

## **IPaLM SIG – Subgroup focused on cancer synoptic worksheet (tissue pathway) encoding**

**Background:** Cancer synoptic worksheets, checklists and tissue pathways are all terms that represent the prevailing form of structured cancer reports based on anatomic pathology (histopathology) and molecular (genetic) pathology assessments. Many national pathology societies produce and publish synoptic worksheets for use in their nations and which enumerate the clinically important data elements that should be reported by the pathologist for diagnostic purposes and prognostic use by the clinical care teams. The international community under the coordination of the International Collaboration on Cancer Reporting (ICCR) is in the process of harmonizing the data elements between national professional colleges and the medical communities to promote internationally consistent cancer reporting. As has been indicated in the academic literature and acknowledged by users of the cancer synoptic data, structured reports do not realize their full potential and clinical utility until the data elements are represented by computable, standardized clinical terminologies. To date, no international or national terminology system has been associated with cancer synoptic data elements. A computable terminology layer is necessary for systems interoperability (intramural and extramural to any health care enterprise), continuity of patient care, epidemiology and registry reporting, clinical decision support and research.

To address this gap in computable terminology, investigators at the University of NE Medical Center (UNMC) in collaboration with members of the IHTSDO community including the UKTC, CAP, US NLM and IHTSDO management began an effort to develop the necessary concept definitions for use with cancer synoptic worksheets. The effort employs the SNOMED CT observables concept model and creates an ontology of observables to support data exchange and data reuse.

UNMC maintains a full terminology authoring and testing environment for SNOMED CT including software tooling and an IHTSDO issued namespace, the Nebraska Lexicon ©, also recognized by the US NLM. Concept development and testing is done at UNMC and placed into production within the UNMC clinical enterprise. Concepts are further issued to the US NLM for review and distribution as a dependent extension of the US SNOMED CT extension.

**UNMC Scope of Work:** The scope of the terminology development project at UNMC is specific to the data elements represented in the cancer synoptic worksheets as published by the various professional pathology societies/colleges (e.g., CAP, RCP, RCPA) and the ICCR. Molecular pathology is within the scope of this project at UNMC. However, only those elements of anatomic pathology and molecular pathology that have been determined by the societies as clinically important and contained within published worksheets are to be considered at this time.

**Working Group Purpose:** The broader objective of the work underway within UNMC is to develop

SNOMED CT content for cancer reporting and international distribution. Therefore, a working subgroup of the IPaLM SIG is proposed to advise the UNMC terminology team regarding concept modeling, definition and fitness for use in other nations. Members of the working group should have experience in the field of pathology, experience in use or management of pathology data and/or terminology. It is desirable that members of interested pathology societies be represented in the working group and serve as liaisons to their communities of use. The work group will work closely with the Observables and Investigation Project team members to ensure alignment and adherence with the observables concept model.

The working group will meet twice per month via go to meeting to discuss developed and/or developing concepts. Based on published CAP cancer protocols, 82 worksheets are to be addressed as part of this working group. (Note: RCP/RCPA/ICCR protocol counts vary compared to CAP, but the content coverage is similar.) Upon completion of the content represented within the 82 CAP worksheets (and equivalent RCP/RCPA/ICCR tissue pathways), the working group meeting frequency will be reduced and/or discontinued based on concept promotion to the international core.

The anticipated duration of the working subgroup focusing on content creation is 12 to 15 months. Anatomic pathology (histopathology) worksheet data elements will form the basis of the initial work. Molecular pathology items will be incorporated as the concept model is further developed for this area. Upon project inception and launch, participants should anticipate reviewing, editing and/or advising on 3-4 synoptic worksheets very two to three weeks until all worksheet data elements are defined.

Initial content will be developed using the Nebraska Lexicon namespace, and observable concepts will be indicated by SCTID's. Ultimate representation of developed concept definitions for international distribution (i.e., LOINC code or SCTID) shall be based on IHTSDO/RII cooperative agreement terms. Ongoing content maintenance and content update processes will be determined based on formal IHTSDO project status.