Annotations for Sorafenib Tosylate in Treating Patients With Desmoid Tumors or Aggressive Fibromatosis (A091105-Tumor-Annotations)

Summary

This dataset contains image annotations derived from the NCI Clinical Trial "Sorafenib Tosylate in Treating Patients With Desmoid Tumors or Aggressive Fibromatosis (A091105)". This dataset was generated as part of an NCI project to augment TCIA datasets with annotations that will improve their value for cancer researchers and AI developers.

Annotation Protocol

For each patient, all scans were reviewed to identify and annotate the clinically relevant time points and sequences/series. In a typical patient all available time points were annotated. The following annotation rules were followed:

1. RECIST 1.1 was otherwise generally followed for MR and CT imaging. A maximum of 5 lesions were annotated per patient scan (timepoint); no more than 2 per organ. The same 5 lesions were annotated at each time point. If the primary lesion was <1 cm it was still annotated.
2. Three-dimensional segmentations of lesions were created in the axial plane. If no axial plane was available, lesions were annotated in the coronal plane.
3. MRIs were annotated using the T1-weighted axial post contrast sequence, fat saturated if available. Occasionally, if the tumor was significantly better delineated on a STIR or T2 fat-sat sequence, it wase annotated on that sequence instead of the post contrast sequence.
4. CTs were annotated using the axial post contrast series. If not available, the non contrast series was annotated.
5. Lesions were labeled separately.
6. The volume of each annotated lesion was calculated and reported in cubic centimeters [cc] in the Annotation Metadata CSV.
7. Seed points were automatically generated, but reviewed by a radiologist.
8. A "negative" annotation was created for any exam without findings.

At each time point:

1. A seed point (kernel) was created for each segmented structure. The seed points for each segmentation are provided in a separate DICOM RTSTRUCT file.
2. SNOMED-CT "Anatomic Region Sequence" and "Segmented Property Category Code Sequence" and codes were inserted for all segmented structures.
3. "Tracking ID" and "Tracking UID" tags will be inserted for each segmented structure to enable longitudinal lesion tracking.
4. Imaging time point codes were inserted to help identify each annotation in the context of the clinical trial assessment protocol.
    a. "Clinical Trial Time Point ID" was used to encode time point type using one of the following strings as applicable: "pre-dose" or "post-chemotherapy".
    b. Content Item in "Acquisition Context Sequence" was added containing "Time Point Type" using Concept Code Sequence (0040,A168) selected from:
        i. (255235001, SCT, "Pre-dose")
        ii. (262502001, SCT, "Post-chemotherapy")

Important supplementary information and sample code

1. A spreadsheet containing key details about the annotations is available in the **Data Access** section below.
2. A Jupyter notebook demonstrating how to use the NBIA Data Retriever Command-Line Interface application and the REST API to access these data can be found in the **Additional Resources** section below.

<u>Data Access</u>
Data Access

Data Type	Download all or Query/Filter	License
A091105 Annotations - Segmentations, Seed Points, and Negative Findings Assessments (DICOM, 264 MB)	*Download Search* (Download requires NBIA Data Retriever)	CC BY 4.0
A091105 Annotation Metadata (CSV, 909 KB)	*Download*	CC BY 4.0

Click the Versions tab for more info about data releases.

Additional Resources for this Dataset

- NCTN/NCORP Data Archive provides the Clinical Data files related to these subjects, and is also where you go to request access to the entire dataset
- Jupyter notebook demonstrating how to use the NBIA Data Retriever Command-Line Interface application and REST API (with authentication) to access these data
- Instructions for Visualizing these data in 3D Slicer

Collections Used in this Third Party Analysis

Below is a list of the Collections used in these analyses:

Source Data Type	Download	License
Original A091105 Images used to create Segmentations and Seed Points (DICOM, 61.1 GB)	*Download* (Download requires NBIA Data Retriever)	NCTN/NCORP Data Archive License (Without Collaborative Agreement)
Original A091105 Images used to create Negative Assessment reports (DICOM, 6.7 GB)	*Download* (Download requires NBIA Data Retriever)	NCTN/NCORP Data Archive License (Without Collaborative Agreement)

- Sorafenib Tosylate in Treating Patients With Desmoid Tumors or Aggressive Fibromatosis (A091105)

Detailed Description

Detailed Description

Image Statistics	
Modalities	RTSTRUCT
Number of Patients	83
Number of Studies	1023
Number of Series	2445
Number of Images	2445
Images Size (GB)	0.3

Citations & Data Usage Policy

Citations & Data Usage Policy

Users must abide by the TCIA Data Usage Policy and Restrictions. Attribution should include references to the following citations:

> ⓘ **Data Citation**
>
> Rozenfeld, M., & Jordan, P. (2023). *Annotations for Sorafenib Tosylate in Treating Patients With Desmoid Tumors or Aggressive Fibromatosis (A091105-Tumor-Annotations)* (Version 1) [Data set]. The Cancer Imaging Archive. https://doi.org/10.7937/T8RN-J447

> ⓘ **TCIA Citation**
>
> Clark, K., Vendt, B., Smith, K., Freymann, J., Kirby, J., Koppel, P., Moore, S., Phillips, S., Maffitt, D., Pringle, M., Tarbox, L., & Prior, F. (2013). The Cancer Imaging Archive (TCIA): Maintaining and Operating a Public Information Repository. In Journal of Digital Imaging (Vol. 26, Issue 6, pp. 1045–1057). Springer Science and Business Media LLC. https://doi.org/10.1007/s10278-013-9622-7

Other Publications Using This Data

TCIA maintains a list of publications which leverage TCIA data. If you have a manuscript you'd like to add please contact TCIA's Helpdesk.

Versions

Version 1 (Current): Updated 2023/11/13

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