CONDITION

Cutaneous t-cell lymphomas

Cutaneous T-cell lymphomas are cancers of immune cells that mainly affect the skin.

WHAT IT IS
Group of T-cell cancers that mainly affect skin

BODY SYSTEM
Skin and immune system

MAIN SYMPTOMS
Persistent patches, raised plaques, skin lumps, itching

WHAT CAUSES IT
Unknown, with acquired changes in T cells

HOW IT IS DIAGNOSED
Skin biopsies, cell markers, and T-cell gene tests

MAIN TREATMENT
Skin therapy, immune treatment, targeted medicines, or radiation

CAN IT BE CURED?
Sometimes - localized types or donor stem cell transplant

IS IT AN EMERGENCY?
Sometimes - fever with painful, rapidly worsening skin

LONG-TERM OUTLOOK
Often slow-growing early; advanced forms can shorten life

Overview

Cutaneous T-cell lymphomas, or CTCLs, are cancers involving T cells, which are white blood cells that help the immune system respond to infections and abnormal cells.

In CTCL, abnormal T cells collect mainly in the skin. This can cause flat patches, thicker raised areas called plaques, or lumps called tumors. Some forms also affect the blood, lymph nodes, or internal organs.

The most common type is mycosis fungoides . Despite its name, it is not a fungal infection. It often begins with slowly changing patches that resemble eczema or psoriasis.

Sézary syndrome is less common and involves abnormal T cells in the blood. It usually causes widespread redness, scaling, and severe itching.

Other CTCLs include primary cutaneous anaplastic large-cell lymphoma and several rare

subtypes. Some remain limited to the skin for years, while others grow or spread more quickly. The subtype, stage, symptoms, and general health help determine treatment and outlook.

Symptoms

Early mycosis fungoides often causes flat, dry, or scaly patches. They may be red, brown, purple, lighter, or darker than surrounding skin, depending partly on skin tone.

Patches commonly appear on areas covered by clothing, such as the buttocks, thighs, breasts, or lower abdomen. They may remain stable, fade and return, or slowly become thicker.

Possible symptoms include:

Sézary syndrome can make most of the skin red, inflamed, and scaly, a condition called erythroderma . The skin may feel tight or painful, itching can be intense, and the palms and soles may thicken or crack.

Symptoms cannot confirm CTCL because common skin conditions can look similar. A persistent or changing rash needs medical assessment.

- Persistent patches that do not respond as expected to eczema treatment
- Raised or thickened plaques
- Firm skin lumps or tumors, sometimes with an open sore
- Itching, burning, tenderness, or pain
- Changes in skin color
- Enlarged lymph nodes, often felt as painless lumps
- Hair loss or nail changes when skin involvement is extensive

Causes and risk factors

The exact cause of most CTCLs is unknown. The condition develops after T cells acquire changes in genes that control their growth and survival. These changes are usually acquired during life rather than inherited.

CTCL is not contagious and is not caused by poor hygiene. It cannot spread through touch, sex, shared objects, or contact with affected skin.

Most people have no clear avoidable risk factor. CTCL is diagnosed more often in older adults, although it can occur at other ages, and some forms are more common in men.

Eczema, psoriasis, and other inflammatory skin conditions do not turn into CTCL. However, their similarity to early CTCL can delay diagnosis.

Diagnosis

Diagnosis begins with a skin examination and questions about how long the changes have been present, whether they come and go, and which treatments have been tried. The clinician may examine the entire skin surface and check for enlarged lymph nodes.

A skin biopsy is needed to confirm CTCL. After numbing the area, a small sample of skin is removed and examined under a microscope.

Early CTCL can be difficult to identify because it may resemble ordinary inflammation. More than one biopsy, from different areas or at different times, may be needed. This does not necessarily mean the condition is worsening.

Tests on the biopsy may include:

No single result is usually interpreted alone. The symptoms, examination, biopsy appearance, and laboratory findings should form a consistent pattern.

Blood tests may include a blood cell count, liver and kidney tests, flow cytometry, and tests for abnormal T cells. CT or PET scans may be used if there are tumors, enlarged lymph nodes, abnormal blood findings, or concern about disease beyond the skin. An enlarged lymph node may also need a biopsy.

CTCL is staged according to skin involvement and whether abnormal cells are present in the lymph nodes, blood, or internal organs. Both stage and subtype guide treatment.

- Immunohistochemistry to identify proteins on abnormal cells
- T-cell receptor gene testing to look for a closely related population of T cells
- Additional molecular tests for certain uncommon subtypes

Treatment and management

Treatment depends on the CTCL subtype, stage, symptoms, previous treatments, and overall health. Care may involve dermatology, blood cancer, radiation, and specialist nursing teams.

Early mycosis fungoides is often managed with skin-directed therapy , including:

Phototherapy uses carefully measured ultraviolet exposure and is not the same as using a tanning bed.

A small localized lesion from certain subtypes may be treated with surgery or local radiation. Some limited, slow-growing cases can be monitored until treatment is needed.

Treatment throughout the body may be considered when CTCL is widespread, involves the blood, or does not respond to skin therapy. Options include immune-based treatments, retinoid medicines related to vitamin A, extracorporeal photopheresis, targeted medicines, or chemotherapy.

Extracorporeal photopheresis involves removing some blood, treating its white cells with a light-activated medicine, and returning the blood to the body. It is often used when abnormal T cells circulate in the blood.

Targeted medicines act on particular proteins found on lymphoma cells. Cell testing may help determine whether one is suitable.

Chemotherapy may help selected advanced or faster-growing cases, although its effects are often temporary. An allogeneic stem cell transplant using donor blood-forming cells can sometimes provide long-term control or a cure. Because it carries substantial risks, it is considered only for selected people.

Supportive care, including moisturizers, itch control, wound care, pain relief, and treatment of infections, can improve comfort and sleep.

- Anti-inflammatory or anticancer medicines applied to the skin
- Phototherapy using controlled ultraviolet light
- Radiation directed at affected areas
- Total skin electron-beam therapy when larger areas need radiation

Complications

Affected skin may crack, bleed, or develop open sores, increasing the risk of bacterial or viral infections. Extensive redness can interfere with temperature control and fluid balance.

Persistent itching may disrupt sleep, concentration, mood, work, and relationships. Tumors may become painful or ulcerated, and swelling can occur if lymphoma or treatment affects lymph drainage.

Some CTCLs progress from patches to plaques or tumors and may later involve the lymph nodes, blood, or internal organs. This is not inevitable; risk varies greatly by subtype and stage.

Treatment can cause skin irritation, light sensitivity, altered blood counts, infection risk, or effects on other organs. Follow-up is used to monitor these complications.

Prevention

There is no established way to prevent most CTCLs because the genetic changes usually occur without a known avoidable cause. Diet changes, supplements, and ordinary skin care have not been shown to prevent it.

For people with CTCL, gentle skin care may reduce cracking and irritation. Using treatments as prescribed, reporting infection signs, and attending follow-up can help limit complications, although these steps do not prevent the underlying condition.

Living with it and what to expect

The course of CTCL varies by subtype and stage. Early mycosis fungoides often changes slowly, and some people remain at an early stage for many years while continuing usual activities.

Patches may improve and later return. This relapse does not always mean the lymphoma is more dangerous; another course or type of treatment may be needed.

Treatment may aim to clear visible areas, reduce itching, protect the skin, and delay progression. Even when CTCL cannot be permanently removed, it may be managed as a long-term condition.

Advanced mycosis fungoides, Sézary syndrome, and some rare subtypes can be harder to control and may require repeated or combined treatments.

Follow-up usually includes examination of the skin and lymph nodes, discussion of symptoms, and review of treatment effects. Blood tests or scans are used when appropriate.

Between visits, report new lumps, sores that do not heal, rapidly changing areas, worsening itch, or unexplained changes in general health. Photographs can help document patches that come and go.

When to get medical help

Arrange a routine medical assessment for a persistent unexplained rash, especially if it is spreading, changing, or not improving with treatment. Also seek advice for a new skin lump, an open sore that does not heal, or ongoing severe itching.

If you have CTCL, contact your care team promptly for:

Seek urgent medical help for fever with rapidly worsening red, painful, or blistered skin,

particularly during treatment. This can indicate a serious infection or treatment reaction.

Emergency help is also appropriate for trouble breathing, facial or throat swelling, fainting, confusion, or other signs of a severe allergic reaction.

- New or rapidly growing skin tumors
- Increasing redness, pain, swelling, or drainage
- New enlarged lymph nodes
- Unexplained fever, night sweats, or weight loss
- Treatment side effects that are difficult to manage

Common questions

Is cutaneous T-cell lymphoma a skin cancer or a blood cancer?

It is a lymphoma, meaning a cancer of immune-system cells. It mainly appears in the skin, but some forms involve the blood, lymph nodes, or other organs. It differs from cancers that begin in ordinary skin cells, such as melanoma.

Is CTCL contagious?

No. It cannot spread through skin contact, shared towels, sex, blood, or everyday contact.

Can cutaneous T-cell lymphoma be cured?

Sometimes. A small localized CTCL may be eradicated with surgery or radiation. A donor stem cell transplant can potentially cure selected advanced cases. Many people with early mycosis fungoides instead receive long-term treatment to control recurring skin changes.

How quickly does CTCL spread?

Many cases of early mycosis fungoides progress slowly or remain limited to the skin for long periods. Sézary syndrome and some rare subtypes can be more aggressive. Subtype, stage, blood involvement, biopsy findings, and changes over time provide the most useful information.

Why might I need more than one skin biopsy?

Early CTCL can look almost identical to eczema or another inflammatory rash under the microscope, and different areas may show different changes. Repeated samples can establish a reliable pattern and reduce the risk of an incorrect diagnosis.

Does a persistent itchy rash mean I have CTCL?

Usually not. Persistent rashes are more often caused by common skin conditions. However, a

rash that remains unexplained, changes, or does not improve as expected should be assessed.

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