SpringWorks® THERAPEUTICS

RETHINK DESMOID TUMORS

Don’t underestimate these unpredictable tumors and their “tendril-like” growths[1]

- Desmoid tumors are **locally aggressive**, potentially morbid tumors of the soft tissues, with a tendency to infiltrate surrounding structures[1-3]
- The NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)* and Desmoid Tumor Working Group (DTWG)† Guideline recommend an initial evaluation and management by a multidisciplinary team with **expertise and experience in desmoid tumors**[4,5]
- Although they do not metastasize, desmoid tumors are associated with **local recurrence rates ranging from 24% to 77%** after surgical resection, regardless of margin status[6,7,‡]
- For progressive, morbid, or symptomatic desmoid tumors, systemic therapies are recommended as a **first-line treatment option** according to the NCCN Guidelines® and DTWG Guideline[4,5,§]

Access desmoid tumor resources and sign up for information at DesmoidTumors.com/hcp

*The National Comprehensive Cancer Network® (NCCN®) is a not-for-profit alliance of 33 leading cancer centers devoted to patient care, research, and education. The development of the NCCN Guidelines is an ongoing and iterative process based on a critical review of the best available evidence and derivation of recommendations by a multidisciplinary panel of experts in the field of cancer.[4]

†The Desmoid Tumor Working Group (DTWG) consists of more than 90 sarcoma experts, patients, and patient advocates from around the world. The DTWG includes representatives from all disciplines involved in the management of desmoid tumors, including pathology, molecular biology, radiology, orthopedic surgery, surgical oncology, radiotherapy, medical oncology, and supportive care.[5]

‡Based on retrospective, observational data. Factors associated with local recurrence postsurgery include tumor location, age of the participant, tumor size, margin status, and prior recurrence.[8,9]

§NCCN Guidelines also recommend ablation/embolization and definitive radiation therapy as first-line treatment options for progressive, morbid, or symptomatic desmoid tumors for certain patients.[4]

ICD-10-CM, International Classification of Diseases, Tenth Revision, Clinical Modification; NCCN, National Comprehensive Cancer Network® (NCCN®).

About desmoid tumors

Patients with desmoid tumors seek both disease control and symptom improvement

Sometimes referred to as aggressive fibromatosis or desmoid fibromatosis, these mesenchymal tumors can be serious, debilitating and, in rare cases when vital organs are impacted, they can be life-threatening.[2,10,11]

Studies suggest pain is a prognostic indicator of progression and is associated with worse outcomes.[12-14]

Incidence and risk factors

There are approximately 1000 to 1650 annual cases in the United States[15-17]

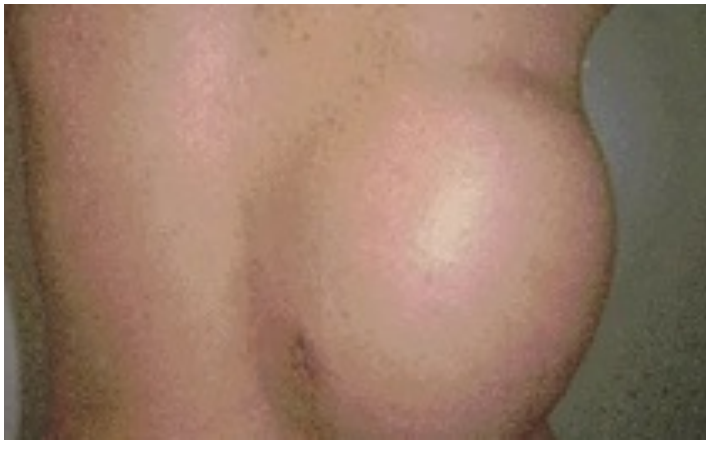
Most patients are diagnosed between 20-44 years of age[16]

Female-to-male ratio is ~2-3:1[7,16,18]

Recent pregnancy, injury, or surgery may increase risk[19,20]

Patients with FAP have ~850-fold higher risk of developing desmoid tumors than the general population[21]

Large desmoid tumor on the posterior thoracic wall[22]



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Lateral and posterior images of a desmoid tumor on the left leg[23]

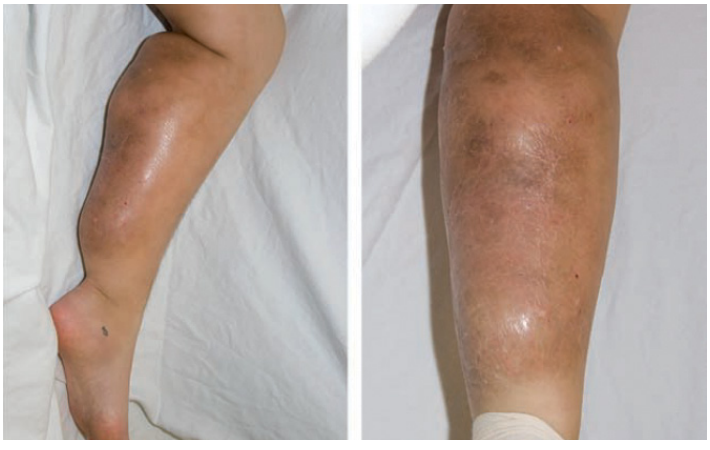

Image reproduced with permission from McDonald ES, Yi ES, Wenger DE. Best cases from the AFIP: extraabdominal desmoid-type fibromatosis. *Radiographics*. 2008;28(3):901-906. ©RSNA

FAP, familial adenomatous polyposis.

Symptoms and complications at specific sites

Symptomatology related to desmoid tumors and disease outcomes vary based on where the tumors present.[1,11,24-26]

Tumor Site	Est. Frequency[26]	Common Symptoms And Complications
Intra-abdominal (including mesentery)	20%	Compression may cause pain, cachexia, malaise, abdominal distention, or obstruction of the intestines or ureters[26-28]
Abdominal Wall	16%	Large tumors may cause tissue stretching, blood vessel compression, and bowel or bladder displacement[29]
Lower Extremities	16%	Limited mobility, pain, muscle stiffness, or deformity[23,26]
Chest Wall	15%	Dyspnea, dysphagia, pleural invasion, rib or spinal involvement, bone erosion, and pain[22,26,27,30]
Upper Extremities	14%	Restricted mobility, muscle and ligament involvement, limb weakness, deformity, or pain[26,31]
Head and Neck	8%	Pain, neurologic deficit, proximity to vital structures, including mortality risk from vascular or airway restriction[32]
Other	11%	Symptoms and complications dependent on the location[11,24,26]

CT, computed tomography.

Intra-abdominal desmoid tumor[33]

This contrast-enhanced CT scan shows an unresectable, sporadic, mesenteric desmoid tumor (white arrow) in a female patient aged 30 years. The desmoid tumor is surrounding the superior mesenteric vessels (white arrowhead). The tumor's multiple tendrils are threatening the bowel. After 3 months of observation, the patient presented with a bowel obstruction.

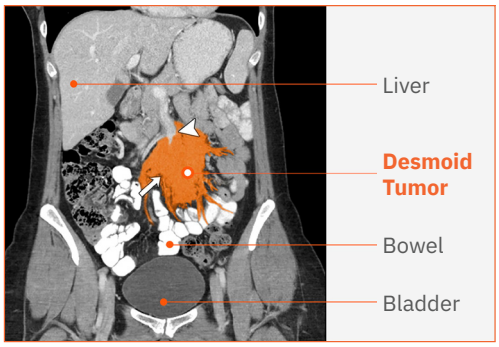

Image adapted with permission from Braschi-Amirfarzan M, Keralyiga AR, Krajewski KM, et al. Role of imaging in management of desmoid-type fibromatosis: a primer for radiologists. *Radiographics.* 2016;36(3):767-782. False color added. ©RSNA

Desmoid tumor in the neck[33]

This T1-weighted MRI shows a recurrent desmoid tumor (white arrow) in the lower neck and throat of a female patient aged 52 years. The tumor is extending into the vertebral body (arrowhead).

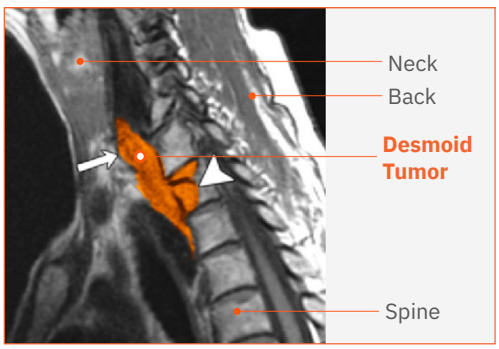

Image adapted with permission from Braschi-Amirfarzan M, Keralyiga AR, Krajewski KM, et al. Role of imaging in management of desmoid-type fibromatosis: a primer for radiologists. *Radiographics.* 2016;36(3):767-782. False color added. ©RSNA

Management options

NCCN Guidelines recommend that patients having tumors that are progressing, symptomatic, or impairing or threatening in function be offered therapy with the decision based on the **location of the tumor** and the potential **morbidity of the therapeutic option.**[4] In addition to reduction of tumor growth, treatment considerations should include **reducing symptoms and improving functioning and quality of life.**[34-36]

Active Surveillance

For patients who have desmoid tumors that are **asymptomatic and not progressing** or morbid, active surveillance may be an appropriate option.[5] However, it is recommended that they stay in close contact with their multidisciplinary team along the way for intervention as needed.[5]

According to the DTWG Guideline, active surveillance means that patients need to be continuously monitored with the next MRI (or alternatively CT, if MRI is not possible, or in intra-abdominal presentation) within 1-2 months, then in 3-6 months intervals.[10]

NCCN Guidelines recommendations for initiating treatment:[4,*]

Symptoms **OR** Impairing or threatening in function **OR** Tumor growth documented on imaging (e.g., MRI or CT)

Systemic Therapy

For progressive, morbid, or symptomatic desmoid tumors, systemic therapies are recommended as a **first-line treatment option** according to the NCCN Guidelines and DTWG Guideline.[4,5,†]

Currently, there is one FDA-approved treatment option for desmoid tumors. NCCN Guidelines list agents and regimens within the following drug classes:[4]

Drug Class
Preferred Regimens
Gamma Secretase Inhibitor (GSI) | Tyrosine Kinase Inhibitor (TKI) | Chemotherapy
Useful in Certain Circumstances
Nonsteroidal Anti-inflammatory Drugs (NSAIDs)

Surgery

According to the NCCN Guidelines: In general, surgery is not considered a first-line treatment option for desmoid tumors, except in certain situations if agreed upon by a multidisciplinary tumor board.[4]

Locoregional Therapy

According to the NCCN Guidelines, radiation therapy, cryoablation, and drug-eluting bead chemoembolization are sometimes used to help treat desmoid tumors.[4]

Clinical Trials

Enrollment in a clinical trial may be considered an option for appropriate patients.[2]

*A course of ongoing observation is an appropriate option even for patients with disease progression, if the patient is minimally symptomatic and the anatomical location of the tumor is not critical. For tumors that are symptomatic, or impairing or threatening in function, patients should be offered therapy with the decision based on the location of the tumor and potential morbidity of the therapeutic option.[4]

†NCCN Guidelines also recommend ablation/embolization and definitive radiation therapy as first-line treatment options for progressive, morbid, or symptomatic desmoid tumors for certain patients.[4]

CT, computed tomography; FDA, US Food and Drug Administration; MRI, magnetic resonance imaging; NCCN, National Comprehensive Cancer Network® (NCCN®).

Key diagnostic strategies

The NCCN Guidelines and DTWG Guideline recommend an initial evaluation and management by a multidisciplinary team with **expertise and experience in desmoid tumors.**[4,5]

Imaging

NCCN Guidelines recommend the following prior to initiation of a treatment plan for progressive, morbid, or symptomatic disease:[4]

- CT/MRI scan
- Core biopsy

Core needle biopsy and nuclear beta-catenin staining

Histopathologic assessment and immunostaining for beta-catenin are important for diagnosis of desmoid tumors.[37] The DTWG Guideline identifies nuclear positivity for beta-catenin as the key immunophenotypic feature of desmoid tumors.[10]

The presence of nuclear immunopositivity for beta-catenin has been reported in 80% to 98% of sporadic desmoid tumor cases and 60% to 70% of FAP-associated desmoid tumor cases.[10]

Genetic testing

The DTWG Guideline recommends performing a mutational analysis in desmoid tumor biopsy specimens to confirm diagnosis and guide the workup when appropriate. The use of a next-generation sequencing (NGS)-based diagnostic approach appears to be more sensitive.[10]

- 85% to 90% of desmoid tumors are sporadic and most often associated with activating mutations of the beta-catenin gene *CTNNB1*[2,10]
- 10% to 15% of desmoid tumors are syndromic in the context of FAP and associated with germline inactivating mutations in *APC*[2,10]

Initial misdiagnosis of desmoid tumors occurs in approximately 30% to 40% of cases.[1]

APC, adenomatous polyposis coli; CT, computed tomography; CTNNB1, catenin beta 1; FAP, familial adenomatous polyposis; MRI, magnetic resonance imaging; NCCN, National Comprehensive Cancer Network® (NCCN®).

ICD-10-CM codes for desmoid tumors

Location-specific ICD-10-CM codes for desmoid tumors went into effect on October 1, 2023

These ICD-10-CM codes may help:

Support increased identification of patients with desmoid tumors

Improve visibility into the journey of patients with desmoid tumors

Enable healthcare providers to appropriately document diagnoses of patients with desmoid tumors

ICD-10-CM Diagnosis Code[38]	Description[38]
D48.11	**Desmoid tumor** (category heading)
D48.110	**Desmoid tumor of head and neck**
D48.111	**Desmoid tumor of chest wall**
D48.112	**Desmoid tumor, intrathoracic**
D48.113	**Desmoid tumor of abdominal wall**
D48.114	**Desmoid tumor, intraabdominal** Desmoid tumor of pelvic cavity Desmoid tumor, peritoneal, retroperitoneal
D48.115	**Desmoid tumor of upper extremity and shoulder girdle**
D48.116	**Desmoid tumor of lower extremity and pelvic girdle** Desmoid tumor of buttock
D48.117	**Desmoid tumor of back**
D48.118	**Desmoid tumor of other site**
D48.119	**Desmoid tumor of unspecified site**

ICD-10-CM, International Classification of Diseases, Tenth Revision, Clinical Modification.

Resources

Before making a treatment decision, consider consulting with a desmoid tumor expert

Sarcoma Alliance for Research through Collaboration (SARC) Tumor Board

The Desmoid Tumor Research Foundation (DTRF) Virtual Tumor Board

The websites listed above provide additional information if you are interested in submitting your patient cases to SARC or DTRF to be considered for review by a tumor board with desmoid tumor expertise.

The SARC Tumor Board and DTRF Virtual Tumor Board are independent of SpringWorks Therapeutics, Inc. Inclusion of these resources does not represent an endorsement or recommendation from SpringWorks Therapeutics for any group or organization. SpringWorks Therapeutics has no control over whether any case will be considered for review by a tumor board.

Advocacy groups

The following advocacy organizations can provide additional support and information for your patients with desmoid tumors.

The Desmoid Tumor Research Foundation (DTRF)

Rein in Sarcoma

National Organization for Rare Disorders (NORD)

Sarcoma Alliance for Research through Collaboration (SARC)

Northwest Sarcoma Foundation

NCCN Guidelines for Patients® Soft Tissue Sarcoma

Global Genes

Sarcoma Foundation of America

The organizations listed are independent of SpringWorks Therapeutics, Inc. SpringWorks is providing these links to help patients find more information about desmoid tumors, but inclusion on this list does not represent an endorsement or a recommendation from SpringWorks for any group or organization. Logos are used with permission.

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