Understanding Ocular Melanoma (OM): What You Need to Know

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Most people have never heard of Ocular (Uveal) Melanoma.

So, what is Ocular (Uveal) Melanoma?

Ocular melanoma (OM), also known as **Uveal Melanoma (UM)**, is a rare but potentially life-threatening cancer that develops within the eye. It begins in **melanocytes** - the cells responsible for producing melanin, the pigment that gives color to our skin, hair, and eyes. While melanoma is commonly linked to the skin, these pigment cells are also found inside the eye, where they can form malignant tumors.

What Are Melanocytes?

Melanocytes are specialized cells found throughout the body, including the skin, inner ear, and eyes. Their primary function is to produce **melanin**, the pigment responsible for coloration in our skin, hair, and eyes. Melanin also helps protect tissues from ultraviolet (UV) radiation damage.

In the eye, melanocytes are concentrated in the **uveal tract** (choroid, ciliary body, and iris), which is why most ocular melanomas form in these areas. While melanin serves a protective role, the very cells that produce it can, under certain conditions, mutate and become cancerous - leading to ocular melanoma.

Where Ocular Melanoma Begins

This cancer most commonly affects the **uveal tract** - a part of the eye that includes the **choroid**, **ciliary body**, and **iris**:

- **Choroid**: The vascular layer lining the back of the eye.
- **Ciliary body**: Helps focus the eye by adjusting the lens.
- **Iris**: The colored ring at the front of the eye that controls how much light enters.

All three of these structures contain melanin, making them potential sites for melanoma. Less commonly, the cancer may appear on the **conjunctiva** (the thin membrane covering the white of the eye) or the **eyelid**.

Technically speaking, cancers that occur **outside the eye**, such as on the eyelid or conjunctiva, are classified as **ocular melanoma**. In contrast, **uveal melanoma** refers specifically to melanoma that develops **inside the eye**, within the uveal tract (the iris, ciliary body, and choroid).

However, in general conversation and most discussions, the term **ocular melanoma** is commonly used as an umbrella term to describe both types.

What Causes It?

The exact cause of ocular melanoma remains unclear. While we know that ultraviolet (UV) exposure from sunlight or tanning beds increases the risk of **skin** melanoma, a direct link to **eye** melanoma hasn't been firmly established. That said, people with fair skin, light-colored eyes, and a tendency to sunburn may be at greater risk.

While ocular melanoma is generally not considered a **hereditary cancer**, there have been rare instances where it has appeared in multiple members of the same family. One such example involves a **grandmother and grandson** who were both diagnosed with ocular melanoma - highlighting the importance of continued research into potential genetic and environmental factors.

You can read more about their powerful story at **EyeOnGraceFoundation.net**.

Signs and Symptoms to Watch For

Ocular melanoma often develops silently, especially in its early stages. When symptoms do appear, they may include:

- Blurred or distorted vision
- Flashing lights or shadows
- Partial loss of vision
- Floaters and particles in the eye

These symptoms can also be signs of other eye conditions, so it's important to see an eye specialist for a thorough evaluation.

How It's Treated

Treatment options vary based on the size, location, and type of tumor - as well as the patient's overall health and vision in the affected eye. The primary goals are to eliminate the cancer, prevent recurrence, and preserve vision as much as possible.

Radiotherapy (Radiation Treatment)

Radiation is used to kill cancer cells, either externally or internally:

- **External radiotherapy (proton beam therapy)**: An advanced form of radiation treatment that uses high-energy proton particles to target and destroy cancer cells with extreme precision. It is especially useful for treating **ocular (uveal) melanoma**, as it delivers radiation directly to the tumor while minimizing damage to surrounding healthy eye tissue.

This therapy is often recommended for tumors located in sensitive or hard-to-reach areas of the eye, and it can help preserve vision in many cases. Proton beam therapy typically requires a short course of treatment and is available at specialized cancer centers.

- **Internal radiotherapy (brachytherapy/ plaque therapy)**: A common and effective treatment for **ocular (uveal) melanoma**. It involves placing a small, disc-shaped radioactive plaque directly on the outside of the eye, over the location of the tumor. The plaque remains in place for several days, delivering a targeted dose of radiation to destroy the cancer cells while sparing nearby healthy tissue.

  This procedure is performed under general anesthesia, and the plaque is removed in a second, minor surgery once treatment is complete. Brachytherapy is often successful in controlling the tumor and preserving the eye, and it is widely used in specialized ocular oncology centers. Vision loss in the treated eye can be significant over a two-year period, but some patients experience initial vision improvement.

Laser Therapy

Transpupillary Thermotherapy (TTT) is a treatment that uses a focused **infrared laser** to apply heat directly to small ocular tumors. Because cancer cells are more sensitive to heat than healthy cells, TTT can selectively destroy tumor tissue with minimal impact on surrounding structures.

TTT is most effective for **small or early-stage tumors** and may be used on its own or in combination with other treatments such as brachytherapy or radiation to enhance outcomes. It is typically performed as an outpatient procedure and may require **multiple sessions** to achieve optimal results.

Enucleation

While some ocular tumors can be treated without removing the eye, **enucleation** - the surgical removal of the eye - may be necessary in certain cases. This option is typically considered when the tumor is large, aggressive, or causing significant pain or vision loss, and when preserving the eye is no longer safe or effective.

Though the decision can be emotionally difficult, **modern prosthetic eyes** offer excellent cosmetic outcomes. With the use of an **orbital implant**, the artificial eye can move naturally in coordination with the remaining eye, maintaining facial symmetry and appearance.

Follow-Up Care and Risk of Metastasis

After the initial treatment of ocular (uveal) melanoma, **follow-up care is critical**. This rare eye cancer carries a persistent risk of **metastasis** - when cancer cells spread from the eye to other parts of the body through the bloodstream. The **liver** is the most common site for metastatic spread, occurring in nearly half of patients over time, even if the primary eye tumor was successfully treated.

Because of this risk, patients are closely monitored through a structured follow-up plan that may include:

- **Regular Dilated Eye Exams** to monitor tumor activity
- **Imaging Scans** (MRIs, CT scans, PET scans, Ultrasounds) every 3 - 6 months for 5 years, then annually
- **Blood Tests** to check liver function or tumor markers

Metastasis can sometimes occur **months or even years** after the initial diagnosis, which is why long-term surveillance is essential. **Early detection of metastasis** may open the door to more effective treatments, clinical trials, and better management of the disease.

When ocular melanoma spreads beyond the eye to other parts of the body - most commonly the **liver** - it is referred to as **metastatic uveal melanoma**. Once it metastasizes, especially to distant organs, the disease is classified as **stage IV uveal melanoma**, and treatment focuses on managing the spread and improving quality of life. There is no cure for metastatic uveal melanoma and only life extending treatments are currently available.

Ongoing Research and Hope

Although a definitive cure for ocular melanoma has yet to be found, ongoing research is making significant strides. Dedicated scientists and clinicians are continually developing innovative therapies and improving treatment strategies to enhance patient outcomes and **quality of life**.

One leading force in this effort is **Melanoma Research Alliance**, the world's largest private nonprofit funder of melanoma research. We've directly invested over $175 million toward scientific discoveries, and we won't stop until we achieve our mission of curing melanoma.

But hope doesn't only come from the lab - it thrives in the **OM Community**.

The strength and stories of patients and caregivers provide hope and inspiration for those newly diagnosed and for long-term survivors of ocular melanoma. Many have united to create a vibrant community centered on support, advocacy, and shared experiences. **Online support groups**, in particular, have become invaluable lifelines - offering connection, encouragement, and companionship to those navigating this journey.

Others have launched foundations that provide valuable resources for patients and caregivers, beyond treatment. Among them is the **Eye On Grace Foundation**, founded by Ashley McCrary, an ocular melanoma survivor. Through tireless advocacy, Eye On Grace provides **Travel Grants** that ease the financial burden of treatment-related travel, helping patients and their caregivers access the care they need without added stress.

Together - through science, support, and shared strength - the ocular melanoma community continues to move forward with courage and hope.

Want to Support the Ocular Melanoma Community?

Your interest in raising awareness, supporting patients, and advancing research for ocular melanoma means the world to the OM Community. There are many ways to make a difference - whether through donations, volunteering, sharing your skills, or joining a support network.

Here are some impactful organizations you can connect with:

- **Research & Resources** – MelanomaResearchAlliance.org
  Collaborating with all stakeholders to accelerate powerful research, advance cures for all patients, and prevent more melanomas.

- **Travel Grants for Patients & Caregivers** – EyeOnGraceFoundation.net
  Easing the burden of treatment-related travel with financial assistance.

- **Creative Advocacy & Support Through Art** – EyeOnGrace.com
  Using art to inspire hope and support Travel Grants for the OM community.

- **National & Global Awareness & Connection** – BlueOMBlack.org
  A dynamic streaming media hub featuring ocular melanoma awareness podcasts and video channels, powerful patient stories, and the latest in research and education.

Other Ways to Support Ocular Melanoma Awareness

Supporting the ocular melanoma community goes far beyond individual patient care. There are many meaningful ways you can contribute to raising awareness, funding research, and building stronger support networks:

- **Grant Writing and Fundraising**
  Skilled grant writers help secure essential funding for research projects, patient services, and travel grants. Organizing fundraising campaigns - whether virtual or in-person - can generate resources to drive innovation and support families affected by ocular melanoma.

- **Creating Awareness Materials**
  Designing and distributing educational content - such as brochures, posters, videos, social media campaigns, and infographics - helps spread critical information about early detection, treatment options, and patient stories to a wider audience.

- **Organizing Public Events & Fundraisers**
  Hosting awareness walks, seminars, webinars, or community fundraisers creates opportunities to educate the public, engage survivors, unite advocates, and raise much needed funding to continue the mission.

- **Connecting with Sponsors and Partners**
  Building relationships with businesses, healthcare providers, and philanthropic organizations can lead to sponsorships, donations, and collaborative initiatives that

amplify the reach and impact of ocular melanoma programs.

- **Advocacy and Policy Work**
  Supporting legislative efforts to improve funding for rare cancer research, patient access to treatment, and insurance coverage can make a systemic difference. Advocates can engage with lawmakers and healthcare agencies to influence policies benefiting the ocular melanoma community.

- **Volunteering Skills and Time**
  From graphic design and website management to event planning and peer support, volunteers play a vital role. Offering your talents and time helps organizations operate more effectively and reach more people.

- **Sharing Your Story**
  Personal stories have power. Whether through blogs, podcasts, or speaking engagements, sharing your journey can inspire others, raise awareness, and humanize the impact of ocular melanoma.

Every action, big or small, contributes to a stronger, more informed, and better-supported ocular melanoma community. Together, we can make a lasting difference.

Conclusion

Now that you understand more about **Ocular Melanoma (OM)**, it's important to remember that, although it's rare - with odds of about **6 in 1,000,000** - everyone should prioritize their eye health. Regular **Dilated Eye Exams** are the most effective way to catch issues early and protect your vision.

Encourage your family, friends, and everyone around you to schedule these essential eye check-ups. Sharing this simple but powerful message can help save lives and build a stronger, more informed Ocular Melanoma Community.