

What You Should Know About Choroidal Nevi

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Choroidal nevi are pigmented spots in the back of the eye. They are not something a patient would ever be aware that he had. They are typically discovered on examination when the ophthalmologist looks in the back of the eye, usually with the pupils dilated with drops. They are almost never a threat to vision. Their importance lies in the rare possibility that they can become malignant tumors called melanomas. Melanomas require treatment whereas nevi almost never do.

Moles of the Eye?

A common name for a nevus is mole. Everyone is familiar with moles, or nevi, of the skin. These moles are made up of cells containing brown pigment. The same types of pigmented cells, called melanocytes, are found in the back of the eye in a tissue layer called the choroid. Figure 1 below shows this layer, which lies just behind the retina where light in the eye is focused. Like moles of the skin, choroidal moles appear commonly around puberty, reach a certain size, and then stop growing. They are entirely benign. Figure 2 shows what the mole looks like to the ophthalmologist when the eye is examined.

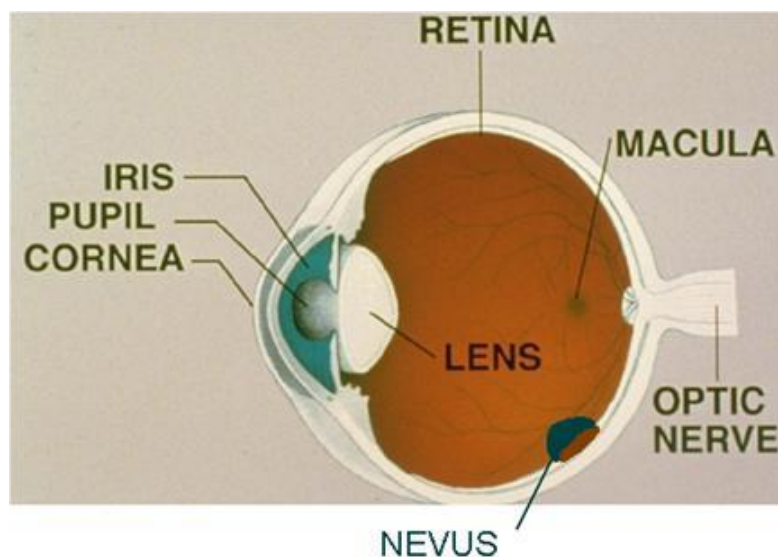
How Common?

Choroidal nevi are found in less than 10% of all people. The prevalence depends on race. The highest prevalence is in whites (4.1%).(1) The prevalence in Chinese is 2.9% and in Hispanics 1.2%.(2) Blacks have the lowest prevalence at 0.7%.

How Often Do They Become Cancers?

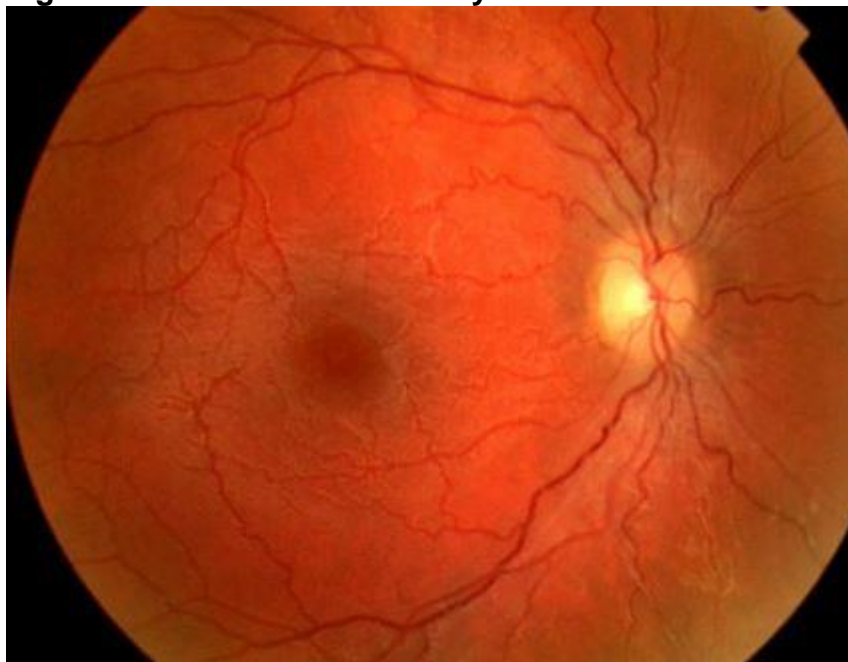
It is estimated that 1 person in every 5000 per year who has a choroidal nevus will develop a melanoma.

Figure 1



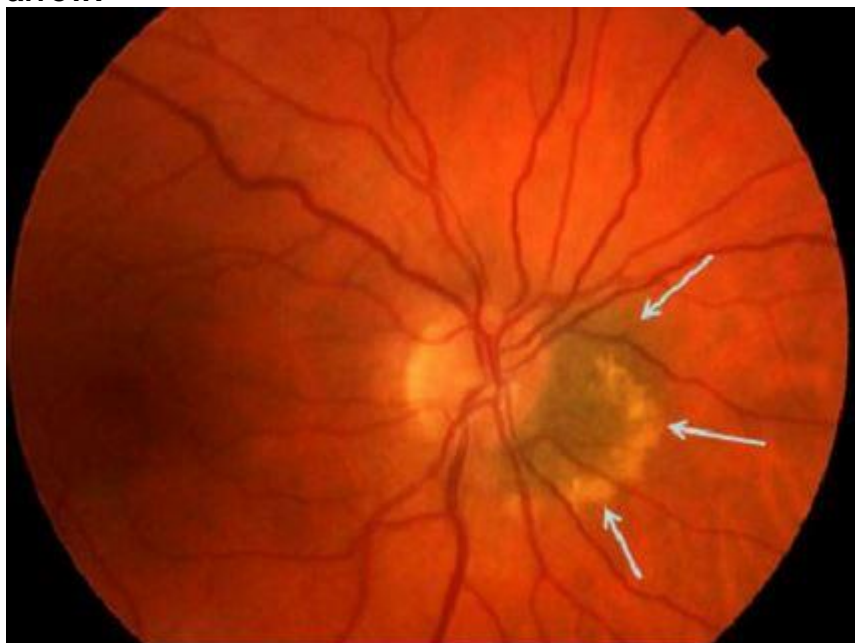
Anatomy of the eye. The choroid is the layer between the retina and the white outer coat of the eye (sclera). This is the layer in which nevi develop.

Figure 2 Fundus of a Normal Eye



The yellow oval is the optic disc, where the optic nerve connects to the retina. The red retinal vessels emanate from the optic disc.

Figure 3 Fundus of an eye with a choroidal nevus. The nevus is indicated by the white arrow.



What Should Be Done About Choroidal Nevi?

Choroidal nevi should be photographed so that an objective documentation of size exists. Thereafter, they need only be examined yearly to compare size with the baseline

photographs. Sometimes, repeat photographs are obtained for a more accurate comparison of size.

Very Rare Mischief in Nevi

Uncommonly, choroidal nevi can cause leakage of fluid under the retina or can be associated with growth of abnormal new blood vessels under the retina, which can bleed. If the nevus is near the center of the retina, this behavior can cause loss of vision. Many times photodynamic therapy, sometimes called cold laser treatment because no tissue cauterization occurs, or injections into the vitreous of drugs that block vascular endothelial growth factor, can reverse these problems. (2) These complications of choroidal nevi occur in less than 5% of cases.

After you read this document, if you have further questions, please visit my website at **www.retinareference.com** or call me at 704-295-3180. Another excellent resource for medical literature is Pubmed, on the National Library of Medicine website, accessible at **www.pubmed.com**.

References

1. Qiu M, Shields CL. Choroidal nevus in the United States adult population: racial disparities and associated factors in the national health and nutrition survey. *Ophthalmology* 2015; 122: 2071-2083.
2. Pointdujour-lim R, Mashayekhi A, Shields JA, Shields CL. Photodynamic therapy for choroidal nevus with subfoveal fluid. *Retina* 2017; 37:718-723.

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