



COVID-19 Abstraction Guidance

June 2020

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Revised August 10, 2020 - Updates highlighted in yellow

Background and Rationale

As the coronavirus disease 2019 (COVID-19) pandemic continues, people with compromised immune systems are at an increased risk for infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus that causes COVID-19. It is estimated that 15,760,939 people are living with cancer in the United States [1]. Incidence of COVID-19 in cancer patients has been reported to be higher than in the general population [2]. Additionally, recent studies have shown patients with cancer had higher observed death rates, higher rates of ICU admission and higher risk of complications when compared to non-cancer patients [3-9]. Radiotherapy, concurrent chemotherapy and pre-radiotherapy preparation have the option to be postponed in order to decrease the risk of infection of COVID-19 including postoperative chemotherapy. A technical report stated that 8% of cancer patients had alterations in treatment plans due to COVID-19. The 8% of patients had delays in treatment and for almost half of these patients, treatment was indefinitely delayed or stopped entirely due to confirmed COVID-19 infections. Given the small sample sizes of these studies, the COVID-19 pandemic has observable and potentially long-lasting effects on cancer outcomes. It is imperative to collect SARS-CoV-2 infection status and modifications to treatment for both incident and prevalent cases at the population-level, using the existing cancer surveillance infrastructure and standards.

Since the collection of structured (coded) information related to COVID-19 is not an option at this time, natural language processing (NLP) techniques can be used to extract valuable information from unstructured or partially structured text, that can further be automatically consolidated and integrated into current population-based cancer databases. Given the complexity of NLP and automated consolidation techniques, it is expected that national organizations such as the National Cancer Institute will develop, test and provide technical support with the implementation of such algorithms.

General Instructions for Documenting COVID-19 as Part of Regular Case Abstraction

Following the above rationale, the COVID-19 Data Abstraction Guidance document provides directions for using current NAACCR text data items and standards to collect information on cancer patients' SARS-CoV-2 laboratory tests, infection status, and delays or modifications of the treatment plan. The implementation of this guidance will take advantage of existing data items and text blocks, with minimal additional efforts for collection of COVID-19 information.

Meanwhile, the abstraction of COVID-19 information will not require changes to case ascertainment, reportability rules, list of required data items, modifications of edits metafiles, or other alterations of the current data acquisition process. In the application of directions listed in the Guidance, there is no expectation that registrars seek medical documents beyond the sources they currently use routinely for case abstraction and coding.

This document addresses the abstraction of data at the facility level. Further instructions related to the central registry data processing of text data collected in conformity with this Guidance, including automated consolidation, will be distributed by NAACCR in a subsequent document.

The current Guidance is not intended or expected to supersede current NAACCR Standards or the SEER Program Coding and Staging Manual.

[Abstracting Instructions](#)

The following directions for recording COVID-19 information in required NAACCR text data items are applicable to cases diagnosed January 1st, 2020 or later and completed on or after June 1st, 2020. At their discretion, central cancer registries may expand (move back) the application of these abstracting directions to cases completed before June 1st, 2020, and /or diagnosed before January 1st, 2020.

Information must be entered in the text fields **exactly as shown** in this document to facilitate data retrieval at a later time. Entering text in ways that vary from the format in this Guidance document could make the information useless.

This document provides instructions for entering COVID-19 information in the following eight required NAACCR text data items.

TEXT--DX PROC--LAB TESTS (NAACCR # 2550)

TEXT--REMARKS (NAACCR # 2680)

RX TEXT--SURGERY (NAACCR # 2610)

RX TEXT--RADIATION (BEAM) (NAACCR # 2620)

RX TEXT--RADIATION Other (NAACCR # 2630)

RX TEXT--CHEMO (NAACCR # 2640)

RX TEXT--HORMONE (NAACCR # 2650)

RX TEXT--BRM (NAACCR # 2660)

Appendix

The appendix at the end of these instructions includes the NAACCR standard description and NAACCR suggestions for text for each of the eight text fields for reference.

List of NAACCR Data Items relevant for the abstraction of COVID-19 related information and abstraction directions

TEXT--DX PROC--LAB TESTS (NAACCR # 2550)

COVID-19 relevant abstraction directions

Use the **TEXT--DX PROC--LAB TESTS text** field to record the interpretation and the date of SARS-CoV-2 viral testing (e.g., viral nucleic acid testing by polymerase chain reaction [PCR] or reverse-transcription PCR [RT-PCR]) and antibody testing (on serology). Serologic antibody tests are not diagnostic tests and indicate prior exposure to the virus.

Consistently use the following abstracting format.

COVID-19 [testing type: viral or antibody] [interpretation: POS, NEG] [date: mm/dd/yyyy]

1. Record separately viral nucleic acid testing from antibody testing
2. Always record the interpretation and date of the latest (most recent) positive antibody testing
3. Do **not** record tests with unknown type (viral nucleic acid vs. antibody)
4. Do **not** record tests with no interpretation or interpretation unknown
5. Record a partial date when interpretation is available and date is not fully known (month/year or year)
 - a. Do **not** approximate the date if unknown
6. Code presumptive positive SARS-CoV-2 test results as confirmed
7. Directions when **multiple** tests with interpretation are available
 - a. Record the date of the **first positive** test when multiple interpretations are available for multiple viral nucleic acid tests
 - b. Record the interpretation and date of the **last negative** test when no positive tests are available, but one or multiple negative SARS-CoV-2 viral nucleic acid or one or multiple negative antibody tests are documented

Record the last test for **both** when a negative viral nucleic acid test **and** a negative antibody test are documented for the same patient. Record the date of each negative test.

Examples of abstracting

COVID-19 viral POS 05/09/2020

COVID-19 viral NEG 03/09/2020 antibody POS 05/09/2020

COVID-19 viral NEG 03/09/2020 antibody NEG 05/09/2020

TEXT--REMARKS (NAACCR # 2680)

COVID-19 relevant abstraction directions

Record the applicable code and associated date in this text field as described below. Also record information related to cancer treatment modifications in this field.

Instructions for recording ICD diagnosis codes

1. **Code only a confirmed diagnosis** of the 2019 novel coronavirus disease (COVID-19) as **documented by a medical provider**
 - a. Record code U07.1 for a confirmed diagnosis
 - i. In this context, “confirmation” does not require documentation of the type of test performed; the provider’s documentation that the individual has COVID-19 is sufficient
 - b. In addition, record code U07.1 when the code was used for diagnosis within the facility EHR, in the hospital discharge, or as a contributing or underlying cause of death
2. Record code **U07.1** for a laboratory test confirmed patient who is asymptomatic
3. Do **not** record code U07.1 when the provider documents "suspected," "possible," "probable," or “inconclusive” any wording of a suspicion of COVID-19
4. Registrars are **not** required to record codes for acute respiratory illness associated with COVID-19 (e.g., pneumonia), exposure to COVID, screening for COVID, signs and symptoms without a definitive diagnosis
 - a. Two of the multiple types of lung injury patterns are noted – diffuse alveolar damage (DAD), which correlates with acute respiratory distress syndrome (ARDS) clinically, and the formation of blood clot(s) (thrombosis) in the lungs

Record the date of confirmed diagnosis [test date (preferred) or office visit date]. Alternatively, record the hospital admission date, or lastly, the hospital discharge date.

Example of abstracting

U07.1 05/09/2020

Instructions for recording cancer treatment information

It is always preferable to abstract information about treatment in the treatment text fields (i.e., RX Text). However, information about specific treatment modalities may not be available and the only available information is about treatment in general with no mention of a specific procedure. For this scenario, use the abstraction rules below.

Note: Record the following information for all cancer patients (when applicable) regardless of whether they have a COVID-19 diagnosis or SARS-CoV-2 test.

1. When first course of treatment was modified because of COVID-19 and no other specific details are provided in the Rx Text fields, record

FCOT CHG D/T COVID-19

[first course of treatment changed due to COVID-19]

2. When diagnosis, staging, treatment (any modality), or other cancer management events have been delayed because of limited access to facilities or postponement of non-essential procedures due to COVID-19, abstract the date of decision to postpone and the Z75.3 code

Z75.3 mm/dd/yyyy

[unavailability or inaccessibility of health care facilities]

3. The abstractor can use both FCOT and Z75.3 at the same time. This combination is required when multiple steps of cancer management (diagnosis, staging, treatment modalities) were affected by unavailability or inaccessibility of oncology care.
4. No recording is necessary when the first course of treatment was not delayed, rescheduled or otherwise modified because of the COVID pandemic.

RX TEXT--SURGERY (NAACCR # 2610)

COVID-19 relevant abstraction directions

Use the **RX TEXT--SURGERY** field to record information about surgery delays or modifications due to COVID-19

The text is intended to identify whether the timing and type of surgical treatment offered to the patient given the site/histology/stage of disease present at diagnosis was impacted because of the COVID-19 pandemic. No text is required if the first course of treatment was not delayed, rescheduled or otherwise modified. If COVID-19 impacted the timing or surgical options offered, one of five following situations is to be captured in this text field.

Note: Record the following information for all cancer patients (when applicable) regardless of whether they have a COVID-19 diagnosis or SARS-CoV-2 test.

1. Typical surgery recommended was performed but it was **delayed** due to COVID-19, record

SURG TX delayed D/T COVID-19

2. Surgical treatment was recommended before but administered **after disease progression**, record SURG TX delayed D/T COVID-19 & given as subsequent TX after progression

Note: Record surgical treatment in Second Course Rx fields if these fields are collected by the cancer registry.

3. Type of surgery offered and performed was **changed/modified** from what is typically recommended due to COVID-19 **and it was delayed**, record

SURG TX delayed & CHG D/T COVID-19

4. Type of surgery offered and performed was **changed/modified** from what is typically recommended due to COVID-19, record

SURG TX CHG D/T COVID-19

5. Surgery was **not performed** due to COVID-19, record

SURG TX DC D/T COVID-19

RX TEXT--RADIATION (BEAM) (NAACCR # 2620)

COVID-19 relevant abstraction directions

Use the **RX TEXT--RADIATION (BEAM)** field to record information about beam radiation delays, discontinuation, or modifications due to COVID-19

Note: Record the following information for all cancer patients (when applicable) regardless of whether they have a COVID-19 diagnosis or SARS-CoV-2 test.

1. When medical documentation is available to indicate that beam radiation was **discontinued/plan changed** because of COVID-19 pandemic, record

EBRT DC D/T COVID-19

or

EBRT CHG D/T COVID-19

[substitute XRT or RT for EBRT as appropriate]

2. When medical documentation is available to indicate that initiation of beam radiation planning or administration was **delayed** because of COVID-19 pandemic, record

EBRT delayed D/T COVID-19

[substitute XRT or RT for EBRT as appropriate]

3. When beam radiation was **not performed** due to COVID-19, record

EBRT DC D/T COVID-19

[substitute XRT or RT for EBRT as appropriate]

4. When radiation (beam) was recommended before but administered **after disease progression**, record

EBRT delayed D/T COVID-19 & given as subsequent TX after progression

[substitute XRT or RT for EBRT as appropriate]

RX TEXT--RADIATION Other (NAACCR # 2630)

COVID-19 relevant abstraction directions

Use the **RX TEXT--RADIATION Other** field to record information about radiation delays, discontinuation, or modifications due to COVID-19

Note: Record the following information for all cancer patients (when applicable) regardless of whether they have a COVID-19 diagnosis or SARS-CoV-2 test.

1. When medical documentation is available to indicate that brachytherapy, systemic therapy of radiation other than beam was **discontinued/plan changed** because of COVID-19 pandemic, record

RT DC D/T COVID-19

or

RT CHG D/T COVID-19

Or

ICB DC D/T COVID-19

or

ICB CHG D/T COVID-19

2. When medical documentation is available to indicate that initiation of brachytherapy, systemic therapy of radiation other than beam planning or administration was **delayed** because of COVID-19 pandemic, record

RT delayed D/T COVID-19

or

ICB delayed D/T COVID-19

3. When radiation other than beam was **not performed** due to COVID-19, record

RT DC D/T COVID-19

or

ICB DC D/T COVID-19

4. When brachytherapy, systemic therapy of radiation other than beam was recommended before but administered **after disease progression**, record

RT delayed D/T COVID-19 & given as subsequent TX after progression

or

ICB delayed D/T COVID-19 & given as subsequent TX after progression

RX TEXT--CHEMO (NAACCR # 2640)

COVID-19 relevant abstraction directions

Use the **RX TEXT--CHEMO** field to record information about chemotherapy delays, discontinuation, or modifications due to COVID-19

Note: Record the following information for all cancer patients (when applicable) regardless of whether they have a COVID-19 diagnosis or SARS-CoV-2 test.

1. When medical documentation is available to indicate that chemotherapy regimen was **discontinued or not initiated** because of COVID-19 pandemic, record

CHEMO DC D/T COVID-19

2. When medical documentation is available to indicate that chemotherapy regimen was **changed** (e.g. infusion to oral, reduction in the number of cycles, etc.) because of COVID-19 pandemic, record

CHEMO CHG D/T COVID-19

3. When medical documentation is available to indicate that initiation of chemotherapy administration was **delayed** because of COVID-19 pandemic, record

CHEMO delayed D/T COVID-19

4. When chemotherapy was recommended before but administered **after disease progression**, record

CHEMO delayed D/T COVID-19 & given as subsequent TX after progression

RX TEXT--HORMONE (NAACCR # 2650)

COVID-19 relevant abstraction directions

Use the **RX TEXT--HORMONE** field to record information about hormone therapy delays, discontinuation, or modifications due to COVID-19

Note: Record the following information for all cancer patients (when applicable) regardless of whether they have a COVID-19 diagnosis or SARS-CoV-2 test.

1. When medical documentation is available to indicate that hormone administration was **discontinued or not initiated** because of COVID-19 pandemic, record

HORMONE DC D/T COVID-19

2. When medical documentation is available to indicate that hormone prescription was **changed** because of COVID-19 pandemic, record

HORMONE CHG D/T COVID-19

3. When medical documentation is available to indicate that initiation of hormone administration was **delayed** because of COVID-19 pandemic, record

HORMONE delayed D/T COVID-19

4. When hormonal therapy was recommended before but administered **after disease progression**, record

HORMONE delayed D/T COVID-19 & given as subsequent TX after progression

RX TEXT--BRM (NAACCR # 2660)

COVID-19 relevant abstraction directions

Use the **RX TEXT--BRM** field to record information about BRM or immunotherapy delays, discontinuation, or modifications due to COVID-19.

Note: Record the following information for all cancer patients (when applicable) regardless of whether they have a COVID-19 diagnosis or SARS-CoV-2 test.

1. When medical documentation is available to indicate that immunotherapy (or bone marrow/stem cell transplant) administration was **discontinued or not initiated** because of COVID-19 pandemic, record

BRM DC D/T COVID-19

or

BMT DC D/T COVID-19

2. When medical documentation is available to indicate that immunotherapy administration was **changed** (i.e. reduction in the number of cycles) because of COVID-19 pandemic, record

BRM CHG D/T COVID-19

3. When medical documentation is available to indicate that initiation of immunotherapy administration (or the bone marrow/stem cell transplant) was **delayed** because of COVID-19 pandemic. record

BRM delayed D/T COVID-19

or

BMT delayed D/T COVID-19

4. When immunotherapy was recommended before but administered **after disease progression**, record

BRM delayed D/T COVID-19 & given as subsequent TX after progression

References

1. National Cancer Institute: Surveillance, Epidemiology, and End Results Program. <https://seer.cancer.gov/>
2. Yang F, Shi S, Zhu J, Shi J, Dai K, Chen X. Clinical characteristics and outcomes of cancer patients with COVID-19. *J Med Virol*. Published online May 5, 2020;jmv.25972. doi:[10.1002/jmv.25972](https://doi.org/10.1002/jmv.25972)
3. Liang W, Guan W, Chen R, et al. Cancer patients in SARS-CoV-2 infection: a nationwide analysis in China. *The Lancet Oncology*. 2020;21(3):335-337. doi:[10.1016/S1470-2045\(20\)30096-6](https://doi.org/10.1016/S1470-2045(20)30096-6)
4. Desai A, Sachdeva S, Parekh T, Desai R. COVID-19 and Cancer: Lessons From a Pooled Meta-Analysis. *JCO Global Oncology*. 2020;(6):557-559. doi:[10.1200/GO.20.00097](https://doi.org/10.1200/GO.20.00097)
5. He W, Chen L, Chen L, et al. COVID-19 in persons with haematological cancers. *Leukemia*. Published online April 24, 2020. doi:[10.1038/s41375-020-0836-7](https://doi.org/10.1038/s41375-020-0836-7)
6. Mei H, Dong X, Wang Y, Tang L, Hu Y. Managing patients with cancer during the COVID-19 pandemic: frontline experience from Wuhan. *The Lancet*. 2020;21:634-636.
7. Martín-Moro F, Marquet J, Piris M, et al. Survival study of hospitalized patients with concurrent Covid-19 and haematological malignancies. *Br J Haematol*. Published online May 7, 2020;bjh.16801. doi:[10.1111/bjh.16801](https://doi.org/10.1111/bjh.16801)
8. Trapani D, Marra A, Curigliano G. The experience on coronavirus disease 2019 and cancer from an oncology hub institution in Milan, Lombardy Region. *European Journal of Cancer*. 2020;132:199-206. doi:[10.1016/j.ejca.2020.04.017](https://doi.org/10.1016/j.ejca.2020.04.017)
9. Press RH, Hasan S, Chhabra AM, Choi JI, Simone CB. Quantifying the Impact of COVID-19 on Cancer Patients: A Technical Report of Patient Experience During the COVID-19 Pandemic at a High-volume Radiation Oncology Proton Center in New York City. *Cureus*. Published online April 28, 2020. doi:[10.7759/cureus.7873](https://doi.org/10.7759/cureus.7873)

Appendix

NAACCR description and NAACCR suggestions for text for the fields in these instructions.

TEXT--DX PROC--LAB TESTS (NAACCR # 2550)

NAACCR Description

Text area for manual documentation of information from laboratory examinations other than cytology or histopathology.

NAACCR Suggestions for text

- Type of laboratory test/tissue specimen(s)
- Record both positive and negative findings. Record positive test results first.
- Information can include tumor markers, serum and urine electrophoresis, special studies, etc.
- Date(s) of laboratory test(s)

TEXT--REMARKS (NAACCR # 2680)

NAACCR Description

Text area for information that is given only in coded form elsewhere or for which the abstract provides no other place. Overflow data can also be placed here. Problematic coding issues can also be discussed in this section.

NAACCR Suggestions for text

- Smoking history
- Family and personal history of cancer
- Comorbidities
- Information on sequence numbers if a person was diagnosed with another primary out-of-state or before the registry's reference date
- Place of birth
- Justification of over-ride flags
- Information clarifying anything unusual such as reason for reporting a case seemingly not reportable for that facility or reason for coding numerous fields as "unknown."

RX TEXT--SURGERY (NAACCR # 2610)

NAACCR Description

Text area for information describing all surgical procedures performed as part of treatment.

NAACCR Suggestions for text

- Date of each procedure.

- Type(s) of surgical procedure(s), including excisional biopsies and surgery to other and distant sites.
- Lymph nodes removed.
- Regional tissues removed.
- Metastatic sites.
- Facility where each procedure was performed.
- Record positive and negative findings. Record positive findings first.
- Other treatment information, reason standard surgical procedure recommended was delayed, e.g., planned procedure aborted; unknown if surgery performed.

RX TEXT--RADIATION (BEAM) (NAACCR # 2620)

NAACCR Description

Text area for manual documentation of information regarding treatment of the tumor being reported with beam radiation.

NAACCR Suggestions for text

- Date radiation treatment began
- Where treatment was given, e.g., at this facility, at another facility
- Type(s) of beam radiation, e.g., Orthovoltage, Cobalt 60, MV X-rays, Electrons, Mixed modalities
- Other treatment information, e.g., patient discontinued after 5 treatments; unknown if radiation was given

RX TEXT--RADIATION Other (NAACCR # 2630)

NAACCR Description

Text area for manual documentation of information regarding treatment of the tumor being reported with radiation other than beam radiation. This includes brachytherapy and systemic radiation therapy.

NAACCR Suggestions for text

- Date treatment was started
- Where treatment was given, e.g., at this facility, at another facility
- Type(s) of nonbeam radiation, e.g., High Dose rate brachytherapy, seed implant, Radioisotopes (I-131)
- Other treatment information, e.g., unknown if radiation was given

RX TEXT--CHEMO (NAACCR # 2640)

NAACCR Description

Text area for manual documentation of information regarding chemotherapy treatment of the reported tumor.

NAACCR Suggestions for text

- Date chemotherapy began
- Where treatment was given, e.g., at this facility, at another facility
- Type of chemotherapy, e.g., name of agent(s) or protocol
- Other treatment information, e.g., treatment cycle incomplete, unknown if chemotherapy was given

RX TEXT--HORMONE (NAACCR # 2640)

NAACCR Description

Text area for manual documentation of information regarding hormonal treatment.

NAACCR Suggestions for text

- Date treatment was started
- Where treatment was given, e.g., at this facility, at another facility
- Type of hormone or antihormone, e.g., Tamoxifen
- Type of endocrine surgery or radiation, e.g., orchiectomy
- Other treatment information, e.g., treatment cycle incomplete; unknown if hormones were given

RX TEXT--BRM (NAACCR # 2640)

NAACCR Description

Text area for manual documentation of information regarding the treatment of the tumor being reported with biological response modifiers or immunotherapy.

NAACCR Suggestions for text

- Date treatment began
- Where treatment was given, e.g., at this facility, at another facility
- Type of BRM agent, e.g., Interferon, BCG
- BRM procedures, e.g., bone marrow transplant, stem cell transplant
- Other treatment information, e.g., treatment cycle incomplete; unknown if BRM was given