Choroidal nevi are found in ~ \% of the population.
A

Choroidal Nevus

- Choroidal nevi are found in ~10% of the population
Choroidal nevi are found in ~ 10% of the population.

What is the ophthalmoscopic appearance of a typical choroidal nevus with respect to…

Color?
Choroidal nevi are found in ~10% of the population.

What is the ophthalmoscopic appearance of a typical choroidal nevus with respect to…

Color? **Gray-brown**
Choroidal nevus: Typical color
Choroidal nevi are found in ~10% of the population.

What is the ophthalmoscopic appearance of a typical choroidal nevus with respect to…

- **Color?** Gray brown
- **Amelanotic?**

Can choroidal nevi be amelanotic?
Choroidal nevi are found in ~10% of the population.

What is the ophthalmoscopic appearance of a typical choroidal nevus with respect to…

Color? Gray brown. Amelanotic? Yes!

Can choroidal nevi be amelanotic?
Yes
Choroidal nevus: Amelanotic
Choroidal nevi are found in ~10% of the population.

What is the ophthalmoscopic appearance of a typical choroidal nevus with respect to...

Color? Gray-brown
Margins?
A

Choroidal nevi are found in ~10% of the population

What is the ophthalmoscopic appearance of a typical choroidal nevus with respect to...
Color? **Gray-brown**
Margins? **Indistinct**
Choroidal Nevus

Choroidal nevus: **Indistinct margins**
Choroidal nevi are found in ~10% of the population.

What is the ophthalmoscopic appearance of a typical choroidal nevus with respect to…

Color? Gray-brown
Margins? Indistinct
Elevation?
Choroidal nevi are found in ~10% of the population.

*What is the ophthalmoscopic appearance of a typical choroidal nevus with respect to…*

**Color?** Gray-brown

**Margins?** Indistinct

**Elevation?** Flat (or only minimally elevated)
Choroidal nevi are found in ~ 10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant?
Choroidal nevi are found in ~10% of the population
Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!
Choroidal nevi are found in ~ 10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

Lesion thickness and malignancy:
- Virtually all lesions < [mm] thick are benign nevi.
Choroidal nevi are found in ~10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

Lesion thickness and malignancy:
- Virtually all lesions <1 mm thick are benign nevi.
Choroidal nevi are found in ~ 10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? *None!*

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi
- Virtually all lesions > [mm] thick are melanomas
Choroidal nevi are found in ~ 10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi
- Virtually all lesions > 3 mm thick are melanomas
Choroidal nevi are found in ~10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**

- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.

- Lesion diameter and malignancy: A flat lesion less than [mm] in diameter is almost always benign.
Choroidal nevi are found in ~ 10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

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- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi
  - Virtually all lesions > 3 mm thick are melanomas

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- Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of orange pigmentation
Choroidal nevi are found in ~ 10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi
- Virtually all lesions > 3 mm thick are melanomas

Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign

Other features of a pigmented lesion that make you worry it’s actually a melanoma:
- Presence of orange pigmentation
Choroidal melanoma with orange pigment and subretinal fluid
Choroidal melanoma with orange pigment
Choroidal nevi are found in ~ 10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi
- Virtually all lesions > 3 mm thick are melanomas

Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

Other features of a pigmented lesion that make you worry it’s actually a melanoma:
- Presence of orange pigmentation

What is the name of the orange-pigmented substance?

Lipofuscin
Choroidal nevi are found in ~ 10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**

- **Lesion thickness and malignancy:**
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.

- **Lesion diameter and malignancy:** A flat lesion less than 10 mm in diameter is almost always benign.

- **Other features of a pigmented lesion that make you worry it’s actually a melanoma:**
  - Presence of **orange pigmentation**

**What is the name of the orange-pigmented substance?**
**Lipofuscin**
● Choroidal nevi are found in ~ 10% of the population.

● Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**

● Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.

● Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

● Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of **orange pigmentation**

*What is the name of the orange-pigmented substance?* Lipofuscin

*Why is it worrisome?*
Choroidal nevi are found in ~10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi
- Virtually all lesions > 3 mm thick are melanomas

Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

Other features of a pigmented lesion that make you worry it’s actually a melanoma:
- Presence of orange pigmentation

What is the name of the orange-pigmented substance?
Lipofuscin

Why is it worrisome?
It indicates the lesion is actively growing.
Choroidal nevi are found in ~10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi
- Virtually all lesions > 3 mm thick are melanomas

Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

Other features of a pigmented lesion that make you worry it’s actually a melanoma:
- Presence of orange pigmentation
- Absence of common DFE finding
A

Choroidal nevi are found in ~10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi
- Virtually all lesions > 3 mm thick are melanomas

Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

Other features of a pigmented lesion that make you worry it’s actually a melanoma:
- Presence of orange pigmentation
- Absence of drusen
Choroidal nevi are found in ~10% of the population. Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi
- Virtually all lesions > 3 mm thick are melanomas

Other features of a pigmented lesion that make you worry it's actually a melanoma:
- Presence of orange pigmentation
- Absence of drusen

That the absence of drusen is worrisome for melanoma suggests that the presence of drusen is the opposite, ie, that drusen are a reassuring finding. Is this the case?

Absence of drusen
Choroidal nevi are found in ~10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi.
- Virtually all lesions > 3 mm thick are melanomas.

Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

Other features of a pigmented lesion that make you worry it's actually a melanoma:
- Presence of orange pigmentation.
- Absence of drusen.

That the absence of drusen is worrisome for melanoma suggests that the presence of drusen is the opposite, ie, that drusen are a reassuring finding.

Is this the case?
Indeed it is.
Choroidal nevus with drusen
Choroidal nevi are found in ~10% of the population. Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi
- Virtually all lesions > 3 mm thick are melanomas

*That the absence of drusen is worrisome for melanoma suggests that the presence of drusen is the opposite, i.e., that drusen are a reassuring finding.*

Is this the case? Indeed it is

**Why is the presence of drusen suggestive that a melanocytic lesion is benign?**

- **Absence of drusen**
Choroidal nevi are found in ~ 10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi
- Virtually all lesions > 3 mm thick are melanomas

Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

Other features of a pigmented lesion that make you worry it's actually a melanoma:
- Presence of orange pigmentation
- Absence of drusen

*That the absence of drusen is worrisome for melanoma suggests that the presence of drusen is the opposite, ie, that drusen are a reassuring finding. Is this the case? Indeed it is*

*Why is the presence of drusen suggestive that a melanocytic lesion is benign? It indicates the lesion is chronic—that it’s been around a long time*

**Absence of drusen**
Choroidal nevi are found in ~ 10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi
- Virtually all lesions > 3 mm thick are melanomas

Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign

Other features of a pigmented lesion that make you worry it’s actually a melanoma:
- Presence of orange pigmentation
- Absence of drusen
- Presence of subretinal fluid
Choroidal nevi are found in ~ 10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi
- Virtually all lesions > 3 mm thick are melanomas

Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

Other features of a pigmented lesion that make you worry it’s actually a melanoma:
- Presence of orange pigmentation
- Absence of drusen
- Presence of subretinal fluid
(a) The right fundus showed a small pigmented submacular mass with prominent overlying orange pigment and shallow subretinal fluid, consistent with small choroidal melanoma. (b) Autofluorescence photography documenting hyperautofluorescence of overlying lipofuscin. (c) Spectral domain optical coherence tomography showing subfoveal fluid.
Choroidal nevi are found in ~ 10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi.
- Virtually all lesions > 3 mm thick are melanomas.

Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

Other features of a pigmented lesion that make you worry it’s actually a melanoma:
- Presence of *orange* pigmentation.
- Absence of *drusen*.
- Presence of subretinal *fluid*.
- Location adjacent to *structure*.
Choroidal nevi are found in ~10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**

- **Lesion thickness and malignancy:**
  - Virtually all lesions < 1 mm thick are benign nevi
  - Virtually all lesions > 3 mm thick are melanomas

- **Lesion diameter and malignancy:** A flat lesion less than 10 mm in diameter is almost always benign

- **Other features of a pigmented lesion that make you worry it’s actually a melanoma:**
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH *(ONH = optic nerve head)*
Choroidal melanoma abutting ONH
Choroidal Nevus

(Referring to Drs. Jerry and Carol Shields of the Wills Eye Hospital in Philadelphia.)

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma:

9 words

- Presence of orange pigmentation
- Absence of drusen
- Presence of subretinal fluid
- Location adjacent to ONH

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!
A

Choroidal Nevus

- Choroidal nevi are found in ~10% of the population.
- Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!
- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.
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- Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of orange pigmentation.
  - Absence of drusen.
  - Presence of subretinal fluid.
  - Location adjacent to ONH.

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma:

“To Find Small Ocular Melanomas, Use Helpful Hints Daily.”
Choroidal nevi are found in ~10% of the population. Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**

Lesion thickness and malignancy:
- Virtually all lesions < 1 mm thick are benign nevi
- Virtually all lesions > 3 mm thick are melanomas

Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign

Other features of a pigmented lesion that make you worry it’s actually a melanoma:
- **Presence of orange pigmentation**
- Absence of drusen
- **Presence of subretinal fluid**
- Location adjacent to **ONH**

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma:

"**To Find Small Ocular Melanomas, Use Helpful Hints Daily**"
Choroidal nevi are found in ~10% of the population. Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**

- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi
  - Virtually all lesions > 3 mm thick are melanomas

- Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign

- Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma: **“To Find Small Ocular Melanomas, Use Helpful Hints Daily”**

**Thickness >2mm**
Choroidal nevi are found in ~10% of the population. Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.
- Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.
- Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH.

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma: “To Find Small Ocular Melanomas, Use Helpful Hints Daily.”
Choroidal nevi are found in ~10% of the population. Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? *None!*

- **Lesion thickness and malignancy:**
  - Virtually all lesions < 1 mm thick are benign nevi
  - Virtually all lesions > 3 mm thick are melanomas

- **Lesion diameter and malignancy:** A flat lesion less than 10 mm in diameter is almost always benign

- **Other features of a pigmented lesion that make you worry it’s actually a melanoma:**
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma:

> **T**o **F**ind **S**mall **O**cular **M**elanomas, **U**se **H**elpful **H**ints **D**aily

Fluid present

Thickness > 2mm
Choroidal Nevus

• Choroidal nevi are found in ~10% of the population.

• Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

• Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.

• Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

• Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma: **“To Find Small Ocular Melanomas, Use Helpful Hints Daily”**
Choroidal Nevus

- Choroidal nevi are found in ~ 10% of the population
- Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi
  - Virtually all lesions > 3 mm thick are melanomas

- Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign

- Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma: **“To Find Small Ocular Melanomas, Use Helpful Hints Daily”**
Choroidal Nevus

- Choroidal nevi are found in ~10% of the population

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**

- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi
  - Virtually all lesions > 3 mm thick are melanomas

- Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign

Other features of a pigmented lesion that make you worry it’s actually a melanoma:
- Presence of orange pigmentation
- Absence of drusen
- Presence of subretinal fluid
- Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma: **“To Find Small Ocular Melanomas, Use Helpful Hints Daily”**

What symptoms associated with a melanocytic lesion would make you worry the lesion is a melanoma?

- Metamorphopsia, photopsias, and/or visual field loss
Choroidal Nevus

- Choroidal nevi are found in ~10% of the population

- Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi
  - Virtually all lesions > 3 mm thick are melanomas

- Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign

- Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH

What symptoms associated with a melanocytic lesion would make you worry the lesion is a melanoma?
Metamorphopsia, photopsias, and/or visual field loss

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma: “To Find Small Ocular Melanomas, Use Helpful Hints Daily”
Choroidal Nevus

- Choroidal nevi are found in ~10% of the population.
- Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**
- **Lesion thickness and malignancy:**
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.
- **Lesion diameter and malignancy:** A flat lesion less than 10 mm in diameter is almost always benign.
- **Other features of a pigmented lesion that make you worry it’s actually a melanoma:**
  - Presence of orange pigment
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma:

**"To Find Small Ocular Melanomas, Use Helpful Hints Daily"**
Choroidal Nevus

- Choroidal nevi are found in ~10% of the population.

- Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? *None!*

- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.

- Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

- Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of *orange* pigmentation
  - Absence of drusen
  - Presence of subretinal *fluid*
  - Location adjacent to **ONH**

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma: “**To Find Small Ocular Melanomas, Use Helpful Hints Daily**”
Choroidal nevi are found in ~10% of the population.

Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? *None!*

**Lesion thickness and malignancy:**
- Virtually all lesions < 1 mm thick are benign nevi.
- Virtually all lesions > 3 mm thick are melanomas.

**Lesion diameter and malignancy:**
- A flat lesion less than 10 mm in diameter is almost always benign.

**Other features of a pigmented lesion that make you worry it’s actually a melanoma:**
- Presence of *orange* pigmentation
- Absence of drusen
- Presence of subretinal *fluid*
- Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma:

"**To Find Small Ocular Melanomas, Use Helpful Hints Daily**"
Choroidal Nevus

- Choroidal nevi are found in ~10% of the population.

A clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.

- Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

- Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma: “To Find Small Ocular Melanomas, Use Helpful Hints Daily”
Choroidal nevi are found in ~10% of the population. The clinical factor that is pathognomonic for whether a melanocytic lesion is benign or malignant is: None!

- Virtually all lesions < 1 mm thick are benign nevi.
- Virtually all lesions > 3 mm thick are melanomas.
- A flat lesion less than 10 mm in diameter is almost always benign.
- Other features of a pigmented lesion that make you worry that it’s actually a melanoma:
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma: “To Find Small Ocular Melanomas, Use Helpful Hints Daily.”
Choroidal Nevus

- Choroidal nevi are found in ~10% of the population.
- Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!
- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.
- Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.
- Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma:

"To Find Small Ocular Melanomas,
Use Helpful Hints Daily"
Choroidal nevi are found in ~10% of the population. Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None. Virtually all lesions < 1 mm thick are benign nevi. Virtually all lesions > 3 mm thick are melanomas. A flat lesion less than 10 mm in diameter is almost always benign. Other features of a pigmented lesion that make you worry it’s actually a melanoma:

- Presence of orange pigmentation
- Absence of drusen
- Presence of subretinal fluid
- Location adjacent to ONH
Choroidal Nevus

- Choroidal nevi are found in ~10% of the population.

- Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**

- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.

- Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

- Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma:

"To Find Small Ocular Melanomas, Use Helpful Hints Daily"
Choroidal Nevi

- Choroidal nevi are found in ~10% of the population.

- Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!

- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.

- Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.

- Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma:

“To Find Small Ocular Melanomas, Use Helpful Hints Daily”

- Fluid present
- Orange pigment
- Thickness >2mm
- Margin touching ONH
- D (Dusen absence)
- U (Ultrasonographic Hollowness)
- S (Symptomatic)
Choroidal Nevus

- Choroidal nevi are found in ~10% of the population.
- Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? None!
- lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.
- lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.
- Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma:

“To Find Small Ocular Melanomas, Use Helpful Hints Daily”

- Thickness >2mm
- Fluid present
- Orange pigment
- Margin touching ONH
- Ultrasonographic Hollowness
- Halo absence
- Drusen absence
Choroidal Nevus

- Choroidal nevi are found in ~10% of the population.
- Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant?
  - None!
- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.
- Lesion diameter and malignancy: A flat lesion less than 10 mm in diameter is almost always benign.
- Other features of a pigmented lesion that make you worry it's actually a melanoma:
  - Presence of orange pigmentation
  - Absence of drusen
  - Presence of subretinal fluid
  - Location adjacent to ONH

The Drs. Shields suggest the following mnemonic for features worrisome for ocular melanoma:

"To Find Small Ocular Melanomas, Use Helpful Hints Daily!"

- Ultrasoundographic Hollowness
- Halo absence
- Drusen absence
- Margin touching ONH
- Fluid present
- Orange pigment
- Thickness > 2mm

Let's take a look at the ultrasound signature of choroidal melanoma.
This is an a-scan of a choroidal melanoma.
What does this spike represent?

This is an α-scan of a choroidal melanoma.
This is an a-scan of a choroidal melanoma.
What does this spike represent? The retina.

What does this ultrasonographically hollow portion represent?

This is an a-scan of a choroidal melanoma.
What does this spike represent?
The retina

What does this ultrasonographically hollow portion represent?
The tumor itself

This is an a-scan of a choroidal melanoma.
What does this spike represent?
The retina

What does this spike represent?
The retina

What does this ultrasonographically hollow portion represent?
The tumor itself

This is an α-scan of a choroidal melanoma.
What does this spike represent?
The retina

What does this little spike represent?
The sclera

What does this ultrasonographically hollow portion represent?
The tumor itself

This is an α-scan of a choroidal melanoma.
What does this spike represent?
The retina

What does this little spike represent?
The sclera

What does this portion represent?
The orbit

What does this ultrasonographically hollow portion represent?
The tumor itself

This is an a-scan of a choroidal melanoma.
This is an a-scan of a choroidal melanoma.
Put it all together and you have…

This is an a-scan of a choroidal melanoma.
This is an a-scan of a choroidal melanoma.
Choroidal Nevus

- Choroidal nevi are found in ~10% of the population.
- Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**
- Lesion thickness and malignancy:
  - Virtually all lesions < 1 mm thick are benign nevi.
  - Virtually all lesions > 3 mm thick are melanomas.
- Lesion diameter and malignancy:
  - A flat lesion less than 10 mm in diameter is almost always benign.
- Other features of a pigmented lesion that make you worry it’s actually a melanoma:
  - Presence of **orange** pigmentation
  - Absence of **drusen**
  - Presence of subretinal **fluid**
  - Location adjacent to **ONH**

Which of these is pathognomonic for choroidal melanoma?
- **None of them.** Remember, there is no pathognomonic clinical feature distinguishing choroidal nevi from choroidal melanoma!
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Which clinical factor is pathognomonic for whether a melanocytic lesion is benign or malignant? **None!**

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- Presence of **orange** pigmentation
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**Which of these is pathognomonic for choroidal melanoma?**

**None of them.** Remember, there is no pathognomonic clinical feature distinguishing choroidal nevi from choroidal melanoma!