ORTHOPAEDIC ONCOLOGY · PATIENT GUIDE

TGCT and PVNS: Understanding Repeated Knee Swelling

Making sense of the diagnosis, your scan and the choices ahead.

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Tenosynovial giant cell tumour, usually shortened to TGCT, grows in the lining of a joint or around a tendon. It is generally non-cancerous, but can damage the structures around it. In the knee, it may cause repeated swelling, pain and stiffness.[1]

Some people notice catching or locking. Symptoms may come and go, and bleeding into the joint can occur without a significant injury. These features need assessment; a history of swelling alone cannot establish the diagnosis.[1]

Why do the names PVNS and TGCT both appear?

PVNS stands for pigmented villonodular synovitis. It is an older name for what is now usually called **diffuse-type TGCT**. The current terminology also includes a localised form. The distinction describes the growth pattern and helps the team understand how much of the joint is involved.[2]

Localised TGCT

One or more well-defined nodules are present. A nodule may lie inside a joint or around a tendon.[1]

Diffuse TGCT

The growth involves the joint lining more widely and can extend beyond the joint. Planning treatment is often more complex.[1]

How is TGCT diagnosed?

MRI maps the location and extent of TGCT, including areas that are difficult to see during keyhole surgery. It also helps assess cartilage, bone and surrounding structures. Other conditions can resemble TGCT, so the scan needs interpretation alongside the clinical history.[2]

Whether a biopsy is needed depends on how clear the diagnosis is and what treatment is being considered. Atypical or uncertain findings need specialist assessment. Tissue confirmation is particularly important before systemic treatment. The team should explain the reason for sampling, or for proceeding without a separate needle biopsy.[3]

Does every TGCT need surgery?

Observation can be appropriate when TGCT is not causing symptoms or limiting function. This involves an agreed review plan, with examination or imaging as needed. Treatment decisions should take account of symptoms and their progression, rather than the scan alone.[3]

Surgery removes the tumour and, when the joint lining is involved, affected synovium. Removal of joint lining is called a synovectomy. Before the operation, discuss what the surgeon plans to remove, the possibility of continuing pain, and the risk of the tumour returning.[6]

Diffuse, recurrent or otherwise complex TGCT benefits from review by a specialist multidisciplinary team. The discussion should weigh symptom relief against the potential harm of an extensive operation. A technically possible operation may still carry too great a cost to joint function.[3]

> **Dr. Vishnu's perspective**
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> Before recommending another procedure, I want to understand what has changed and what useful improvement we are hoping for. Is the main problem pain, repeated swelling or difficulty with an everyday activity? We should discuss what treatment might achieve and what it could cost in function. The condition of your joint after treatment belongs in that conversation too.

When might medicines be considered?

Vimseltinib is a medicine targeting the CSF1 receptor. Its current US indication covers adults with symptomatic TGCT when surgical removal could worsen function or cause severe harm. It requires liver blood tests before and during treatment, and a discussion of pregnancy risks and contraception. [4]

Pexidartinib has a different US indication: adults with symptomatic TGCT causing severe problems or functional limitations that surgery cannot improve. It carries a boxed warning for serious, potentially fatal liver injury and is supplied through a restricted US safety programme. Monitoring is essential, but does not eliminate that risk.[5]

These are specialist treatments with eligibility and safety requirements. Before starting, review your other medicines and plans for pregnancy with the prescribing team. The two labels do not establish which drug is better for an individual, and US approval does not answer questions about access elsewhere.[4][5]

What about recovery and swelling afterwards?

After knee surgery for TGCT, physiotherapy may address movement, walking and use of aids. Pain and swelling also need attention. The extent of the operation affects the return-to-work plan, so recovery advice and any restrictions need to fit your procedure.[6]

Later swelling deserves review, but does not by itself prove recurrence. MRI after treatment can show inflammation or other postoperative changes as well as residual or recurrent tumour. Comparing scans and symptoms helps the team decide what a new finding means.[2]

How TGCT affects your day

Changes in walking, stairs, sleep or work belong in the discussion, including the difference between a good day and a difficult one. You can bring earlier scans, operation details and tissue reports if you have them. The team should help obtain missing records.

Frequently Asked Questions

Is TGCT a cancer?

TGCT is usually a non-cancerous tumour. That does not make it harmless: disease within a joint can damage cartilage and nearby bone, causing pain and affecting movement. Treatment decisions need to consider its local effects. [1]

Are PVNS and TGCT the same thing?

PVNS, or pigmented villonodular synovitis, is an older name usually used for diffuse-type TGCT. TGCT is the broader current term, which also includes the localised form. Ask which pattern your MRI shows. [2]

If TGCT comes back, do I need another operation?

Not automatically. Recurrent or complex TGCT warrants specialist review of symptoms, imaging and the likely effects of further surgery. Monitoring, surgery and systemic treatment can be discussed according to the individual situation. [3]

When can I walk normally after TGCT surgery?

Your recovery plan should reflect the operation you had. Ask your surgeon and physiotherapist about walking aids, movement exercises and returning to work. A general leaflet cannot set your personal milestones or replace your team's instructions. [6]

Your consultation

A TGCT or PVNS consultation in Kannur

To discuss a TGCT or PVNS diagnosis and its effect on daily activities, you can book a consultation with Dr. Vishnu Baburaj at Aster MIMS Kannur.

Book a consultation Plan your visit

The evidence behind this article

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Medically reviewed by Dr. Vishnu Baburaj, MS Ortho (PGI Chandigarh), MRCS (UK) · Last reviewed Nov 5, 2026

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