CONDITION

Lacrimal gland tumor

A lacrimal gland tumor is an abnormal growth in the tear-producing gland above the outer eye.

WHAT IT IS
Abnormal growth in the tear-producing gland

BODY SYSTEM
Eyes and tear system

MAIN SYMPTOMS
Upper eyelid swelling, eye bulging, pain, double vision

WHAT CAUSES IT
Usually unknown; changes within gland cells

HOW IT IS DIAGNOSED
Eye examination, imaging, and tissue testing

MAIN TREATMENT
Surgery, radiotherapy, or systemic cancer treatment

CAN IT BE CURED?
Sometimes - localized tumors may be completely removed

IS IT AN EMERGENCY?
Sometimes - sudden vision loss needs emergency care

LONG-TERM OUTLOOK
Often good for benign tumors; malignant tumors need surveillance

Overview

The lacrimal gland makes the watery part of your tears. It sits above the outer corner of each eye, inside the bony eye socket. A lacrimal gland tumor is an abnormal growth that starts in or involves this gland.

These tumors are uncommon and include several different types. Some are benign, meaning they do not invade nearby tissue or spread to distant organs. Others are malignant, meaning they are cancerous.

A pleomorphic adenoma is a well-known benign lacrimal gland tumor. Malignant types include adenoid cystic carcinoma and carcinoma ex pleomorphic adenoma. Lymphoma, a cancer of immune-system cells, can also involve the lacrimal gland. Some inflammatory conditions can look like tumors on a scan but are not true tumors.

The type matters because treatment and long-term outlook are very different. A slowly growing benign tumor may be cured with complete removal. A malignant tumor may require surgery, radiotherapy, systemic treatment, or a combination.

Because the gland is close to the eye, eye muscles, nerves, and bone, even a noncancerous growth can affect vision or eye movement. A specialist assessment is needed to identify the cause and protect the eye.

Symptoms

Symptoms usually affect one eye, although lymphoma and inflammatory conditions can sometimes affect both sides.

Possible symptoms include:

A mass in the upper outer eye socket often pushes the eye downward and inward. This change may be subtle at first.

The pattern of symptoms can offer clues but cannot confirm the tumor type. Benign tumors often grow slowly and may not hurt. Faster growth, persistent pain, numbness, or bone changes may raise concern for a malignant tumor. However, benign conditions can occasionally cause pain, and some cancers grow slowly.

Many other conditions can cause eyelid swelling or discomfort. These include blocked tear glands, infection, inflammation, thyroid eye disease, and tumors that began elsewhere in the eye socket. Symptoms alone cannot show whether a growth is cancerous.

- Fullness or swelling beneath the outer part of the upper eyelid
- A visible or felt lump near the outer eyebrow
- Bulging or displacement of the eye
- Double vision or reduced eye movement
- Aching, pressure, numbness, or pain around the eye
- Changes in vision
- Excess tearing or, after treatment, dry-eye symptoms

Causes and risk factors

For most lacrimal gland tumors, there is no clear cause. They develop when cells acquire changes that make them grow in an uncontrolled way. These changes are usually acquired

during life rather than inherited from a parent.

Different tumors begin in different cells. Epithelial tumors start in the gland-forming tissue. Lymphomas begin in lymphocytes, which are immune-system cells. Other rare tumors may arise from nearby nerves, blood vessels, or soft tissue.

Some malignant tumors develop within a previously benign pleomorphic adenoma, particularly one that has been present or has returned over a long period. This does not mean that every pleomorphic adenoma will become cancerous.

Certain immune-system conditions may be associated with some types of lymphoma, but most people with those conditions never develop a lacrimal gland tumor. There is usually nothing you did to cause the growth.

Diagnosis

Diagnosis often begins with an eye examination. The clinician may check your vision, pupils, color vision, eye movements, eyelid position, and how far the eye projects forward. They may also feel the upper outer eye socket for a mass.

CT or MRI scans show the size and location of the growth. CT is useful for assessing nearby bone. MRI gives detailed views of soft tissue, nerves, the eye muscles, and possible spread within the eye socket or toward the skull.

Imaging may suggest whether a growth is slow-growing or aggressive, but it usually cannot confirm the exact type. Tissue must be examined by a pathologist, a doctor who identifies conditions by studying cells under a microscope.

How the tissue is obtained requires careful planning. If imaging strongly suggests a pleomorphic adenoma, the preferred approach is often to remove it in one piece without first cutting into it. Damaging its outer covering can leave cells behind and increase the chance of recurrence.

Other lesions, including suspected lymphoma or an invasive cancer, are commonly sampled with a planned biopsy before full treatment. The biopsy method and route are chosen by the specialist team.

If cancer is found, further scans may check nearby lymph nodes or other parts of the body. Blood tests or a bone marrow assessment may be needed for some lymphomas. These tests establish the tumor's stage, meaning how far it has grown or spread.

Treatment and management

Treatment is based on the tumor type, its location and size, whether it has entered nearby structures, and your general health. Care may involve an ophthalmic surgeon, head and neck surgeon, medical oncologist, radiation oncologist, pathologist, and radiologist.

A benign pleomorphic adenoma is generally removed completely while keeping its outer covering intact. Complete removal lowers the chance that it will return. The operation may be performed through an eyelid crease or another approach suited to the tumor's position.

Malignant epithelial tumors are usually treated with surgery when they can be removed safely. The operation may include nearby affected tissue or bone. Radiotherapy may be recommended after surgery to destroy cancer cells that could remain, particularly when the tumor has aggressive features or reaches a surgical edge.

Removal of the entire contents of the eye socket, called orbital exenteration, is not necessary for every malignant lacrimal gland tumor. It may be considered when a large or invasive cancer cannot otherwise be controlled. The likely benefits and effects on vision and appearance should be discussed in detail before treatment.

Lacrimal gland lymphoma is treated differently from an epithelial tumor. A biopsy confirms the lymphoma subtype, followed by tests to see whether it is limited to the eye socket or present elsewhere. Treatment may include radiotherapy, antibody-based treatment, chemotherapy, or observation in selected slow-growing cases.

Systemic treatment means medicine that travels through the bloodstream. It may be considered for lymphoma or for malignant tumors that have spread, returned, or cannot be removed. The choice depends on the exact pathology and available evidence for that tumor type.

After treatment, you may need help with dry eye, eyelid position, double vision, or changes in appearance. Lubricating eye treatments, prism lenses, rehabilitation, or reconstructive procedures may be useful.

Complications

A growing tumor can crowd the eye socket and affect nearby structures. Possible complications include reduced eye movement, double vision, damage to the optic nerve, and loss of vision. Optic nerve damage occurs when pressure or tumor growth interferes with the nerve carrying visual information to the brain.

Malignant tumors may invade bone, nerves, or nearby parts of the head. Some can spread through the bloodstream to distant organs. Adenoid cystic carcinoma is known for growth

along nerves and for the possibility of recurrence many years after initial treatment.

Treatment can also have lasting effects. These may include:

Your treatment team should explain which complications are relevant to the specific tumor and how they will be monitored.

- Dry eye from reduced tear production
- Eyelid or facial changes
- Cataract or retinal damage after radiation near the eye
- Double vision or restricted eye movement
- Numbness or discomfort around the surgical area
- Recurrence at the original site

Prevention

Most lacrimal gland tumors cannot be prevented. There is no established lifestyle change or routine screening test that reliably stops them from developing.

If a pleomorphic adenoma is suspected, specialist surgical planning is important. Removing it intact helps reduce recurrence, but this is part of treatment rather than prevention.

Regular follow-up after treatment cannot guarantee that a tumor will not return. It can, however, identify changes earlier and allow symptoms or treatment effects to be managed.

Living with it and what to expect

What happens over months and years is mainly shaped by the tumor type. Many people with a completely removed benign tumor return to their usual activities after recovery. Follow-up may continue because recurrence is possible, especially if the tumor could not be removed intact.

Recovery from surgery can involve temporary swelling, bruising, numbness, or blurred and double vision. The length of recovery depends on the operation. Changes in tearing or eye comfort may persist and need ongoing treatment.

Malignant tumors usually require longer surveillance. Appointments may include eye examinations and repeat imaging. Some cancers, particularly adenoid cystic carcinoma, can return locally or spread years later, so follow-up may continue for a long time even when treatment appears successful.

Living with uncertainty can be difficult. It may help to ask for a written follow-up plan that explains what testing is expected and which symptoms should prompt an earlier review. Support is also available for coping with changes in vision, facial appearance, work, driving, or emotional well-being.

Most daily activities are guided by how well you can see and move your eyes, rather than by the diagnosis alone. If vision is affected, low-vision services and workplace adjustments may help you remain independent.

When to get medical help

Arrange a routine medical or eye assessment if you develop persistent swelling or a lump beneath the outer upper eyelid, gradual eye displacement, unexplained double vision, or continuing pain around one eye. These symptoms often have causes other than a tumor, but they should be examined.

If you have already been diagnosed, contact your treatment team promptly if a lump grows, pain becomes persistent, numbness develops, or previous symptoms return. New side effects after surgery or radiotherapy also deserve review.

Seek urgent same-day medical care for a rapid decline in vision, rapidly increasing eye bulging, or worsening pain with new difficulty moving the eye.

Go to an emergency department for sudden vision loss, severe eye pain with abrupt vision changes, or rapidly worsening swelling that makes it difficult to close the eye. These symptoms can threaten sight and may also be caused by conditions other than a tumor.

Common questions

Is a lacrimal gland tumor always cancer?

No. Lacrimal gland tumors can be benign or malignant. Imaging may suggest one or the other, but examination of tissue is usually needed to identify the exact type.

Can a lacrimal gland tumor be removed?

Many can be removed surgically. Whether complete removal is possible depends on the type, size, position, and involvement of nearby nerves, muscles, bone, or other structures.

Will I lose my eye?

Most people with a lacrimal gland tumor do not automatically need removal of the eye or eye-socket contents. More extensive surgery is reserved for selected invasive cancers. Your

team should explain whether vision-preserving treatment is possible.

Can the tumor come back after surgery?

Yes, although the risk differs greatly by tumor type and treatment. A benign pleomorphic adenoma is less likely to return when removed intact. Malignant tumors may recur locally or elsewhere, sometimes years later.

Why should a suspected pleomorphic adenoma not always be biopsied first?

Cutting through its outer covering can release tumor cells into nearby tissue and increase recurrence risk. When scans and examination strongly suggest this tumor, planned removal in one piece may provide both diagnosis and treatment.

How long will follow-up last?

Benign tumors may still require years of checks. Malignant tumors often need long-term or lifelong surveillance because some types can return late. The schedule is based on the pathology, treatment, and risk of recurrence.

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