

Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*



**Dry ARMD DDx**

**Wet ARMD DDx**

*Start here, and work  
your way down the list*

- **Pattern dystrophy**  
Macroaneurysms  
Cuticular drusen  
Vitelliform exudative macular detachment  
Polypoidal choroidal vasculopathy  
Central serous chorioretinopathy  
RPE change after CSC  
Small choroidal melanoma  
Hydroxychloroquine toxicity



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**Pattern dystrophy**

Macroaneurysms

Cuticular drusen

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Polypoidal choroidal vasculopathy

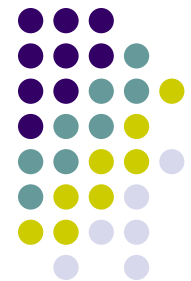
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**Wet ARMD DDx**



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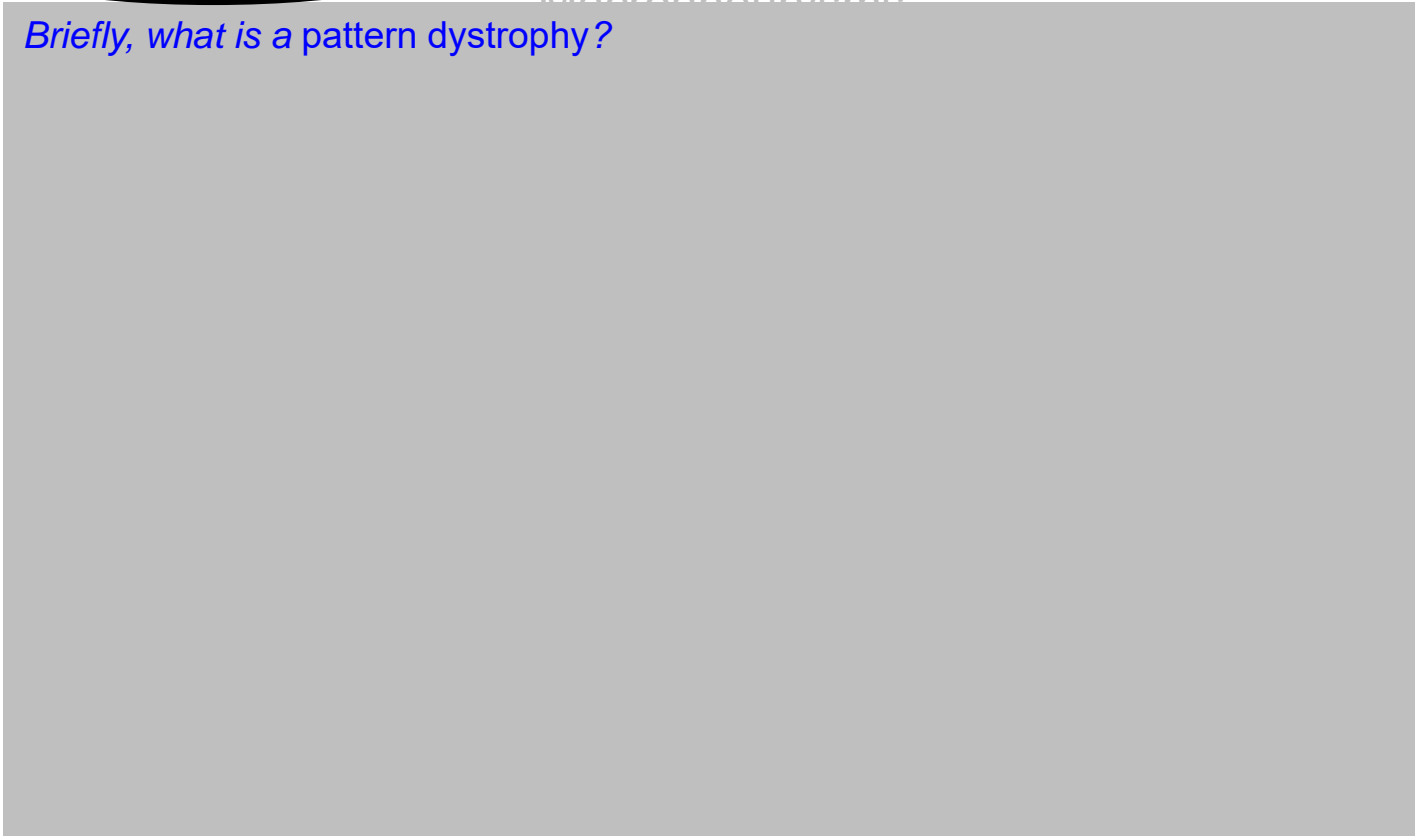
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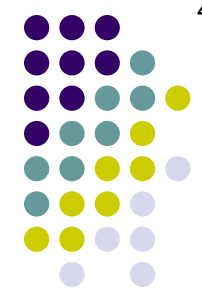
Wet ARMD DDx

**Pattern dystrophy**

Macropharyngitis

*Briefly, what is a pattern dystrophy?*





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An inherited macular dystrophy that has a characteristic appearance (ie, a particular 'pattern')



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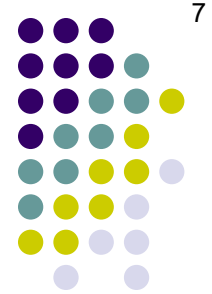
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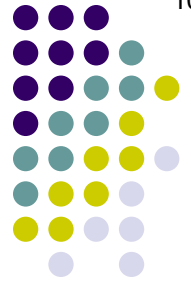
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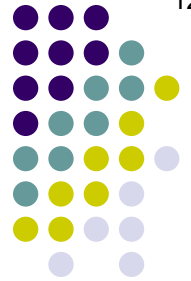
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*The mnemonic is...*



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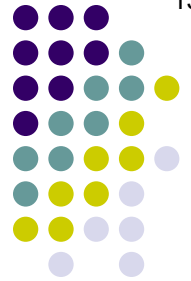
--B

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--R

--F

*The mnemonic is...BARF?*



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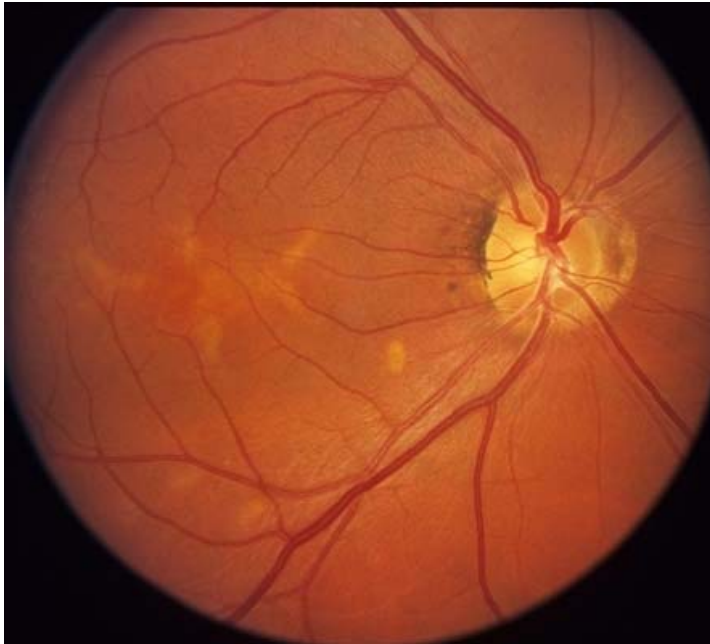
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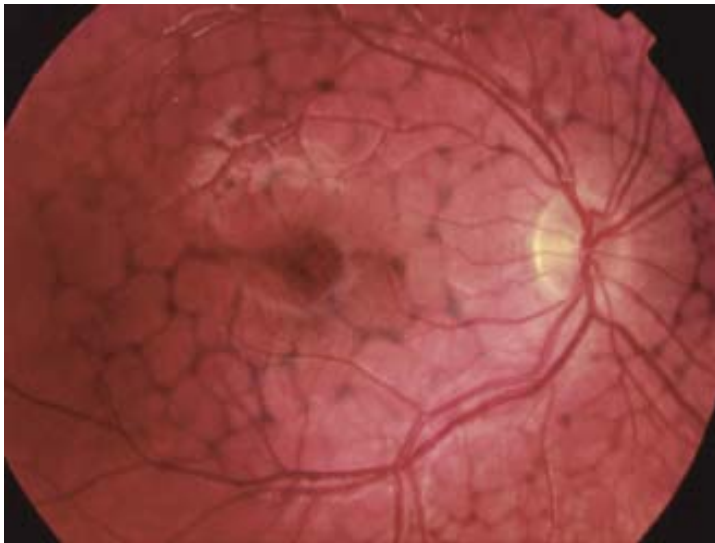
- B**utterfly dystrophy
- A**dult-onset foveomacular vitelliform dystrophy
- R**eticular dystrophy
- F**undus pulverulentus



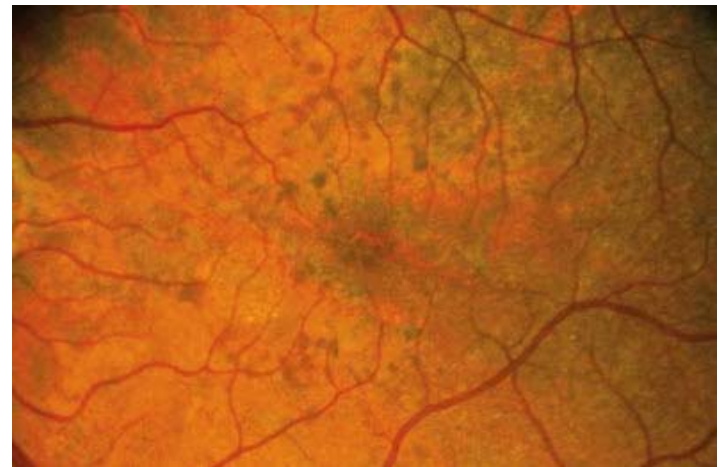
Butterfly dystrophy



Adult-onset foveomacular vitelliform dystrophy



Reticular dystrophy

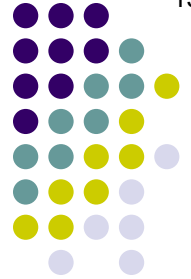


Fundus pulverulentus

x for both  
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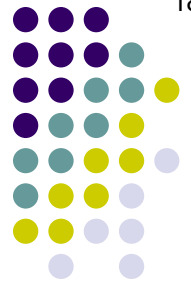
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**Macroaneurysms**

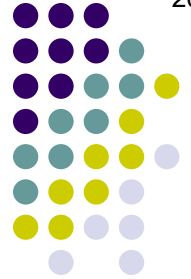
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1A) FP of eye with a retinal arteriole macroaneurysm, evidenced by exudation and subretinal blood in the area of an arteriolar bifurcation. (1B) FA in the early phase highlights the focal hyperfluorescent dilation of the arteriole



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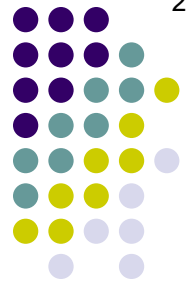
*Are they more likely to occur in the temporal, or nasal retina?*

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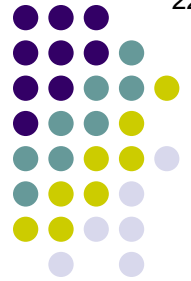
*Is it common to have multiple macroAs in an eye?*

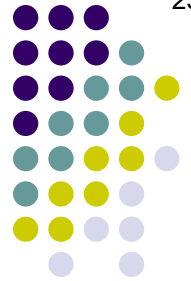
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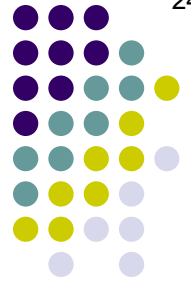
*Is it common to have macroAs bilaterally?*

Wet ARMD DDx

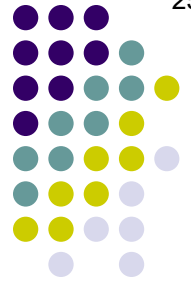
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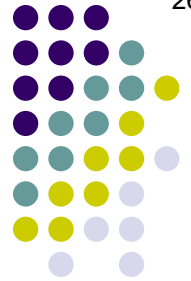
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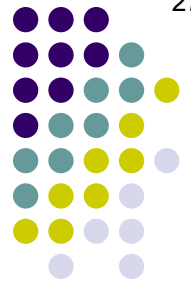
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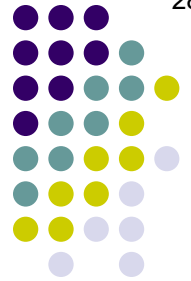
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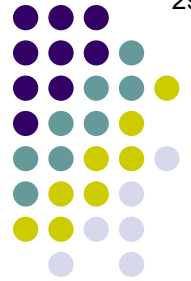
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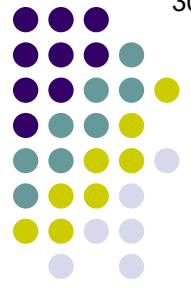
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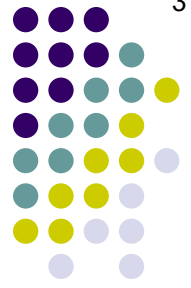
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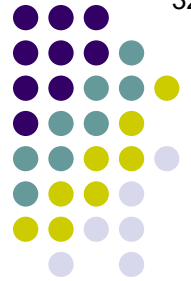
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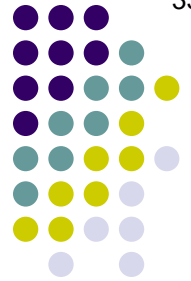
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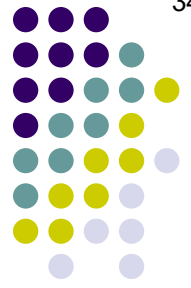
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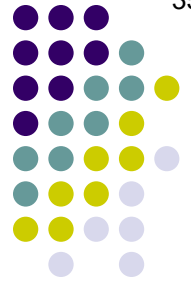
M v F

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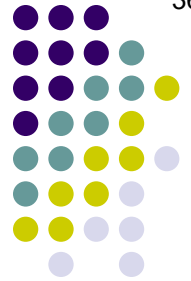
*By what two mechanisms do macroAs affect vision?*

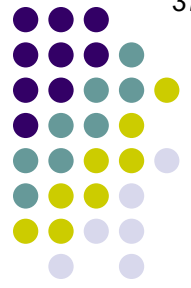
Wet ARMD DDx

**Macroaneurysms**

achment  
athy

a  
y





# A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

*What is a retinal macroaneurysm?*  
A focal dilatation of one of the early branches on the arteriolar side of the retinal circulatory tree

*Are they more likely to occur in the temporal, or nasal retina?*  
Temporal

*Is it common to have multiple macroAs in an eye?*  
Yes

*Is it common to have macroAs bilaterally?*  
No, they are bilateral in 10% or fewer of cases

*Are there any systemic risk factors?*  
Yes-- **HTN** . (It is present in as many as 75% of cases.)

*Is age a risk factor?*  
Yes, most pts are over 50 years old

*Is gender a risk factor?*  
Yes, a preponderance of the pts are ♀

*By what two mechanisms do macroAs affect vision?*  
By bleeding, or leaking (ie, causing macular edema)

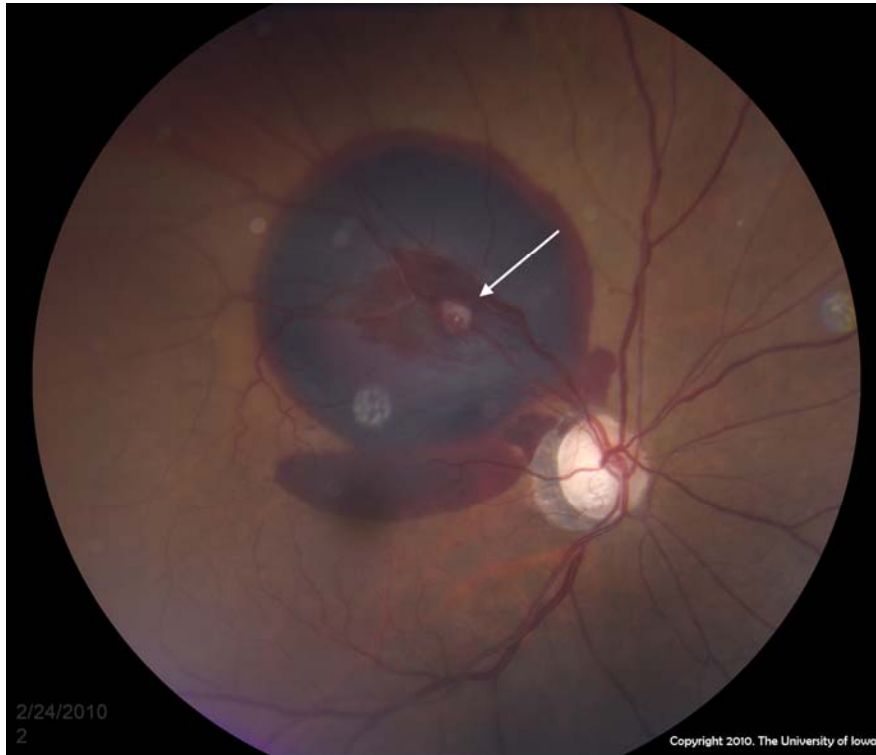
Wet ARMD DDx

**Macroaneurysms**

achment  
athy

a  
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*This is the combined DDX for both dry and wet ARMD—  
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Macroaneurysm: Bleeding, and macular edema

Q

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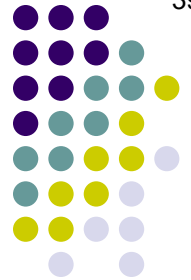
*How are macroAs managed?*

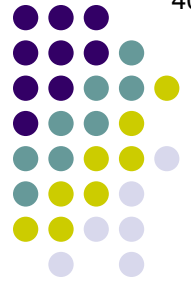
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*By what two mechanisms do macroAs affect vision?*

By bleeding, or leaking (ie, causing macular edema)

*How are macroAs managed?*

Via observation, or anti-VEGF agents, or photocoagulation

Wet ARMD DDx

**Macroaneurysms**

achment  
athy

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## Dry ARMD DDx

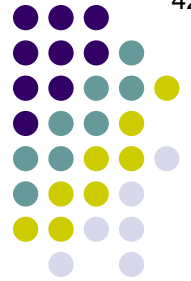
**Pattern dystrophy**

### **Cuticular drusen**

Vitelliform exudative macular detachment  
Polypoidal choroidal vasculopathy  
Central serous chorioretinopathy  
RPE change after CSC  
Small choroidal melanoma  
Hydroxychloroquine toxicity

## Wet ARMD DDx

**Macroaneurysms**

**A**

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## Dry ARMD DDx

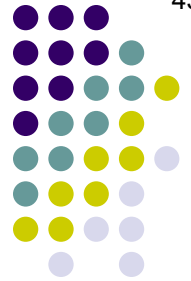
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## Wet ARMD DDx

**Macroaneurysms**



Q

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DDx

Macroaneurysms

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*Small, round-ish, yellow-ish deposits just beneath the RPE*

DDx

Macroaneurysms

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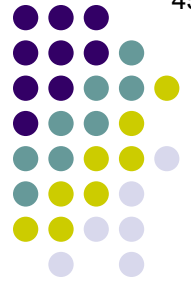
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DDx



Macroaneurysms

**Cuticular drusen**

Vitelliform exudative macular detachment

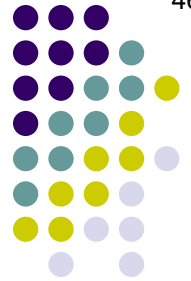
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DDx

Macroaneurysms

**Cuticular drusen**

Vitelliform exudative macular detachment

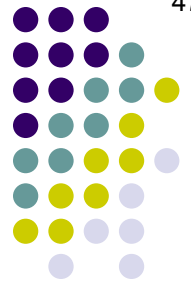
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Central serous chorioretinopathy

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Hydroxychloroquine toxicity



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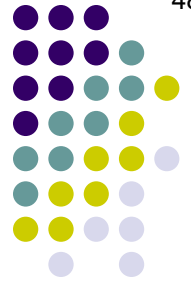
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*Cuticular drusen are known by what other name?*

**Cuticular drusen**

Macroaneurysms

- Vitelliform exudative macular detachment
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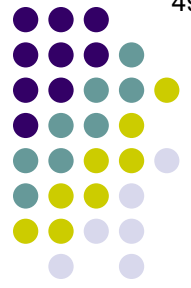
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Basal laminar drusen

Macroaneurysms

**Cuticular drusen**

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 Polypoidal choroidal vasculopathy  
 Central serous chorioretinopathy  
 RPE change after CSC  
 Small choroidal melanoma  
 Hydroxychloroquine toxicity





Q

*This is the combined DDx for both dry and wet ARMD—  
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What are drusen?

Small, round-ish, yellow-

*Based on their appearance, cuticular/basal laminar drusen and basal linear drusen are known by what other names?*

There are three main typ

What are they?

--Cuticular drusen aka...basal laminar drusen aka...

--Basal linear drusen aka...

--Reticular (pseudo)drusen

DDx

### Macroaneurysms

## Cuticular drusen

- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy
- Central serous chorioretinopathy
- RPE change after CSC
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A

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 Small, round-ish, yellow-  
 There are three main typ  
 What are they?  
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**Hard** drusen and **soft** drusen, respectively*

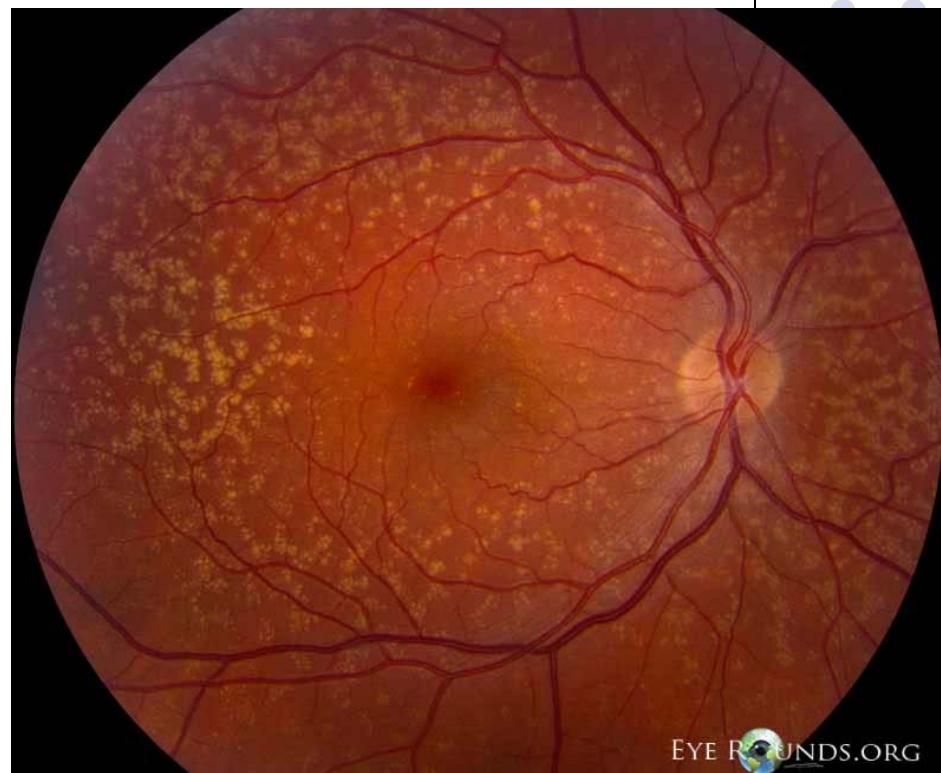
DDx

Macroaneurysms

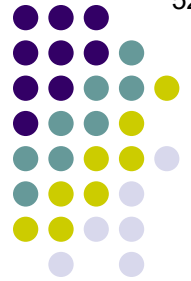
**Cuticular drusen**

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Cuticular drusen



Q

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**Hard** drusen and **soft** drusen respectively

*What is meant by a soft vs hard appearance?*

**Cuticular drusen**

Vitelliform exudative macular detachment

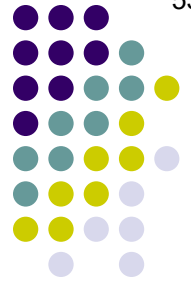
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basal linear drusen are known by what other names?*

**Hard** drusen and **soft** drusen respectively

*What is meant by a soft vs hard appearance?*

It refers to how sharply the drusen are demarcated,  
ie, how well-defined their borders are

**Cuticular drusen**

Vitelliform exudative macular detachment

Polypoidal choroidal vasculopathy

Central serous chorioretinopathy

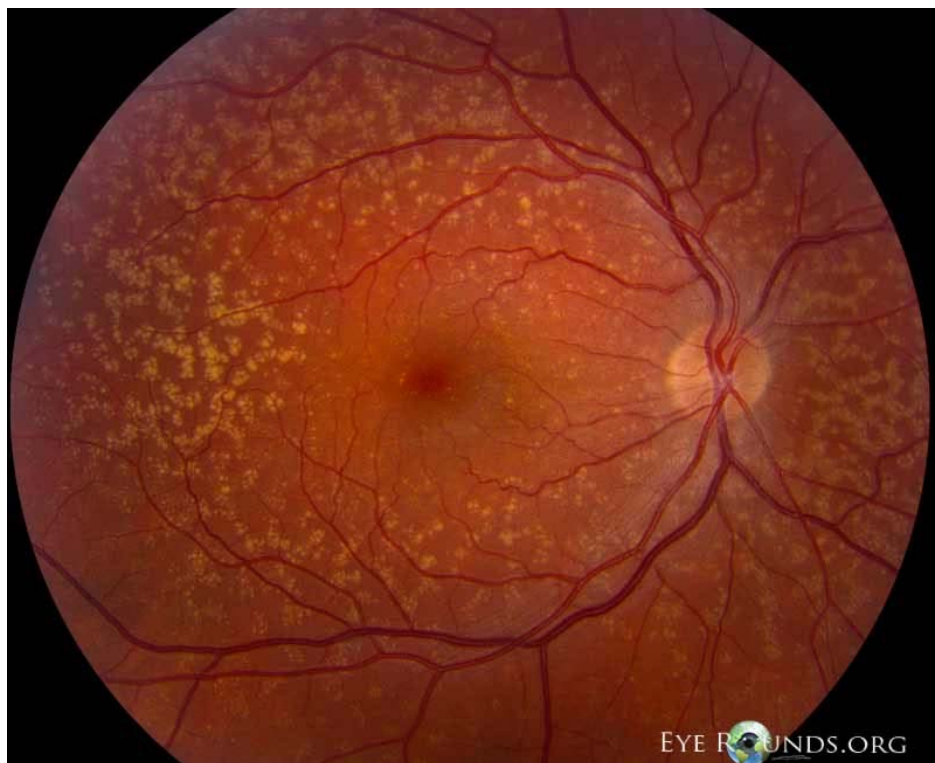
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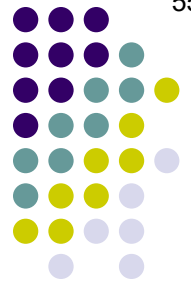
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Basal laminar 'hard' drusen



Basal linear 'soft' drusen



Q

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What are drusen?  
Small, round-ish, yellow-ish deposits just beneath the RPE

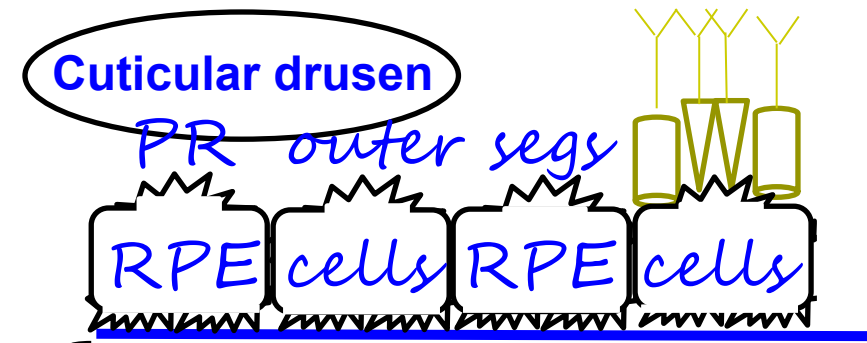
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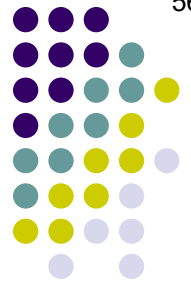
DDx

Macroaneurysms

Where are cuticular/basal laminar drusen found?



- Bruch's membrane
- Basement membrane of RPE
  - Inner collagenous layer
  - Elastic layer
  - Outer collagenous layer
  - Basement membrane of choriocapillaris



A

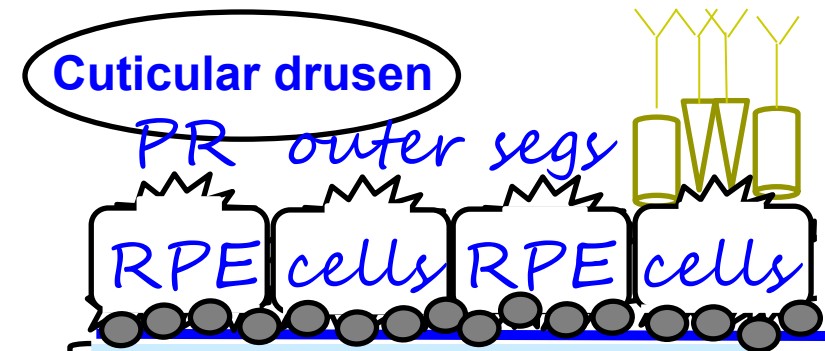
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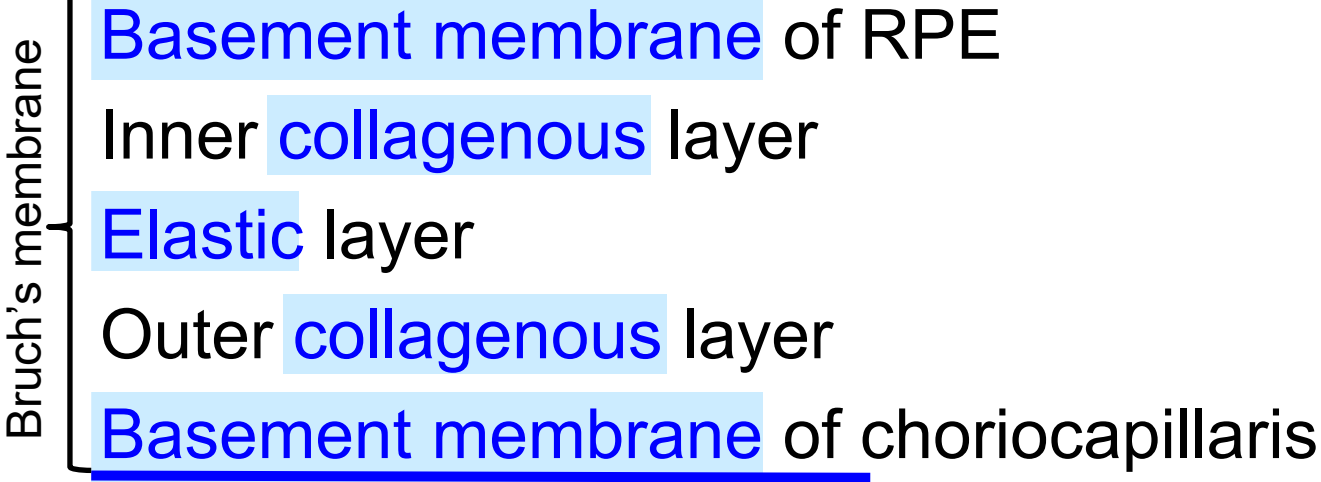
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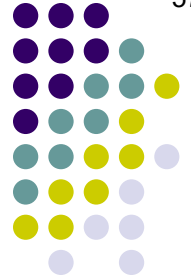
**Macroaneurysms**

Where are cuticular/basal laminar drusen found?  
Between the basement membrane of the RPE and the basal membrane--'basal lamina,' get it?--of the RPE cells



Cuticular/basal laminar drusen





Q

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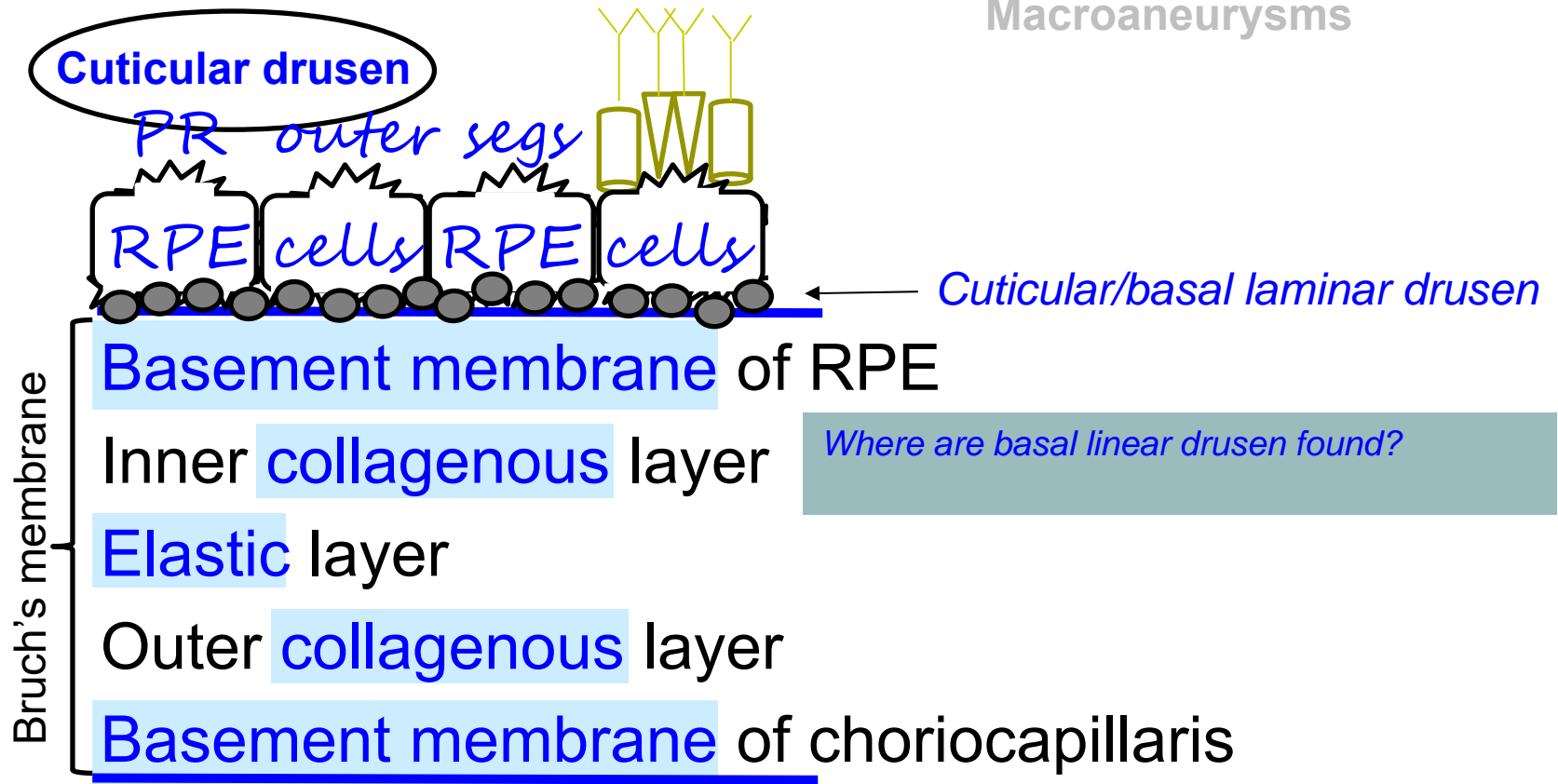
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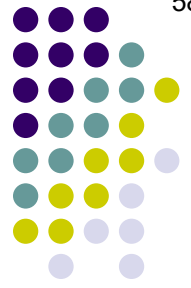
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DDx

Macroaneurysms



Where are basal linear drusen found?



A

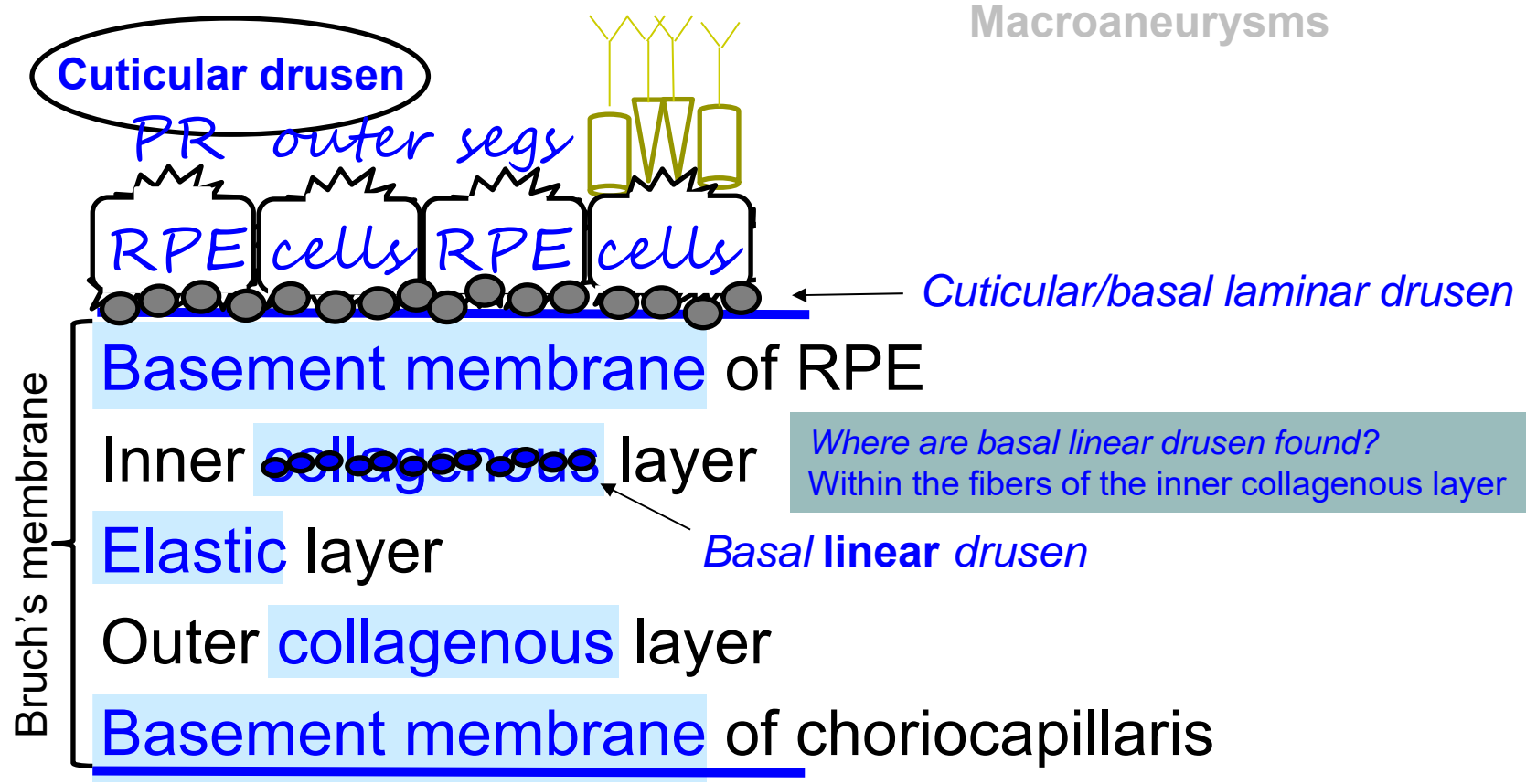
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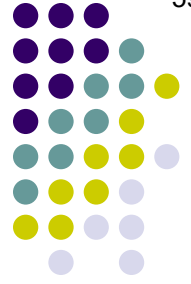
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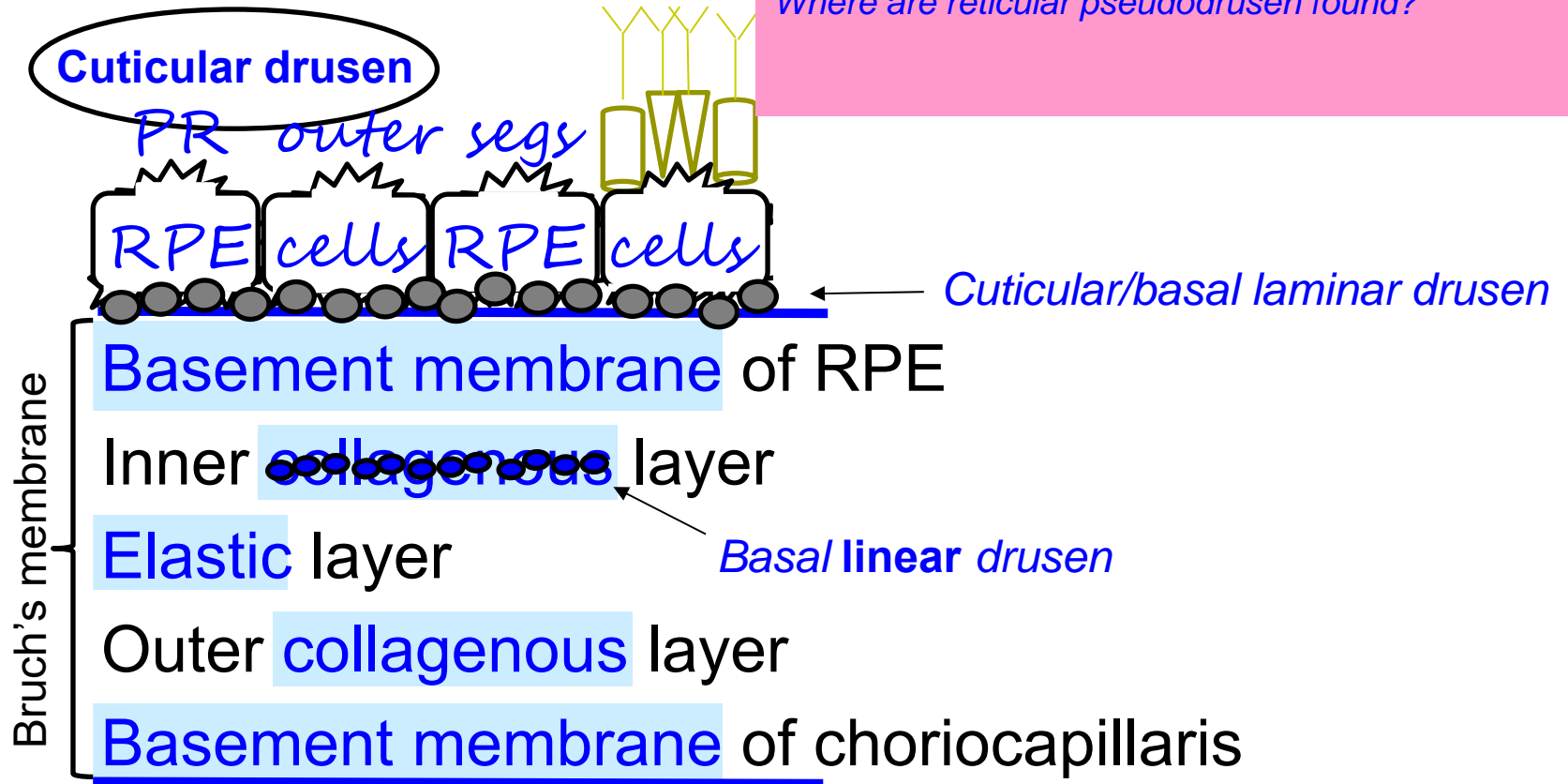
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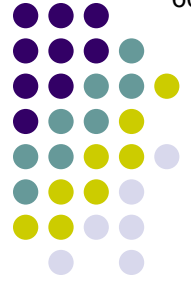
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DDx

Where are reticular pseudodrusen found?





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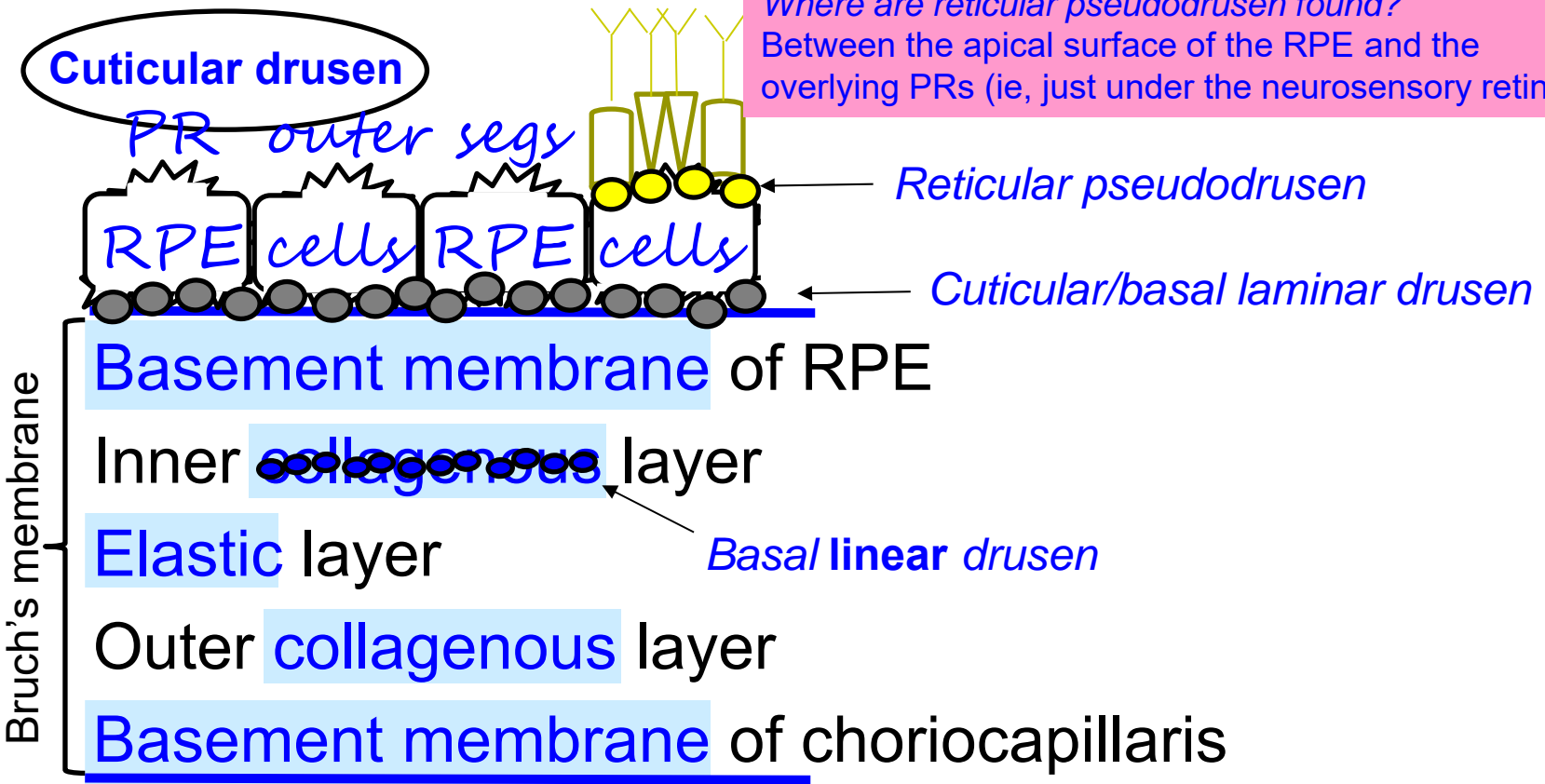
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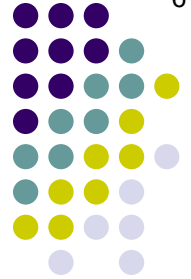
DDx

Where are reticular pseudodrusen found?  
Between the apical surface of the RPE and the overlying PRs (ie, just under the neurosensory retina)



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*



## Dry ARMD DDx

**Pattern dystrophy**

**Cuticular drusen**

**Vitelliform exudative macular detachment**

Polypoidal choroidal vasculopathy

Central serous chorioretinopathy

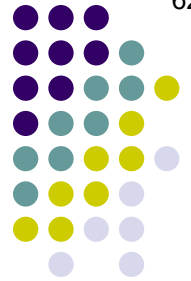
RPE change after CSC

Small choroidal melanoma

Hydroxychloroquine toxicity

## Wet ARMD DDx

**Macroaneurysms**

**A**

*This is the combined DDx for both dry and wet ARMD—  
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## Dry ARMD DDx

**Pattern dystrophy**

**Cuticular drusen**

## Wet ARMD DDx

**Macroaneurysms**

**Vitelliform exudative macular detachment**

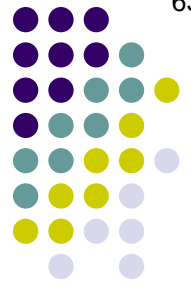
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Wet ARMD DDx

Pattern dystrophy

Cuticular drusen

Macroaneurysms

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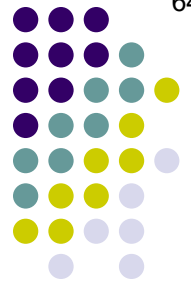
Central

RP

Small

Hydr

What is vitelliform exudative macular detachment (VEMD)?



A

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Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Cuticular drusen

Macroaneurysms

**Vitelliform exudative macular detachment**

Polypoidal choroidal vasculopathy

Central

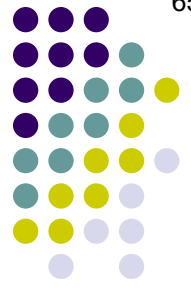
RP

Small

Hydr

*What is vitelliform exudative macular detachment (VEMD)?  
The name says it all--an exudative detachment of the macula in  
which the subretinal fluid is yellow*





Q

*This is the combined DDx for both dry and wet ARMD—  
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Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Cuticular drusen

Macroaneurysms

**Vitelliform exudative macular detachment**

Polypoidal choroidal vasculopathy

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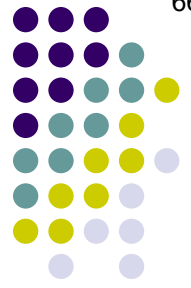
RP

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The name says it all--an exudative detachment of the macula in  
which the subretinal fluid is yellow*

*With what (discussed recently in this slide-set) lesion is it associated?*



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

**Cuticular drusen**

Macroaneurysms

**Vitelliform exudative macular detachment**

Polypoidal choroidal vasculopathy

Central

RP

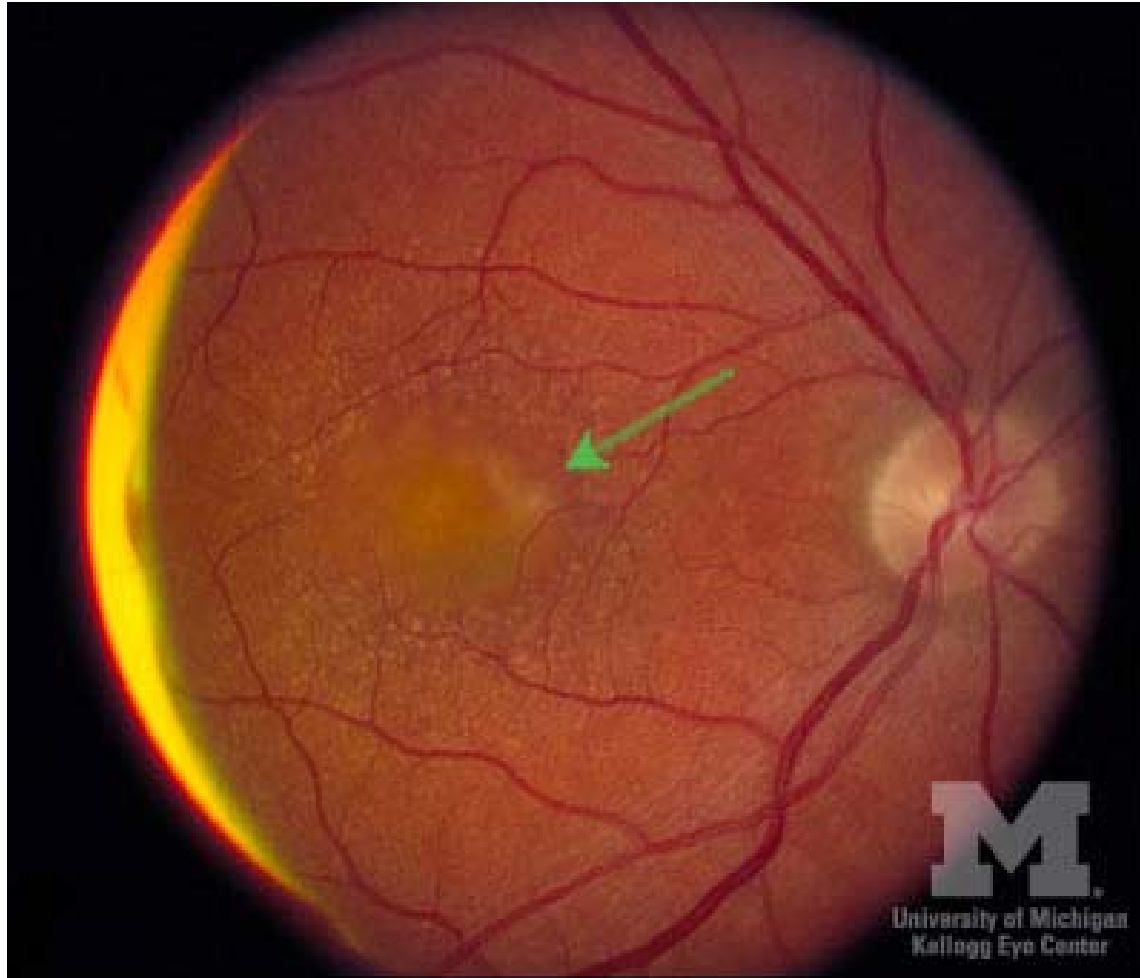
Small

Hydr

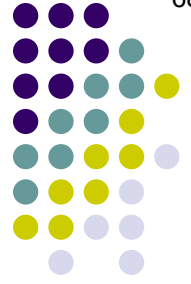
*What is vitelliform exudative macular detachment (VEMD)?  
The name says it all--an exudative detachment of the macula in  
which the subretinal fluid is yellow*

*With what (discussed recently in this slide-set) lesion is it associated?  
VEMD occurs in eyes with extensive **cuticular drusen***

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*



Vitelliform exudative macular detachment. Note the cuticular drusen



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

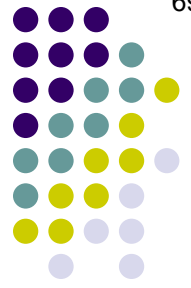
- Pattern dystrophy
- Cuticular drusen

**Vitelliform exudative macular detachment**

- Polypoidal choroidal vasculopathy
- Central serous chorioretinopathy
- RP
- Small vessel disease

*What is vitelliform exudative macular detachment (VEMD)?  
The name says it all--an exudative detachment of the macula in which the subretinal fluid is yellow*

*Hmm...An exudative detachment of the macula with yellow subretinal fluid...  
What condition does that sound like?*



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Cuticular drusen

Macroaneurysms

**Vitelliform exudative macular detachment**

Polypoidal choroidal vasculopathy

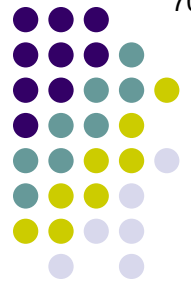
Central

RP

Small

*What is vitelliform exudative macular detachment (VEMD)?  
The name says it all--an exudative detachment of the macula in  
which the subretinal fluid is yellow*

*Hmm...An exudative detachment of the macula with yellow subretinal fluid...  
What condition does that sound like?  
Best disease*



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Cuticular drusen

Macroaneurysms

**Vitelliform exudative macular detachment**

Polypoidal choroidal vasculopathy

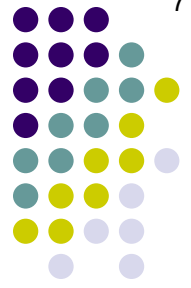
Central

RP

Small

*What is vitelliform exudative macular detachment (VEMD)?  
The name says it all--an exudative detachment of the macula in which the subretinal fluid is yellow*

*Hmm...An exudative detachment of the macula with yellow subretinal fluid...  
What condition does that sound like?  
Best disease  
  
Are VEMD and Best dz related?*



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy  
Cuticular drusen

Macroaneurysms

**Vitelliform exudative macular detachment**

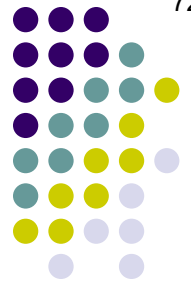
Polypoidal choroidal vasculopathy

Central  
RP  
Sma

*What is vitelliform exudative macular detachment (VEMD)?  
The name says it all--an exudative detachment of the macula in which the subretinal fluid is yellow*

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What condition does that sound like?  
Best disease*

*Are VEMD and Best dz related?  
No, but their appearance can be very similar*



Q

This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Cuticular drusen

Macroaneurysms

**Vitelliform exudative macular detachment**

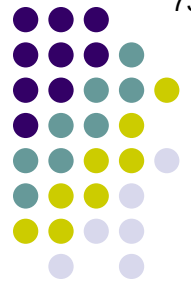
Polypoidal choroidal vasculopathy

	Best dz	VEMD
Life-stage of onset?		

Best disease  
Are **VEMD and Best dz** related?  
No, but their appearance can be very similar

ment (VEMD)?  
ent of the macula in  
h yellow subretinal fluid...





A

This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy  
Cuticular drusen

Macroaneurysms

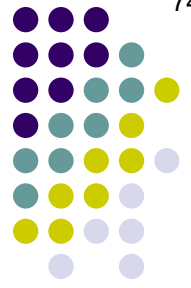
**Vitelliform exudative macular detachment**

Polypoidal choroidal vasculopathy

	Best dz	VEMD
Life-stage of onset?	Childhood	Adulthood

Best disease  
Are **VEMD and Best dz** related?  
No, but their appearance can be very similar

ment (VEMD)?  
ent of the macula in  
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Q

This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular drusen

**Vitelliform exudative macular detachment**

Polypoidal choroidal vasculopathy

	Best dz	VEMD
Life-stage of onset?	Childhood	Adulthood
Cuticular drusen present?		

Are **VEMD and Best dz** related?  
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A

This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular drusen

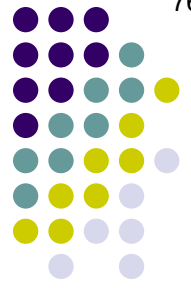
**Vitelliform exudative macular detachment**

Polypoidal choroidal vasculopathy

	Best dz	VEMD
Life-stage of onset?	Childhood	Adulthood
Cuticular drusen present?	No	Yes

Are **VEMD and Best dz** related?  
No, but their appearance can be very similar

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Q

This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular drusen

**Vitelliform exudative macular detachment**

Polypoidal choroidal vasculopathy

	Best dz	VEMD
Life-stage of onset?	Childhood	Adulthood
Cuticular drusen present?	No	Yes
EOG abnormal?		

Are **VEMD and Best dz** related?  
No, but their appearance can be very similar

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ent of the macula in  
h yellow subretinal fluid...



A

This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular drusen

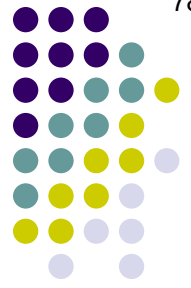
**Vitelliform exudative macular detachment**

Polypoidal choroidal vasculopathy

	Best dz	VEMD
Life-stage of onset?	Childhood	Adulthood
Cuticular drusen present?	No	Yes
EOG abnormal?	Yes	No

Best disease  
Are **VEMD and Best dz** related?  
No, but their appearance can be very similar

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h yellow subretinal fluid...



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystro

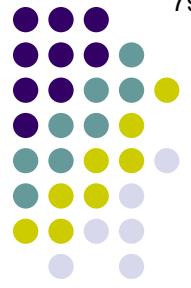
Cuticular drus

What does EOG stand for?

detachment

- Life-stage
- Cuticular drus
- EOG** abn

EMD)?  
 e macula in  
 subretinal fluid...



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystro

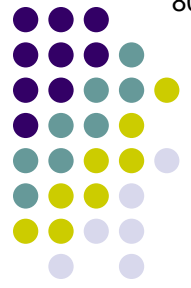
Cuticular drus

What does EOG stand for?  
Electro-oculogram

detachment

- Life-stage
- Cuticular drus
- EOG** abn

EMD)?  
 e macula in  
 subretinal fluid...



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystro

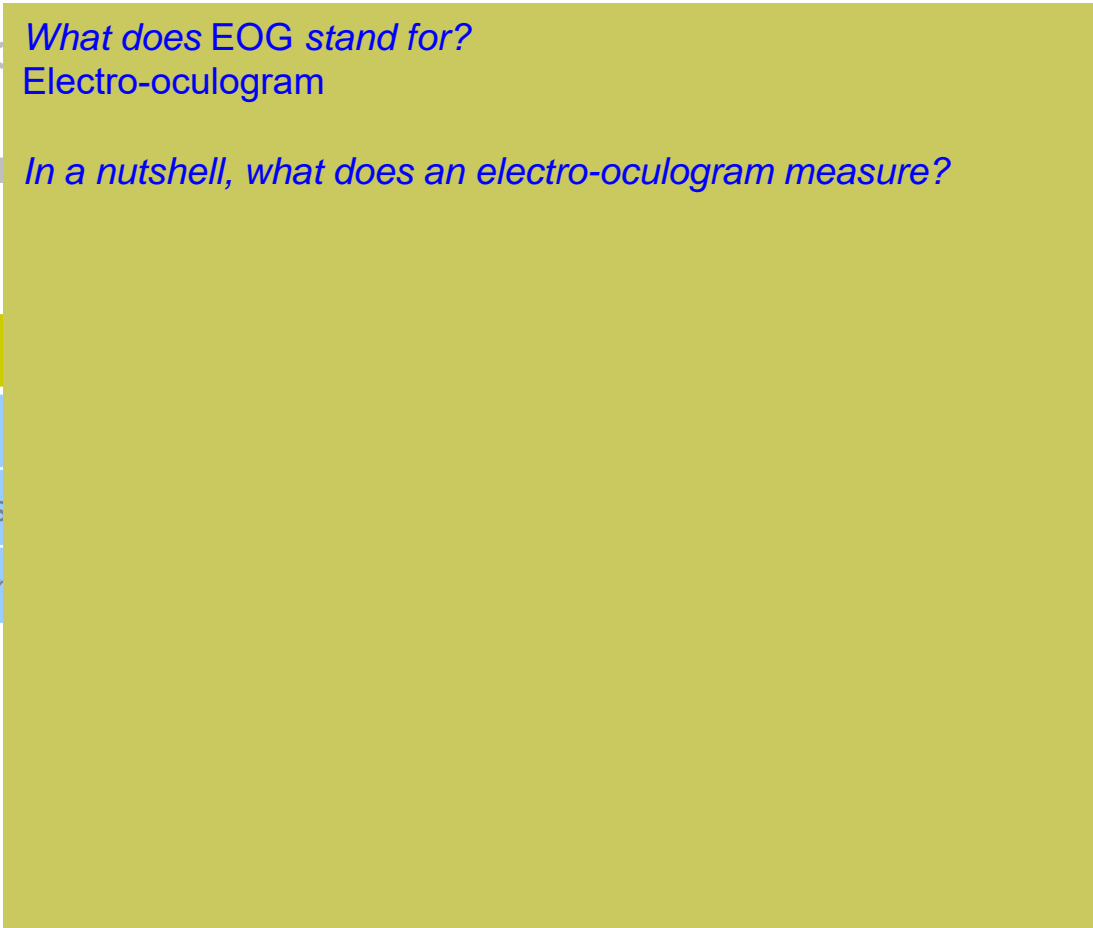
*What does EOG stand for?  
Electro-oculogram*

Cuticular drus

*In a nutshell, what does an electro-oculogram measure?*

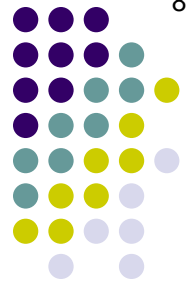
detachment

- Life-stage
- Cuticular drus
- EOG** abn



EMD)?  
 e macula in  
 subretinal fluid...





A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystro

What does EOG stand for?  
Electro-oculogram

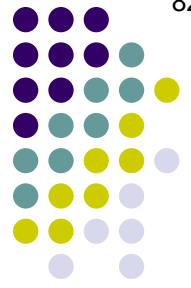
Cuticular drus

In a nutshell, what does an electro-oculogram measure?  
RPE function

detachment

- Life-stage
- Cuticular drus
- EOG** abn

- EMD)?
- macula in
- subretinal fluid...



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystro

*What does EOG stand for?  
Electro-oculogram*

Cuticular drus

*In a nutshell, what does an electro-oculogram measure?  
RPE function*

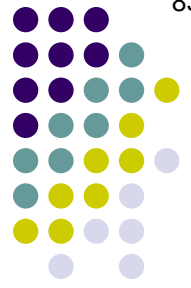
*Again in a nutshell, how does it work?*

detachment

- Life-stage
- Cuticular drus
- EOG** abn

EMD)?  
e macula in

subretinal fluid...



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

*What does EOG stand for?  
Electro-oculogram*

Cuticular drusen

*In a nutshell, what does an electro-oculogram measure?  
RPE function*

*Again in a nutshell, how does it work?*

*The resting potential of the RPE is measured in both the light-  
and dark-adapted states, and a ratio of the two resting  
potentials is calculated*

detachment

- Life-stage
- Cuticular drusen
- EOG** abnormal

- EMD)?
- macula in
- subretinal fluid...



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystro

*What does EOG stand for?  
Electro-oculogram*

Cuticular drus

*In a nutshell, what does an electro-oculogram measure?  
RPE function*

detachment

*Again in a nutshell, how does it work?*

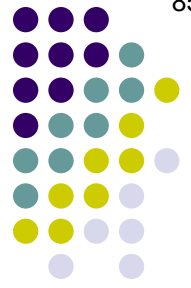
The resting potential of the RPE is measured in both the light- and dark-adapted states, and a ratio of the two resting potentials is calculated

*What is this ratio called?*

EMD)?  
e macula in

- Life-stage
- Cuticular drus
- EOG** abr

subretinal fluid...



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Cuticular druse

- Life-stage
- Cuticular druse
- EOG** (circled)

*What does EOG stand for?*  
Electro-oculogram

*In a nutshell, what does an electro-oculogram measure?*  
RPE function

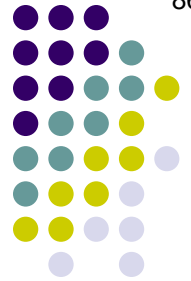
*Again in a nutshell, how does it work?*  
The resting potential of the RPE is measured in both the light- and dark-adapted states, and a ratio of the two resting potentials is calculated

*What is this ratio called?*  
The **Arden ratio**

detachment

EMD)?  
e macula in

subretinal fluid...



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Cuticular drusen

- Life-stage
- Cuticular drusen
- EOG** (circled)

*What does EOG stand for?*  
Electro-oculogram

*In a nutshell, what does an electro-oculogram measure?*  
RPE function

*Again in a nutshell, how does it work?*  
The resting potential of the RPE is measured in both the light- and dark-adapted states, and a ratio of the two resting potentials is calculated

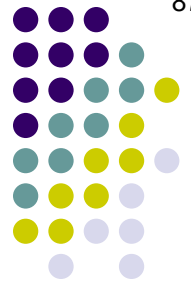
*What is this ratio called?*  
The **Arden ratio**

*What is the normal range for the Arden ratio?*

detachment

EMD)?  
e macula in

subretinal fluid...



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Cuticular drusen

- Life-stage
- Cuticular drusen
- EOG** (circled)

*What does EOG stand for?*  
Electro-oculogram

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RPE function

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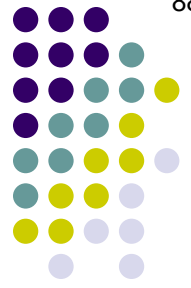
*What is this ratio called?*  
The **Arden ratio**

*What is the normal range for the Arden ratio?*  
1.9-2.8

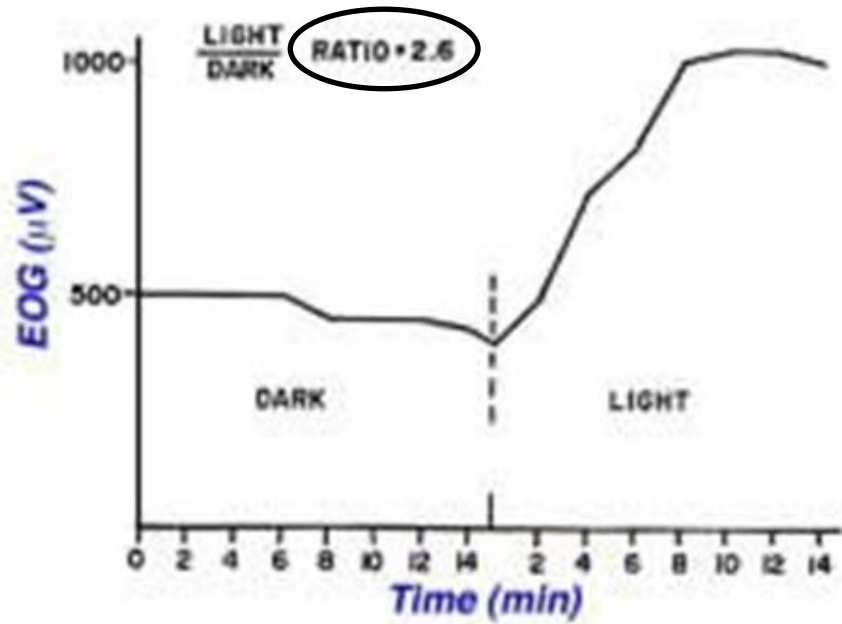
detachment

EMD)?  
e macula in

subretinal fluid...



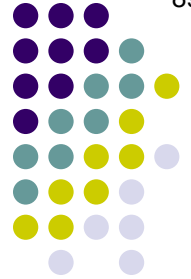
*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*



Non-Best pts

EOG





Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystro

Cuticular drus

*What does EOG stand for?*  
Electro-oculogram

*In a nutshell, what does an electro-oculogram measure?*  
RPE function

*Again in a nutshell, how does it work?*

The resting potential of the RPE is measured in both the light- and dark-adapted states, and a ratio of the two resting potentials is calculated

*What is this ratio called?*

The **Arden ratio**

*What is the normal range for the Arden ratio?*

1.9-2.8

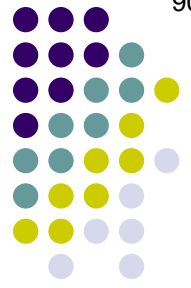
*At what value is the Arden ratio considered definitely abnormal?*

detachment

EMD)?  
e macula in

subretinal fluid...

- Life-stage
- Cuticular drus
- EOG** abr



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Cuticular drusen

- Life-stage
- Cuticular drusen
- EOG** (circled)

*What does EOG stand for?*  
Electro-oculogram

*In a nutshell, what does an electro-oculogram measure?*  
RPE function

*Again in a nutshell, how does it work?*  
The resting potential of the RPE is measured in both the light- and dark-adapted states, and a ratio of the two resting potentials is calculated

*What is this ratio called?*  
The **Arden ratio**

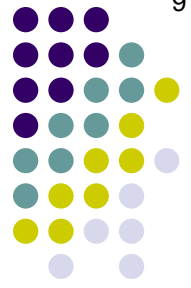
*What is the normal range for the Arden ratio?*  
1.9-2.8

*At what value is the Arden ratio considered definitely abnormal?*  
Below 1.7 (it's usually <1.5 in Best dz, and ratios as low as 1.1 are not uncommon)

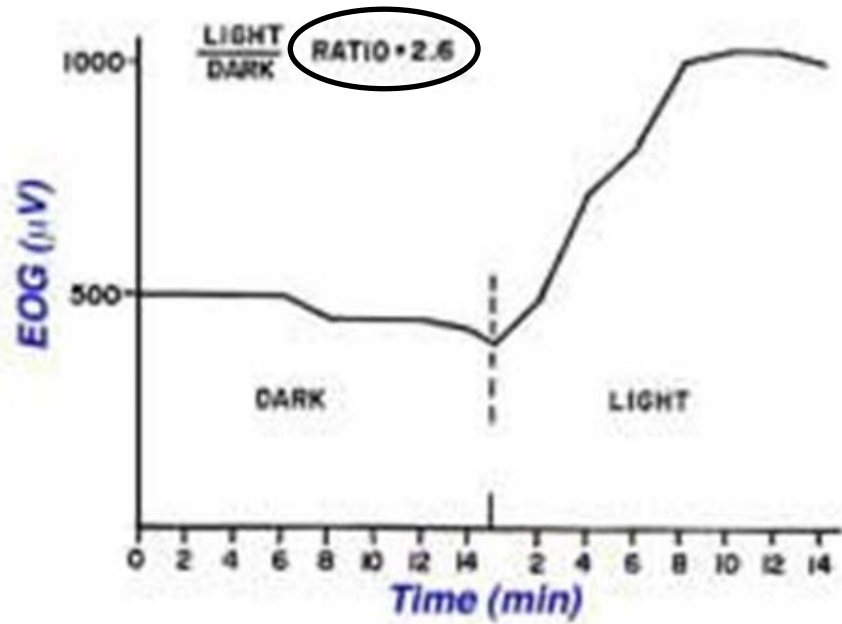
detachment

EMD)?  
e macula in

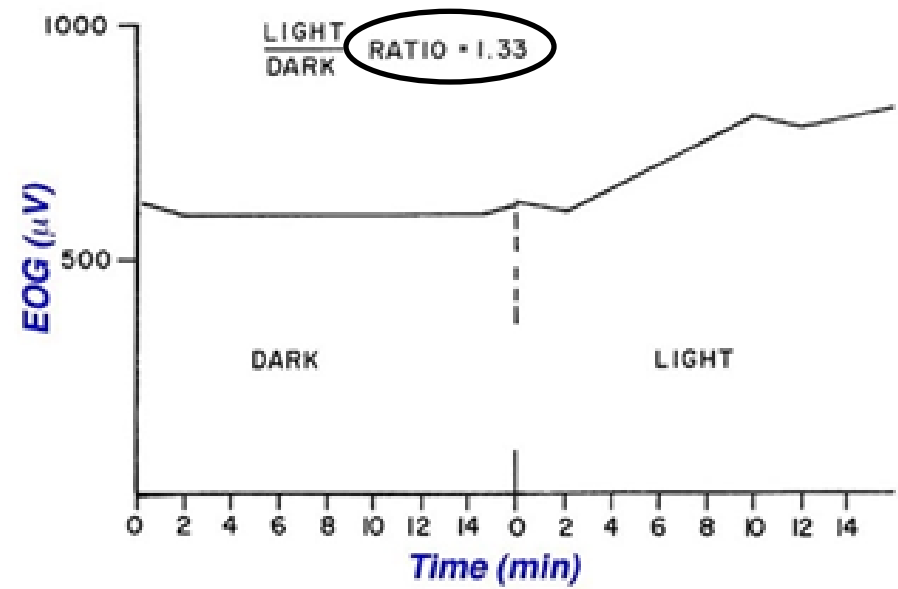
subretinal fluid...



*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

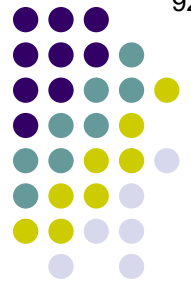


Non-Best pts



Best pts

EOG



*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

**Dry ARMD DDx**

**Wet ARMD DDx**

Pattern dystrophy

**Cuticular drusen**

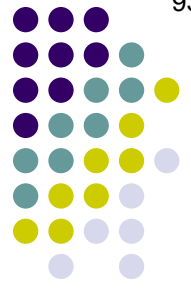
Macroaneurysms

Vitelliform exudative macular detachment

Polypoidal choroidal vasculopathy

Central serous chorioretinopathy

Cuticular drusen/VEMD tl;dr  
**Cuticular drusen can mimic dry ARMD.**



*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular drusen

Vitelliform exudative macular detachment

Polypoidal choroidal vasculopathy  
Central serous chorioretinopathy

Cuticular drusen/VEMD tl;dr  
Cuticular drusen can mimic **dry ARMD**.  
Cuticular drusen can also lead to VEMD, which in turn...



*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular drusen

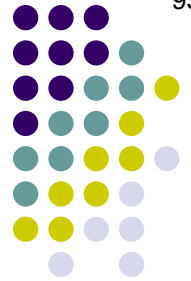
Vitelliform exudative macular detachment

Polypoidal choroidal vasculopathy  
Central serous chorioretinopathy

Cuticular drusen/VEMD tl;dr  
Cuticular drusen can mimic **dry ARMD**.  
Cuticular drusen can also lead to VEMD, which in turn...  
can mimic **wet ARMD**.

Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*



## Dry ARMD DDx

**Pattern dystrophy**

**Cuticular drusen**

## Wet ARMD DDx

**Macroaneurysms**

**Vitelliform exudative macular detachment**

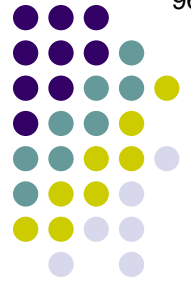
**Polypoidal choroidal vasculopathy**

Central serous chorioretinopathy

RPE change after CSC

Small choroidal melanoma

Hydroxychloroquine toxicity

**A**

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

## Dry ARMD DDx

**Pattern dystrophy**

**Cuticular drusen**

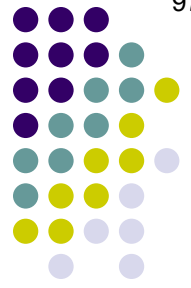
## Wet ARMD DDx

**Macroaneurysms**

**Vitelliform exudative macular detachment**  
**Polypoidal choroidal vasculopathy**

Central serous chorioretinopathy  
RPE change after CSC  
Small choroidal melanoma  
Hydroxychloroquine toxicity





Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

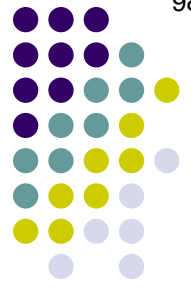
Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How does polypoidal choroidal vasculopathy (PCV) present?*



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

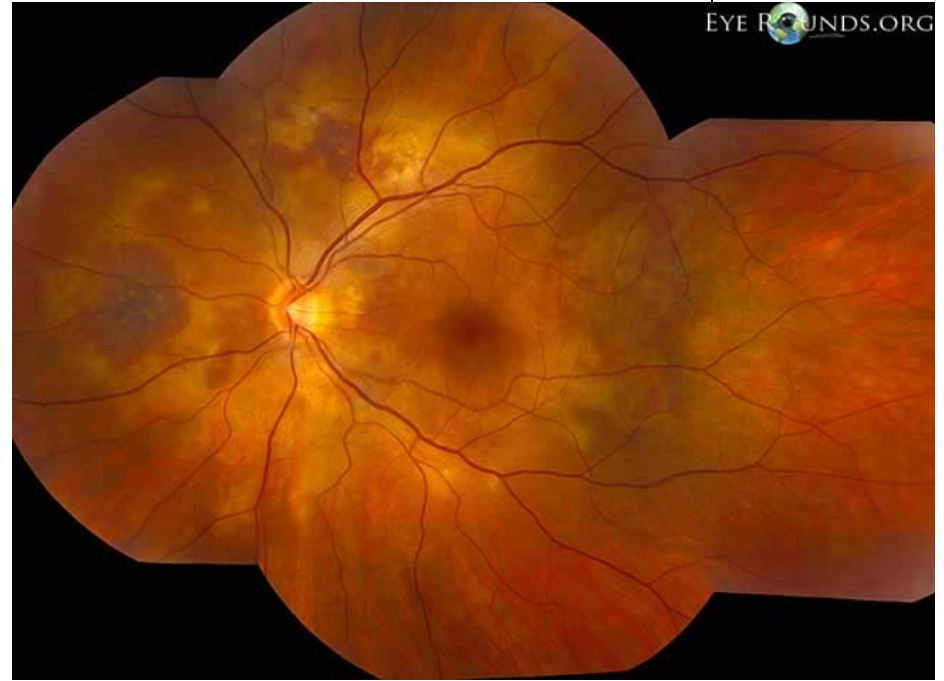
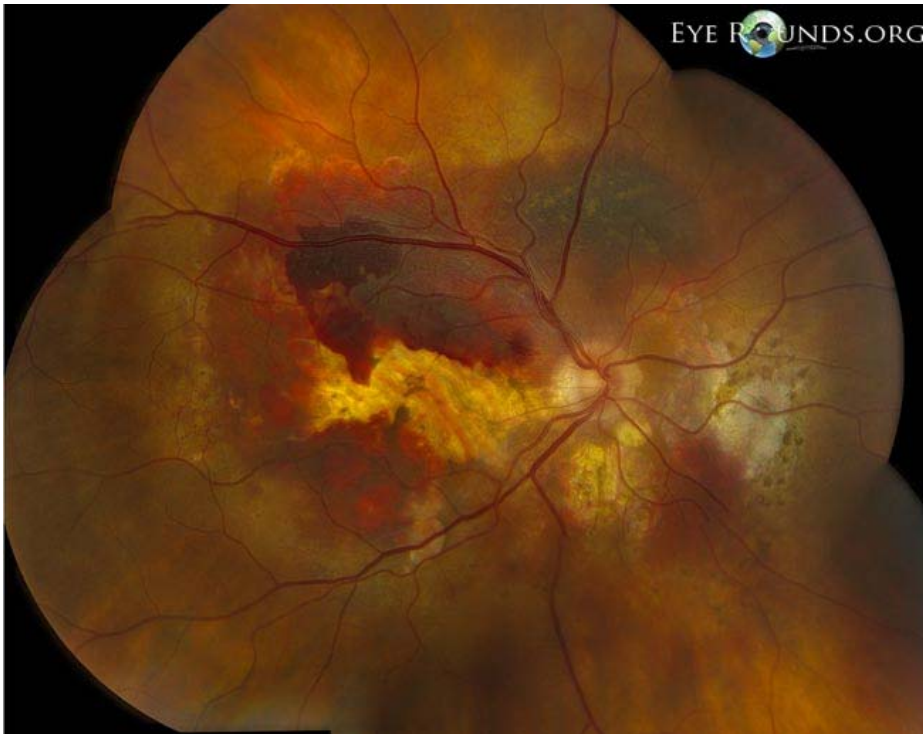
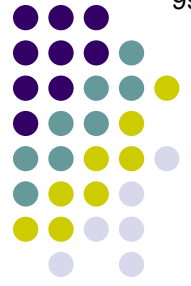
- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How does polypoidal choroidal vasculopathy (PCV) present?  
With recurrent, multifocal serous/sanguineous detachments of the RPE*

*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*



PCV. Multiple areas of subretinal hemorrhage are visible. They are surrounded by areas of yellow subretinal material which likely represents old hemorrhage. There is an acute subretinal hemorrhage OD.

PCV



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

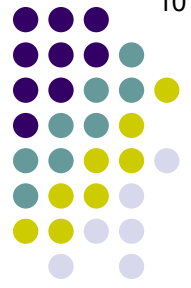
- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How does polypoidal choroidal vasculopathy (PCV) present?*  
With recurrent, multifocal **serous/sanguineous** detachments of the RPE

*Where does this fluid and blood come from?*



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Pattern dystrophy

Cuticular drusen

Wet ARMD DDx

Macroaneurysms

Vitelliform exudative macular detachment

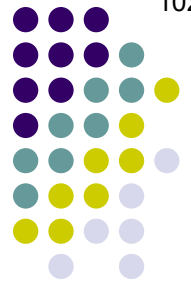
**Polypoidal choroidal vasculopathy**

Central serous chorioretinopathy

*How does polypoidal choroidal vasculopathy (PCV) present?*  
With recurrent, multifocal **serous/sanguineous** detachments of the RPE

*Where does this fluid and blood come from?*  
It's all in the name. The choroidal vasculature contains polyp-shaped terminal dilations that leach serum and/or heme--hence, poly-poidal choroidal vasculopathy.





Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

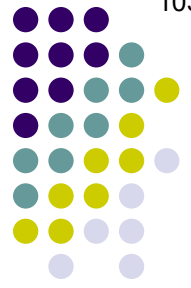
- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How does polypoidal choroidal vasculopathy (PCV) present?  
With recurrent, multifocal serous/sanguineous detachments of the RPE*

*Is there a gender predilection?*



# Q/A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

## Dry ARMD DDx

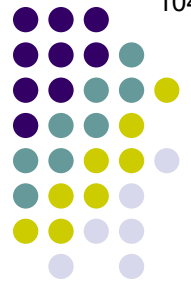
- Pattern dystrophy
- Cuticular drusen

## Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How does polypoidal choroidal vasculopathy (PCV) present?*  
 With recurrent, multifocal serous/sanguineous detachments of the RPE

*Is there a gender predilection?*  
 Yes,        are more likely to be affected



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

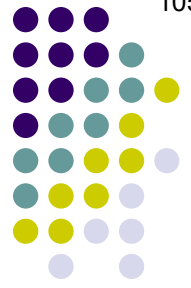
Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How does polypoidal choroidal vasculopathy (PCV) present?*  
 With recurrent, multifocal serous/sanguineous detachments of the RPE

*Is there a gender predilection?*  
 Yes, females are more likely to be affected





Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

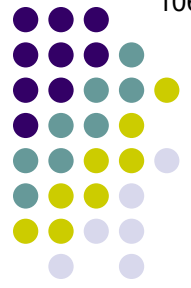
Wet ARMD DDx

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- Central serous chorioretinopathy

*How does polypoidal choroidal vasculopathy (PCV) present?*  
 With recurrent, multifocal serous/sanguineous detachments of the RPE

*Is there a gender predilection?*  
 Yes, females are more likely to be affected

*Is there a racial predilection?*



# Q/A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

## Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

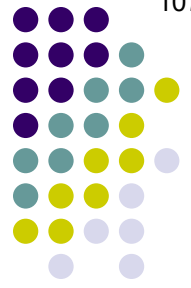
## Wet ARMD DDx

- Macroaneurysms
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- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How does polypoidal choroidal vasculopathy (PCV) present?*  
 With recurrent, multifocal serous/sanguineous detachments of the RPE

*Is there a gender predilection?*  
 Yes, females are more likely to be affected

*Is there a racial predilection?*  
 Yes, individuals of [ ] and [ ] heritage are more likely to be affected



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

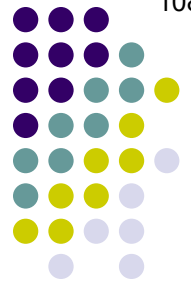
Wet ARMD DDx

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- Central serous chorioretinopathy

*How does polypoidal choroidal vasculopathy (PCV) present?*  
 With recurrent, multifocal serous/sanguineous detachments of the RPE

*Is there a gender predilection?*  
 Yes, females are more likely to be affected

*Is there a racial predilection?*  
 Yes, individuals of (East) Asian and African heritage are more likely to be affected



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

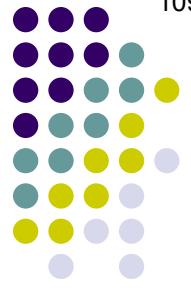
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*How does polypoidal choroidal vasculopathy (PCV) present?*  
 With recurrent, multifocal serous/sanguineous detachments of the RPE

*Is there a gender predilection?*

*What percentage of cases of presumed wet ARMD are actually PCV in:  
 Whites?  
 East Asians?*

Yes, individuals of **(East) Asian** and African heritage are more likely to be affected



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

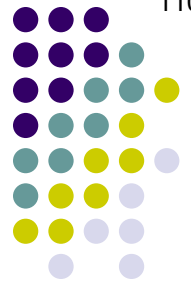
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*How does polypoidal choroidal vasculopathy (PCV) present?*  
 With recurrent, multifocal serous/sanguineous detachments of the RPE

*Is there a gender predilection?*

*What percentage of cases of presumed wet ARMD are actually PCV in:  
 Whites? No more than about 5%  
 East Asians?*

Yes, individuals of **(East) Asian** and African heritage are more likely to be affected



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

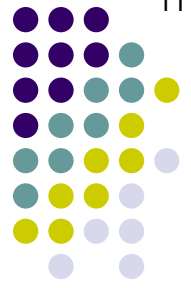
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 Whites? No more than about 5%  
 East Asians?*

Yes, individuals of **(East) Asian** and African heritage are more likely to be affected



A

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Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

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- Central serous chorioretinopathy

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 With recurrent, multifocal serous/sanguineous detachments of the RPE

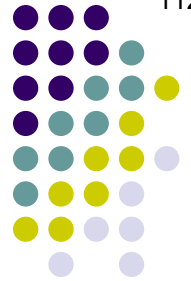
*Is there a gender predilection?*

*What percentage of cases of presumed wet ARMD are actually PCV in:*  
*Whites? No more than about 5%*  
*East Asians? Estimates run as high as an astonishing 50%!*

Yes, individuals of **(East) Asian** and African heritage are more likely to be affected

Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*



Dry ARMD DDx

Pattern dystrophy

Cuticular drusen

Wet ARMD DDx

Macroaneurysms

Vitelliform exudative macular detachment

**Polypoidal choroidal vasculopathy**

Central serous chorioretinopathy

*How does polypoidal choroidal vasculopathy (PCV) present?*

With recurrent, multifocal serous/sanguineous detachments of the RPE

*Is there a gender predilection?*

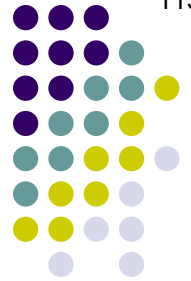
Yes, females are more likely to be affected

*Is there a racial predilection?*

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?*





# A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Pattern dystrophy

Cuticular drusen

Wet ARMD DDx

Macroaneurysms

Vitelliform exudative macular detachment

**Polypoidal choroidal vasculopathy**

Central serous chorioretinopathy

*How does polypoidal choroidal vasculopathy (PCV) present?*

With recurrent, multifocal serous/sanguineous detachments of the RPE

*Is there a gender predilection?*

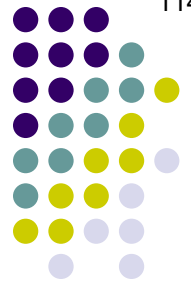
Yes, females are more likely to be affected

*Is there a racial predilection?*

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?*

Between 50 and 70 years of age



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

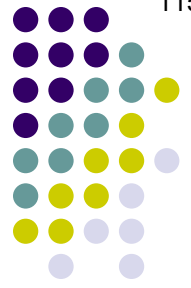
Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How is PCV diagnosed?*

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?*  
Between 50 and 70 years of age



# Q/A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

## Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

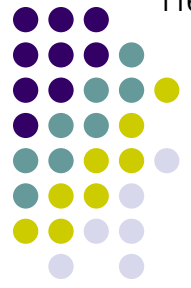
## Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How is PCV diagnosed?*  
 Because of its ability to image the choroidal circulation, **angiography** is probably the most useful test in making the dx

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?*  
 Between 50 and 70 years of age



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

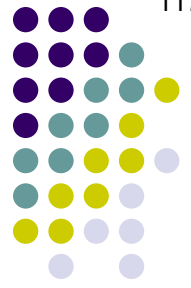
- Pattern dystrophy
- Cuticular drusen

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How is PCV diagnosed?*  
 Because of its ability to image the choroidal circulation, ICG angiography is probably the most useful test in making the dx

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?*  
 Between 50 and 70 years of age



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular dystrophy

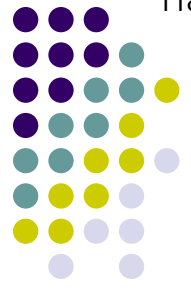
retinal detachment  
pathy

What does ICG stand for in this context?

How is PCV diagnosed?  
Because of its ability to image the choroidal circulation, **ICG angiography** is probably the most useful test in making the dx

Yes, individuals of (East) Asian and African heritage are more likely to be affected

During what age range does it typically present?  
Between 50 and 70 years of age



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular dystrophy

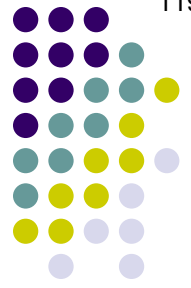
retinal detachment  
pathy

What does ICG stand for in this context?  
Indocyanine green

How is PCV diagnosed?  
Because of its ability to image the choroidal circulation, **ICG angiography** is probably the most useful test in making the dx

Yes, individuals of (East) Asian and African heritage are more likely to be affected

During what age range does it typically present?  
Between 50 and 70 years of age



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular dystrophy

retinal detachment  
pathy

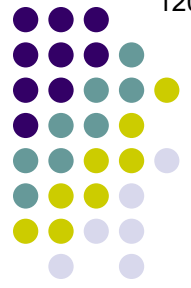
*What does ICG stand for in this context?  
Indocyanine green*

*Under what circumstance is ICG angiography preferred over FA?*

*How is PCV diagnosed?  
Because of its ability to image the choroidal circulation, **ICG angiography** is probably the most useful test in making the dx*

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?  
Between 50 and 70 years of age*



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular dystrophy

retinal detachment  
pathy

*What does ICG stand for in this context?  
Indocyanine green*

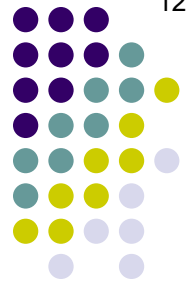
*Under what circumstance is ICG angiography preferred over FA?  
When one is primarily concerned with visualizing the choroidal circulation*

*How is PCV diagnosed?*  
Because of its ability to image the choroidal circulation, **ICG angiography** is probably the most useful test in making the dx

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?*  
Between 50 and 70 years of age





Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular dystrophy

*What does ICG stand for in this context?  
Indocyanine green*

*Under what circumstance is ICG angiography preferred over FA?  
When one is primarily concerned with visualizing the choroidal circulation*

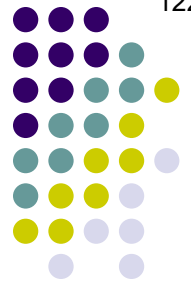
retinal detachment  
pathy

*How is PCV diagnosed?  
Because of its ability to image the choroidal circulation, **ICG angiography** is probably the most useful test in making the dx*

*Why is ICG superior to fluorescein for imaging the choroidal circulation?*

*During what age range does it typically present?  
Between 50 and 70 years of age*

ected



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular dystrophy

*What does ICG stand for in this context?  
Indocyanine green*

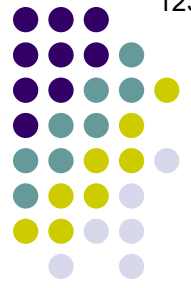
*Under what circumstance is ICG angiography preferred over FA?  
When one is primarily concerned with visualizing the choroidal circulation*

retinal detachment  
pathy

*How is PCV diagnosed?  
Because of its ability to image the choroidal circulation, **ICG angiography** is probably the most useful test in making the dx*

*Why is ICG superior to fluorescein for imaging the choroidal circulation?  
Fluorescein diffuses rapidly through choroidal vessels, rendering them hard to visualize.*

*During what age range does it typically present?  
Between 50 and 70 years of age*



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular dystrophy

*What does ICG stand for in this context?*

Indocyanine green

*Under what circumstance is ICG angiography preferred over FA?*

When one is primarily concerned with visualizing the choroidal circulation

retinal detachment  
pathy

*How is PCV diagnosed?*

Because of its ability to image the choroidal circulation, **ICG angiography** is probably the most useful test in making the dx

*Why is ICG superior to fluorescein for imaging the choroidal circulation?*

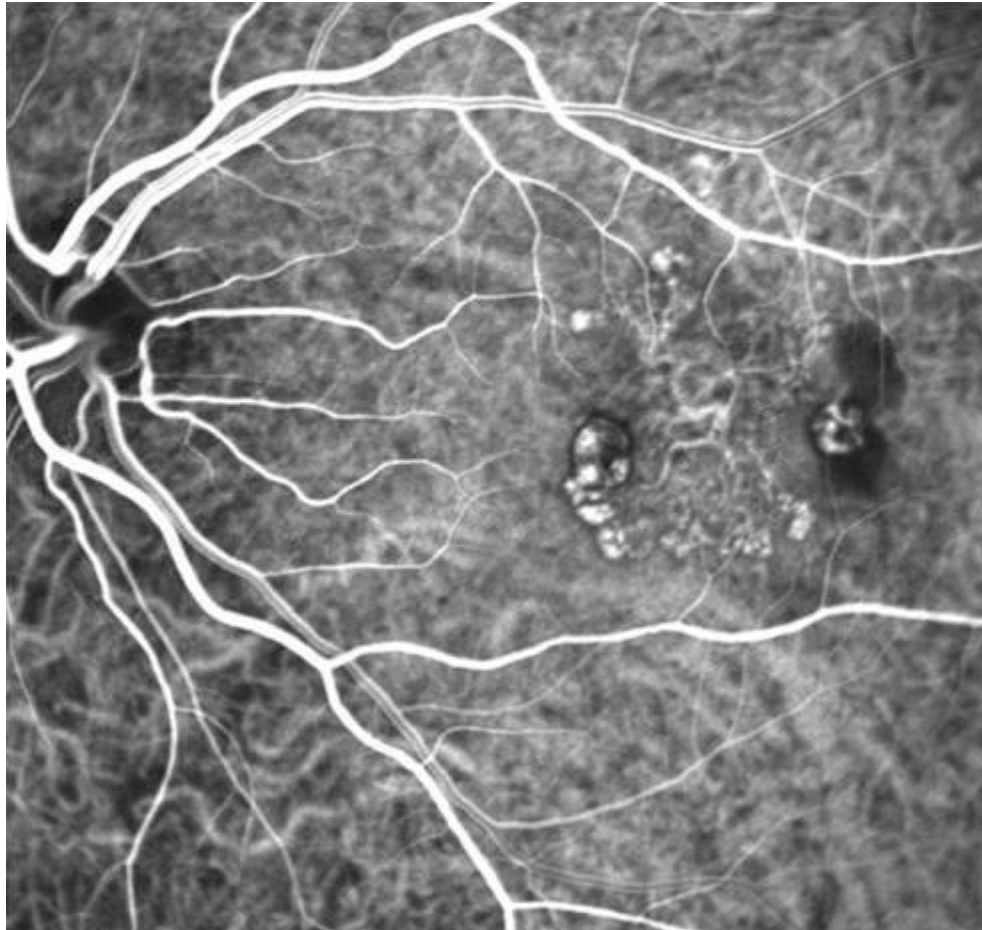
Fluorescein diffuses rapidly through choroidal vessels, rendering them hard to visualize. **In contrast (ahem), ICG is almost completely protein-bound in circulation, and thus will not diffuse across normal choroidal vessels.**

**This renders ICG ideal for visualizing pathology of the choroidal vasculature.**

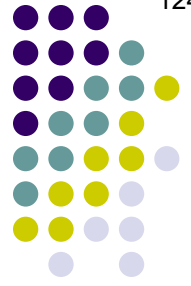
*During what age range does it typically present?*

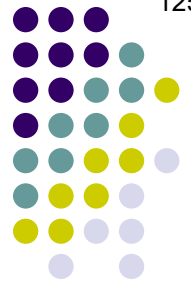
Between 50 and 70 years of age

*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*



PCV: ICGA. Note the characteristic lesion: a choroidal vascular network of vessels ending in aneurysmal, polyp-like bulges





# Q/A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

## Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

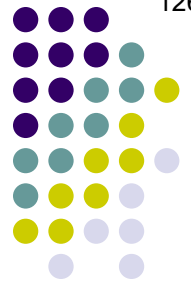
## Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How is PCV diagnosed?*  
 Because of its ability to image the choroidal circulation, ICG angiography is probably the most useful test in making the dx (  and  can be contributory as well)

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?*  
 Between 50 and 70 years of age



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Cuticular drusen

Macroaneurysms

Vitelliform exudative macular detachment

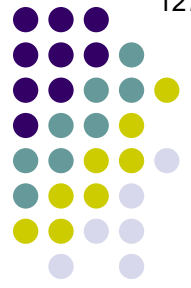
**Polypoidal choroidal vasculopathy**

Central serous chorioretinopathy

*How is PCV diagnosed?*  
Because of its ability to image the choroidal circulation, ICG angiography is probably the most useful test in making the dx ( FA and OCTA can be contributory as well)

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?*  
Between 50 and 70 years of age



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy

Macroaneurysms

Cuticular drusen

Vitelliform exudative macular detachment

**Polypoidal choroidal vasculopathy**

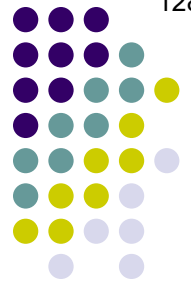
Central serous chorioretinopathy

*How is PCV diagnosed?*  
 Because of its ability to image the choroid, OCTA is the most useful test in making the dx ( FA and ICG are less useful)

**OCTA** What does OCTA stand for in this context?

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?*  
Between 50 and 70 years of age



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

Wet ARMD DDx

Pattern dystrophy  
Cuticular drusen

Macroaneurysms  
Vitelliform exudative macular detachment  
**Polypoidal choroidal vasculopathy**  
Central serous chorioretinopathy

*How is PCV diagnosed?*  
Because of its ability to image the choroid, OCTA is the most useful test in making the dx ( FA and ICG are not useful for this dx)

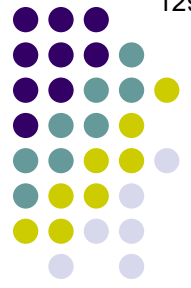
**OCTA**

*What does OCTA stand for in this context?*  
Ocular coherence tomography angiography

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?*  
Between 50 and 70 years of age





Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How is PCV diagnosed?*  
 Because of its ability to image the choroidal circulation, ICG angiography is probably the most useful test in making the dx ( FA and OCTA can be contributory as well)

*How is it treated?*

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?*  
 Between 50 and 70 years of age



# Q/A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

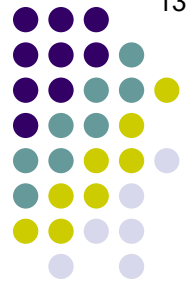
- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How is PCV diagnosed?*  
 Because of its ability to image the choroidal circulation, ICG angiography is probably the most useful test in making the dx ( FA and OCTA can be contributory as well)

*How is it treated?*  
 Anti-VEGF agents are effective, especially in conjunction with two words

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?*  
 Between 50 and 70 years of age



A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy**
- Central serous chorioretinopathy

*How is PCV diagnosed?*  
 Because of its ability to image the choroidal circulation, ICG angiography is probably the most useful test in making the dx ( FA and OCTA can be contributory as well)

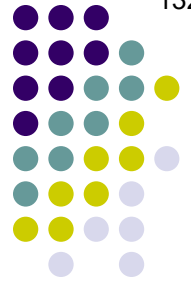
*How is it treated?*  
 Anti-VEGF agents are effective, especially in conjunction with photodynamic therapy (PDT)

Yes, individuals of (East) Asian and African heritage are more likely to be affected

*During what age range does it typically present?*  
 Between 50 and 70 years of age

Q

*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*



## Dry ARMD DDX

Pattern dystrophy

Cuticular drusen

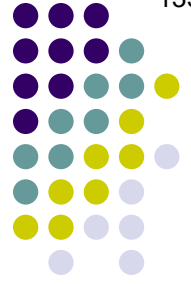
## Wet ARMD DDX

Macroaneurysms

Vitelliform exudative macular detachment  
Polypoidal choroidal vasculopathy

**Central serous chorioretinopathy**

RPE change after CSC  
Small choroidal melanoma  
Hydroxychloroquine toxicity



# A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

## Dry ARMD DDx

**Pattern dystrophy**

**Cuticular drusen**

## Wet ARMD DDx

**Macroaneurysms**

**Vitelliform exudative macular detachment**

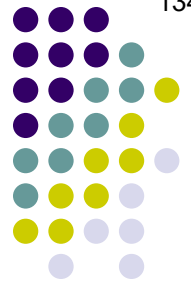
**Polypoidal choroidal vasculopathy**

**Central serous chorioretinopathy**

RPE change after CSC

Small choroidal melanoma

Hydroxychloroquine toxicity



Q

*This is the combined DDx for both dry and wet ARMD—  
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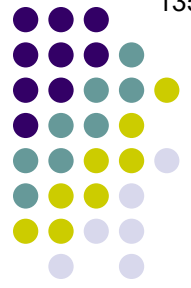
Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy
- Central serous chorioretinopathy**

*In a nutshell, what is the pathophysiology of CSC?*



A

*This is the combined DDx for both dry and wet ARMD—  
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Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

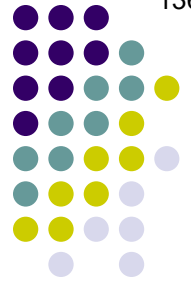
- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy
- Central serous chorioretinopathy**

*In a nutshell, what is the pathophysiology of CSC?*  
 Choroidal hyperpermeability + impaired RPE barrier function → serous retinal detachment(s)

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

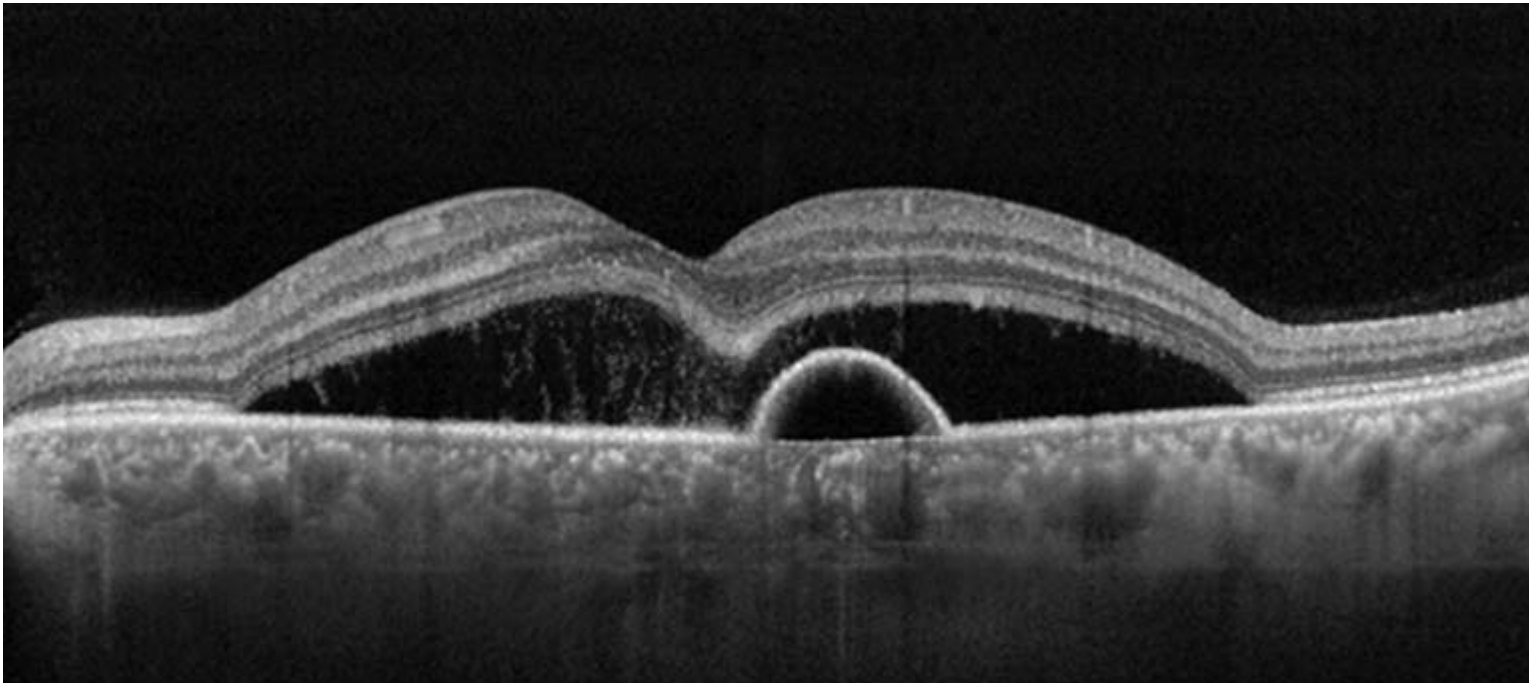
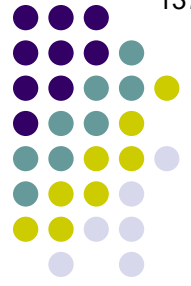


CSC: Serous RD

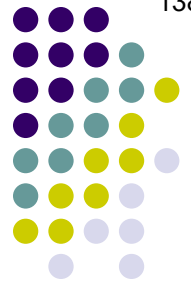




*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*



CSC: OCT



Q

*This is the combined DDx for both dry and wet ARMD—  
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Dry ARMD DDx

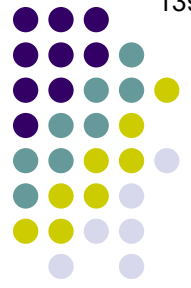
- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy
- Central serous chorioretinopathy**

*In a nutshell, what is the pathophysiology of CSC?*  
 Choroidal hyperpermeability + impaired RPE barrier function → serous retinal detachment(s)

*How does CSC present?*



A

*This is the combined DDx for both dry and wet ARMD—  
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Dry ARMD DDx

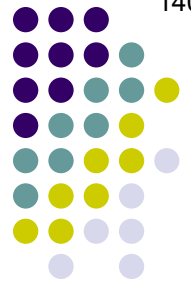
- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy
- Central serous chorioretinopathy**

*In a nutshell, what is the pathophysiology of CSC?*  
 Choroidal hyperpermeability + impaired RPE barrier function → serous retinal detachment(s)

*How does CSC present?*  
 With visual dysfunction--decreased VA, dyschromatopsia, metamorphopsia, etc



Q

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Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

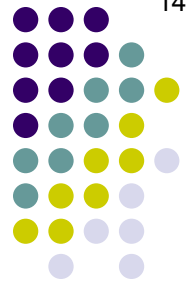
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*Who is the typical pt?*



**Q/A**

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Dry ARMD DDx

Pattern dystrophy

Cuticular drusen

Wet ARMD DDx

Macroaneurysms

Vitelliform exudative macular detachment

Polypoidal choroidal vasculopathy

**Central serous chorioretinopathy**

*In a nutshell, what is the pathophysiology of CSC?*

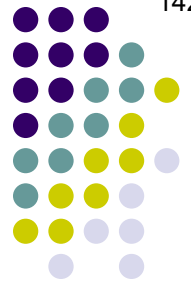
Choroidal hyperpermeability + impaired RPE barrier function → serous retinal detachment(s)

*How does CSC present?*

With visual dysfunction--decreased VA, dyschromatopsia, metamorphopsia, etc

*Who is the typical pt?*

A **M vs F** between the ages of **40-50** who has a so-called **myopic** kind of person you are



A

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Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy
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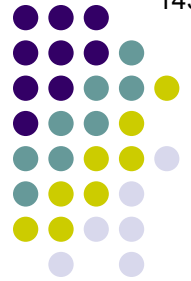
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*How does CSC present?*  
 With visual dysfunction--decreased VA, dyschromatopsia, metamorphopsia, etc

*Who is the typical pt?*  
 A male between the ages of 35 and 55 who has a so-called Type A personality

Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*



Dry ARMD DDx

Pattern dystrophy

Cuticular drusen

Wet ARMD DDx

Macroaneurysms

Vitelliform exudative macular detachment

Polypoidal choroidal vasculopathy

**Central serous chorioretinopathy**

*In a nutshell, what is the pathophysiology of CSC?*

Choroidal hyperpermeability + impaired RPE barrier function → serous retinal detachment(s)

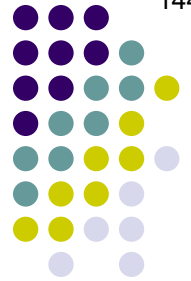
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*Who is the typical pt?*

A male between the ages of 35 and 55 who has a so-called Type A personality

*What is the preferred treatment?*



# A

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Dry ARMD DDx

Pattern dystrophy

Cuticular drusen

Wet ARMD DDx

Macroaneurysms

Vitelliform exudative macular detachment

Polypoidal choroidal vasculopathy

**Central serous chorioretinopathy**

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Choroidal hyperpermeability + impaired RPE barrier function → serous retinal detachment(s)

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*Who is the typical pt?*

A male between the ages of 35 and 55 who has a so-called Type A personality

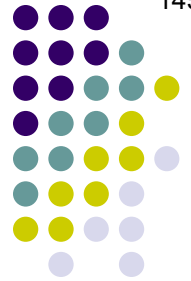
*What is the preferred treatment?*

PDT



Q

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*



## Dry ARMD DDx

**Pattern dystrophy**

**Cuticular drusen**

## Wet ARMD DDx

**Macroaneurysms**

**Vitelliform exudative macular detachment**

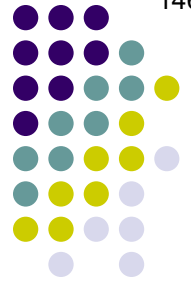
**Polypoidal choroidal vasculopathy**

**Central serous chorioretinopathy**

**RPE change after CSC**

Small choroidal melanoma

Hydroxychloroquine toxicity



# A

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

## Dry ARMD DDx

**Pattern dystrophy**

**Cuticular drusen**

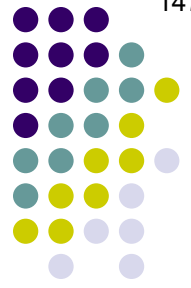
**RPE change after CSC**

Small choroidal melanoma  
Hydroxychloroquine toxicity

## Wet ARMD DDx

**Macroaneurysms**

**Vitelliform exudative macular detachment**  
**Polypoidal choroidal vasculopathy**  
**Central serous chorioretinopathy**



*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

Dry ARMD DDx

- Pattern dystrophy
- Cuticular drusen

**RPE change after CSC**

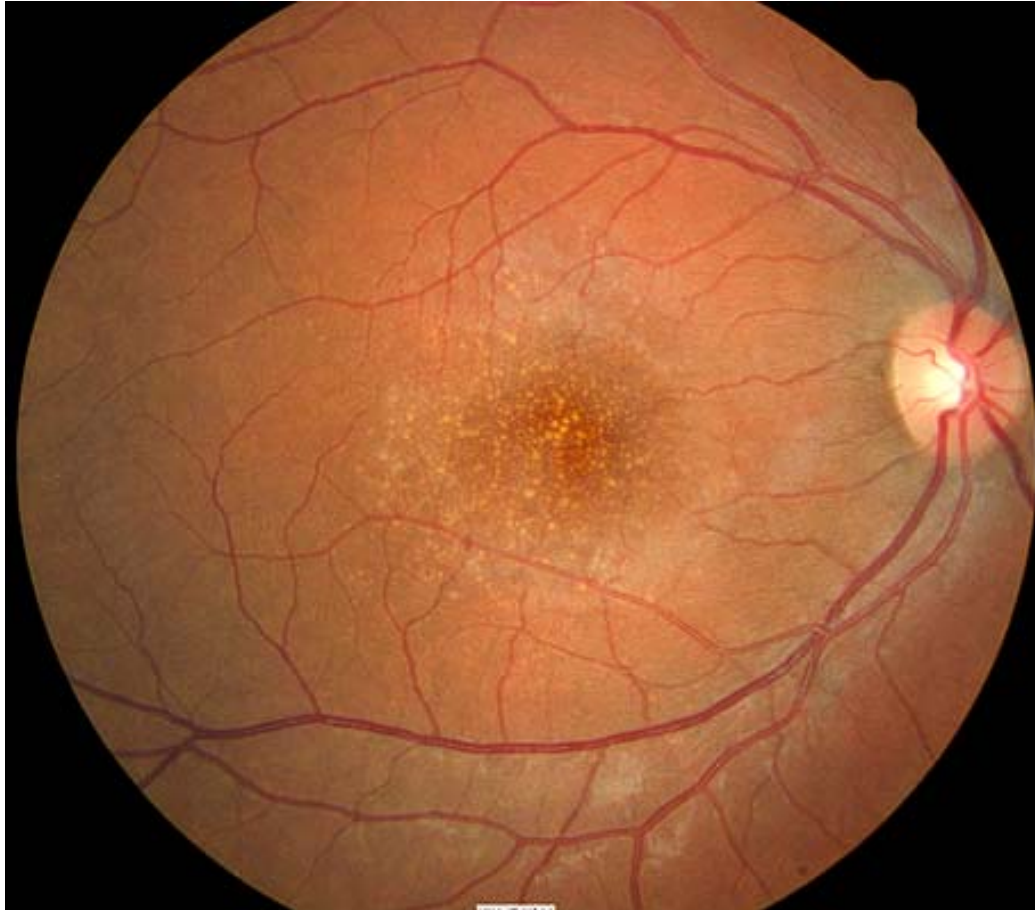
Small choroidal melanoma

After CSC (especially chronic CSC), the RPE can acquire a 'granular' appearance that mimics dry ARMD

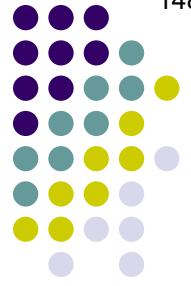
Wet ARMD DDx

- Macroaneurysms
- Vitelliform exudative macular detachment
- Polypoidal choroidal vasculopathy
- Central serous chorioretinopathy

*This is the combined DDX for both dry and wet ARMD—  
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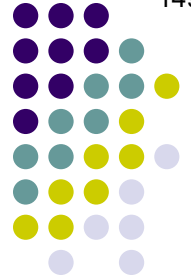


CSC: RPE change



Q

*This is the combined DDx for both dry and wet ARMD—  
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## Dry ARMD DDx

Pattern dystrophy

Cuticular drusen

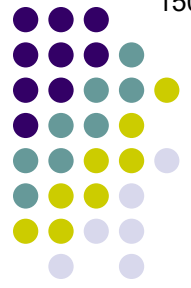
RPE change after CSC

Small choroidal melanoma  
Hydroxychloroquine toxicity

## Wet ARMD DDx

Macroaneurysms

Vitelliform exudative macular detachment  
Polypoidal choroidal vasculopathy  
Central serous chorioretinopathy



**A**

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

**Dry ARMD DDx**

**Pattern dystrophy**

**Cuticular drusen**

**RPE change after CSC**

**Wet ARMD DDx**

**Macroaneurysms**

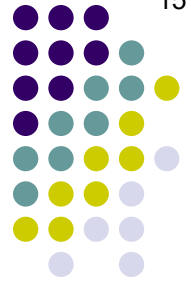
**Vitelliform exudative macular detachment**  
**Polypoidal choroidal vasculopathy**  
**Central serous chorioretinopathy**

**Small choroidal melanoma**

Hydroxychloroquine toxicity

Q

*This is the combined DDx for both dry and wet ARMD—  
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## Dry ARMD DDx

Pattern dystrophy

Cuticular drusen

RPE change after CSC

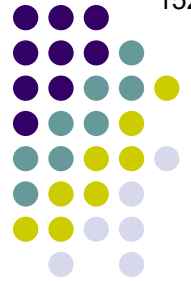
Hydroxychloroquine toxicity

## Wet ARMD DDx

Macroaneurysms

Vitelliform exudative macular detachment  
Polypoidal choroidal vasculopathy  
Central serous chorioretinopathy

Small choroidal melanoma

**A**

*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

### Dry ARMD DDx

**Pattern dystrophy**

**Cuticular drusen**

**RPE change after CSC**

**Hydroxychloroquine toxicity**

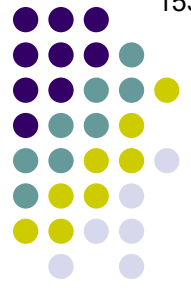
### Wet ARMD DDx

**Macroaneurysms**

**Vitelliform exudative macular detachment**  
**Polypoidal choroidal vasculopathy**  
**Central serous chorioretinopathy**

**Small choroidal melanoma**





*This is the combined DDx for both dry and wet ARMD—  
divide it into the respective differentials*

**Dry ARMD DDx**

**Wet ARMD DDx**

Pattern dystrophy

For what it's worth: The *Retina* book spends more time discussing CSC as a mimic of **both** forms of **ARMD** than it does any other cause!

vitreomorph exudative macular detachment

Polypoidal choroidal vasculopathy

**Central serous chorioretinopathy**

Small choroidal melanoma

**RPE change after CSC**

Hydroxychloroquine toxicity



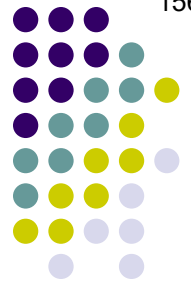
Q

*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*

*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area						
CSC	?						
ARMD	?						



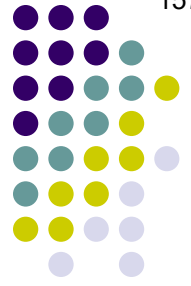


Q

*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*

*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?					
<b>CSC</b>	<b>Leak &lt;&lt; SRF</b>	<b>?</b>					
<b>ARMD</b>	<b>Leak ≈ SRF</b>	<b>?</b>					



# A

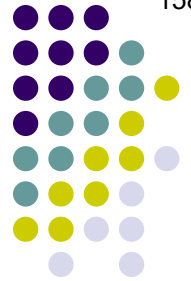
*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*

*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?					
<b>CSC</b>	<b>Leak &lt;&lt; SRF</b>	<b>Yes</b>					
<b>ARMD</b>	<b>Leak ≈ SRF</b>	<b>No</b>					

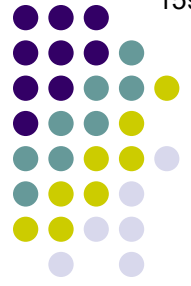
Q

*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*



*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?				
<b>CSC</b>	Leak $\ll$ SRF	Yes	?				
<b>ARMD</b>	Leak $\approx$ SRF	No	?				



# A

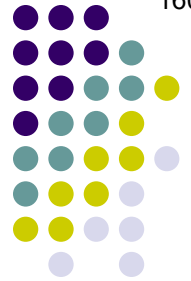
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*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?				
<b>CSC</b>	<b>Leak &lt;&lt; SRF</b>	<b>Yes</b>	<b>No</b>				
<b>ARMD</b>	<b>Leak ≈ SRF</b>	<b>No</b>	<b>Yes</b>				

Q

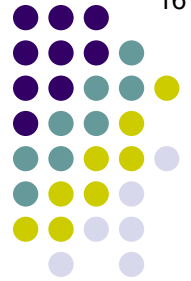
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*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?			
<b>CSC</b>	<b>Leak &lt;&lt; SRF</b>	<b>Yes</b>	<b>No</b>	<b>?</b>			
<b>ARMD</b>	<b>Leak ≈ SRF</b>	<b>No</b>	<b>Yes</b>	<b>?</b>			





# A

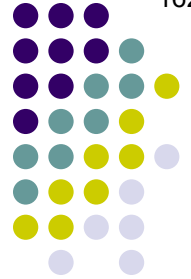
*This is the combined DDX for both dry and wet ARMD—  
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*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?			
<b>CSC</b>	<b>Leak &lt;&lt; SRF</b>	<b>Yes</b>	<b>No</b>	<b>No</b>			
<b>ARMD</b>	<b>Leak ≈ SRF</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>			

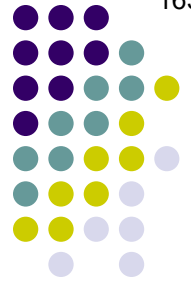
Q

*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*



*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?	Lipid present?		
<b>CSC</b>	Leak << SRF	Yes	No	No	?		
<b>ARMD</b>	Leak $\approx$ SRF	No	Yes	Yes	?		



# A

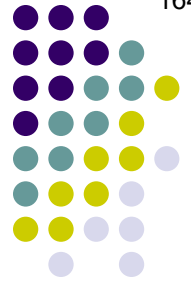
*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*

*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?	Lipid present?		
<b>CSC</b>	<b>Leak &lt;&lt; SRF</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>		
<b>ARMD</b>	<b>Leak ≈ SRF</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>		

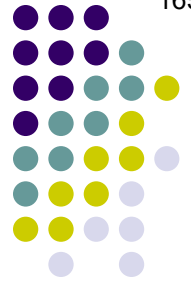
Q

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divide it into the respective differentials*



*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?	Lipid present?	Choroidal thickness c/w normal	
<b>CSC</b>	Leak << SRF	Yes	No	No	No	?	
<b>ARMD</b>	Leak ≈ SRF	No	Yes	Yes	Yes	?	



# A

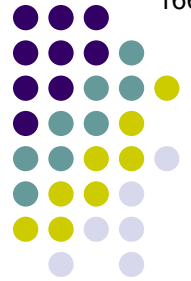
*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*

*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?	Lipid present?	Choroidal thickness c/w normal	
<b>CSC</b>	<b>Leak &lt;&lt; SRF</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>Thicker</b>	
<b>ARMD</b>	<b>Leak ≈ SRF</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Thinner</b>	

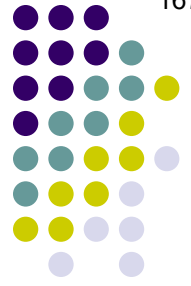
Q

*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*



*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?	Lipid present?	Choroidal thickness c/w normal	Descending tracts present?
<b>CSC</b>	Leak << SRF	Yes	No	No	No	Thicker	?
<b>ARMD</b>	Leak $\approx$ SRF	No	Yes	Yes	Yes	Thinner	?

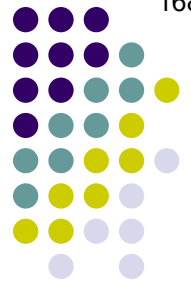


# A

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divide it into the respective differentials*

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	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?	Lipid present?	Choroidal thickness c/w normal	Descending tracts present?
CSC	Leak $\ll$ SRF	Yes	No	No	No	Thicker	Yes
ARMD	Leak $\approx$ SRF	No	Yes	Yes	Yes	Thinner	No



Q

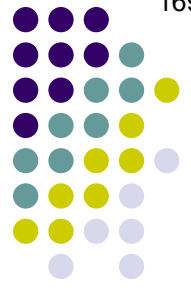
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	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?	Lipid present?	Choroidal thickness c/w normal	Descending tracts present?
<b>CSC</b>	Leak << SRF	Yes	No	No	No	Thicker	<b>Yes</b>
<b>ARMD</b>	Leak ≈ SRF	No	Yes	Yes	Yes	Thinner	No

*In the context of CSC, what are descending tracts?*





# A

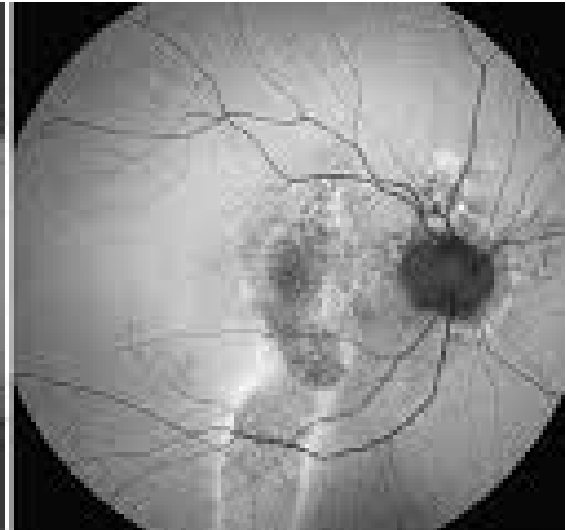
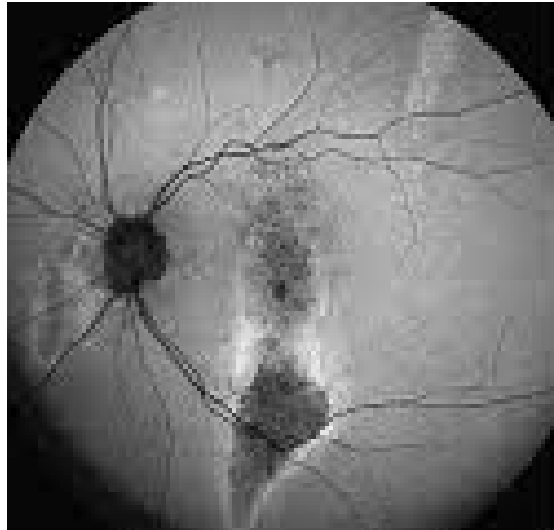
*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*

*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

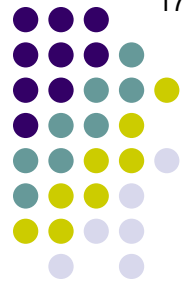
	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?	Lipid present?	Choroidal thickness c/w normal	Descending tracts present?
<b>CSC</b>	Leak << SRF	Yes	No	No	No	Thicker	<b>Yes</b>
<b>ARMD</b>	Leak ≈ SRF	No	Yes	Yes	Yes	Thinner	No

*In the context of CSC, what are descending tracts?*  
 Long, narrow areas of RPE change extending inferiorly from the areas of SRF

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CSC: Descending tracts



Q

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	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?	Lipid present?	Choroidal thickness c/w normal	Descending tracts present?
<b>CSC</b>	Leak << SRF	Yes	No	No	No	Thicker	<b>Yes</b>
<b>ARMD</b>	Leak ≈ SRF	No	Yes	Yes	Yes	Thinner	No

*In the context of CSC, what are descending tracts?  
Long, narrow areas of RPE change extending inferiorly from the areas of SRF*

*What is the cause?*



# A

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divide it into the respective differentials*

*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?	Lipid present?	Choroidal thickness c/w normal	Descending tracts present?
<b>CSC</b>	Leak << SRF	Yes	No	No	No	Thicker	<b>Yes</b>
<b>ARMD</b>	Leak ≈ SRF	No	Yes	Yes	Yes	Thinner	No

*In the context of CSC, what are descending tracts?*

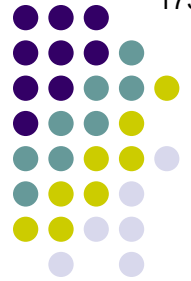
Long, narrow areas of RPE change extending inferiorly from the areas of SRF

*What is the cause?*

Gravity-dependent 'dripping' of the SRF

Q

*This is the combined DDX for both dry and wet ARMD—  
divide it into the respective differentials*



*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?	Lipid present?	Choroidal thickness c/w normal	Descending tracts present?
<b>CSC</b>	Leak << SRF	Yes	No	No	No	Thicker	<b>Yes</b>
<b>ARMD</b>	Leak ≈ SRF	No	Yes	Yes	Yes	Thinner	No

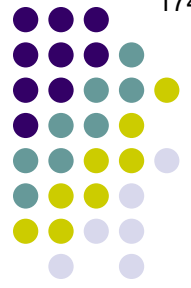
*In the context of CSC, what are descending tracts?*

Long, narrow areas of RPE change extending inferiorly from the areas of SRF

*What is the cause?*

Gravity-dependent 'dripping' of the SRF

*By what other name is this phenomenon known?*



# A

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divide it into the respective differentials*

*Is it CSC or wet ARMD? An important distinction to make—can you make it?*

	Size of leak relative to size of SRF area	Multiple small PED present?	Drusen present?	Blood present?	Lipid present?	Choroidal thickness c/w normal	Descending tracts present?
<b>CSC</b>	Leak << SRF	Yes	No	No	No	Thicker	<b>Yes</b>
<b>ARMD</b>	Leak ≈ SRF	No	Yes	Yes	Yes	Thinner	No

*In the context of CSC, what are descending tracts?  
Long, narrow areas of RPE change extending inferiorly from the areas of SRF*

*What is the cause?  
Gravity-dependent 'dripping' of the SRF*

*By what other name is this phenomenon known?  
'Guttering'*