The current [NAACCR Standards for Cancer Registries Volume V, Laboratory Electronic Reporting Pathology Version 5.0, May 2020 (Revised 2020)](https://www.naaccr.org/wp-content/uploads/2020/05/NAACCR-Vol-V_20200526.pdf) defines the standard message format for transmitting pathology laboratory information to central cancer registries using the HL7 Version 2.5.1 Message format. At present, the patient and specimen data flow from the clinic and electronic health record (EHR) to the pathology lab in a variety of formats (HL7 V2, CDA, etc.). While discrete data elements are captured in electronic format in most laboratory information systems (LISs), typically, synoptic cancer pathology reports then flow from the LIS to EHRs in non-discrete data formats (e.g., pdf format).

Over the past two decades, the College of American Pathologists (CAP) worked with expert pathologists from the field to develop the [electronic Cancer Checklists (eCCs)](https://www.cap.org/laboratory-improvement/proficiency-testing/cap-ecC) to standardize the collection and transmission of cancer pathology data from laboratory information systems. The use of the CAP eCCs promote the collection and transmission of structured pathology data using standard vocabulary and code sets to improve interoperability across systems.

There is a need for an electronic data exchange standard to maintain discrete cancer data when exchanging information from pathology laboratories with hospital EHRs, physician EHRs, cancer registries, and other healthcare systems to support the patient’s continuity of care, cancer reporting requirements, and research. In addition, starting in December 2022, the Centers for Medicare and Medicaid Services (CMS) and the Office of the National Coordinator for Health IT (ONC) require certified Health Information Technology (HIT) vendors to implement Fast Healthcare Interoperability Resources (FHIR)-based Application Programming Interfaces (APIs) (see [ONC’s Cure Act Final Rule](https://www.healthit.gov/curesrule/download)). In 2019, the CDC NPCR and CAP began working collaboratively with the NAACCR Volume V Task Force and Lantana Group to develop an HL7 FHIR Cancer Pathology Data Sharing Implementation Guide (IG) that is intended to assist pathology laboratory reporting to move from HL7 V2 to HL7 FHIR alignment in accordance with the ONC initiative.

The HL7 FHIR Cancer Pathology Data Sharing IG, in conjunction with the [IHE SDC/eCC on FHIR IG](https://hl7.org/fhir/uv/ihe-sdc-ecc/2022Sep/), defines standards for the exchange of laboratory cancer pathology information from a hospital or facility-based LIS to a hospital or facility-based EHR system or cancer registry system. It provides an alternative to the HL7 Version 2.5.1 message format used by NAACCR Volume V for reporting cancer pathology synoptic reports. A mapping table was developed to define where each NAACCR Volume V data element is represented in HL7 FHIR Resources. This IG will be published in September 2022 as a Standard for Trial Use 1 (STU1) that will be used to begin piloting in real-word scenarios.

[Integrating the Healthcare Enterprise (IHE) Structured Data Capture (SDC)](https://wiki.ihe.net/index.php/Structured_Data_Capture) on FHIR IG uses a form-driven workflow to capture and transmit encoded data by creating FHIR Observations. The primary use case for this is transmitting data captured in CAP eCCs, which are distributed as IHE SDC templates.

The SDC initiative was established by the ONC in 2013 to develop two implementation guides:

* [IHE SDC Technical Framework](https://wiki.ihe.net/index.php/Structured_Data_Capture)
* [HL7 FHIR SDC Implementation Guide](https://hl7.org/fhir/uv/sdc/)

On March 30, 2017, the ONC transitioned both initiatives into community led projects. Both initiatives focus on improving data capture within healthcare. The CAP selected IHE SDC for their collection of [eCCs](https://www.cap.org/laboratory-improvement/proficiency-testing/cap-ecC). This implementation guide will enable implementers to transmit eCC data in FHIR resources.

IHE SDC is deployed in several different use cases, beyond Pathology and in order to accommodate those additional use cases this IG is Universal Realm. It is expected that implementers may want to apply other standards such as US-Core to this IG in order to meet their needs. This IG is intended as guidance on how to map from the IHE SDC XML form model to FHIR.

Leveraging IHE SDC and HL7 FHIR allows for data to be shared more easily and enables improved data management and analysis as well as pre-population of data in new forms. The coding of structured data automates the interpretation and utilization of the data thereby allowing for the automation of processes and increasing efficiency and accuracy. The representation of data as a FHIR resource can remove barriers that exist between different datasets while improving interoperability and making data more useful to providers, hospitals, and cancer registries.

For registry reporting, the conversion of SDC forms to HL7 FHIR resources has the potential of enabling high-quality public health reporting through improved ease of data collection and transmission, and improved accuracy of data. Ultimately this can be used to better integrate with cancer registries for public health planning and reporting. The coding of data to a common standard helps to remove the discrepancies that may exist between different datasets which can allow registries to more easily compare and correlate data. This allows for public health decision-making that effectively combines different datasets, improves efficiency through automation, and limits errors through the removal of human interaction.

The IHE SDC/eCC on FHIR is currently being balloted by HL7 between August 12, 2022- September 12, 2022. If the ballot is successful, the IG will graduate from a Draft standard to a Standard for Trial Use 1 (STU1). As STU1, it is expected that we will begin piloting this standard and test it in more real-world use cases, instead of only synthetic ones. For more on HL7 IG publishing, please refer to the [HL7 documentation on Publishing and Balloting.](https://confluence.hl7.org/display/FHIR/FHIR+Profile+and+IG+Balloting)

