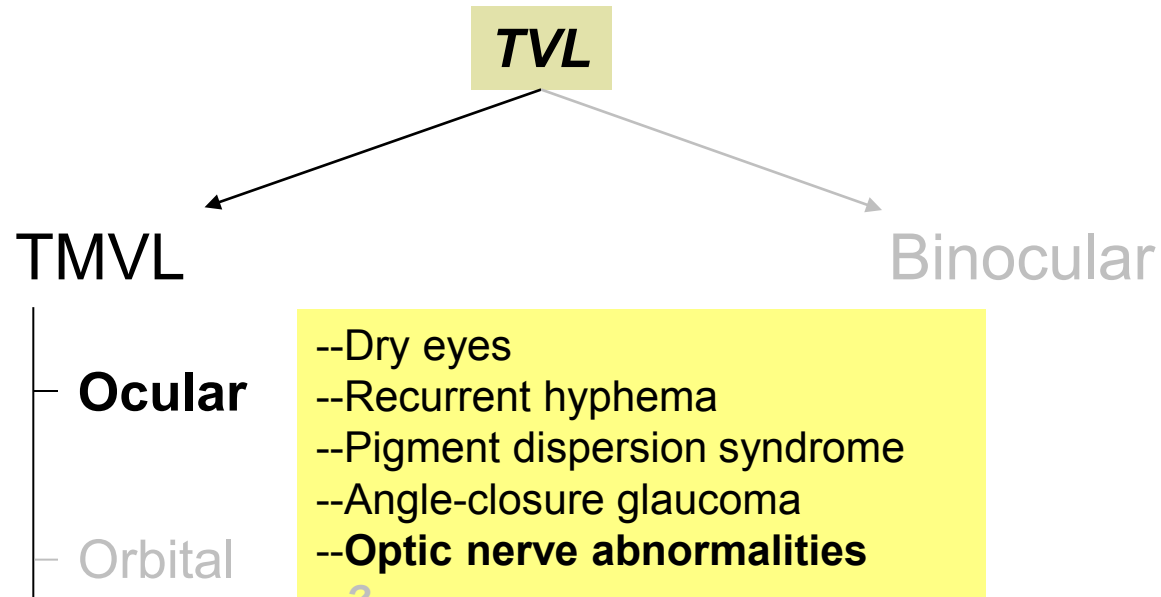
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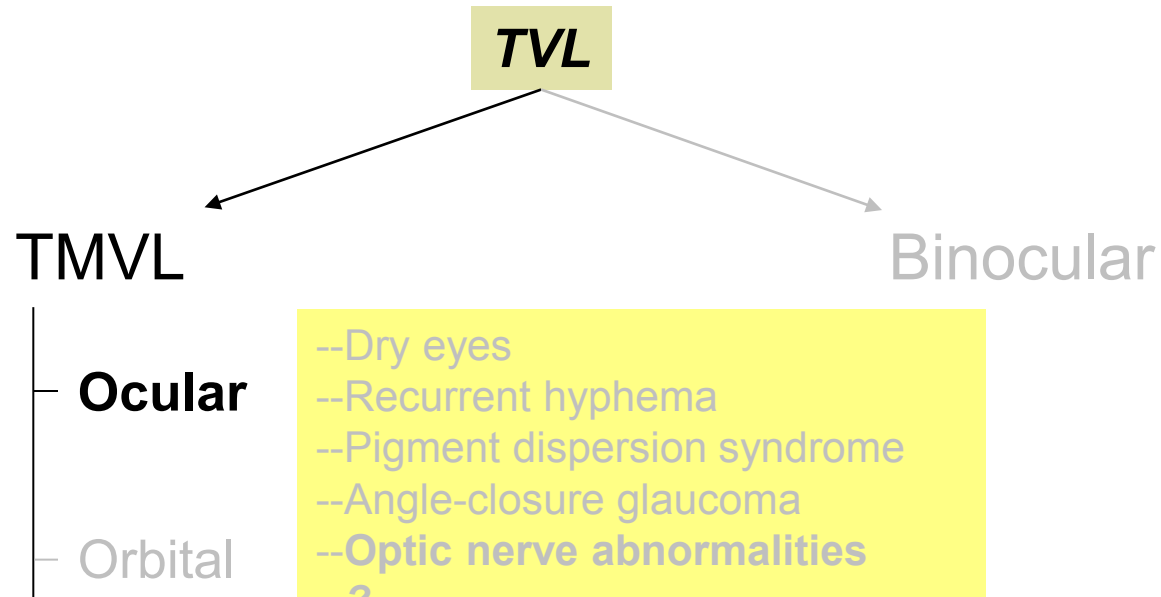
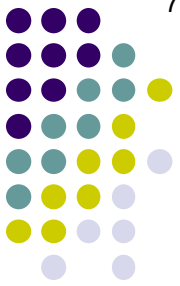
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How long do TVLs of this sort typically last?

A few seconds (hence they are more commonly labeled **abb.**)

A

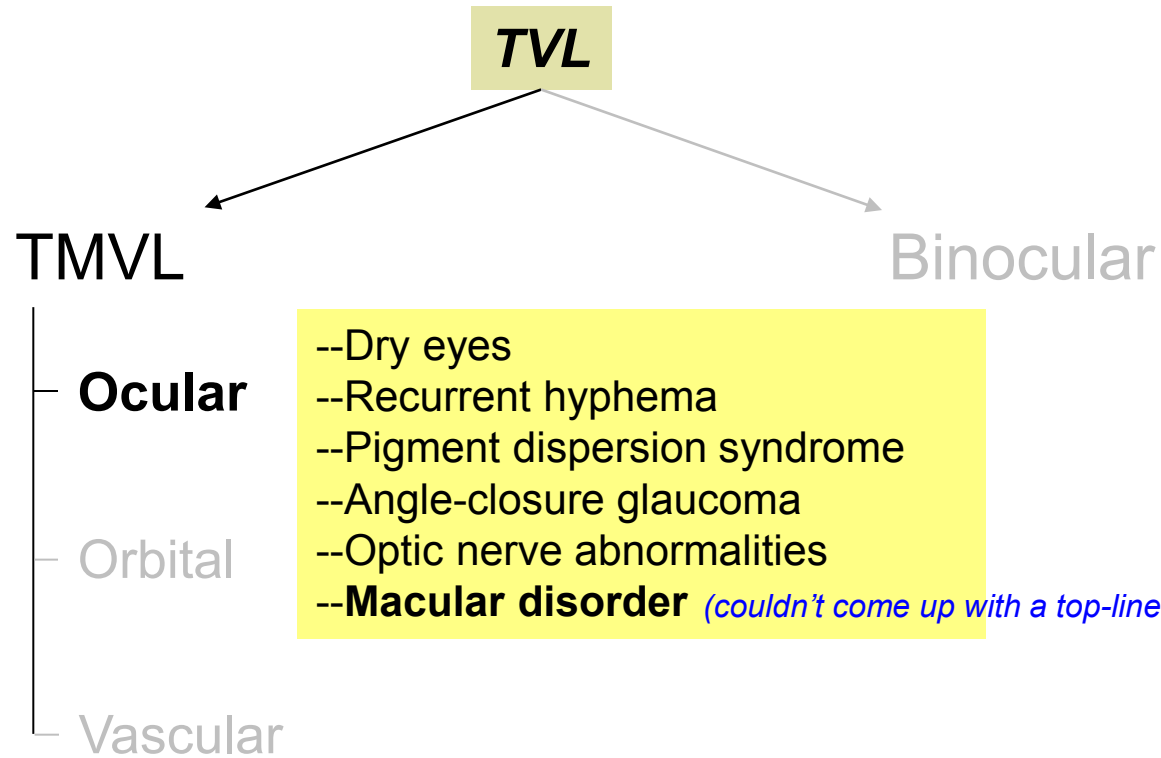
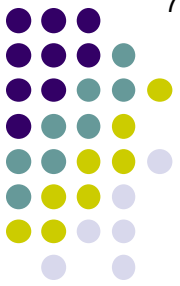


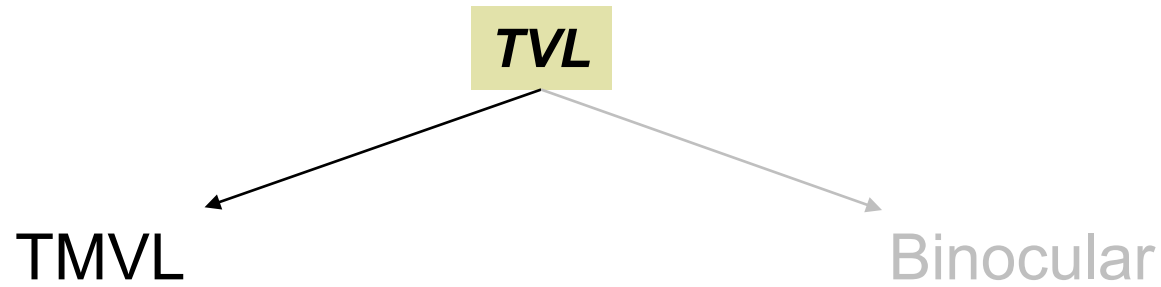
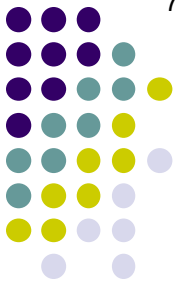


a change in posture precipitates the vision loss:

Head's up—Don't lock in 'posture change in TVL = optic nerve issue.'
In a few slides we will encounter other causes of TVL that are
influenced by changes in posture!

How long do TVLs of this sort typically last?
A few seconds (hence they are more commonly labeled TVOs)





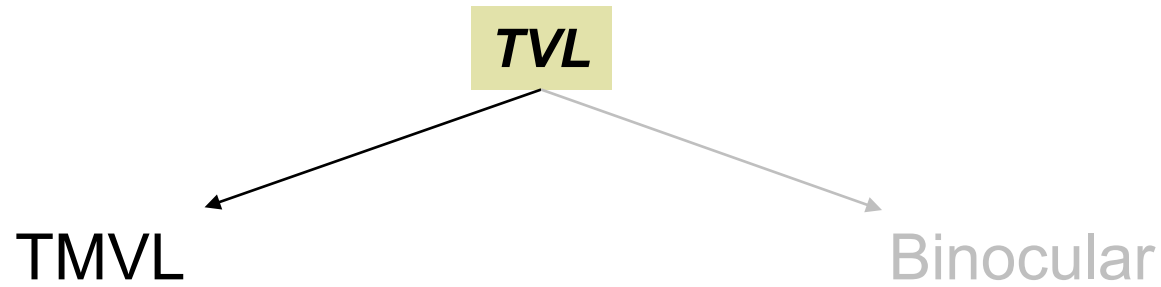
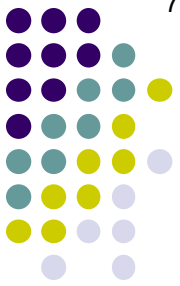
Ocular

- Dry eyes
- Recurrent hyphema
- Pigment dispersion syndrome
- Angle-closure glaucoma
- Optic nerve abnormalities
- Macular disorder**

Orbital

'Macular disorder' is rather vague. What three conditions does the Neuro book mention in this regard?

- ?
- ?
- ?



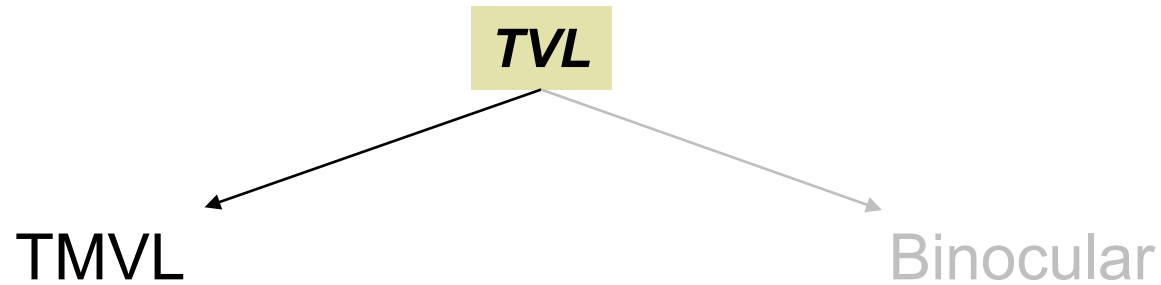
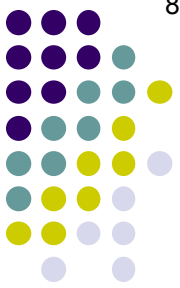
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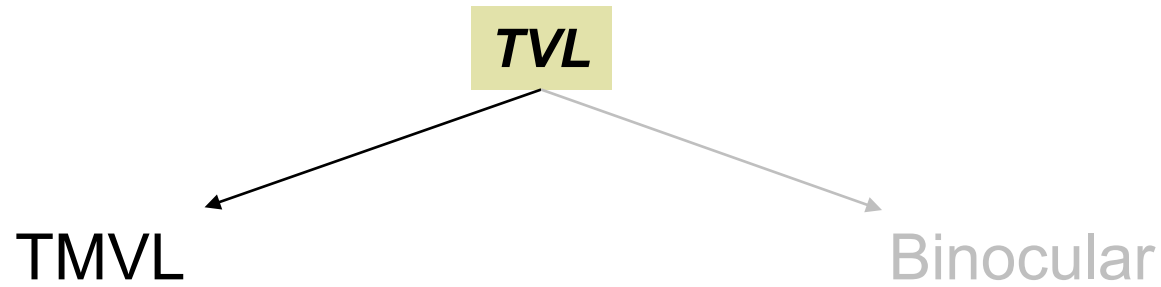
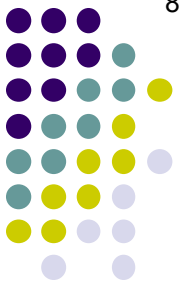
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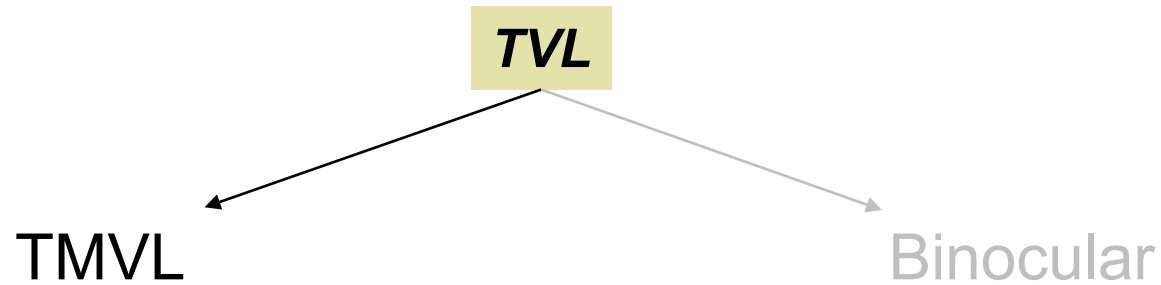
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Exposure to a very two words

A



Ocular

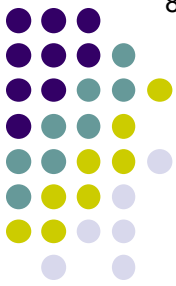
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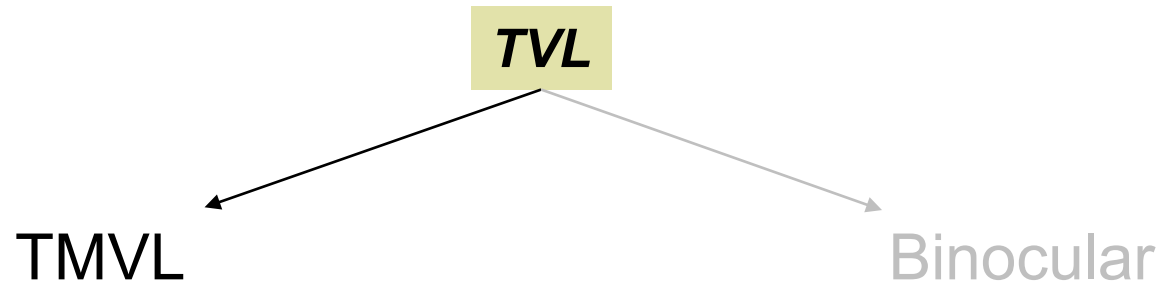
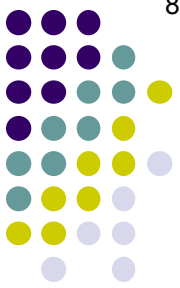
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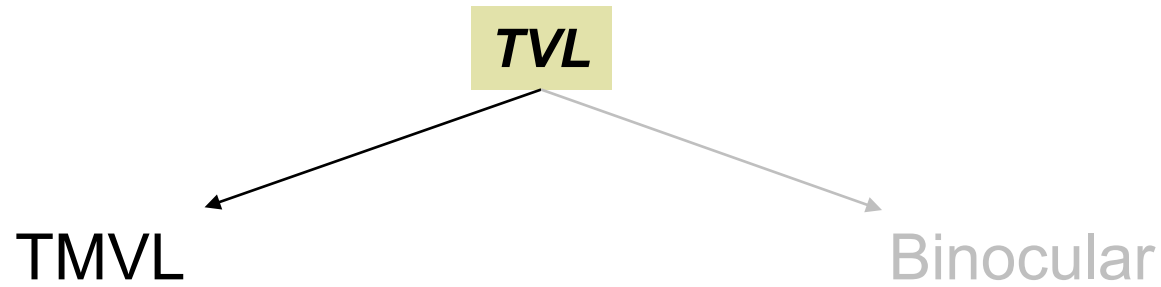
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Ocular

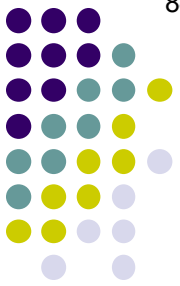
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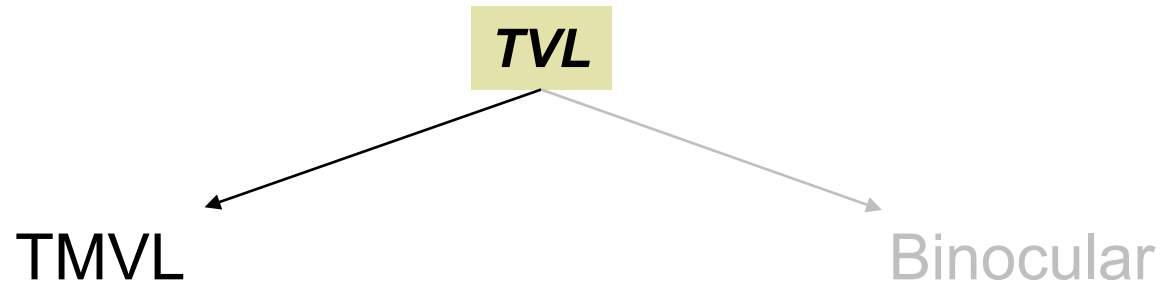
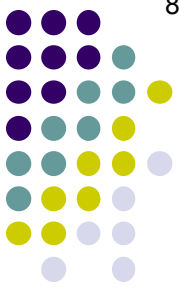
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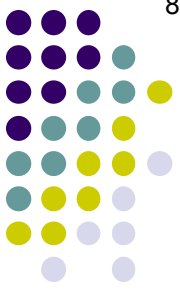
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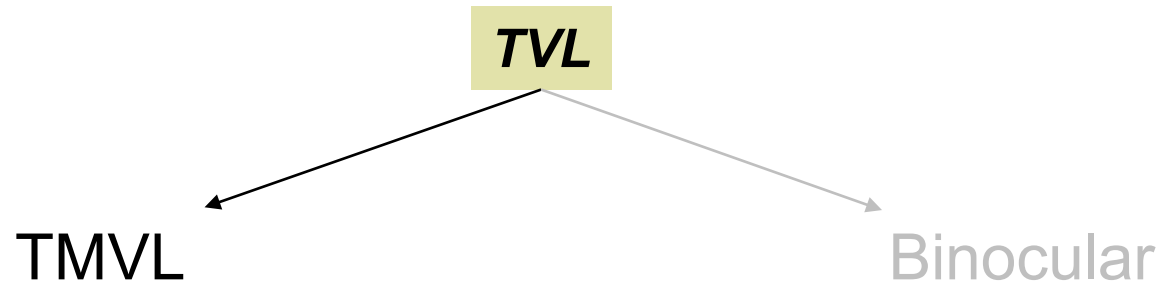
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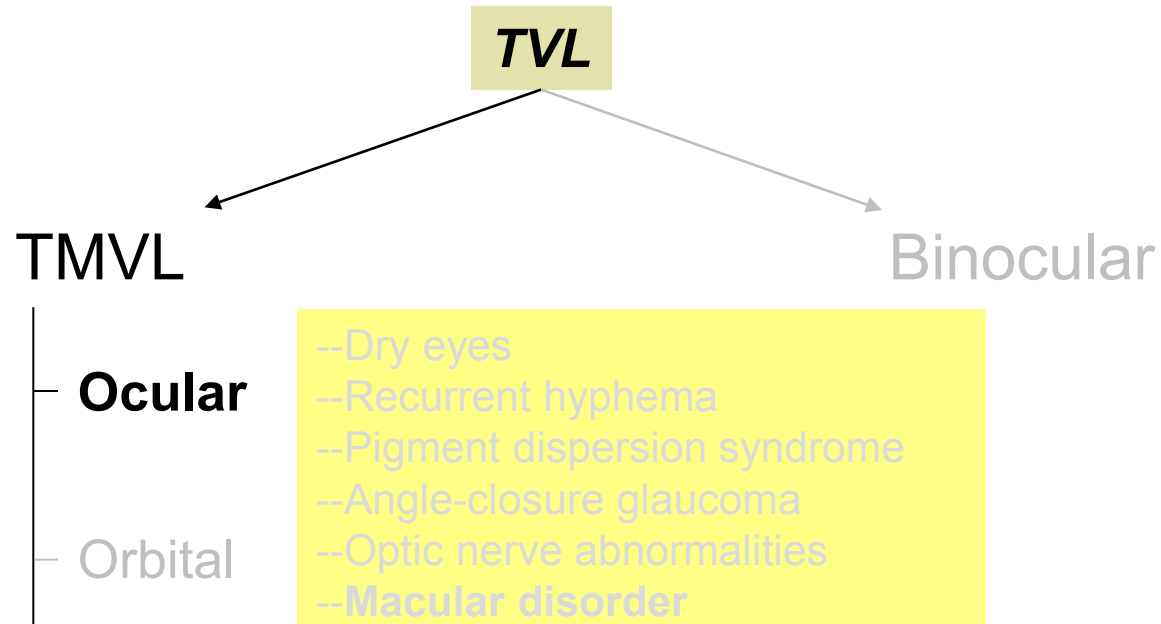
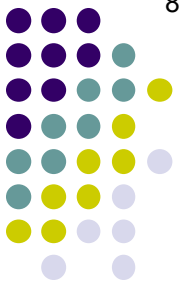
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Q

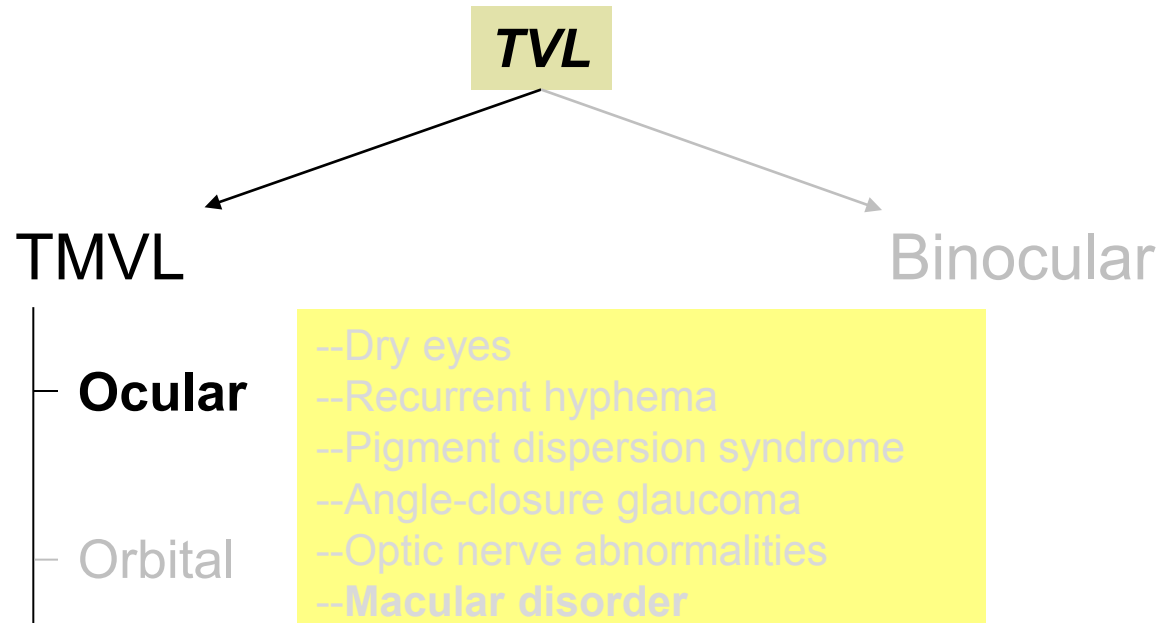


Can photostress recovery time be formally assessed in the clinic?

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Q/A



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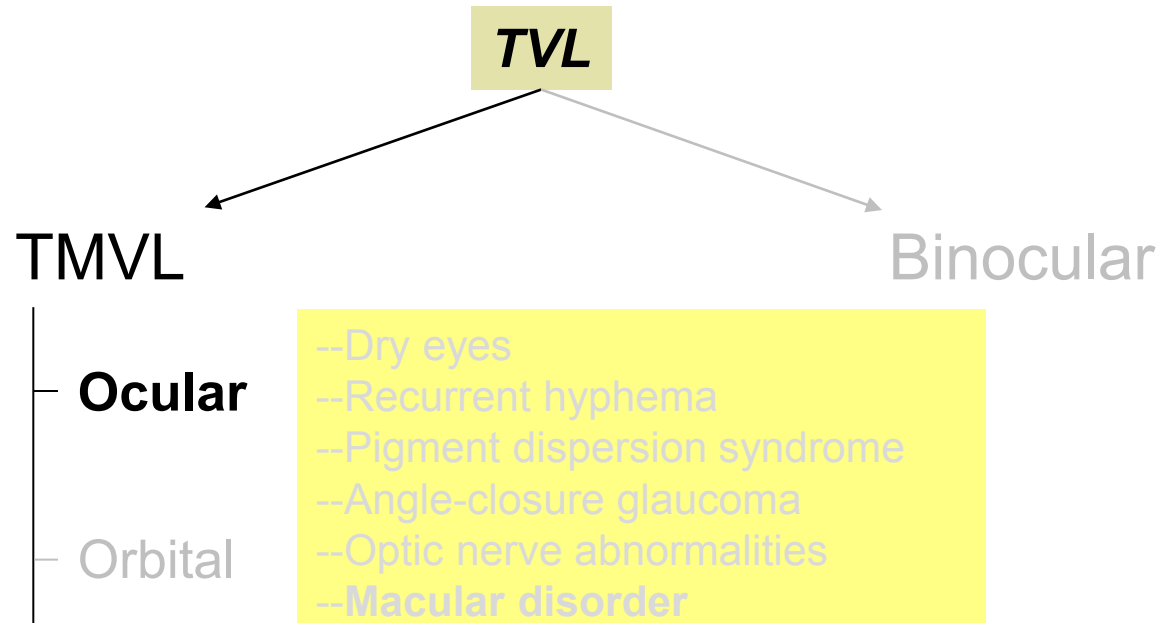
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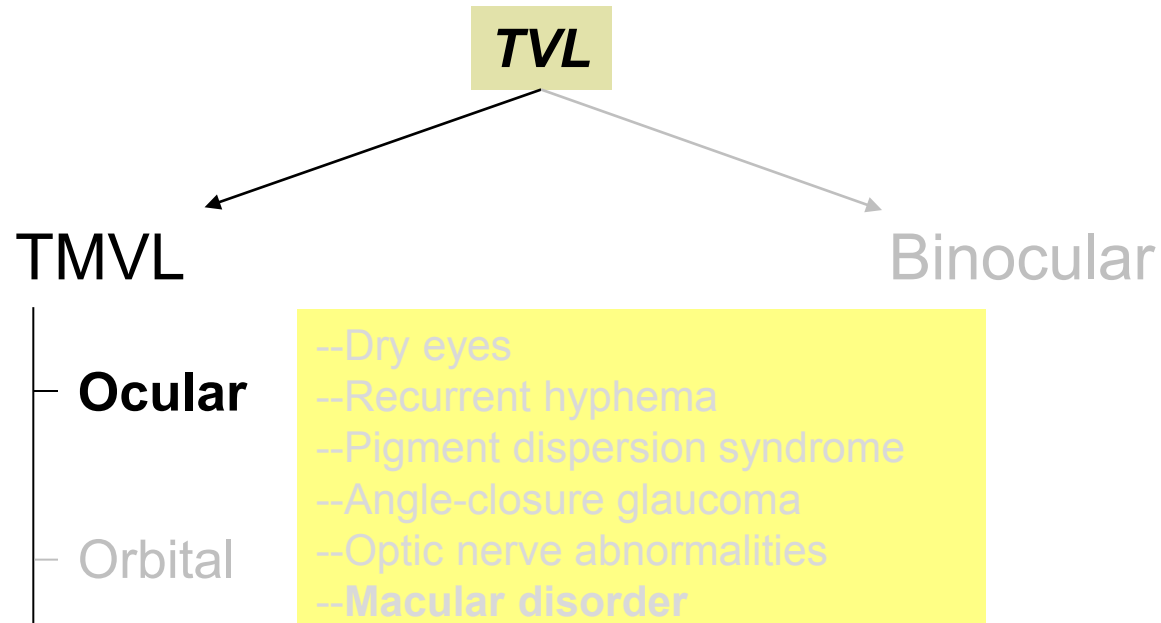
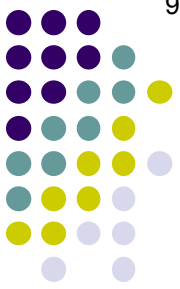
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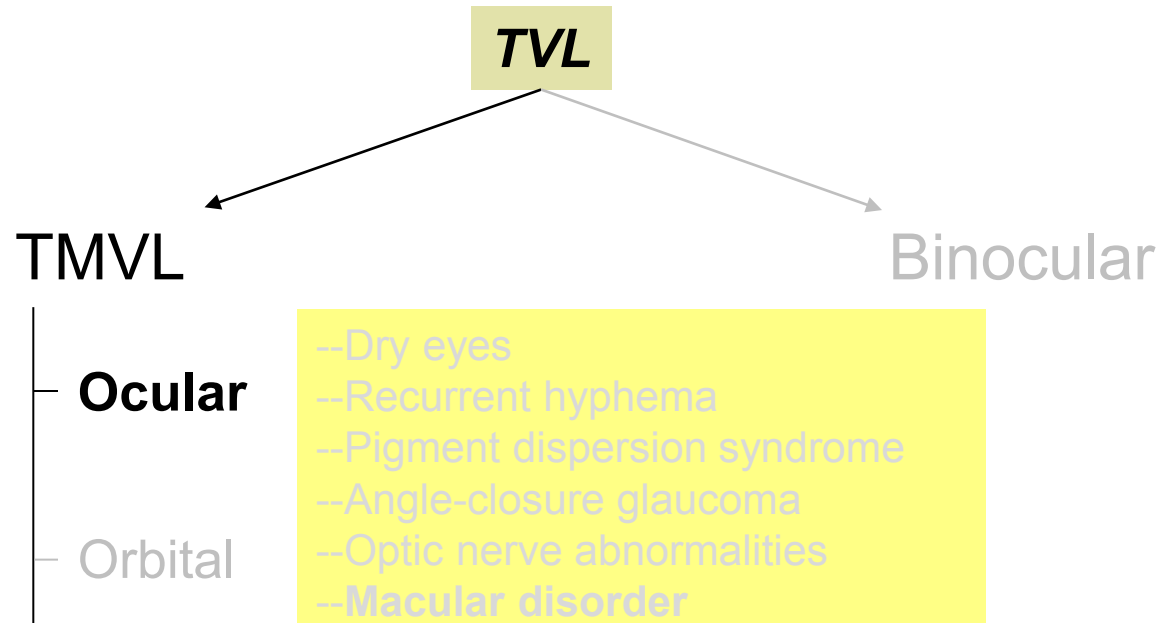
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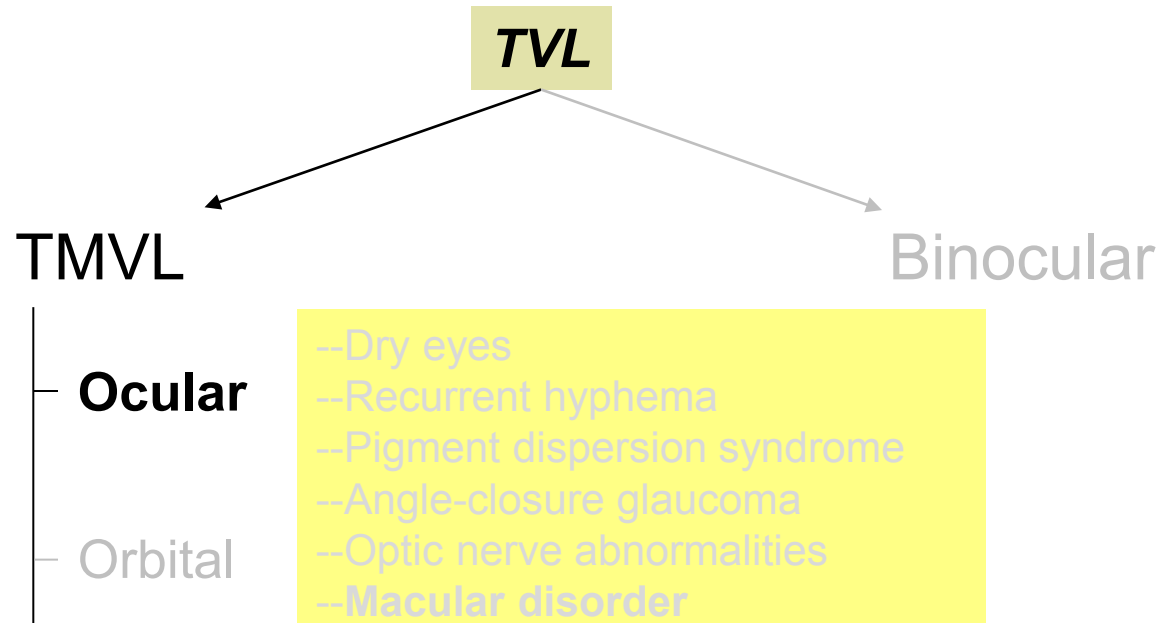
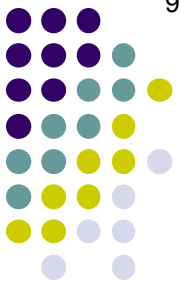


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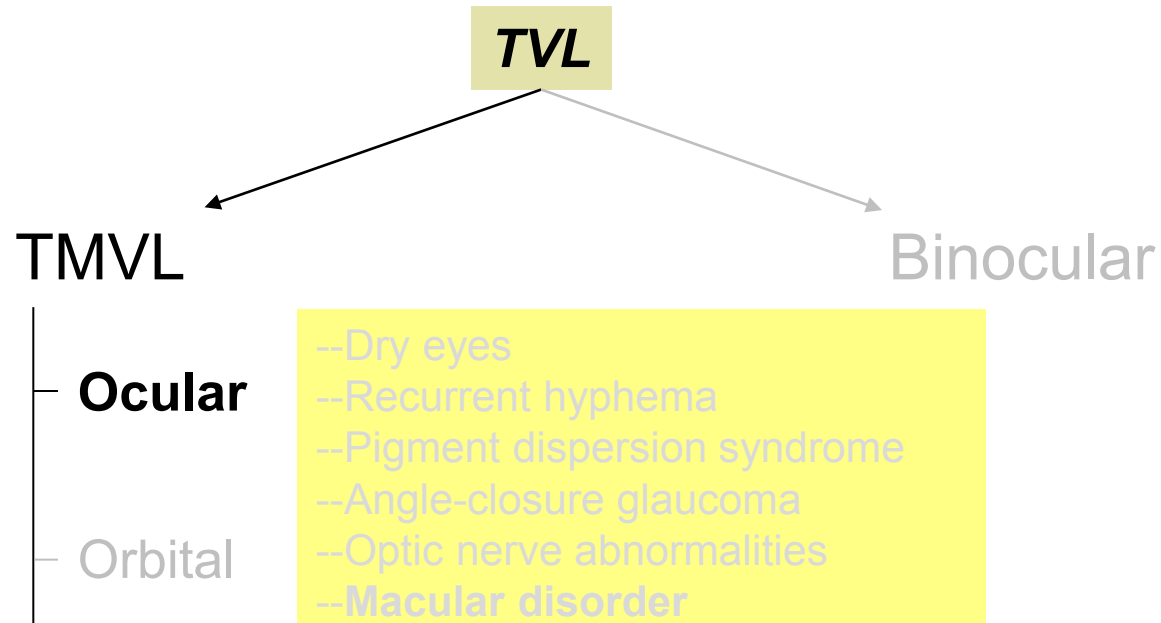
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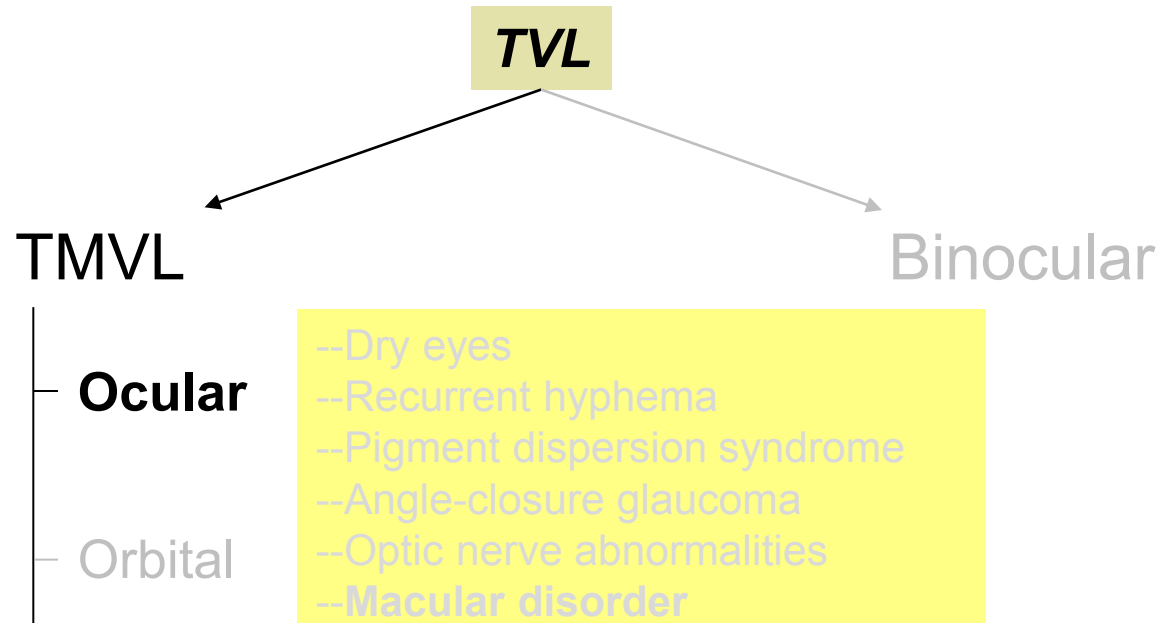
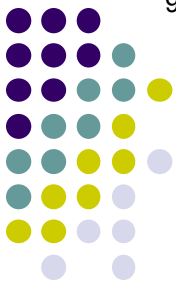


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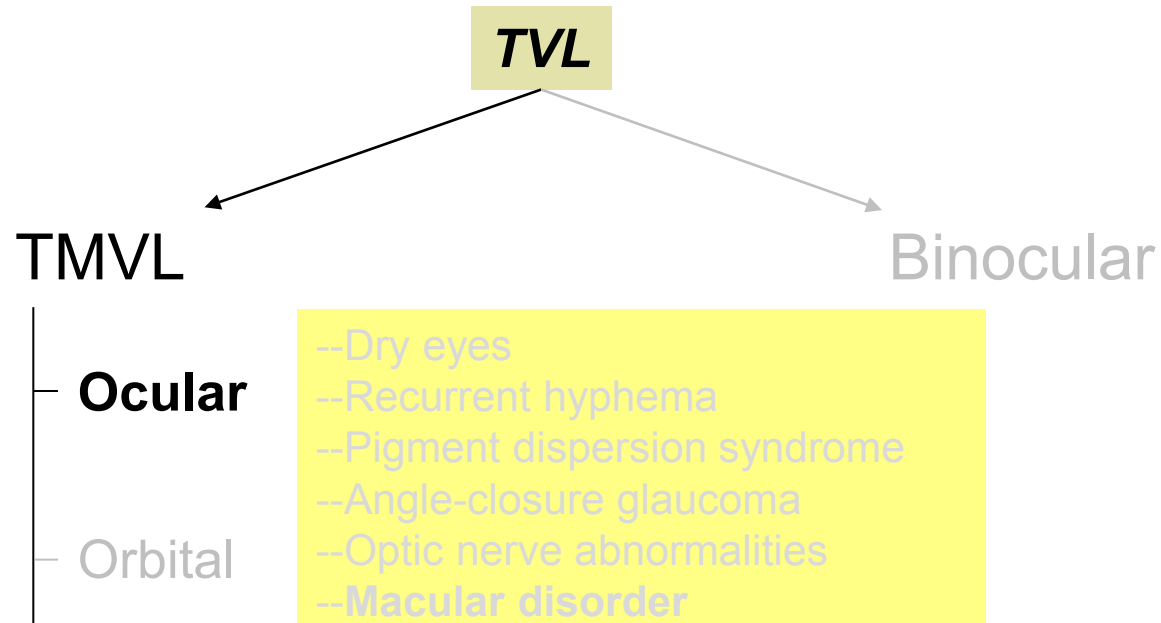
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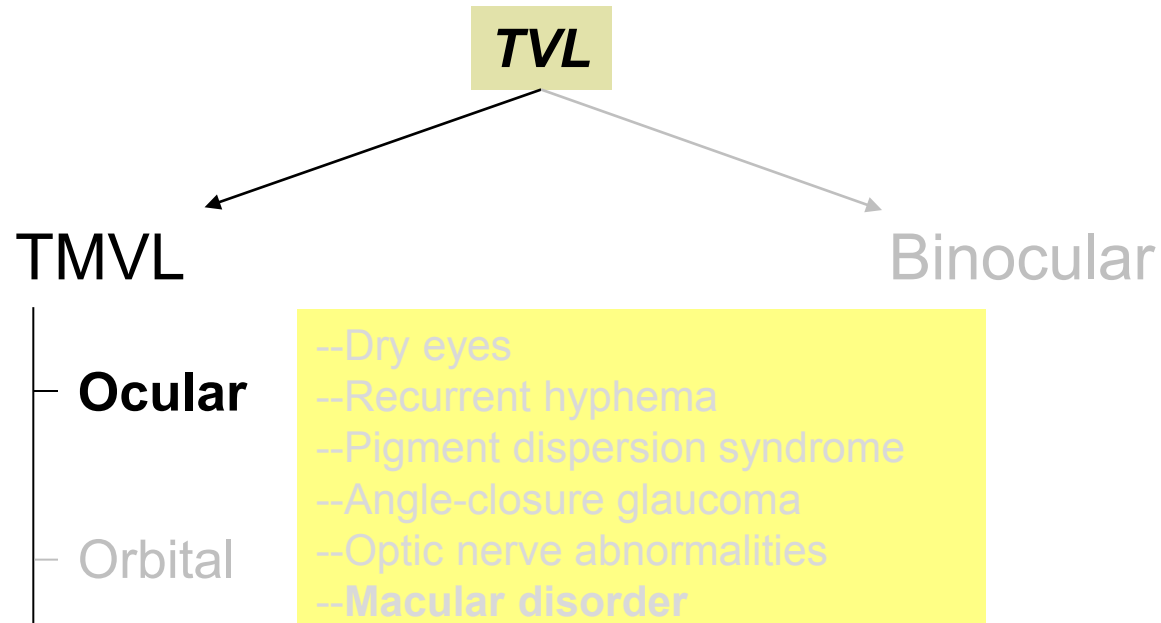
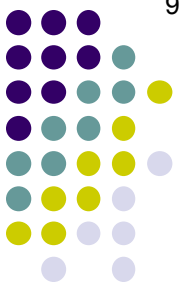


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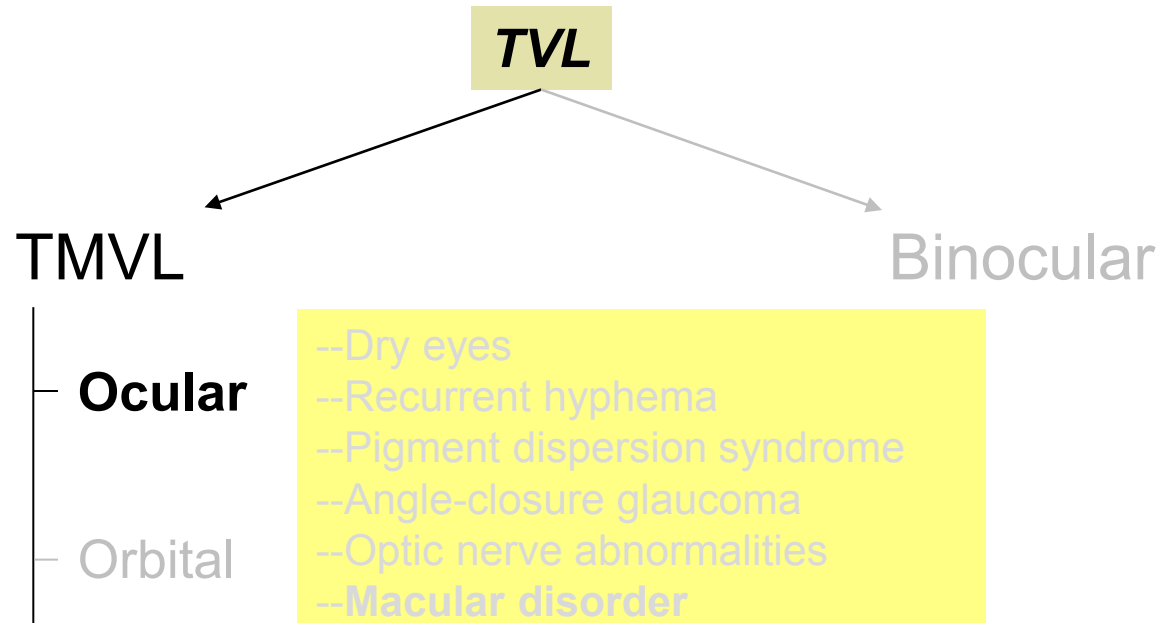
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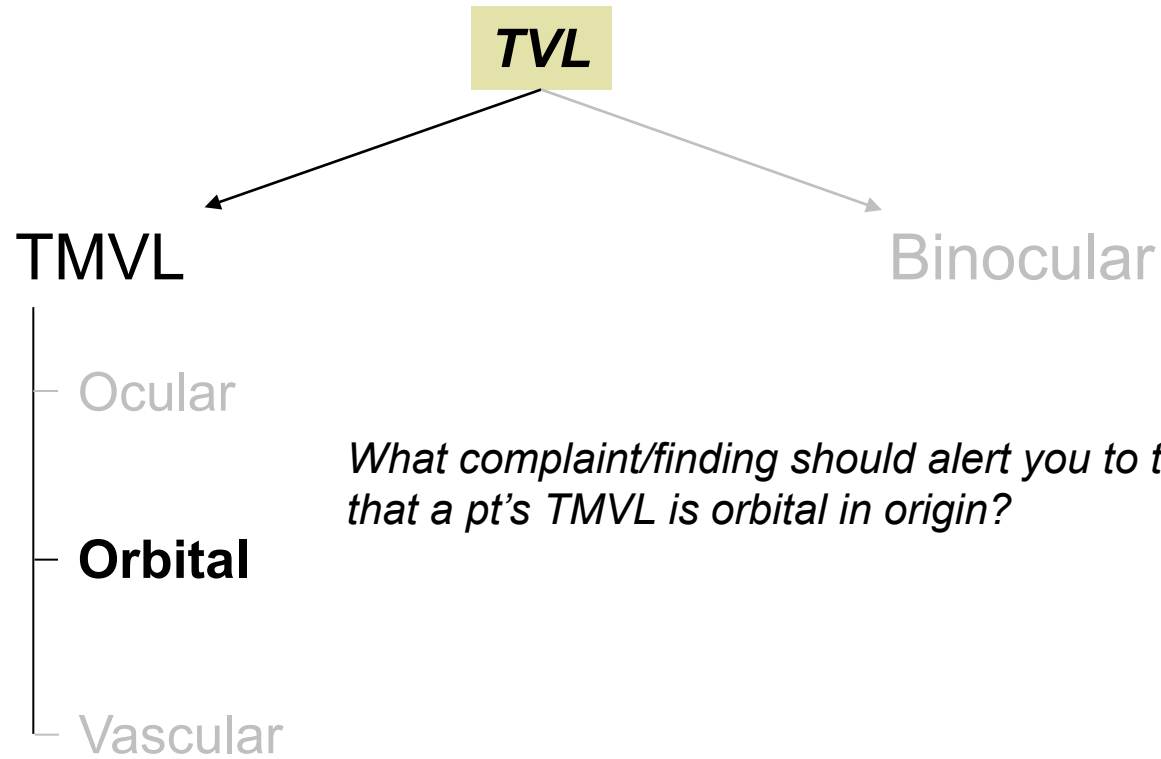
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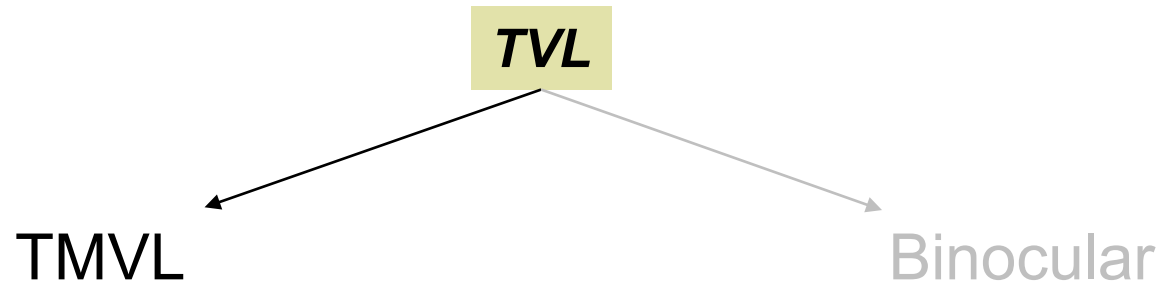
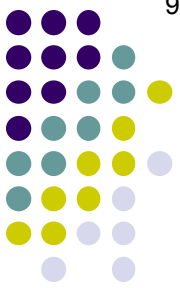
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Q





Ocular

Orbital

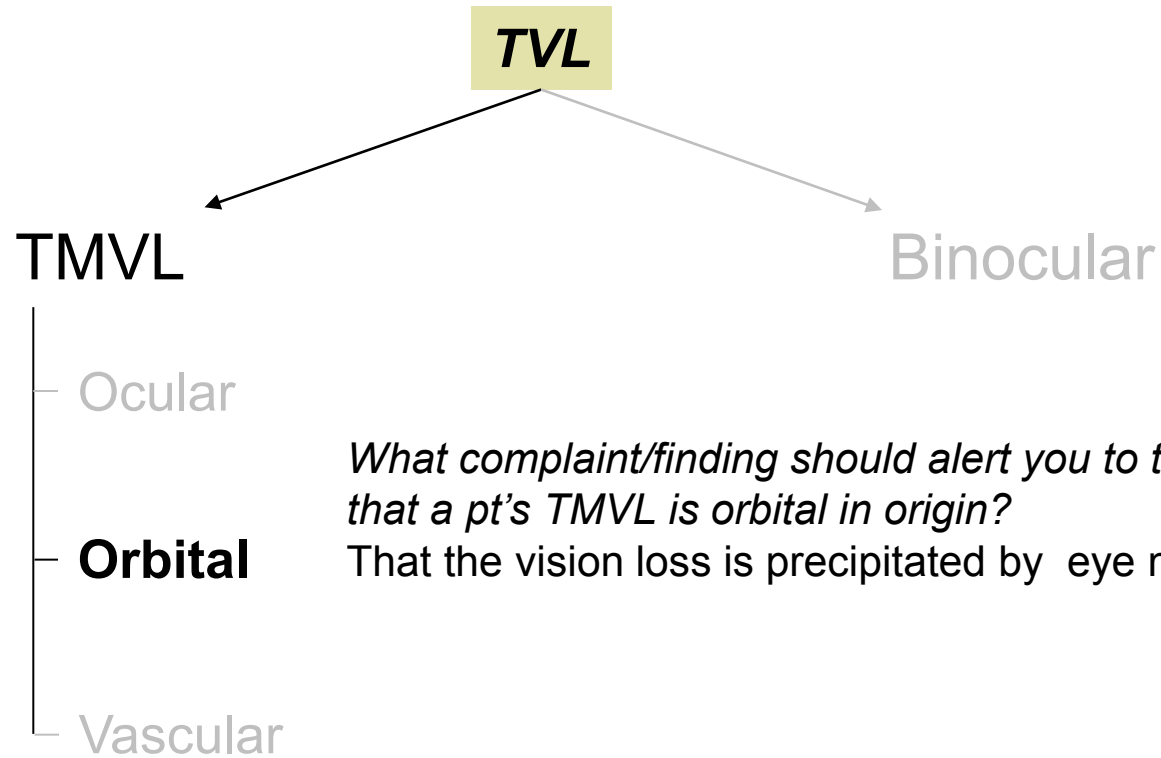
Vascular

What complaint/finding should alert you to the possibility that a pt's TMVL is orbital in origin?

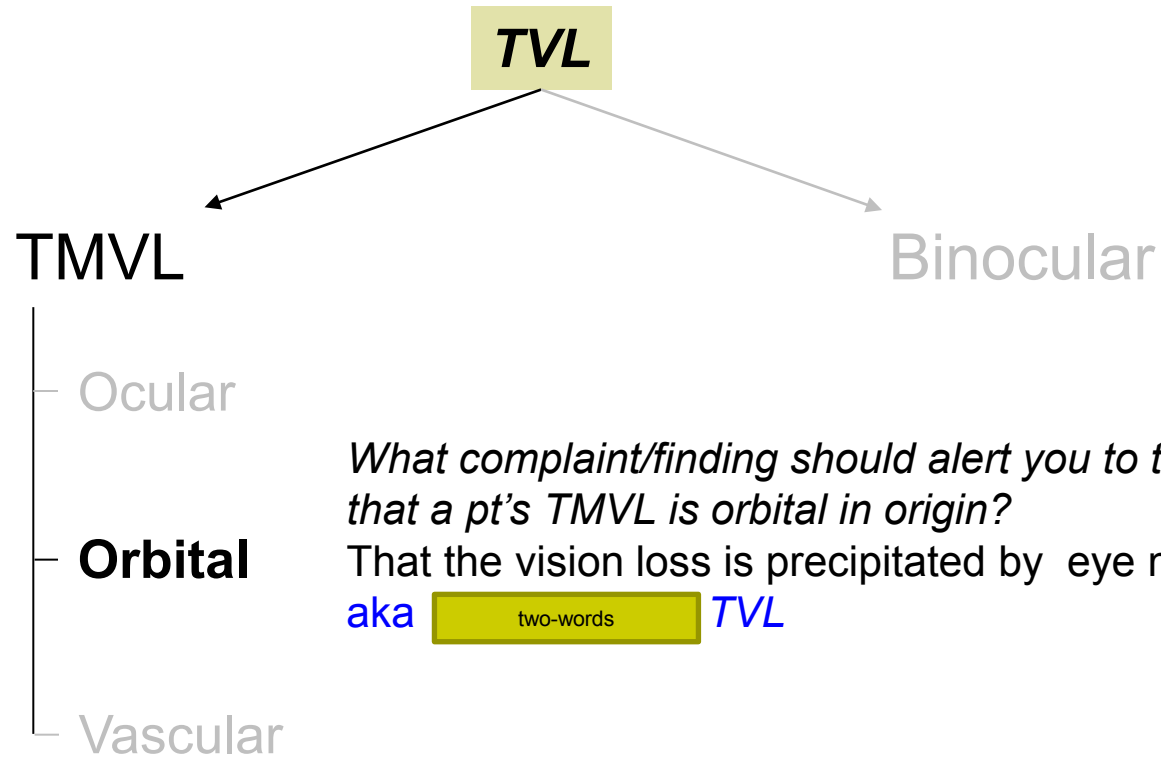
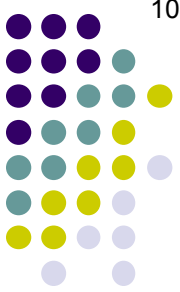
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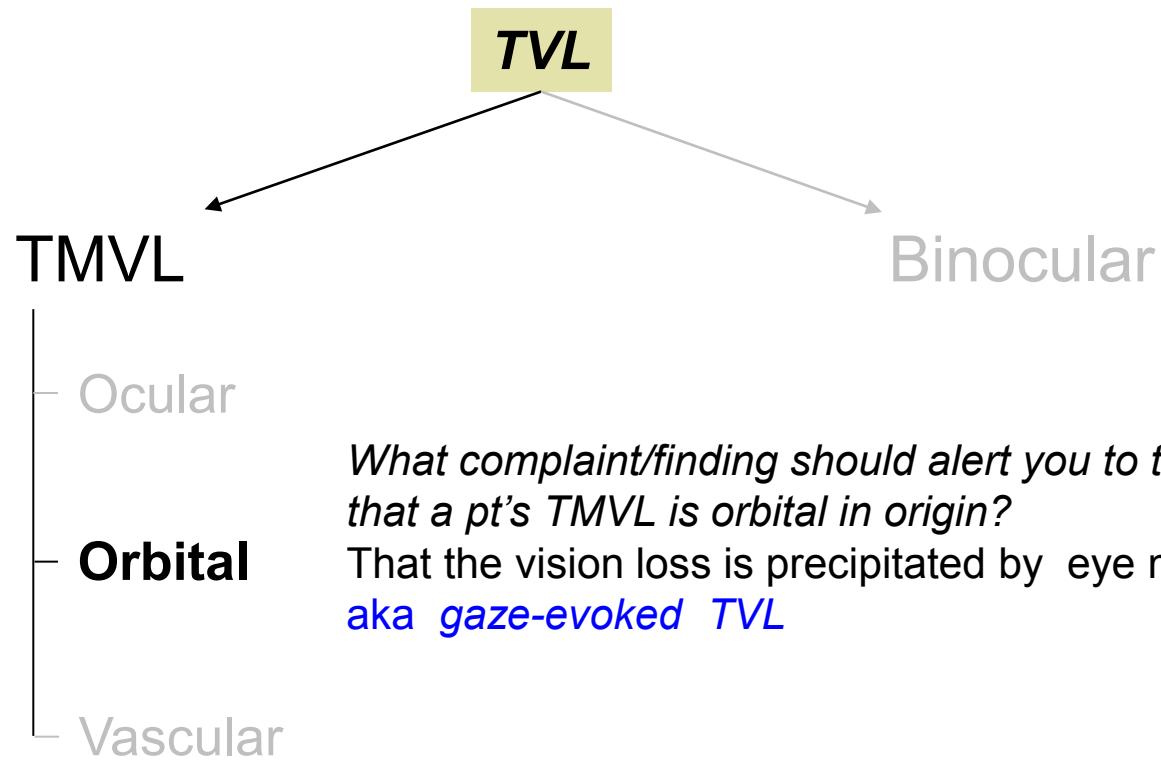
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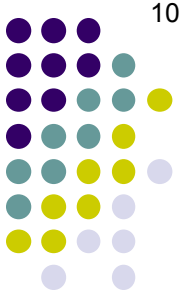
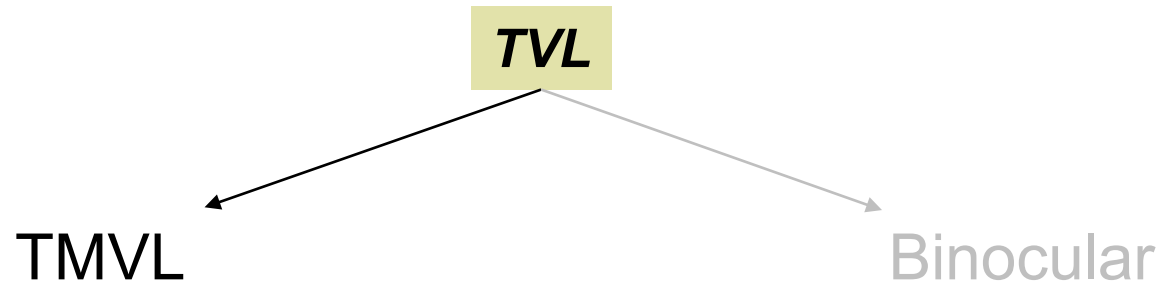
A



Q



A



— Ocular

— **Orbital**

— Vascular

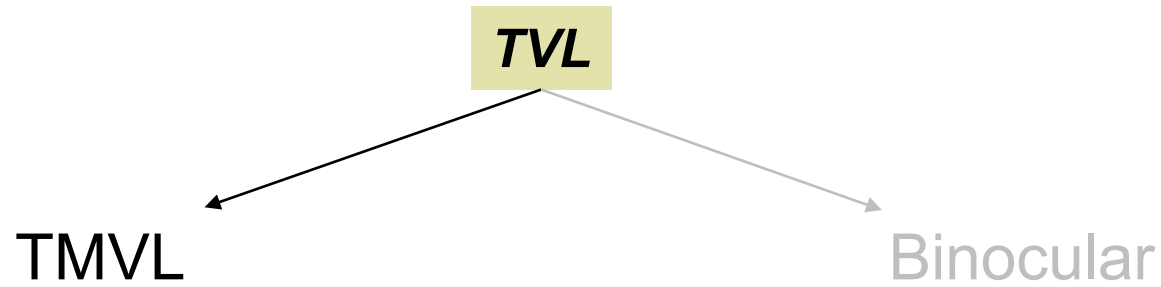
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That the vision loss is precipitated by eye movement,
aka gaze-evoked TVL

What other findings might be present that would clue you in to the possibility of an orbital process?

--?

--?



— Ocular

— **Orbital**

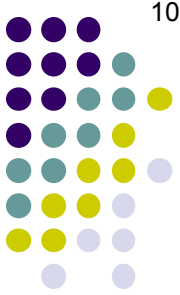
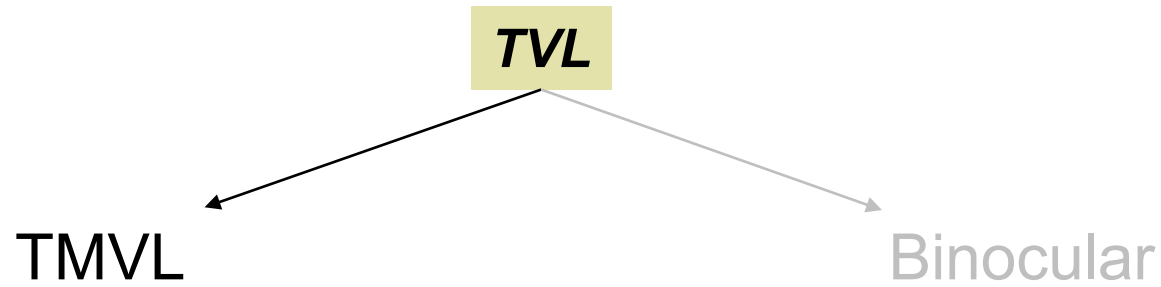
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— Ocular

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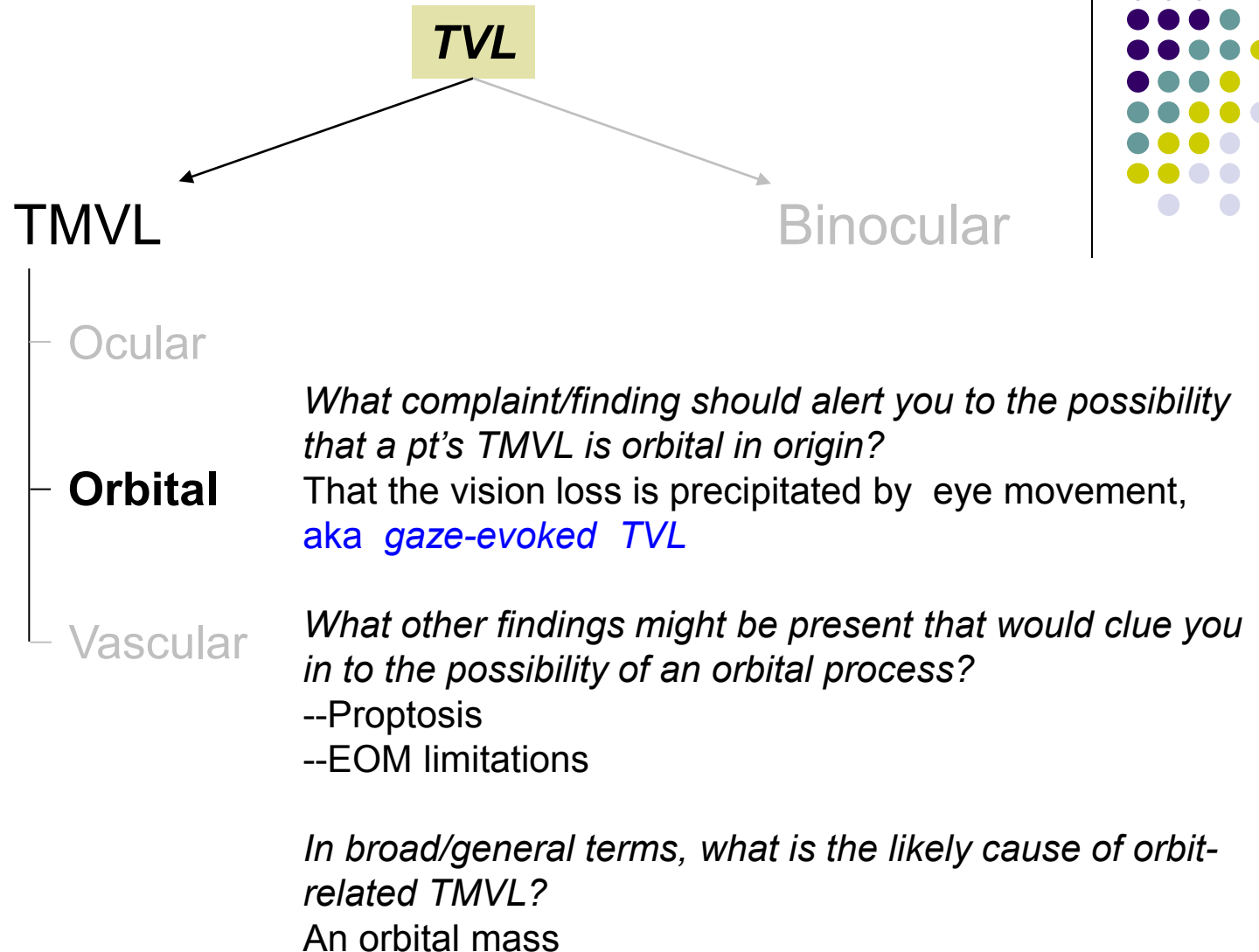
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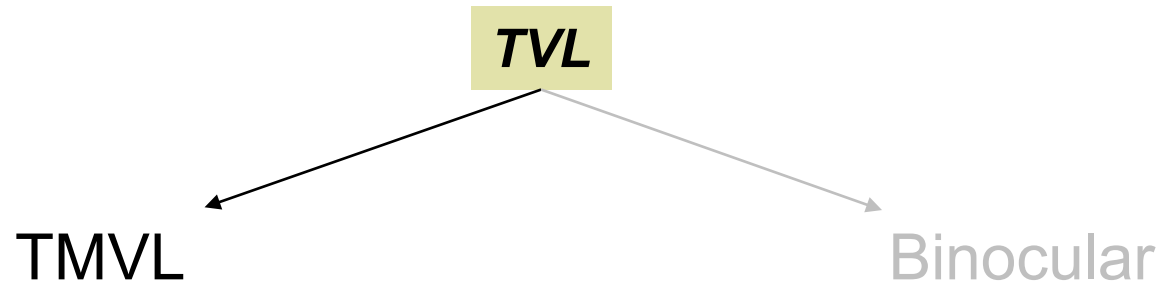
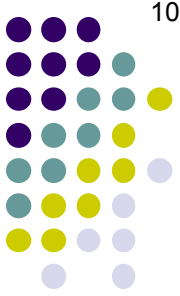
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In broad/general terms, what is the likely cause of orbit-related TMVL?





Ocular

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Orbital

That the vision loss is precipitated by eye movement, aka *gaze-evoked TVL*

Vascular

What other findings might be present that would clue you in to the possibility of an orbital process?

--Proptosis
--EOM limitations

In broad/general terms, what is the likely cause of orbit-related TMVL?

An **orbital mass**

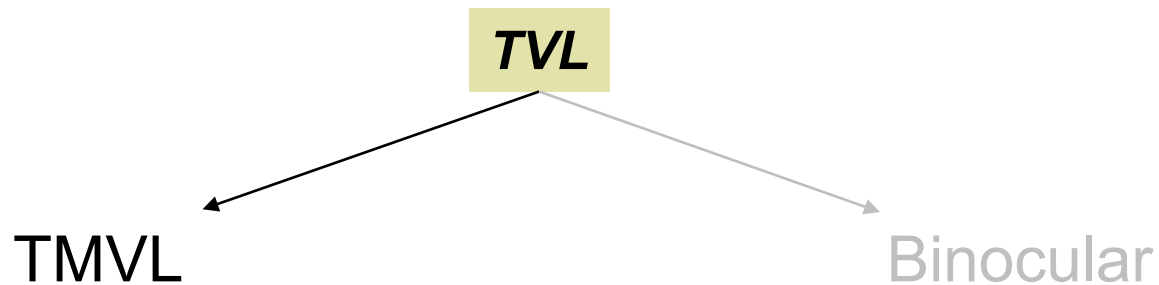
└ ?

└ ?

└ ?

The Neuro book mentions three examples—what are they?

A



Ocular

What complaint/finding should alert you to the possibility that a pt's TMVL is orbital in origin?

Orbital

That the vision loss is precipitated by eye movement,
aka *gaze-evoked TVL*

Vascular

What other findings might be present that would clue you in to the possibility of an orbital process?

--Proptosis
--EOM limitations

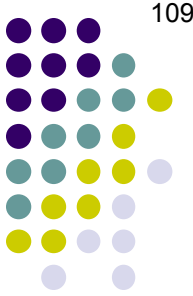
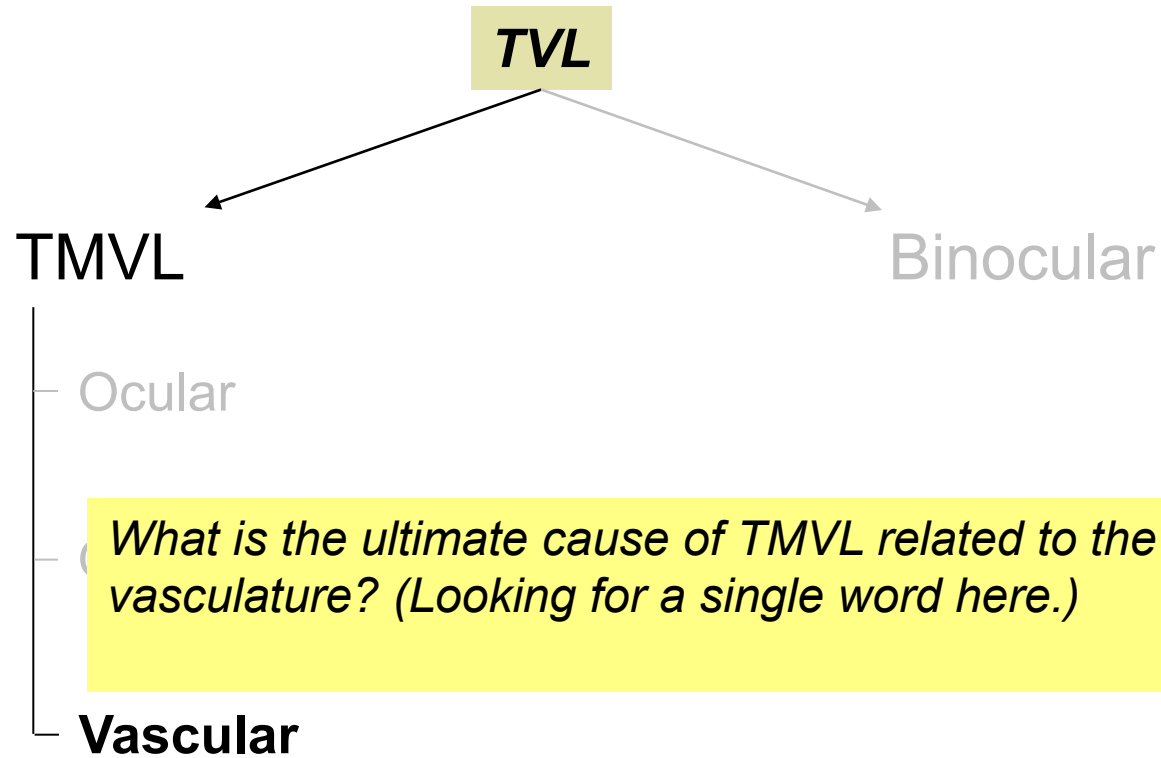
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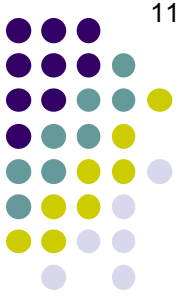
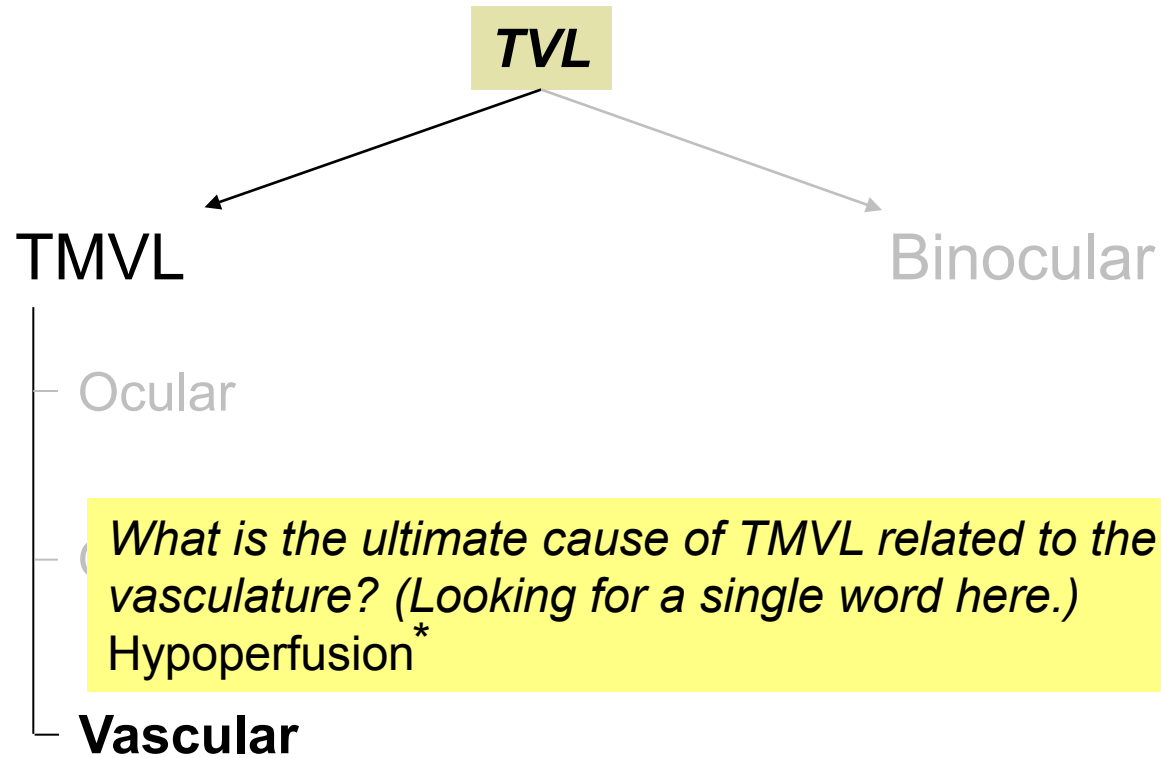
An **orbital mass**

The Neuro book mentions three examples—what are they?

- └ Hemangioma
- └ Meningioma
- └ Foreign body

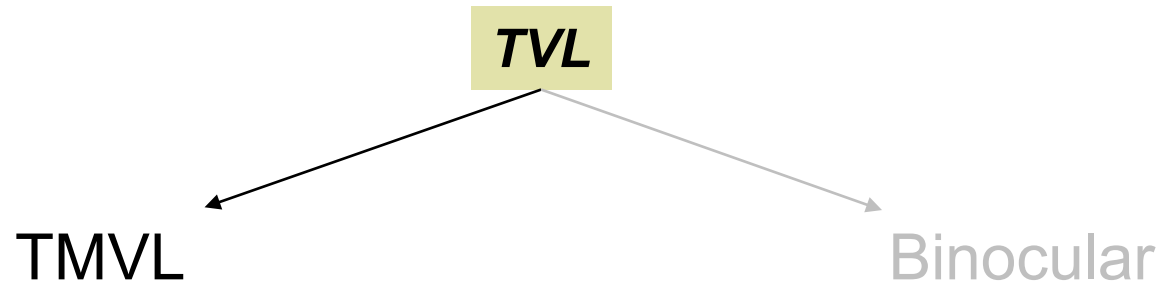
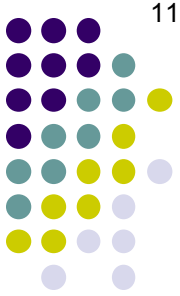
Q



A

*Ischemia is also a reasonable answer here (in fact, we'll use it shortly)

Q



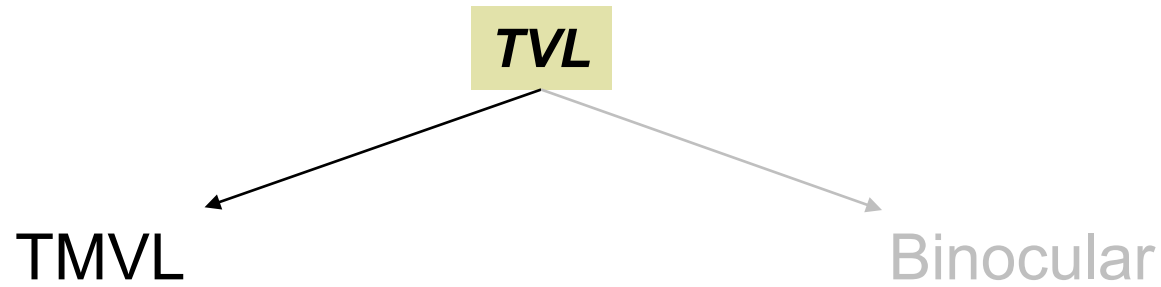
Ocular

What is the ultimate cause of TMVL related to the vasculature? (Looking for a single word here.)
Hypoperfusion of...

Vascular

Hypoperfusion of what two structures are implicated?

A



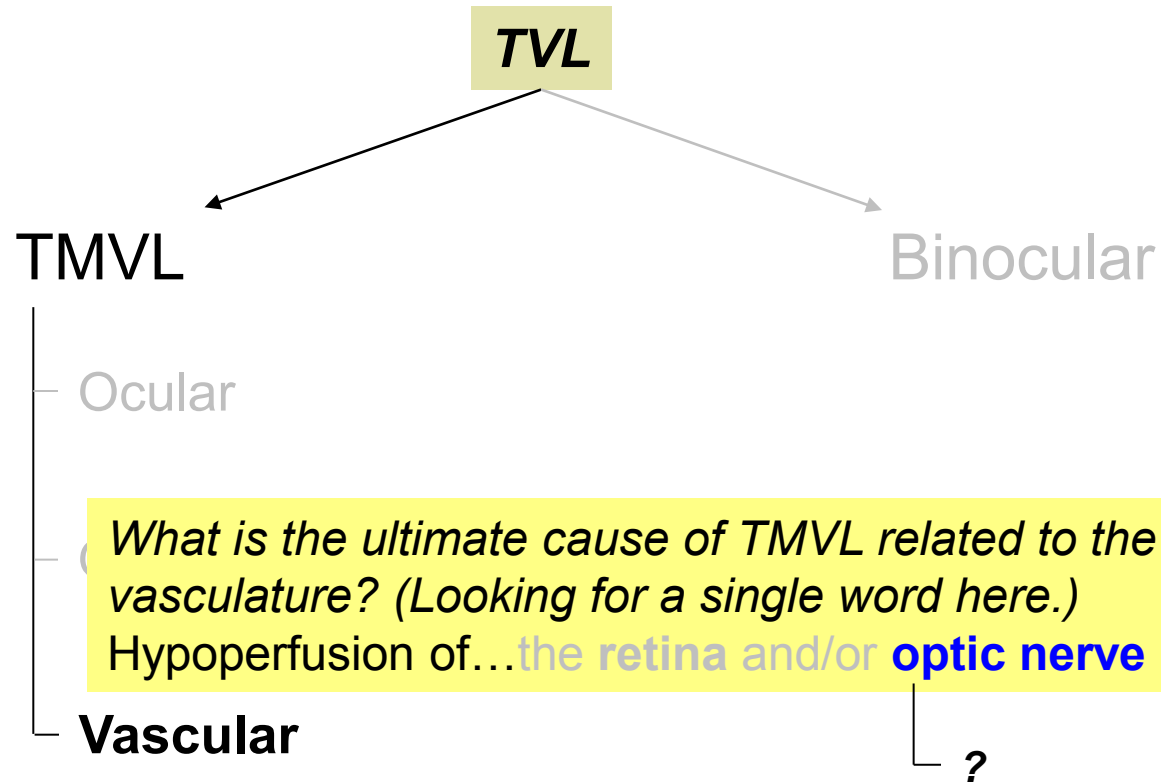
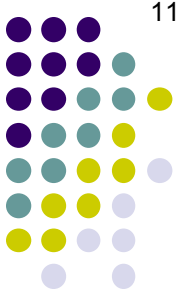
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What is the ultimate cause of TMVL related to the vasculature? (Looking for a single word here.)

Hypoperfusion of...the retina and/or optic nerve

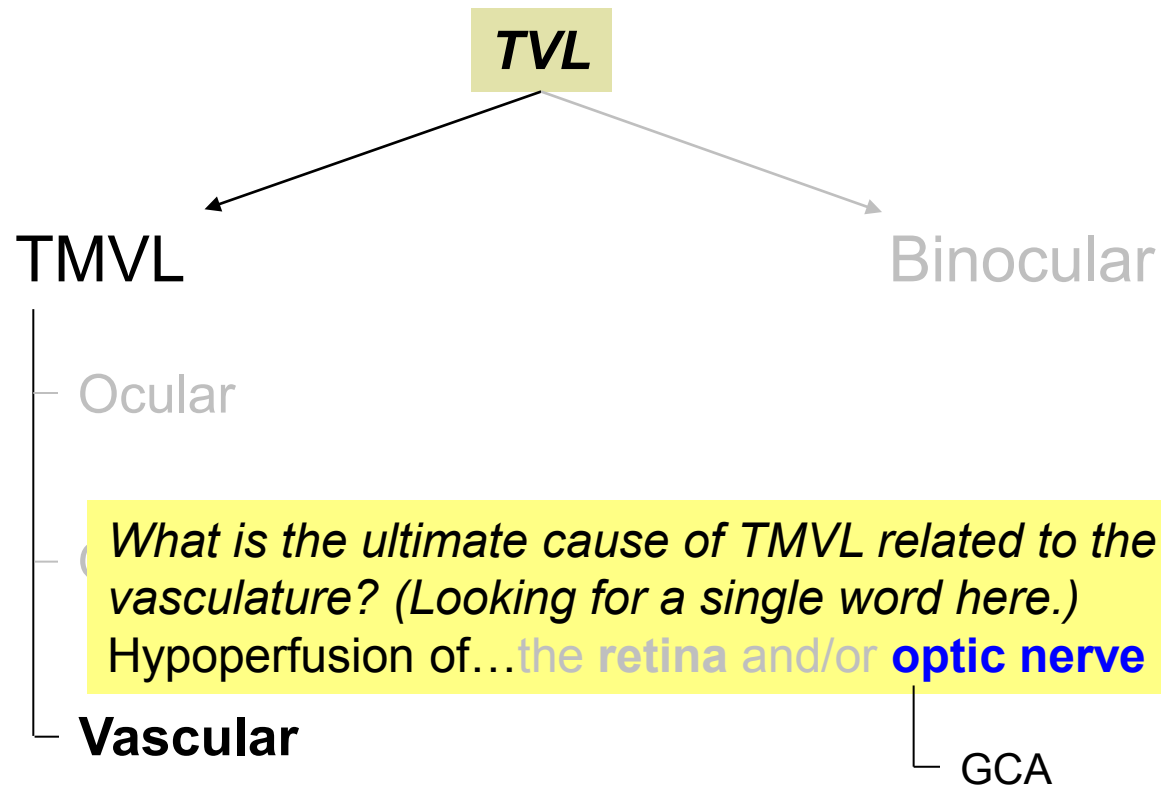
Vascular

Hypoperfusion of what two structures are implicated?



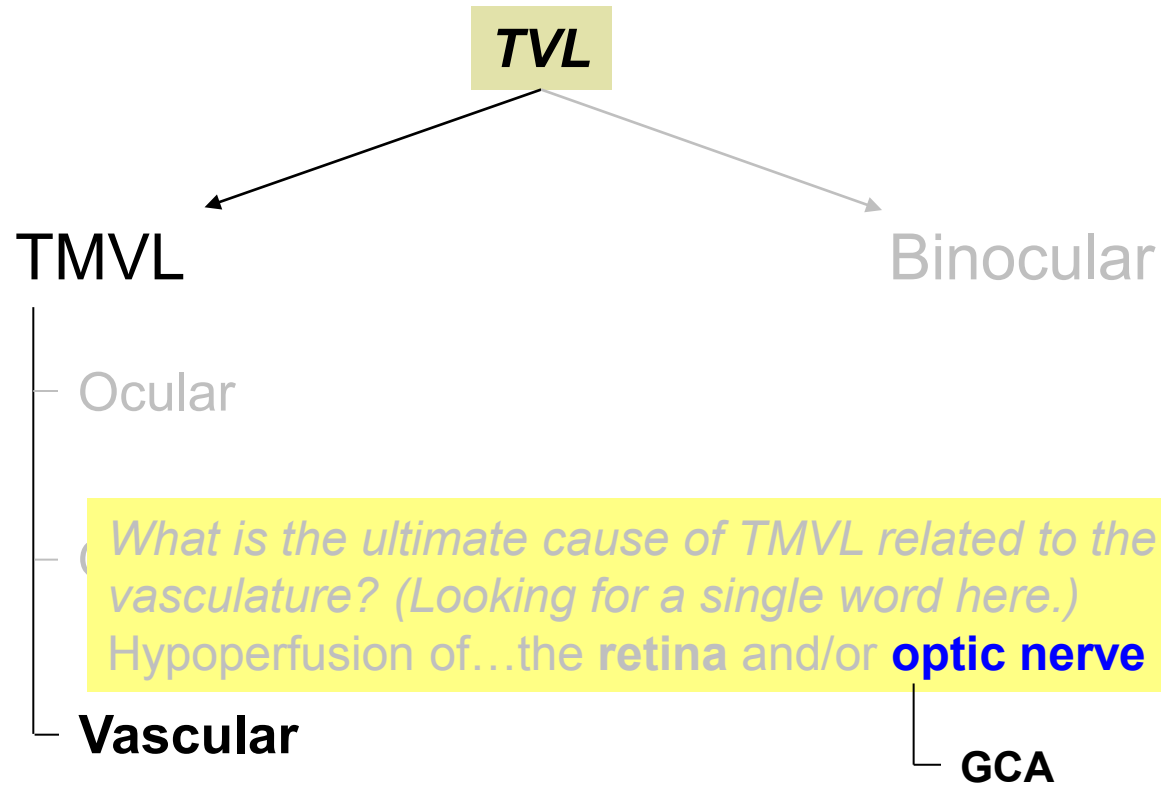
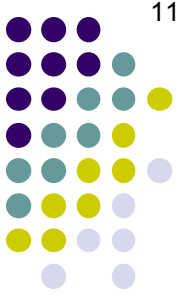
In the TMVL section, the book discusses at length only one cause of optic nerve hypoperfusion. What is it?

A



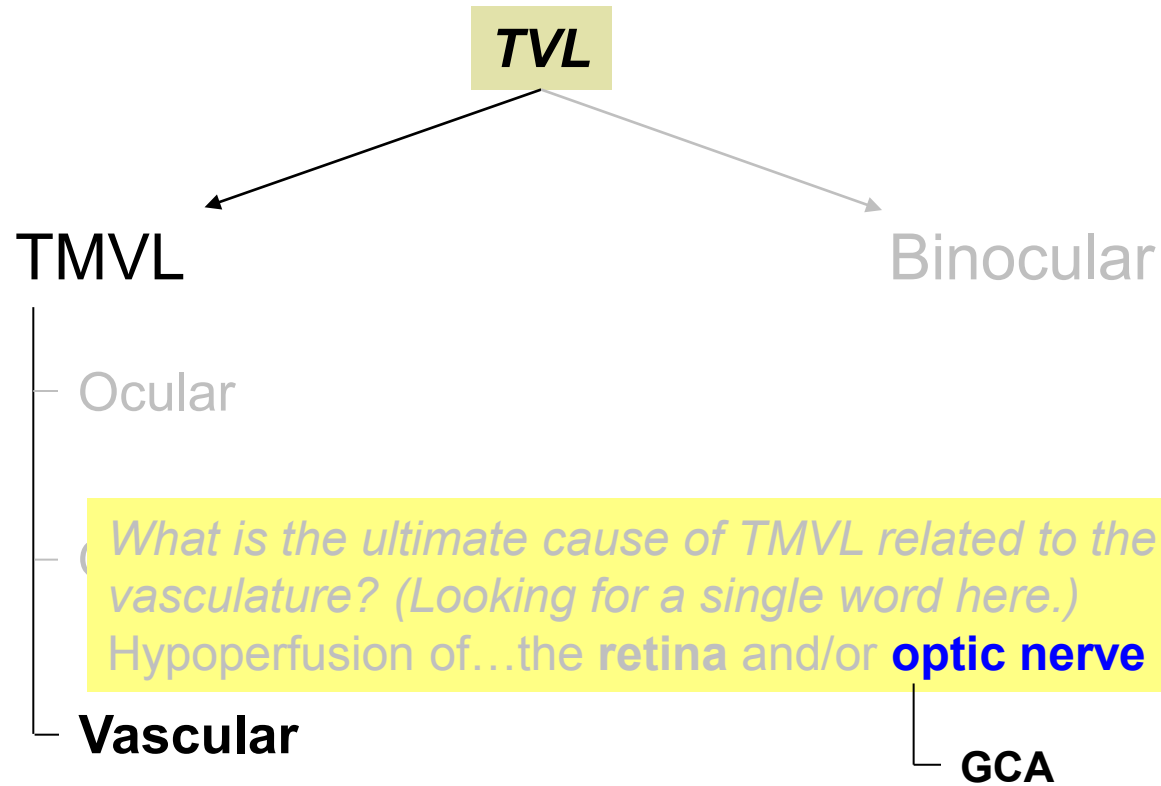
In the TMVL section, the book discusses at length only one cause of optic nerve hypoperfusion. What is it?

Q



In general terms, what is GCA?

Q/A



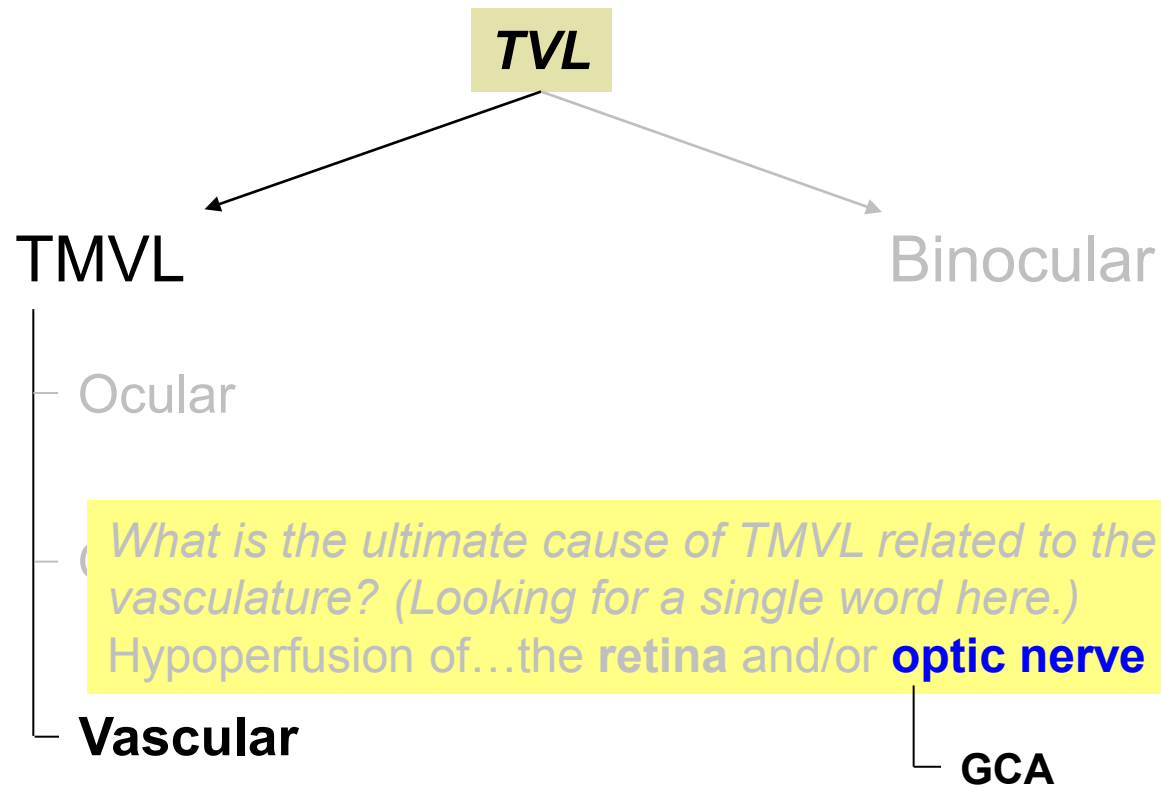
In general terms, what is GCA?

An inflammatory disease that targets

small?
mid-sized?
large?

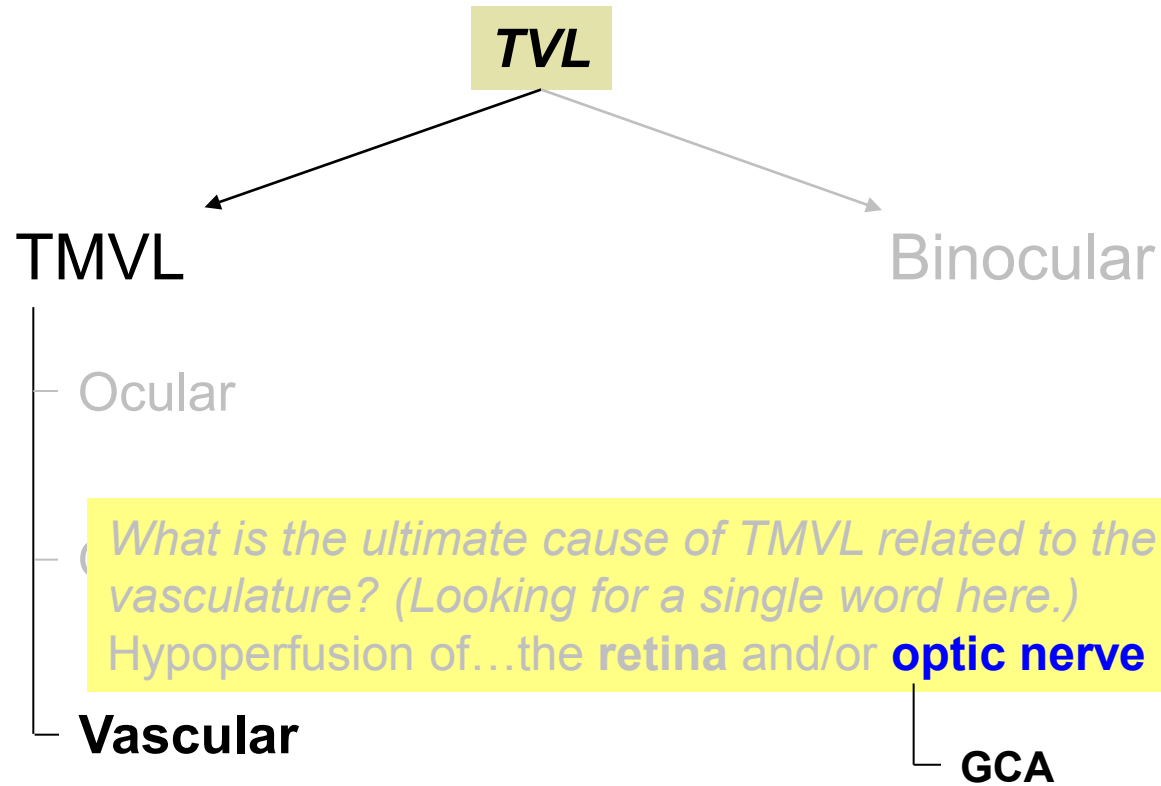
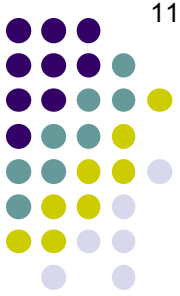
arteries

A



In general terms, what is GCA?
An inflammatory disease that targets mid-sized arteries

Q

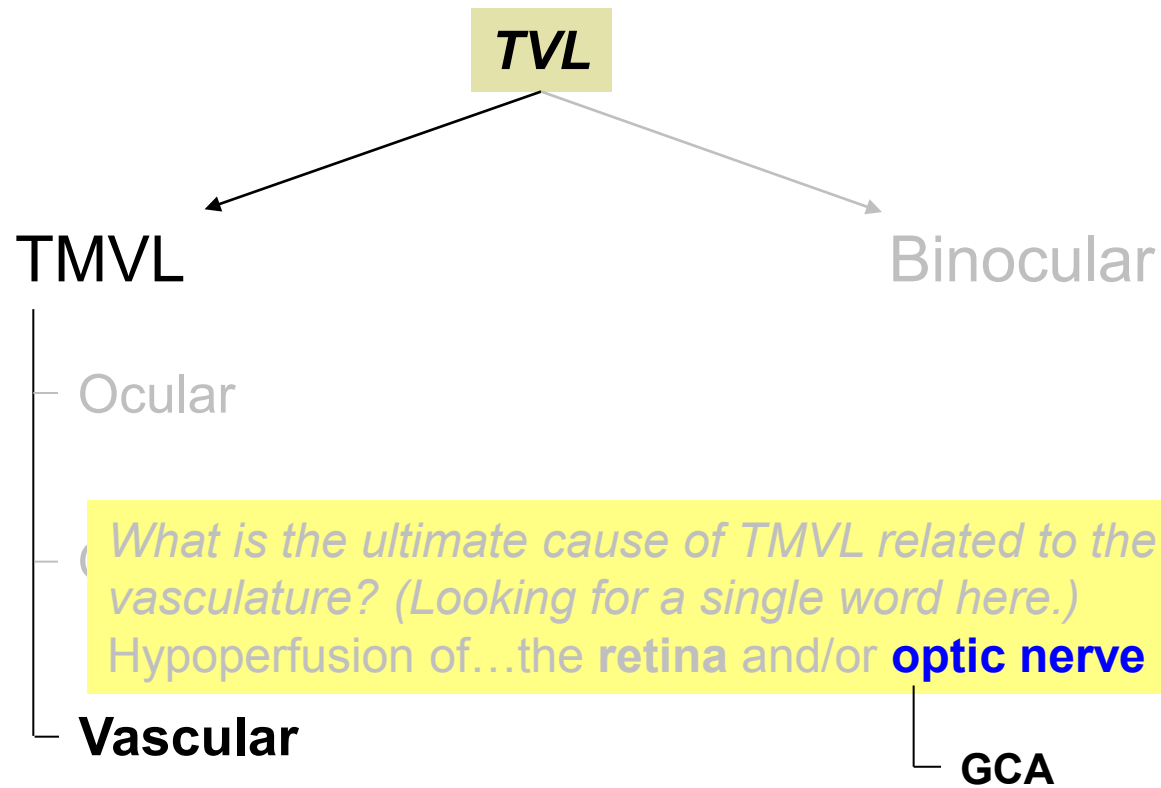


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Who is the classic GCA patient?

A



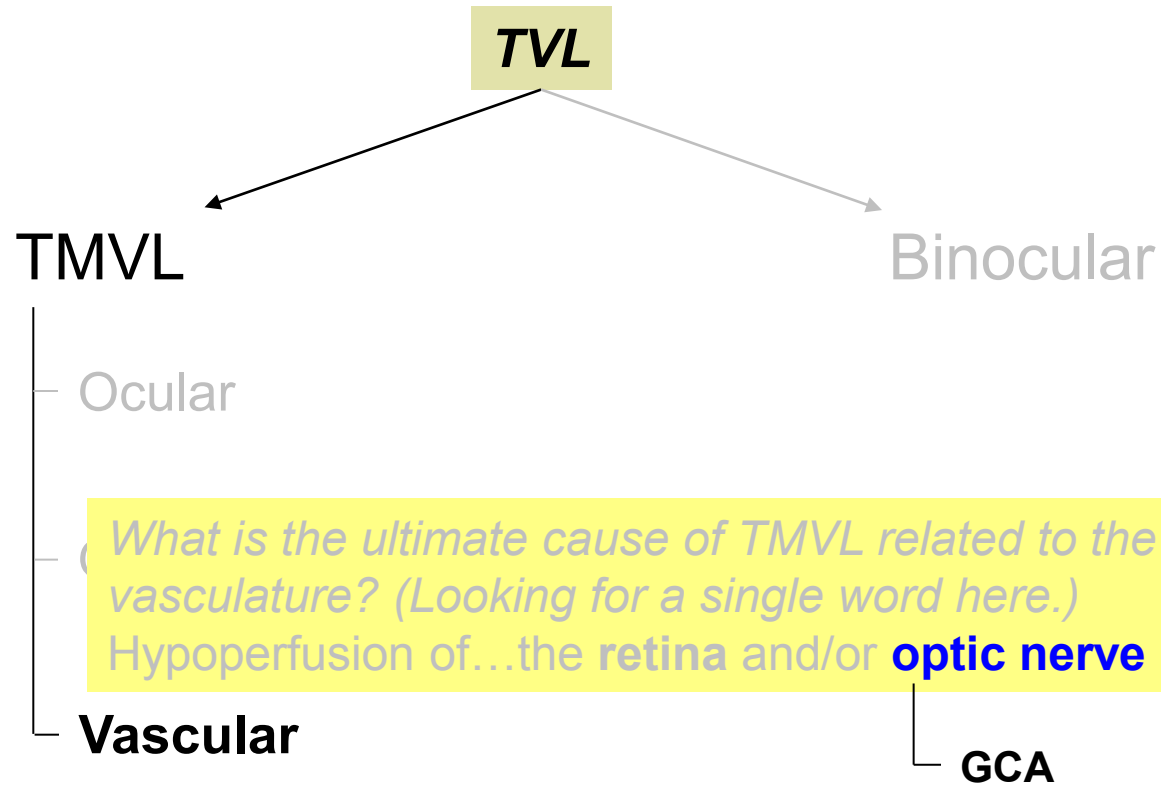
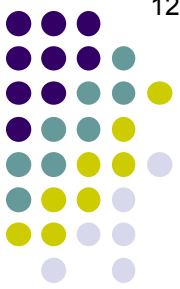
In general terms, what is GCA?

An inflammatory disease that targets mid-sized arteries

Who is the classic GCA patient?

An old white lady

Q

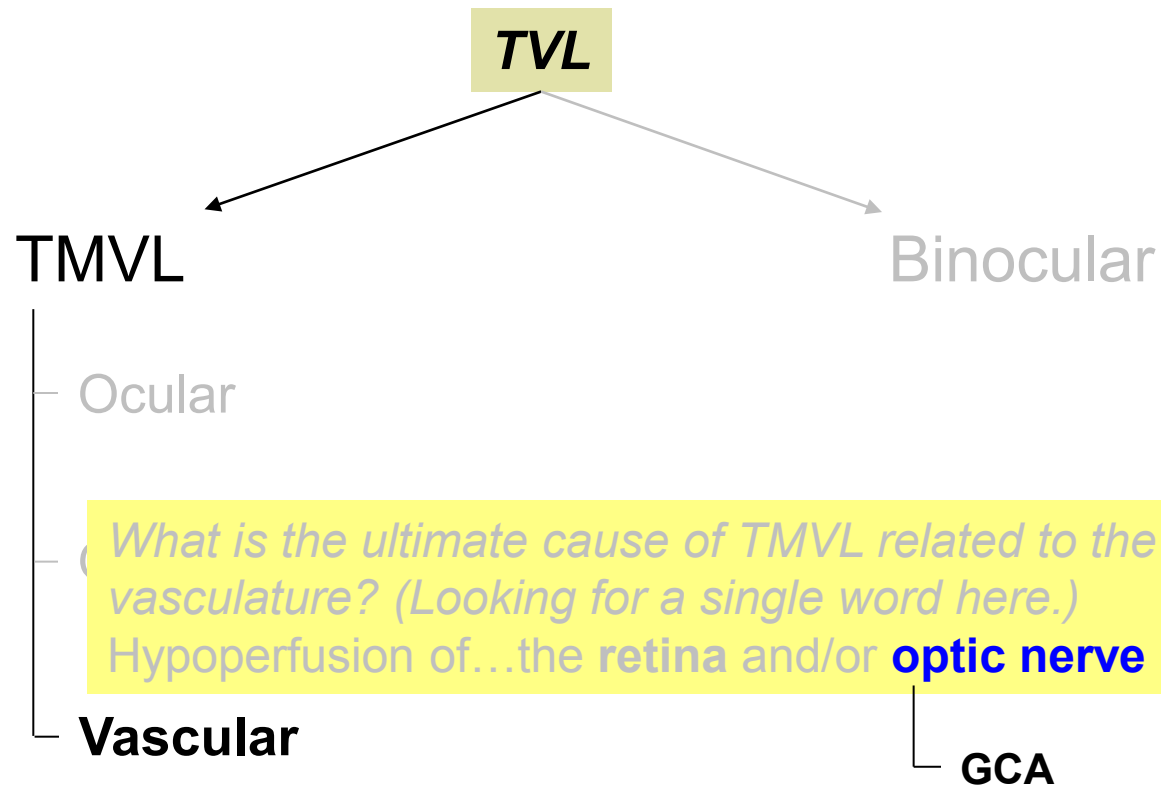


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Who is the classic GCA patient?
An **old white lady**

How old is old?

A



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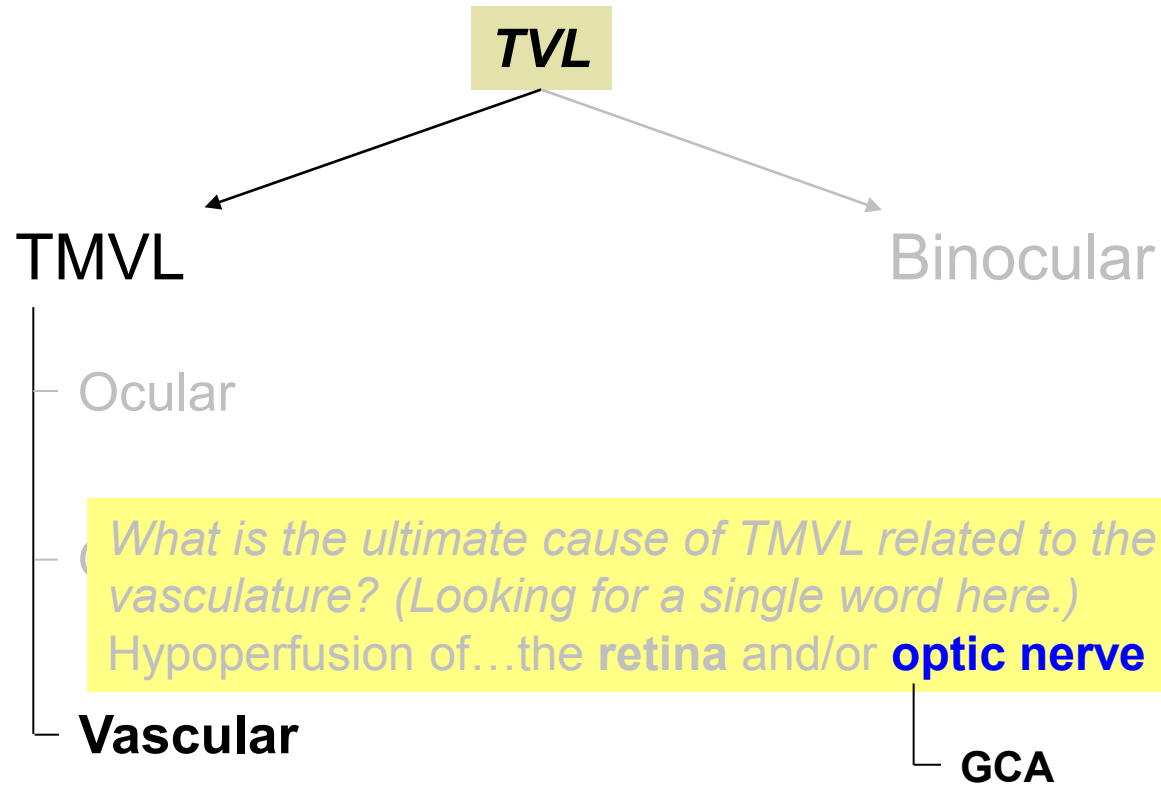
Who is the classic GCA patient?

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How old is old?

Usually 70+

Q



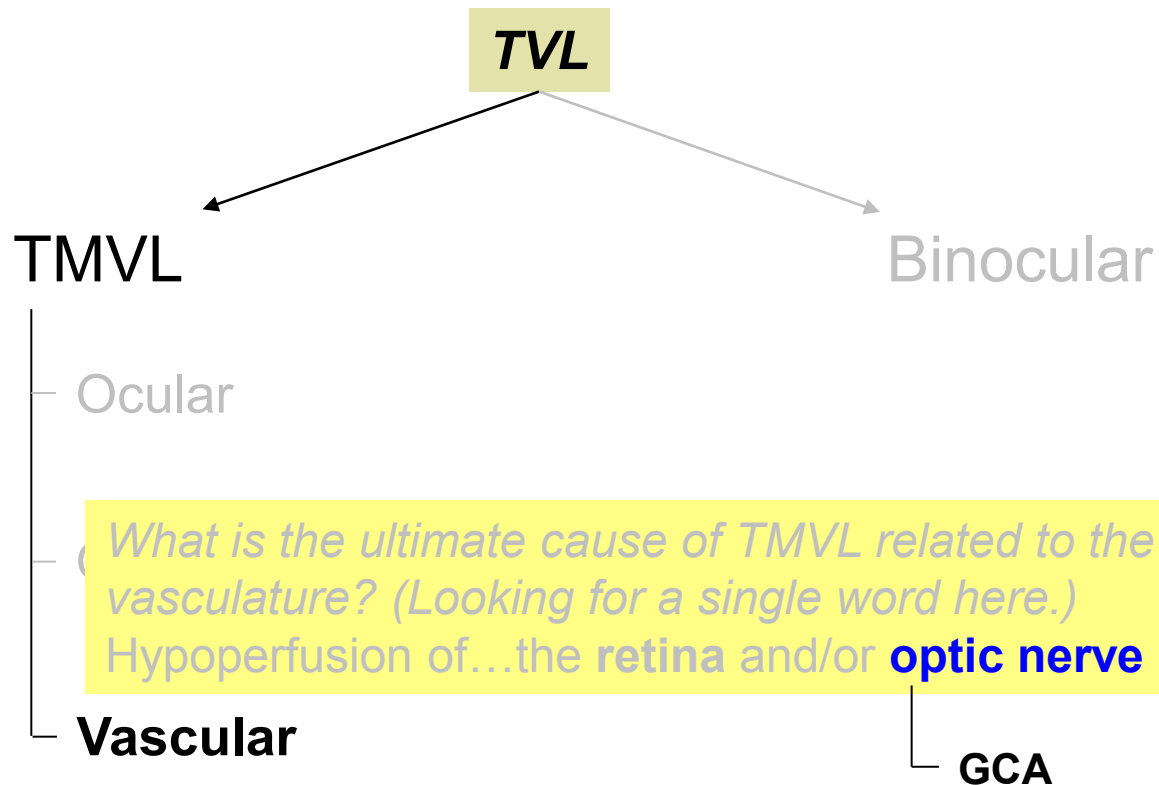
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At what age should GCA enter one's DDx for TMVL?

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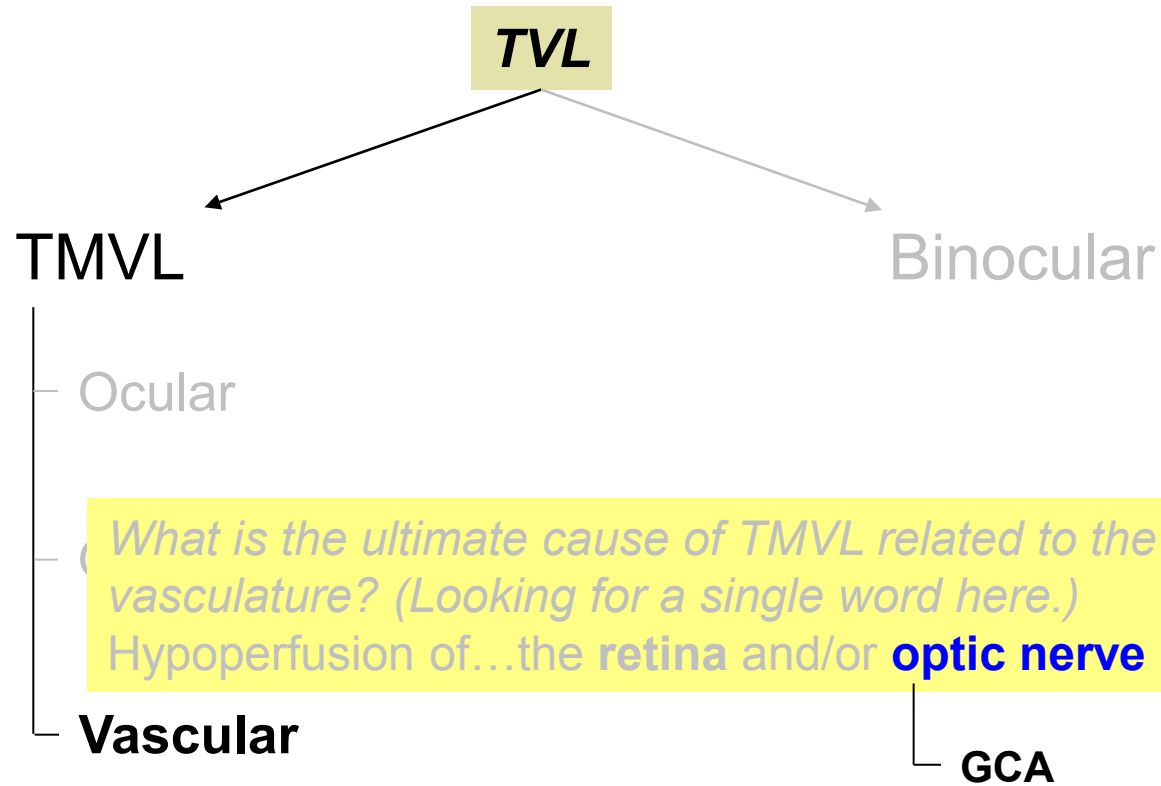
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At what age should GCA enter one's DDx for TMVL?

The Neuro book says to consider it in anyone 50+

Q



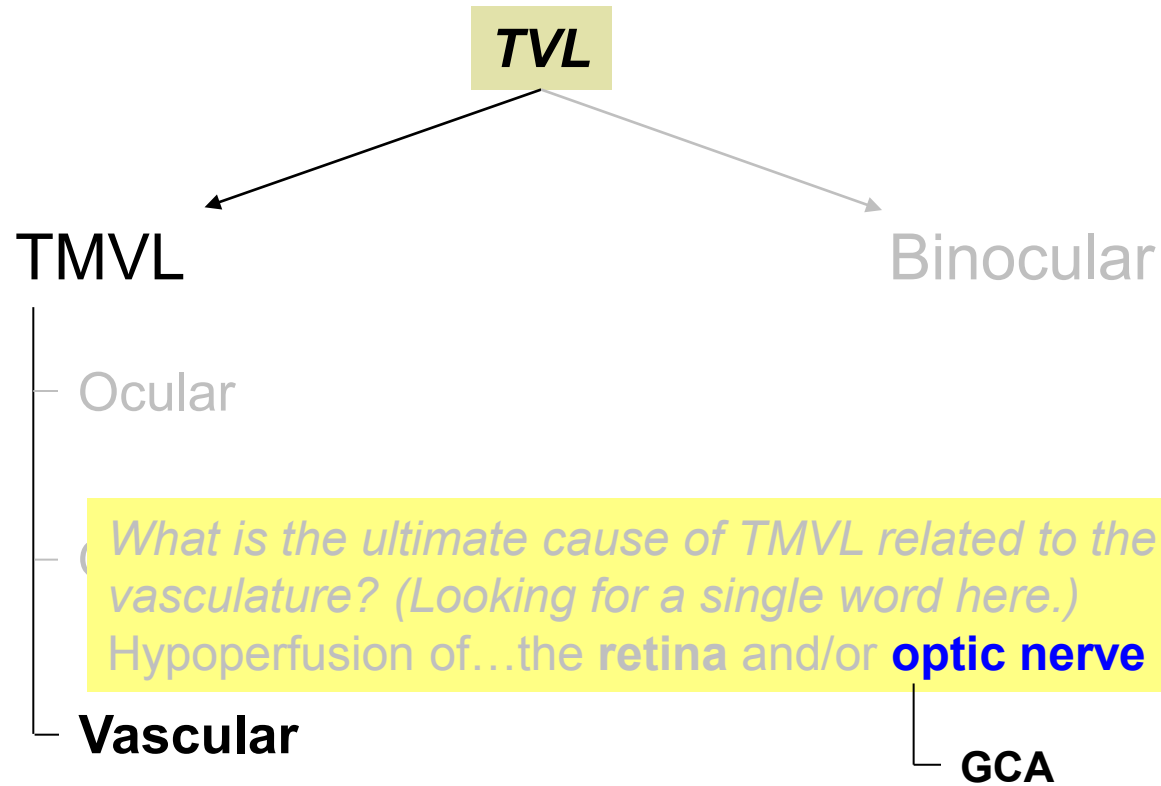
Other than TMVL, what symptoms might a GCA pt report?

- ?
- ?
- ?
- ?
- ?
- ?

--(There are other legit answers as well)

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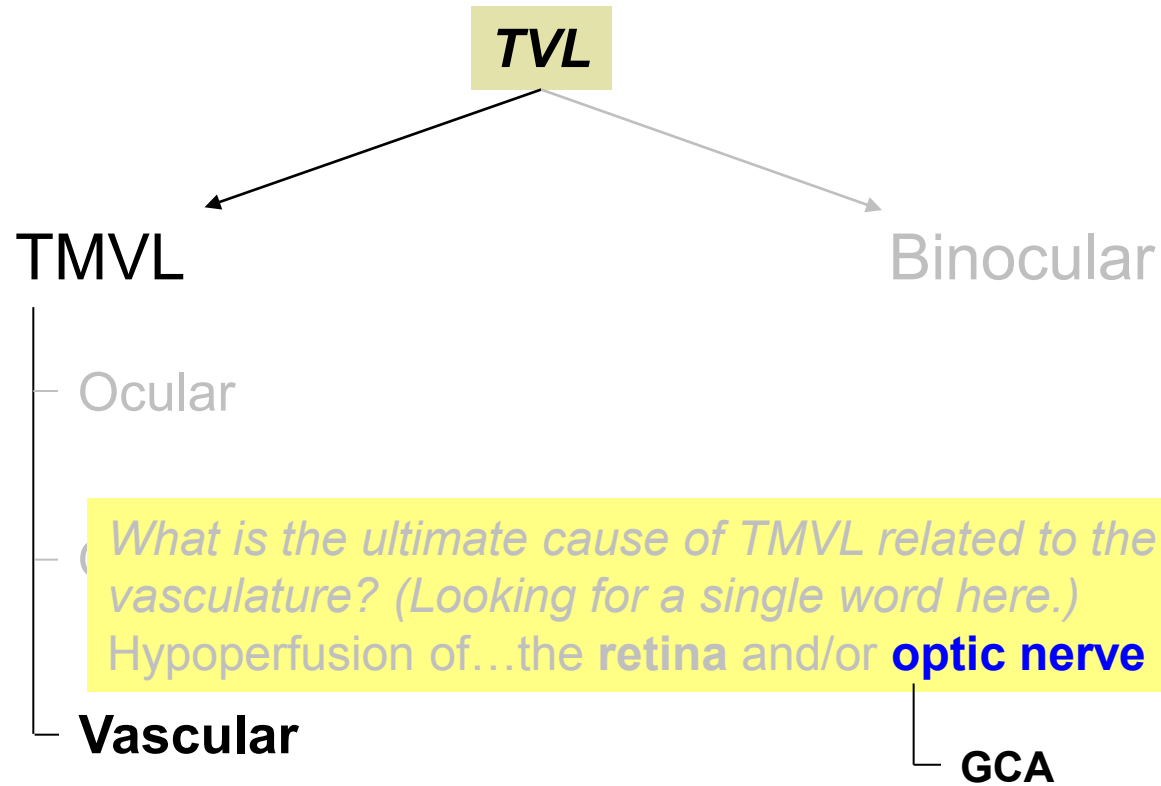


Other than TMVL, what symptoms might a GCA pt report?

- Headache
- Jaw claudication
- Fever
- Malaise
- PMR symptoms
- Diplopia
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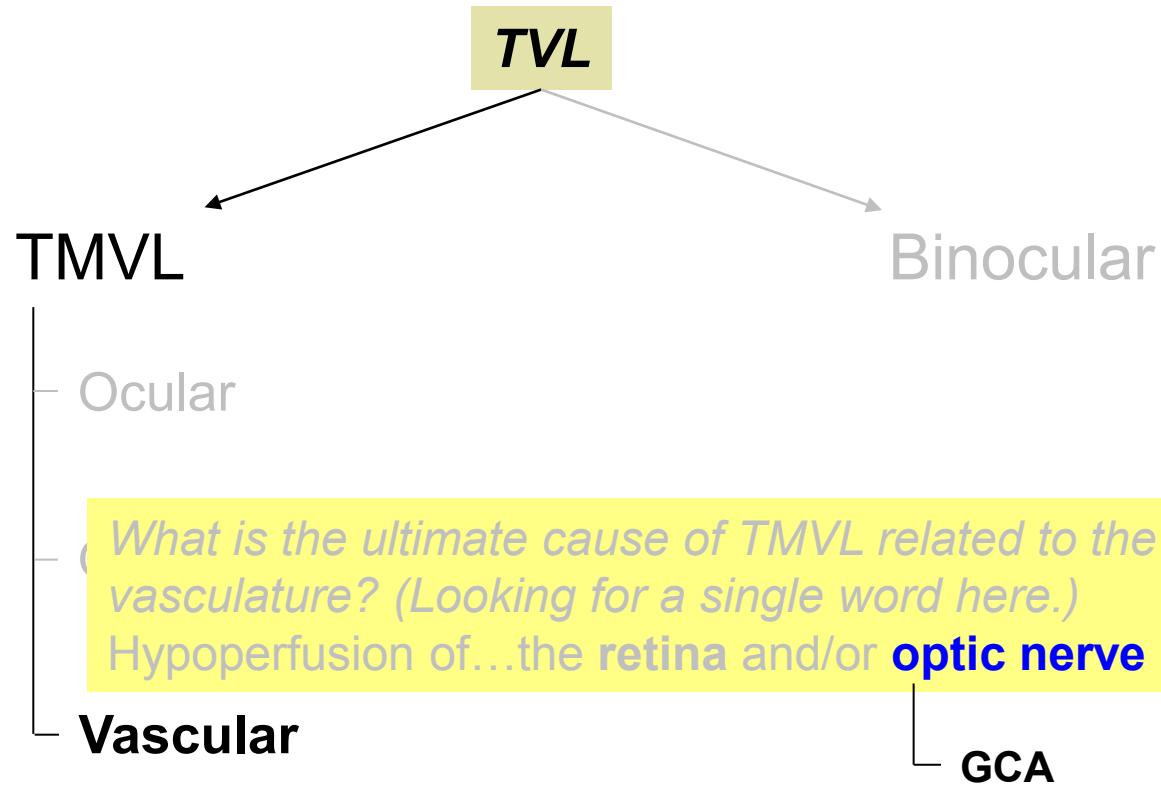
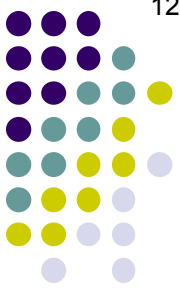
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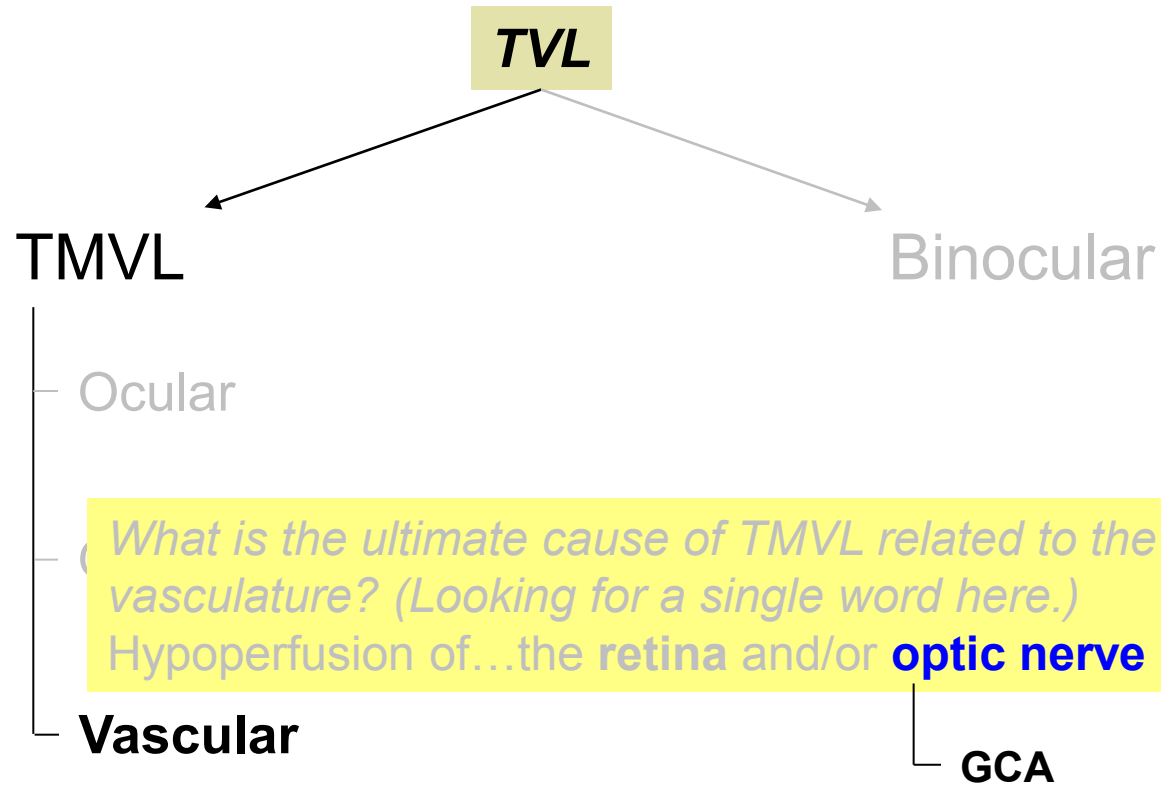
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What is jaw claudication?

Pain in the jaw brought on by [redacted]

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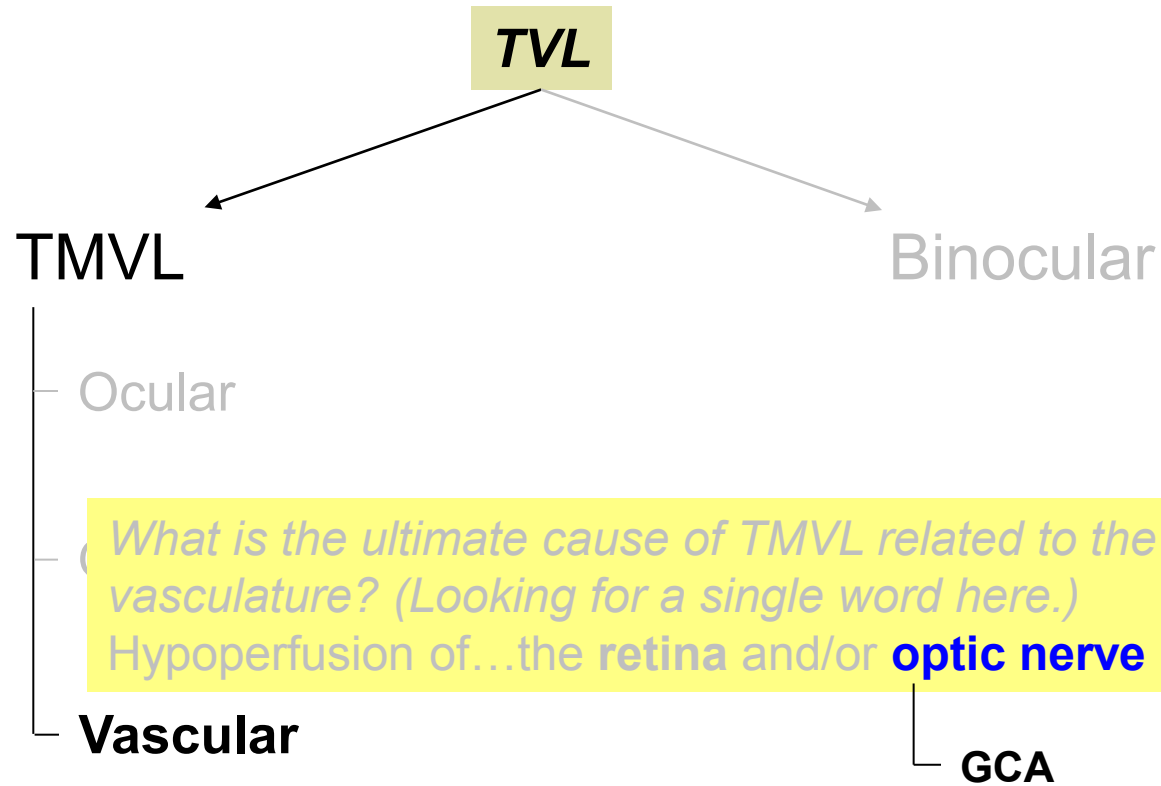
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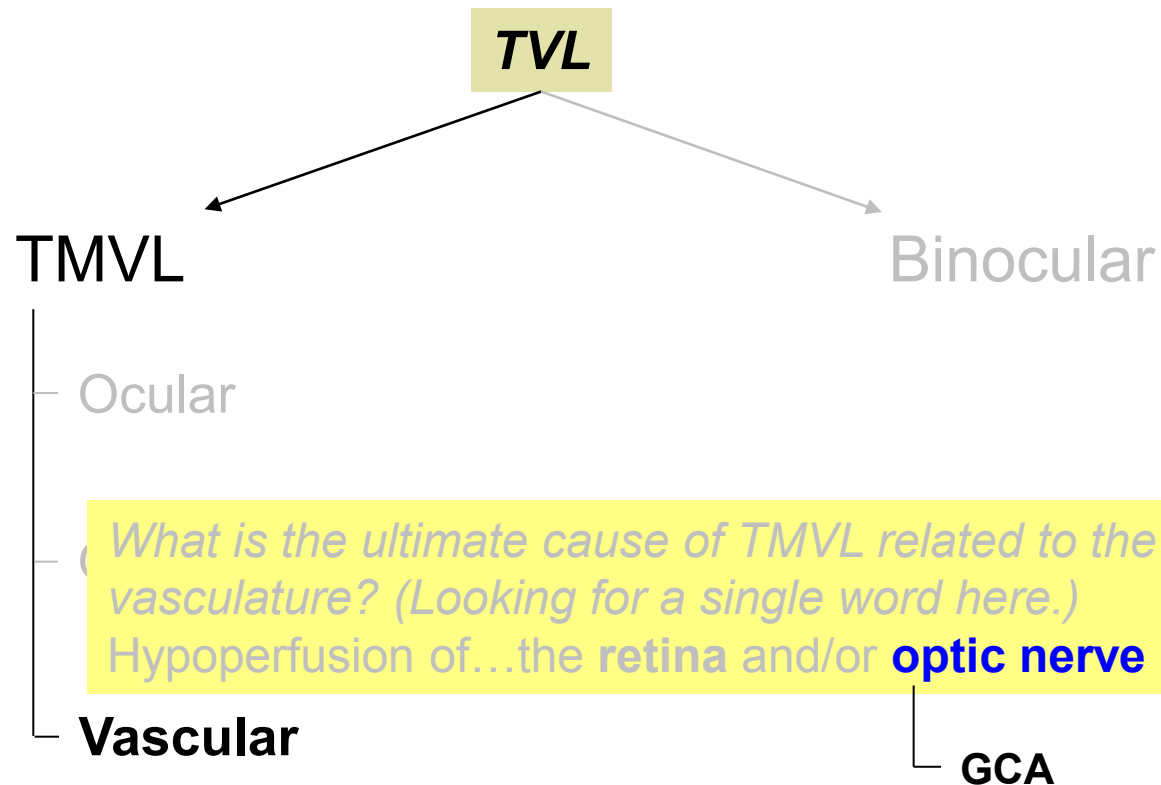
What is jaw claudication?

Pain in the jaw brought on by chewing

What is the etiology?

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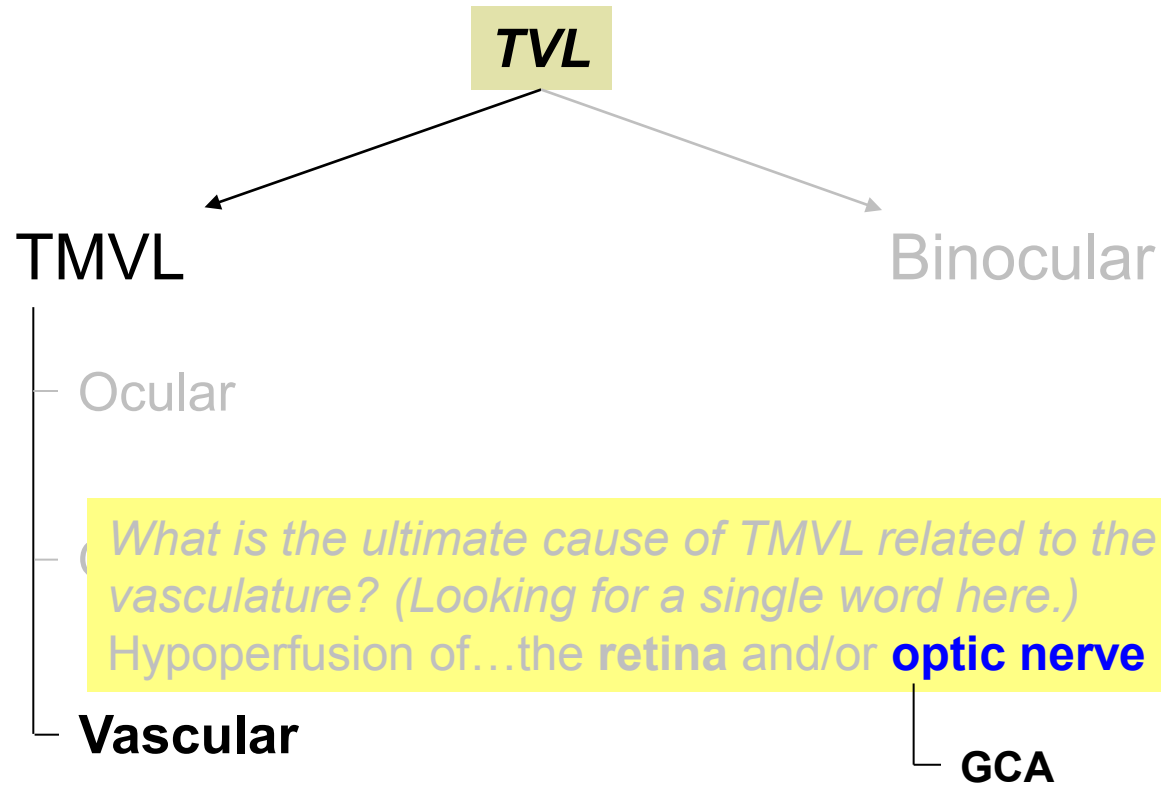
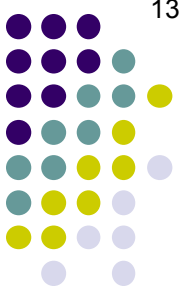
Pain in the jaw brought on by chewing

What is the etiology?

Same as the leg claudication that PAD pts get when walking—poor muscle perfusion→muscle ischemia with use→pain

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Q



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Other than TMVL, what are the other signs and symptoms?

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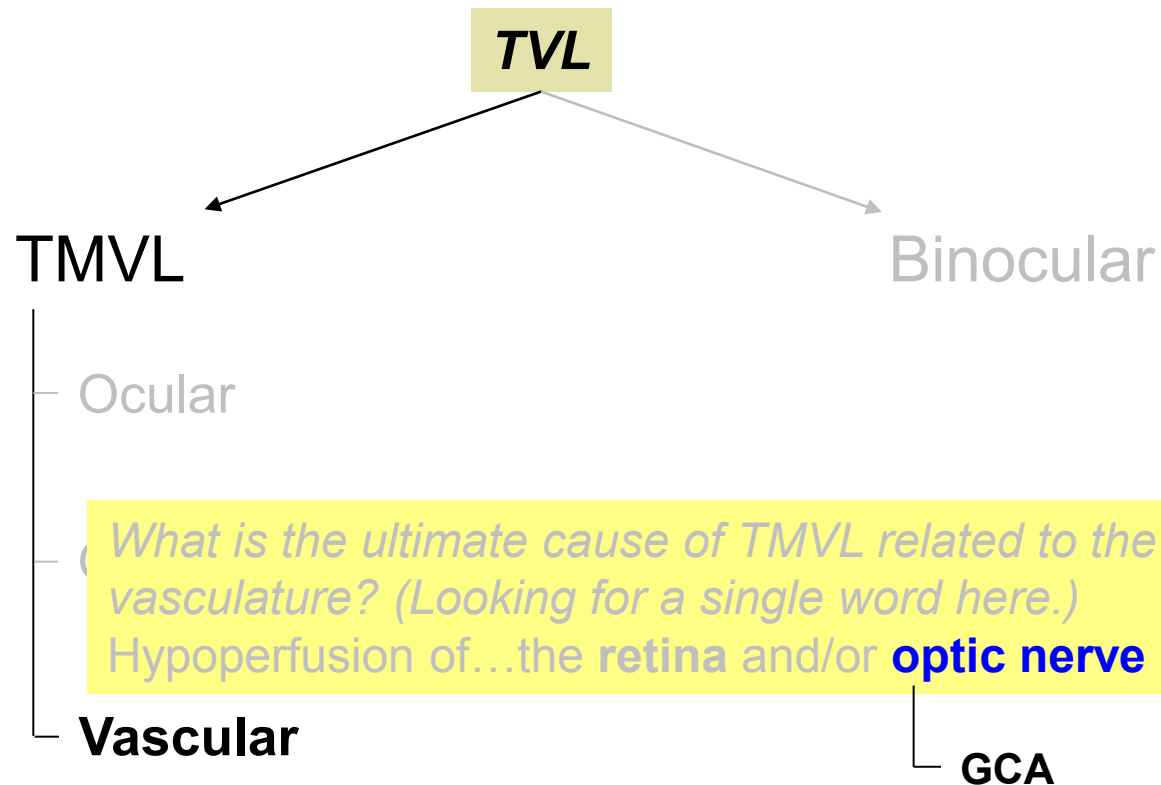
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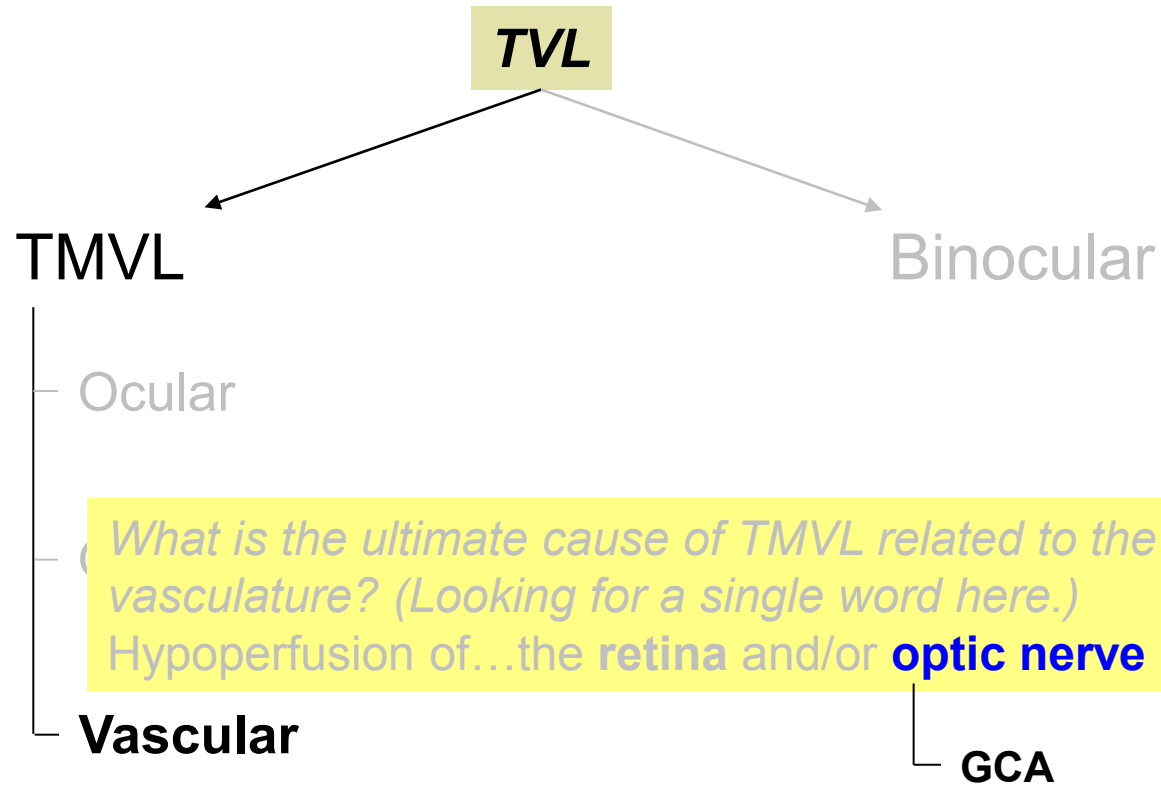
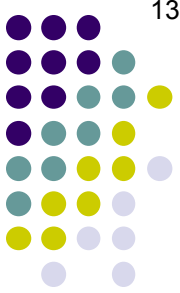
Same as the leg claudication that PAD pts get when walking—poor muscle perfusion→muscle ischemia with use→pain

Does the pain localize to the TMJ?

No! If it does, it's not claudication

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Q



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Other than TMVL, what are the other symptoms of GCA?

- Headache
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- PMR symptoms**
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- (There are other less common symptoms)

What is jaw claudication?

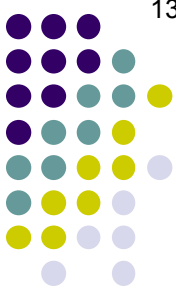
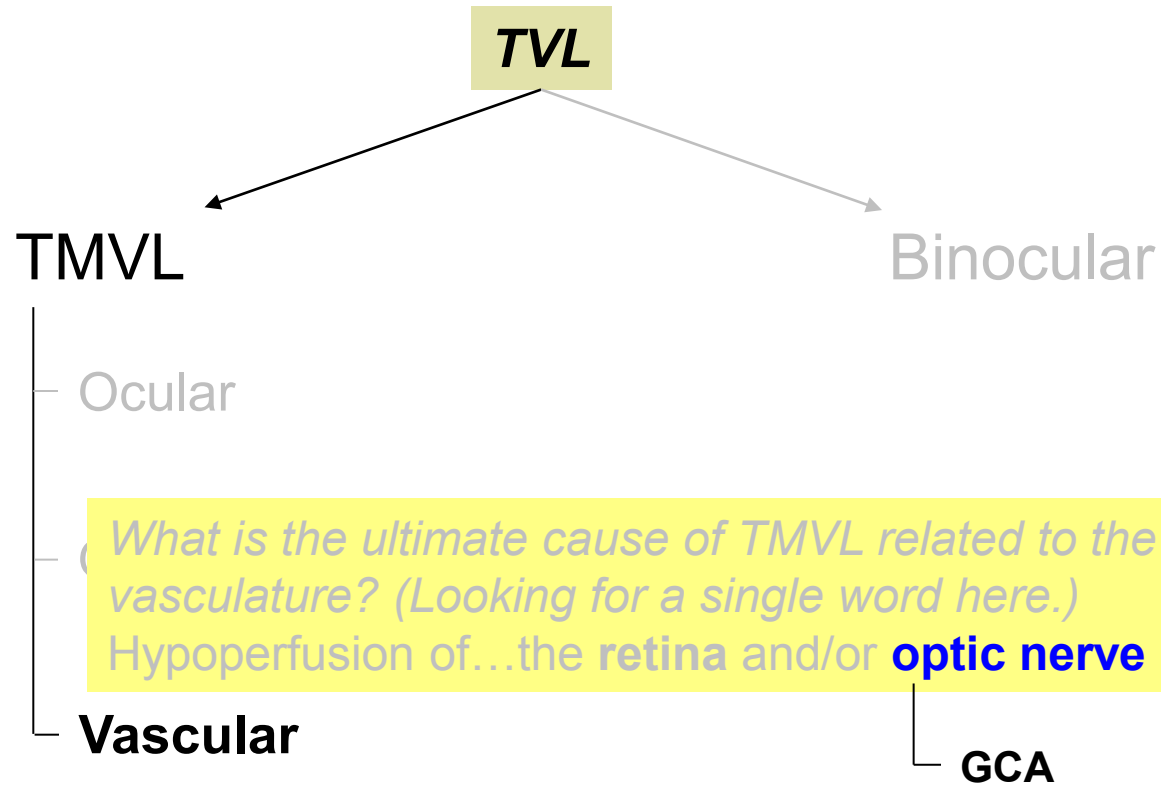
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What is the etiology?

What does PMR stand for in this context?

The

A



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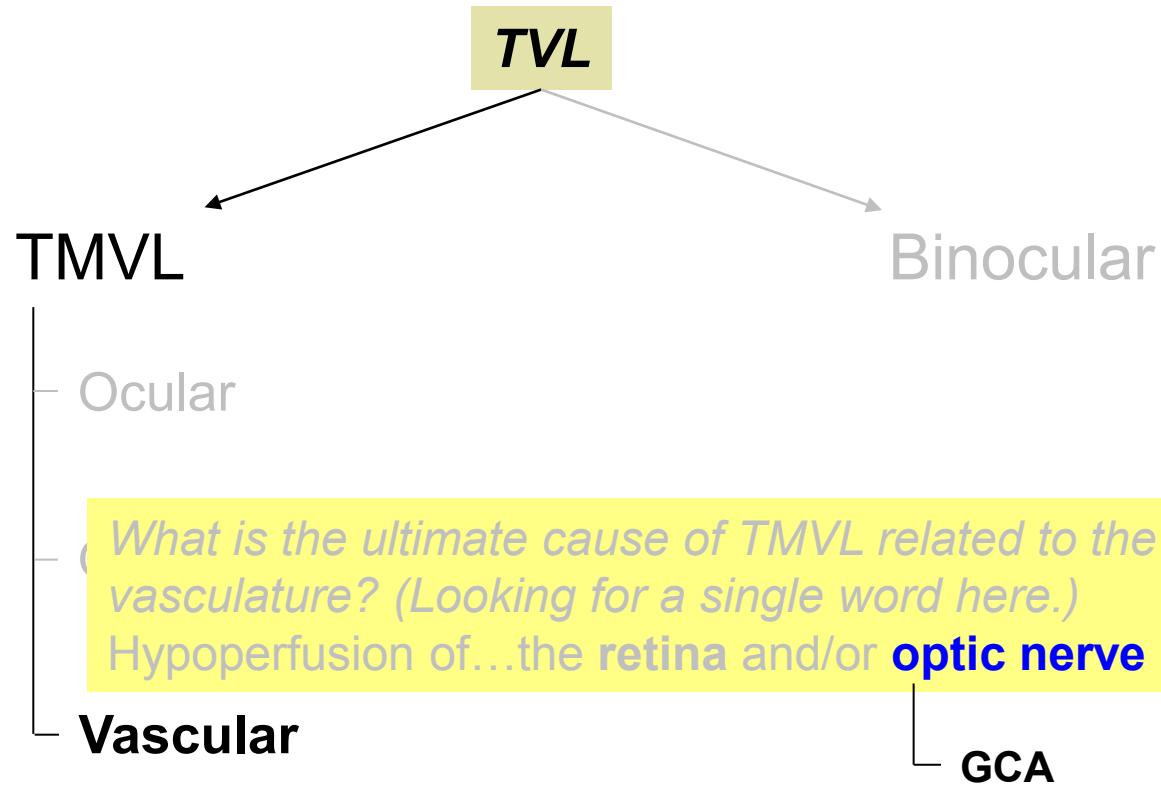
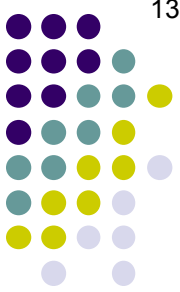
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Polymyalgia rheumatica

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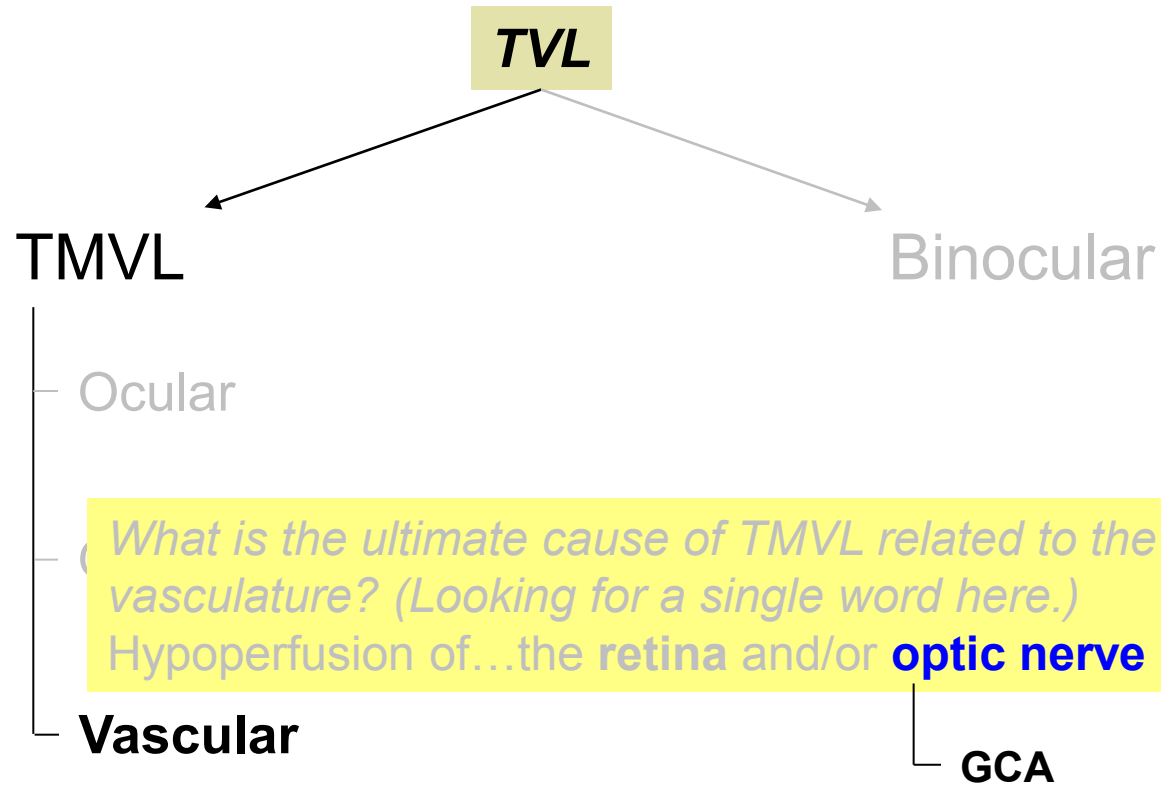
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Which is...?

The

Q/A



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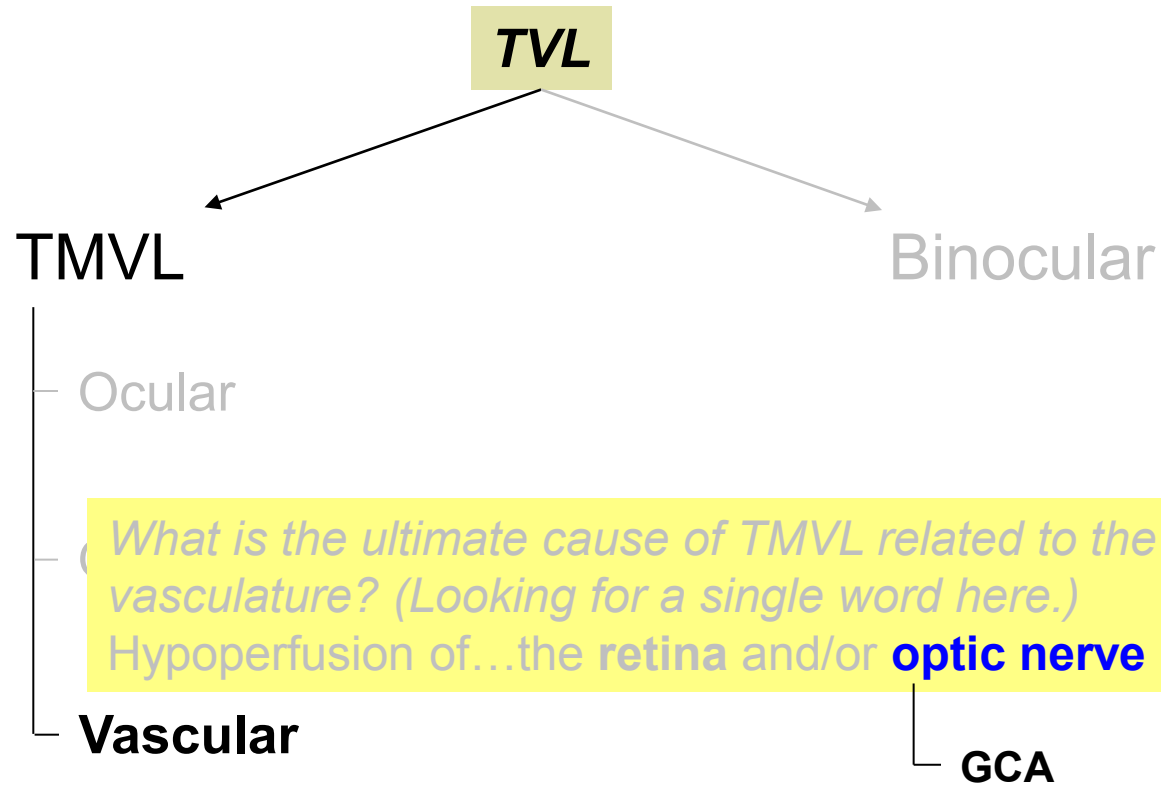
Polymyalgia rheumatica

Which is...?

A syndrome consisting of pain and stiffness in the muscles/joints

proximal vs
distal

A



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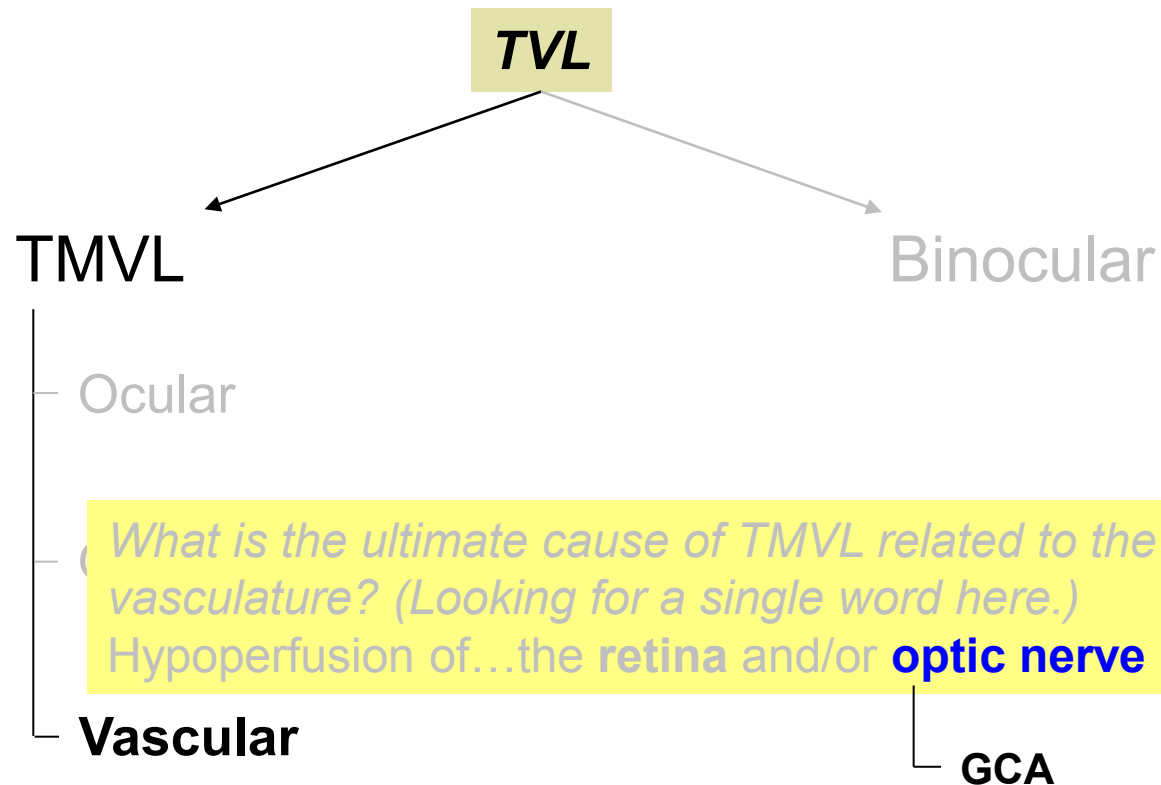
Polymyalgia rheumatica

Which is...?

A syndrome consisting of pain and stiffness in the proximal muscles/joints

The

A



Other than TMVL, what are the symptoms of GCA?

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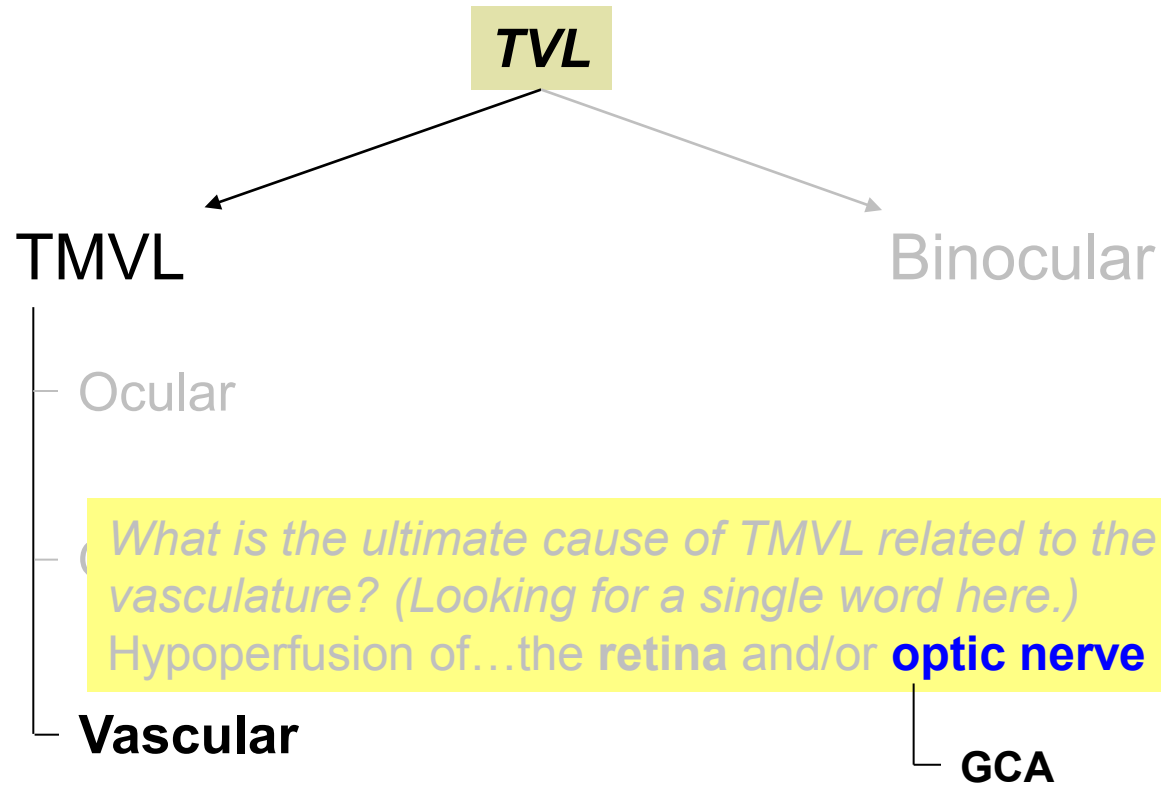
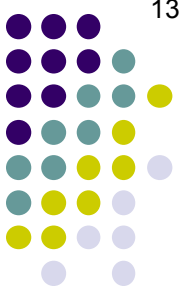
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Polymyalgia rheumatica

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A syndrome consisting of pain and stiffness in the proximal muscles/joints (ie, shoulder and hip joints/muscles)

Q



What lab studies might be useful in diagnosing GCA?

--?
--?
--?
--?

--PMR symptoms

--Diplopia

--(There are other le

In general terms, what is GCA?

What is the ultimate cause of GCA?

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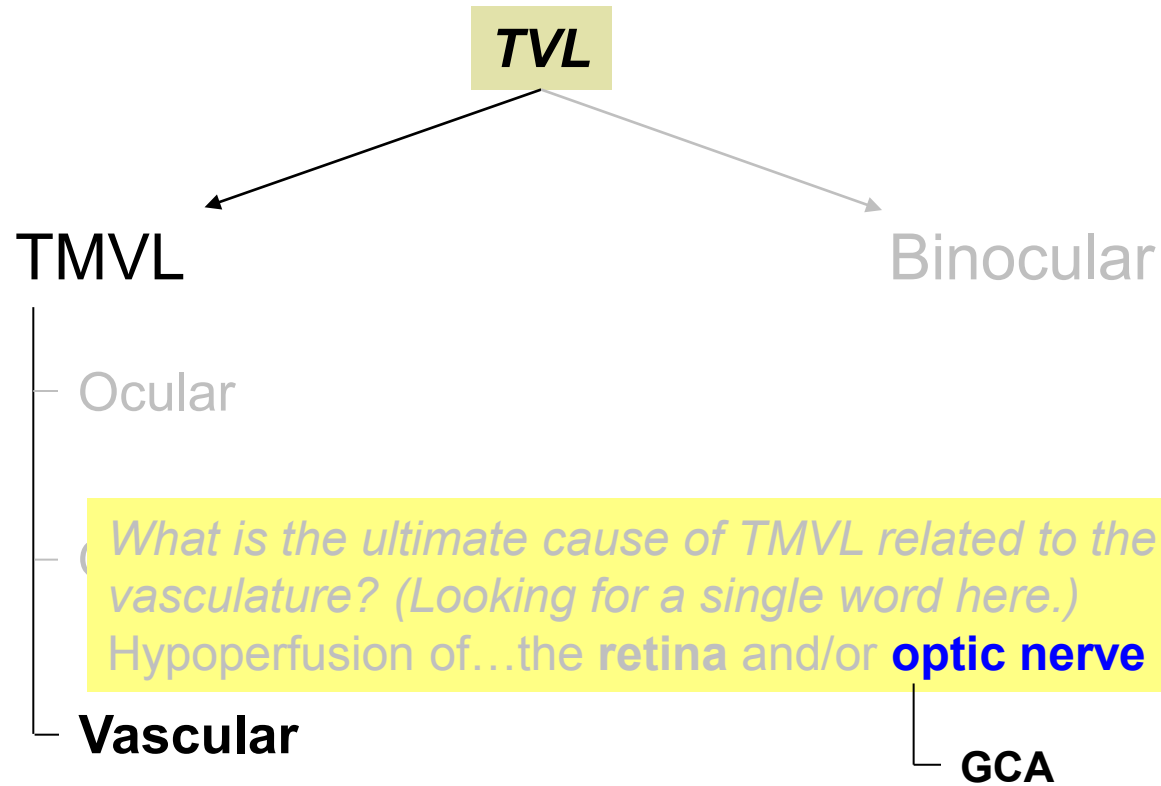
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- ESR
- CRP
- Platelet count
- H&H

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In general terms, what is GCA?

What is the clinical presentation of GCA?

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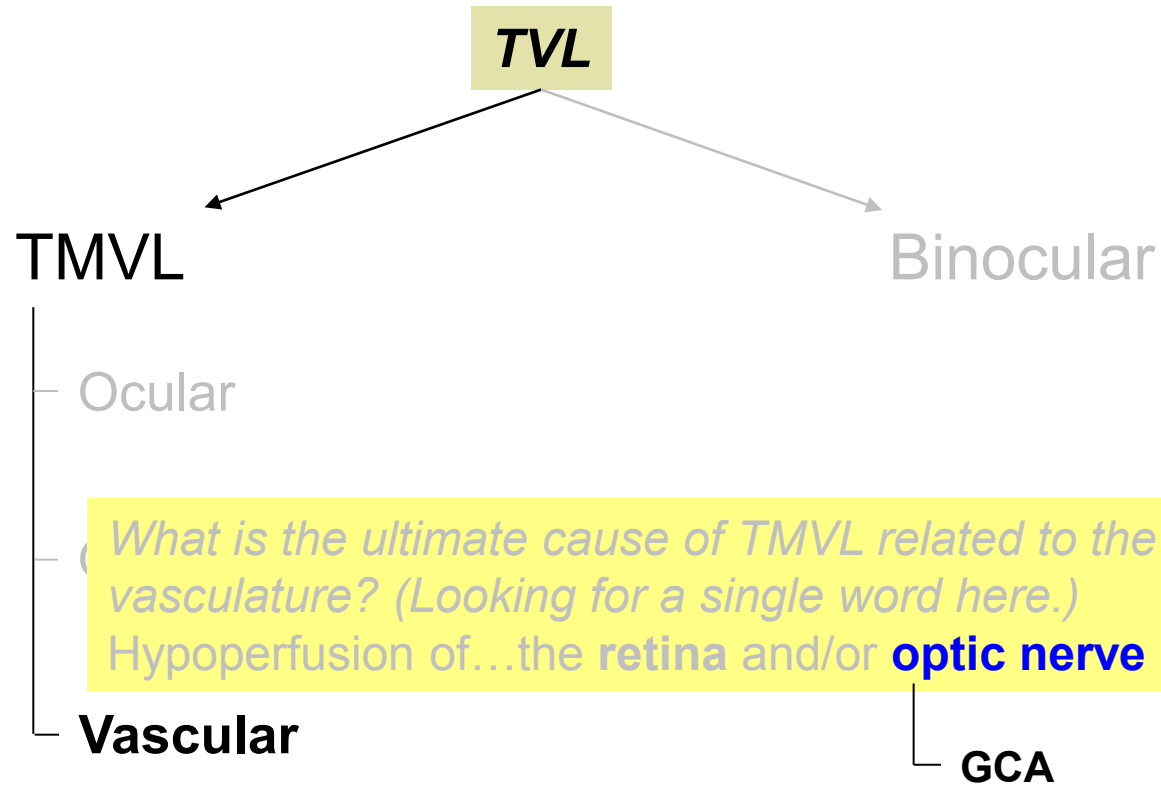
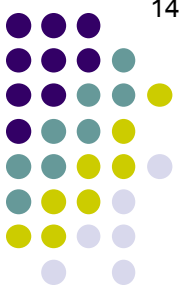
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Q



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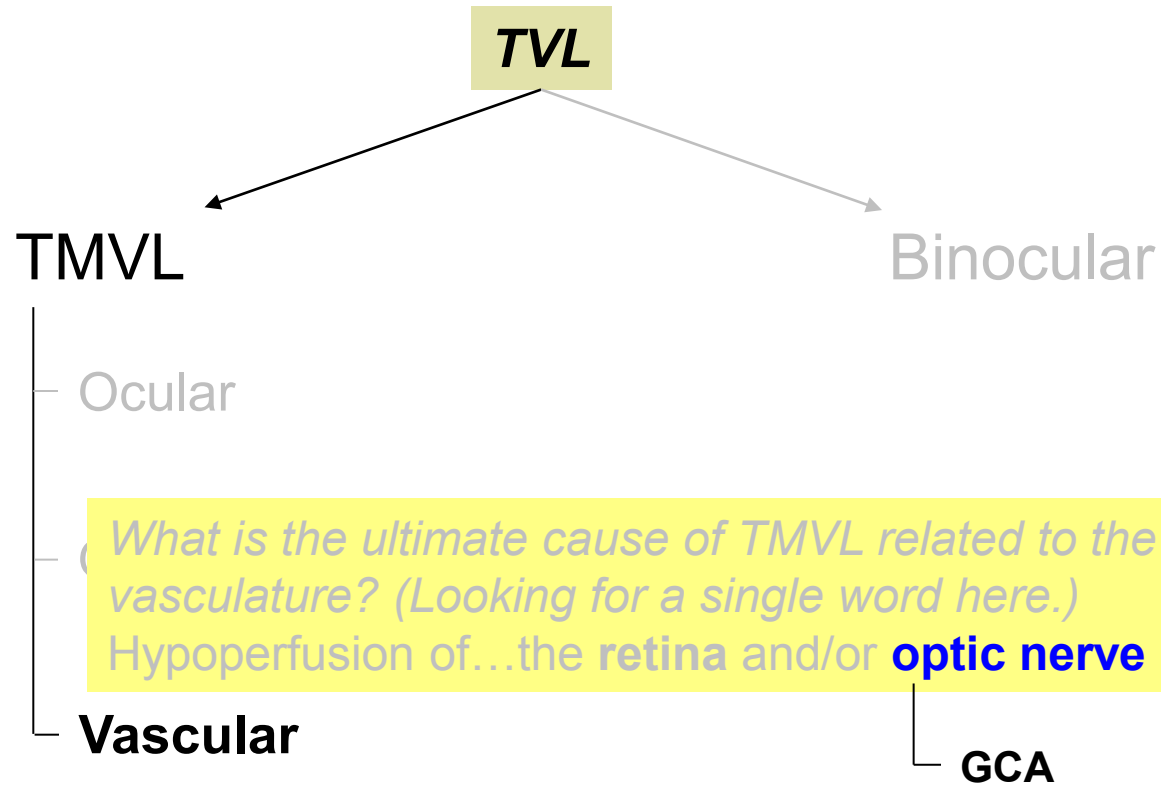
What procedure is the gold standard for diagnosing GCA?

- PM
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What procedure is the gold standard for diagnosing GCA?

Temporal artery biopsy (TAB)

–PM

–Diplopia

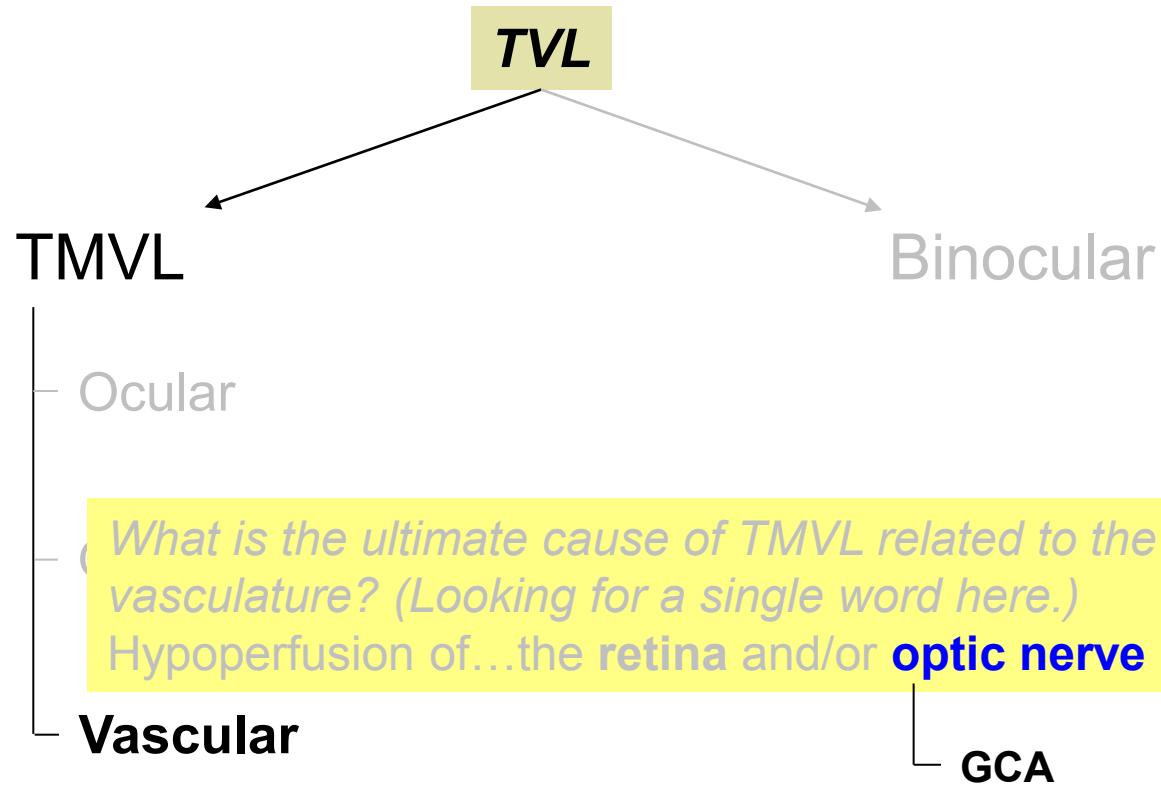
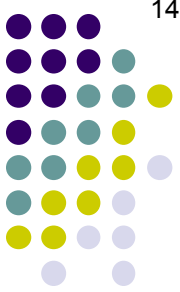
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Which is...?

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The

Q



What lab studies might be useful in diagnosing GCA?

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What procedure is the gold standard for diagnosing GCA?

Temporal artery biopsy (TAB)

Why biopsy the temporal artery?

–PM

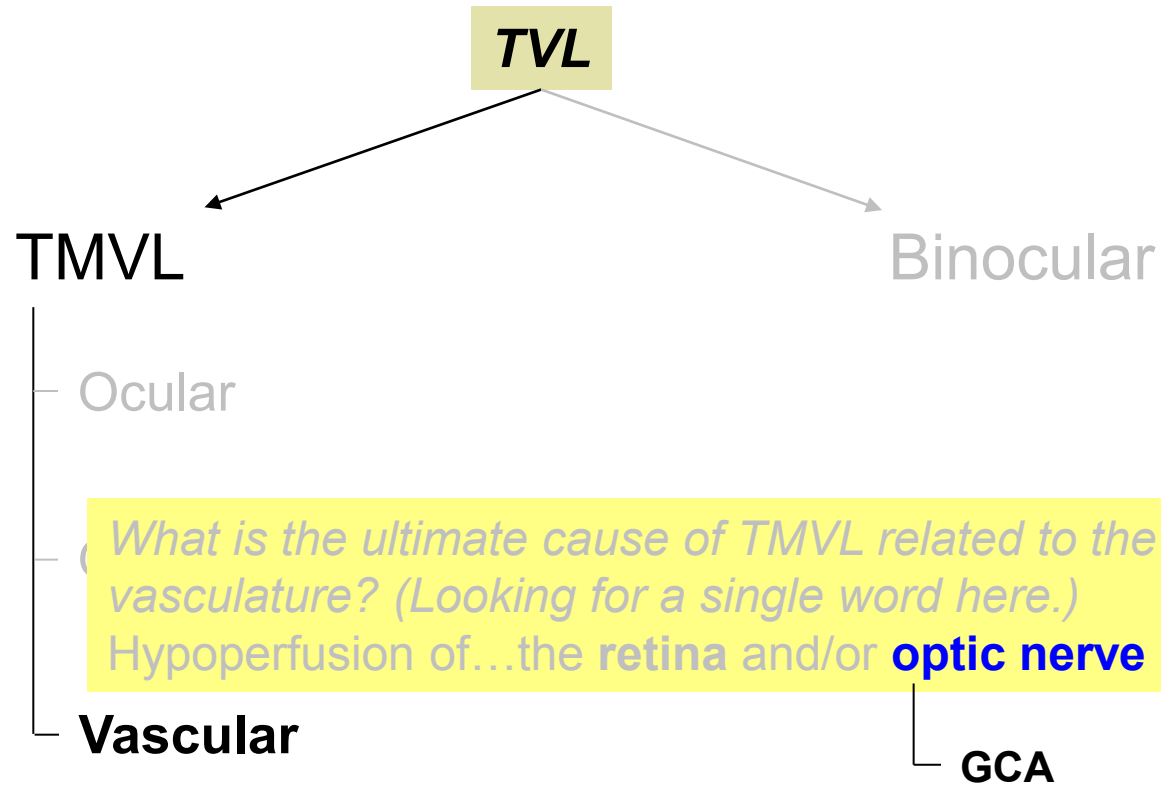
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A



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What procedure is the gold standard for diagnosing GCA?

Temporal artery biopsy (TAB)

Why biopsy the temporal artery?

It's readily accessible, and (usually) nonvital

–PM

–Diplopia

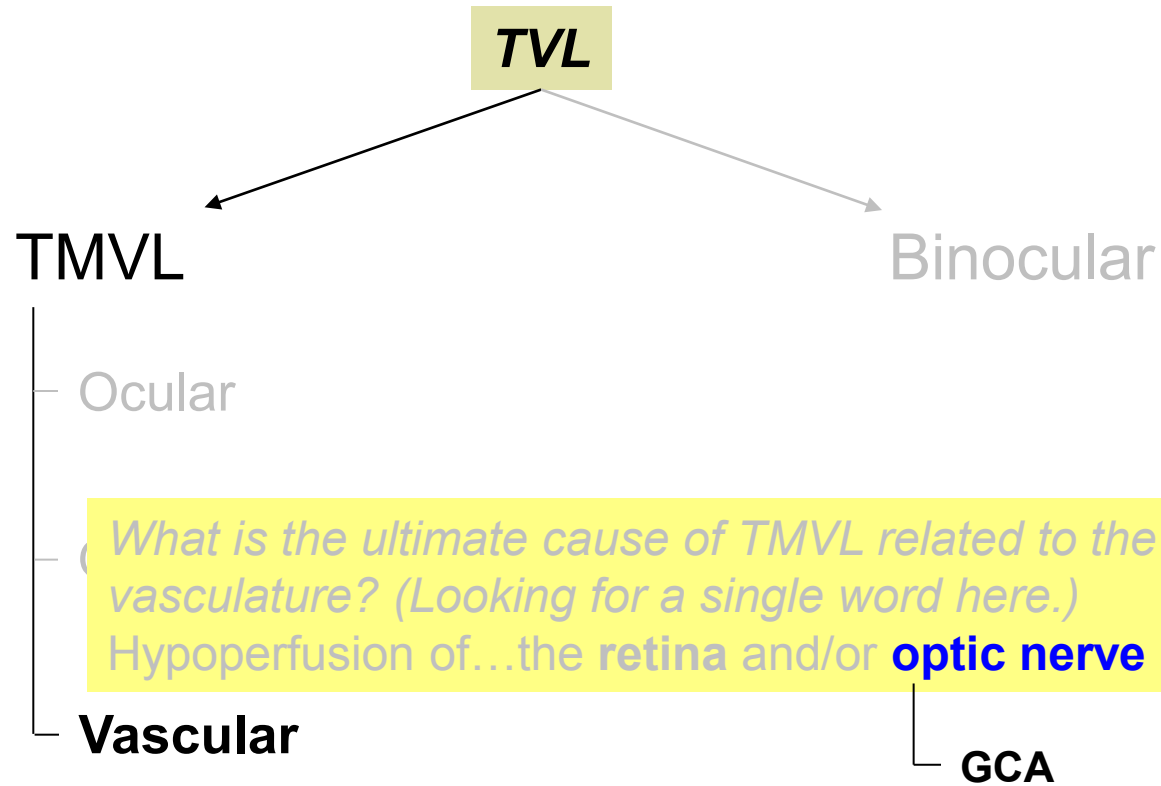
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Q



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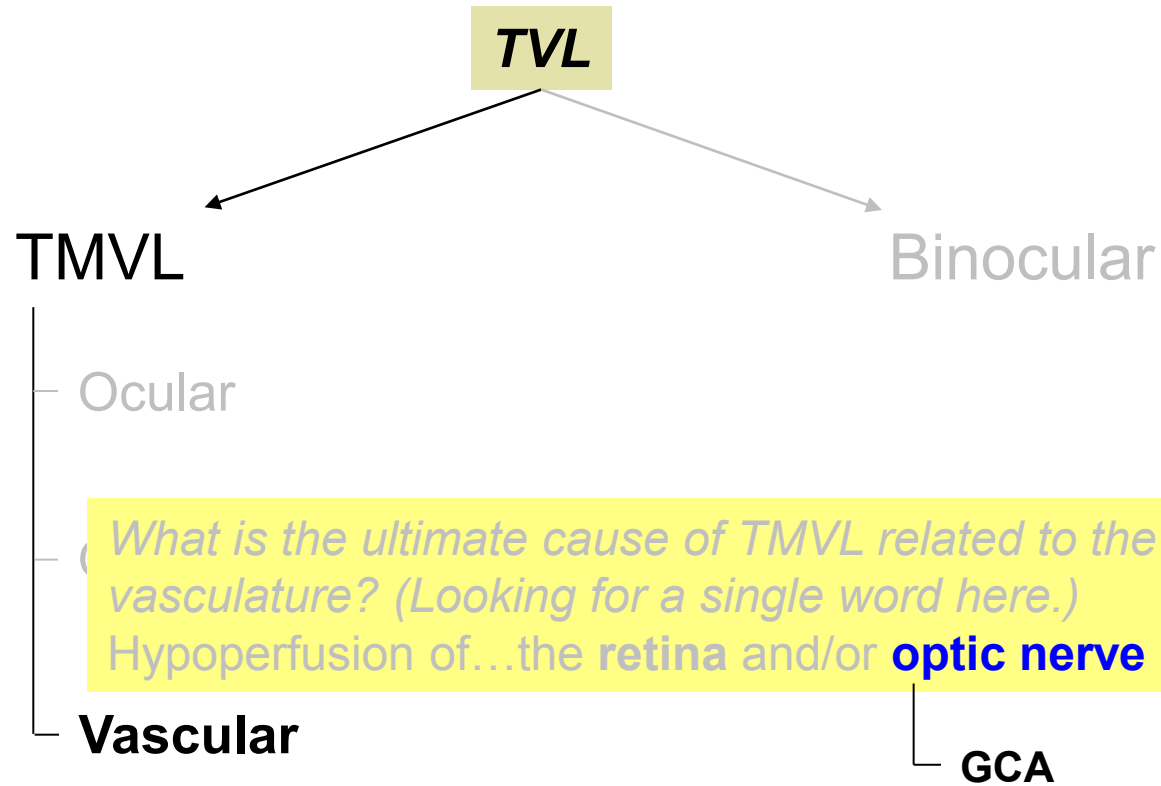
Why biopsy?

- PM It's readily accessible
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What is the treatment for GCA?

A syndrome consisting of pain and stiffness in the proximal muscles/joints (ie, shoulder and hip joints/muscles)

Q/A



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- (There are other reasons)

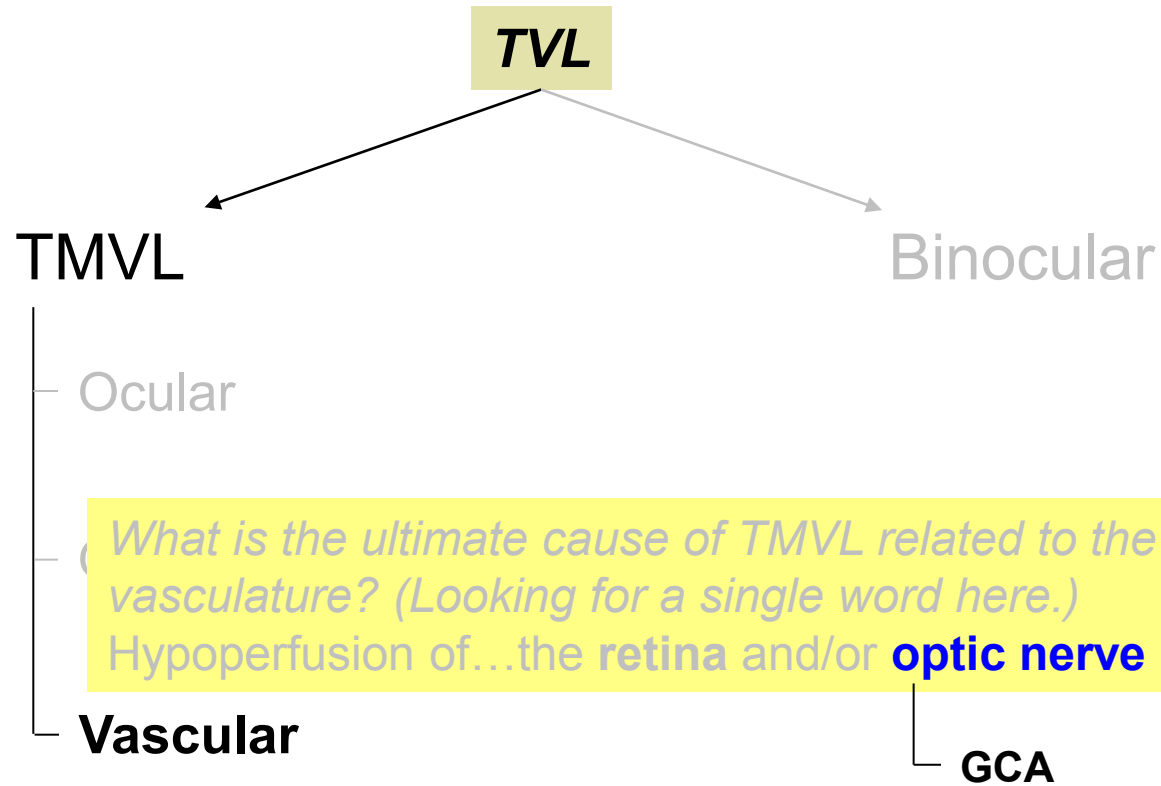
What is the treatment for GCA?

High-dose steroids started

immediately vs whenever

A syndrome consisting of pain and stiffness in the proximal muscles/joints (ie, shoulder and hip joints/muscles)

A



What lab studies might be useful in diagnosing GCA?

- ESR
- CRP
- Platelet count
- H&H

What procedure is the gold standard for diagnosing GCA?

Temporal artery biopsy

Why biopsy?

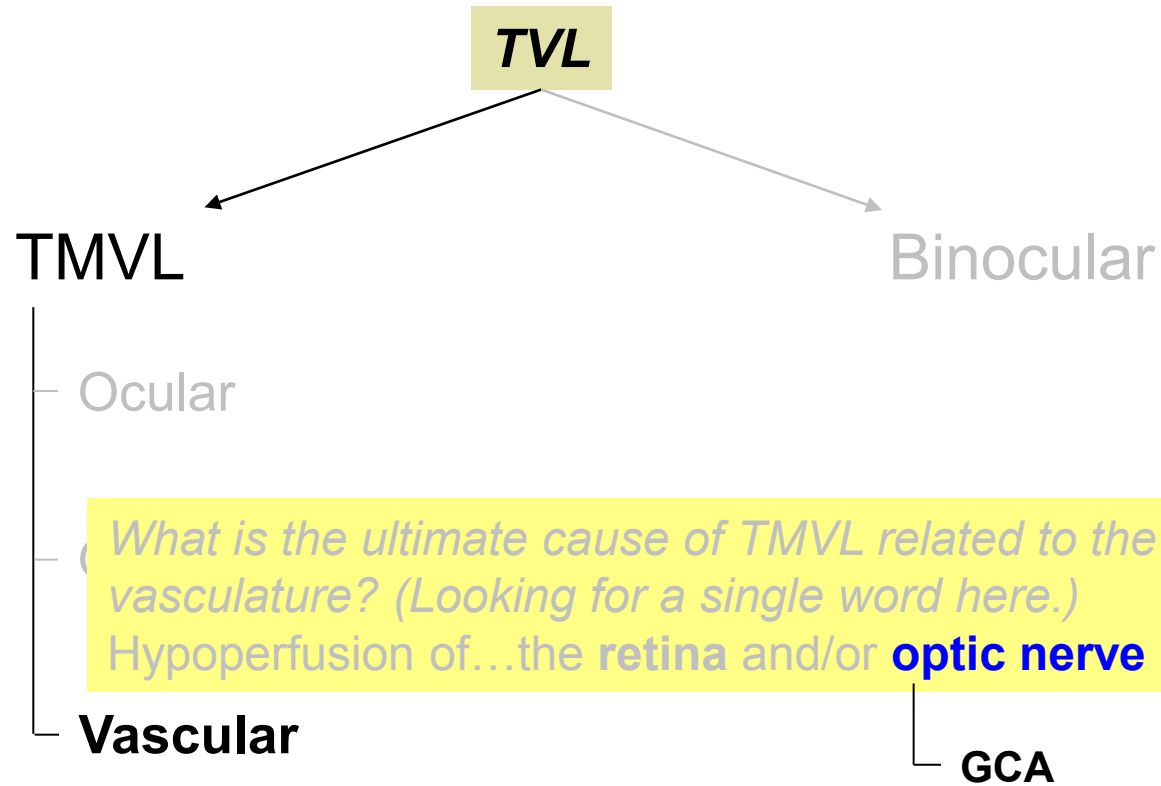
- PM It's readily accessible
- Diplopia
- (There are other reasons)

What is the treatment for GCA?

High-dose steroids started immediately

A syndrome consisting of pain and stiffness in the proximal muscles/joints (ie, shoulder and hip joints/muscles)

Q



What lab studies might be useful in diagnosing GCA?

- ESR
- CRP
- Platelet count
- H&H

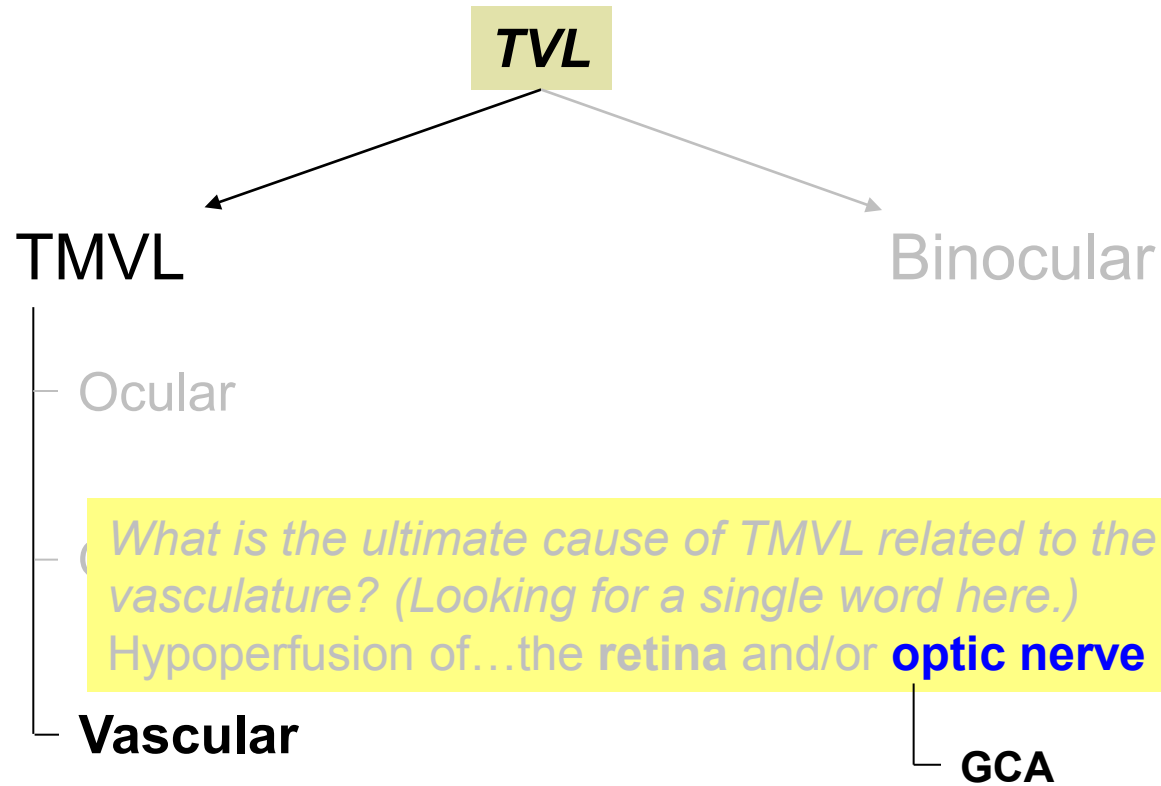
What procedure is the gold standard for diagnosing GCA?
Temporal artery biopsy

What is the treatment for GCA?
High-dose steroids **started immediately**

How immediately is immediately?

- PM It's
- Diplop
- (There

A



What lab studies might be useful in diagnosing GCA?

- ESR
- CRP
- Platelet count
- H&H

What procedure is the gold standard for diagnosing GCA?
Temporal artery biopsy

What is the treatment for GCA?

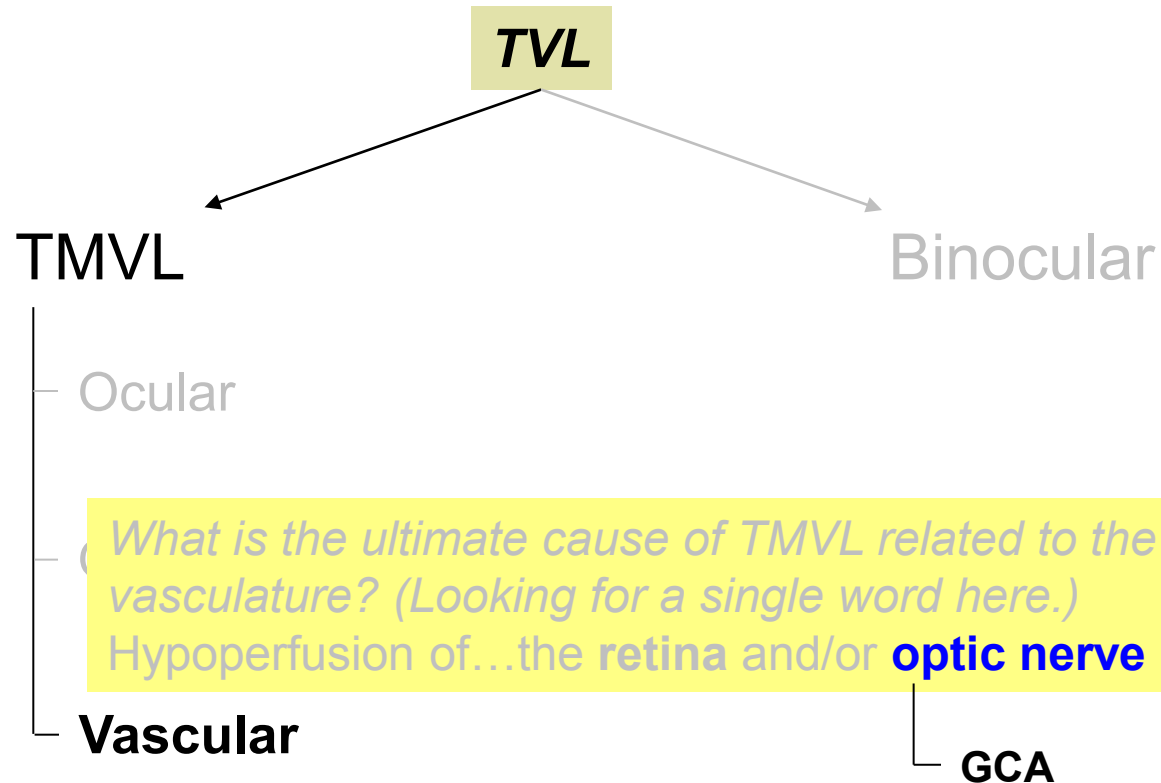
High-dose steroids **started immediately**

How immediately is immediately?

Immediately as in, if the index of suspicion warrants it, treatment should be started before confirmatory labs are *drawn* (much less *reported back*)

- PM It
- Diplop
- (There

A



What lab studies might be useful in diagnosing GCA?

- ESR
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What procedure is the gold standard for diagnosing GCA?

Temporal artery biopsy

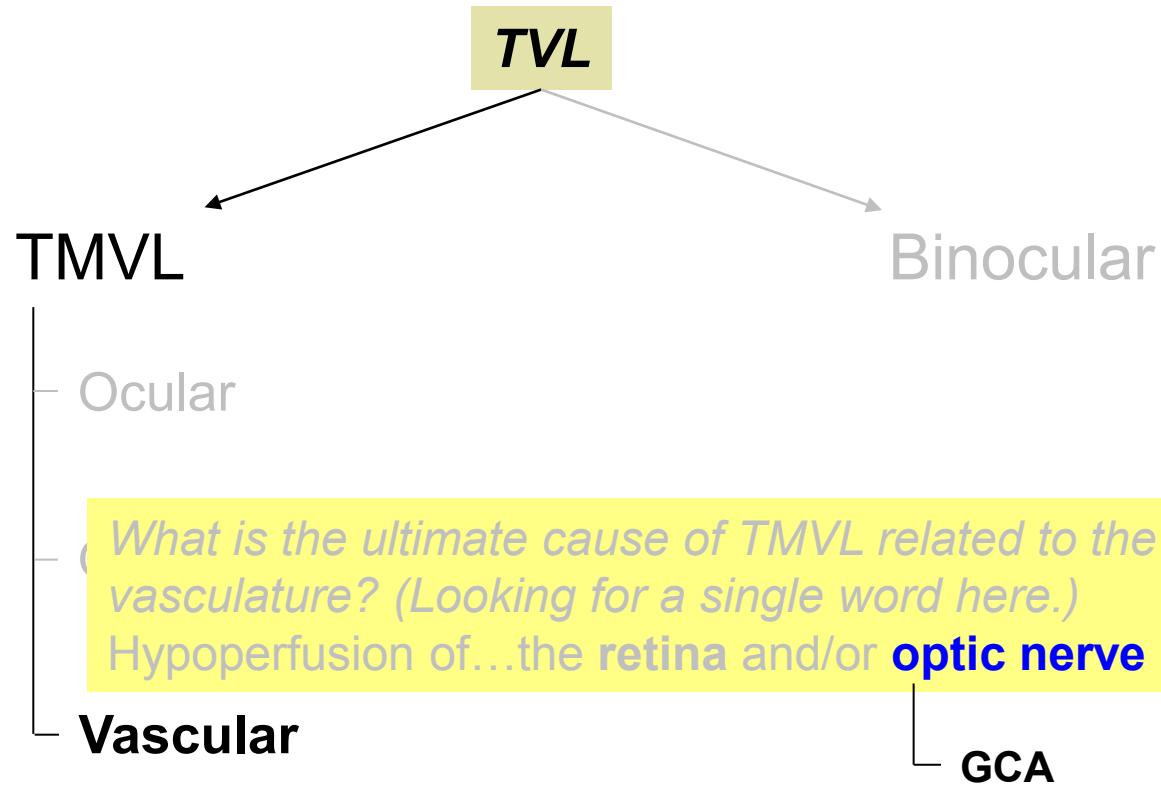
What is the treatment for GCA?

High-dose steroids **started immediately**

How immediately is immediately?

Immediately as in, if the index of suspicion warrants it, treatment should be started before confirmatory labs are *drawn* (much less *reported back*). In fact, some practices go so far as to maintain a GCA 'crash cart' in their clinic containing the supplies needed to commence IV steroids without the delay inherent in gathering equipment and procuring the med.

Q



What is the ultimate cause of TMVL related to the vasculature? (Looking for a single word here.)
 Hypoperfusion of...the **retina** and/or **optic nerve**

What lab studies might be useful in diagnosing GCA?

- ESR
- CRP
- Platelet count
- H&H

What procedure is the gold standard for diagnosing GCA?
 Temporal artery biopsy

Why biopsy?
 It's readily available

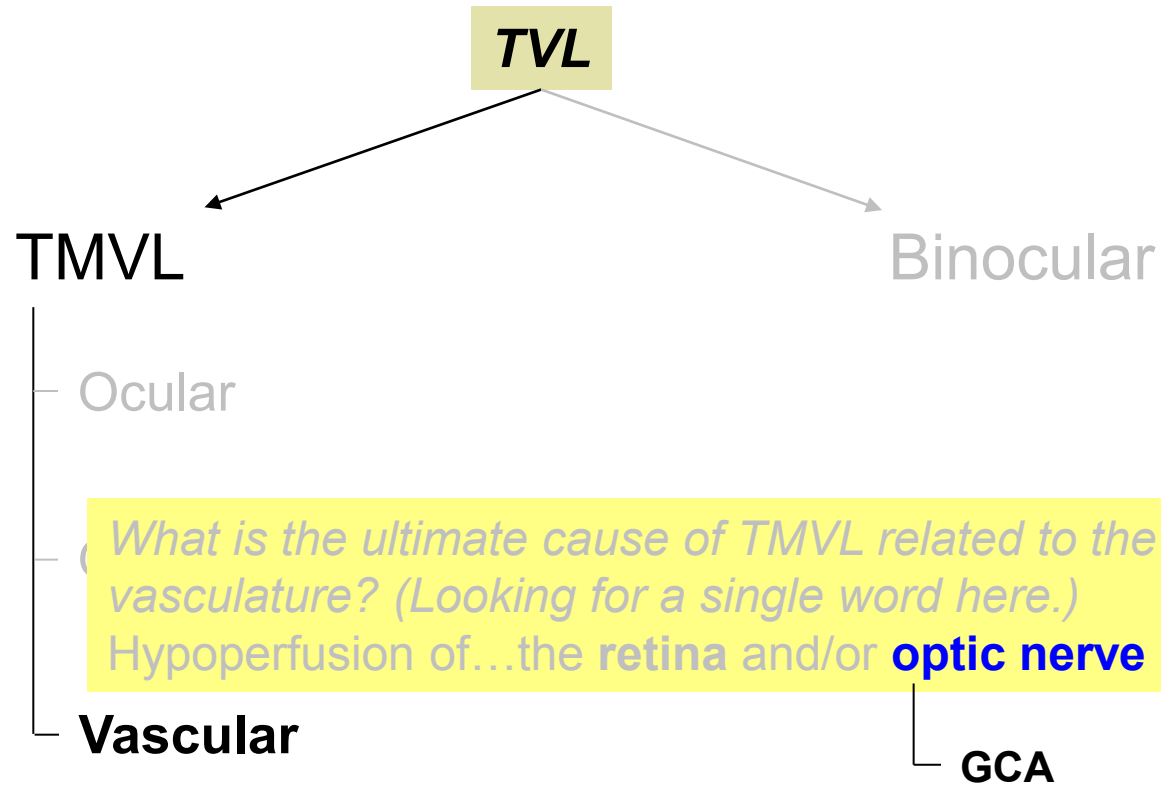
- PM
- Diplopia
- (There are other causes of PM)

What is the treatment for GCA?
 High-dose steroids started immediately

How high is high?

A syndrome consisting of pain and stiffness in the proximal muscles/joints (ie, shoulder and hip joints/muscles)

Q/A



What lab studies might be useful in diagnosing GCA?

- ESR
- CRP
- Platelet count
- H&H

What procedure is the gold standard for diagnosing GCA?

Temporal artery biopsy

Why biopsy?

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What is the treatment for GCA?

High-dose steroids started immediately

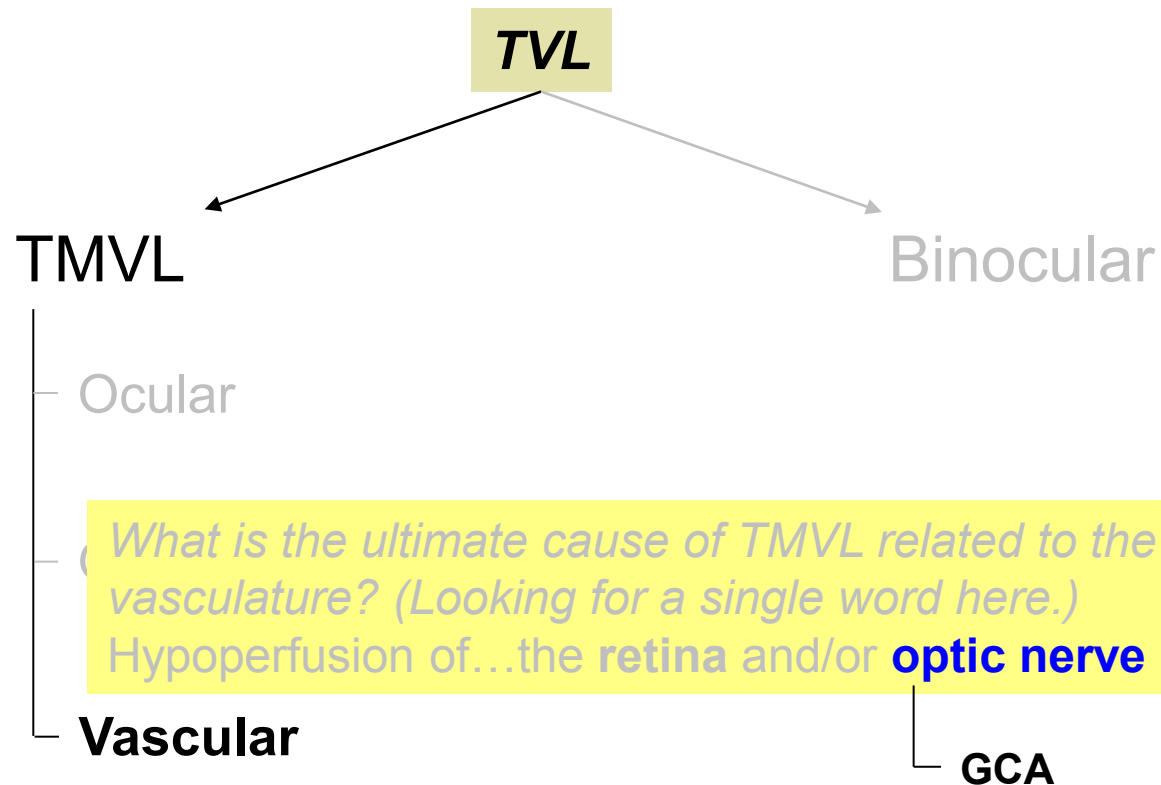
How high is high?

Pts with TMVL should receive

route, dose, duration

A syndrome consisting of pain and stiffness in the proximal muscles/joints (ie, shoulder and hip joints/muscles)

A



What lab studies might be useful in diagnosing GCA?

- ESR
- CRP
- Platelet count
- H&H

What procedure is the gold standard for diagnosing GCA?

Temporal artery biopsy

Why biopsy?

It's readily available

- PM
- Diplopia
- (There are other causes of PM)

In general terms, what is GCA?

What is the treatment for GCA?

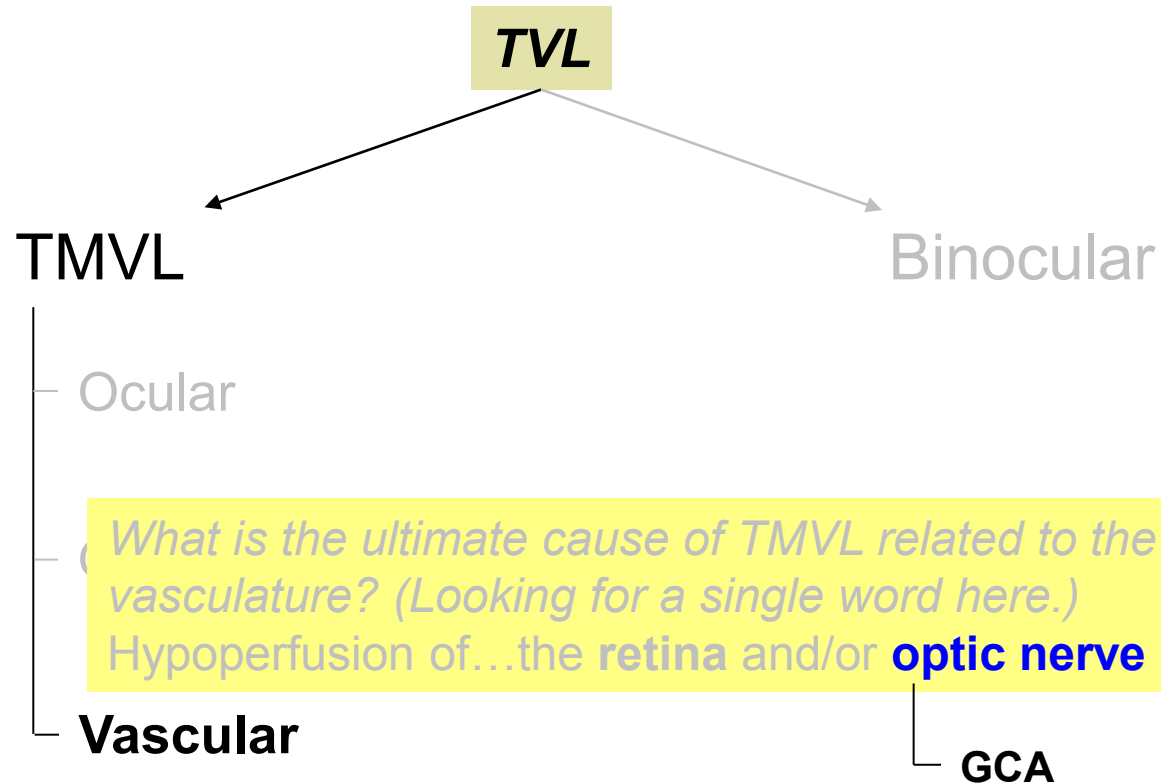
High-dose steroids started immediately

How high is high?

Pts with TMVL should receive IV pred 1 g/d x 3-5 days,

A syndrome consisting of pain and stiffness in the proximal muscles/joints (ie, shoulder and hip joints/muscles)

A



What lab studies might be useful in diagnosing GCA?

- ESR
- CRP
- Platelet count
- H&H

What procedure is the gold standard for diagnosing GCA?

Temporal artery biopsy

Why biopsy?

- PM It's readily accessible
- Diplopia
- (There are other causes of diplopia)

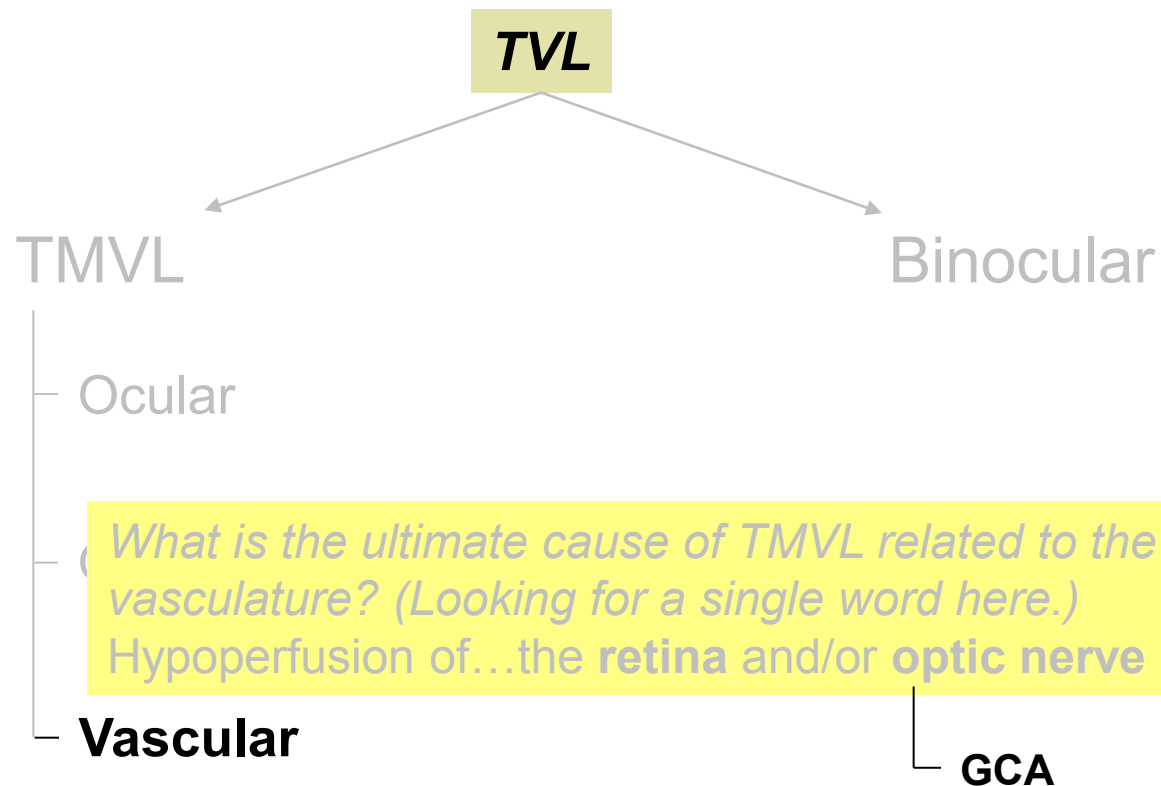
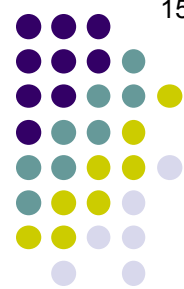
What is the treatment for GCA?

High-dose steroids started immediately

How high is high?

Pts with TMVL should receive IV pred 1 g/d x 3-5 days, then switch over to PO

A syndrome consisting of pain and stiffness in the proximal muscles/joints (ie, shoulder and hip joints/muscles)



What lab studies might be useful

in diag

- ESR
- CRP
- Plate
- H&H

If a TMVL pt is over 50—and especially if she's over 70, and AFAB—establishing an index of suspicion for GCA (and acting on it, if high) is the first order of the day.

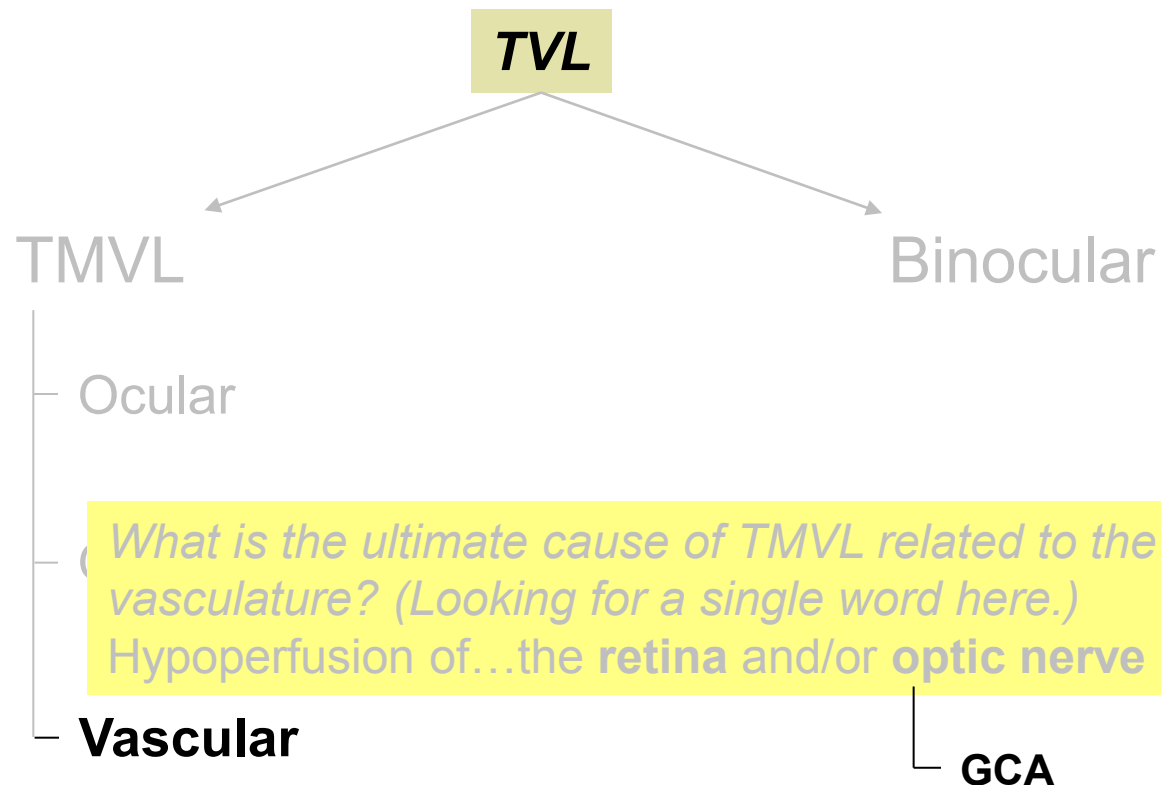
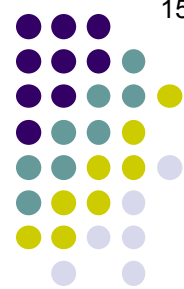
--Diplopia

--(There are other

Pts with TMVL should receive IV pred 1 g/d x 3-5 days, then switch over to PO

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- CRP
- Plate
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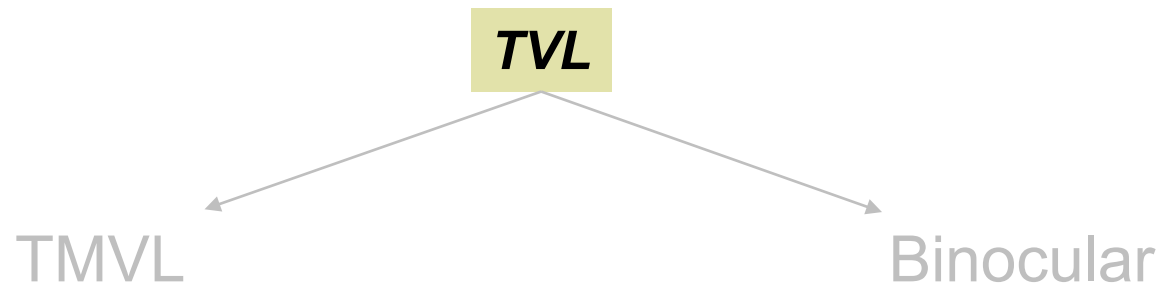
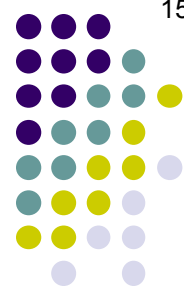
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The



Ocular

What is the ultimate cause of TMVL related to the vasculature? (Looking for a single word here.)

Hypoperfusion of the retina and/or optic nerve

For more on GCA, see slide-set N17

What lab studies might be useful

in diag

--ESR

--CRP

--Plate

--H&H

If a TMVL pt is over 50—and especially if she's over 70, and AFAB—establishing an index of suspicion for GCA (and acting on it, if high) is the first order of the day. (Fortunately, this is easily accomplished via a few questions posed while taking an initial history or performing the anterior-segment slit lamp exam.)

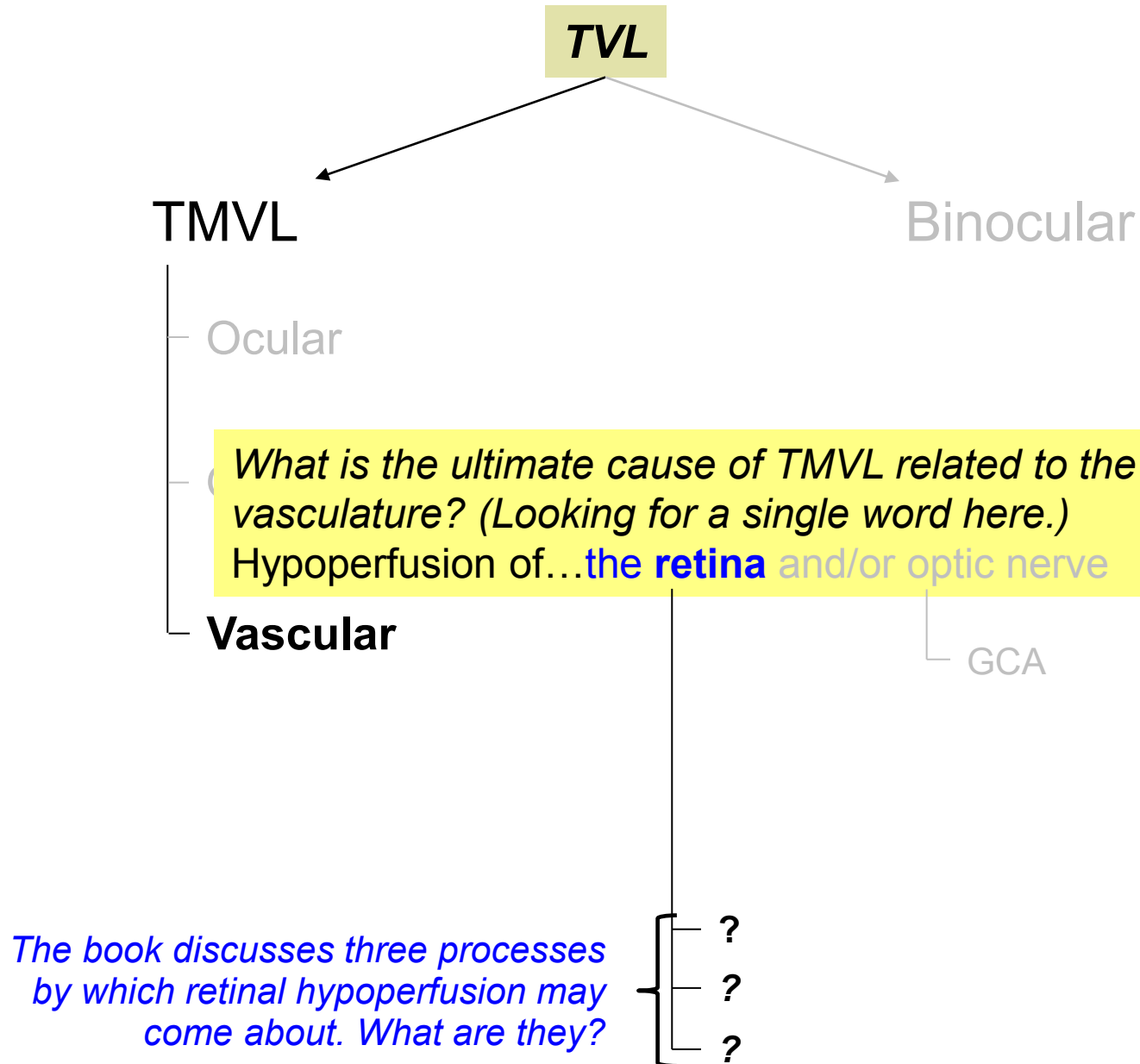
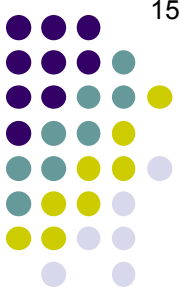
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--(There are other

Pts with TMVL should receive IV pred 1 g/d x 3-5 days, then switch over to PO

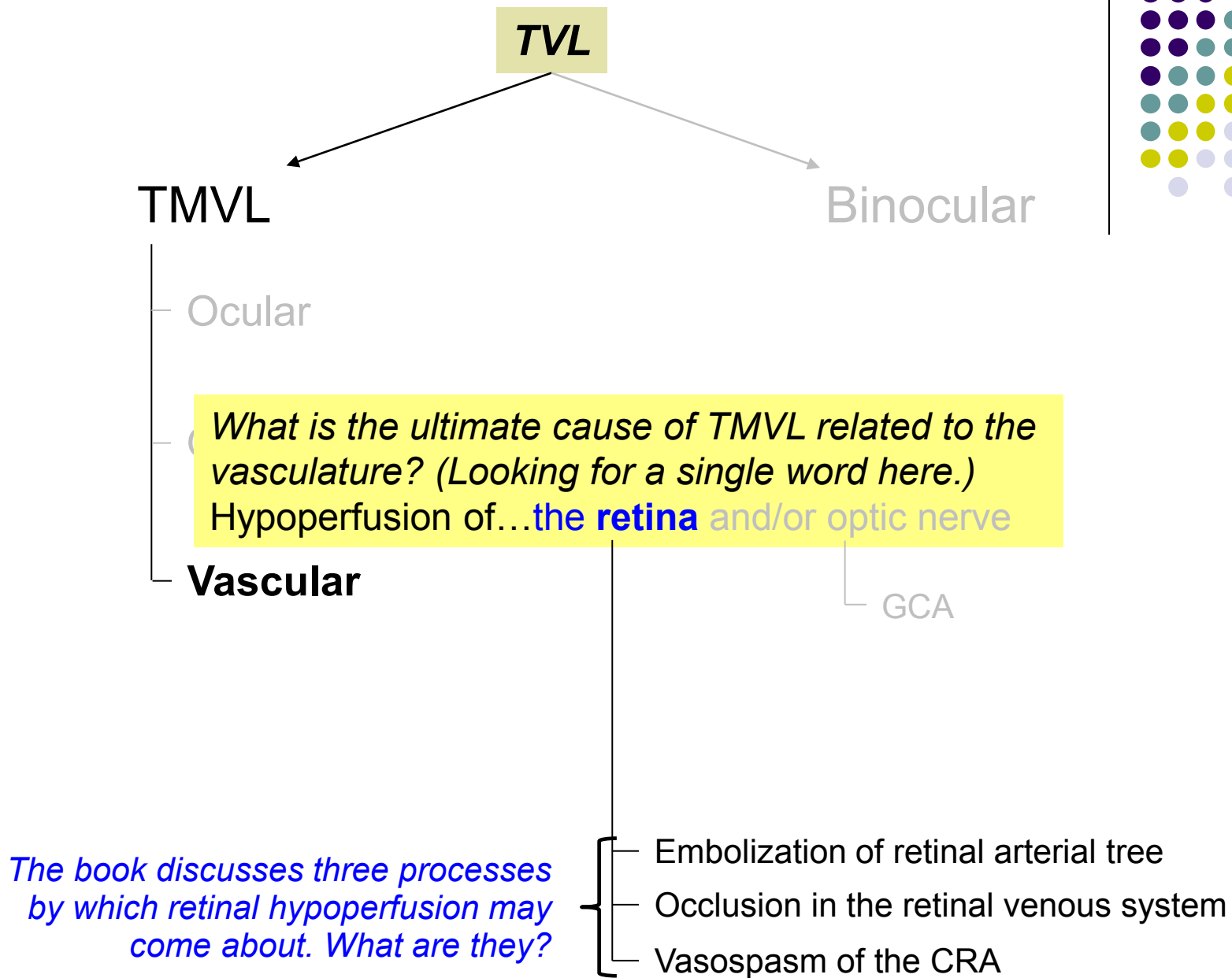
A syndrome consisting of pain and stiffness in the proximal muscles/joints (ie, shoulder and hip joints/muscles)

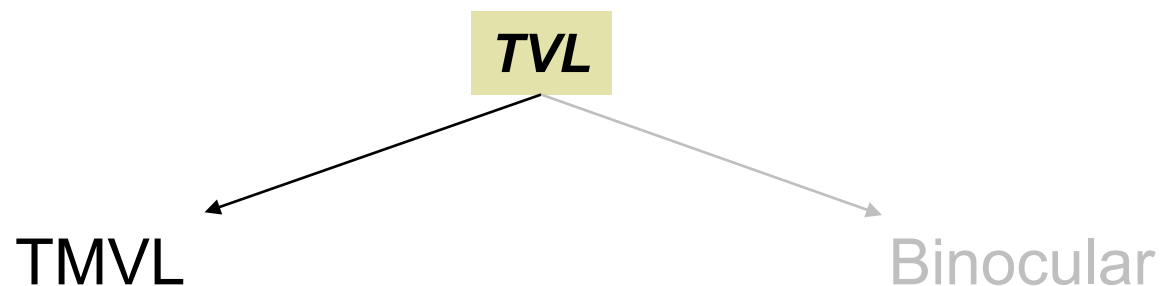
The





A





Ocular

What is the ultimate cause of TMVL related to the vasculature? (Looking for a single word here.)

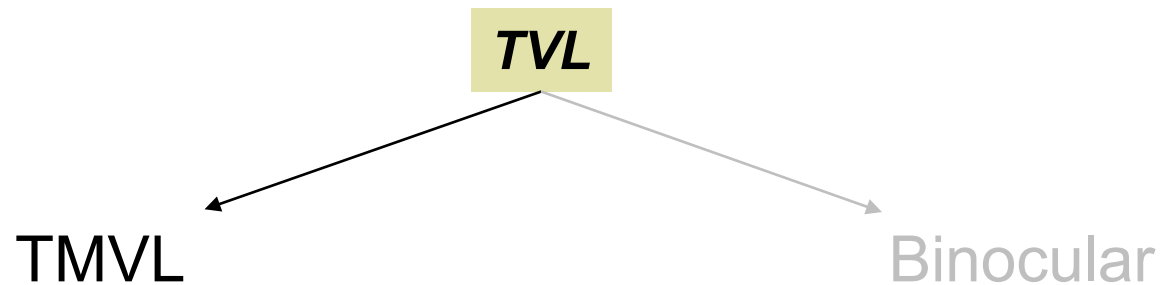
Hypoperfusion of...the retina and/or optic nerve

Vascular

GCA

We'll come back to and drill down on these shortly

- Embolization of retinal arterial tree
- Occlusion in the retinal venous system
- Vasospasm of the CRA



Ocular

What is the ultimate cause of TMVL related to the vasculature? (Looking for a single word here.)

Hypoperfusion of...the retina **and** /or optic nerve

Vascular

GCA

Diffuse ocular hypoperfusion

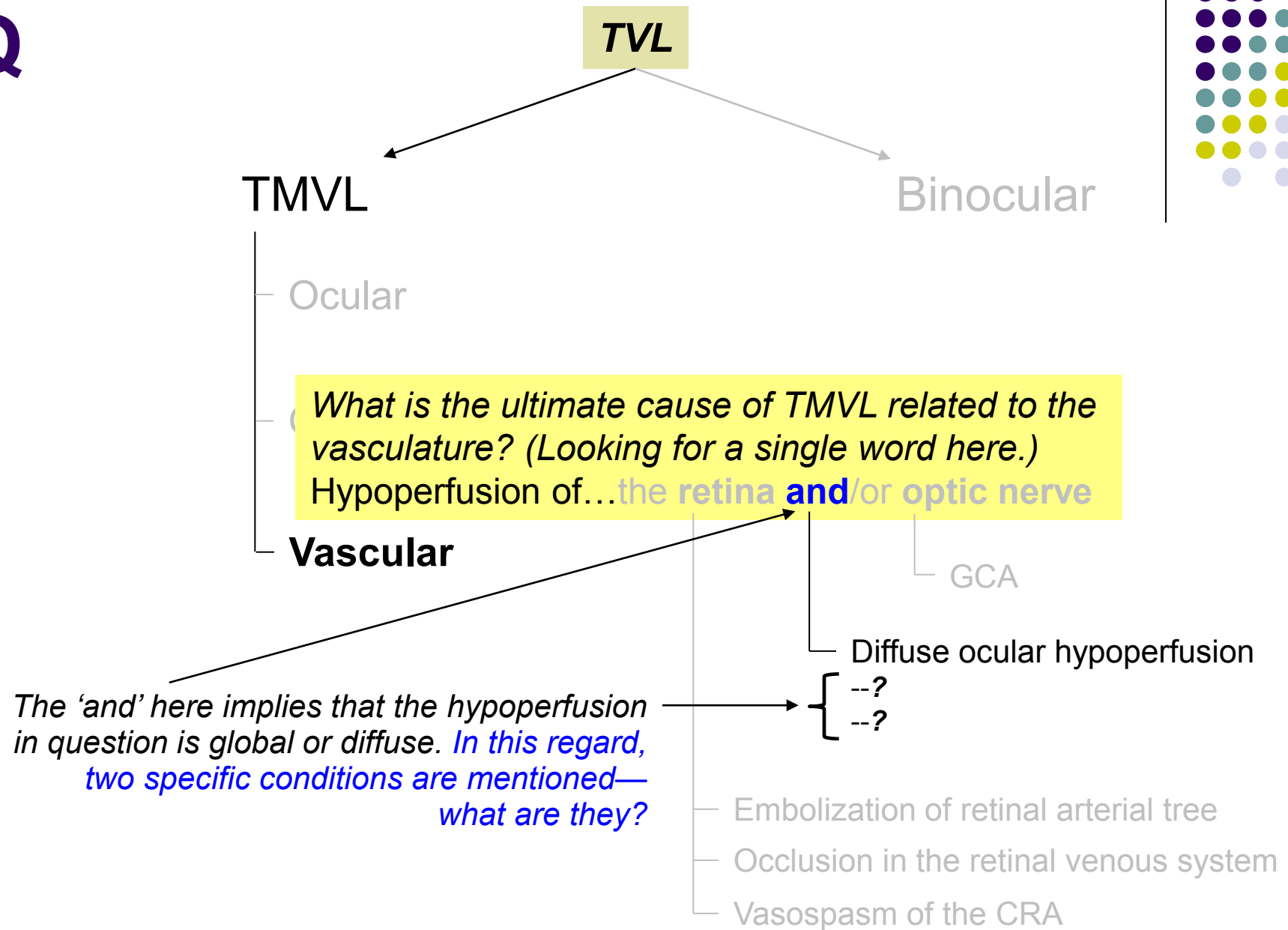
The 'and' here implies that the hypoperfusion in question is global or diffuse.

Embolization of retinal arterial tree

Occlusion in the retinal venous system

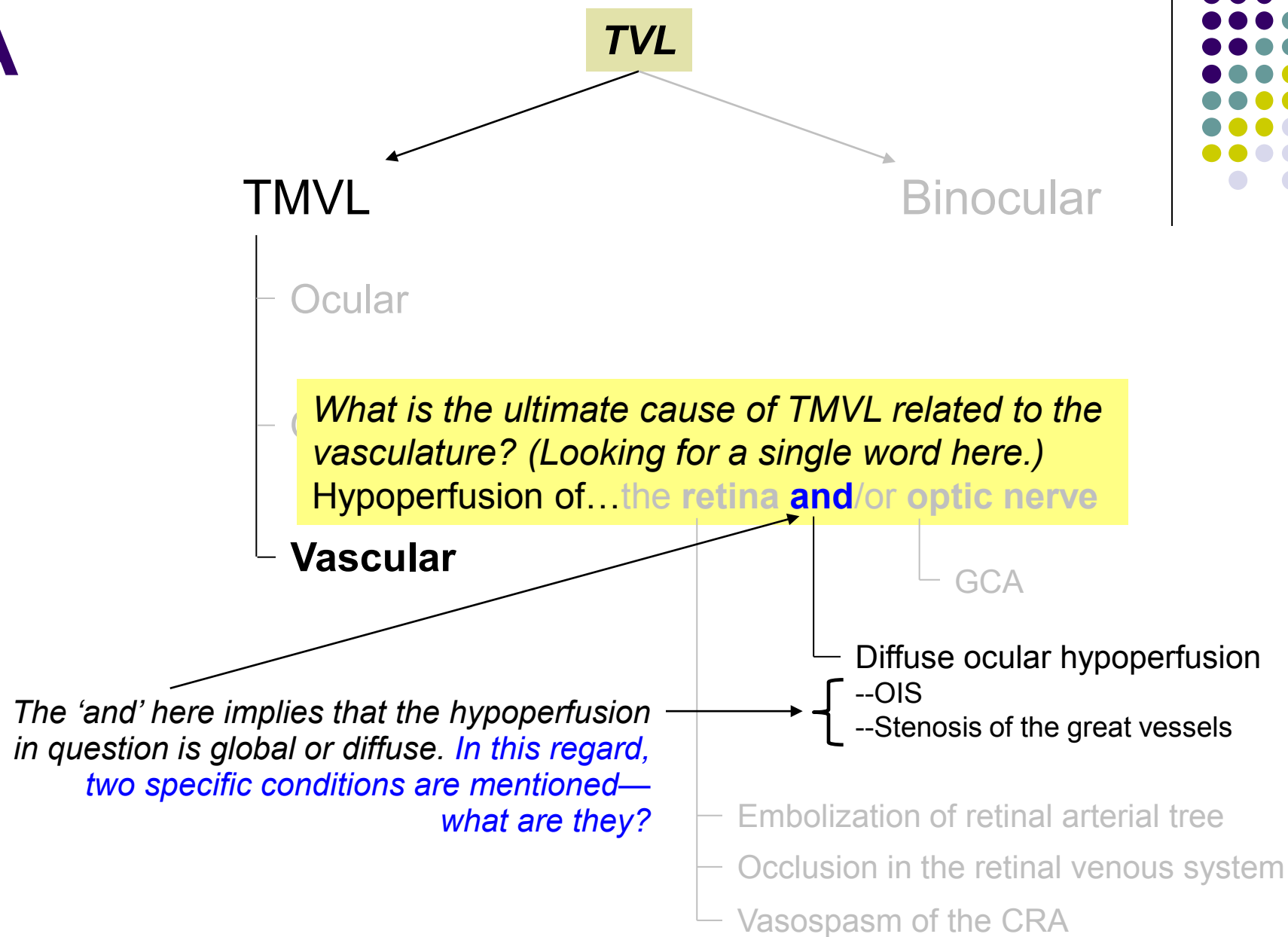
Vasospasm of the CRA

Q

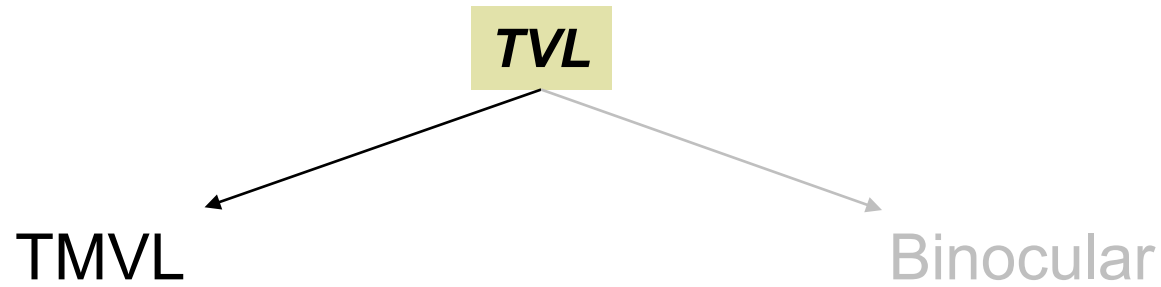




A



Q



Ocular

What is the ultimate cause of TMVL related to the vasculature? (Looking for a single word here.)

Hypoperfusion of...the retina **and**/or optic nerve

Vascular

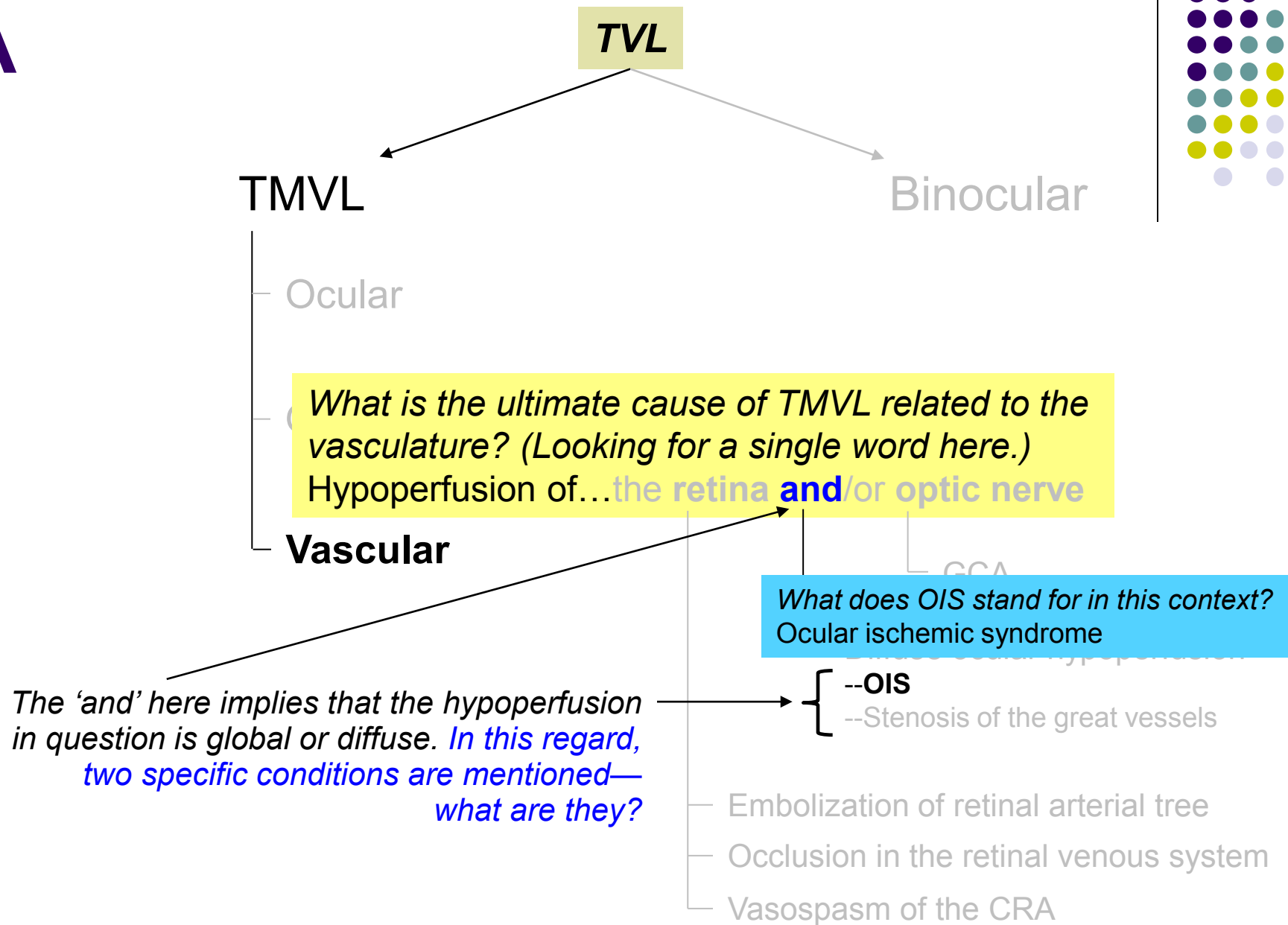
What does OIS stand for in this context?

The 'and' here implies that the hypoperfusion in question is global or diffuse. In this regard, two specific conditions are mentioned—what are they?

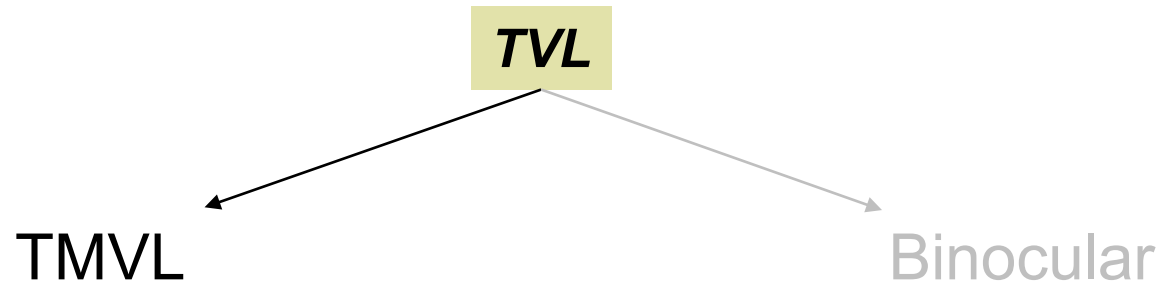
--OIS
--Stenosis of the great vessels

- Embolization of retinal arterial tree
- Occlusion in the retinal venous system
- Vasospasm of the CRA

A



Q



Ocular

What is the ultimate cause of TMVL related to the vasculature? (Looking for a single word here.)

Hypoperfusion of...the retina **and**/or optic nerve

Vascular

What does OIS stand for in this context?
Ocular ischemic syndrome

The 'and' here implies that the hypoperfusion in question is global or diffuse. *In this regard, two specific conditions are mentioned—what are they?*

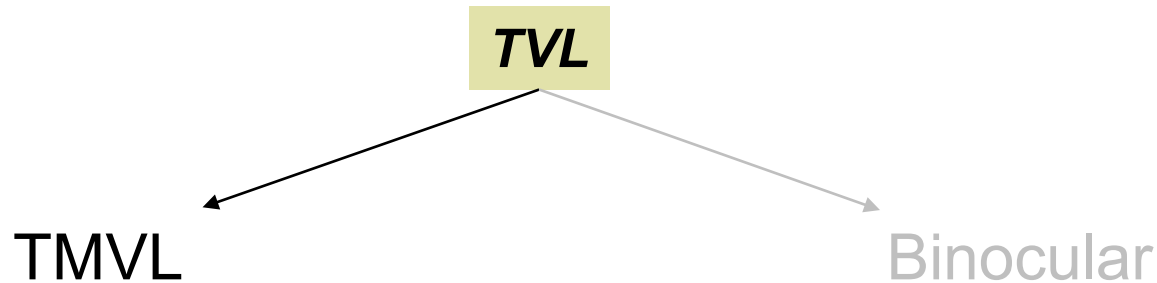
--OIS
--Stenosis of the **great vessels**

To what does 'great vessels' refer?

En
Occlusion in the retinal venous system
Vasospasm of the CRA



A



Ocular

What is the ultimate cause of TMVL related to the vasculature? (Looking for a single word here.)

Hypoperfusion of...the retina **and**/or optic nerve

Vascular

What does OIS stand for in this context?
Ocular ischemic syndrome

The 'and' here implies that the hypoperfusion in question is global or diffuse. In this regard, two specific conditions are mentioned—what are they?

--OIS
--Stenosis of the **great vessels**

To what does 'great vessels' refer?
To the vessels that directly enter or exit the heart

Vasospasm of the CRA

Q

TVL

In a nutshell, what is OIS?

OIS

--Stenosis of the **great vessels**

To what does 'great vessels' refer?

To the vessels that directly enter or exit the heart

Vasospasm of the CRA

A

TVL

In a nutshell, what is OIS?

A constellation of signs and symptoms owing to chronic ocular ischemia/hypoperfusion

OIS

--Stenosis of the **great vessels**

To what does 'great vessels' refer?

To the vessels that directly enter or exit the heart

Vasospasm of the CRA

Q

TVL

In a nutshell, what is OIS?

A constellation of signs and symptoms owing to chronic ocular **ischemia/hypoperfusion**

Where's the choke point, ie, what vessel is being occluded that produces the chronic hypoperfusion?

OIS

--Stenosis of the **great vessels**

To what does 'great vessels' refer?

To the vessels that directly enter or exit the heart

Vasospasm of the CRA

Q/A

TVL

In a nutshell, what is OIS?

A constellation of signs and symptoms owing to chronic ocular **ischemia/hypoperfusion**

Where's the choke point, ie, what vessel is being occluded that produces the chronic hypoperfusion?

The vessel most commonly implicated is the ipsilateral artery

OIS

--Stenosis of the **great vessels**

To what does 'great vessels' refer?

To the vessels that directly enter or exit the heart

Vasospasm of the CRA

A

TVL

In a nutshell, what is OIS?

A constellation of signs and symptoms owing to chronic ocular **ischemia/hypoperfusion**

Where's the choke point, ie, what vessel is being occluded that produces the chronic hypoperfusion?

The vessel most commonly implicated is the ipsilateral internal carotid artery

OIS

--Stenosis of the **great vessels**

To what does 'great vessels' refer?

To the vessels that directly enter or exit the heart

Vasospasm of the CRA

TVL

In a nutshell, what is OIS?

A constellation of signs and symptoms owing to chronic ocular **ischemia/hypoperfusion**

Where's the choke point, ie, what vessel is being occluded that produces the chronic hypoperfusion?

The vessel most commonly implicated is the ipsilateral internal carotid artery

How occluded does the internal carotid artery (ICA) have to be for OIS to occur?

OIS

--Stenosis of the **great vessels**

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Vasospasm of the CRA

A

TVL

In a nutshell, what is OIS?

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Where's the choke point, ie, what vessel is being occluded that produces the chronic hypoperfusion?

The vessel most commonly implicated is the ipsilateral internal carotid artery

How occluded does the internal carotid artery (ICA) have to be for OIS to occur?

Very—at least 50%, and probably closer to 90

OIS

--Stenosis of the **great vessels**

To what does 'great vessels' refer?

To the vessels that directly enter or exit the heart

Vasospasm of the CRA

TVL

High-grade stenosis of the internal carotid artery origin (arrow) in two pts

Q

TVL

In a nutshell, what is OIS?

A constellation of **signs and symptoms** owing to chronic ocular ischemia/hypoperfusion

What are the signs/symptoms of OIS?

Signs:

--?
--?
--?
--?

Symptoms

OIS

--Stenosis of the **great vessels**

To what does 'great vessels' refer?

To the vessels that directly enter or exit the heart

Vasospasm of the CRA

A

TVL

In a nutshell, what is OIS?

A constellation of **signs and symptoms** owing to chronic ocular ischemia/hypoperfusion

What are the signs/symptoms of OIS?

Signs:

- Intraretinal hemorrhages
- NVI/NVA
- AC cell/flare
- Retinal vascular changes

Symptoms

OIS

--Stenosis of the **great vessels**

To what does 'great vessels' refer?

To the vessels that directly enter or exit the heart

Vasospasm of the CRA

Q

TVL



Classic presentation of intraretinal hemorrhages in OIS:

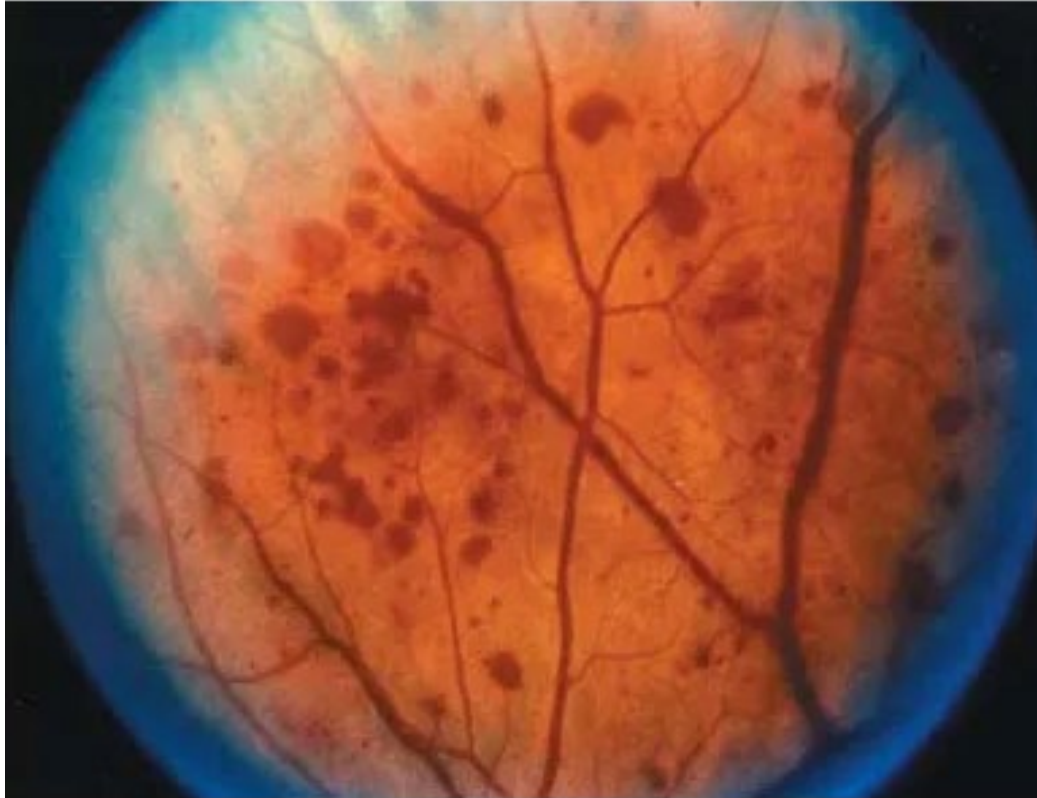
- location
- size
- shape/type

A

TVL



179

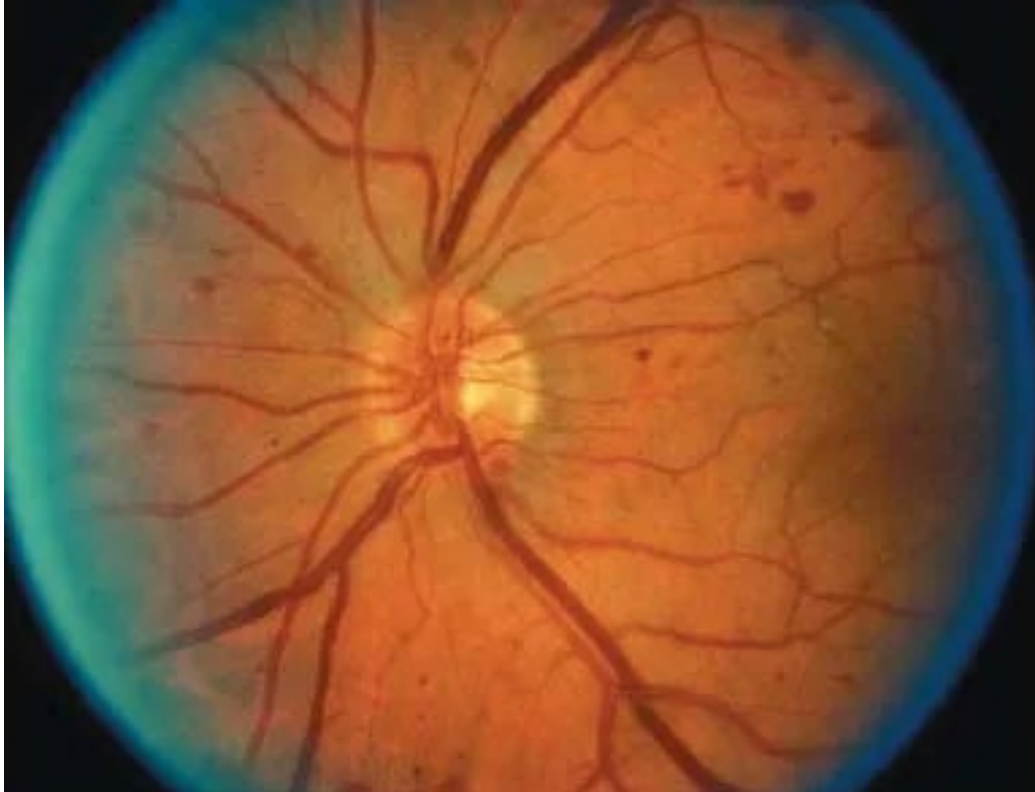
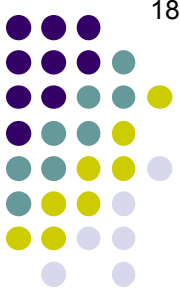


Classic presentation of intraretinal hemorrhages in OIS:
Midperipheral , medium-large , dot-blot

Q

TVL

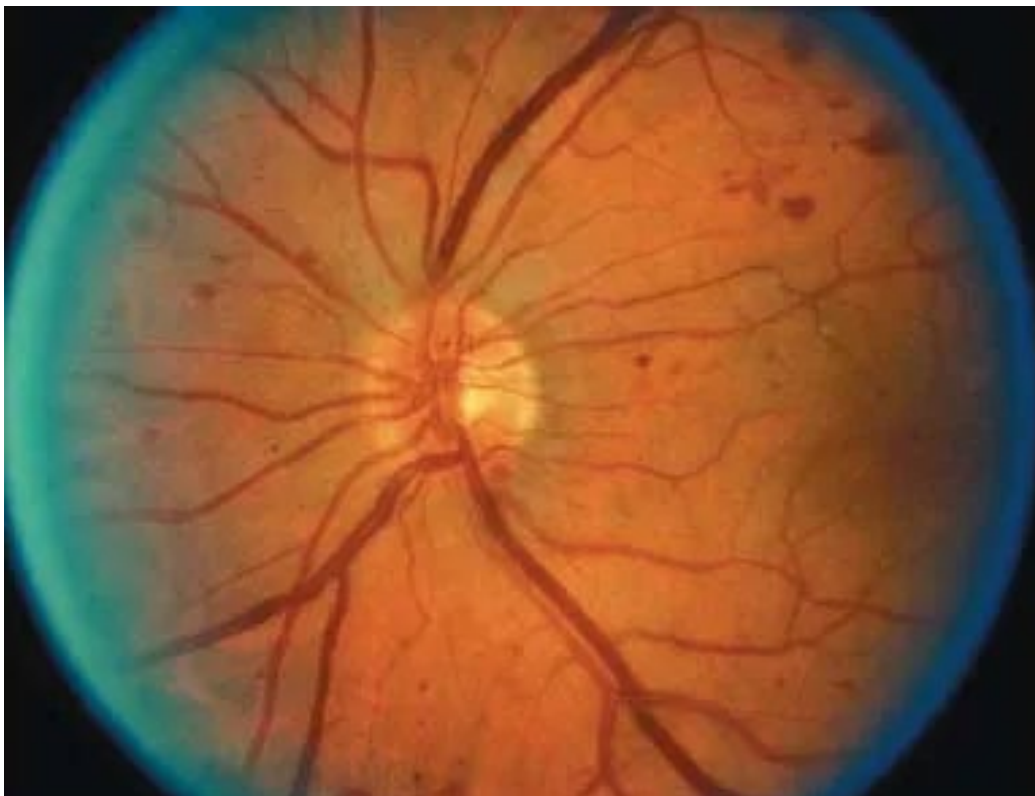
180



Classic vascular changes in OIS:

--Arteriolar



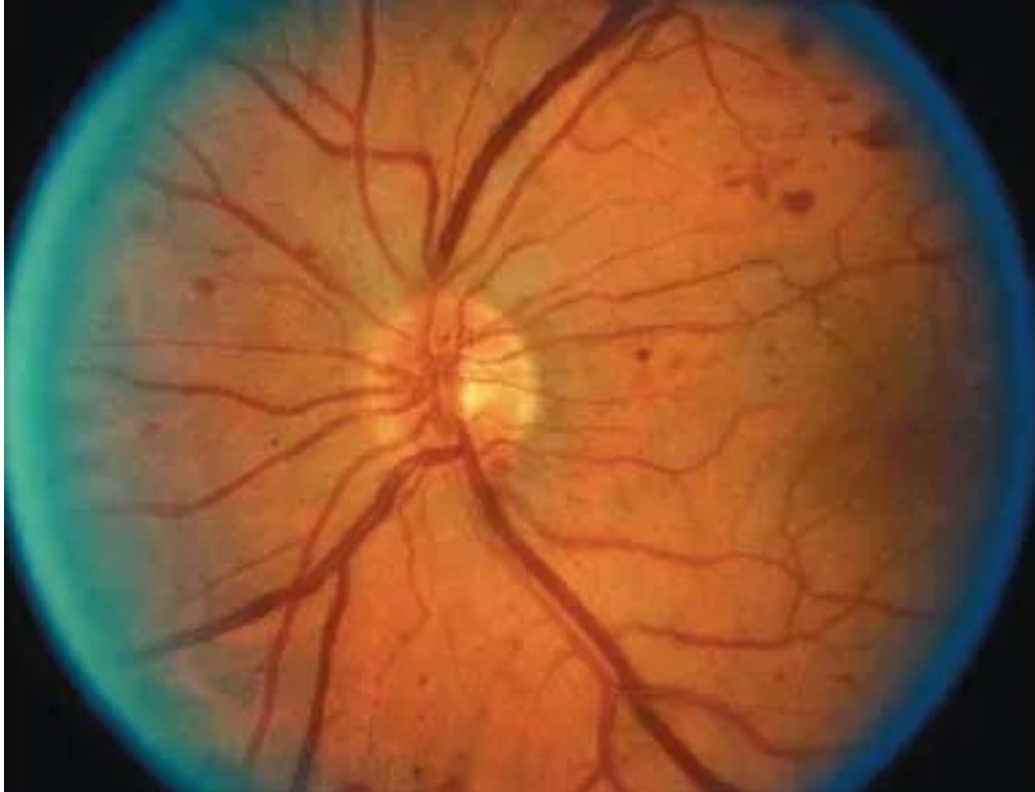
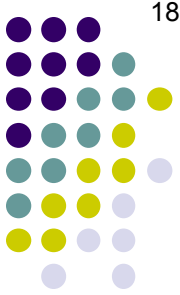
**A****TVL**

Classic vascular changes in OIS:
--Arteriolar **narrowing**

Q

TVL

182



Classic vascular changes in OIS:

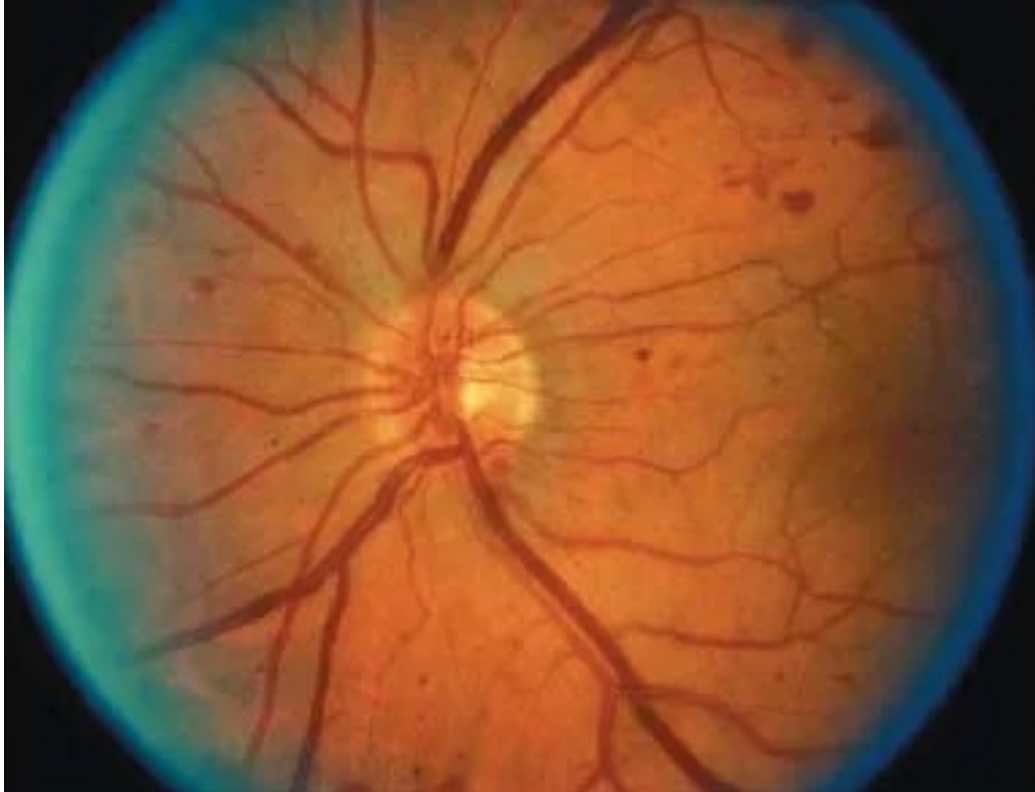
--Arteriolar **narrowing**

--Venules but not



A

TVL



Classic vascular changes in OIS:
--Arteriolar **narrowing**
--Venules **dilated** but not **tortuous**

Q

TVL

In a nutshell, what is OIS?

A constellation of **signs and symptoms** owing to chronic ocular ischemia/hypoperfusion

What are the signs/symptoms of OIS?

Signs:

- Intraretinal hemorrhages
- NVI/NVA
- AC cell/flare
- Retinal vascular changes

Symptoms:

- ?
- ?
- ?

OIS

--Stenosis of the **great vessels**

To what does 'great vessels' refer?

To the vessels that directly enter or exit the heart

Vasospasm of the CRA

A

TVL

In a nutshell, what is OIS?

A constellation of **signs and symptoms** owing to chronic ocular ischemia/hypoperfusion

What are the signs/symptoms of OIS?

Signs:

- Intraretinal hemorrhages
- NVI/NVA
- AC cell/flare
- Retinal vascular changes

Symptoms:

- Decreased vision
- Pain (described as 'dull')
- Prolonged photostress recovery time

OIS

--Stenosis of the **great vessels**

To what does 'great vessels' refer?

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Vasospasm of the CRA

Q

TVL

In a nutshell, what is OIS?

A constellation of signs and symptoms owing to chronic ocular ischemia/hypoperfusion

Does it present unilaterally, or bilaterally?

OIS

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Q/A

TVL

In a nutshell, what is OIS?

A constellation of signs and symptoms owing to chronic ocular ischemia/hypoperfusion

Does it present unilaterally, or bilaterally?

Unilaterally (in about % of cases)

OIS

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Vasospasm of the CRA

A

TVL

In a nutshell, what is OIS?

A constellation of signs and symptoms owing to chronic ocular ischemia/hypoperfusion

Does it present unilaterally, or bilaterally?

Unilaterally (in about 80% of cases)

OIS

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Vasospasm of the CRA

Q

TVL

In a nutshell, what is OIS?

A constellation of signs and symptoms owing to chronic ocular ischemia/hypoperfusion

Does it present unilaterally, or bilaterally?

Unilaterally (in about 80% of cases)

Is there a gender predilection?

OIS

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TVL

In a nutshell, what is OIS?

A constellation of signs and symptoms owing to chronic ocular ischemia/hypoperfusion

Does it present unilaterally, or bilaterally?

Unilaterally (in about 80% of cases)

Is there a gender predilection?

Yes, **M v F** are twice as likely to have it

OIS

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To what does 'great vessels' refer?

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Vasospasm of the CRA

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TVL

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Is there a gender predilection?

Yes, men are twice as likely to have it

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Does it present unilaterally, or bilaterally?

Unilaterally (in about 80% of cases)

Is there a gender predilection?

Yes, men are twice as likely to have it

Is there a relationship with age?

OIS

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Does it present unilaterally, or bilaterally?

Unilaterally (in about 80% of cases)

Is there a gender predilection?

Yes, men are twice as likely to have it

Is there a relationship with age?

Yes, OIS is a dz of older v younger individuals

OIS

--Stenosis of the great vessels

To what does 'great vessels' refer?

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Vasospasm of the CRA

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TVL

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Does it present unilaterally, or bilaterally?

Unilaterally (in about 80% of cases)

Is there a gender predilection?

Yes, men are twice as likely to have it

Is there a relationship with age?

Yes, OIS is a dz of older individuals

OIS

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To what does 'great vessels' refer?

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Vasospasm of the CRA

TVL

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Yes, OIS is a dz of older individuals—average age is about

#

OIS

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TVL

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Does it present unilaterally, or bilaterally?

Unilaterally (in about 80% of cases)

Is there a gender predilection?

Yes, men are twice as likely to have it

Is there a relationship with age?

Yes, OIS is a dz of older individuals—average age is about 65

OIS

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To what does 'great vessels' refer?

To the vessels that directly enter or exit the heart

Vasospasm of the CRA

TVL

In a nutshell, what is OIS?

A constellation of signs and symptoms owing to chronic ocular ischemia/hypoperfusion

Does it present unilaterally, or bilaterally?

Unilaterally (in about 80% of cases)

Is there a gender predilection?

Yes, men are twice as likely to have it

Is there a relationship with age?

Yes, OIS is a dz of older individuals—average age is about 65

Does OIS carry implications for the general health of the afflicted individual?

OIS

--Stenosis of the great vessels

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Q/A

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Indeed it does—the 5-year mortality rate associated with OIS is yikes

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Indeed it does—the 5-year mortality rate associated with OIS is 40%!

OIS

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TVL

TMVL

Binocular

Remember when we remarked a while back that we would encounter other TVL conditions for which 'posture change' played a role? We are now encountering them now.

The 'and' here implies that the hypoperfusion in question is global or diffuse. In this regard, two specific conditions are mentioned—what are they?

Diffuse ocular hypoperfusion

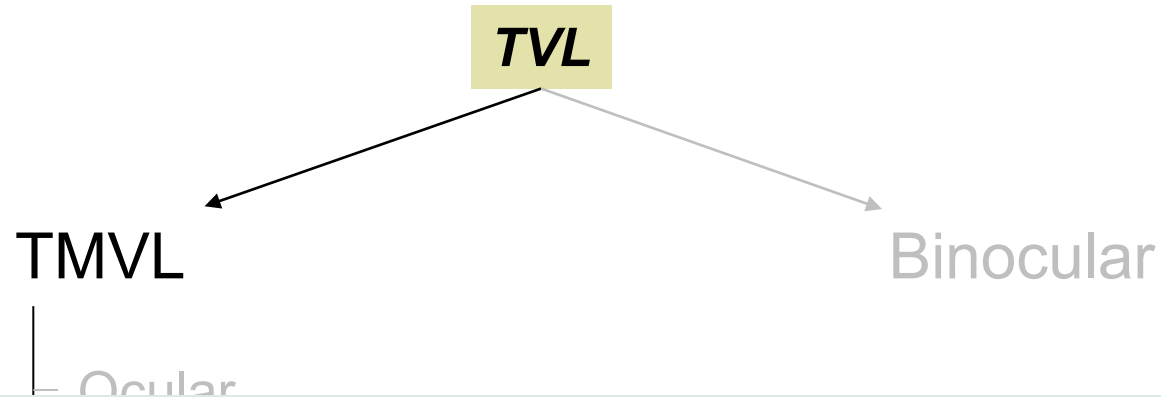
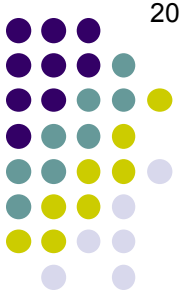
--OIS

--Stenosis of the great vessels

Embolization of retinal arterial tree

Occlusion in the retinal venous system

Vasospasm of the CRA

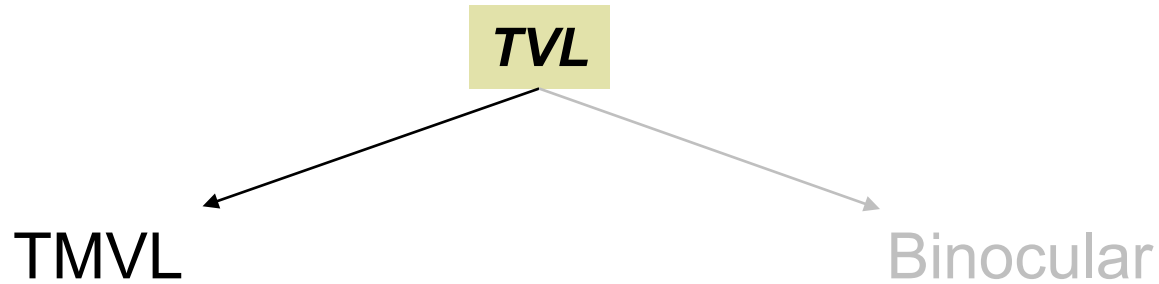
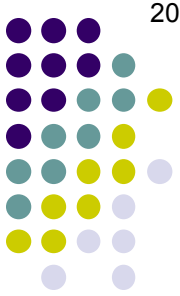


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What is the classic posture-related finding pts report with regard to **stenosis of the great vessels**?

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- └─ Diffuse ocular hypoperfusion
 - OIS
 - Stenosis of the great vessels**
- └─ Embolization of retinal arterial tree
- └─ Occlusion in the retinal venous system
- └─ Vasospasm of the CRA



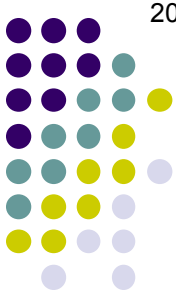
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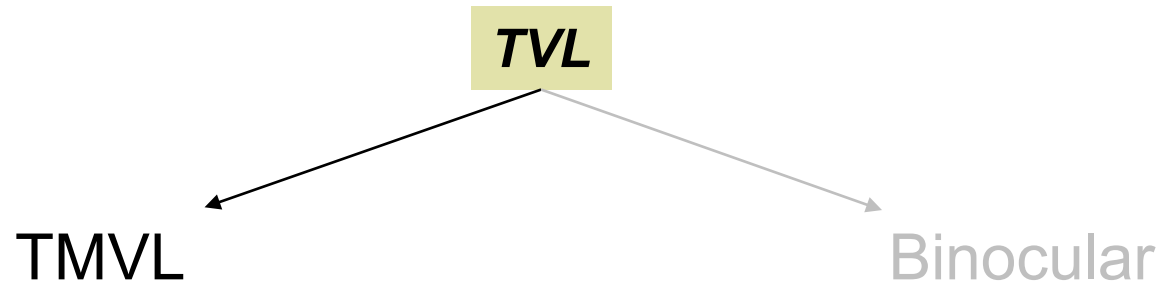
They report experiencing TVL when they go from a [yellow box] to a [yellow box] position

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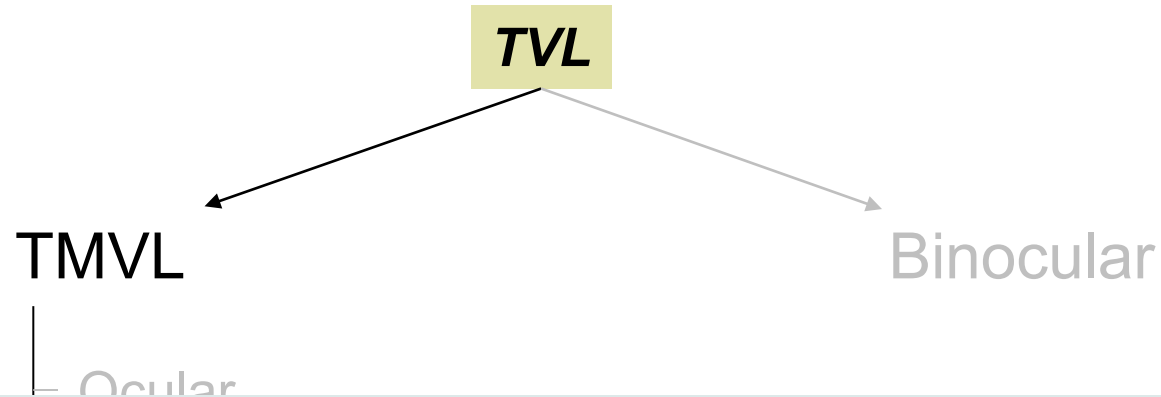
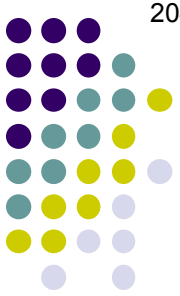
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Diffuse ocular hypoperfusion
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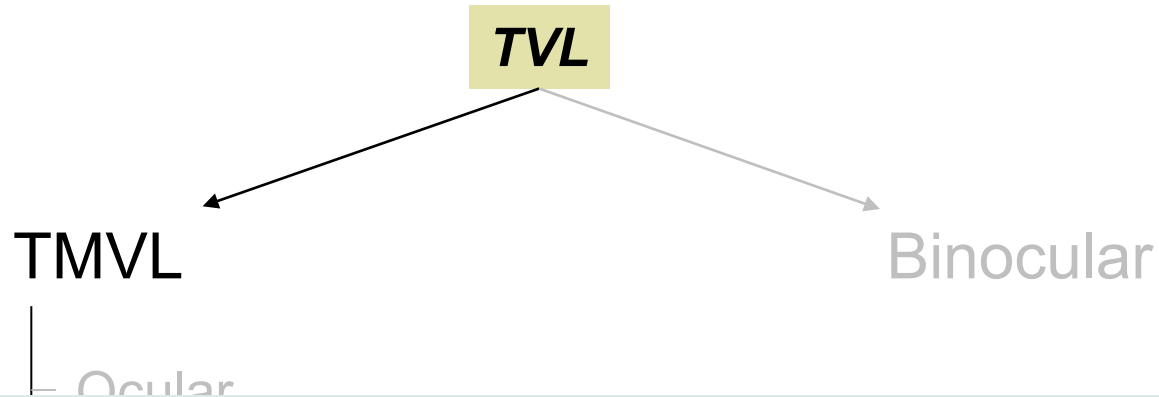
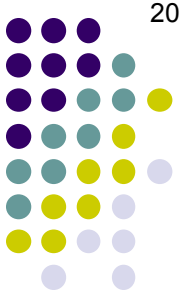
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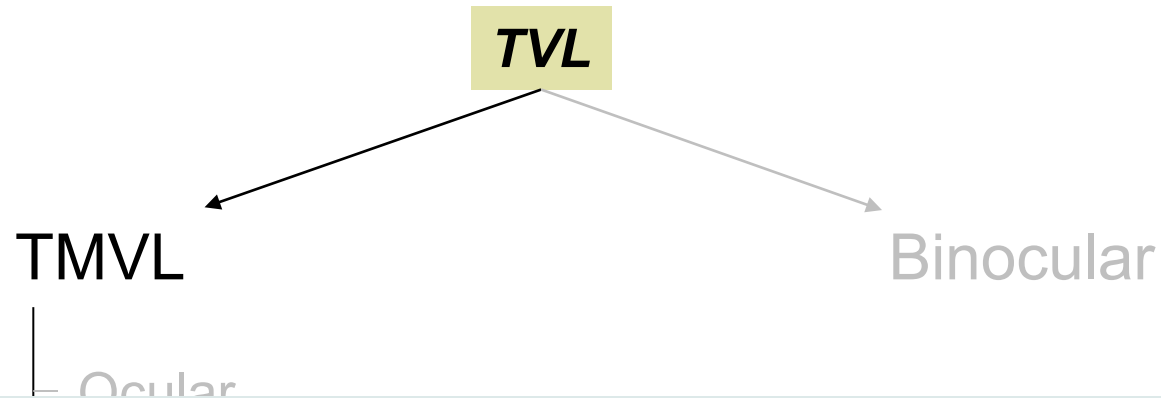
The OIS-associated ocular **symptom** gets better when they **lie down vs stand up**

The ‘and’ here implies that the hypoperfusion in question is global or diffuse. In this regard, two specific conditions are mentioned—what are they?

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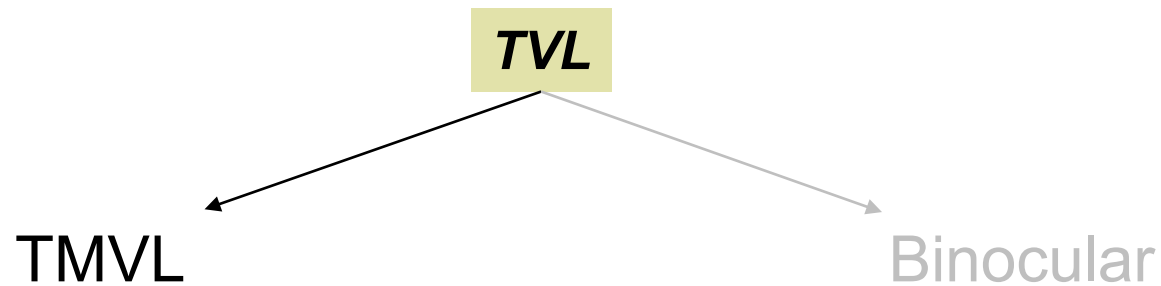
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(This is a good point in the set to take a break)



Ocular

What is the ultimate cause of TMVL related to the vasculature? (Looking for a single word here.)

Hypoperfusion of...the **retina and/or optic nerve**

Vascular

GCA

Diffuse ocular hypoperfusion

--OIS

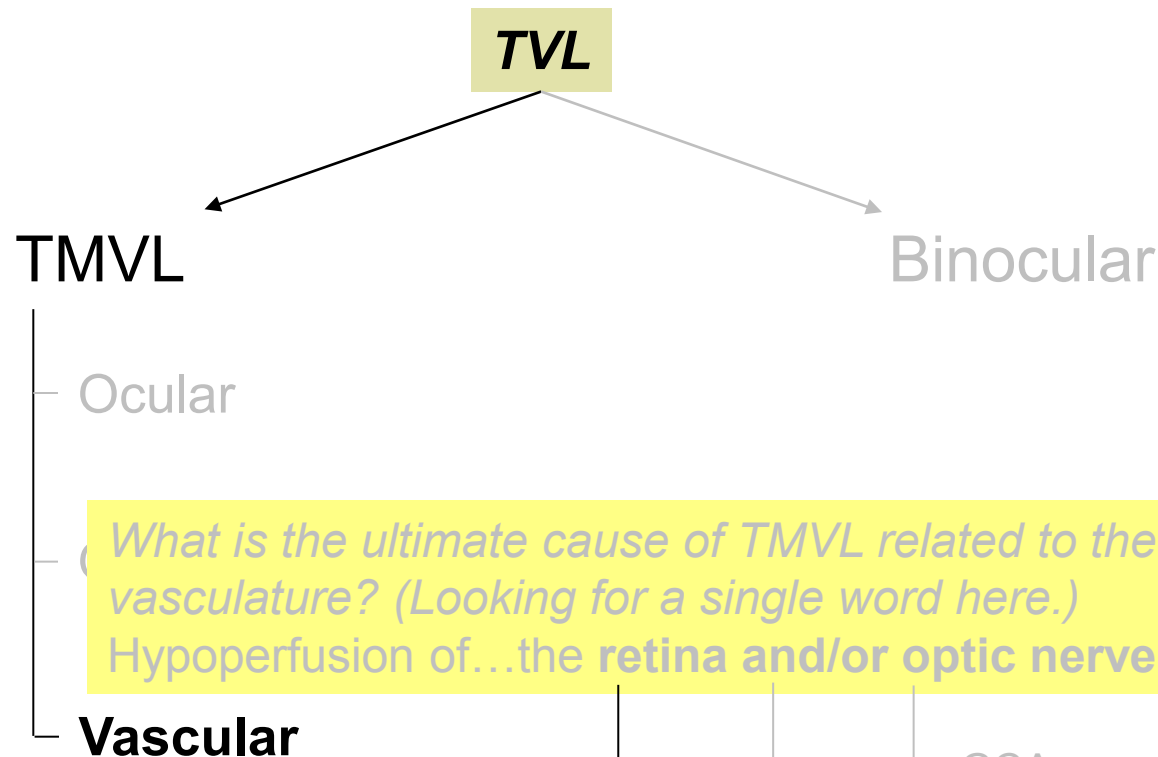
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Embolization of retinal arterial tree

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Next we will delve into **TMVL 2ndry to embolization**. Take note: This topic receives more attention than any other in the chapter.



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Q



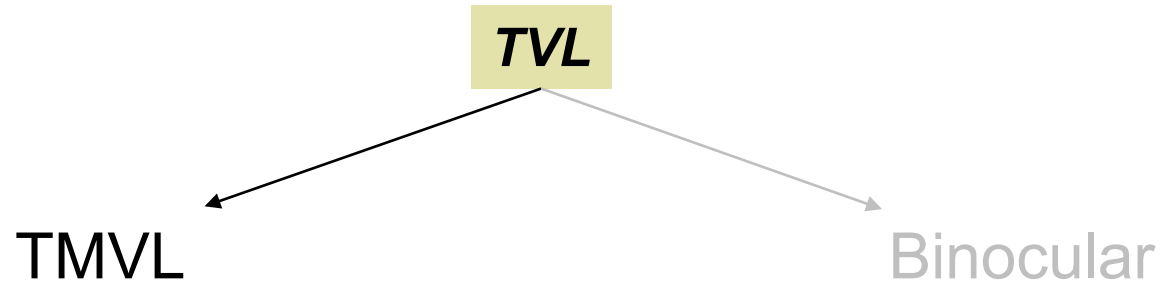
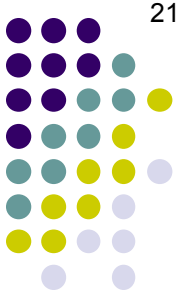
TVL

TMVL

Binocular

What is the classic description of TMVL 2ndry to retinal embolus?

- Diffuse ocular hypoperfusion
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What is the classic description of TMVL 2ndry to retinal embolus?

A moving fairly quickly across a portion (or all) of the VF

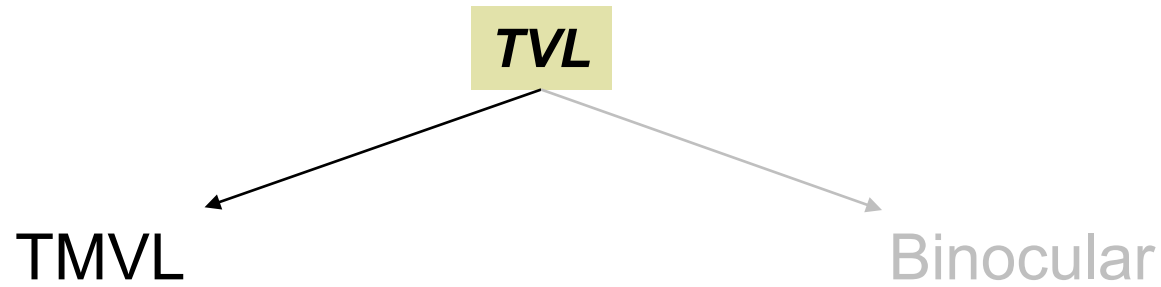
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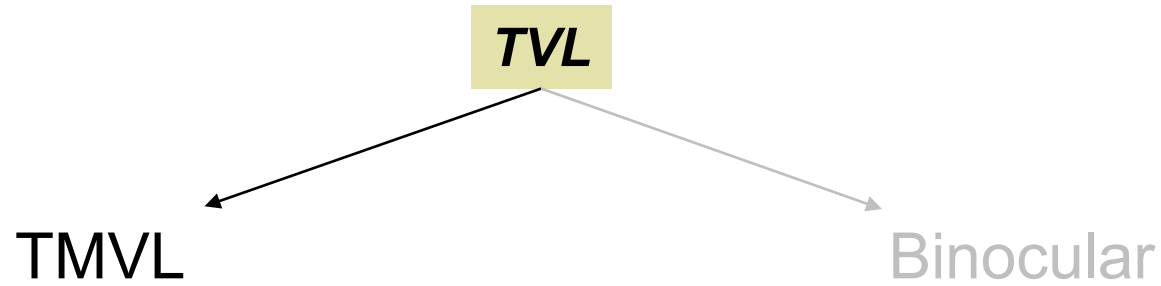
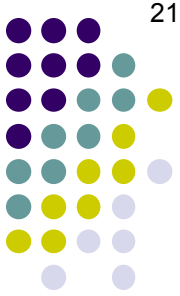
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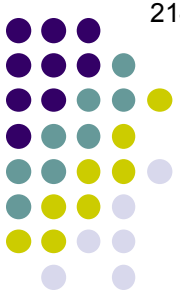
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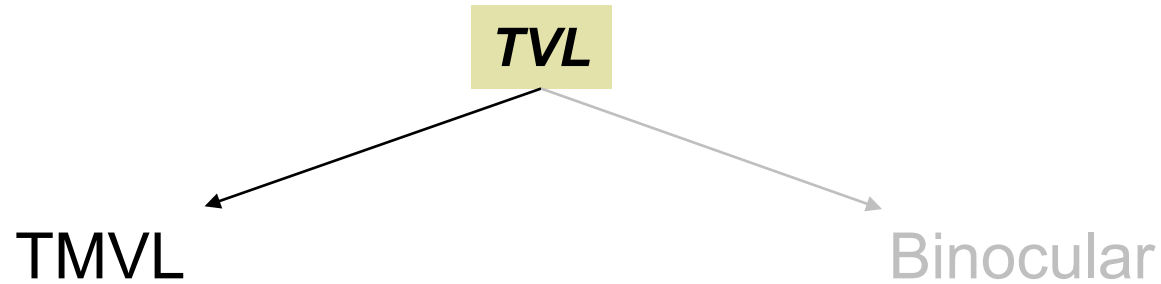
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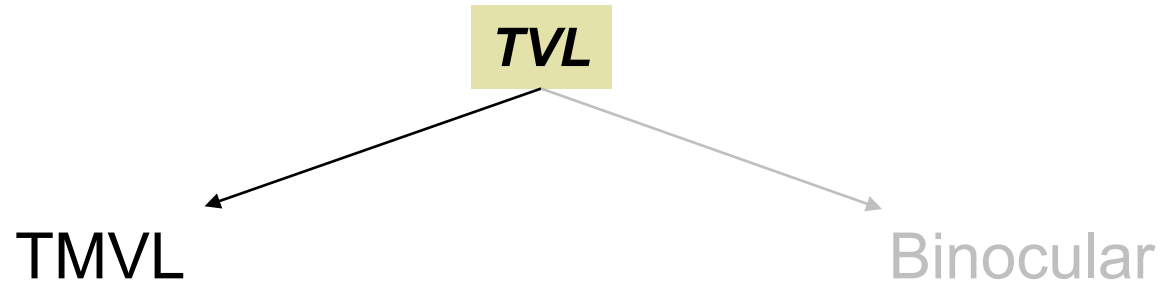
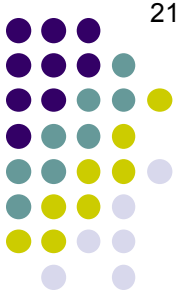
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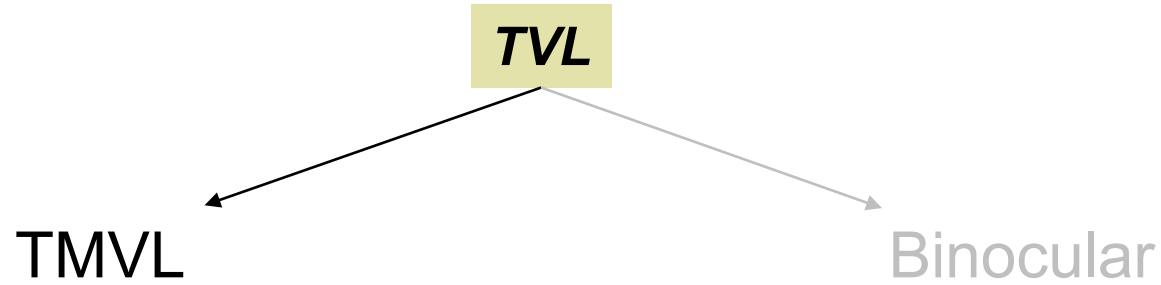
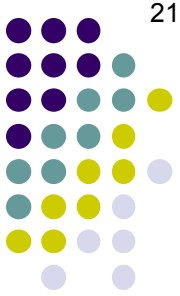
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 No, it is painless

How long until the vision loss resolves?
 Usually a matter of

seconds?
 minutes?
 hours?
 days?

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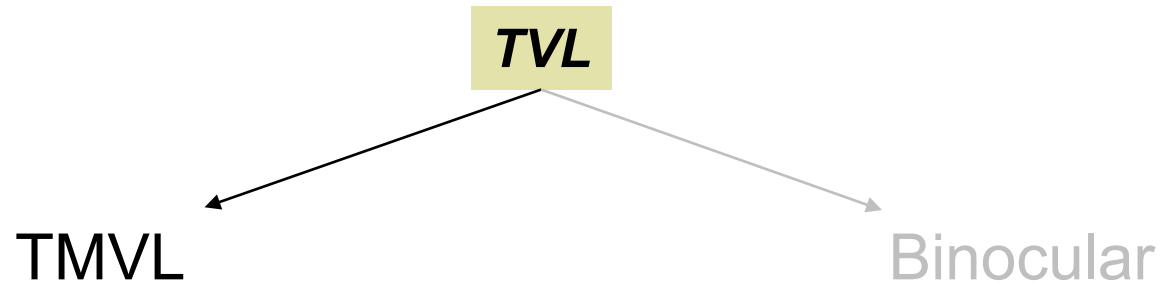
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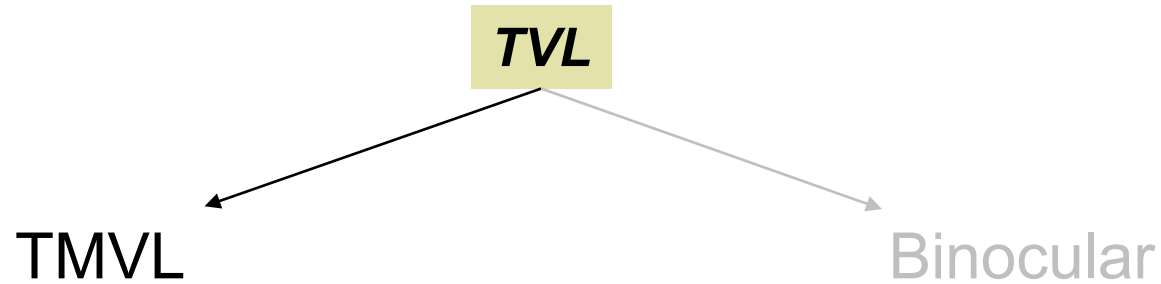
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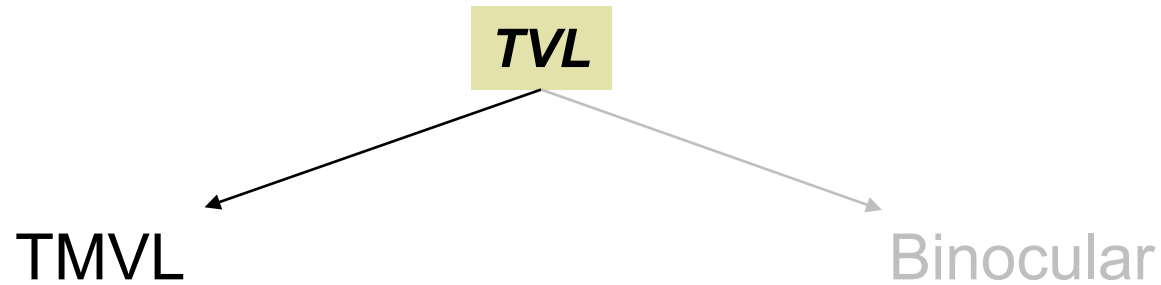
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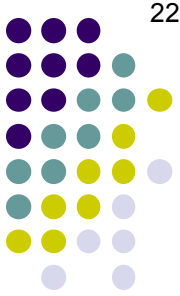
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TVL

TMVL

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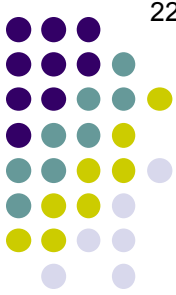
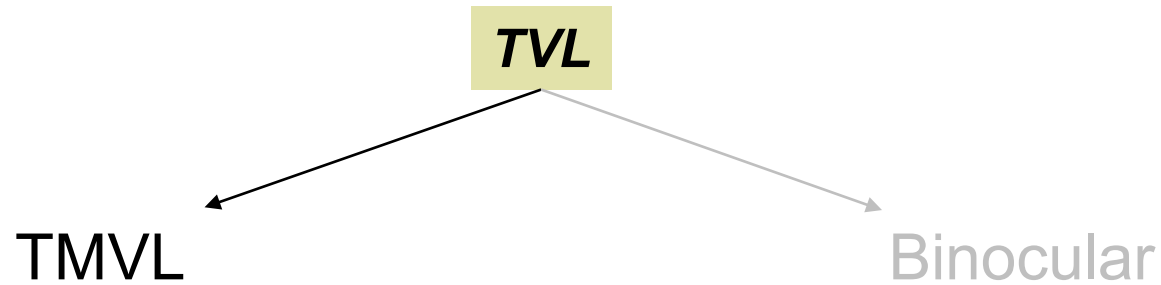
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There are none! A retinal TIA is a TIA, and must be managed as such! (We'll delve into management specifics shortly)

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TVL

In general terms, where do emboli usually lodge?

TMVL

— Ocular

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Q/A

TVL

In general terms, where do emboli usually lodge?
At a **two words** in the arterial tree

TMVL

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Usually a matter of minutes

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TVL

In general terms, where do emboli usually lodge?
At a branch point in the arterial tree

TMVL

Ocular

What is the classic description of TMVL 2ndry to retinal embolus?
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No, it is painless

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TVL

In general terms, where do emboli usually lodge?

At a branch point in the arterial tree. That is, an emboli will continue to float along in the bloodstream until it reaches a bifurcation for which it is too large to travel down either fork, and becomes lodged.

TMVL

What is the classic description of TMVL 2ndry to retinal embolus?

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What are the three types of embolus?

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TVL

What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

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TVL

What are the three types of emboli?

--Cholesterol

--Calcium

--Platelet-fibrin

Emboli composed of cholesterol are known by what eponymous name?

TMVL

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What are the three types of emboli?

--Cholesterol

--Calcium

--Platelet-fibrin

Emboli composed of cholesterol are known by what eponymous name?

Hollenhorst plaque

What is the classic description of TMVL 2ndry to retinal embolus?

A curtain moving fairly quickly across a portion (or all) of the VF

Is it associated with pain?

No, it is painless

How long until the vision loss resolves?

Usually a matter of minutes

Is it fair to call TMVL 2ndry to an embolus a 'retinal TIA'?

It is indeed

*In terms of how we should think about/approach them, what are the key differences between a retinal TIA and a cerebral one?*There are none! A retinal TIA *is* a TIA, and must be managed as such! (We'll delve into management specifics shortly)

Diffuse ocular hypoperfusion

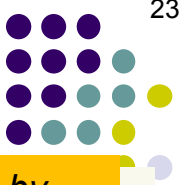
--OIS

--Stenosis of the great vessels

Embolization of retinal arterial tree

Occlusion in the retinal venous system

Vasospasm of the CRA



TVL

What are the three types of retinal emboli?

- Cholesterol
- Calcium
- Platelet-fibrin

Emboli composed of cholesterol are known by what eponymous name?

Hollenhorst plaque

What do Hollenhorst plaques look like on DFE?

TMVL

What is the classic description of TMVL 2ndry to retinal embolus?

A curtain moving fairly quickly across a portion (or all) of the VF

Is it associated with pain?

No, it is painless

How long until the vision loss resolves?

Usually a matter of minutes

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Diffuse ocular hypoperfusion

--OIS

--Stenosis of the great vessels

Embolization of retinal arterial tree

— Occlusion in the retinal venous system

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Q/A

TVL

What are the three types of emboli?

--Cholesterol

--Calcium

--Platelet-fibrin

Emboli composed of cholesterol are known by what eponymous name?

Hollenhorst plaque

What do Hollenhorst plaques look like on DFE?

color(ish)

globules described as

appearance

TMVL

What is the classic description of TMVL 2ndry to retinal embolus?

A curtain moving fairly quickly across a portion (or all) of the VF

Is it associated with pain?

No, it is painless

How long until the vision loss resolves?

Usually a matter of minutes

Is it fair to call TMVL 2ndry to an embolus a 'retinal TIA'?

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There are none! A retinal TIA is a TIA, and must be managed as such! (We'll delve into management specifics shortly)

Diffuse ocular hypoperfusion

--OIS

--Stenosis of the great vessels

Embolization of retinal arterial tree

— Occlusion in the retinal venous system

— Vasospasm of the CRA

A

TVL

TMVL

What are the three types of emboli?

--Cholesterol

--Calcium

--Platelet-fibrin

Emboli composed of cholesterol are known by what eponymous name?

Hollenhorst plaque

What do Hollenhorst plaques look like on DFE?

Yellowish globules described as 'refractile'

What is the classic description of TMVL 2ndry to retinal embolus?

A curtain moving fairly quickly across a portion (or all) of the VF

Is it associated with pain?

No, it is painless

How long until the vision loss resolves?

Usually a matter of minutes

Is it fair to call TMVL 2ndry to an embolus a 'retinal TIA'?

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In terms of how we should think about/approach them, what are the key differences between a retinal TIA and a cerebral one?

There are none! A retinal TIA is a TIA, and must be managed as such! (We'll delve into management specifics shortly)

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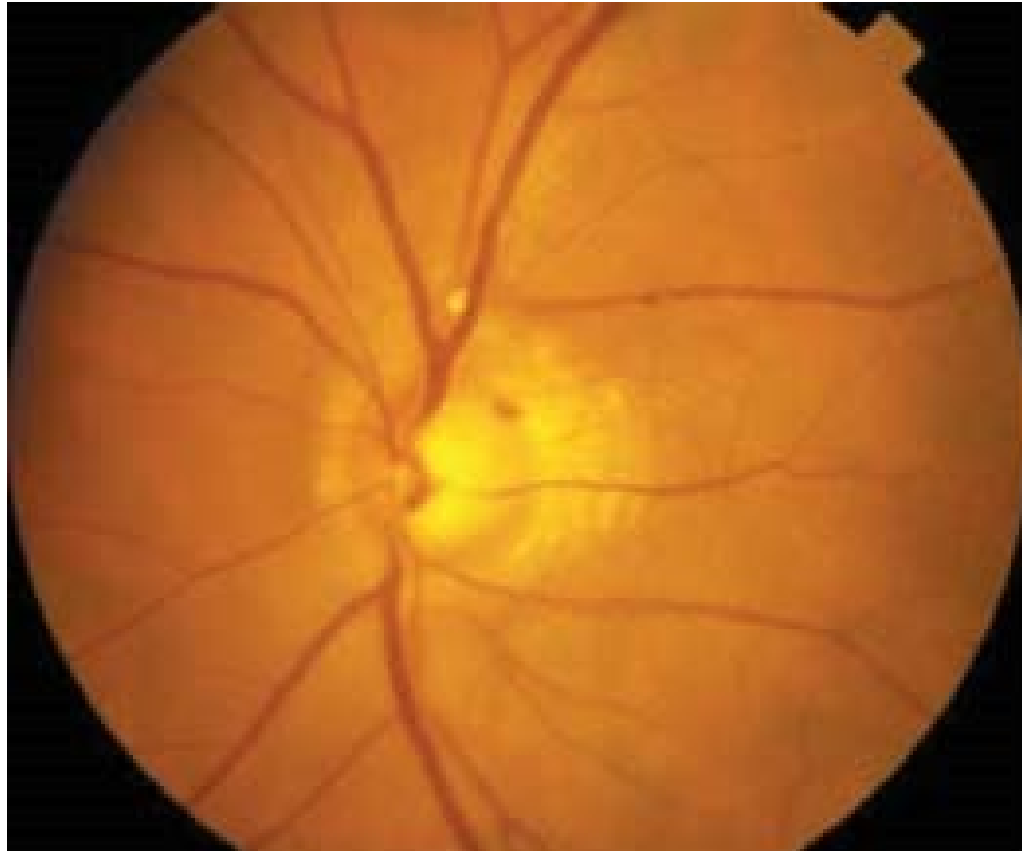
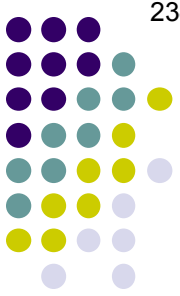
--OIS

--Stenosis of the great vessels

Embolization of retinal arterial tree

Occlusion in the retinal venous system

Vasospasm of the CRA

TVL

Hollenhorst plaque at the bifurcation of a retinal arteriole

**TVL****TMVL***What are the three***--Cholesterol****--Calcium****--Platelet-fibrin***Emboli composed of cholesterol are known by what eponymous name?**Hollenhorst plaque**What do Hollenhorst plaques look like on DFE?**Yellowish, cholesterol described as "refractile"*

In two words, what pathologic entity is the source of cholesterol emboli?

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA



A

TVL

TMVL

What are the three

--Cholesterol

--Calcium

--Platelet-fibrin

Emboli composed of cholesterol are known by what eponymous name?

Hollenhorst plaque

What do Hollenhorst plaques look like on DFE?

Yellowish, cholesterol described as "refractile"

In two words, what pathologic entity is the source of cholesterol emboli?

Atheromatous plaques

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA

TVL

TMVL

What are the three types of emboli?

- Cholesterol
- Calcium
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What do Hollenhorst plaques look like on DFE?

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Atheromatous plaques

Within which vascular structure are TVL-implicated plaques most likely to be located?

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

A

TVL

TMVL

What are the three types of emboli?

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--Calcium

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In two words, what pathologic entity is the source of cholesterol emboli?

Atheromatous plaques

Within which vascular structure are TVL-implicated plaques most likely to be located?

The carotid artery

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA

TVL

TMVL

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--Cholesterol

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The Neuro book mentions another "common" (their word) location for atheromatous plaques that can give rise to cholesterol emboli—what is it?— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA

A

TVL

TMVL

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Atheromatous plaques

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The carotid artery

The Neuro book mentions another "common" (their word) location for atheromatous plaques that can give rise to cholesterol emboli—what is it?

The aortic arch

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA

TVL

TMVL

*What are the three**--Cholesterol**--Calcium**--Platelet-fibrin**Emboli composed of cholesterol are known by what eponymous name?**Hollenhorst plaque**What do Hollenhorst plaques look like on DFE?**Yellowish, cholesterol described as "refractile"**In two words, what pathologic entity is the source of cholesterol emboli?**Atheromatous plaques**Within which vascular structure are TVL-implicated plaques most likely to be located?**The carotid artery**Where specifically in the carotid system are such plaques most likely to form?*

- **Embolization of retinal arterial tree**

- Occlusion in the retinal venous system

- Vasospasm of the CRA

A

TVL

TMVL

What are the three types of emboli?

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The carotid artery

Where specifically in the carotid system are such plaques most likely to form?

The bifurcation

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA

TVL

TMVL

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How stenosed does the carotid lumen have to be for emboli to occur?

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA

A

TVL

TMVL

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The bifurcation

*How stenosed does the carotid lumen have to be for emboli to occur?*Emboli can occur at *any* degree of stenosis (in contrast to global hypoperfusion conditions, eg, OIS)— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA

TVL

TMVL

What are the three components of TVL?

- Cholesterol
- Calcium
- Platelet-fibrin

Emboli composed of cholesterol are known by what eponymous name?

Hollenhorst plaque

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The bifurcation

How stenosed does the carotid lumen have to be for emboli to occur?

Emboli can occur at *any* degree of stenosis (in contrast to global hypoperfusion conditions, eg, OIS)

What two characteristics of an atheromatous plaque increase the likelihood it will flick off emboli?

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

A

TVL

TMVL

What are the three types of emboli?

--Cholesterol

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--Platelet-fibrin

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*How stenosed does the carotid lumen have to be for emboli to occur?*Emboli can occur at *any* degree of stenosis (in contrast to global hypoperfusion conditions, eg, OIS)*What two characteristics of an atheromatous plaque increase the likelihood it will flick off emboli?*

If it is ulcerated and/or unstable

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA

Q



TVL

What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

— Ocular

What is the classic source of calcium emboli?

- Diffuse ocular hypoperfusion
 - OIS
 - Stenosis of the great vessels

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA

A

TVL

What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

— Ocular

What is the classic source of calcium emboli?

Diseased heart valves; eg, calcific aortic stenosis

— Diffuse ocular hypoperfusion

--OIS

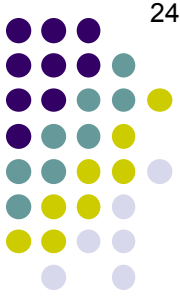
--Stenosis of the great vessels

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA





TVL

What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

— Ocular

What is the classic source of calcium emboli?

Diseased heart valves; eg, calcific aortic stenosis

Speaking of diseased heart valves: *There is a particular condition/history—classic for leading to heart-valve disease—that, if mentioned, should clue you in that an embolus is calcific. What history?*

— Diffuse ocular hypoperfusion

--OIS

--Stenosis of the great vessels

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA

A

TVL

What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

— Ocular

What is the classic source of calcium emboli?

Diseased heart valves; eg, calcific aortic stenosis

Speaking of diseased heart valves: *There is a particular condition/history—classic for leading to heart-valve disease—that, if mentioned, should clue you in that an embolus is calcific. What history?*
Rheumatic heart disease

— Diffuse ocular hypoperfusion

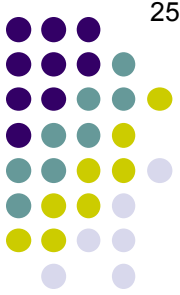
--OIS

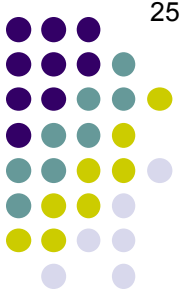
--Stenosis of the great vessels

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA



**TVL**

What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

— Ocular

What is the classic source of calcium emboli?

Diseased heart valves; eg, calcific aortic stenosis

What do calcium emboli look like on DFE?

— Diffuse ocular hypoperfusion

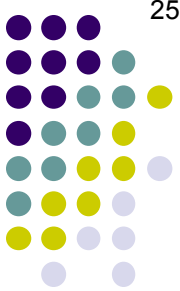
--OIS

--Stenosis of the great vessels

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA



TVL

What are the three types of embolus?
 --Cholesterol
 --Calcium
 --Platelet-fibrin

TMVL

– Ocular

What is the classic source of calcium emboli?
 Diseased heart valves; eg, calcific aortic stenosis

What do calcium emboli look like on DFE?

color and shape

- Diffuse ocular hypoperfusion
 - OIS
 - Stenosis of the great vessels
- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

A

TVL

What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

— Ocular

What is the classic source of calcium emboli?

Diseased heart valves; eg, calcific aortic stenosis

What do calcium emboli look like on DFE?

Chalk-white and round

— Diffuse ocular hypoperfusion

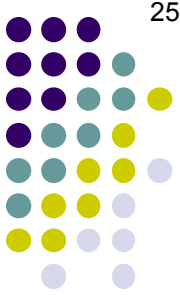
--OIS

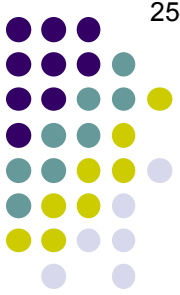
--Stenosis of the great vessels

— **Embolization of retinal arterial tree**

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— Vasospasm of the CRA





TVL

What are the three types of embolus?

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- Platelet-fibrin

TMVL

— Ocular

What is the classic source of calcium emboli?

Diseased heart valves; eg, calcific aortic stenosis

What do calcium emboli look like on DFE?

Chalk-white and round

Do they tend to be larger, or smaller than Hollenhorst plaques?

— Diffuse ocular hypoperfusion

--OIS

--Stenosis of the great vessels

— **Embolization of retinal arterial tree**

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A

TVL

What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

— Ocular

What is the classic source of calcium emboli?

Diseased heart valves; eg, calcific aortic stenosis

What do calcium emboli look like on DFE?

Chalk-white and round

Do they tend to be larger, or smaller than Hollenhorst plaques?

Larger. In fact, they tend to be so large as to not be able to pass farther along the arterial tree than the first bifurcation, ie, they often lodge at the ONH itself.

— Diffuse ocular hypoperfusion

--OIS

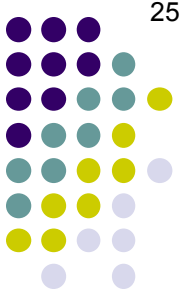
--Stenosis of the great vessels

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA



TVL

Calcific embolus with branch retinal artery occlusion

Q

TVL

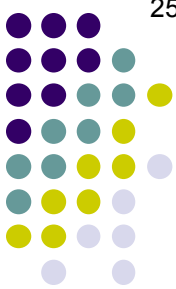
What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

Ocular

ocular



What is the classic source of platelet-fibrin emboli?

- Diffuse ocular hypoperfusion
- OIS
- Stenosis of the great vessels

Embolization of retinal arterial tree

Occlusion in the retinal venous system

Vasospasm of the CRA

Q/A

TVL

What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

Ocular

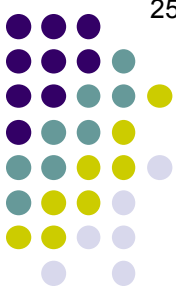
What is the classic source of platelet-fibrin emboli?
A thrombus in the atrium of a pt with dx

- Diffuse ocular hypoperfusion
 - OIS
 - Stenosis of the great vessels

Embolization of retinal arterial tree

Occlusion in the retinal venous system

Vasospasm of the CRA



A

TVL

What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

Ocular



What is the classic source of platelet-fibrin emboli?
 A thrombus in the atrium of a pt with A-fib

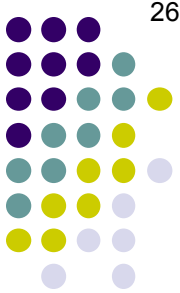
- Diffuse ocular hypoperfusion
- OIS
- Stenosis of the great vessels

Embolization of retinal arterial tree

Occlusion in the retinal venous system

Vasospasm of the CRA

Q



TVL

What are the three types of embolus?
--Cholesterol
--Calcium
--Platelet-fibrin

TMVL

Ocular

What is the classic source of platelet-fibrin emboli?
A thrombus in the atrium of a pt with A-fib

What do platelet-fibrin emboli look like on DFE?

- Diffuse ocular hypoperfusion
 - OIS
 - Stenosis of the great vessels
- Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

A

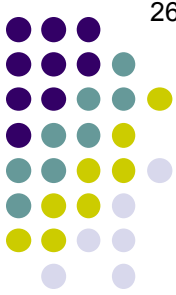
TVL

What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

Ocular



What is the classic source of platelet-fibrin emboli?

A thrombus in the atrium of a pt with A-fib

What do platelet-fibrin emboli look like on DFE?

Unlike their calcific and cholesterol cousins, platelet-fibrin emboli are not compact structures—they tend to be elongated, filling a small section of an arteriole.

Diffuse ocular hypoperfusion

--OIS

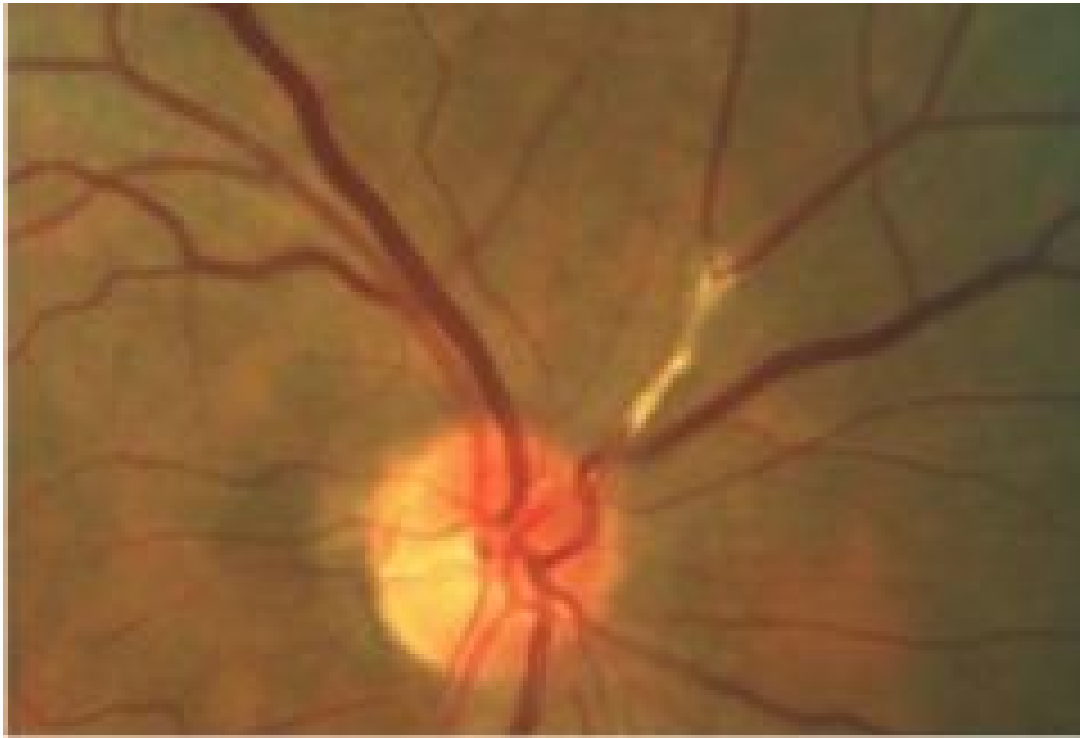
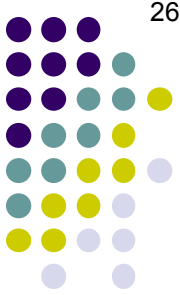
--Stenosis of the great vessels

Embolization of retinal arterial tree

Occlusion in the retinal venous system

Vasospasm of the CRA

TVL



Platelet-fibrin embolus

A

TVL

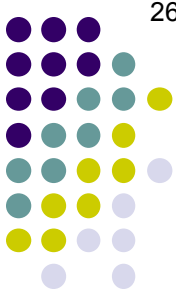
What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

Ocular

ocular



What is the classic source of platelet-fibrin emboli?

A thrombus in the atrium of a pt with A-fib

What do platelet-fibrin emboli look like on DFE?

Unlike their calcific and cholesterol cousins, platelet-fibrin emboli are not compact structures—they tend to be elongated, filling a small section of an arteriole. For this reason, they may lodge in and occlude an arteriole at a non-branch point.*

Diffuse ocular hypoperfusion

--OIS

--Stenosis of the great vessels

Embolization of retinal arterial tree

Occlusion in the retinal venous system

Vasospasm of the CRA

*This is the caveat to the 'bifurcation rule' alluded to earlier



TVL

When you hear 'retinal arteriole occlusion at non-branch points,' another specific condition should come to mind. What is it?

ocular

compact structures—
reason, they may

lodge in an

occlude an arteriole at a non-branch point.

Diffuse ocular hypoperfusion
--OIS
--Stenosis of the great vessels

Embolization of retinal arterial tree

Occlusion in the retinal venous system

Vasospasm of the CRA



A

TVL

When you hear 'retinal arteriole occlusion at non-branch points,' another specific condition should come to mind. What is it?

Susac syndrome

ocular

compact structures—
reason, they may

lodge in an

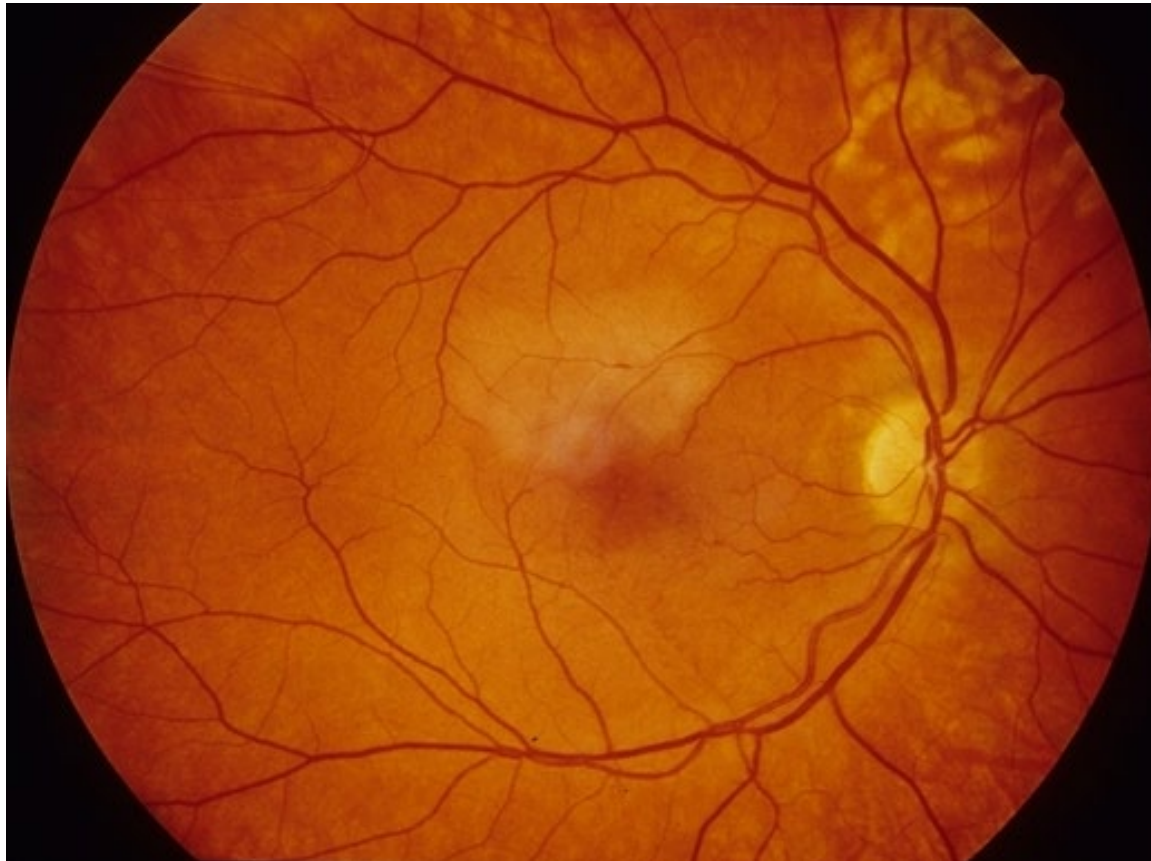
occlude an arteriole at a non-branch point.

Diffuse ocular hypoperfusion
--OIS
--Stenosis of the great vessels

Embolization of retinal arterial tree

Occlusion in the retinal venous system

Vasospasm of the CRA

TVL

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



TVL

When you hear 'retinal arteriole occlusion at non-branch points,' another specific condition should come to mind. What is it?

Susac syndrome

What is the classic presentation?

ocular

compact structures—
reason, they may

lodge in an

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Diffuse ocular hypoperfusion

--OIS

--Stenosis of the great vessels

Embolization of retinal arterial tree

Occlusion in the retinal venous system

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TVL

A

When you hear 'retinal arteriole occlusion at non-branch points,' another specific condition should come to mind. What is it?

Susac syndrome

What is the classic presentation?

Multiple bilateral BRAOs occurring at non-branch points

ocular

compact structures—
reason, they may

lodge in an

occlude an arteriole at a non-branch point.

Diffuse ocular hypoperfusion

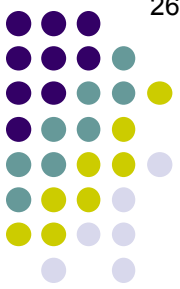
--OIS

--Stenosis of the great vessels

Embolization of retinal arterial tree

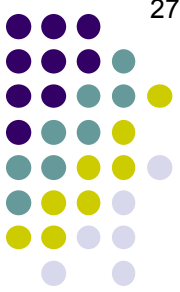
Occlusion in the retinal venous system

Vasospasm of the CRA

TVL

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

TVL



When you hear 'retinal arteriole occlusion at non-branch points,' another specific condition should come to mind. What is it?

Susac syndrome

What is the classic presentation?

Multiple bilateral BRAOs occurring at non-branch points

Is it common, or rare?

ocular

compact structures—
reason, they may

lodge in an

occlude an arteriole at a non-branch point.

Diffuse ocular hypoperfusion

--OIS

--Stenosis of the great vessels

Embolization of retinal arterial tree

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Vasospasm of the CRA



TVL

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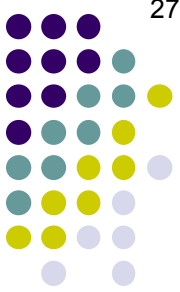
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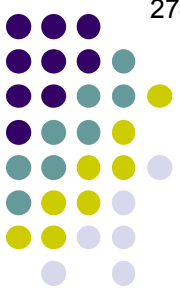
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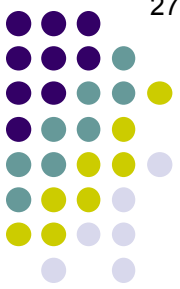
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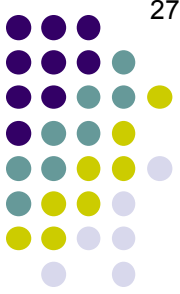
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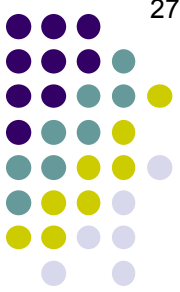
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--C: ?

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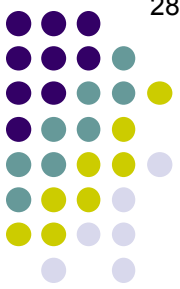
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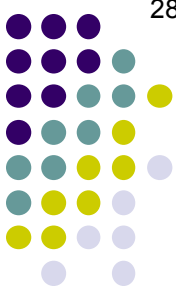
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For more on Susac syndrome, see slide-set R68

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TVL

What are the three types of embolus?

- Cholesterol
- Calcium
- Platelet-fibrin

TMVL

Let's keep it 100 for a minute. Clinically speaking, an embolus is an embolus, isn't it? Other than as a topic for torturing residents, does it really matter what sort of embolus is involved?

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The book mentions several antiplatelet agents by name—
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-- ? + ?

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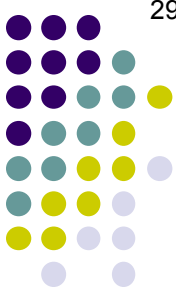
--Cholesterol emboli, which most commonly arise from carotid dz, are managed with **antiplatelet agents**.

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- Aspirin
- Aspirin + dipyridamole
- Clopidogrel

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Factoid—no Q

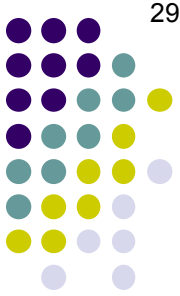
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--Platelet-fibrin emboli, which usually arise from thrombi owing to AFib, are managed with [] and/or the so-called []

three words

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- Apixaban
- Rivaroxaban
- Dagibatran

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- Better safety profile
- Do not require routine monitoring

direct oral anticoagulants (DOACs)

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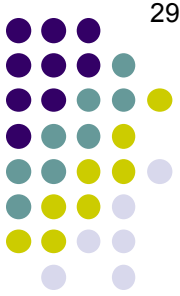
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TVL

In a pt with TMVL, what should push you to suspect an embolic cause?

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

Q/A

TVL

In a pt with TMVL, what should push you to suspect an embolic cause?
Finding that you've ruled out ocular and orbital causes, as well as having concluded that the likelihood of [redacted] is low

- **Embolization of retinal arterial tree**
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In a pt with TMVL, what should push you to suspect an embolic cause?
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OK, so I've concluded the acute case of TMVL sitting in front of me is likely embolic in origin. What now?

- **Embolization of retinal arterial tree**
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Finding that you've ruled out ocular and orbital causes, as well as having concluded that the likelihood of GCA is low

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Well, they need a workup

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

Q

TVL

In a pt with TMVL, what should push you to suspect an embolic cause?
Finding that you've ruled out ocular and orbital causes, as well as having concluded that the likelihood of GCA is low

OK, so I've concluded the acute case of TMVL sitting in front of me is likely embolic in origin. What now?
Well, they need a workup

In a nutshell, what is the goal of the workup?

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

Q/A

TVL

In a pt with TMVL, what should push you to suspect an embolic cause?

Finding that you've ruled out ocular and orbital causes, as well as having concluded that the likelihood of GCA is low

OK, so I've concluded the acute case of TMVL sitting in front of me is likely embolic in origin. What now?

Well, they need a workup

In a nutshell, what is the goal of the workup?

To identify the two words

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

A**TVL**

In a pt with TMVL, what should push you to suspect an embolic cause?
Finding that you've ruled out ocular and orbital causes, as well as having concluded that the likelihood of GCA is low

OK, so I've concluded the acute case of TMVL sitting in front of me is likely embolic in origin. What now?
Well, they need a workup

In a nutshell, what is the goal of the workup?
To identify the embolic source

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

Q

TVL

In a pt with TMVL, what should push you to suspect an embolic cause?
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OK, so I've concluded the acute case of TMVL sitting in front of me is likely embolic in origin. What now?
Well, they need a workup

In a nutshell, what is the goal of the workup?
To identify the embolic source

Who should do the workup?

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

A

TVL

In a pt with TMVL, what should push you to suspect an embolic cause?
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OK, so I've concluded the acute case of TMVL sitting in front of me is likely embolic in origin. What now?
Well, they need a workup

In a nutshell, what is the goal of the workup?
To identify the embolic source

Who should do the workup?
Ideally an ER-affiliated Stroke Center; otherwise, the ER

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA



TVL

In a pt with TMVL, what should push you to suspect an embolic cause?

Finding that you've ruled out ocular and orbital causes, as well as having concluded that the likelihood of GCA is low

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In a nutshell, what is the goal of the workup?

To identify the embolic source

Who should do the workup?

Ideally an ER-affiliated Stroke Center; otherwise, the ER

*Who should **not** do the workup?*

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

A

TVL

In a pt with TMVL, what should push you to suspect an embolic cause?

Finding that you've ruled out ocular and orbital causes, as well as having concluded that the likelihood of GCA is low

OK, so I've concluded the acute case of TMVL sitting in front of me is likely embolic in origin. What now?

Well, they need a workup

In a nutshell, what is the goal of the workup?

To identify the embolic source

Who should do the workup?

Ideally an ER-affiliated Stroke Center; otherwise, the ER

*Who should **not** do the workup?*

You, and/or the pt's PCP via an outpt referral. Remember, a retinal TIA *is* a TIA.

If a pt reported a recent two-minute spell of aphasia, would you refer them to their PCP for evaluation? (Please tell me you said no.) A retinal TIA is no different.

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

Q

TVL

In a pt with TMVL, what should push you to suspect an embolic cause?
 Finding that you've ruled out ocular and orbital causes, as well as having concluded that the likelihood of GCA is low

OK, so I've concluded the acute case of TMVL sitting in front of me is likely embolic in origin. What now?
 Well, they need a workup

In a nutshell, what is the goal of the workup?

identify the embolic source

How does one go about identifying the embolic source?

ise, the ER

You, and/or the pt's PCP via an outpt referral. Remember, a retinal TIA *is* a TIA. If a pt reported a recent two-minute spell of aphasia, would you refer them to their PCP for evaluation? (Please tell me you said no.) A retinal TIA is no different.

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TVL

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OK, so I've concluded the acute case of TMVL sitting in front of me is likely embolic in origin. What now?
 Well, they need a workup

In a nutshell, what is the goal of the workup?

identify the embolic source

How does one go about identifying the embolic source?
 Well, recall that each embolus type is suggestive of a particular sort of pathology

You, and/or the pt's PCP via an outpt referral. Remember, a retinal TIA *is* a TIA. If a pt reported a recent two-minute spell of aphasia, would you refer them to their PCP for evaluation? (Please tell me you said no.) A retinal TIA is no different.

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- Vasospasm of the CRA

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TVL

In a pt with TMVL, what should push you to suspect an embolic cause?
 Finding that you've ruled out ocular and orbital causes, as well as having concluded that the likelihood of GCA is low

OK, so I've concluded the acute case of TMVL sitting in front of me is likely embolic in origin. What now?
 Well, they need a workup

In a nutshell, what is the goal of the workup?

identify the embolic source

How does one go about identifying the embolic source?

Well, recall that each embolus type is suggestive of a particular sort of pathology, which in turn is suggestive of particular locales at which the path might be found...

You, and/or the pt's PCP via an outpt referral. Remember, a retinal TIA *is* a TIA. If a pt reported a recent two-minute spell of aphasia, would you refer them to their PCP for evaluation? (Please tell me you said no.) A retinal TIA is no different.

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

TVL

In a pt with TMVL, what should push you to suspect an embolic cause?
Finding that you've ruled out ocular and orbital causes, as well as having concluded that the likelihood of GCA is low

OK, so I've concluded the acute case of TMVL sitting in front of me is likely embolic in origin. What now?
Well, they need a workup

In a nutshell, what is the goal of the workup?

identify the embolic source

How does one go about this?
Well, recall that each eye has a particular sort of papilla, and each has a particular sort of papilla of particular locales

***Before we get to the w/u,
let's hit a quick review***

You, and/or your patient, are on a TIA. If a pt reported a recent two-minute spell of aphasia, would you refer them to their PCP for evaluation? (Please tell me you said no.) A retinal TIA is no different.

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

Q

TVL



emboli

emboli

emboli

The three types of emboli are:

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA



A

TVL

Cholesterol emboli

Platelet-fibrin emboli

Calcium emboli

The three types of emboli are:

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

- Embolization of retinal arterial tree
- Occlusion in the retinal venous system
- Vasospasm of the CRA

Q

TVL



Cholesterol emboli
are suggestive of...

dz, **not** location

dz

Platelet-fibrin emboli

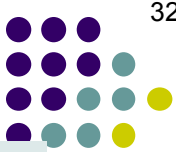
Calcium emboli

Cholesterol emboli are suggestive of:

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA



A

TVL

Cholesterol emboli
are suggestive of...
atheromatous dz

Platelet-fibrin emboli

Calcium emboli

Cholesterol emboli are suggestive of:

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

Q

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...

now location

Platelet-fibrin emboli

Calcium emboli

*Cholesterol emboli implicated in TMVL
are most likely to have originated in
atheromatous plaques of:*

identify the embolic source

How does one go about identifying the source of emboli?
Well, recall that each particular sort of pathologic process has a particular locale of predilection.

*Before we get to the w/u,
let's hit a quick review*

You, and/or your colleagues, are called to the bedside of a patient who has just had a TIA. If a pt reported a recent two-minute spell of aphasia, would you refer them to their PCP for evaluation? (Please tell me you said no.) A retinal TIA is no different.

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

Q/A

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids*

Platelet-fibrin emboli

Calcium emboli

*Cholesterol emboli implicated in TMVL
are most likely to have originated in
atheromatous plaques of:*

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

*But shout-out the **two words** as well, remember

A

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids*

Platelet-fibrin emboli

Calcium emboli

*Cholesterol emboli implicated in TMVL
are most likely to have originated in
atheromatous plaques of:*

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

— **Embolization of retinal arterial tree**

— Occlusion in the retinal venous system

— Vasospasm of the CRA

*But shout-out the aortic arch as well, remember

Q

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...

not location

dz

Calcium emboli

Platelet-fibrin emboli are suggestive of:

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA



A

TVL

Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz

Calcium emboli

Platelet-fibrin emboli are suggestive of:

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

Q

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...

structure and dz condition

Calcium emboli

*Platelet-fibrin emboli implicated in TMVL
are most likely to have originated in:*

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA



A

TVL

Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

Calcium emboli

*Platelet-fibrin emboli implicated in TMVL
are most likely to have originated in:*

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

Q

TVL

Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

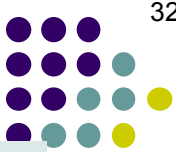
Calcium emboli
are suggestive of...
; dz

Calcific emboli
are suggestive of:

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA



A

TVL

Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

Calcium emboli
are suggestive of...
calcific dz

Calcific emboli
are suggestive of:

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

Q

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

Calcium emboli
are suggestive of...
calcific dz of...
the structure

*Calcium emboli implicated
in TMVL are most likely to
have originated in:*

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

How does one go about...
Well, recall that each
particular sort of pathologic
of particular locales

You, and/or... is a TIA.
If a pt reported a recent two-minute spell of aphasia, would you refer them to their
PCP for evaluation? (Please tell me you said no.) A retinal TIA is no different.

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

A

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

*Calcium emboli implicated
in TMVL are most likely to
have originated in:*

identify the embolic source

*Before we get to the w/u,
let's hit a quick review*

- **Embolization of retinal arterial tree**
- Occlusion in the retinal venous system
- Vasospasm of the CRA

Q

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

identify the embolic source

Now, the workup. What tests/exam maneuvers should be performed?

--?
--?
--?
--?
--?
--?
--?

Embolization of retinal arterial tree

← Vasospasm of the CRA

Q/A

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

identify the embolic source

Now, the workup. What tests/exam maneuvers should be performed?

- Check the pt's
- auscultation
- auscultation
- imaging
- Echocardiography
- EKG
- study

Embolization of retinal arterial tree

← Vasospasm of the CRA

A

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

identify the embolic source

Now, the workup. What tests/exam maneuvers should be performed?

- Check the pt's pulse
- Carotid auscultation
- Cardiac auscultation
- Carotid imaging
- Echocardiography
- EKG
- Holter study

Embolization of retinal arterial tree

← Vasospasm of the CRA



TVL

Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

identify the embolic source

Now, the workup. What tests/exam maneuvers should be performed?

- Check the pt's pulse
- Carotid auscultation
- Cardiac auscultation
- Carotid imaging
- Echocardiography
- EKG
- Holter study

Note: Some of you no doubt came up with a study that's not on this list. If so, no worries—we'll address that study shortly.

--Another very important study

— Vasospasm of the CRA

Q

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

identify the embolic source

Now, the workup. What tests/exam maneuvers should be performed?

For each, indicate the type(s) of emboli for which the test has direct bearing vis a vis making a diagnosis:

--Check the pt's pulse?

- Carotid auscultation
- Cardiac auscultation
- Carotid imaging
- Echocardiography
- EKG
- Holter study

Embolization of retinal arterial tree

← Vasospasm of the CRA

A

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

identify the embolic source

*Now, the workup. What tests/exam maneuvers should be performed?
For each, indicate the type(s) of emboli for which the test has direct
bearing vis a vis making a diagnosis:*

--Check the pt's pulse

- Carotid auscultation
- Cardiac auscultation
- Carotid imaging
- Echocardiography
- EKG
- Holter study

Embolization of retinal arterial tree

— Vasospasm of the CRA

Q

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

--Check the pt's pulse

What are you looking for via a pulse check?

identify the embolic source

Now, the workup. What tests/exam maneuvers should be performed?
For each, indicate the type(s) of emboli for which the test has direct bearing vis a vis making a diagnosis:

--Check the pt's pulse

--Carotid auscultation

--Cardiac auscultation

--Carotid imaging

--Echocardiography

--EKG

--Holter study

Embolization of retinal arterial tree

— Vasospasm of the CRA

A

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

--Check the pt's pulse

What are you looking for via a pulse check?

An irregularly irregular rhythm, which would increase
(although not cinch) the likelihood that AFib is present

identify the embolic source

Now, the workup. What tests/exam maneuvers should be performed?

For each, indicate the type(s) of emboli for which the test has direct bearing vis a vis making a diagnosis:

--Check the pt's pulse

--Carotid auscultation

--Cardiac auscultation

--Carotid imaging

--Echocardiography

--EKG

--Holter study

Embolization of retinal arterial tree

← Vasospasm of the CRA

Q

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

identify the embolic source

*Now, the workup. What tests/exam maneuvers should be performed?
For each, indicate the type(s) of emboli for which the test has direct
bearing vis a vis making a diagnosis:*

--Check the pt's pulse

--**Carotid auscultation?**

--Cardiac auscultation

--Carotid imaging

--Echocardiography

--EKG

--Holter study

Next

Embolization of retinal arterial tree

← Vasospasm of the CRA

A

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

--Carotid auscultation

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

--Check the pt's pulse

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

identify the embolic source

Now, the workup. What tests/exam maneuvers should be performed?

For each, indicate the type(s) of emboli for which the test has direct bearing vis a vis making a diagnosis:

- Check the pt's pulse
- Carotid auscultation**
- Cardiac auscultation
- Carotid imaging
- Echocardiography
- EKG
- Holter study

Embolization of retinal arterial tree

← Vasospasm of the CRA

Q

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

--Carotid auscultation

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

--Check the pt's pulse

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

What are you assessing for via carotid auscultation?

--Carotid auscultation

--Cardiac auscultation

--Carotid imaging

--Echocardiography

--EKG

--Holter study

Embolization of retinal arterial tree

— Vasospasm of the CRA

Q/A

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

--Carotid auscultation

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

--Check the pt's pulse

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

What are you assessing for via carotid auscultation?
The presence of a

--Carotid auscultation

--Cardiac auscultation

--Carotid imaging

--Echocardiography

--EKG

--Holter study

Embolization of retinal arterial tree

— Vasospasm of the CRA



A

TVL

Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

--Carotid auscultation

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

--Check the pt's pulse

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

What are you assessing for via carotid auscultation?
The presence of a bruit

--Carotid auscultation

--Cardiac auscultation

--Carotid imaging

--Echocardiography

--EKG

--Holter study

Embolization of retinal arterial tree

— Vasospasm of the CRA

Q

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

--Carotid auscultation

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

--Check the pt's pulse

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

What are you assessing for via carotid auscultation?
The presence of a bruit

Where (ie, at what anatomic landmark) should auscultation be performed?

--Carotid auscultation

--Cardiac auscultation

--Carotid imaging

--Echocardiography

--EKG

--Holter study

Embolization of retinal arterial tree

— Vasospasm of the CRA

Q/A

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

--Carotid auscultation

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

--Check the pt's pulse

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

What are you assessing for via carotid auscultation?
The presence of a bruit

Where (ie, at what anatomic landmark) should auscultation be performed?
The angle of the jaw (is the location of the carotid)

--Carotid auscultation

--Cardiac auscultation

--Carotid imaging

--Echocardiography

--EKG

--Holter study

Embolization of retinal arterial tree

— Vasospasm of the CRA



A

TVL

Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

--Carotid auscultation

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

--Check the pt's pulse

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

What are you assessing for via carotid auscultation?

The presence of a bruit

Where (ie, at what anatomic landmark) should auscultation be performed?

The angle of the jaw (is the location of the carotid bifurcation)

--Carotid auscultation

--Cardiac auscultation

--Carotid imaging

--Echocardiography

--EKG

--Holter study

Embolization of retinal arterial tree

— Vasospasm of the CRA

Q

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of...
the carotids

--Carotid auscultation

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of...
the atria in AFib

--Check the pt's pulse

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

What are you assessing for via carotid auscultation?

The presence of a bruit

Where (ie, at what anatomic landmark) should auscultation be performed?

The angle of the jaw (is the location of the carotid bifurcation)

If no bruit is present, is a carotid embolic source ruled out?

--Carotid auscultation

--Cardiac auscultation

--Carotid imaging

--Echocardiography

--EKG

--Holter study

Embolization of retinal arterial tree

— Vasospasm of the CRA



A

TVL

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What are you assessing for via carotid auscultation?

The presence of a bruit

Where (ie, at what anatomic landmark) should auscultation be performed?

The angle of the jaw (is the location of the carotid bifurcation)

If no bruit is present, is a carotid embolic source ruled out?

No! Remember, a bruit won't be present if the artery is either minimally occluded **or** totally occluded.

--Carotid auscultation

--Cardiac auscultation

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Embolization of retinal arterial tree

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identify the embolic source

Now, the workup. What tests/exam maneuvers should be performed?

For each, indicate the type(s) of emboli for which the test has direct bearing vis a vis making a diagnosis:

- Check the pt's pulse
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- Cardiac auscultation?**
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Next

Embolization of retinal arterial tree

— Vasospasm of the CRA

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the heart valves

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How (ie, via what modality/modalities) should the carotids be imaged?

How does this fit into the workup? What tests/exam maneuvers should be performed?

Well, recall that we're looking for emboli. For each, indicate the type(s) of emboli for which the test has direct bearing vis a vis making a diagnosis:

--Check the pt's pulse
--Carotid auscultation
--Cardiac auscultation
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--Cardiac auscultation

How (ie, via what modality/modalities) should the carotids be imaged?

Ultrasound, MRA and CTA are all acceptable (although the *Neuro* book indicates MRA/CTA are preferred)

How does this work? What tests/exam maneuvers should be performed?

Well, recall that the test has direct bearing vis a vis making a diagnosis:

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- Check the pt's pulse
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- Echo

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the heart valves

- Cardiac auscultation
- Echo

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Calcium emboli
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calcific dz of...
the heart valves

- Cardiac auscultation
- Echo

What are you looking for on echo vis a vis working up platelet-fibrin emboli?

- Check the pt's pulse
- Carotid auscultation
- Cardiac auscultation
- Carotid imaging
- Echocardiography**
- EKG
- Holter study

Embolization of retinal arterial tree

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- Check the pt's pulse
- Cardiac auscultation
- Echo

Calcium emboli
are suggestive of...
calcific dz of...
the heart valves

- Cardiac auscultation
- Echo

What are you looking for on echo vis a vis working up platelet-fibrin emboli?
Well, it would certainly cinch the diagnosis if an intra-atrial clot was observed...

- Check the pt's pulse
- Carotid auscultation
- Cardiac auscultation
- Carotid imaging
- Echocardiography**
- EKG
- Holter study

Embolization of retinal arterial tree

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- Check the pt's pulse
- Cardiac auscultation
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- Cardiac auscultation
- Echo

What are you looking for on echo vis a vis working up platelet-fibrin emboli?
Well, it would certainly cinch the diagnosis if an intra-atrial clot was observed...
Other than that, the main concern is for an four words that would
allow an embolus originating on the venous side of the circulatory system to
gain access to the arterial side.

- Check the pt's pulse
- Carotid auscultation
- Cardiac auscultation
- Carotid imaging
- Echocardiography**
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Embolization of retinal arterial tree

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--Cardiac auscultation
--Echo

What are you looking for on echo vis a vis working up platelet-fibrin emboli?
Well, it would certainly cinch the diagnosis if an intra-atrial clot was observed...
Other than that, the main concern is for an atrial septal wall defect that would allow an embolus originating on the venous side of the circulatory system to gain access to the arterial side.

--Check the pt's pulse
--Carotid auscultation
--Cardiac auscultation
--Carotid imaging
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Embolization of retinal arterial tree

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- Echo



identify the embolic s

What are you looking for on echo in this regard?

Now, the workup. What

For each, indicate the
bearing vis a vis makin

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- Cardiac auscultation
- Echo

identify the embolic source

What are you looking for on echo in this regard?
Evidence of cardiac valvular dz

Now, the workup. What

*For each, indicate the
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- Carotid auscultation
- Cardiac auscultation
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Embolization of retinal arterial tree

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- Echo

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Evidence of cardiac valvular dz

This exam goal may necessitate a modification in echo technique.
What mod?

Now, the workup. What

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Embolization of retinal arterial tree

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What are you looking for on echo in this regard?
Evidence of cardiac valvular dz

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What mod?

Employing a [redacted] approach rather than the
more commonly-employed [redacted] approach

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Embolization of retinal arterial tree

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What are you looking for on echo in this regard?
Evidence of cardiac valvular dz

This exam goal may necessitate a modification in echo technique.
What mod?

Employing a transesophageal (TEE) approach rather than the
more commonly-employed transthoracic (TTE) approach

Now, the workup. What?
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Embolization of retinal arterial tree

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Why might a TEE be indicated?

Now, the workup. What?
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Embolization of retinal arterial tree

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Evidence of cardiac valvular dz

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What mod?

Employing a transesophageal (TEE) approach rather than the more commonly-employed transthoracic (TTE) approach

Why might a TEE be indicated?

Because TTE doesn't visualize the **two words** well

Embolization of retinal arterial tree

— vasospasm of the CRA

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Embolization of retinal arterial tree

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*And last but by no means least: No matter what the putative embolism type is, all pts with acute retinal ischemia need another imaging study. What is it?
(This is the 'another important study' alluded to earlier.)*

How do
Well, it
partic
of part

- Carotid imaging
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- EKG
- Holter study**

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MRI

How c
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all pts with acute retinal ischemia

MRI-ing everyone with retinal ischemia seems like overkill. Why bother?

*How do
Well, it
particu
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- Carotid imaging
- Echocardiography
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- Holter study

Embolization of retinal arterial tree

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Q/A

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[all pts with acute retinal ischemia](#)

MRI-ing everyone with retinal ischemia seems like overkill. Why bother?

Because as many as % of retinal ischemia pts have cerebral infarctions

How do
Well, it
particu
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[all pts with acute retinal ischemia](#)

MRI-ing everyone with retinal ischemia seems like overkill. Why bother?

Because as many as 25% of retinal ischemia pts have cerebral infarctions

How do
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--EKG
--**Holter study**

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[all pts with acute retinal ischemia](#)

MRI-ing everyone with retinal ischemia seems like overkill. Why bother?
OK, but then why not just image those who present with S/S of TIA/CVA?
Because as many as 25% of retinal ischemia pts have cerebral infarctions

How do
Well, it
partic
of part

--Carotid imaging
--Echocardiography
--EKG
--**Holter study**

Embolization of retinal arterial tree

← Vasospasm of the CRA

A

TVL



Cholesterol emboli
are suggestive of...
atheromatous dz of

Platelet-fibrin emboli
are suggestive of...
thrombotic dz of

Calcium emboli
are suggestive of...
calcific dz of

[all pts with acute retinal ischemia](#)

*MRI-ing everyone with retinal ischemia seems like overkill. Why bother?
OK, but then why not just image those who present with S/S of TIA/CVA?
Because as many as 25% of retinal ischemia pts have cerebral infarctions.
These infarctions are often 'silent' (ie, neurologically asymptomatic).*

*How do
Well, it
particu
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And last but by no means least: No matter what the putative embolism type is, all pts with acute retinal ischemia need another imaging study. What is it? (This is the 'another important study' alluded to earlier.)

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There's a particular MRI sequence the Neuro book stresses must be obtained—what is it?

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It is especially good for revealing brain infarctions

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If DWI reveals acute infarction, what should be done?

The pt should be admitted to the Stroke service

--Carotid imaging
--Echocardiography
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of par

Why this particular study?

It is especially good for revealing brain infarctions

but silent

If DWI reveals acute infarction, what should be done?

What should be done if the DWI-revealed acute infarct is silent?

zation of retinal arterial tree

--Holter study

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The pt should be admitted to the Stroke service

What should be done if the DWI-revealed acute infarct is silent?

Makes no difference—the pt should still be admitted

--Holter study

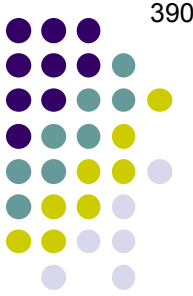
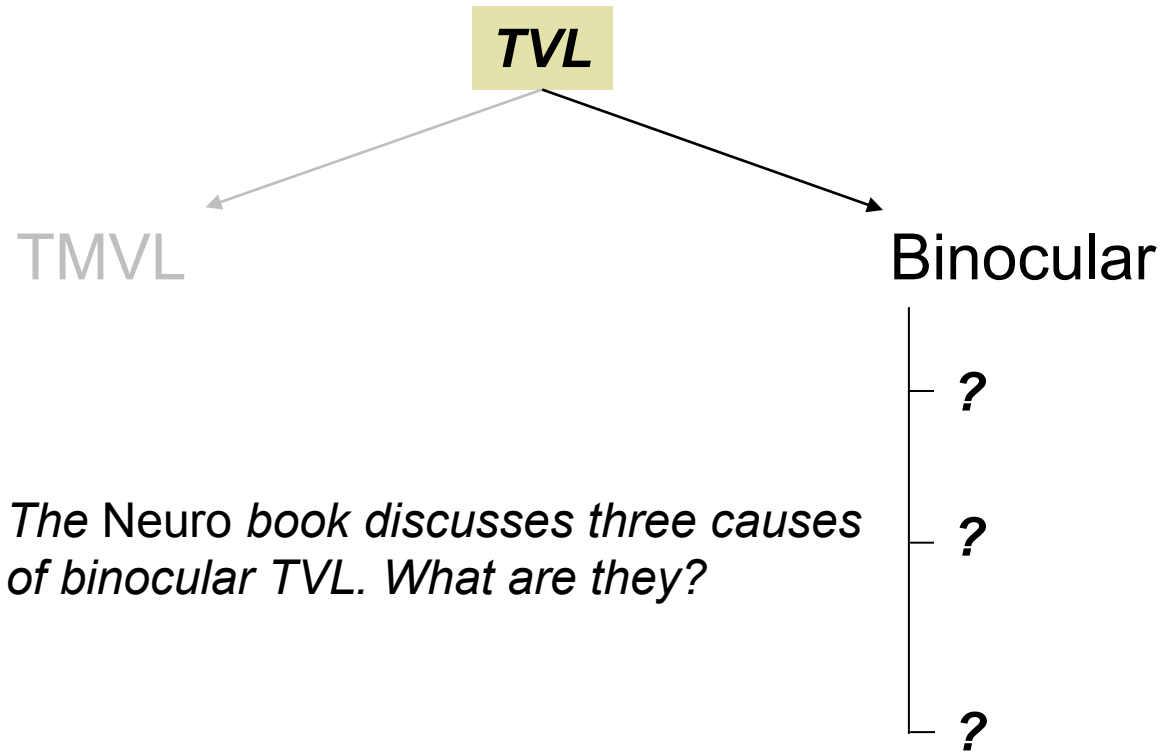
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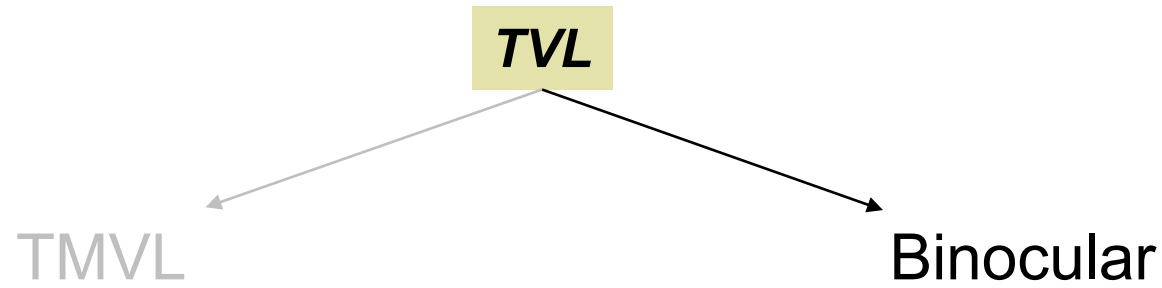


(This is a good point in the set to take a break)

Q



A

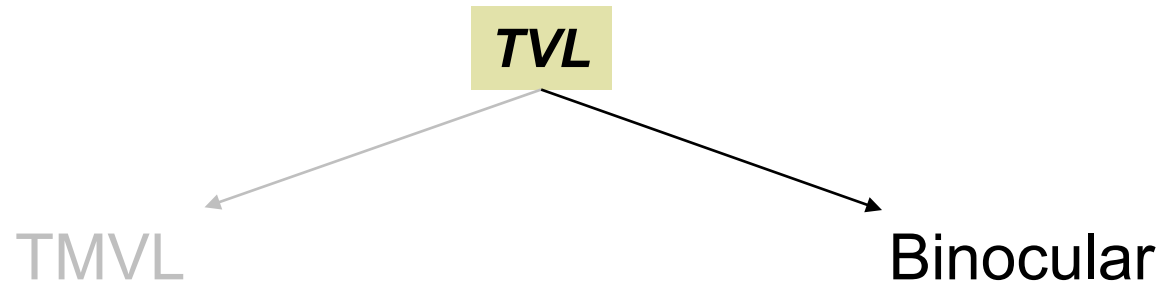
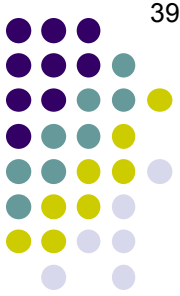


The Neuro book discusses three causes of binocular TVL. What are they?

- Migraine
- Posterior circulation abnormality
- Occipital structural abnormality



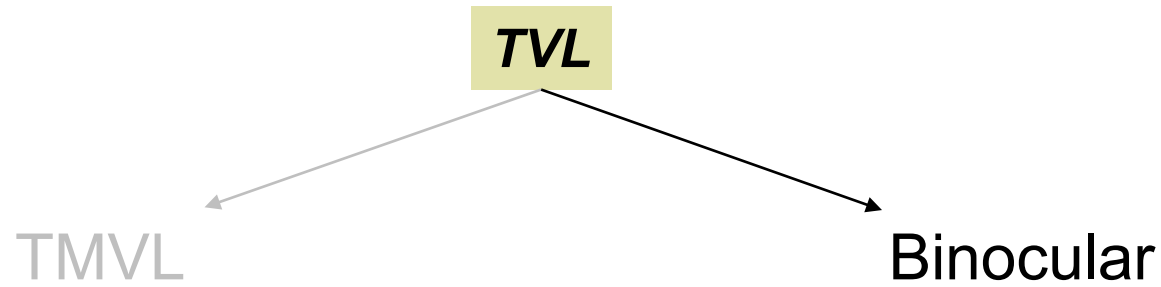
Q



The Neuro book discusses three causes of binocular TVL. What are they?

Actually, the book does touch upon a fourth cause—what is it?

- Migraine
- Posterior circulation abnormality
- Occipital structural abnormality
- ?

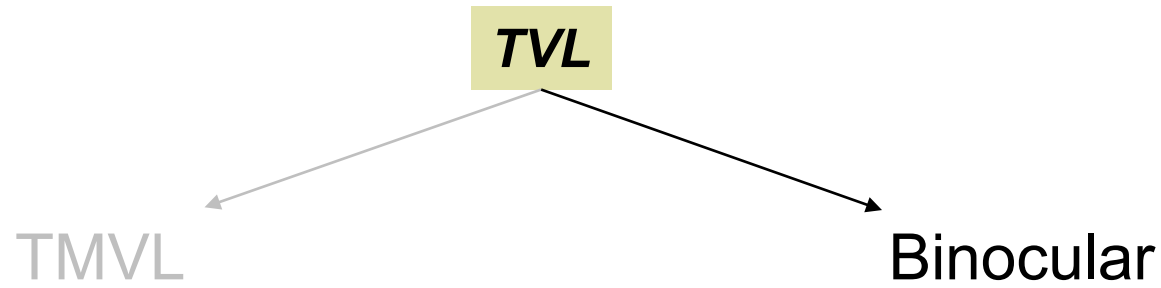
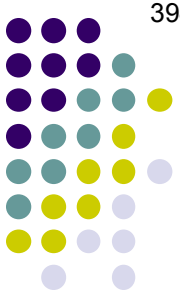
**A**

The Neuro book discusses three causes of binocular TVL. What are they?

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Occipital seizures

- Migraine
- Posterior circulation abnormality
- Occipital structural abnormality
- *Occipital seizures*

Q



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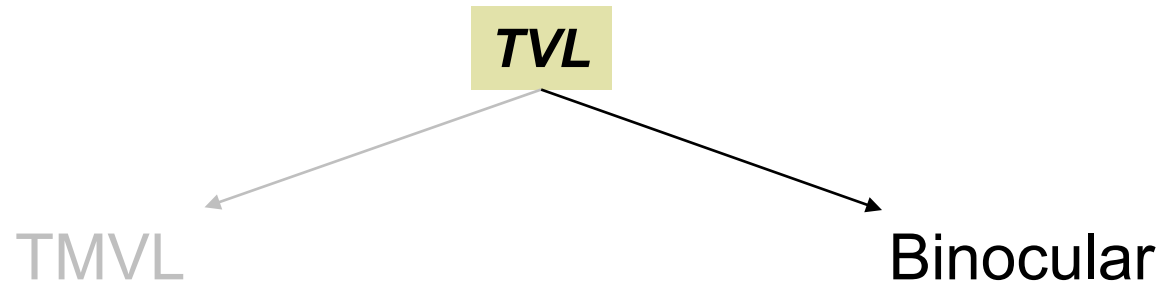
Actually, the book does touch upon a fourth cause—what is it?
Occipital seizures

Are occipital seizures a common cause of binocular TVL?

- Migraine
- Posterior circulation abnormality
- Occipital structural abnormality
- *Occipital seizures*



A

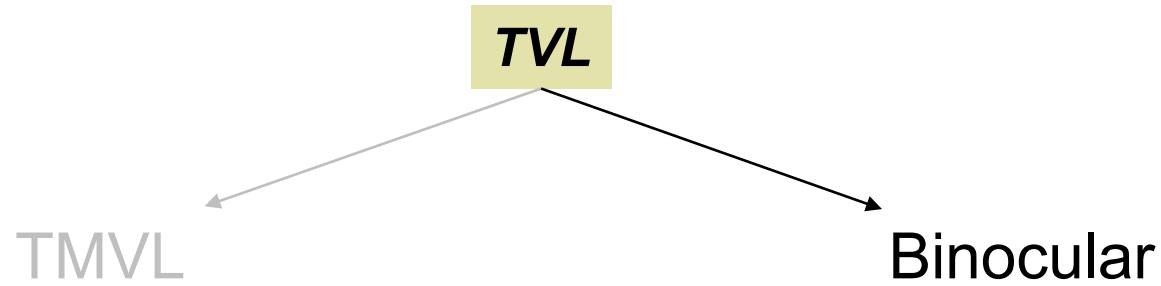
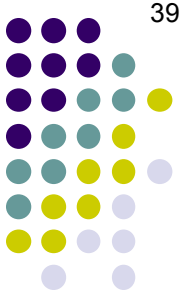


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No—they are “very uncommon” to quote the *Neuro* book

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- Posterior circulation abnormality
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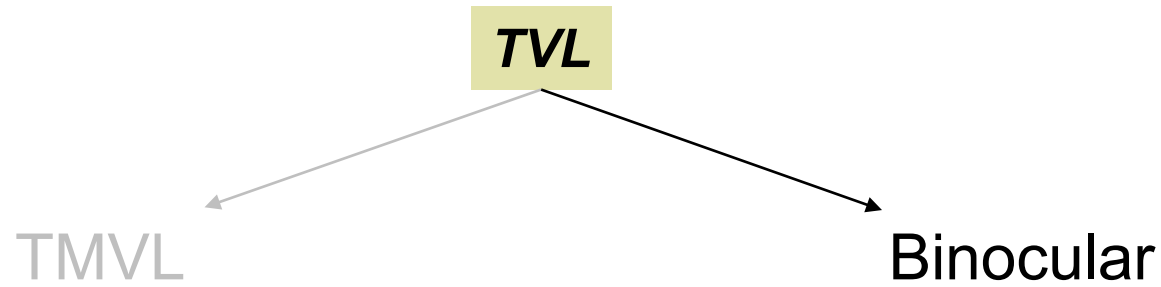
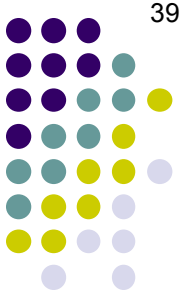
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How long does seizure-induced TVL last?

- Migraine
- Posterior circulation abnormality
- Occipital structural abnormality
- *Occipital seizures*



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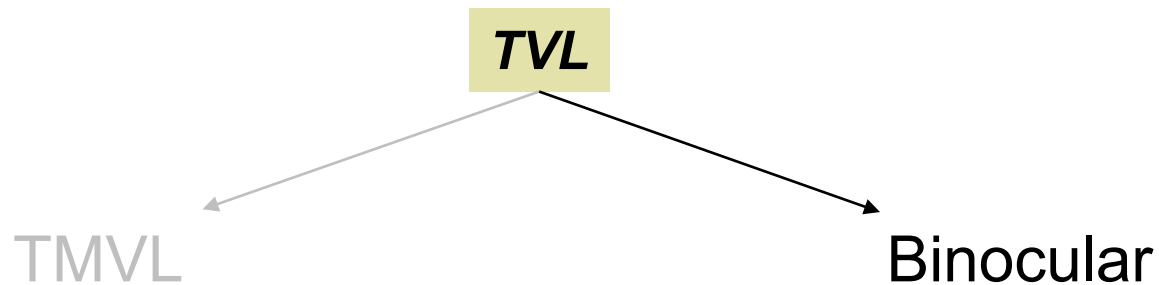
Seconds?
Minutes?
Hours?
Days?

, usually (an important diagnostic consideration)

- Migraine
- Posterior circulation abnormality
- Occipital structural abnormality
- *Occipital seizures*



A



The Neuro book discusses three causes of binocular TVL. What are they?

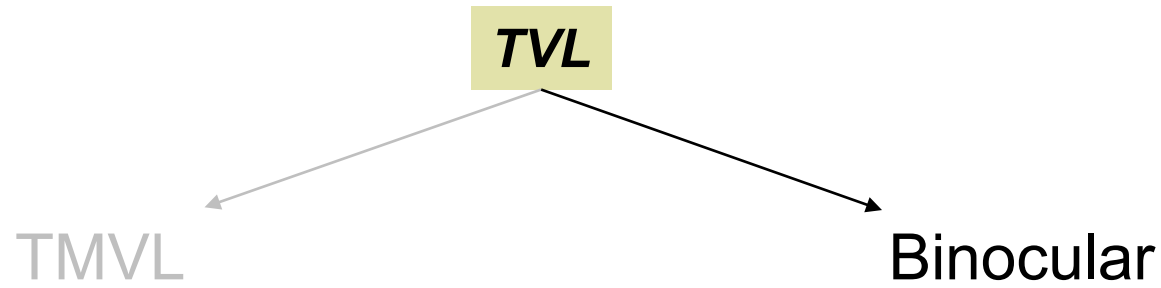
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Seconds, usually (an important diagnostic consideration)

- Migraine
- Posterior circulation abnormality
- Occipital structural abnormality
- *Occipital seizures*

Q

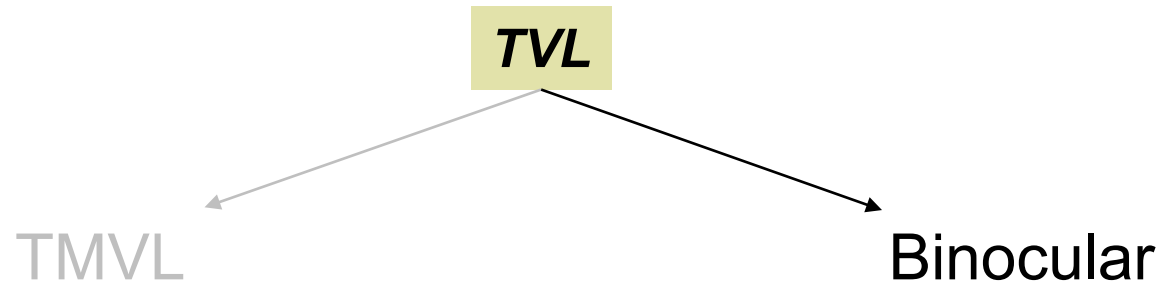


Of these, which is most common?

- *Migraine?*
- *Posterior circulation abnormality?*
- *Occipital structural abnormality?*



A



Of these, which is most common?

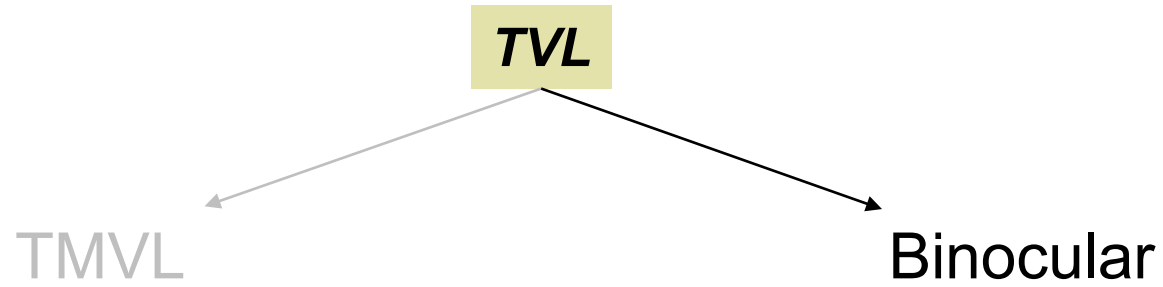
Migraine

Posterior circulation abnormality

Occipital structural abnormality



Q

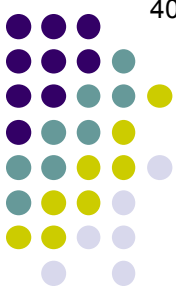
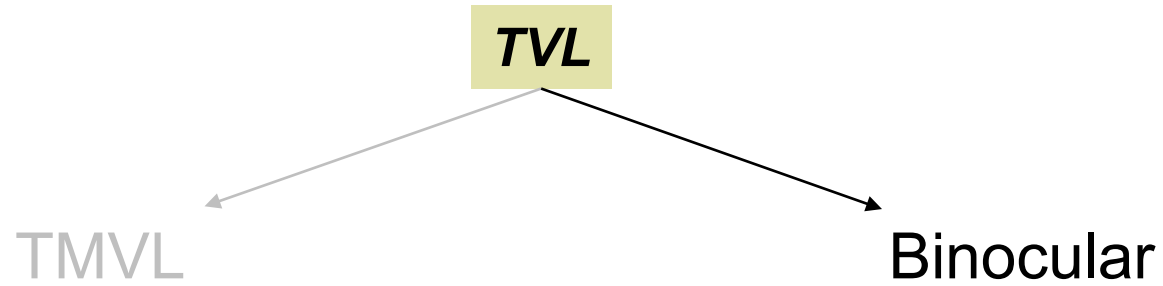


What buzzword is the general term for vision changes associated with migraine?

Migraine

posterior circulation
normality

occipital structural
normality

A

What buzzword is the general term for vision changes associated with migraine?

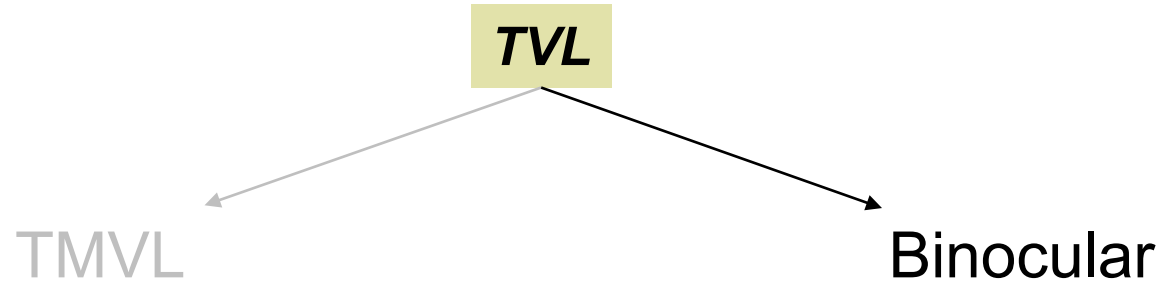
'Aura'

Migraine

posterior circulation
abnormality

occipital structural
abnormality

Q



What buzzword is the general term for vision changes associated with migraine?
'Aura'

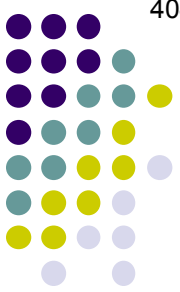
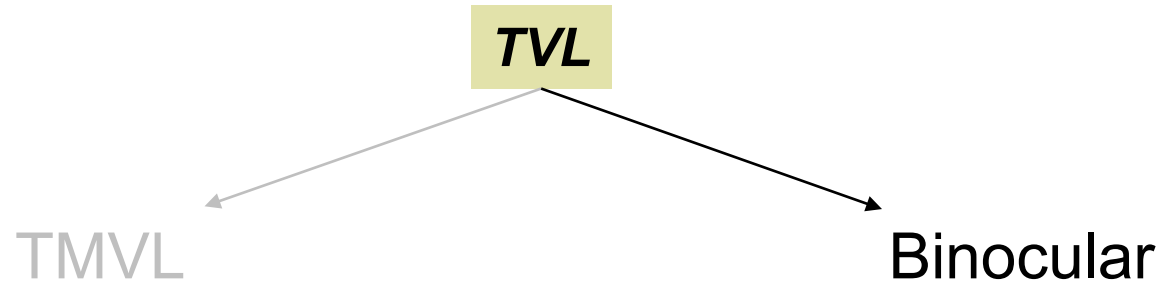
Does migraine aura precede, or follow the migraine HA itself?

Migraine

posterior circulation
normality

occipital structural
normality

A



What buzzword is the general term for vision changes associated with migraine?

'Aura'

Migraine

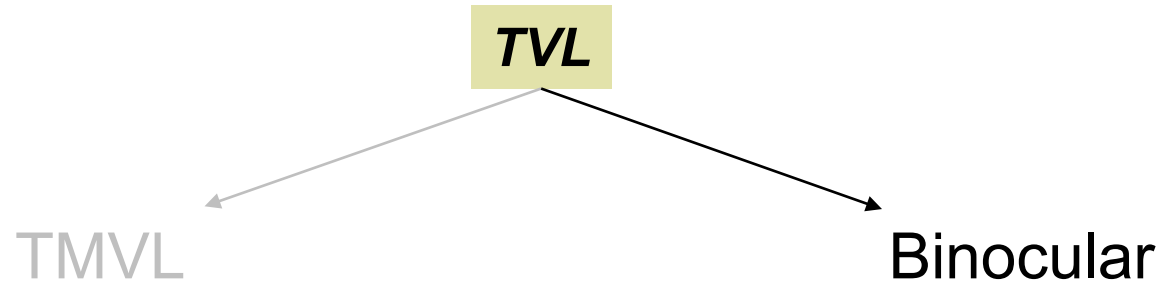
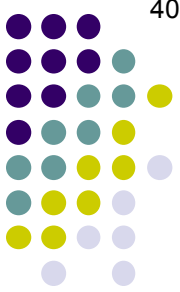
Does migraine aura precede, or follow the migraine HA itself?

Precede

posterior circulation
normality

occipital structural
normality

Q



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Migraine

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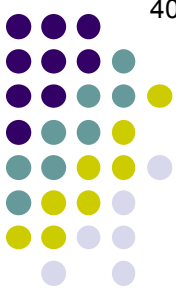
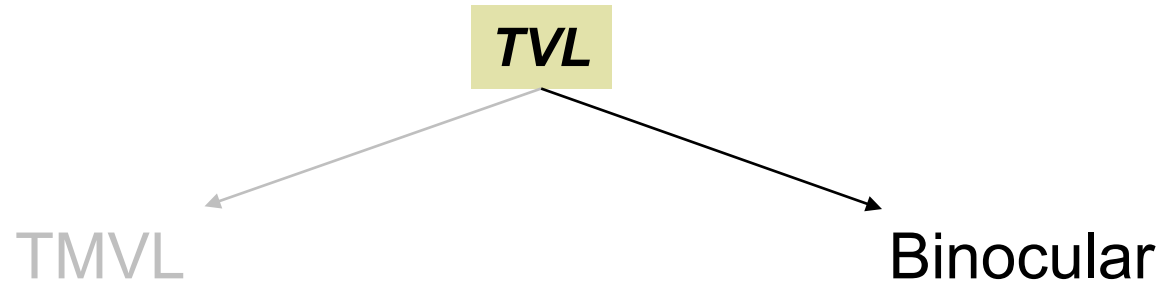
Precede

*Is aura **always** followed by a HA?*

posterior circulation
normality

occipital structural
normality

Q/A



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Migraine

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Precede

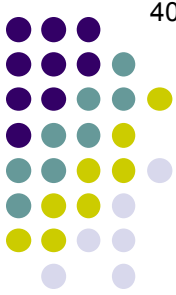
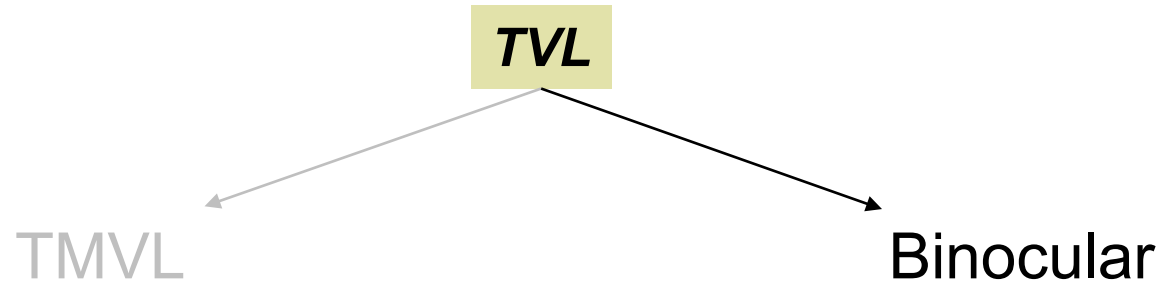
*Is aura **always** followed by a HA?*

No, some pts have what are called weird word *migraines* in which they get an aura but no subsequent HA

posterior circulation
normality

occipital structural
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What buzzword is the general term for vision changes associated with migraine?

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No, some pts have what are called *acephalgic migraines* in which they get an aura but no subsequent HA

posterior circulation
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occipital structural
normality

Q

TVL

TMVL

Binocular

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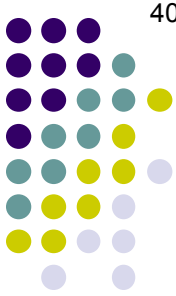
Precede

What is the classic form of bilateral vision loss 2ndary to migraine?

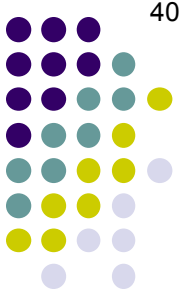
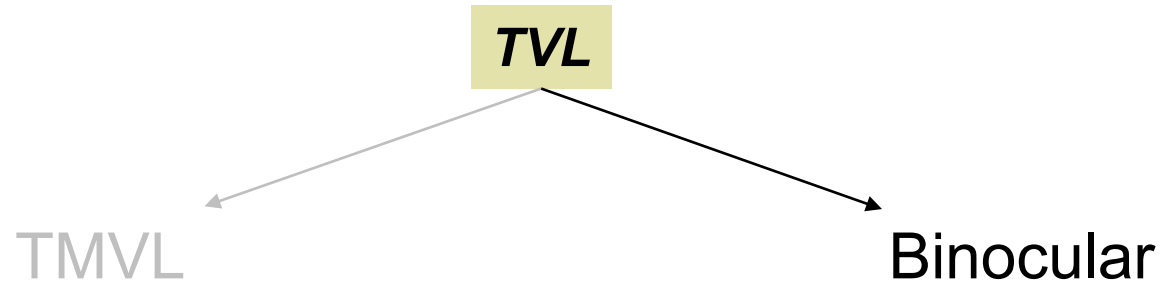
Migraine

posterior circulation
normality

occipital structural
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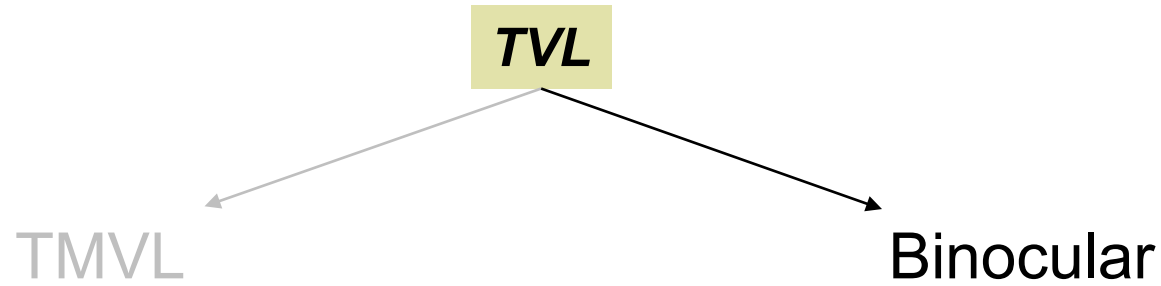
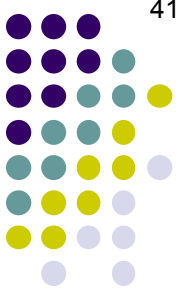
What is the classic form of bilateral vision loss 2ndary to migraine?

Homonymous hemianopia

posterior circulation
normality

occipital structural
normality

Q



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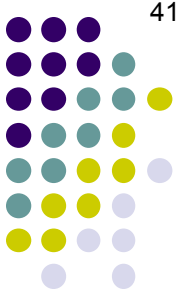
Homonymous hemianopia

Migraine is a recurrent condition. Is the same hemifield always involved?

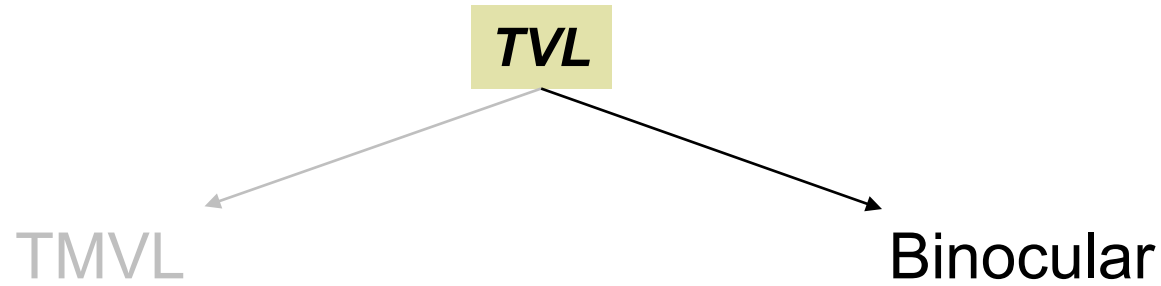
Migraine

posterior circulation
normality

occipital structural
normality



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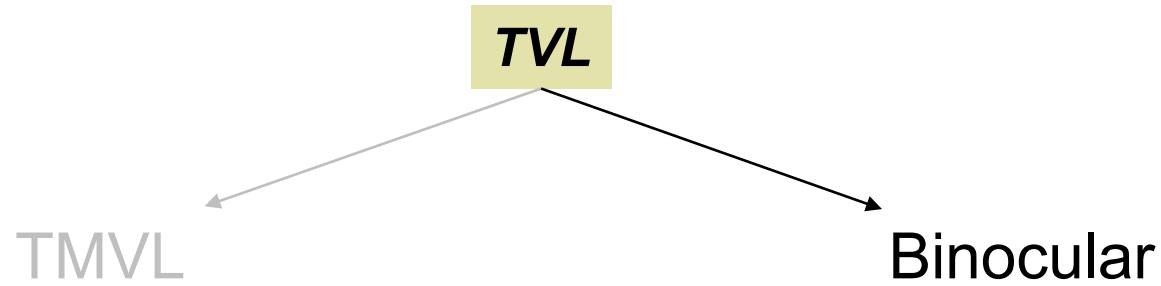
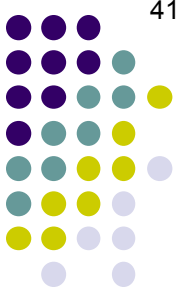
Migraine is a recurrent condition. Is the same hemifield always involved?

No—in fact, if only one hemifield is involved over and over again, the migraine dx should be questioned

posterior circulation
normality

occipital structural
normality

Q



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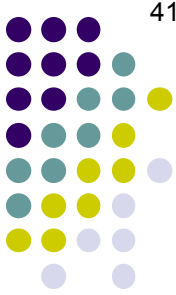
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In such cases, what sort of condition rises to the top of the DDx?

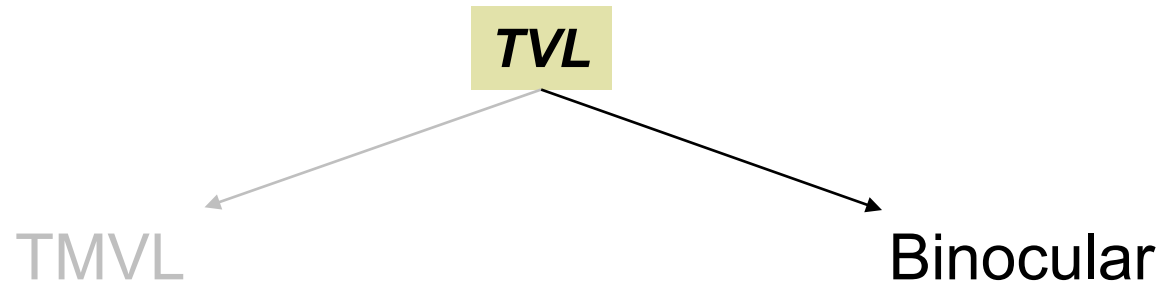
Migraine

posterior circulation
normality

occipital structural
normality



A



What buzzword is the general term for vision changes associated with migraine?

'Aura'

Migraine

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Precede

anterior circulation
normality

What is the classic form of bilateral vision loss 2ndary to migraine?

Homonymous hemianopia

**Occipital structural
abnormality**

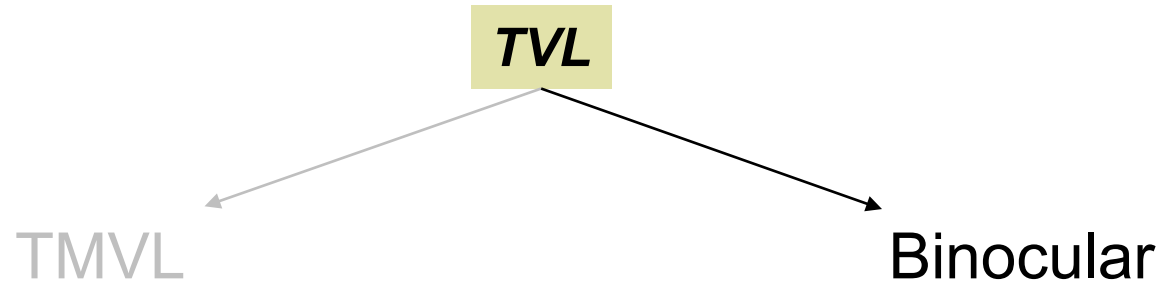
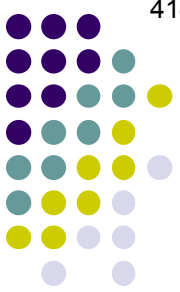
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Occipital structural abnormalities, eg, AVM; tumor

Q



What buzzword is the general term for vision changes associated with migraine?

'Aura' **Migraine**

Does migraine aura precede, or follow the migraine HA itself?

Precede **anterior circulation abnormality**

What is the classic form of bilateral vision loss 2ndary to migraine?

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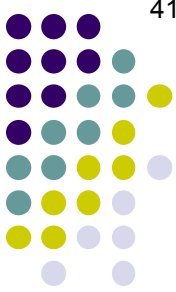
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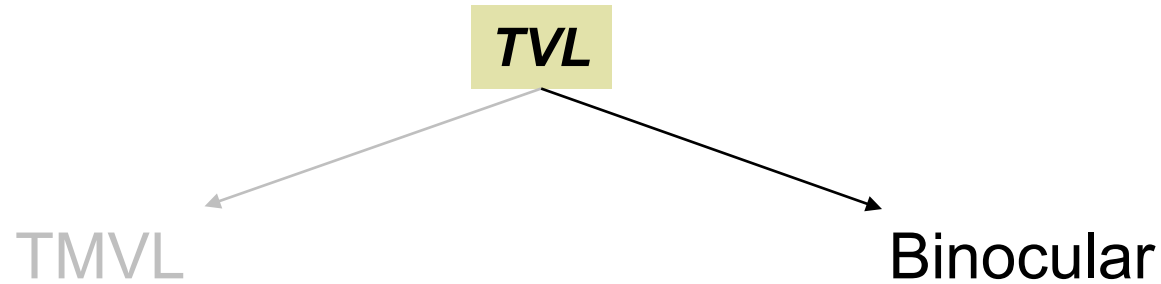
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Are these associated with HA?



A



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normality

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No—in fact, if only one hemifield is involved over and over again, the migraine dx should be questioned

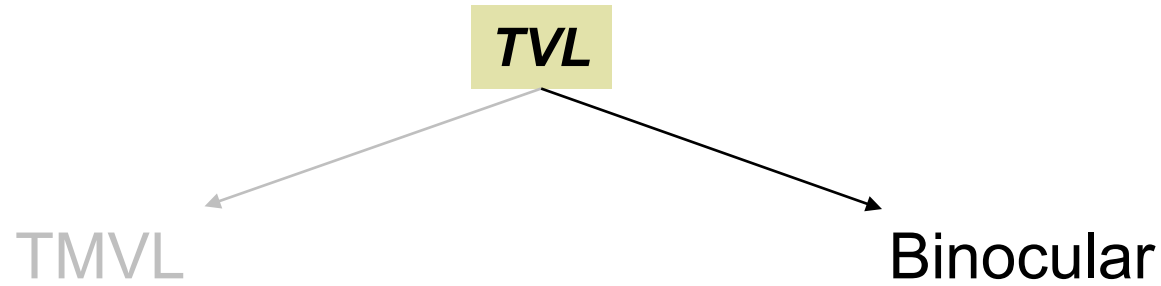
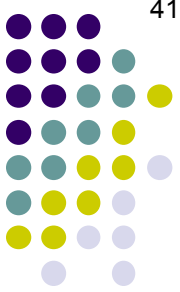
Occipital structural abnormality

In such cases, what sort of condition rises to the top of the DDx?

Occipital structural abnormalities, eg, AVM; tumor

Are these associated with HA?

Yes



What buzzword is the general term for vision changes associated with migraine?

'Aura'

Migraine

Does migraine aura precede, or follow the migraine HA itself?

Precede

What is the classic form of bilateral vision loss 2ndary to migraine?

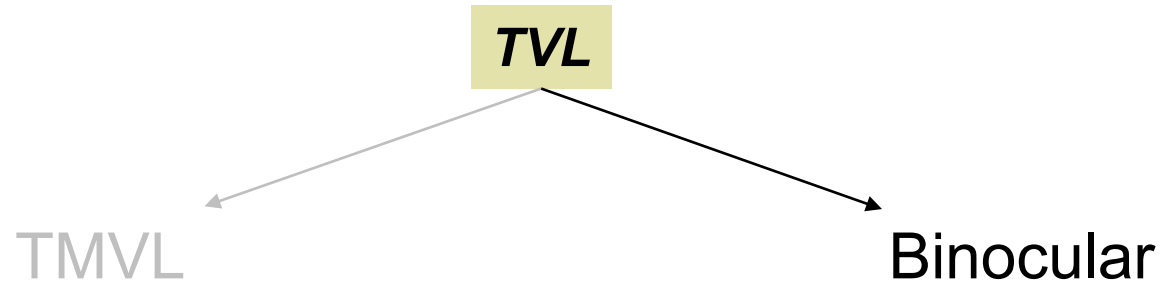
Homonymous hemianopia

How do migraine-related vision changes present and proceed?

anterior circulation
normality

occipital structural
normality

Q/A



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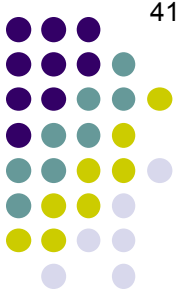
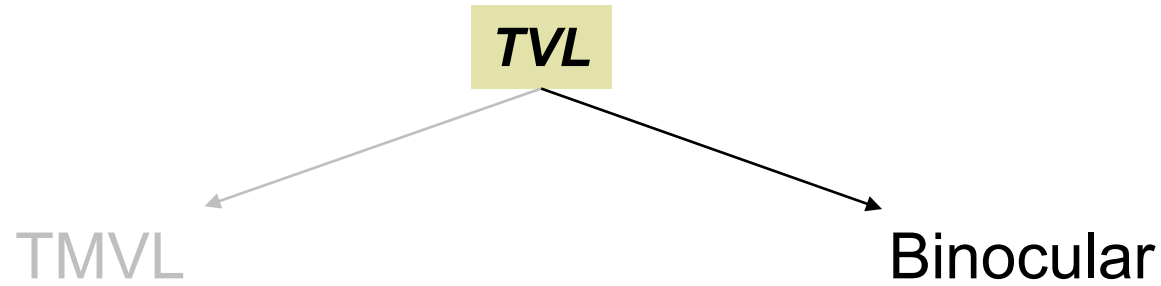
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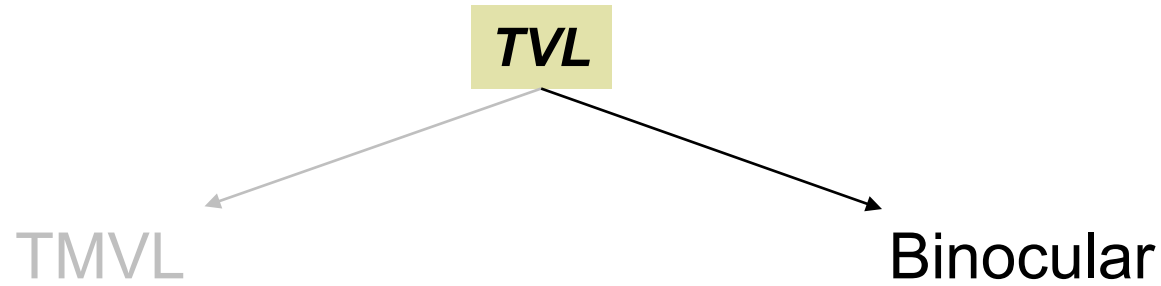
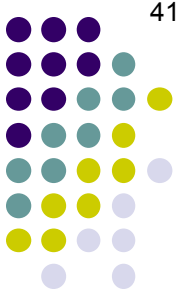
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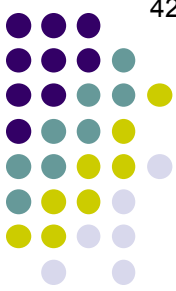
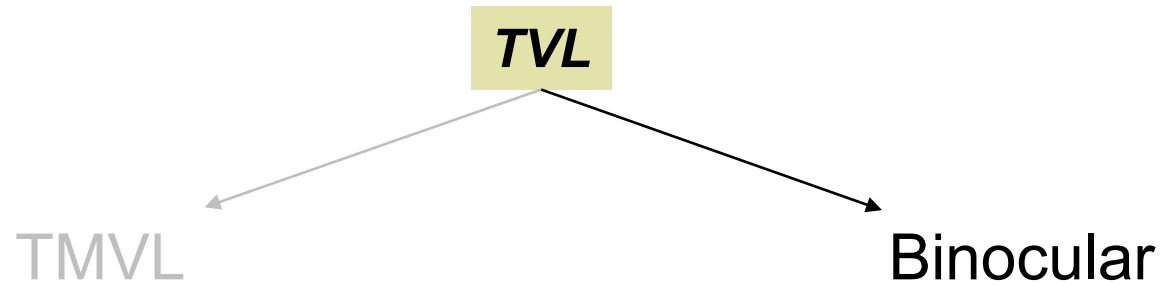
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It starts as a small scotoma surrounded by **scintillations**

What term is often used to describe the geometric quality of these scintillations?



A



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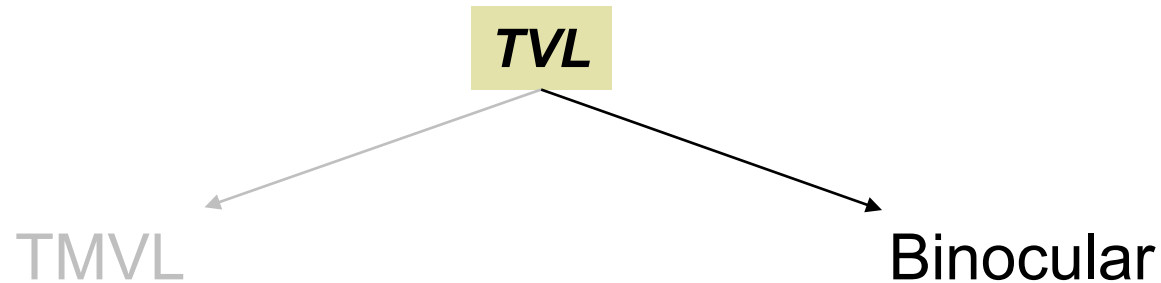
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'Fortification spectrum'





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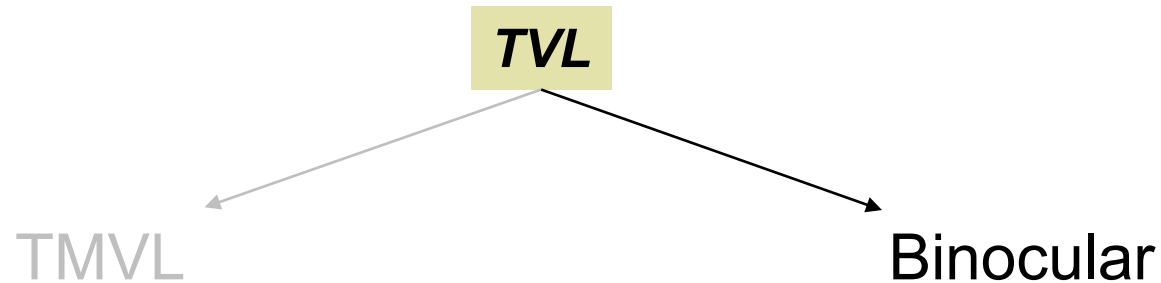
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Note: Fortification spectra are closely associated with migraines (as they should be). However, **any** occipital-based cause of TVL can present with fortification spectra.



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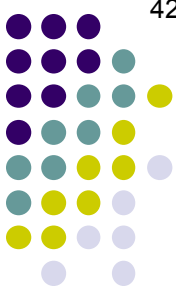
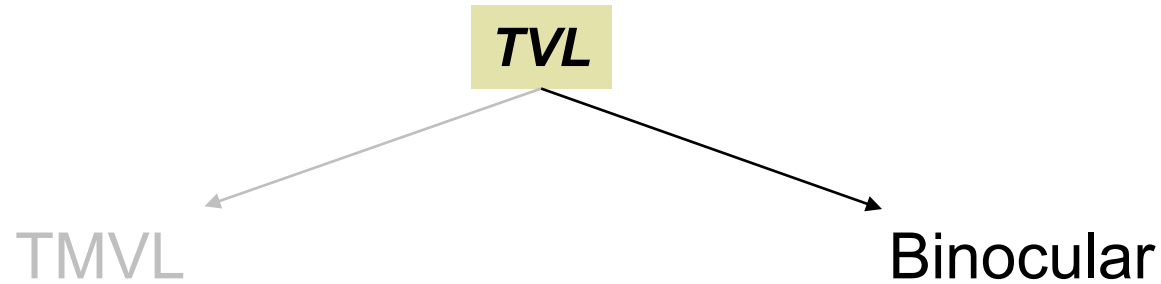
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Note: Fortification spectra are closely associated with migraines (as they should be). However, **any** occipital-based cause of TVL can present with fortification spectra. So when you hear *fortification spectra*, you mos def should think migraine first—but keep occipital circulatory and structural issues in the back of your mind.

Q



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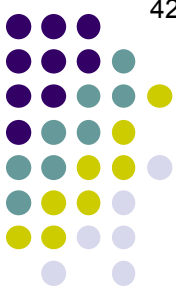
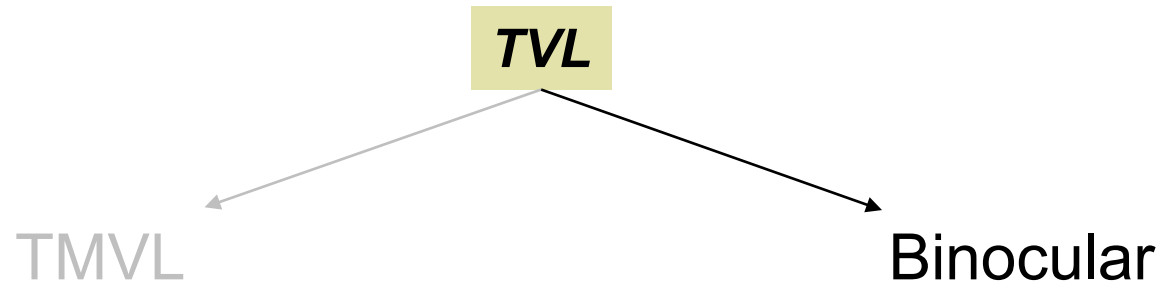
It starts as a small scotoma surrounded by scintillations. Over a period of a few
 unit of time it enlarges v shrinks, and then begins to slowly fade.

anterior circulation
normality

capit structural

Next question

A



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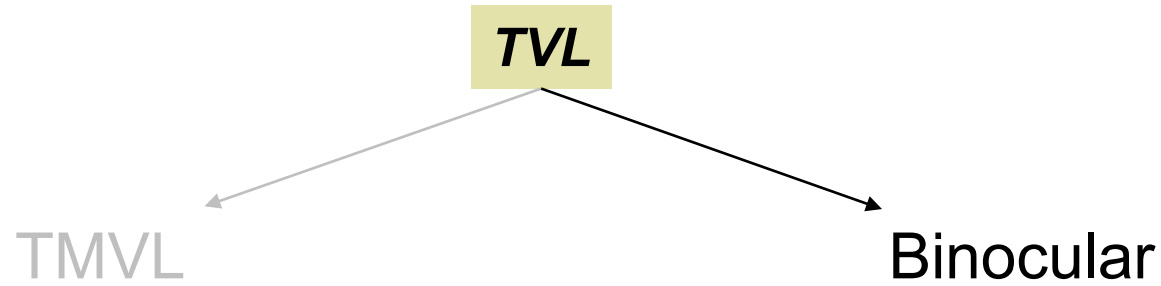
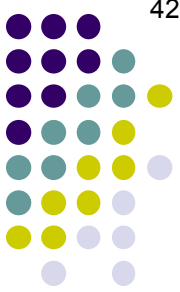
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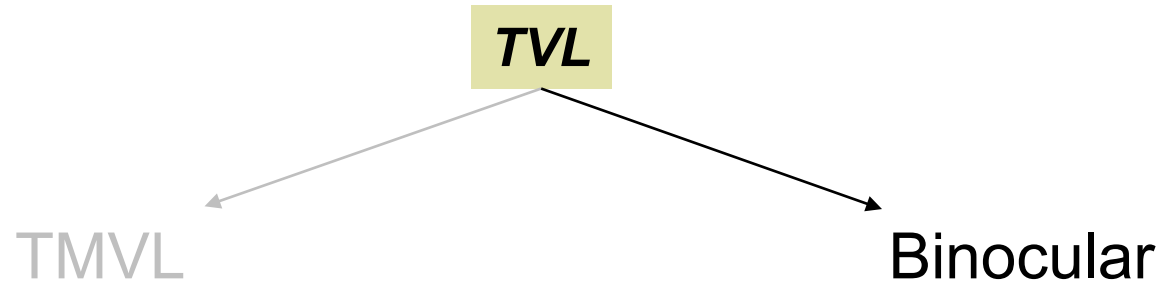
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anterior circulation
normality

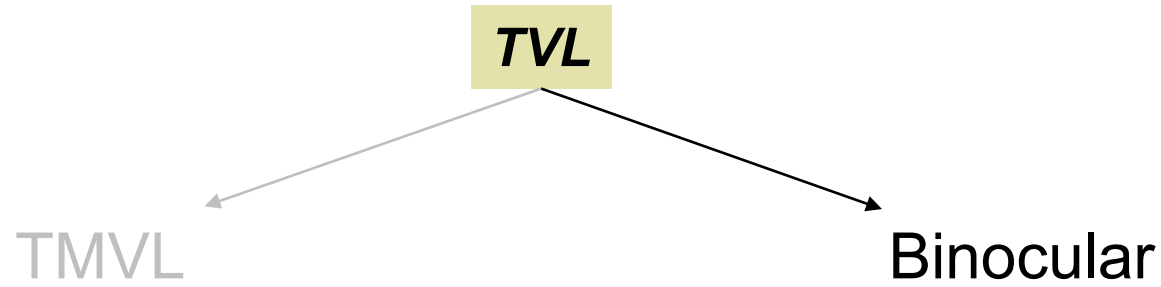
occipital structural
normality

TVL



Visual aura of migraine. A, The aura commonly begins with a small scotoma near fixation that gradually expands into the peripheral vision (B–C) and then breaks up (D). The times shown represent minutes from the onset of the visual aura.

Q



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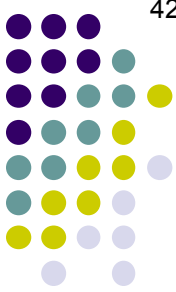
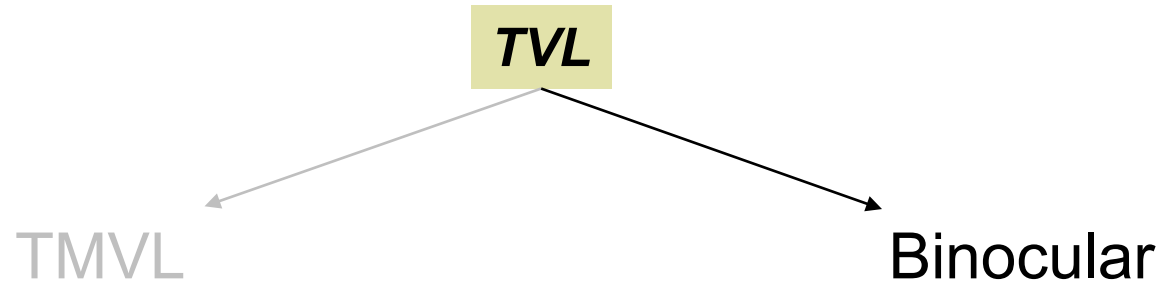
circulation

ty

structural

ty

Q/A



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It is the same as a garden-variety migraine-with-aura, with one huge difference—the aura is confined to one [] as opposed to one []

How do migraines typically start?

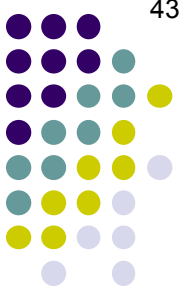
It starts as a prodrome
minutes it ends
no more than 10 minutes

circulation

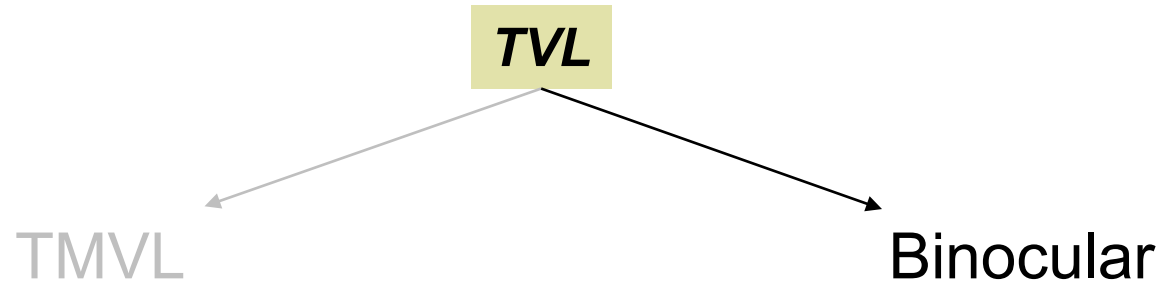
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How do migraine attacks typically last?
It starts as a prodrome, lasts 10-30 minutes, it ends with no more than 1 hour

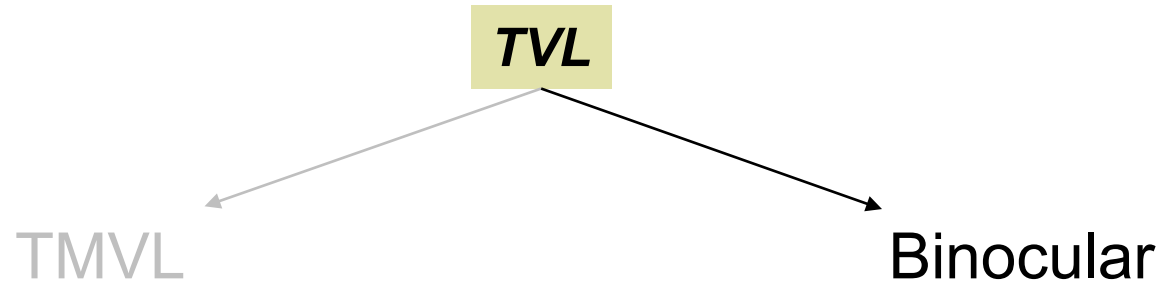
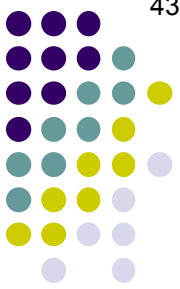
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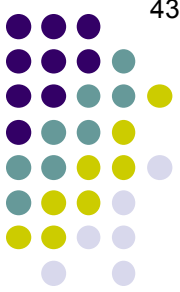
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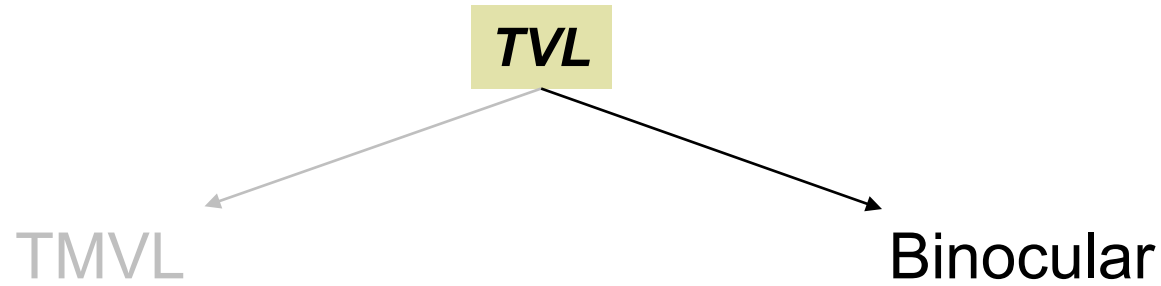
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Homonymous

How do migraine auras typically present?
It starts as a small area that expands over minutes to hours, lasting no more than 30 minutes.

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Here's the thing—it's **not** common; in fact, it is considered to be very rare. Despite this, in clinical practice *retinal migraine* is often used as a wastebasket diagnosis for unexplained TMVL. Don't do this!

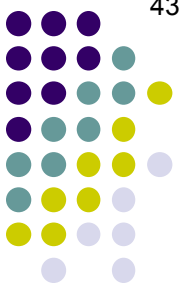
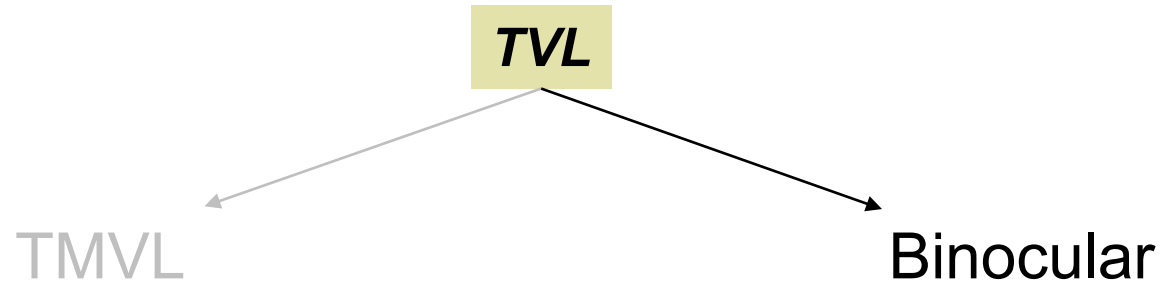
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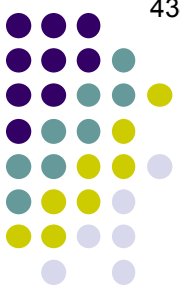
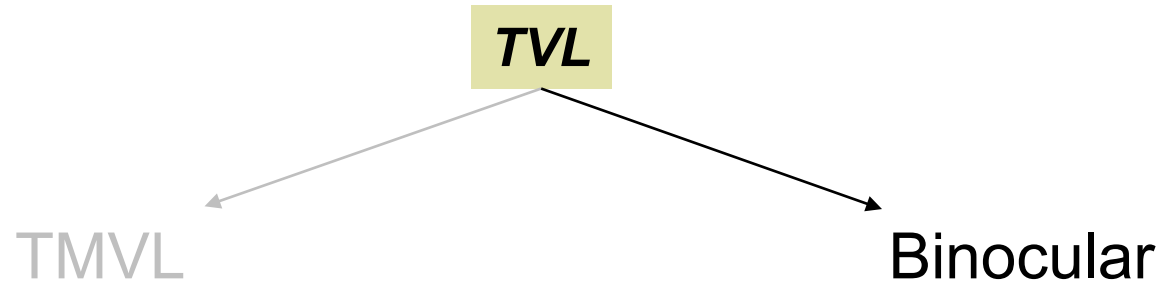
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Most likely, it's migraine-with-aura for which the pt has (mis)identified their bilateral hemifield loss as monocular (as we mentioned they are wont to do)

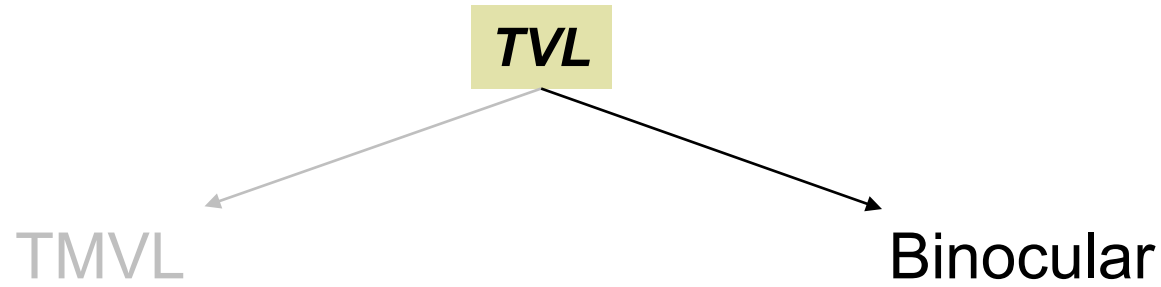
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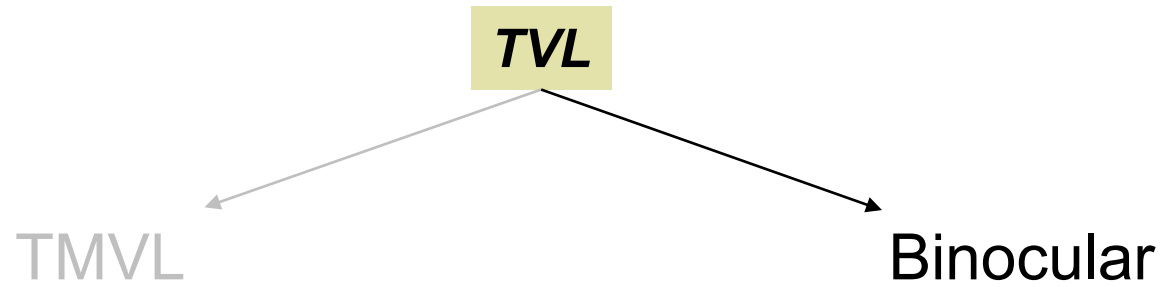


What sorts of 'circulatory abnormalities' are we talking about here?

--?
--?
--?

} *Three mentioned in the Neuro book*

- Migraine
- **Posterior circulation abnormality**
- Occipital structural abnormality

**A**

What sorts of 'circulatory abnormalities' are we talking about here?

--Embolism

--Vasculitis

--Atherosclerosis

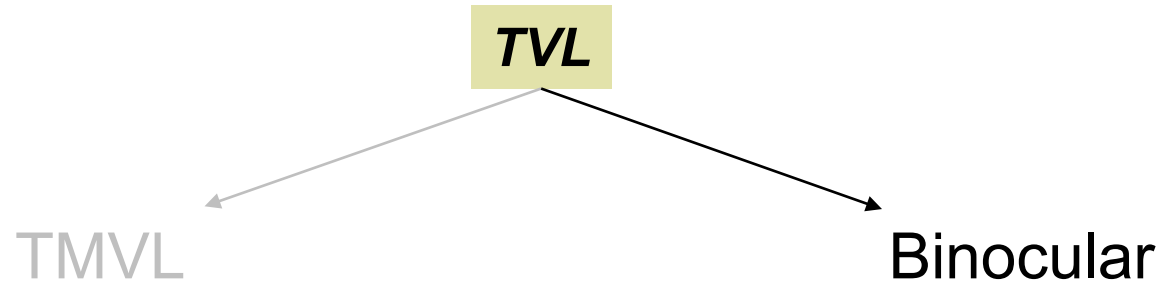
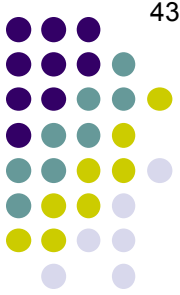
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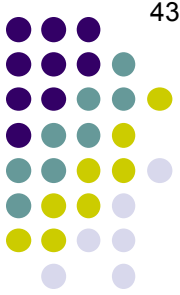
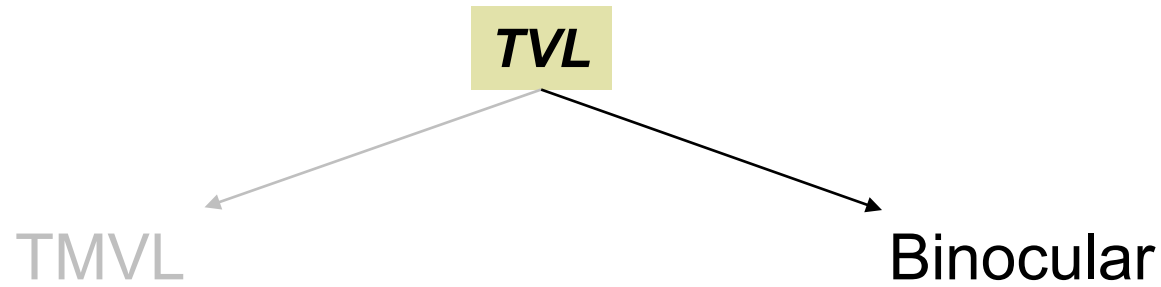
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Q/A



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They lead to occipital



Binocular

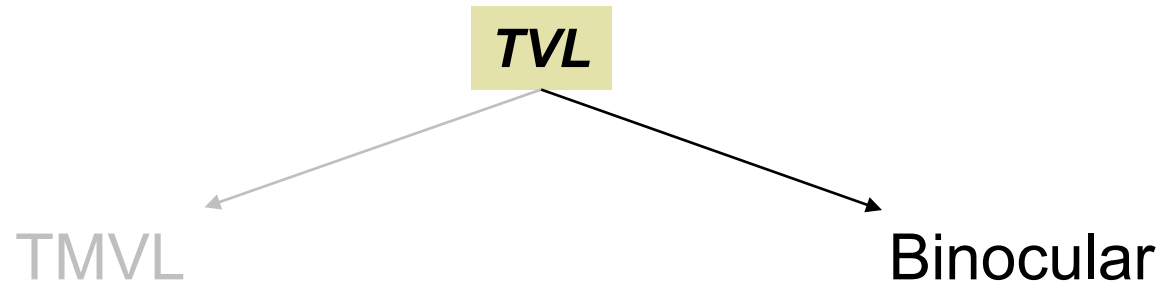
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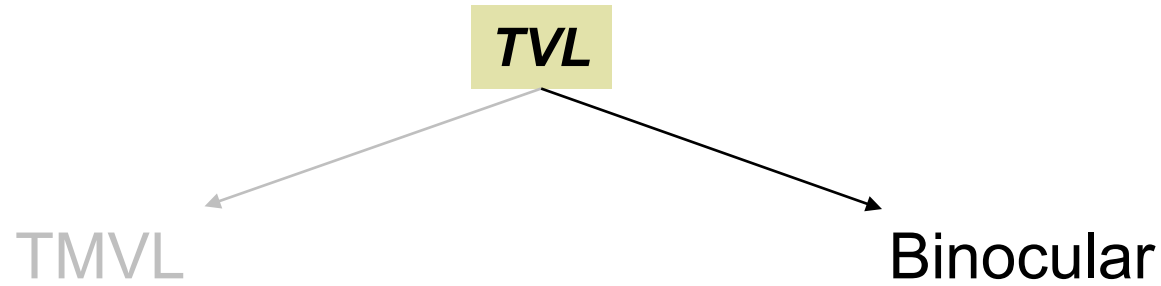
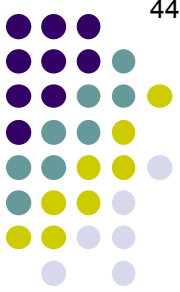
They lead to occipital ischemia

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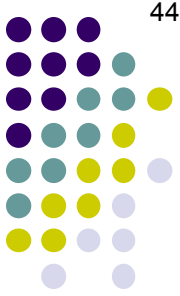
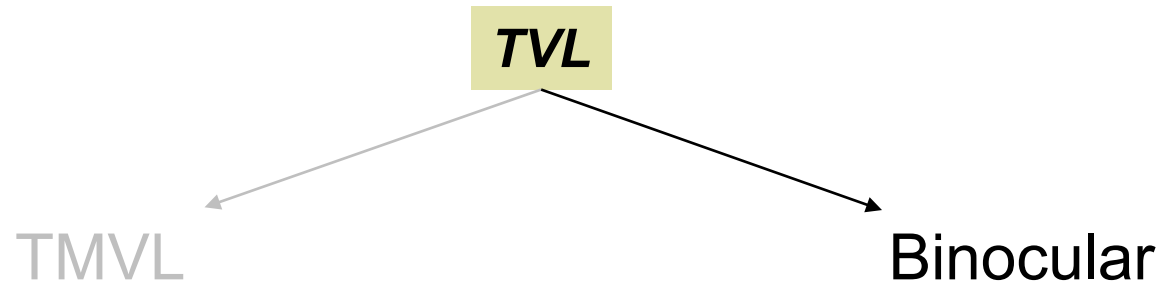
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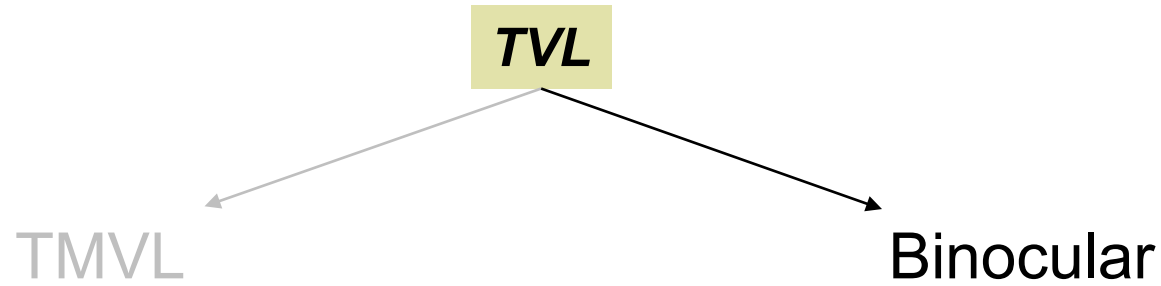
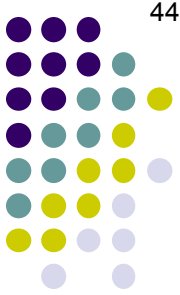
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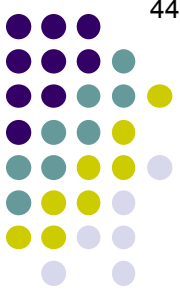
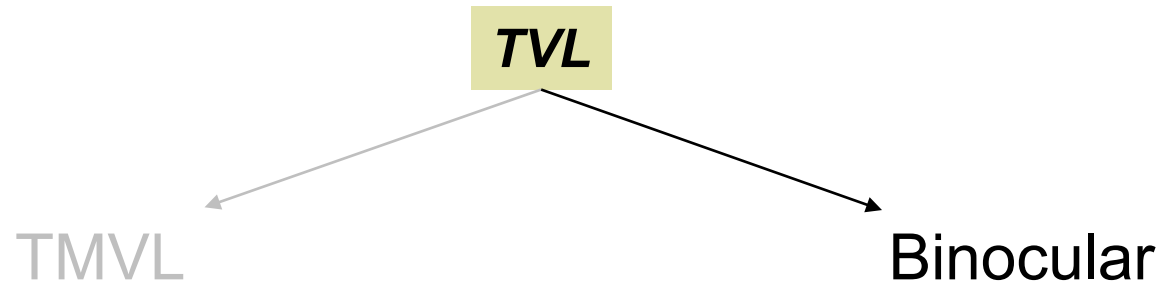
HA 2ndry to these ischemic events...Where does it tend to localize?

Migraine

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Q/A



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In the region

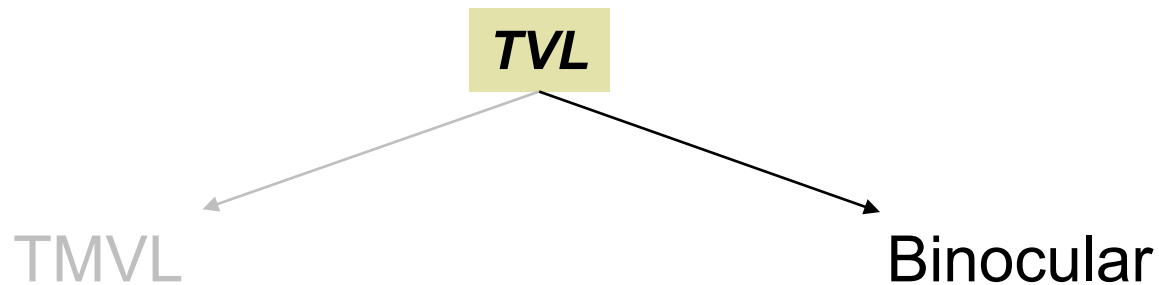
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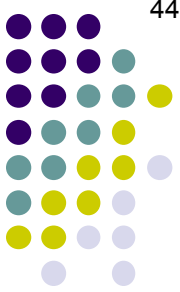
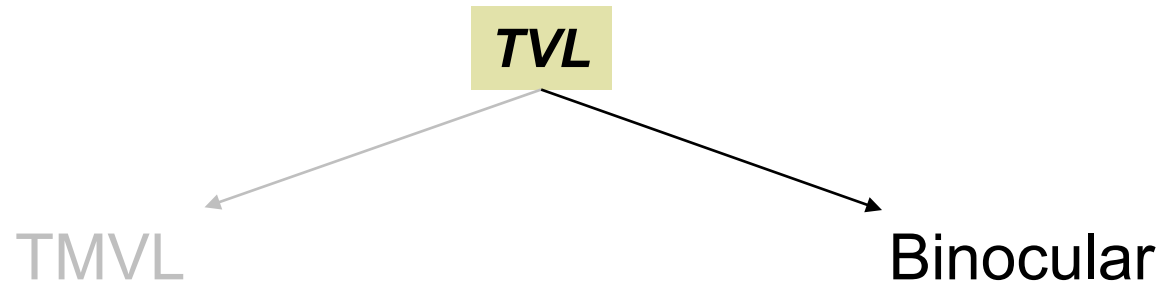
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In the brow region **on the side** **ipsi- v contralateral** **to the hemianopia**

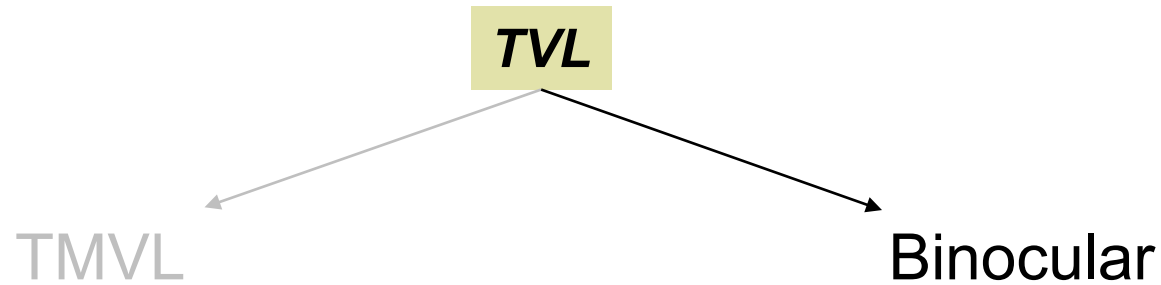
Migraine

Posterior circulation abnormality

Occipital structural abnormality



A



What sorts of 'circulatory abnormalities' are we talking about here?

--Embolism

--Vasculitis

--Atherosclerosis

Three mentioned in the Neuro book

What is the final common pathway by which such abnormalities lead to TVL?

They lead to occipital ischemia

Are these **associated with HA?**

Yes

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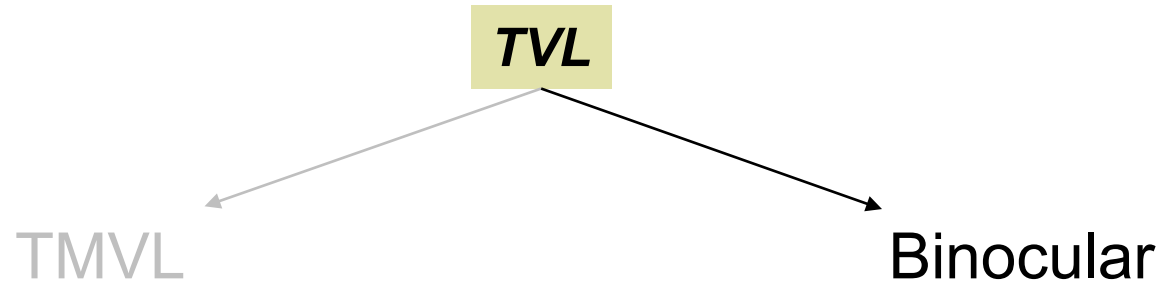
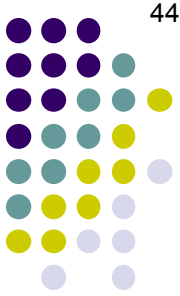
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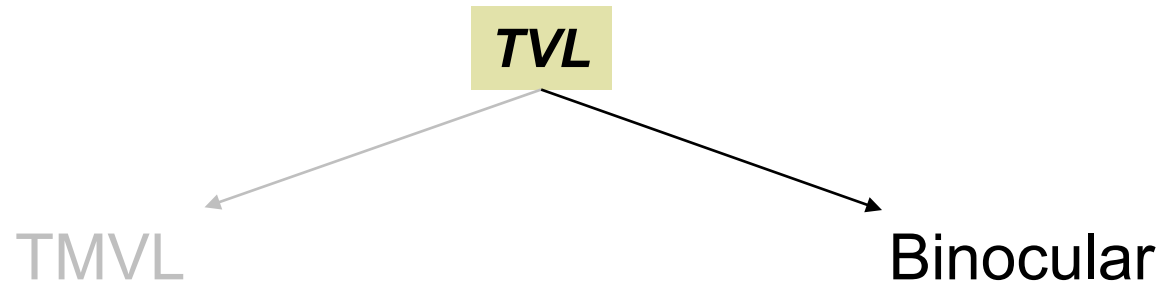
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Whereas a migraine HA *follows* the vision loss, in occipital ischemic events the HA occurs **simultaneous with vs long before** the vision loss

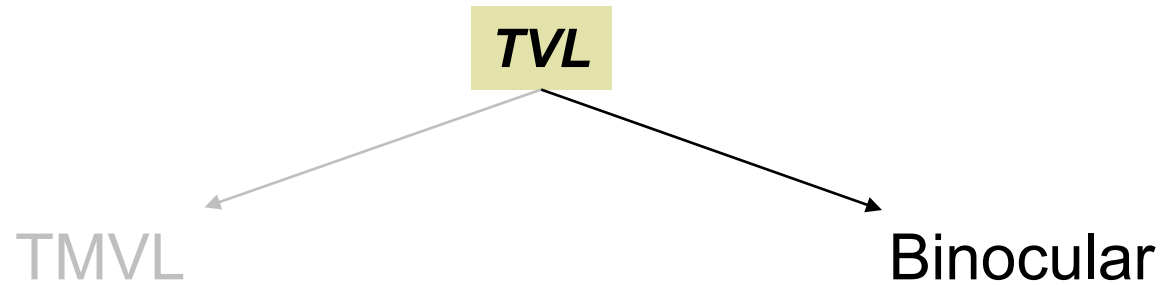
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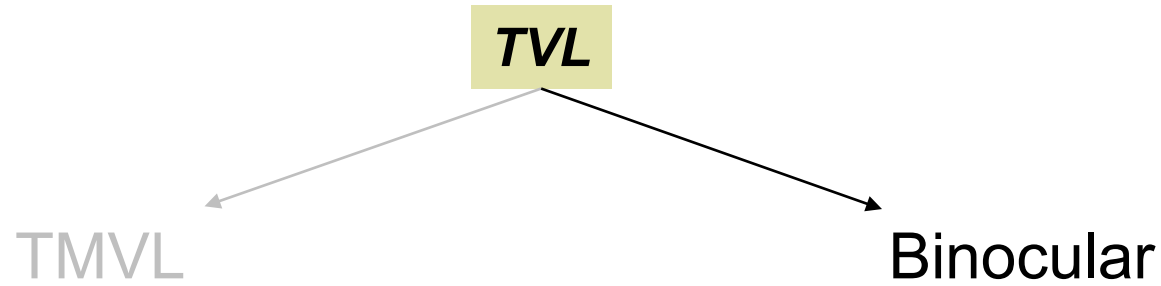
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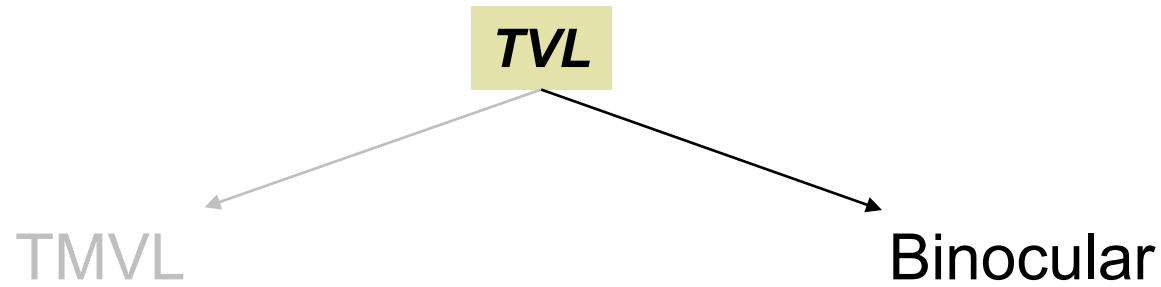
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Q/A



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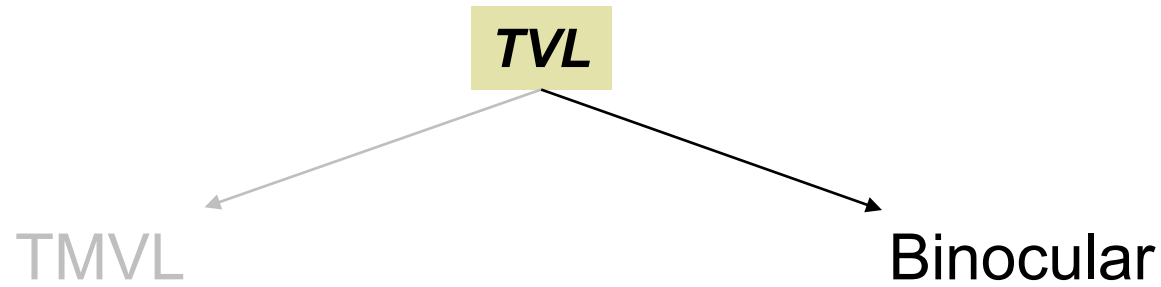
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--The onset of vision loss in occipital ischemia is...

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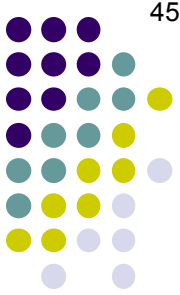
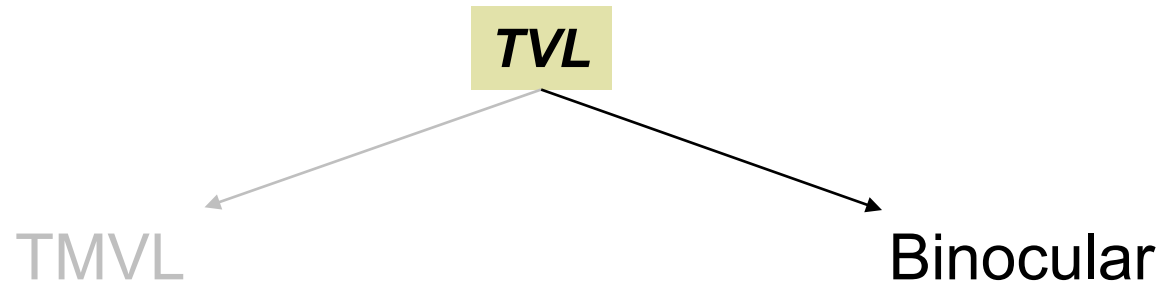
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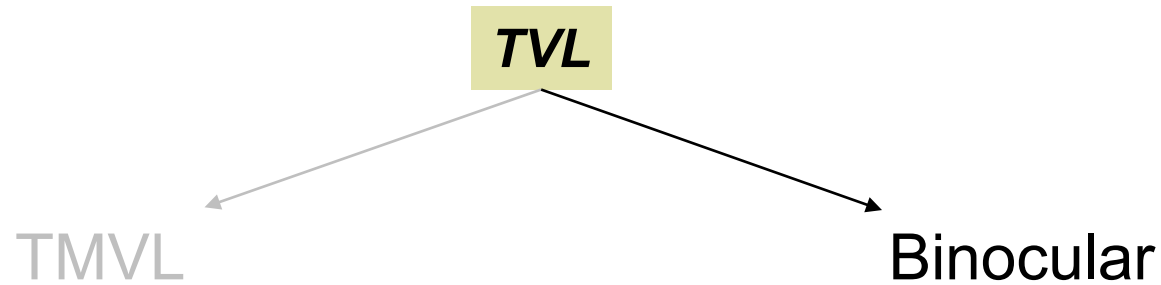
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--The onset of vision loss in occipital ischemia is...**sudden** (as opposed to the gradual onset characteristic of migraine-with-aura)

--The duration of vision loss in occipital ischemia is...**brief** (just a few minutes, as opposed to the 30-60 minutes typical of migraine-with-aura)