

2022 NPCR NORTH CAROLINA SUCCESS STORY

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Streamlining the Creation of Abstracts from Electronic Pathology Reports

National Program of Cancer Registries SUCCESS STORY

SUMMARY

The North Carolina Central Cancer Registry (NCCCR) creates approximately 3000 abstracts from various electronic data sources each year. These sources include pathology, death certificate, and physician office data. Most are generated from electronic pathology (ePath) reports transmitted through eMaRCPlus. The NCCCR developed a process where the review and coding of ePath reports is completed outside of eMaRCPlus and WebPlus, a crosswalk for default codes is applied, and an XML file is created that can be imported directly into PrepPlus as a complete abstract. This allows for groups of similar cases to be reviewed and coded at the same time and bypasses processing cases individually in eMaRCPlus and WebPlus.

CHALLENGE

Much of the data needed for the cancer registry abstract for ePath, death certificate, and Meaningful Use (MU) physician office data already exists in electronic form but creating the final abstract requires significant data entry to convert the data from one electronic format to the final cancer registry abstract format. While WebPlus can accept an XML formatted data file to create partial abstracts, each abstract would be completed individually, which does not significantly reduce the time needed to create the abstract. The NCCCR desired to leverage data in the incoming electronic format, and applications such as MS SQL Script, Excel, and SAS to reduce the time and effort needed to create a complete abstract.

SOLUTION

Figure 1 shows the ePath abstracting workflow from eMaRCPlus to CRSPlus. Steps such as linkage and follow-back remain the same. As these types of cases typically have minimal information, extensive coding for many data items cannot be done. The new process uses a combination of MS SQL Scripts to format pathology data from eMaRCPlus consistently each time the report is built and align it with standard cancer registry data items and codes; Excel to code data items that need manual review by a CTR; and SAS programming to apply default codes to the remaining data items and build the XML file. A crosswalk, in Excel format, is used to help build the abstract based on the type of case. The crosswalk is used by the CTR to manually apply codes for selected data items in Excel based on the primary site and histology, such as grade, behavior, and SSDI defaults. It is also used to program SAS to populate other data items that have the same code for all cases, such as radiation and systemic treatment data items. The result is a complete abstract with all required data items coded, including blank, none, unknown or special values where applicable. The XML file is then imported directly into PrepPlus where the AJCC and Schema Id's are derived. For common cases, the abstract can pass all edits in the NCCCR's full edit set. Any remaining edits and coding corrections for the less common types of cases are completed in PrepPlus. For example, the AJCC TNM Edition may be changed from code 08 to 88 on a small number of cases with an unusual site/histology combination. This workflow has proven to be more efficient than processing every case through WebPlus. The ePath workflow cycle only needs to occur once each year. This allows an entire year of pathology reports to move through each step at the same time and similar cases for the entire year to be coded as group. Overall, this reduces the time needed to create complete abstracts for many similar cases.

RESULTS

The ability to review an entire set of cases as a group leads to streamlining measures such as:

- Excel functions, such as find, can identify specific terms of interest in all cases at one time. This is extremely helpful in reviewing for reportability and evaluating coding accuracy.
- With the crosswalk, codes can be applied to all similar cases. For example, behavior, grade, LVI, SS2018, and SSDI codes can be applied to all melanoma in situ cases in one copy and paste function.
- In some instances, multiple data item values can be derived from one pathology report field. For example, the date of the pathology report can be used to populate the date of diagnosis, date of first contact, and date of last contact columns through the SAS program.
- Manually entering text into the abstract is eliminated. The only information available for text is already provided in the ePath report. Creating the text field columns and content is automated with MS SQL Scripts when the spreadsheet is built. For example, the path report number, date, and final diagnosis columns from the ePath report output are combined into a single column in Excel designated as the Place of Diagnosis text field; and the ordering facility, address and physician name columns are combined to create the Remarks text field. All information is incorporated in the text fields in some way.
- Multiple pathology reports for the same patient and tumor can be combined in Excel, eliminating the need of consolidating the data in CRSPlus.
- As the data is already in Excel, a quality review of all cases can be done before the cases are converted to NAACCR XML and loaded into CRSPlus. This eliminates having to pull the data from CRSPlus to audit it later.

SUSTAINING SUCCESS

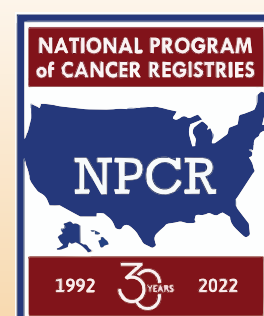
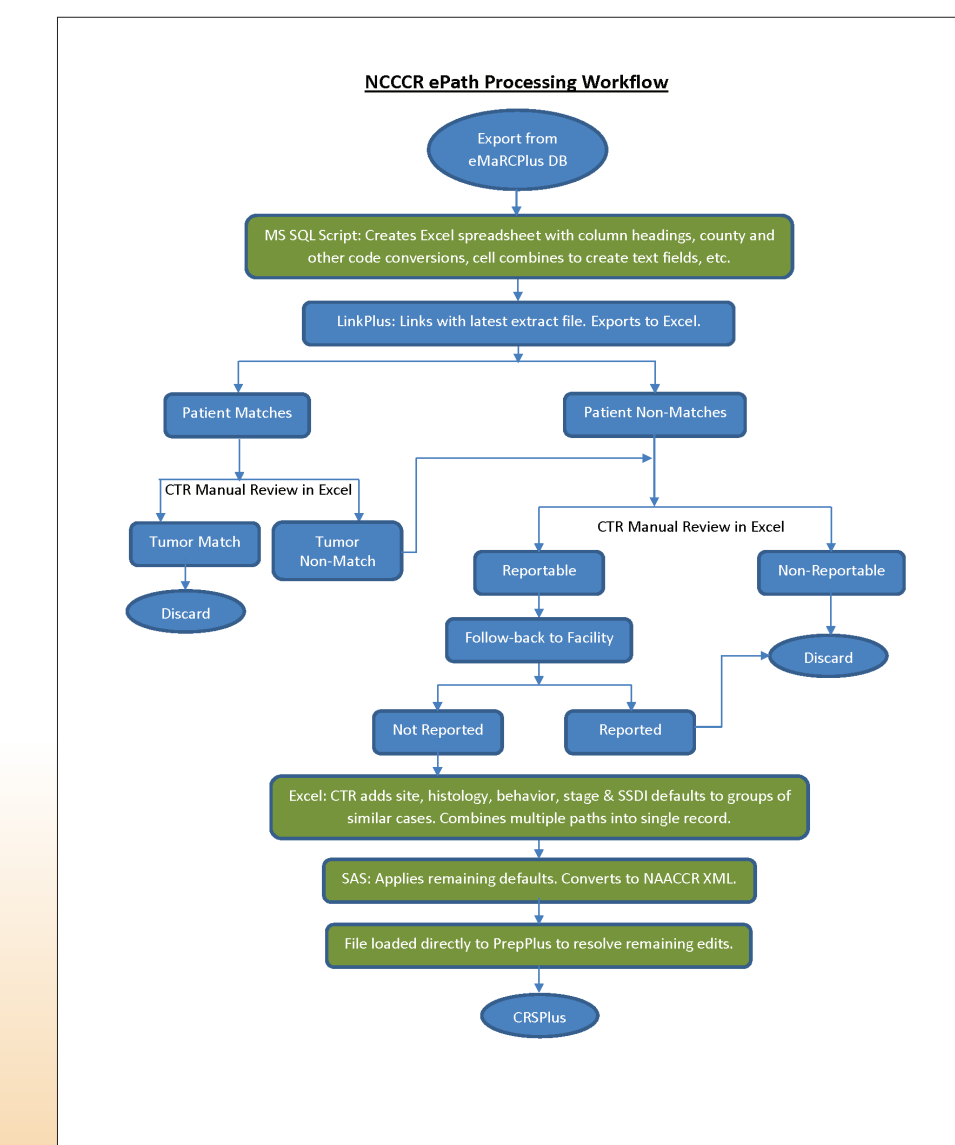
Each year, additional steps that can be automated are identified and the process continually becomes more streamlined. This process has since been applied to physician office cases reported through Meaningful Use (MU). In addition, approximately 1800 cases identified through the death clearance process are abstracted each year. Data from the state death file is used to create the initial Excel spreadsheet. Currently, the converted XML file is loaded into WebPlus so that they may be finalized or removed as follow-back is received. Modifying the timing of the follow-back process so that the abstract can be finalized in Excel and imported directly into PrepPlus is planned.

REGISTRY CONTACT INFORMATION

984-236-7400

North Carolina Central Cancer Registry

FIGURE 1



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention