



201924 SNOMED CT Coding Molecular and Genomic Pathology Data for Precision Cancer Medicine

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Summary

Beginning in 2015, the University of Nebraska departments of pathology and internal medicine undertook a collaborative project to systematically encode the content of College of American Pathologists protocols for diagnosis of cancer addressing both anatomic and molecular pathology

Audience

Clinical, Research/academic, Technical , Research data warehouse managers Cancer specialists including pathologists and oncologists Clinical laboratory and Surgical pathology department managers and staff Audience level: advanced

Learning Objectives

1. Understand research and clinical use cases for use of coded observations in anatomic and molecular pathology
2. Appreciate challenges facing terminology development needed to codify anatomic and molecular pathology data
3. Describe the benefits/utility of coded pathology data for clinical care

Abstract

Systematically analyzing the data requirements of Cancer Protocol Templates from the College of American Pathologists (CAP), we developed extensions to SNOMED CT Observable entities, Clinical Findings, Procedures and Body Structures to capture the details of the pathologist's observations. We have further revised and tailored the workflow of the clinical pathologist in order to electronically capture this structured and coded synoptic cancer data at the time they sign out their case. Coded observations regarding the cancer specimens are interfaced from our sequence labs and cytogenetics, integrating their data into the structured synoptic report. Coded results are transmitted by an HL7 interface developed with Epic to store results in the EHR which may be used in decision support and clinical decision making.

Collaboration on content development for SNOMED CT has included not only CAP but also the Royal College of Pathologists, the Royal College of Pathologists of Australia and the International Collaboration for Cancer Research.



Terminology extensions to SNOMED CT and LOINC developed in this project have been published since 2016 with agreement of the National Library of Medicine at our website (<https://www.unmc.edu/pathology/informatics/tdc>). Based upon the request of three IHTSDO member NRCs, our terminology extensions for breast, colorectal and melanoma cancer types are undergoing quality review for promotion to the International Release of SNOMED CT.