

PATIENT-FRIENDLY

Optimal Clinical Management of Tenosynovial Giant Cell Tumour (TGCT): A UK Perspective

UK TGCT Consortium



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TGCT SUPPORT IS A PROGRAM OF  **The Life Raft**
GROUP

CONSENSUS RECOMMENDATIONS

STATEMENT/RECOMMENDATION	CONSENSUS LEVEL
Nomenclature and Characterisation	
The field is in a transitional phase, with TGCT emerging as the preferred disease name in oncology and multidisciplinary discussions.	Moderate
Subtyping of TGCT should be determined by MRI alone, rather than pathology	Strong
Any well-defined circular mass(es), without infiltrative patterns into other surrounding tissue is classified as L-TGCT.	Moderate
It is possibility to have an intermediate localised category, especially when more than one well-defined tumor is present in different parts of the joint (e.g., front and back of the knee) but without the infiltrative features of D-TGCT.	Low
Diagnostics	
MRI is the optimal imaging method for diagnosis and characterisation of TGCT. MRI should be recommended as part of the standard diagnostic work-up.	Strong
Conventional radiography (i.e., x ray) has limited value in TGCT but may be used to identify calcium deposits, bone damage, cartilage or bone cysts, and joint degeneration, particularly in longstanding or advanced disease.	Strong
Contrast agents may not be necessary and may be resource dependent (as scans without contrast require less resources and free up local imaging capacity)	Low
<p>For TGCTs where high-quality MRI are interpreted by radiologists with extensive experience in assessing TGCT and other tumuors and the MRI is highly confident of TGCT, core-needle biopsy* may be deemed unnecessary.</p> <p><i>*Core-needle biopsy describes a procedure where a needle is inserted into the joint of interest guided by a CT or ultrasound and pieces of the tissue-of-interest are taken to confirm diagnosis.</i></p>	Strong
For small, localised lesions, removing it during surgery and sending to pathology after can occur if the radiological features are consistent with that of TGCT.	Moderate
<p>For localised lesions, tissue-confirmed diagnosis via core-needle biopsy before surgery may be appropriate in some cases where imaging is inconsistent with TGCT after review by a sarcoma MDT*.</p> <p><i>*Sarcoma MDT refers to a specialized team of clinicians that treat sarcomas using different approaches. Typically, these multidisciplinary teams (MDT) include a medical oncologist, orthopedic oncologist, radiologist, pathologist and other consultants who specialize specifically in soft tissue tumors.</i></p>	Low

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Diagnosics (continued)	
Any removed tissue should be sent for confirmation of diagnosis to pathology. If the MRI characteristics are atypical, then the case should be referred to the local sarcoma centre as per national UK guidelines to rule out sarcoma.	Strong
Biopsies for large, diffuse, recurrent TGCT or atypical radiological appearance should be reviewed at a sarcoma centre and/or with experienced pathologists that specialize in tumours	Strong
There is strong support for pathology review by a specialist sarcoma pathologist and access to additional diagnostic tests.	Strong
Principles of Treatment	
Patients with suspected D-TGCT, TGCT in atypical locations, or those requiring complex surgeries should be reviewed by a MDT case review at a sarcoma centre, given the multidisciplinary nature of TGCT management.	Strong
Surgical Techniques	
The primary approach for asymptomatic L-TGCT should not be surgical. Active monitoring is recommended in the absence of symptoms or functional impairment.	Strong
Removing the entire TGCT in one piece should be universally recommended for symptomatic L-TGCT.	Strong
The use of arthroscopic surgery could be appropriate for TGCT that can be removed entirely without cutting into the TGCT in a joint that are easily accessible (e.g., front of the knee or ankle) due to risk of spreading it around the joint.	Moderate
Open surgery was recommended for symptomatic L-TGCT due to concerns about cutting it up during arthroscopy.	Moderate
Arthroscopies of the back of the knee or ankle should not be advised due to technical difficulties achieving complete removal of TGCT and concerns with contaminating the joint.	Strong
The primary approach for asymptomatic D-TGCT should be actively monitoring with regular follow-up visits to assess disease progression and/or symptoms.	Moderate
MDT review and discussion, including surgical, medical, and clinical oncology, and radiology teams, should be recommended for treatment planning.	Strong

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Surgical Techniques <i>(continued)</i>	
Symptomatic D-TGCT should be managed by a multidisciplinary sarcoma centre and MDT review and discussion, including surgical, medical/clinical oncology, and radiology teams, should be recommended for treatment planning	Strong
Completely removing the TGCT is the preferred approach if achievable without causing damage to the joint or increasing risk of complications and preservation of function.	Strong
Arthroscopic surgery was not favored for D-TGCT due to the risk of disease spread in the joint.	Strong
If completely removing TGCT is not feasible, partially removing (known as debulking) the symptomatic portion of the disease (e.g., front of knee if a patient cannot bend) should only occur if recommended by the sarcoma MDT review.	Moderate
Experts agreed that removing only part of the disease is a practical but often suboptimal and only performed due to lack of better alternatives which should be discussed with a sarcoma MDT.	Moderate
Joint reconstruction or replacement may be appropriate in TGCT patients but only when secondary degenerative joint disease (e.g. osteoarthritis or joint erosion) is advanced and mobility is severely impacted. Joint replacement is not used as a treatment for TGCT directly and does not reduce recurrence risks.	Strong
Recurrence of symptoms should be a common trigger for medical oncology involvement.	Low
Decisions for referrals are made on a case-by-case basis within an MDT setting.	Strong
Several surgical experts suggested a proactive approach, referring to oncology early in the planning process if disease is diffuse, only partially removable, recurrent, or in difficult surgical locations (e.g., posterior capsule or ankle).	Low
Radiotherapy	
Radiation as a treatment for TGCT should be avoided and limited to only very select patients after sarcoma MDT review and only once all other options are exhausted.	Strong

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Medication Therapy	
Referral for consideration of medication is recommended for discussion of alternatives for patients with recurrent TGCT, or D-TGCT or L-TGCT in complex locations.	Moderate
Medication may be preferred following MDT discussion and patient preference.	Moderate
Medical oncology referral is usually not necessary at initial diagnosis, but is recommended early in cases of symptomatic, diffuse, recurrent, or TGCT that is not entirely removable via surgery, or when surgery is associated with high complications or dysfunction, or when surgical options are exhausted, carry a high risk of local recurrence is associated, or involve difficult surgical locations (e.g., back of knee or ankle).	Moderate
Imatinib is the standard-of-care medication in the UK at present. However, clinical trials should be the preferred option when available.	Strong
There could be a role for medication before surgery, especially in cases of large extensive disease or when medication may improve surgical outcomes.	Moderate
Surveillance and Follow-Up	
Regular post-operative imaging or routine imaging was unnecessary for patients with L-TGCT and that follow-up imaging should be based on symptoms.	Strong
Clinical symptoms and physical function should be used to guide post-operation decision-making. Flexible, symptom-guided imaging was recommended by all experts.	Strong
After MRI progression, increased frequency of scans is useful to monitor arthrosis.	Moderate
Post-operative baseline imaging was recommended for patients with D-TGCT to assess residual disease.	Moderate
Follow-up and routine imaging thereafter should be guided by patient's symptoms and evaluated at 6- and 12- month intervals.	Strong
If post operative or routine imaging is sought, MRI is unanimously preferred by all experts as the imaging modality of choice for evaluating the condition.	Strong
For patients on medication, monitoring treatment response is often based on clinical improvement in symptoms and radiographic response.	Strong



TGCT Glossary of Terms



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