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Background

Databases are useful for clinical research to better understand epidemiology and health outcomes, especially for rare diseases like desmoid tumors (DT).

Many databases are organized by International Classification of Diseases (ICD) codes. Diagnostic coding practices vary widely, potentially limiting the utility of database research. Prior to October 2023, no DT-specific ICD code existed.

The United States Veterans Affairs (VA) national database provides a unique opportunity for DT research due to the availability of all clinical results and pathology reports.

- What is the incidence of DT in the VA database?
- 1. What proportion of patients with DT in the VA database lack DT ICD codes? 2. What are the demographic characteristics of DT patients in the VA database cohort?

Methods

16.4 million pathology reports from 2003 and 2024 retrospectively searched within the National VA Corporate Data Warehouse

Word search "desmoid fibromatosis", "desmoid tumor", "aggressive fibromatosis"

> **520 pathology reports** 426 patients

Manual Review

Gold standard cohort (confirmed by researchers) to have true DT)

322 pathology reports **270 patients**

Diagnosis codes, demographic characteristics, and year at diagnosis abstracted

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Desmoid Tumor Cohort Creation and Characteristics in the Veterans Affairs (VA) National Database



38.1% error rate (322/520) for word search alone

Number of Patients	ICD
78	D
33	R
21	R
18	R
16	N
16	R
12	Re
11	R
10	С
10	D

Results

	Diagnostic Coding Pattern	S
D Code	ICD Description	•
48.1*	Neoplasm of uncertain behavior of connective and other soft tissue and DT-specific codes by location	
R22.2	Localized swelling, mass and lump, trunk	
R10.9	Unspecified abdominal pain	
19.00	Intra-abdominal and pelvic swelling, mass and lump, unspecified site	٠
172.4	Pseudosarcomatous fibromatosis	
19.09	Other intra-abdominal and pelvic swelling, mass and lump	
68.89	Other general symptoms and signs	
19.07	Generalized intra-abdominal and pelvic swelling, mass and lump	
249.4	Malignant neoplasm of connective and soft tissue of abdomen	
021.6	Benign neoplasm of connective and other soft tissue of trunk, unspecified	

Epidemiology and incidence

	VA DT Cohort	Historical DT Cohorts	0
Age at diagnosis, mean	56.5	20-44 ^{1, 2}	
Female sex (%)	19.3	69-74 ²	

Age at diagnosis ranged from 21.5 to 86.7 years (mean: 56.5 years ± 14.4 years) Incidence rate of DT within the VA database is approximately 3 patients per million person-years

Conclusions

• DT diagnostic coding practices vary greatly and may lead to an underrepresentation of DT within large databases and underestimates of DT incidence

• The incidence rate of DT within the VA database is consistent with previously reported incidence rates of 3-5 per million person-years, despite a predominantly male population Other methods are needed to identify patients with DT for cohort-based research. The new DT-specific ICD 10 code may facilitate future cohort-based research

References

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Appropriate ICD codes (D48.1*) absent for **71.1%** of patients (192/270)Most commonly (i.e., >=10 patients) used codes shown

verall VA National Database 58 11

