Fielding the CAHPS® Cancer Care Survey

Figures

Documents Available for the CAHPS Cancer Care Survey

This document is part of a set of instructional materials that address implementing the Cancer Care Survey, analyzing the data, and reporting the results. All documents are available on the Agency for Healthcare Research and Quality's Web site. For assistance in accessing these documents, please contact the CAHPS Help Line at 800-492-9261 or cahps1@westat.com.

For descriptions of these documents, refer to ***What's Available for the CAHPS Cancer Care Survey.***

Available for the Cancer Care Survey:

Questionnaires

- ***CAHPS Cancer Care Survey*** (English and Spanish)
  - ***Radiation Therapy Survey***
  - ***Drug Therapy Survey***
  - ***Cancer Surgery Survey***

Supplemental Items

- ***Supplemental Items for the CAHPS Cancer Care Survey***

Survey Administration Guidelines

- ***Preparing a Questionnaire Using the CAHPS Cancer Care Survey***
- ***Fielding the CAHPS Cancer Care Survey***
- ***Sample Notification Letters and Emails for the CAHPS Cancer Care Survey***

Reporting Measures and Guidelines

- ***Patient Experience Measures from the CAHPS Cancer Care Survey***

Available for all CAHPS surveys:

- Analyzing CAHPS Survey Data: Free programs for analyzing the data, guidance on preparing survey results for analysis, and instructions for using the CAHPS Analysis Program.
- Translating Surveys and Other Materials: Guidelines for translating surveys and selecting translators and translation reviewers.

Introduction

This document explains how to field the CAHPS Cancer Care Survey and gather the data needed for analysis and reporting. It provides instructions and advice related to the following topics:

- Constructing the sampling frame.
- Choosing the sample.
- Maintaining confidentiality.
- Collecting the data.
- Tracking returned questionnaires.
- Calculating the response rate.

Results from the CAHPS Cancer Care Survey can be analyzed and reported by treatment modality (e.g., results for the medical oncology team) or for the cancer center, including all treatment modalities. It is important to consider how you plan to use the survey results as you read through the following instructions.

Figure 1. Summary of Key Recommendations for Administering a Cancer Care Survey

Administration	To generate the standardized data necessary for valid comparisons, the survey should be conducted by a third-party vendor according to the CAHPS guidelines specified in this document.
Sampling frame	Adult (18 and over); visited a cancer center for treatment in the past 6 months.
Collection mode	Mail only, mail-telephone mixed mode, or Web-mail mixed mode
Sample size	The sample needs to be large enough to yield— • 200 completed questionnaires for each treatment modality (radiation oncology, medical oncology, surgery) if analyzing/reporting results by modality; or • 200 completed questionnaires for the cancer center if analyzing/reporting results at the facility level.
Target response rate	40 percent

Sampling Guidelines

These sampling guidelines indicate who is eligible to be included in the sample frame for a CAHPS Cancer Care Survey. They also explain how to select a sample. By following these guidelines, you can be confident that your results will be comparable to those produced by other vendors and survey sponsors (organizations that fund or oversee the administration of the survey).

Eligibility Guidelines for the Sample Frames

The target population for the CAHPS Cancer Care Survey is defined as adult patients receiving radiation therapy, drug therapy (i.e., medical oncology), or surgery for cancer for any purpose (curative or palliative) at any time in the cancer care continuum (new and recurrent disease, first line or nth line of therapy) in any treatment setting (inpatient and outpatient). While patients may receive care from multiple providers, both the survey and the cover letter that accompanies it direct respondents to think only about the provider from which they were sampled for the survey when answering the questions.

If you plan to report results at the level of the treatment modality, the sample frame should include only patients who received that kind of treatment. Detailed algorithms for identifying those patients are provided below. If you are reporting at the level of the cancer center, all patients who meet the inclusion criteria should be combined into one single sample frame from which they are selected for the sample.

Specific eligibility criteria for the Cancer Care Survey are listed below:

Inclusion criteria

- 18 years of age or older at the time of sample selection.
- Received radiation therapy, drug therapy, or surgery for cancer at the specified cancer center within the past 6 months. Patients could have been receiving treatment for any length of time, provided some treatment was received at that cancer center during the 6 months prior to being included in the sample frame. Please refer to algorithms below.
- All stages (including *in situ,* except where noted below) and all cancer types (except squamous and basal cell carcinoma).

Exclusion criteria

- Received only a diagnosis but no treatment, a second opinion, follow-up care, or hospice care at the specified cancer center
- Breast carcinoma *in situ* (all treatment modalities), cervical carcinoma *in situ* (surgery treatment modality)

Figure 2. Sample Frame Elements

The sample frame that a survey sponsor provides to the vendor should include the following information (data elements):

- Unique patient ID or medical record number (use the medical record number only if necessary for deduplication within and across the sample frames)
- Name of person (first and last)
- Date of birth
- Gender
- Complete address (full street address, city, state, and ZIP Code)
- Telephone number with area code (if available)
- Email address (if available)
- Indication that non-English-language materials are required (if known)
- Name and unique ID of site where patient was seen
- Name and unique ID of medical group (optional)
- Name and unique ID of provider seen (optional)
- Type of treatment for which the patient was sampled (radiation therapy, drug therapy, surgery)

Data Sources and Algorithms for the Sampling Frames

The CAHPS team recommends the use of billing data to identify patients for the sampling frame because these data are consistently available across most cancer care providers:[1]

- ICD-10 CM diagnostic codes for malignant neoplasms[2]
- ICD-10 PCS procedure codes for inpatient facility billing data[2]
- Current Procedural Terminology (CPT) codes for Professional and Outpatient facility billing data
- Other administrative data that should be readily available in different care settings.

This section describes three separate algorithms that use different codes to identify patients who received a cancer treatment – radiation therapy, drug therapy, or cancer surgery – anytime in the 6 months prior to being sampled.

[1] The survey developers recognize that not all cancer care providers can rely on billing data. Health Maintenance Organizations (HMOs), for example, may not "bill" their members for each chemotherapy or radiation therapy administration encounter using procedure codes. These types of cancer care providers have to develop their own tailored sampling approach using available data sources that exactly or closely mimics the recommended standardized sampling methodology based on billing data.

[2] Because the field tests of the Cancer Care Survey were conducted with ICD-9 codes prior to the implementation of ICD-10, the ICD-10 codes provided in this document have not been tested in the field.

Number of encounters: For radiation oncology and medical oncology in outpatient settings, the sampling criteria include two or more encounters in the prior 6 months. The purpose of this criterion is to ensure that patients have had sufficient exposure to their cancer team to reliably answer frequency questions. Specifically, many of the questions ask, "In the last 6 months, how often did your cancer therapy team" do something or behave in a way that is indicative of high-quality care. If patients had only one visit in the last 6 months, it would be difficult to interpret their responses to this type of frequency question.

Confirming eligibility: All three sampling algorithms have been modified since the second field test to incorporate lessons learned and to address changes in codes. Before selecting a sample to send to the vendor, the CAHPS team recommends confirming that the individuals in the sampling frame are in fact eligible to receive the survey. This can be done by reviewing the records of all individuals or a random subset of the sampling frame. Specifically, the review should confirm that the identified individuals (1) have a diagnosis of cancer and (2) received radiation, drug, or surgical treatment for cancer in the past 6 months.

Why Tumor Registries Are Not Recommended as Sampling Frames

Local tumor registries are not suitable sampling frames for several reasons:

- Tumor registries are limited to patients who are newly diagnosed or receiving a first course of treatment at the reporting facility. Using a tumor registry for the sampling frame would exclude patients who have recurrent cases or are receiving a subsequent line of treatment.
- Most tumor registries have a 6-month or longer delay in reporting cases. This delay means that some patients in the registry would not meet the eligibility criterion related to receiving care in the previous 6 months.
- Tumor registries are not available in all communities where cancer centers might want to use the survey.

Sampling Frame Algorithm for Radiation Therapy

The recommended algorithm to create a sampling frame for the Radiation Therapy Survey depends on the source of billing data: professional and outpatient facility or inpatient facility.

Source of Billing Data: Professional and Outpatient Facility

A person would be eligible to receive the Radiation Therapy Survey if the following three criteria were met in the 6 months prior to being sampled:[3]

1. The person has a primary ICD-10 CM diagnosis of any malignant neoplasms (C00-D09.9, excluding D05- carcinoma *in situ* of the breast; Figure 3),

   or

   The person has a primary ICD-10 CM diagnosis of Z51.0 (Encounter for antineoplastic radiation therapy; Figure 6) AND an ICD-10 CM diagnosis of malignant neoplasm (Figure 3) in any secondary diagnosis field,

   and

2. The diagnoses in criterion (1) were associated with (i.e., on the same billing line) any of the following radiation therapy CPT administration procedures (Figure 4):[4]

   77371, 77372, 77373, 77385, 77386, 77387, 77401, 77402, 77407, 77412, 77422, 77423, 77424, 77425, 77520, 77523, 77767, 77768, 77770, 77771, 77772, 77790, 77799,

   and

3. (a) If place of service is **not** an inpatient hospital, the person met criteria (1) and (2) on two or more separate dates.

   (b) If place of service **is** an inpatient hospital, the date of discharge is before the sample date.

Note regarding criterion (2): Radiation therapy can be administered for non-malignant conditions, such as benign tumors. This algorithm requires a radiation administration procedure code to be associated with a malignant neoplasm diagnosis code to help to prevent the inclusion of those patients.

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[3] The use of separate criteria for radiation therapy administered in an inpatient setting (i.e., one admission, date of discharge prior to sampling) versus an outpatient setting (i.e., two or more encounters) grew out of the experiences of field test participants but was not tested in the field.

[4] The recommended algorithm and the list of CPT codes in Figure 4 differ from what was tested in the second field test. First, a review of the radiation therapy CPT codes after the second field test identified codes that were related to treatment planning but not radiation therapy delivery; those codes were removed. Second, some codes for management were removed because, on their own, they do not indicate that radiation therapy was delivered. Finally, two additional CPT codes created in 2016 were added to this algorithm.

Notes regarding criterion (3b): Due to the intensity of care in the inpatient setting, one admission for antineoplastic radiation therapy should provide sufficient exposure to the cancer care team for patients to reliably answer frequency questions; thus, it is not necessary to apply the criterion (3a) to cancer patients who receive treatment in inpatient hospitals.

For inpatients identified in the professional billing data, the date of service will be listed but not the date of discharge. Sponsors should make some effort to use other information available to them to minimize the risk of sampling someone who has not been discharged. It may also be necessary to determine the discharge date to avoid overlap with CAHPS surveys mandated by the Centers for Medicare & Medicaid Services (CMS), as noted on page 19.

Source of Billing Data: Inpatient Facility

A person would be eligible to receive the Radiation Therapy Survey if the following three criteria were met in the 6 months prior to being sampled:[5]

1. The person has a primary ICD-10 CM diagnosis of Z51.0 (Encounter for antineoplastic radiation therapy; Figure 6),

   and

2. an ICD-10 CM diagnosis of malignant neoplasm (Figure 3) in any secondary diagnosis field for the same admission.

   and

3. the date of discharge is before the sample date.

The algorithm for inpatient facility billing data is limited to a principal diagnosis of Z51.0 to identify patients for whom the receipt of cancer treatment was the purpose of the hospitalization. Patients may receive radiation therapy in an inpatient setting under many scenarios. For example, a person who is receiving radiation therapy in an outpatient setting could be hospitalized for another purpose unrelated to cancer (e.g., a hip fracture). The patient may receive radiation therapy while in the hospital to maintain fidelity to his cancer treatment regimen. It is not likely that this patient would consider the clinicians providing radiation therapy during a hospitalization for another purpose as his "radiation therapy team." Furthermore, the accountability and actionability of survey scores for this patient may be difficult to interpret. For that reason, this sampling approach does not select individuals who received radiation therapy while hospitalized for some other purpose.

[5] The use of inpatient facility billing data to sample patients for the Radiation Therapy Survey grew out of the experiences of field test participants but was not tested in the field.

Sampling Frame Algorithm for Drug Therapy

The recommended algorithm to create a sampling frame for the Drug Therapy Survey depends on the source of billing data: professional and outpatient facility or inpatient facility.

Source of Billing Data: Professional and Outpatient Facility

A patient is considered eligible to receive the Drug Therapy Survey if the following criteria were met in the 6 months prior to being sampled:[6]

1. The patient has a primary ICD-10 CM diagnosis of any malignant neoplasm (C00-D09.9, excluding D05 – carcinoma *in situ* of the breast; Figure 3),

   or

   The person has a primary ICD-10 CM diagnosis of Z51.11 (Encounter for antineoplastic chemotherapy) OR Z51.12 (Encounter for antineoplastic immunotherapy) (Figure 6) AND an ICD-10 diagnosis of malignant neoplasm (Figure 3) in any secondary diagnosis field,

   and

2. The diagnoses in criterion (1) were associated with (i.e., on the same billing line) any of the following chemotherapy administration CPT procedures (Figure 5):

   96401, 96402, 96405, 96406, 96409, 96411, 96413, 96415, 96416, 96417, 96420, 96422, 96423, 96425, 96440, 96446, 96450, 96521, 96522, 96542, 96549, Q0083, Q0084, Q0085, 51720

   and

3. (a) If place of service **is not** an inpatient hospital, the person met both criteria (1) and (2) on two or more separate dates.

   (b) If place of service **is** an inpatient hospital, the date of discharge is before the sample date.

Note regarding criterion (2): Some cancer drugs can be administered for non-oncology treatment, such as autoimmune diseases. This algorithm requires a chemotherapy or immunotherapy administration procedure code to be associated with a malignant neoplasm diagnosis code to help to prevent the inclusion of those patients.

Notes regarding criterion (3b): Due to the intensity of care in the inpatient setting, one admission for antineoplastic therapy should provide sufficient exposure to the cancer care team for patients to reliably answer frequency questions; thus, it is not

[6] The use of separate criteria for cancer drug therapy administered in an inpatient setting (i.e., one admission, date of discharge prior to sampling) versus an outpatient setting (i.e., two or more encounters) grew out of the experiences of field test participants but was not tested in the field.

necessary to apply the criterion (3)(a) to cancer patients who receive treatment in inpatient hospitals.

For inpatients identified in the professional billing data, the date of service will be listed but not the date of discharge. Sponsors should make some effort to use other information available to them to minimize the risk of sampling someone who has not been discharged. It may also be necessary to determine the discharge date to avoid overlap with CAHPS surveys mandated by the Centers for Medicare & Medicaid Services (CMS), as noted on page 19.

Source of Billing Data: Inpatient Facility

A person would be eligible to receive the Drug Therapy Survey if the following criteria were met in the 6 months prior to being sampled:[7]

1. The person has a primary ICD-10 CM diagnosis of Z51.11 (Encounter for antineoplastic chemotherapy) or Z51.12 (Encounter for antineoplastic immunotherapy) (Figure 6),

   and

2. The person has an ICD-10 CM diagnosis of malignant neoplasm (Figure 3) in any secondary diagnosis field for the same admission,

   and

3. the discharge date is before the sample date.

The algorithm for inpatient facility billing data is limited to primary diagnoses of Z51.11and Z51.12 to identify patients for whom the receipt of cancer treatment was the purpose of the hospitalization. Patients may receive chemotherapy or immunotherapy in an inpatient setting under many scenarios. For example, a person who is receiving chemotherapy in an outpatient setting could be hospitalized for another purpose unrelated to cancer (e.g., a hip fracture). The patient may receive chemotherapy while in the hospital to maintain fidelity to his cancer treatment regimen. It is not likely that this patient would regard the clinicians providing chemotherapy during this hospitalization as his "drug therapy team." Furthermore, the accountability and actionability of the survey scores for this patient may be difficult to interpret. Therefore, this sampling approach does not select individuals who received chemotherapy or immunotherapy while hospitalized for some other purpose.

[7] This algorithm for sampling patients receiving drug therapy in an inpatient setting was not tested as part of the field test because none of the participating sites used inpatient facility billing data to select patients for the Drug Therapy Survey.

Figure 3. Malignant Neoplasm: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C00-C14	Lip, oral cavity, and pharynx
C15-C26	Digestive organs
C30-C39	Respiratory and intrathoracic organs
C40-C41	Bone and articular cartilage
C43, C44	Melanoma and other neoplasms of the skin
C45-C49	Connective and soft tissue
C50	Breast
C51-C58	Female genital organs
C60-C63	Male genital organs
C64-C68	Urinary tract
C69-C72	Eye, brain, other parts of central nervous system
C73-C75	Thyroid and other endocrine glands
C4A, C7A	Neuroendocrine tumors
C76-C80	Ill-defined, other secondary and unspecified sites
C81-C96	Lymphoid, hematopoietic and related tissue
D00-D04.9, D06-D09.9, excludes D05, carcinoma *in situ* of the breast	Carcinoma in situ

Figure 4. Radiation Therapy Administration Procedures: CPT Codes and Descriptions

CPT Code	Description
77371	Radiation treatment delivery, stereotactic radiosurgery (SRS), complete course of treatment of cranial lesion(s) consisting of 1 session; multi-source Cobalt 60 based
77372	Radiation treatment delivery, stereotactic radiosurgery (SRS), complete course of treatment of cranial lesion(s) consisting of 1 session; linear accelerator based
77373	Stereotactic body radiation therapy, treatment delivery, per fraction to 1 or more lesions, including image guidance, entire course not to exceed 5 fractions
77385	Intensity modulated radiation treatment delivery (IMRT), includes guidance and tracking, when performed; simple
77386	Intensity modulated radiation treatment delivery (IMRT), includes guidance and tracking, when performed; complex
77387	Guidance for localization of target volume for delivery of radiation treatment delivery, includes intrafraction tracking, when performed
77401	Radiation treatment delivery, superficial and/or ortho voltage
77402	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks; up to 5 MeV
77407	Radiation treatment delivery, 2 separate treatment areas, 3 or more ports on a single treatment area, use of multiple blocks; up to 5 MeV
77412	Radiation treatment delivery, 3 or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; up to 5 MeV
77422	High energy neutron radiation treatment delivery; single treatment area using a single port or parallel-opposed ports with no blocks or simple blocking
77423	High energy neutron radiation treatment delivery; 1 or more isocenter(s) with coplanar or non-coplanar geometry with blocking and/or wedge, and/or compensator(s)
77424	Intraoperative radiation treatment delivery, x-ray, single treatment session
77425	Intraoperative radiation treatment delivery, electrons, single treatment session

CPT Code	Description
77520	Proton treatment delivery; simple, without compensation
77523	Proton treatment delivery; intermediate
77767	Remote afterloading high dose rate radionuclide skin surface brachytherapy, includes basic dosimetry, when performed; lesion diameter up to 2.0 cm or 1 channel
77768	Remote afterloading high dose radionuclide skin surface brachytherapy, includes basic dosimetry, when performed; lesion diameter over 2.0 cm and 2 or more channels, or multiple lesions
77770	Remote afterloading high dose rate radionuclide brachytherapy; 1 channel
77771	Remote afterloading high dose rate radionuclide brachytherapy; 2-12 channels
77772	Remote afterloading high dose rate radionuclide brachytherapy; over 12 channels
77790	Supervision, handling, loading of radiation source
77799	Unlisted procedure, clinical brachytherapy

Figure 5. Chemotherapy Administration Procedures: CPT Codes and Descriptions

CPT Code	Description
96401	Chemotherapy administration, subcutaneous or intramuscular; non-hormonal anti-neoplastic
96402	Chemotherapy administration, subcutaneous or intramuscular; hormonal anti-neoplastic
96405	Chemotherapy administration; intralesional, up to and including 7 lesions
96406	Chemotherapy administration; intralesional, more than 7 lesions
96409	Chemotherapy administration; intravenous, push technique, single or initial substance/drug
96411	Chemotherapy administration; intravenous, push technique, each additional substance/drug (List separately in addition to code for primary procedure)
96413	Chemotherapy administration, intravenous infusion technique; up to 1 hour, single or initial substance/drug

CPT Code	Description
96415	Chemotherapy administration, intravenous infusion technique; each additional hour (List separately in addition to code for primary procedure)
96416	Chemotherapy administration, intravenous infusion technique; initiation of prolonged chemotherapy infusion (more than 8 hours), requiring use of a portable or implantable pump
96417	Chemotherapy administration, intravenous infusion technique; each additional sequential infusion (different substance/drug), up to 1 hour (List separately in addition to code for primary procedure)
96420	Chemotherapy administration, intra-arterial; push technique
96422	Chemotherapy administration, intra-arterial; infusion technique, up to 1 hour
96423	Chemotherapy administration, intra-arterial; infusion technique, each additional hour (List separately in addition to code for primary procedure)
96425	Chemotherapy administration, intra-arterial; infusion technique, initiation of prolonged infusion (more than 8 hours), requiring the use of a portable or implantable pump
96440	Chemotherapy administration into pleural cavity, requiring and including thoracentesis
96446	Chemotherapy administration into the peritoneal cavity via indwelling port or catheter
96450	Chemotherapy administration, into CNS (e.g., intrathecal), requiring and including spinal puncture
96521	refilling and maintenance of portable pump
96522	Refilling and maintenance of implantable pump or reservoir for drug delivery, systemic (e.g., intravenous, intra-arterial)
96542	Chemotherapy injection, subarachnoid or intraventricular via subcutaneous reservoir, single or multiple agents
96549	Unlisted chemotherapy procedure
Q0083	Chemotherapy administration by other than infusion technique only (e.g., subcutaneous, intramuscular, push), per visit
Q0084	Chemotherapy administration by infusion technique only, per visit

CPT Code	Description
Q0085	Chemotherapy administration by both infusion technique and other technique(s) (e.g., subcutaneous, intramuscular, push), per visit
51720	BCG (bacillus Calmette-Guerin) administration for bladder cancer

Figure 6. Antineoplastic Therapy: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
Z51.0	Encounter for antineoplastic radiation therapy
Z51.11	Encounter for antineoplastic chemotherapy
Z51.12	Encounter for antineoplastic immunotherapy

Sampling Frame Algorithm for Cancer Surgery

In contrast to the algorithms for radiation and drug therapy, the algorithm for sampling patients for the Cancer Surgery Survey is organized by cancer type (i.e., body part) and by source of billing data. The 14 cancer types included in the algorithm are bladder, breast, brain, cervical, colon, endometrial (uterine), esophagus, lung, liver, ovarian, pancreas, prostate, rectal, and stomach;[8] this list includes 8 of the 12 most common solid tumor types for both males and females.[9] Cancer types that are not represented in the cancer surgery sampling frame include kidney, melanoma, head and neck, and thyroid as well as secondary malignancies.

This section summarizes the recommended algorithm for identifying eligible patients for the Cancer Surgery Survey. **Appendix C** provides the specific sampling frame algorithm and codes for each of the 14 cancer types.

Source of Billing Data: Professional and Outpatient Facility

A person would be eligible to receive the Cancer Surgery Survey if the following three criteria were met in the 6 months prior to being sampled:

1. The person has a primary ICD-10 CM diagnosis of a malignant neoplasm for a specific body part,

   and

[8] These 14 cancer types were included because lists of procedure codes that could be used to sample patients using billing data existed at the time of the second field test.

[9] American Cancer Society. *Cancer Facts & Figures 2017.* Atlanta, GA. 2014.

2. the diagnosis in criterion (1) was associated with (i.e., on the same billing line) a CPT procedure code indicating the removal of all or a portion of that body part,

   and

3. if place of service is an inpatient hospital, the date of discharge is before the sample date.

Note regarding criterion (3): For inpatients identified in the professional billing data, the date of service will be listed but not the date of discharge. Sponsors should make some effort to use other information available to them to minimize the risk of sampling someone who has not been discharged. It may also be necessary to determine the discharge date to avoid overlap with CAHPS surveys mandated by the Centers for Medicare & Medicaid Services (CMS), as noted on page 19.

Source of Billing Data: Inpatient Facility

A person would be eligible to receive the Cancer Surgery Survey if the following three criteria were met in the 6 months prior to being sampled:[10]

1. The person has a primary ICD-10 CM diagnosis of a malignant neoplasm for a specific body part,

   and

2. the diagnosis in criterion (1) was associated with (i.e., on the same billing line) an ICD-10 PCS procedure code indicating the removal of all or a portion of that body part,

   and

3. the discharge date is before the sample date.

Selecting a Sample from the Sampling Frame

The sample size required for the Cancer Care Survey depends on which treatment modalities are provided at the cancer center and the level at which the results will be reported.

Calculating the Starting Sample Size

To ensure the statistical reliability of results for the Cancer Care Survey, you will need to sample enough patients to obtain a minimum of 200 completed questionnaires. ("Questionnaires" are the survey instruments that have been mailed or are administered by telephone or online. **Appendix A** explains how to determine whether the returned questionnaire is "complete.")

[10] This algorithm for sampling patients receiving cancer surgery in an inpatient setting was not fully tested as part of the field test because only half of the participating sites used inpatient facility billing data to select patients for the Cancer Surgery Survey.

The sample size required for each treatment modality depends on the unit of analysis and reporting (i.e., how you plan to use the results):

- If you plan to analyze and report the results by **treatment modality** (e.g., results for the medical oncology team), you will need 200 completed questionnaires for each modality you plan to analyze/report.
- If you plan to report the results for the **cancer center**, you will need a total of 200 completed questionnaires across the included treatment modalities.

Once you are clear on the minimum number of completed questionnaires, which could be as low as 200 for a cancer center or as high as 600 for all three treatment modalities, you must consider several other factors to determine the starting sample size:

- The anticipated response rate
- The accuracy of the contact information
- The mode or modes of data collection
- Any prior surveys of the same or similar populations
- Expectations about the number of individuals who may be identified as ineligible (see the discussion of response rates in the following section)

The CAHPS team recommends aiming for a response rate of at least 40 percent. This figure is based on evidence from field trials regarding what is possible with a reasonable amount of effort and expense; it assumes that survey sponsors and vendors follow the recommended protocols for sampling and data collection, including follow-up with non-respondents.

Assuming you achieve a response rate of 40 percent, you would need to start with a sample size of 500 to achieve 200 completed questionnaires. Figure 7 shows this calculation.

Figure 7. Calculation of Estimated Sample Size Needed

Goal	200 completed questionnaires
Target response rate	40 percent (=.40)
Minimum sample size needed	(200/0.40) = 500 per treatment modality

If there are not enough eligible cases to draw a sample of 500 patients at a single point in time, users can consider drawing and fielding weekly or monthly samples in order to reach a total sample of 500 over time.

The recommendation to achieve 200 completes applies to the survey with **core items only**. If your survey includes supplemental items, some of which may be relevant to a

relatively small subset of the overall sample, a higher number of completed questionnaires may be needed to generate enough responses to those items for the purposes of analysis and reporting. Generally speaking, at least 100 responses per item are needed to yield a level of reliability for supplemental items that is consistent with that of the core items.

Achieving the Response Rate Goal

Being able to achieve a response rate of 40 percent depends in large part on the accuracy of the sampling frame. If you anticipate that inaccuracies in the sample frame, such as poor contact information (addresses and phone numbers), will decrease the number of questionnaires that reach the sampled individuals, you may need to start with a larger sample size.

A low response rate affects the ultimate sample size, but it is of concern primarily because the lower the response rate, the less confident one can be that the sample is representative of the underlying population. Differences in response rates across units of interest (whether cancer centers or treatment modalities) are also a concern, because the sampling bias may differ across units. Survey users should track the unit-level response rate as well as the overall response rate as they field the survey.

Drawing the Sample

The approach used to draw the sample depends on the size of each of the sampling frames:

- **Census**: If the size of the sampling frame for a given treatment modality is the **same size or smaller** than the desired survey sample, survey the census of the patients in the frame. However, the sample may include only one adult per household.
- **Random sampling**: If the sampling frame for a treatment modality is **larger** than the desired sample, use a random sampling process to select patients from the sampling frame to receive a survey. Prior to conducting random sampling:
    - Screen each of the separate sampling frames for deceased individuals.
    - Evaluate the sampling frames for duplicates **within** sampling frames. Retain only one record and delete the others. The process for selecting which duplicate record to retain is not critical and need not be sophisticated; it is sufficient to select the first record and delete all other duplicates, regardless of how the records are organized.
    - Evaluate the sampling frames for duplicates **across** sampling frames, which can occur for patients who received more than one modality of care in the last 6 months. Randomly select the patient to remain in one of the sampling frames and be deleted from the other frames. Exception: If the sample for a treatment modality is not the desired size, you may want to assign patients who received multiple modalities of care to the modality with the smallest sample size.

Preparing Sample Files for Data Collection

Once the sample has been selected, the vendor assigns a unique identification (ID) number to each sampled person. This unique ID number should **not** be based on an existing identifier such as a Social Security number or a patient ID number. This number will be used **only** to track the respondents during data collection.

As previously noted, some sample frames may not include complete and accurate contact information, requiring the combination of information from two (or more) sources – such as administrative records from a health plan and contact records from a hospital or cancer center. When information from two sources differs, survey sponsors and their vendors should consult with each other to decide which sources of information are most accurate and should be used. This may be a complex, multistep process that requires time and rigorous quality control. In addition, because the survey sponsor may be responsible for some elements of this process and the vendor for others, it is important to carefully coordinate this process.

The pieces of information that are most critical to the success of data collection are accurate and complete names for patients and cancer centers and contact information appropriate for the mode of administration (i.e., addresses for mail surveys, telephone numbers for telephone administration, and email addresses for online administration). When you have incomplete address information or have reason to believe that this information may be inaccurate, survey sponsors and/or vendors may be able to use other sources to clean the sample file, such as Internet directories.

Recommended Data Collection Modes

Based on extensive testing conducted for the CAHPS Clinician & Group Survey as well as field test results from the CAHPS Cancer Care Survey, the CAHPS team recommends the following modes for data collection:

- Mail only
- Telephone only
- Mixed mode (mail and telephone, email and mail, or email and telephone).

Results from the field test of the Cancer Care Survey suggest that sponsors may be able to achieve a 40 percent response rate (or higher) by fielding the survey by email with follow-up by mail. The success of this approach is dependent, however, on having valid and up-to-date email addresses for patients. The experiences of organizations that have fielded similar surveys indicate that the mail with telephone follow-up method is also a highly effective data collection approach. (Please refer to **Appendix B** for advice on improving response rates.)

This section provides protocols for collecting responses by mail with telephone follow-up and email with mail follow-up. Users of this survey have the option of

adapting the protocols for mail-only, telephone-only, or email with telephone follow-up. At this time, an email-only mode is not recommended. If you choose to deviate from the recommended protocols, it is important to conduct sufficient follow-up, i.e., additional attempts to obtain a completed questionnaire, to achieve a response rate of 40 percent.

Alternative Data Collection Modes

Recognizing that many organizations are interested in different ways of administering a patient survey, the CAHPS team has conducted preliminary testing of alternative modes, specifically in-office distribution and interactive voice response (IVR, also known as telephone audio computer-assisted self-interviewing, or T-ACASI). Further study is required before either of these modes can be recommended.

Multiple studies of in-office distribution found that the survey results were not comparable to those collected with recommended modes.[11] The investigators observed incomplete distribution rates, lower response rates, and declining distribution rates. Finally, there were significant mode-physician interaction effects, which suggests that data cannot be pooled then adjusted to account for the differences.

Because the implications of using these modes are not yet fully known, they should be used with caution. If a sponsor uses one of these modes to collect data, the ability to compare survey results across users may be limited.

Each survey sponsor will need to choose the data collection modes that maximize the response rate at an acceptable cost. Costs associated with administering the CAHPS Cancer Care Survey will vary depending on the mode or mix of modes.

Survey field periods can range from 6 to 14 weeks. Since the time required to achieve the desired response rate varies, there is no specific cut-off point for the field period. Additionally, data collection should not be stopped if the target number of completed questionnaires is achieved. The data collection protocol should be completed as planned to ensure comparability of the results.

[11] For one example, see: Anastario MP, Rodriguez HP, Gallagher PM, et al. A Randomized Trial Comparing Mail versus In-Office Distribution of the CAHPS Clinician and Group Survey. Health Services Research. 2010;45:1345-1359.

Key Issues When Preparing for Data Collection

Avoiding Overlap with Surveys Mandated by CMS

Hospitals eligible for the CAHPS Hospital Survey (HCAHPS) and surgery centers eligible for the CAHPS Outpatient and Ambulatory Survey (OAS CAHPS) must follow rules established by the Centers for Medicare & Medicaid Services (CMS). Specifically, those survey sponsors must hold off on active data collection for the Cancer Care Survey until 51 days after the patient has been discharged. This delay permits CMS to first field the surveys designed for program monitoring and national public reporting.

Maintaining Confidentiality

Privacy assurances are central to encouraging respondent participation. Survey vendors should already have standard procedures in place for maintaining the confidentiality of respondents' names and minimizing the extent to which identifying information, such as names and addresses, are linked to the actual survey responses. For example, the individual ID numbers that are used to track the survey must not be based on existing identifiers, such as Social Security numbers or employee ID numbers. Many survey vendors require employees to sign statements of confidentiality ensuring that they will not reveal the names of respondents or any results linked to specific individuals.

There are several opportunities during the survey process to explain to respondents that their responses are kept strictly confidential. The key avenues are the advance and cover letters and interviewer assurances during telephone interviews.

Addressing the Risk of Misidentification

An error in administrative data could cause the sampling algorithms to identify an individual who is not actually eligible to receive the Cancer Care Survey, potentially creating emotional distress. The survey itself includes three questions to confirm the respondent's eligibility for the survey. In addition, survey sponsors and vendors are encouraged to include language in the recruitment materials (i.e., cover letter, email message, telephone script) to mitigate the risk of emotional distress for individuals who may have been misidentified. Consider the following examples of text that can be incorporated into these materials:

"If you feel a survey about cancer care does not apply to you or that you were selected by mistake, please call 1-xxx-xxx-xxxx to talk to a representative at [Reporting Unit/Survey Vendor]."

"If you feel a survey about cancer care does not apply to you or that you were selected by mistake, please disregard this survey."

Mail Protocol

This section reviews the basic steps for collecting data through the mail and offers some advice for making this process as effective as possible.[12]

- **Set up a toll-free number** and publish it in all correspondence with respondents. Assign a trained project staff member to respond to questions on that line. It is useful to maintain a log of these calls and review them periodically.
- **Send the respondent the questionnaire with a cover letter and a postage-paid envelope.** A well-written, persuasive letter authored by a recognizable organization will increase the likelihood that the recipient of the questionnaire will complete and return it within the deadline. The cover letter should include instructions for completing and returning the questionnaire. For an example, refer to ***Sample Notification Letters and Emails for the CAHPS Cancer Care Survey***.

  Tips for the letter:

  - Tailor the letter, including language that explains the purpose of your survey, the voluntary nature of participation, and the confidentiality of responses.
  - Note that a refusal to participate will not affect an individual's health care.
  - Personalize the letter with the name and address of the intended recipient.
  - Have it signed by a representative of the sponsoring organization(s).
  - Spend some time on the cover letter, checking it for brevity and clarity, and ensuring that there are no grammatical or typographical errors.

  Tips for the outside envelope:

  - Make it look "official" but not too bureaucratic; it must not look like junk mail.
  - Place a **recognizable** name, such as the name of the cancer center, above the return address.
- **Send a postcard reminder to nonrespondents 10 days after sending the questionnaire.** Some vendors prefer sending a reminder postcard to all respondents 3 to 5 days after mailing the questionnaire instead of sending a postcard only to nonrespondents 10 days after the questionnaire is mailed. Their reminder postcards serve as a thank you to those who have returned their questionnaires and as a reminder to those who have not. The reminder postcard

[12] Adapted from McGee J, Goldfield N, Riley K, Morton J. Collecting Information from Health Care Consumers, Rockville, MD: Aspen Publications, 1996.

is an inexpensive way to increase your response rate. ***Sample Notification Letters and Emails*** includes a sample reminder card.

- **Send a second questionnaire** with a reminder letter and a post-paid envelope to those still not responding 3 weeks after the first mailing. ***Sample Notification Letters and Emails*** includes a sample reminder letter.

Telephone Protocol

While the Cancer Care Survey was not tested using a telephone-only methodology, testing conducted for the Clinician & Group Survey and other similar surveys suggest that telephone-only administration is a viable data collection approach. Telephone reminders and non-response follow-up are also helpful strategies for increasing the survey response rate.

The Cancer Care Survey must be modified for telephone administration. ***Preparing a Questionnaire Using the CAHPS Cancer Care Survey*** provides a sample introductory statement that you can adapt as needed.

Note on mode effects: Research conducted in collaboration with the CAHPS team indicates that telephone-only administration for similar surveys is associated with more positive reports and ratings of care.[13] The direction of this effect is not uncommon in comparisons of mail-only and telephone-only survey administration. Further testing is needed before we can determine if and how survey users should adjust data collected using telephone-only mode.

- **Check telephone numbers.** Check the telephone numbers of sample respondents for out-of-date area codes and partial or unlikely telephone numbers**.** All survey vendors should have standard automated procedures for checking and updating telephone numbers before beginning data collection.

  After extensive tracking, you may still be left with some respondents who do not have a working telephone number, or for whom you have only an address. Delivery of a package containing the questionnaire by an overnight service, such as a Priority Mail or Federal Express, can be an effective method of drawing attention to the need to complete the questionnaire.
- **Train the interviewers before they begin interviewing.** The interviewer should not bias survey responses or affect the survey results. (See the box below for advice regarding the training of interviewers.)
- **Begin contacting nonrespondents**. If following up on an email or a mailed questionnaire, initiate telephone contact with nonrespondents 3 weeks after sending the second email or questionnaire.
- **Attempt to contact each respondent by telephone at least six times.** The vendor should make at least six attempts unless the respondent explicitly

[13] Hepner KA, Brown JA, Hays RD. Comparison of mail and telephone in assessing patient experiences in receiving care from medical group practices. Eval Health Prof. 2005 Dec;28(4):377-89.

refuses to complete the survey. These attempts must be on different days of the week (both weekdays and weekends), at different times of the day, and in different weeks.

Training Interviewers

The CAHPS team recommends the following key procedures for conducting standardized, nondirective interviews:

- Interviewers should read questions exactly as worded so that all respondents are answering the same question. When questions are reworded, it can have important effects on the resulting answers.
- When a respondent fails to give a complete or adequate answer, interviewer probes should be nondirective. That is, interviewers should use probes that do not increase the likelihood of one answer over another. Good probes simply stimulate the respondent to give an answer that meets the question's objectives.
- Interviewers should maintain a neutral and professional relationship with respondents. It is important that they have a positive interaction with respondents, but there should not be a personal component. The primary goal of the interaction from the respondent's point of view should be to provide accurate information. The less interviewers communicate about their own personal characteristics and preferences, the more standardized the interview experience becomes across all interviewers.
- Interviewers should record only answers that the respondents themselves choose. The CAHPS instrument is designed to minimize decisions that interviewers might need to make about how to categorize answers.

Training and supervision are the keys to maintaining these standards. Although these principles may seem clear, it has been shown that training, which includes exercises and supervised role playing, is essential for interviewers to learn how to put these principles into practice. In addition, interviewers may not meet these standards unless their work is monitored. A supervisor should routinely monitor a sample of each interviewer's work to ensure that the interviewers are, in fact, carrying out interviews using prescribed standards and methods. When you are hiring a survey vendor, the protocol for training and supervision should be among the top criteria you consider when choosing among data collection organizations.

Email Protocol

This section reviews the basic steps for contacting respondents via email to invite them to take an online survey and offers some advice for making this process as effective as possible. The CAHPS team does not recommend an email-only protocol at this time. Regardless of the response rate achieved through email alone, the email protocol must be followed by a full mail or telephone protocol for nonrespondents to ensure that all patients in the sample have an equal chance of completing the survey and that the respondents are representative of the patient population. For the same reason, the sample should not consist of only those patients for which you have an email address.

Note: This email protocol is also applicable when administering the survey through a patient portal.

- **Set up an email address or toll-free telephone number** that respondents can contact with questions and publish it in all correspondence. Assign a trained project staff member to respond to questions that are submitted. It is useful to maintain a log of these emails/calls and review them periodically.
- **Send the respondent an email with a link to the online survey.** A well-written, persuasive message authored by a recognizable organization will increase the likelihood that the recipient of the survey invitation will complete it within the deadline. The email should be personalized and contain an individualized ID and password to access the survey as well as an individualized direct link. The email invitation should include instructions for completing the survey and explain whom to contact if recipients have questions. ***Sample Notification Letters and Emails for the CAHPS Cancer Care Survey*** includes examples of email content that can be adapted.

  Tips for the email:

  - Include information in the email message and subject line to convey to the respondent that the survey is about their experience: for example, "Tell us about your recent medical care." Subject lines and email messages that request the recipient to "Please help" are not recommended because they do not provide clues to the content and purpose of the email and are more likely to be deleted.
  - Tailor the email message and the subject line to the recipient. It can be helpful to personalize the email message with the name of the intended recipient. But be aware of confidentiality issues. In particular, do not include detailed personal information in the subject line. For example, a subject line could include a reference to "your recent visit to [CANCER CENTER]," but should not be too personal (e.g., "your visit on April 4th with Dr. Mary Jones").

- In the email message:
  - Include language that explains the purpose of your survey, the voluntary nature of participation, and the confidentiality of responses.
  - Include a brief description of the survey. For example:

    We want to hear about your recent care. For example, we want to know:

    - *How easy it was for you to get appointments.*
    - *How clearly your health care providers explained things to you.*
    - *Whether your health care providers talked with you about possible side effects.*

    Only you can tell us about these experiences.
  - Note that a refusal to participate will not affect an individual's health care.
- To accommodate differing screen sizes, keep the email message itself shorter than a paper cover letter. Test it on multiple platforms.
- Spend some time on the email message, checking it for brevity and clarity and ensuring that there are no grammatical or typographical errors.
- Have the email electronically signed by a representative of the sponsoring organization(s). Include the person's title in the signature.
- If possible, send the email from the sponsoring organization (or from someone at that organization). This step increases the likelihood that participants will open the email. If the email cannot be sent from the organization, many survey programs and vendors can mask the actual name so it looks like it comes from the organization (e.g., the sender name could look like CancerCenter@survey.com rather than Vender@survey.com).

- **Send an email reminder to nonrespondents 7-10 days after sending the initial email invitation.** The email reminder serves as a thank you to those who have completed their survey and as a reminder or plea to those who have not. ***Sample Notification Letters and Emails*** includes a sample reminder card that can be used as a template for the email reminder.
- **Send a second email reminder** to those still not responding 2-3 weeks after the initial email invitation.
- **Follow-up with nonrespondents by mail or telephone** 2-3 weeks after the second email reminder. It is critical to initiate contact by either mail or telephone with everyone who has not completed the survey online. Since not all patients have access to or use email regularly, survey sponsors must follow the email protocol with either the full mail or telephone protocol for all nonrespondents to ensure that the final survey responses represent the patient

population that was sampled. Based on research conducted to date, the CAHPS team does not recommend including a link to a Web-based online survey in a mailed letter.

Tracking Returned Questionnaires

Most vendors have established methods for tracking the sample. You should also set up a system to track the returned questionnaires by the unique ID number that is assigned to each respondent in the sample. This ID number should be placed on every questionnaire that is mailed, included in the call record of each telephone case, or incorporated into the unique link for online surveys.

To maintain respondent confidentiality, the tracking system should not contain any of the survey responses. The survey responses should be entered in a separate data file linked to the sample file by the unique ID number. (This system will generate the weekly progress reports that sponsors and vendors should review closely.)

Each respondent in the tracking system should be assigned a survey result code that indicates whether the respondent:

- Returned the mail survey,
- Participated in the telephone interview,
- Participated in the online survey,
- Was ineligible to participate in the study,
- Could not be located,
- Is deceased, or
- Refused to respond.

The codes should also indicate whether the questionnaire is complete, partially complete, or incomplete.

- **Complete questionnaire:** A questionnaire is considered complete if responses are available for at least half of the key survey items and at least one reportable item.
- **Partially completed questionnaire:** A questionnaire is considered partially complete if responses are available for at least one reportable item, but less than half of the key items. It is important to keep track of partially completed questionnaires because they should be included for analysis and reporting.
- **Incomplete questionnaire:** A questionnaire is incomplete if the individual did not answer at least one reportable item.

For more information about the key and reportable items in the Cancer Care Survey, see **Appendix A** of this document.

The tracking system should also include the date the questionnaire was returned (for mail surveys) or answered (for telephone and online surveys). The interim result code reflects the status of the case during the different rounds of data collection; the final result code reflects the status at the end of data collection. These result codes are used to calculate the response rate as shown in the next section.

Calculating the Response Rate

In its simplest form, the response rate is the total number of completed questionnaires divided by the total number of individuals selected for the sample. Calculating your response rate is helpful in determining a more accurate starting sample size for future survey administration. For the CAHPS Cancer Care Survey, the goal is a response rate of at least 40 percent.

To calculate the response rate, use the following formula:

$$\frac{\textbf{Number of completed questionnaires}}{\textbf{Total number of individuals surveyed – (deceased + ineligible)}}$$

Listed below is an explanation of the categories included and excluded in the denominator of the response rate calculation.

Denominator Inclusions

The denominator should include:

- **Respondents.** The individual returned/answered a questionnaire, whether complete, incomplete, or partially complete.
- **Refusals.** The individual refused to participate in writing or by phone.
- **Nonresponses.** The individual is presumed to be eligible but did not complete the questionnaire for some reason (e.g., never responded, was unavailable at the time of the survey, was ill or incapable, had a language barrier).
- **Bad addresses/phone numbers.** In either case, the sampled individual is presumed to be eligible even if you are unable to locate them.

Denominator Exclusions

- **Deceased.** In some cases, a household or family member may inform you of the death of the sampled individual.
- **Ineligible.** The sampled individual did not receive treatment for cancer from the named cancer center. This can be ascertained two ways:
    - The sampled individual or a household or family member informs you that the survey does not apply.
    - The sampled individual answers “no” to one of the three questions confirming eligibility at the beginning of the survey.

Appendix A: Determining Whether a Survey Response Is Complete

To determine if a questionnaire is complete, the first step is to flag the key and reportable items in the core survey. Supplemental items are **not** included in the definition of a completed questionnaire.

What are key items? Key items are the survey questions that **all** respondents should answer, including:

- Questions confirming eligibility for the survey.
- The screeners for the questions included in the core composites measures.
- The rating questions.
- Demographic and other background items.

Figure 8 lists the key items from the CAHPS Cancer Care Survey.

What are reportable items? Reportable items are the questions included in the composite and rating measures. For a list of the reportable items in the core survey, refer to the appendix in ***Patient Experience Measures from the CAHPS Cancer Care Survey*.**

Number of key items needed for a complete questionnaire. A questionnaire is considered complete if it has responses for at least 50 percent of the key items (i.e., at least 23 of the items listed below) and 1 reportable item.

Figure 8. Key Questions from the CAHPS Cancer Care Survey

Short Item Title	Item Number
Patient received care from facility named below	1
Patient has been diagnosed with cancer	2
Patient received specified type of treatment	3
Patient usually goes to this facility for care	4
How long this patient has been going to this facility	5
How long it has been since this patient was diagnosed with cancer	6
Cancer care team encouraged questions between visits	7
Cancer care team said to call immediately if patient has certain symptoms or side effects	8

Short Item Title	Item Number
Cancer care team gave instructions on how to contact them after hours	9
Cancer care team involved family members or friends in discussions	10
Patient received care from cancer center within the last 6 months	11
Number of times this patient visited this cancer center for care	12
Patient contacted cancer center for appointment for urgent care	13
Patient contacted cancer center for appointment for non-urgent care	15
Patient contacted cancer center with a question during regular hours	17
Cancer care team explained things in a way that was easy to understand	19
Cancer care team listened carefully to patient	20
Cancer care team knew important information about patient's medical history	21
Cancer care team showed respect for what patient had to say	22
Cancer care team spent enough time with patient	23
Cancer care team ordered blood test, x-ray, or other test	24
Patient took a prescription medicine	26
Patient and cancer care team talked about cancer-related pain	28
Patient was bothered by pain from cancer or treatment	29
Patient and cancer care team talked about changes in patient's energy levels	31
Patient was bothered by changes in energy levels	32
Patient and cancer care team talked about emotional problems	34
Patient was bothered by emotional problems	35
Patient and cancer care team talked about additional services to manage care at home	37
Patient and cancer care team talked about things patient could do to maintain health	38
Rating of cancer care team	39

Short Item Title	Item Number
Patient needed an interpreter	40
Rating of overall cancer care	42
Clerks and receptionists were helpful	43
Clerks and receptionists were courteous and respectful	44
Cancer treatments received	45
Patient's preferences for decision making	46
Hospital stay for cancer	47
Rating of overall health	48
Rating of mental or emotional health	49
Age of patient	50
Male or female	51
Highest grade level completed	52
Hispanic or Latino origin	53
Race	54
Someone helped respondent complete survey	55
Total number of key items	**46**
Number of items needed to be a "complete" survey	**23**

Appendix B: Methods for Increasing the Number of Responses

Out-of-date mailing and email addresses, inaccurate telephone numbers, voicemail, call screening, gatekeepers, and frequent travel by respondents are common problems. To maximize the number of responses, sponsors and vendors can:

- Improve initial contact rates by making sure that addresses, phone numbers, and email addresses are current and accurate (e.g., identify sources of up-to-date sample information, run a sample file through a national change-of-address database, send a sample to a phone number look-up vendor).
- Take steps to improve contact rates after data collection has begun (e.g., increase the maximum number of calls, ensure that calls take place at different day and evening times over a period of days, mail or email second reminders, use experienced and well-trained interviewers).
- Consider using a mixed-mode protocol involving email, mail, and telephone data collection procedure. In field tests, the combined approach was more likely to achieve a desired response rate than either mode alone.
- Train interviewers on how to deal with gatekeepers.
- Train interviewers on refusal aversion/conversion techniques.

These methods will add to the costs of conducting a survey, but users need to weigh these extra costs against the risk of low response rates and less representative data.

Once the vendor reaches the potential respondent, other challenges await: people throw away the envelope, sometimes unopened, or set aside the questionnaire but then never complete it. These responses draw attention to the importance of effectively communicating why the person should complete the questionnaire. In addition to persistent follow-up, make sure that the outside envelope, cover letter, and questionnaire are as compelling as possible.[14]

It is especially important to interview or receive returned questionnaires from those individuals who might be difficult to reach. They are likely to be different from those individuals who immediately complete and return a questionnaire or who are easily interviewed. They may, for example, be chronically ill, have two jobs, or be different in some other way that is relevant to your results. Unless you maintain a high response rate overall and make efforts to reach them, their views and experiences will be underrepresented.

Sponsors and vendors should discuss this possibility in advance and consider plans to do extensive follow-up, including telephone tracking and locating. You may also

[14] Learn more: McGee J, Goldfield N, Riley K, Morton J. *Collecting information from health care consumers*. Rockville, MD: Aspen Publications, 1996.

want to talk about the timing of interviews. Because the Cancer Care Survey is a survey of respondents at their homes, interviewers typically work in the evenings and on weekends. However, the survey vendor should provide at least one interviewer during the daytime to maintain appointments made with respondents during the day and try to reach those respondents who do not answer during the evenings (e.g., those who have evening shift jobs). Interviewing during the daytime on weekdays is especially effective and appropriate for surveys of seniors and those who may be chronically ill.

You are likely to encounter certain types of problems with which you should be familiar. Sponsors and vendors should discuss these issues and agree on appropriate procedures.

Common Problems	Some Guidance
The interviewer reaches a voicemail.	There is some debate about whether or not it is best to leave a message; unfortunately, there is no right answer to this question. However, you cannot assume that a respondent will call back, so survey vendors should continue to make an effort to reach the respondent. In essence, when an interviewer reaches answering machine or voicemail, it should be handled as though the person were not at home.
The telephone number for the sampled individual is incorrect.	The vendor should make every effort to find the right number: • If the person answering the telephone knows how to reach the sampled individual, use that information. • If there is no information about the sampled individual at the provided number, use directory assistance. • If the vendor cannot find a correct telephone number for the individual, and the sponsor has agreed to a multi-mode approach to data collection, email or mail the questionnaire.
The sampled person has moved and the address in the sample is incorrect.	The vendor should make every effort to track down the sampled person. If the mail gets returned, refer to sources like Internet directories or national change of address directories to obtain the new address.
The sampled person is temporarily away.	The protocol for this situation will depend somewhat on the data collection schedule. If the person will become available before data collection is scheduled to be concluded, the right procedure is to call back later.

Common Problems	Some Guidance
The sampled person does not speak English.	If the questionnaire has not been translated into the respondent's language, an interview cannot be conducted. For the purposes of calculating response rates, these cases should be considered as "nonresponse" and cannot be excluded from the response rate formula's denominator.
The sampled person is temporarily ill.	Contact the person again before the end of data collection to determine if he/she has recovered and can participate.
The sampled person has a condition that prevents being interviewed, such as having a visual, hearing, or cognitive impairment.	This person becomes a nonrespondent by virtue of his or her condition.

Appendix C: Sampling Frame Algorithms for the Cancer Surgery Survey

Sampling frame algorithms are available to identify patients who received the following types of cancer surgery:

1. Bladder Surgery: Algorithm and Codes

A person with bladder cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

1. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of the bladder, C67.* (i.e., C67.0, C67.1, C67.2, C67.3, C67.4, C67.5, C67.6, C67.7, C67.8, C67.9; Exhibit 1-1),

   and

2. The person has any CPT procedure code in Exhibit 1-2 associated with (i.e., on the same billing line) a primary diagnosis of C67.*,

   and

3. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

1. The person had a primary ICD-10 CM diagnosis of C67.*,

   and

2. The person has any ICD-10 PCS procedure code for excision or resection of bladder (Exhibit 1-3). The procedure must be associated with a primary diagnosis of C67.*,

   and

3. The discharge date is before the sample date.

Exhibit 1-1. Breast Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C67.0	Malignant neoplasm of trigone of bladder
C67.1	Malignant neoplasm of dome of bladder
C67.2	Malignant neoplasm of lateral wall of bladder
C67.3	Malignant neoplasm of anterior wall of bladder
C67.4	Malignant neoplasm of posterior wall of bladder
C67.5	Malignant neoplasm of bladder neck
C67.6	Malignant neoplasm of ureteric orifice
C67.7	Malignant neoplasm of urachus

ICD-10 CM Diagnosis Code	Description
C67.8	Malignant neoplasm of overlapping sites of bladder
C67.9	Malignant neoplasm of bladder, unspecified

Exhibit 1-2. Bladder Cancer Surgery: CPT Codes and Descriptions

CPT Code*	Description
51520*	Cystotomy; for simple excision of vesical neck (separate procedure)
51525*	Cystotomy; for excision of bladder diverticulum, single or multiple (separate procedure)
51530*	Cystotomy; for excision of bladder tumor
51535*	Cystotomy for excision, incision, or repair of ureterocele
51550	Cystectomy, partial; simple
51555	Cystectomy, partial; complicated (e.g., postradiation, previous surgery, difficult location)
51565	Cystectomy, partial, with reimplantation of ureter(s) into bladder (ureteroneocystostomy)
51570	Cystectomy, complete; (separate procedure)
51575	Cystectomy, complete; with bilateral pelvic lymphadenectomy, including external iliac, hypogastric, and obturator nodes
51580	Cystectomy, complete, with ureterosigmoidostomy or ureterocutaneous transplantations
51585	Cystectomy, complete, with ureterosigmoidostomy or ureterocutaneous transplantations; with bilateral pelvic lymphadenectomy, including external iliac, hypogastric, and obturator nodes
51590	Cystectomy, complete, with ureteroileal conduit or sigmoid bladder, including intestine anastomosis;
51595	Cystectomy, complete, with ureteroileal conduit or sigmoid bladder, including intestine anastomosis; with bilateral pelvic lymphadenectomy, including external iliac, hypogastric, and obturator nodes
51596	Cystectomy, complete, with continent diversion, any open technique, using any segment of small and/or large intestine to construct neobladder

CPT Code*	Description
51597	Pelvic exenteration, complete, for vesical, prostatic or urethral malignancy, with removal of bladder and ureteral transplantations, with or without hysterectomy and/or abdominoperineal resection of rectum and colon and colostomy, or any combination thereof
52234	Cystourethroscopy, with fulguration (including cryosurgery or laser surgery) and/or resection of; SMALL bladder tumor(s) (0.5 up to 2.0 cm)
52235	Cystourethroscopy, with fulguration (including cryosurgery or laser surgery) and/or resection of; MEDIUM bladder tumor(s) (2.0 to 5.0 cm)
52240	Cystourethroscopy, with fulguration (including cryosurgery or laser surgery) and/or resection of; LARGE bladder tumor(s)
52355*	Cystourethroscopy, with ureteroscopy and/or pyeloscopy; with resection of ureteral or renal pelvic tumor
52500*	Transurethral resection of bladder neck (separate procedure)

*CPT code was added after the second field test and has not been field tested.

Exhibit 1-3. Bladder Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
0TBB0ZZ	Excision of Bladder, Open Approach
0TBB4ZZ	Excision of Bladder, Percutaneous Endoscopic Approach
0TBC0ZZ	Excision of Bladder Neck, Open Approach
0TBC4ZZ	Excision of Bladder Neck, Percutaneous Endoscopic Approach
0TTB0ZZ	Resection of Bladder, Open Approach
0TTB4ZZ	Resection of Bladder, Percutaneous Endoscopic Approach
0TTB8ZZ	Resection of Bladder, Via Natural or Artificial Opening Endoscopic
0TTC0ZZ	Resection of Bladder Neck, Open Approach
0TTC4ZZ	Resection of Bladder Neck, Percutaneous Endoscopic Approach
0TTC8ZZ	Resection of Bladder Neck, Via Natural or Artificial Opening Endoscopic

2. Brain Surgery: Algorithm and Codes

A person with brain cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

1. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of the brain, C71.* (i.e., C71.0 – C71.9), or secondary malignant neoplasm of brain and cerebral meninges, C79.31 (Exhibit 2-1),

   and

2. The person has any CPT procedure code in Exhibit 2-2 associated with (i.e., on the same billing line) a primary diagnosis of C71.* or C79.31,

   and

3. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

1. The person had a primary ICD-10 CM diagnosis of C71.* or C79.31,

   and

2. The person has any ICD-10 PCS procedure code for excision or resection of brain (Exhibit 2-3). The procedure must be associated with a primary diagnosis of C C71.* or C79.31,

   and

3. The discharge date is before the sample date.

Exhibit 2-1. Brain Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C71.0	Malignant neoplasm of cerebrum, except lobes and ventricles
C71.1	Malignant neoplasm of frontal lobe
C71.2	Malignant neoplasm of temporal lobe
C71.3	Malignant neoplasm of parietal lobe
C71.4	Malignant neoplasm of occipital lobe
C71.5	Malignant neoplasm of cerebral ventricle
C71.6	Malignant neoplasm of cerebellum
C71.7	Malignant neoplasm of brain stem

ICD-10 CM Diagnosis Code	Description
C71.8	Malignant neoplasm of overlapping sites of brain
C71.9	Malignant neoplasm of brain, unspecified
C79.31	Secondary malignant neoplasm of brain

Exhibit 2-2. Brain Cancer Surgery: CPT Codes and Descriptions

CPT Code*	Description
61510	Craniectomy, trephination, bone flap craniotomy; for excision of brain tumor, supratentorial, except meningioma
61518	Craniectomy for excision of brain tumor, infratentorial or posterior fossa; except meningioma, cerebellopontine angle tumor, or midline tumor at base of skull
61520	Craniectomy for excision of brain tumor, infratentorial or posterior fossa; cerebellopontine angle tumor
61521	Craniectomy for excision of brain tumor, infratentorial or posterior fossa; midline tumor at base of skull
61526	Craniectomy, bone flap craniotomy, transtemporal (mastoid) for excision of cerebellopontine angle tumor;
61530	Craniectomy, bone flap craniotomy, transtemporal (mastoid) for excision of cerebellopontine angle tumor; combined with middle/posterior fossa craniotomy/craniectomy
61575	Transoral approach to skull base, brain stem or upper spinal cord for biopsy, decompression or excision of lesion;
61576	Transoral approach to skull base, brain stem or upper spinal cord for biopsy, decompression or excision of lesion; requiring splitting of tongue and/or mandible (including tracheostomy)
62164	Neuroendoscopy, intracranial; with excision of brain tumor, including placement of external ventricular catheter for drainage

* All CPT codes for brain cancer were added after the second field test and have not been field tested.

Exhibit 2-3. Brain Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
00B00ZZ	Excision of Brain, Open Approach
00B04ZZ	Excision of Brain, Percutaneous Endoscopic Approach
00B60ZZ	Excision of Cerebral Ventricle, Open Approach
00B64ZZ	Excision of Cerebral Ventricle, Percutaneous Endoscopic Approach
00B70ZZ	Excision of Cerebral Hemisphere, Open Approach
00B74ZZ	Excision of Cerebral Hemisphere, Percutaneous Endoscopic Approach
00BB0ZZ	Excision of Pons, Open Approach
00BB4ZZ	Excision of Pons, Percutaneous Endoscopic Approach
00BC0ZZ	Excision of Cerebellum, Open Approach
00BC4ZZ	Excision of Cerebellum, Percutaneous Endoscopic Approach
00BD0ZZ	Excision of Medulla Oblongata, Open Approach
00BD4ZZ	Excision of Medulla Oblongata, Percutaneous Endoscopic Approach
00T70ZZ	Resection of Cerebral Hemisphere, Open Approach
00T74ZZ	Resection of Cerebral Hemisphere, Percutaneous Endoscopic Approach

3. Breast Surgery: Algorithm and Codes

A person with breast cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

4. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of the breast, C50.* (i.e., C50.011 – C50.929; Exhibit 3-1),

   and

5. The person has any CPT procedure code in Exhibit 3-2 associated with (i.e., on the same billing line) a primary diagnosis of C50.*,

   and

6. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

7. The person had a primary ICD-10 CM diagnosis of C50.*,

   and

8. The person has any ICD-10 PCS procedure code for excision, resection (breast or nipple), or replacement (i.e., mastectomy with immediate reconstruction) of the breast (Exhibit 3-3). The procedure must be associated with a primary diagnosis of C50.*,

   and

9. The discharge date is before the sample date.

Exhibit 3-1. Breast Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C50.011	Malignant neoplasm of nipple and areola, right female breast
C50.012	Malignant neoplasm of nipple and areola, left female breast
C50.019	Malignant neoplasm of nipple and areola, unspecified female breast
C50.021	Malignant neoplasm of nipple and areola, right male breast
C50.022	Malignant neoplasm of nipple and areola, left male breast
C50.029	Malignant neoplasm of nipple and areola, unspecified male breast
C50.111	Malignant neoplasm of central portion of right female breast
C50.112	Malignant neoplasm of central portion of left female breast

ICD-10 CM Diagnosis Code	Description
C50.119	Malignant neoplasm of central portion of unspecified female breast
C50.121	Malignant neoplasm of central portion of right male breast
C50.122	Malignant neoplasm of central portion of left male breast
C50.129	Malignant neoplasm of central portion of unspecified male breast
C50.211	Malignant neoplasm of upper-inner quadrant of right female breast
C50.212	Malignant neoplasm of upper-inner quadrant of left female breast
C50.219	Malignant neoplasm of upper-inner quadrant of unspecified female breast
C50.221	Malignant neoplasm of upper-inner quadrant of right male breast
C50.222	Malignant neoplasm of upper-inner quadrant of left male breast
C50.229	Malignant neoplasm of upper-inner quadrant of unspecified male breast
C50.311	Malignant neoplasm of lower-inner quadrant of right female breast
C50.312	Malignant neoplasm of lower-inner quadrant of left female breast
C50.319	Malignant neoplasm of lower-inner quadrant of unspecified female breast
C50.321	Malignant neoplasm of lower-inner quadrant of right male breast
C50.322	Malignant neoplasm of lower-inner quadrant of left male breast
C50.329	Malignant neoplasm of lower-inner quadrant of unspecified male breast
C50.411	Malignant neoplasm of upper-outer quadrant of right female breast
C50.412	Malignant neoplasm of upper-outer quadrant of left female breast
C50.419	Malignant neoplasm of upper-outer quadrant of unspecified female breast
C50.421	Malignant neoplasm of upper-outer quadrant of right male breast
C50.422	Malignant neoplasm of upper-outer quadrant of left male breast
C50.429	Malignant neoplasm of upper-outer quadrant of unspecified male breast
C50.511	Malignant neoplasm of lower-outer quadrant of right female breast

ICD-10 CM Diagnosis Code	Description
C50.512	Malignant neoplasm of lower-outer quadrant of left female breast
C50.519	Malignant neoplasm of lower-outer quadrant of unspecified female breast
C50.521	Malignant neoplasm of lower-outer quadrant of right male breast
C50.522	Malignant neoplasm of lower-outer quadrant of left male breast
C50.529	Malignant neoplasm of lower-outer quadrant of unspecified male breast
C50.611	Malignant neoplasm of axillary tail of right female breast
C50.612	Malignant neoplasm of axillary tail of left female breast
C50.619	Malignant neoplasm of axillary tail of unspecified female breast
C50.621	Malignant neoplasm of axillary tail of right male breast
C50.622	Malignant neoplasm of axillary tail of left male breast
C50.629	Malignant neoplasm of axillary tail of unspecified male breast
C50.811	Malignant neoplasm of overlapping sites of right female breast
C50.812	Malignant neoplasm of overlapping sites of left female breast
C50.819	Malignant neoplasm of overlapping sites of unspecified female breast
C50.821	Malignant neoplasm of overlapping sites of right male breast
C50.822	Malignant neoplasm of overlapping sites of left male breast
C50.829	Malignant neoplasm of overlapping sites of unspecified male breast
C50.911	Malignant neoplasm of unspecified site of right female breast
C50.912	Malignant neoplasm of unspecified site of left female breast
C50.919	Malignant neoplasm of unspecified site of unspecified female breast
C50.921	Malignant neoplasm of unspecified site of right male breast
C50.922	Malignant neoplasm of unspecified site of left male breast
C50.929	Malignant neoplasm of unspecified site of unspecified male breast

Exhibit 3-2. Breast Cancer Surgery: CPT Codes and Descriptions

CPT Code*	Description
19301	Mastectomy, partial
19302	Mastectomy, partial with axillary lymphadenectomy
19303	Mastectomy, simple, complete
19304	Mastectomy, subcutaneous
19305	Mastectomy, radical with axillary lymphadenectomy and excision of pectoral muscle
19306	Mastectomy, radical with axillary and internal lymphadenectomy and excision of pectoral muscle
19307	Mastectomy, modified radical with axillary lymphadenectomy, with or without pectoralis minor muscle, but excluding pectoralis major muscle

*No changes to this list of CPT codes were made following the second field test.

Exhibit 3-3. Breast Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
0HBT0ZZ	Excision of Right Breast, Open Approach
0HBU0ZZ	Excision of Left Breast, Open Approach
0HBV0ZZ	Excision of Bilateral Breast, Open Approach
0HBWXZZ	Excision of Right Nipple, External Approach
0HBXXZZ	Excision of Left Nipple, External Approach
0HRT075	Replacement of Right Breast using Latissimus Dorsi Myocutaneous Flap, Open Approach
0HRT076	Replacement of Right Breast using Transverse Rectus Abdominis Myocutaneous Flap, Open Approach
0HRT077	Replacement of Right Breast using Deep Inferior Epigastric Artery Perforator Flap, Open Approach
0HRT078	Replacement of Right Breast using Superficial Inferior Epigastric Artery Flap, Open Approach
0HRT079	Replacement of Right Breast using Gluteal Artery Perforator Flap, Open Approach

ICD-10 PCS Procedure Code	Description
0HRT07Z	Replacement of Right Breast with Autologous Tissue Substitute, Open Approach
0HRT0JZ	Replacement of Right Breast with Synthetic Substitute, Open Approach
0HRT0KZ	Replacement of Right Breast with Nonautologous Tissue Substitute, Open Approach
0HRU075	Replacement of Left Breast using Latissimus Dorsi Myocutaneous Flap, Open Approach
0HRU076	Replacement of Left Breast using Transverse Rectus Abdominis Myocutaneous Flap, Open Approach
0HRU077	Replacement of Left Breast using Deep Inferior Epigastric Artery Perforator Flap, Open Approach
0HRU078	Replacement of Left Breast using Superficial Inferior Epigastric Artery Flap, Open Approach
0HRU079	Replacement of Left Breast using Gluteal Artery Perforator Flap, Open Approach
0HRU07Z	Replacement of Left Breast with Autologous Tissue Substitute, Open Approach
0HRU0JZ	Replacement of Left Breast with Synthetic Substitute, Open Approach
0HRU0KZ	Replacement of Left Breast with Nonautologous Tissue Substitute, Open Approach
0HRV075	Replacement of Bilateral Breast using Latissimus Dorsi Myocutaneous Flap, Open Approach
0HRV076	Replacement of Bilateral Breast using Transverse Rectus Abdominis Myocutaneous Flap, Open Approach
0HRV077	Replacement of Bilateral Breast using Deep Inferior Epigastric Artery Perforator Flap, Open Approach
0HRV078	Replacement of Bilateral Breast using Superficial Inferior Epigastric Artery Flap, Open Approach
0HRV079	Replacement of Bilateral Breast using Gluteal Artery Perforator Flap, Open Approach
0HRV07Z	Replacement of Bilateral Breast with Autologous Tissue Substitute, Open Approach

ICD-10 PCS Procedure Code	Description
0HRV0JZ	Replacement of Bilateral Breast with Synthetic Substitute, Open Approach
0HRV0KZ	Replacement of Bilateral Breast with Nonautologous Tissue Substitute, Open Approach
0HTT0ZZ	Resection of Right Breast, Open Approach
0HTU0ZZ	Resection of Left Breast, Open Approach
0HTV0ZZ	Resection of Bilateral Breast, Open Approach
0HTWXZZ	Resection of Right Nipple, External Approach
0HTXXZZ	Resection of Left Nipple, External Approach

4. Cervical Surgery: Algorithm and Codes

A person with cervical cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

1. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of the cervix, C53.* (i.e., C53.0, C53.1, C53.8, C53.9; Exhibit 4-1),

   and

2. The person has any CPT procedure code in Exhibit 4-2 associated with (i.e., on the same billing line) a primary diagnosis of C53.*,

   and

3. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

1. The person had a primary ICD-10 CM diagnosis of C53.* (Exhibit 4-1),

   and

2. The person has any ICD-10 PCS procedure code for resection of the cervix (Exhibit 4-3). The procedure must be associated with a primary diagnosis of C53.*,

   and

3. The discharge date is before the sample date.

Exhibit 4-1. Cervical Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C53.0	Malignant neoplasm of endocervix
C53.1	Malignant neoplasm of exocervix
C53.8	Malignant neoplasm of overlapping sites of cervix uteri
C53.9	Malignant neoplasm of cervix uteri, unspecified

Exhibit 4-2. Cervical Cancer Surgery: CPT Codes and Descriptions

CPT Code	Description
57520	Conization of cervix, with or without fulguration, with or without dilation and curettage, with or without repair; cold knife or laser
57522	Conization of cervix, with or without fulguration, with or without dilation and curettage, with or without repair; loop electrode excision

CPT Code	Description
57530	Trachelectomy (cervicectomy), amputation of cervix (separate procedure)
57531	Radical trachelectomy
57540	Excision of cervical stump, abdominal approach
57545	Excision of cervical stump, abdominal approach; with pelvic floor repair
57550	Excision of cervical stump, vaginal approach
57555	Excision of cervical stump, vaginal approach; with anterior and/or posterior repair
57556	Excision of cervical stump, vaginal approach; with repair of enterocele
58150	Total abdominal hysterectomy (corpus and cervix), with or without removal of tube(s), with or without removal of ovary(ies)
58152	Total abdominal hysterectomy (corpus and cervix), with or without removal of tube(s), with or without removal of ovary(ies); with colpo-urethrocystopexy (e.g., Marshall-Marchetti-Krantz, Burch)
58200	Total abdominal hysterectomy, including partial vaginectomy, with para-aortic and pelvic lymph node sampling, with or without removal of tube(s), with or without removal of ovary(ies)
58210	Radical abdominal hysterectomy, with bilateral total pelvic lymphadenectomy and para-aortic lymph node sampling (biopsy), with or without removal of tube(s), with or without removal of ovary(ies)
58240	Pelvic exenteration for gynecologic malignancy, with total abdominal hysterectomy or cervicectomy, with or without removal of tube(s), with or without removal of ovary(ies), with removal of bladder and ureteral transplantations, and/or abdominoperineal resection of rectum and colon and colostomy, or any combination thereof
58260	Vaginal hysterectomy, for uterus 250 g or less
58262	Vaginal hysterectomy, for uterus 250 g or less; with removal of tube(s), and/or ovary(ies)
58263	Vaginal hysterectomy, for uterus 250 g or less; with removal of tube(s), and/or ovary(ies), with repair of enterocele
58267	Vaginal hysterectomy, for uterus 250 g or less; with colpo-urethrocystopexy (Marshall-Marchetti-Krantz type, Pereyra type) with or without endoscopic control
58270	Vaginal hysterectomy, for uterus 250 g or less; with repair of enterocele

CPT Code	Description
58275	Vaginal hysterectomy, with total or partial vaginectomy;
58280	Vaginal hysterectomy, with total or partial vaginectomy; with repair of enterocele
58285	Vaginal hysterectomy, radical (Schauta type operation)
58290	Vaginal hysterectomy, for uterus greater than 250 g
58291	Vaginal hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies)
58292	Vaginal hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies), with repair of enterocele
58293	Vaginal hysterectomy, for uterus greater than 250 g; with colpo-urethrocystopexy (Marshall-Marchetti-Krantz type,Pereyra type) with or without endoscopic control
58294	Vaginal hysterectomy, for uterus greater than 250 g; with repair of enterocele
58548	Laparoscopy, surgical, with radical hysterectomy, with bilateral total pelvic lymphadenectomy and para-aortic lymph node sampling (biopsy), with removal of tube(s) and ovary(ies), if performed
58550	Laparoscopy, surgical, with vaginal hysterectomy, for uterus 250 g or less
58552	Laparoscopy, surgical, with vaginal hysterectomy, for uterus 250 g or less; with removal of tube(s) and/or ovary(ies)
58553	Laparoscopy, surgical, with vaginal hysterectomy, for uterus greater than 250 g
58554	Laparoscopy, surgical, with vaginal hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies)
58570	Laparoscopy, surgical, with total hysterectomy, for uterus 250 g or less
58571	Laparoscopy, surgical, with total hysterectomy, for uterus 250 g or less; with removal of tube(s) and/or ovary(ies)
58572	Laparoscopy, surgical, with total hysterectomy, for uterus greater than 250 g
58573	Laparoscopy, surgical, with total hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies)
58951	Resection (initial) of ovarian, tubal or primary peritoneal malignancy with bilateral salpingo-oophorectomy and omentectomy; with total

CPT Code	Description
	abdominal hysterectomy, pelvic and limited para-aortic lymphadenectomy
58952	Resection (initial) of ovarian, tubal or primary peritoneal malignancy with bilateral salpingo-oophorectomy and omentectomy; with radical dissection for debulking (i.e., radical excision or destruction, intra-abdominal or retroperitoneal tumors)
58953	Bilateral salpingo-oophorectomy with omentectomy, total abdominal hysterectomy and radical dissection for debulking
58954	Bilateral salpingo-oophorectomy with omentectomy, total abdominal hysterectomy and radical dissection for debulking; with pelvic lymphadenectomy and limited para-aortic lymphadenectomy
58956	Bilateral salpingo-oophorectomy with total omentectomy, total abdominal hysterectomy for malignancy

Exhibit 4-3. Cervical Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
0UBC0ZZ	Excision of Cervix, Open Approach
0UBC4ZZ	Excision of Cervix, Percutaneous Endoscopic Approach
0UBC7ZZ	Excision of Cervix, Via Natural or Artificial Opening
0UBC8ZZ	Excision of Cervix, Via Natural or Artificial Opening Endoscopic
0UT90ZZ	Resection of Uterus, Open Approach
0UT94ZZ	Resection of Uterus, Percutaneous Endoscopic Approach
0UT97ZZ	Resection of Uterus, Via Natural or Artificial Opening
0UT98ZZ	Resection of Uterus, Via Natural or Artificial Opening Endoscopic
0UT9FZZ	Resection of Uterus, Via Natural or Artificial Opening With Percutaneous Endoscopic Assistance
0UTC0ZZ	Resection of Cervix, Open Approach
0UTC4ZZ	Resection of Cervix, Percutaneous Endoscopic Approach
0UTC7ZZ	Resection of Cervix, Via Natural or Artificial Opening
0UTC8ZZ	Resection of Cervix, Via Natural or Artificial Opening Endoscopic

5. Colon Surgery: Algorithm and Codes

A person with colon cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

1. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of the colon, C18.* (i.e., C18.0, C18.1, C18.2, C18.3, C18.4, C18.5, C18.6, C18.7, C18.8, C18.9) or carcinoma in situ of colon, D01.0 (Exhibit 5-1),

   and

2. The person has any CPT procedure code in Exhibit 5-2 associated with (i.e., on the same billing line) a primary diagnosis of C18.* or D01.0 (Exhibit 5-1),

   and

3. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

1. The person had a primary ICD-10 CM diagnosis of C18.* or D01.0 (Exhibit 5-1),

   and

2. The person has any ICD-10 PCS procedure code for resection of the colon (Exhibit 5-3). The procedure must be associated with a primary diagnosis of C18.* or D01.0,

   and

3. The discharge date is before the sample date.

Exhibit 5-1. Colon Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C18.0	Malignant neoplasm of cecum
C18.1	Malignant neoplasm of appendix
C18.2	Malignant neoplasm of ascending colon
C18.3	Malignant neoplasm of hepatic flexure
C18.4	Malignant neoplasm of transverse colon
C18.5	Malignant neoplasm of splenic flexure
C18.6	Malignant neoplasm of descending colon
C18.7	Malignant neoplasm of sigmoid colon

ICD-10 CM Diagnosis Code	Description
C18.8	Malignant neoplasm of overlapping sites of colon
C18.9	Malignant neoplasm of colon, unspecified
D01.0	Carcinoma in situ of colon

Exhibit 5-2. Colon Cancer Surgery: CPT Codes and Descriptions

CPT Code	Description
44110*	Excision of 1 or more lesions of small or large intestine not requiring anastomosis, exteriorization, or fistulization; single enterotomy
44111*	Excision of 1 or more lesions of small or large intestine not requiring anastomosis, exteriorization, or fistulization; multiple enterotomies
44140	Colectomy, partial; with anastomosis
44141	Colectomy, partial; with skin level cecostomy or colostomy
44143	Colectomy, partial; with end colostomy and closure of distal segment (Hartmann type procedure)
44144	Colectomy, partial; with resection, with colostomy or ileostomy and creation of mucofistula
44145	Colectomy, partial; with coloproctostomy (low pelvic anastomosis)
44146	Colectomy, partial; with coloproctostomy (low pelvic anastomosis), with colostomy
44147	Colectomy, partial; abdominal and transanal approach
44150	Colectomy, total, abdominal, without proctectomy; with ileostomy or ileoproctostomy
44151	Colectomy, total, abdominal, without proctectomy; with continent ileostomy
44155	Colectomy, total, abdominal, with proctectomy; with ileostomy
44156	Colectomy, total, abdominal, with proctectomy; with continent ileostomy
44157	Colectomy, total, abdominal, with proctectomy; with ileoanal anastomosis, includes loop ileostomy, and rectal mucosectomy, when performed

44158	Colectomy, total, abdominal, with proctectomy; with ileoanal anastomosis, creation of ileal reservoir (S or J), includes loop ileostomy, and rectal mucosectomy, when performed
44160	Colectomy, partial, with removal of terminal ileum with ileocolostomy
44204	Laparoscopy, surgical; colectomy, partial, with anastomosis
44205	Laparoscopy, surgical; colectomy, partial, with removal of terminal ileum with ileocolostomy
44206	Laparoscopy, surgical; colectomy, partial, with end colostomy and closure of distal segment (Hartmann type procedure)
44207	Laparoscopy, surgical; colectomy, partial, with anastomosis, with coloproctostomy (low pelvic anastomosis)
44208	Laparoscopy, surgical; colectomy, partial, with anastomosis, with coloproctostomy (low pelvic anastomosis) with colostomy
44210	Laparoscopy, surgical; colectomy, total, abdominal, without proctectomy, with ileostomy or ileoproctostomy
44211	Laparoscopy, surgical; colectomy, total, abdominal, with proctectomy, with ileoanal anastomosis, creation of ileal reservoir (S or J), with loop ileostomy, includes rectal mucosectomy, when performed
44212	Laparoscopy, surgical; colectomy, total, abdominal, with proctectomy, with ileostomy

*CPT code was added after the second field test and has not been field tested.

Exhibit 5-3. Colon Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
0DBE0ZZ	Excision of Large Intestine, Open Approach
0DBE4ZZ	Excision of Large Intestine, Percutaneous Endoscopic Approach
0DBE7ZZ	Excision of Large Intestine, Via Natural or Artificial Opening
0DBE8ZZ	Excision of Large Intestine, Via Natural or Artificial Opening Endoscopic
0DBF0ZZ	Excision of Right Large Intestine, Open Approach
0DBF4ZZ	Excision of Right Large Intestine, Percutaneous Endoscopic Approach
0DBF7ZZ	Excision of Right Large Intestine, Via Natural or Artificial Opening

ICD-10 PCS Procedure Code	Description
0DBF8ZZ	Excision of Right Large Intestine, Via Natural or Artificial Opening Endoscopic
0DBG0ZZ	Excision of Left Large Intestine, Open Approach
0DBG4ZZ	Excision of Left Large Intestine, Percutaneous Endoscopic Approach
0DBG7ZZ	Excision of Left Large Intestine, Via Natural or Artificial Opening
0DBG8ZZ	Excision of Left Large Intestine, Via Natural or Artificial Opening Endoscopic
0DBK0ZZ	Excision of Ascending Colon, Open Approach
0DBK4ZZ	Excision of Ascending Colon, Percutaneous Endoscopic Approach
0DBK7ZZ	Excision of Ascending Colon, Via Natural or Artificial Opening
0DBK8ZZ	Excision of Ascending Colon, Via Natural or Artificial Opening Endoscopic
0DBL0ZZ	Excision of Transverse Colon, Open Approach
0DBL4ZZ	Excision of Transverse Colon, Percutaneous Endoscopic Approach
0DBL7ZZ	Excision of Transverse Colon, Via Natural or Artificial Opening
0DBL8ZZ	Excision of Transverse Colon, Via Natural or Artificial Opening Endoscopic
0DBM0ZZ	Excision of Descending Colon, Open Approach
0DBM4ZZ	Excision of Descending Colon, Percutaneous Endoscopic Approach
0DBM7ZZ	Excision of Descending Colon, Via Natural or Artificial Opening
0DBM8ZZ	Excision of Descending Colon, Via Natural or Artificial Opening Endoscopic
0DBN0ZZ	Excision of Sigmoid Colon, Open Approach
0DBN4ZZ	Excision of Sigmoid Colon, Percutaneous Endoscopic Approach
0DBN7ZZ	Excision of Sigmoid Colon, Via Natural or Artificial Opening
0DBN8ZZ	Excision of Sigmoid Colon, Via Natural or Artificial Opening Endoscopic
0DTE0ZZ	Resection of Large Intestine, Open Approach

ICD-10 PCS Procedure Code	Description
0DTE4ZZ	Resection of Large Intestine, Percutaneous Endoscopic Approach
0DTE7ZZ	Resection of Large Intestine, Via Natural or Artificial Opening
0DTE8ZZ	Resection of Large Intestine, Via Natural or Artificial Opening Endoscopic
0DTF0ZZ	Resection of Right Large Intestine, Open Approach
0DTF4ZZ	Resection of Right Large Intestine, Percutaneous Endoscopic Approach
0DTF7ZZ	Resection of Right Large Intestine, Via Natural or Artificial Opening
0DTF8ZZ	Resection of Right Large Intestine, Via Natural or Artificial Opening Endoscopic
0DTG0ZZ	Resection of Left Large Intestine, Open Approach
0DTG4ZZ	Resection of Left Large Intestine, Percutaneous Endoscopic Approach
0DTG7ZZ	Resection of Left Large Intestine, Via Natural or Artificial Opening
0DTG8ZZ	Resection of Left Large Intestine, Via Natural or Artificial Opening Endoscopic
0DTK0ZZ	Resection of Ascending Colon, Open Approach
0DTK4ZZ	Resection of Ascending Colon, Percutaneous Endoscopic Approach
0DTK7ZZ	Resection of Ascending Colon, Via Natural or Artificial Opening
0DTK8ZZ	Resection of Ascending Colon, Via Natural or Artificial Opening Endoscopic
0DTL0ZZ	Resection of Transverse Colon, Open Approach
0DTL4ZZ	Resection of Transverse Colon, Percutaneous Endoscopic Approach
0DTL7ZZ	Resection of Transverse Colon, Via Natural or Artificial Opening
0DTL8ZZ	Resection of Transverse Colon, Via Natural or Artificial Opening Endoscopic
0DTM0ZZ	Resection of Descending Colon, Open Approach
0DTM4ZZ	Resection of Descending Colon, Percutaneous Endoscopic Approach
0DTM7ZZ	Resection of Descending Colon, Via Natural or Artificial Opening

ICD-10 PCS Procedure Code	Description
0DTM8ZZ	Resection of Descending Colon, Via Natural or Artificial Opening Endoscopic
0DTN0ZZ	Resection of Sigmoid Colon, Open Approach
0DTN4ZZ	Resection of Sigmoid Colon, Percutaneous Endoscopic Approach
0DTN7ZZ	Resection of Sigmoid Colon, Via Natural or Artificial Opening
0DTN8ZZ	Resection of Sigmoid Colon, Via Natural or Artificial Opening Endoscopic

6. Endometrial (Uterine) Surgery: Algorithm and Codes

A person with endometrial (uterine) cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

1. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of the uterus, C54.* (i.e., C54.0-C54.9) or carcinoma *in situ* of endometrium, D07.0 (Exhibit 6-1),

   and

2. The person has any CPT procedure code in Exhibit 6-2 associated with (i.e., on the same billing line) a primary diagnosis of C54.* or D07.0 (Exhibit 6-1),

   and

3. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

1. The person had a primary ICD-10 CM diagnosis of C54.* or D07.0 (Exhibit 6-1),

   and

2. The person has any ICD-10 PCS procedure code for resection of the uterus (Exhibit 6-3). The procedure must be associated with a primary diagnosis of C54.* or D07.0,

   and

3. The discharge date is before the sample date.

Exhibit 6-1. Endometrial (Uterine) Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C54.0	Malignant neoplasm of isthmus uteri
C54.1	Malignant neoplasm of endometrium
C54.2	Malignant neoplasm of myometrium
C54.3	Malignant neoplasm of fundus uteri
C54.8	Malignant neoplasm of overlapping sites of corpus uteri
C54.9	Malignant neoplasm of corpus uteri, unspecified
D07.0	Carcinoma in situ of endometrium

Exhibit 6-2. Endometrial (Uterine) Cancer Surgery: CPT Codes and Descriptions

CPT Code	Description
58150	Total abdominal hysterectomy (corpus and cervix), with or without removal of tube(s), with or without removal of ovary(ies)
58152	Total abdominal hysterectomy (corpus and cervix), with or without removal of tube(s), with or without removal of ovary(ies); with colpo-urethrocystopexy (e.g., Marshall-Marchetti-Krantz, Burch)
58180*	Supracervical abdominal hysterectomy (subtotal hysterectomy), with or without removal of tube(s), with or without removal of ovary(ies)
58200	Total abdominal hysterectomy, including partial vaginectomy, with para-aortic and pelvic lymph node sampling, with or without removal of tube(s), with or without removal of ovary(ies)
58210	Radical abdominal hysterectomy, with bilateral total pelvic lymphadenectomy and para-aortic lymph node sampling (biopsy), with or without removal of tube(s), with or without removal of ovary(ies)
58240	Pelvic exenteration for gynecologic malignancy, with total abdominal hysterectomy or cervicectomy, with or without removal of tube(s), with or without removal of ovary(ies), with removal of bladder and ureteral transplantations, and/or abdominoperineal resection of rectum and colon and colostomy, or any combination thereof
58260	Vaginal hysterectomy, for uterus 250 g or less
58262	Vaginal hysterectomy, for uterus 250 g or less; with removal of tube(s), and/or ovary(ies)
58263	Vaginal hysterectomy, for uterus 250 g or less; with removal of tube(s), and/or ovary(ies), with repair of enterocele
58267	Vaginal hysterectomy, for uterus 250 g or less; with colpo-urethrocystopexy (Marshall-Marchetti-Krantz type, Pereyra type) with or without endoscopic control
58270	Vaginal hysterectomy, for uterus 250 g or less; with repair of enterocele
58275	Vaginal hysterectomy, with total or partial vaginectomy;
58280	Vaginal hysterectomy, with total or partial vaginectomy; with repair of enterocele
58285	Vaginal hysterectomy, radical (Schauta type operation)
58290	Vaginal hysterectomy, for uterus greater than 250 g

CPT Code	Description
58291	Vaginal hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies)
58292	Vaginal hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies), with repair of enterocele
58293	Vaginal hysterectomy, for uterus greater than 250 g; with colpo-urethrocystopexy (Marshall-Marchetti-Krantz type,Pereyra type) with or without endoscopic control
58294	Vaginal hysterectomy, for uterus greater than 250 g; with repair of enterocele
58541*	Laparoscopy, surgical, supracervical hysterectomy, for uterus 250 g or less
58542*	Laparoscopy, surgical, supracervical hysterectomy, for uterus 250 g or less; with removal of tube(s) and/or ovary(ies)
58543*	Laparoscopy, surgical, supracervical hysterectomy, for uterus greater than 250 g
58544*	Laparoscopy, surgical, supracervical hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies)
58545*	Laparoscopy, surgical, myomectomy, excision; 1 to 4 intramural myomas with total weight of 250 g or less and/or removal of surface myomas
58546*	Laparoscopy, surgical, myomectomy, excision; 5 or more intramural myomas and/or intramural myomas with total weight greater than 250 g
58548	Laparoscopy, surgical, with radical hysterectomy, with bilateral total pelvic lymphadenectomy and para-aortic lymph node sampling (biopsy), with removal of tube(s) and ovary(ies), if performed
58550	Laparoscopy, surgical, with vaginal hysterectomy, for uterus 250 g or less
58552	Laparoscopy, surgical, with vaginal hysterectomy, for uterus 250 g or less; with removal of tube(s) and/or ovary(ies)
58553	Laparoscopy, surgical, with vaginal hysterectomy, for uterus greater than 250 g
58554	Laparoscopy, surgical, with vaginal hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies)
58570	Laparoscopy, surgical, with total hysterectomy, for uterus 250 g or less

CPT Code	Description
58571	Laparoscopy, surgical, with total hysterectomy, for uterus 250 g or less; with removal of tube(s) and/or ovary(ies)
58572	Laparoscopy, surgical, with total hysterectomy, for uterus greater than 250 g
58573	Laparoscopy, surgical, with total hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies)
58951	Resection (initial) of ovarian, tubal or primary peritoneal malignancy with bilateral salpingo-oophorectomy and omentectomy; with total abdominal hysterectomy, pelvic and limited para-aortic lymphadenectomy
58952	Resection (initial) of ovarian, tubal or primary peritoneal malignancy with bilateral salpingo-oophorectomy and omentectomy; with radical dissection for debulking (i.e., radical excision or destruction, intra-abdominal or retroperitoneal tumors)
58953	Bilateral salpingo-oophorectomy with omentectomy, total abdominal hysterectomy and radical dissection for debulking
58954	Bilateral salpingo-oophorectomy with omentectomy, total abdominal hysterectomy and radical dissection for debulking; with pelvic lymphadenectomy and limited para-aortic lymphadenectomy
58956	Bilateral salpingo-oophorectomy with total omentectomy, total abdominal hysterectomy for malignancy
58957*	Resection (tumor debulking) of recurrent ovarian, tubal, primary peritoneal, uterine malignancy (intra-abdominal, retroperitoneal tumors), with omentectomy, if performed
58958*	Resection (tumor debulking) of recurrent ovarian, tubal, primary peritoneal, uterine malignancy (intra-abdominal, retroperitoneal tumors), with omentectomy, if performed; with pelvic lymphadenectomy and limited para-aortic lymphadenectomy

*CPT code was added after the second field test and has not been field tested.

Exhibit 6-3. Endometrial (Uterine) Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
0UT90ZZ	Resection of Uterus, Open Approach
0UT94ZZ	Resection of Uterus, Percutaneous Endoscopic Approach

ICD-10 PCS Procedure Code	Description
0UT97ZZ	Resection of Uterus, Via Natural or Artificial Opening
0UT98ZZ	Resection of Uterus, Via Natural or Artificial Opening Endoscopic
0UT9FZZ	Resection of Uterus, Via Natural or Artificial Opening With Percutaneous Endoscopic Assistance

7. Esophagus Surgery: Algorithm and Codes

A person with esophageal cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

1. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of the esophagus, C15.* (i.e., C15.3, C15.4, C15.5, C15.8, C15.9) or carcinoma *in situ* of esophagus, D00.1 (Exhibit 7-1),

   and

2. The person has any CPT procedure code in Exhibit 7-2 associated with (i.e., on the same billing line) a primary diagnosis of C54.* or D07.0 (Exhibit 7-1),

   and

3. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

1. The person had a primary ICD-10 CM diagnosis of C15.* or D00.1 (Exhibit 7-1),

   and

2. The person has any ICD-10 PCS procedure code for excision or resection of the esophagus (Exhibit 7-3). The procedure must be associated with a primary diagnosis of C15.* or D000.1,

   and

3. The discharge date is before the sample date.

Exhibit 7-1. Esophageal Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C15.3	Malignant neoplasm of upper third of esophagus
C15.4	Malignant neoplasm of middle third of esophagus
C15.5	Malignant neoplasm of lower third of esophagus
C15.8	Malignant neoplasm of overlapping sites of esophagus
C15.9	Malignant neoplasm of esophagus, unspecified
D00.1	Carcinoma in situ of esophagus

Exhibit 7-2. Esophageal Cancer Surgery: CPT Codes and Descriptions

CPT Code	Description
43107	Total or near total esophagectomy, without thoracotomy; with pharyngogastrostomy or cervical esophagogastrostomy, with or without pyloroplasty (transhiatal)
43108*	Total or near total esophagectomy, without thoracotomy; with colon interposition or small intestine reconstruction, including intestine mobilization, preparation and anastomosis(es)
43112	Total or near total esophagectomy, with thoracotomy; with pharyngogastrostomy or cervical esophagogastrostomy, with or without pyloroplasty
43113*	Total or near total esophagectomy, with thoracotomy; with colon interposition or small intestine reconstruction, including intestine mobilization, preparation, and anastomosis(es)
43116*	Partial esophagectomy, cervical, with free intestinal graft, including microvascular anastomosis, obtaining the graft and intestinal reconstruction
43117	Partial esophagectomy, distal two-thirds, with thoracotomy and separate abdominal incision, with or without proximal gastrectomy; with thoracic esophagogastrostomy, with or without pyloroplasty (Ivor Lewis)
43118*	Partial esophagectomy, distal two-thirds, with thoracotomy and separate abdominal incision, with or without proximal gastrectomy; with colon interposition or small intestine reconstruction, including intestine mobilization, preparation, and anastomosis(es)
43121	Partial esophagectomy, distal two-thirds, with thoracotomy only, with or without proximal gastrectomy, with thoracic esophagogastrostomy, with or without pyloroplasty
43122	Partial esophagectomy, thoracoabdominal or abdominal approach, with or without proximal gastrectomy; with esophagogastrostomy, with or without pyloroplasty
43123*	Partial esophagectomy, thoracoabdominal or abdominal approach, with or without proximal gastrectomy; with colon interposition or small intestine reconstruction, including intestine mobilization, preparation, and anastomosis(es)
43124*	Total or partial esophagectomy, without reconstruction (any approach), with cervical esophagostomy

*CPT code was added after the second field test and has not been field tested. Several codes used in the second field test were removed following additional review (43611-Excision, local; malignant tumor of stomach; 43620-Gastrectomy, total; with esophagoenterostomy; 43621-Gastrectomy, total; with Roux-en-Y reconstruction).

Exhibit 7-3. Esophageal Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
0DB10ZZ	Excision of Upper Esophagus, Open Approach
0DB14ZZ	Excision of Upper Esophagus, Percutaneous Endoscopic Approach
0DB17ZZ	Excision of Upper Esophagus, Via Natural or Artificial Opening
0DB18ZZ	Excision of Upper Esophagus, Via Natural or Artificial Opening Endoscopic
0DB20ZZ	Excision of Middle Esophagus, Open Approach
0DB24ZZ	Excision of Middle Esophagus, Percutaneous Endoscopic Approach
0DB27ZZ	Excision of Middle Esophagus, Via Natural or Artificial Opening
0DB28ZZ	Excision of Middle Esophagus, Via Natural or Artificial Opening Endoscopic
0DB30ZZ	Excision of Lower Esophagus, Open Approach
0DB34ZZ	Excision of Lower Esophagus, Percutaneous Endoscopic Approach
0DB37ZZ	Excision of Lower Esophagus, Via Natural or Artificial Opening
0DB38ZZ	Excision of Lower Esophagus, Via Natural or Artificial Opening Endoscopic
0DB40ZZ	Excision of Esophagogastric Junction, Open Approach
0DB44ZZ	Excision of Esophagogastric Junction, Percutaneous Endoscopic Approach
0DB47ZZ	Excision of Esophagogastric Junction, Via Natural or Artificial Opening
0DB48ZZ	Excision of Esophagogastric Junction, Via Natural or Artificial Opening Endoscopic
0DB50ZZ	Excision of Esophagus, Open Approach
0DB54ZZ	Excision of Esophagus, Percutaneous Endoscopic Approach
0DB57ZZ	Excision of Esophagus, Via Natural or Artificial Opening
0DB58ZZ	Excision of Esophagus, Via Natural or Artificial Opening Endoscopic

ICD-10 PCS Procedure Code	Description
0DT10ZZ	Resection of Upper Esophagus, Open Approach
0DT14ZZ	Resection of Upper Esophagus, Percutaneous Endoscopic Approach
0DT20ZZ	Resection of Middle Esophagus, Open Approach
0DT24ZZ	Resection of Middle Esophagus, Percutaneous Endoscopic Approach
0DT30ZZ	Resection of Lower Esophagus, Open Approach
0DT34ZZ	Resection of Lower Esophagus, Percutaneous Endoscopic Approach
0DT40ZZ	Resection of Esophagogastric Junction, Open Approach
0DT44ZZ	Resection of Esophagogastric Junction, Percutaneous Endoscopic Approach
0DT50ZZ	Resection of Esophagus, Open Approach
0DT54ZZ	Resection of Esophagus, Percutaneous Endoscopic Approach

8. Liver Surgery: Algorithm and Codes

A person with liver cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

1. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of the liver, C22.* (i.e., C22.0, C22.1, C22.2, C22.3, C22.4, C22.7, C22.8, C22.9); carcinoma in situ of liver, gallbladder and bile ducts, D01.5; secondary malignant neoplasm of liver and intrahepatic bile duct, C78.7; or secondary carcinoid tumors of liver, C7B.02 (Exhibit 8-1),

   and

2. The person has any CPT procedure code in Exhibit 8-2 associated with (i.e., on the same billing line) a primary diagnosis of C22.*, D01.5, C78.7, or C7B.02 (Exhibit 8-1),

   and

3. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

1. The person had a primary ICD-10 CM diagnosis of C22.*, D01.5, C78.7, or C7B.02 (Exhibit 8-1),

   and

2. The person has any ICD-10 PCS procedure code for excision or resection of the liver (Exhibit 8-3). The procedure must be associated with a primary diagnosis of C22.*, D01.5, C78.7, or C7B.02,

   and

3. The discharge date is before the sample date.

Exhibit 8-1. Liver Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C22.0	Liver cell carcinoma
C22.1	Intrahepatic bile duct carcinoma
C22.2	Hepatoblastoma
C22.3	Angiosarcoma of liver
C22.4	Other sarcomas of liver
C22.7	Other specified carcinomas of liver

ICD-10 CM Diagnosis Code	Description
C22.8	Malignant neoplasm of liver, primary, unspecified as to type
C22.9	Malignant neoplasm of liver, not specified as primary or secondary
D01.5	Carcinoma in situ of liver, gallbladder and bile ducts
C78.7	Secondary malignant neoplasm of liver and intrahepatic bile duct
C7B.02	Secondary carcinoid tumors of liver

Exhibit 8-2. Liver Cancer Surgery: CPT Codes and Descriptions

CPT Code*	Description
47120	Hepatectomy, resection of liver; partial lobectomy
47122	Hepatectomy, resection of liver; trisegmentectomy
47125	Hepatectomy, resection of liver; total left lobectomy
47130	Hepatectomy, resection of liver; total right lobectomy

*CPT codes were added after the second field test and have not been field tested.

Exhibit 8-3. Liver Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
0FB00ZZ	Excision of Liver, Open Approach
0FB04ZZ	Excision of Liver, Percutaneous Endoscopic Approach
0FB10ZZ	Excision of Right Lobe Liver, Open Approach
0FB14ZZ	Excision of Right Lobe Liver, Percutaneous Endoscopic Approach
0FB20ZZ	Excision of Left Lobe Liver, Open Approach
0FB24ZZ	Excision of Left Lobe Liver, Percutaneous Endoscopic Approach
0FT10ZZ	Resection of Right Lobe Liver, Open Approach
0FT14ZZ	Resection of Right Lobe Liver, Percutaneous Endoscopic Approach
0FT20ZZ	Resection of Left Lobe Liver, Open Approach

ICD-10 PCS Procedure Code	Description
0FT24ZZ	Resection of Left Lobe Liver, Percutaneous Endoscopic Approach

9. Lung Surgery: Algorithm and Codes

A person with lung cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

1. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of the lung, C34.* (i.e., C34.10-C34.92) or carcinoma *in situ* of the lung, D02.2* (i.e., D02.20-D02.22) (Exhibit 9-1),

   and

2. The person has any CPT procedure code in Exhibit 9-2 associated with (i.e., on the same billing line) a primary diagnosis of C34.* or D02.2* (Exhibit 9-1),

   and

3. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

1. The person had a primary ICD-10 CM diagnosis of C34.* or D02.2* (Exhibit 9-1),

   and

2. The person has any ICD-10 PCS procedure code for excision or resection of the left, right, or bilateral lung (Exhibit 9-3). The procedure must be associated with a primary diagnosis of C34.* or D02.2*,

   and

3. The discharge date is before the sample date.

Exhibit 9-1. Lung Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C34.10	Malignant neoplasm of upper lobe, unspecified bronchus or lung
C34.11	Malignant neoplasm of upper lobe, right bronchus or lung
C34.12	Malignant neoplasm of upper lobe, left bronchus or lung
C34.2	Malignant neoplasm of middle lobe, bronchus or lung
C34.30	Malignant neoplasm of lower lobe, unspecified bronchus or lung
C34.31	Malignant neoplasm of lower lobe, right bronchus or lung
C34.32	Malignant neoplasm of lower lobe, left bronchus or lung
C34.80	Malignant neoplasm of overlapping sites of unspecified bronchus and

ICD-10 CM Diagnosis Code	Description
	lung
C34.81	Malignant neoplasm of overlapping sites of right bronchus and lung
C34.82	Malignant neoplasm of overlapping sites of left bronchus and lung
C34.90	Malignant neoplasm of unspecified part of unspecified bronchus or lung
C34.91	Malignant neoplasm of unspecified part of right bronchus or lung
C34.92	Malignant neoplasm of unspecified part of left bronchus or lung
D02.20	Carcinoma in situ of unspecified bronchus and lung
D02.21	Carcinoma in situ of right bronchus and lung
D02.22	Carcinoma in situ of left bronchus and lung

Exhibit 9-2. Lung Cancer Surgery: CPT Codes and Descriptions

CPT Code	Description
32440	Removal of lung, pneumonectomy
32442	Removal of lung, pneumonectomy; with resection of segment of trachea followed by broncho-tracheal anastomosis (sleeve pneumonectomy)
32445*	Removal of lung, pneumonectomy; extrapleural
32480	Removal of lung, other than pneumonectomy; single lobe (lobectomy)
32482	Removal of lung, other than pneumonectomy; 2 lobes (bilobectomy)
32484	Removal of lung, other than pneumonectomy; single segment (segmentectomy)
32486	Removal of lung, other than pneumonectomy; with circumferential resection of segment of bronchus followed by broncho-bronchial anastomosis (sleeve lobectomy)
32488	Removal of lung, other than pneumonectomy; with all remaining lung following previous removal of a portion of lung (completion pneumonectomy)
32501	Resection and repair of portion of bronchus (bronchoplasty) when performed at time of lobectomy or segmentectomy (List separately in addition to code for primary procedure)

CPT Code	Description
32505	Thoracotomy; with therapeutic wedge resection (e.g., mass, nodule), initial
32506	Thoracotomy; with therapeutic wedge resection (e.g., mass or nodule), each additional resection, ipsilateral (List separately in addition to code for primary procedure)
32507	Thoracotomy; with diagnostic wedge resection followed by anatomic lung resection (List separately in addition to code for primary procedure)
32663	Thoracoscopy, surgical; with lobectomy (single lobe)
32666	Thoracoscopy, surgical; with therapeutic wedge resection (e.g., mass, nodule), initial unilateral
32667	Thoracoscopy, surgical; with therapeutic wedge resection (e.g., mass or nodule), each additional resection, ipsilateral (List separately in addition to code for primary procedure)
32668	Thoracoscopy, surgical; with diagnostic wedge resection followed by anatomic lung resection (List separately in addition to code for primary procedure)
32669	Thoracoscopy, surgical; with removal of a single lung segment (segmentectomy)
32670	Thoracoscopy, surgical; with removal of two lobes (bilobectomy)
32671	Thoracoscopy, surgical; with removal of lung (pneumonectomy)

*CPT code was added after the second field test and has not been field tested.

Exhibit 9-3. Lung Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
0BBC0ZZ	Excision of Right Upper Lung Lobe, Open Approach
0BBC4ZZ	Excision of Right Upper Lung Lobe, Percutaneous Endoscopic Approach
0BBD0ZZ	Excision of Right Middle Lung Lobe, Open Approach
0BBD4ZZ	Excision of Right Middle Lung Lobe, Percutaneous Endoscopic Approach
0BBF0ZZ	Excision of Right Lower Lung Lobe, Open Approach

ICD-10 PCS Procedure Code	Description
0BBF4ZZ	Excision of Right Lower Lung Lobe, Percutaneous Endoscopic Approach
0BBG0ZZ	Excision of Left Upper Lung Lobe, Open Approach
0BBG4ZZ	Excision of Left Upper Lung Lobe, Percutaneous Endoscopic Approach
0BBH0ZZ	Excision of Lung Lingula, Open Approach
0BBH4ZZ	Excision of Lung Lingula, Percutaneous Endoscopic Approach
0BBJ0ZZ	Excision of Left Lower Lung Lobe, Open Approach
0BBJ4ZZ	Excision of Left Lower Lung Lobe, Percutaneous Endoscopic Approach
0BBK0ZZ	Excision of Right Lung, Open Approach
0BBK4ZZ	Excision of Right Lung, Percutaneous Endoscopic Approach
0BBL0ZZ	Excision of Left Lung, Open Approach
0BBL4ZZ	Excision of Left Lung, Percutaneous Endoscopic Approach
0BBM0ZZ	Excision of Bilateral Lungs, Open Approach
0BBM4ZZ	Excision of Bilateral Lungs, Percutaneous Endoscopic Approach
0BTC0ZZ	Resection of Right Upper Lung Lobe, Open Approach
0BTC4ZZ	Resection of Right Upper Lung Lobe, Percutaneous Endoscopic Approach
0BTD0ZZ	Resection of Right Middle Lung Lobe, Open Approach
0BTD4ZZ	Resection of Right Middle Lung Lobe, Percutaneous Endoscopic Approach
0BTF0ZZ	Resection of Right Lower Lung Lobe, Open Approach
0BTF4ZZ	Resection of Right Lower Lung Lobe, Percutaneous Endoscopic Approach
0BTG0ZZ	Resection of Left Upper Lung Lobe, Open Approach
0BTG4ZZ	Resection of Left Upper Lung Lobe, Percutaneous Endoscopic Approach
0BTH0ZZ	Resection of Lung Lingula, Open Approach

ICD-10 PCS Procedure Code	Description
0BTH4ZZ	Resection of Lung Lingula, Percutaneous Endoscopic Approach
0BTJ0ZZ	Resection of Left Lower Lung Lobe, Open Approach
0BTJ4ZZ	Resection of Left Lower Lung Lobe, Percutaneous Endoscopic Approach
0BTK0ZZ	Resection of Right Lung, Open Approach
0BTK4ZZ	Resection of Right Lung, Percutaneous Endoscopic Approach
0BTL0ZZ	Resection of Left Lung, Open Approach
0BTL4ZZ	Resection of Left Lung, Percutaneous Endoscopic Approach
0BTM0ZZ	Resection of Bilateral Lungs, Open Approach
0BTM4ZZ	Resection of Bilateral Lungs, Percutaneous Endoscopic Approach

10. Ovarian Surgery: Algorithm and Codes

A person with ovarian cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

4. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of the ovary, C56.* (i.e., C56.1, C56.2, C56.9) or uterine adnexa, unspecified, C57.4 (Exhibit 10-1),

   and

5. The person has any CPT procedure code in Exhibit 10-2 associated with (i.e., on the same billing line) a primary diagnosis of C56.* or C57.4 (Exhibit 10-1),

   and

6. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

7. The person had a primary ICD-10 CM diagnosis of C56.* or C57.4 (Exhibit 10-1),

   and

8. The person has any ICD-10 PCS procedure code for resection of the ovary (Exhibit 10-3). The procedure must be associated with a primary diagnosis of C56.* or C57.4,

   and

9. The discharge date is before the sample date.

Exhibit 10-1. Ovarian Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C56.1	Malignant neoplasm of right ovary
C56.2	Malignant neoplasm of left ovary
C56.9	Malignant neoplasm of unspecified ovary
C57.4	Malignant neoplasm of uterine adnexa, unspecified

Exhibit 10-2. Ovarian Cancer Surgery: CPT Codes and Descriptions

CPT Code	Description
58940	Oophorectomy, partial or total, unilateral or bilateral
58943	Oophorectomy, partial or total, unilateral or bilateral; for ovarian, tubal

CPT Code	Description
	or primary peritoneal malignancy, with para-aortic and pelvic lymph node biopsies, peritoneal
58950	Resection (initial) of ovarian, tubal or primary peritoneal malignancy with bilateral salpingo-oophorectomy and omentectomy
58951	Resection (initial) of ovarian, tubal or primary peritoneal malignancy with bilateral salpingo-oophorectomy and omentectomy; with total abdominal hysterectomy, pelvic and limited para-aortic lymphadenectomy
58952	Resection (initial) of ovarian, tubal or primary peritoneal malignancy with bilateral salpingo-oophorectomy and omentectomy; with radical dissection for debulking (i.e., radical excision or destruction, intra-abdominal or retroperitoneal tumors)
58953	Bilateral salpingo-oophorectomy with omentectomy, total abdominal hysterectomy and radical dissection for debulking
58954	Bilateral salpingo-oophorectomy with omentectomy, total abdominal hysterectomy and radical dissection for debulking; with pelvic lymphadenectomy and limited para-aortic lymphadenectomy
58956	Bilateral salpingo-oophorectomy with total omentectomy, total abdominal hysterectomy for malignancy
58661	Laparoscopy, surgical; with removal of adnexal structures (partial or total oophorectomy and/or salpingectomy)
58720	Salpingo-oophorectomy, complete or partial, unilateral or bilateral (separate procedure)
	Many uterine surgeries include ovary and could be included here:
58150	Total abdominal hysterectomy (corpus and cervix), with or without removal of tube(s), with or without removal of ovary(ies)
58180	Supracervical abdominal hysterectomy (subtotal hysterectomy), with or without removal of tube(s), with or without removal of ovary(ies)
58200	Total abdominal hysterectomy, including partial vaginectomy, with para-aortic and pelvic lymph node sampling, with or without removal of tube(s), with or without removal of ovary(ies)
58210	Radical abdominal hysterectomy, with bilateral total pelvic lymphadenectomy and para-aortic lymph node sampling (biopsy), with or without removal of tube(s), with or without removal of ovary(ies)

CPT Code	Description
58240	Pelvic exenteration for gynecologic malignancy, with total abdominal hysterectomy or cervicectomy, with or without removal of tube(s), with or without removal of ovary(ies), with removal of bladder and ureteral transplantations, and/or abdominoperineal resection of rectum and colon and colostomy, or any combination thereof
58262	Vaginal hysterectomy, for uterus 250 g or less; with removal of tube(s), and/or ovary(ies)
58263	Vaginal hysterectomy, for uterus 250 g or less; with removal of tube(s), and/or ovary(ies), with repair of enterocele
58291	Vaginal hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies)
58292	Vaginal hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies), with repair of enterocele
58542	Laparoscopy, surgical, supracervical hysterectomy, for uterus 250 g or less; with removal of tube(s) and/or ovary(ies)
58544	Laparoscopy, surgical, supracervical hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies)
58548	Laparoscopy, surgical, with radical hysterectomy, with bilateral total pelvic lymphadenectomy and para-aortic lymph node sampling (biopsy), with removal of tube(s) and ovary(ies), if performed
58552	Laparoscopy, surgical, with vaginal hysterectomy, for uterus 250 g or less; with removal of tube(s) and/or ovary(ies)
58554	Laparoscopy, surgical, with vaginal hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies)
58571	Laparoscopy, surgical, with total hysterectomy, for uterus 250 g or less; with removal of tube(s) and/or ovary(ies)
58573	Laparoscopy, surgical, with total hysterectomy, for uterus greater than 250 g; with removal of tube(s) and/or ovary(ies)

Exhibit 10-3. Ovarian Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
0UT00ZZ	Resection of Right Ovary, Open Approach
0UT04ZZ	Resection of Right Ovary, Percutaneous Endoscopic Approach

ICD-10 PCS Procedure Code	Description
0UT07ZZ	Resection of Right Ovary, Via Natural or Artificial Opening
0UT08ZZ	Resection of Right Ovary, Via Natural or Artificial Opening Endoscopic
0UT0FZZ	Resection of Right Ovary, Via Natural or Artificial Opening With Percutaneous Endoscopic Assistance
0UT10ZZ	Resection of Left Ovary, Open Approach
0UT14ZZ	Resection of Left Ovary, Percutaneous Endoscopic Approach
0UT17ZZ	Resection of Left Ovary, Via Natural or Artificial Opening
0UT18ZZ	Resection of Left Ovary, Via Natural or Artificial Opening Endoscopic
0UT1FZZ	Resection of Left Ovary, Via Natural or Artificial Opening With Percutaneous Endoscopic Assistance
0UT20ZZ	Resection of Bilateral Ovaries, Open Approach
0UT24ZZ	Resection of Bilateral Ovaries, Percutaneous Endoscopic Approach
0UT27ZZ	Resection of Bilateral Ovaries, Via Natural or Artificial Opening
0UT28ZZ	Resection of Bilateral Ovaries, Via Natural or Artificial Opening Endoscopic
0UT2FZZ	Resection of Bilateral Ovaries, Via Natural or Artificial Opening With Percutaneous Endoscopic Assistance

11. Pancreas Surgery: Algorithm and Codes

A person with pancreatic cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

1. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of the pancreas, C25.* (i.e., C25.0, C25.1, C25.2, C25.3, C25.4, C25.7, C25.8, C25.9) (Exhibit 11-1),

   and

2. The person has any CPT procedure code in Exhibit 11-2 associated with (i.e., on the same billing line) a primary diagnosis of C25.*,

   and

3. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

4. The person had a primary ICD-10 CM diagnosis of C25.*,

   and

5. The person has any ICD-10 PCS procedure code for excision or resection of pancreas (Exhibit 11-3). The procedure must be associated with a primary diagnosis of C25.*,

   and

6. The discharge date is before the sample date.

Exhibit 11-1. Pancreatic Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C25.0	Malignant neoplasm of head of pancreas
C25.1	Malignant neoplasm of body of pancreas
C25.2	Malignant neoplasm of tail of pancreas
C25.3	Malignant neoplasm of pancreatic duct
C25.4	Malignant neoplasm of endocrine pancreas
C25.7	Malignant neoplasm of other parts of pancreas
C25.8	Malignant neoplasm of overlapping sites of pancreas
C25.9	Malignant neoplasm of pancreas, unspecified

Exhibit 11-2. Pancreatic Cancer Surgery: CPT Codes and Descriptions

CPT Code*	Description
48120	Excision of lesion of pancreas (e.g., cyst, adenoma)
48140	Pancreatectomy, distal subtotal, with or without splenectomy; without pancreaticojejunostomy
48145	Pancreatectomy, distal subtotal, with or without splenectomy; with pancreaticojejunostomy
48146	Pancreatectomy, distal, near-total with preservation of duodenum (Child-type procedure)
48150	Pancreatectomy, proximal subtotal with total duodenectomy, partial gastrectomy, choledochoenterostomy and gastrojejunostomy (Whipple-type procedure); with pancreatojejunostomy
48152	Pancreatectomy, proximal subtotal with total duodenectomy, partial gastrectomy, choledochoenterostomy and gastrojejunostomy (Whipple-type procedure); without pancreatojejunostomy
48153	Pancreatectomy, proximal subtotal with near-total duodenectomy, choledochoenterostomy and duodenojejunostomy (pylorus-sparing, Whipple-type procedure); with pancreatojejunostomy
48154	Pancreatectomy, proximal subtotal with near-total duodenectomy, choledochoenterostomy and duodenojejunostomy (pylorus-sparing, Whipple-type procedure); without pancreatojejunostomy
48155	Pancreatectomy, total
48160	Pancreatectomy, total or subtotal, with autologous transplantation of pancreas or pancreatic islet cells

*All CPT coded were added after the second field test and have not been field tested.

Exhibit 11-3. Pancreatic Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
0FBG0ZZ	Excision of Pancreas, Open Approach
0FBG4ZZ	Excision of Pancreas, Percutaneous Endoscopic Approach
0FTG0ZZ	Resection of Pancreas, Open Approach
0FTG4ZZ	Resection of Pancreas, Percutaneous Endoscopic Approach

12. Prostate Surgery: Algorithm and Codes

A person with prostate cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

1. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of the prostate, C61 (Exhibit 12-1),

   and

2. The person has any CPT procedure code in Exhibit 12-2 associated with (i.e., on the same billing line) a primary diagnosis of C61,

   and

3. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

1. The person had a primary ICD-10 CM diagnosis of C61 (Exhibit 12-1),

   and

2. The person has any ICD-10 PCS procedure code for excision or resection of prostate (Exhibit 12-3). The procedure must be associated with a primary diagnosis of C61,

   and

3. The discharge date is before the sample date.

Exhibit 12-1. Prostate Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C61	Malignant neoplasm of prostate

Exhibit 12-2. Prostate Cancer Surgery: CPT Codes and Descriptions

CPT Code	Description
51597*	Pelvic exenteration, complete, for vesical, prostatic or urethral malignancy, with removal of bladder and ureteral transplantations, with or without hysterectomy and/or abdominoperineal resection of rectum and colon and colostomy, or any combination thereof
52402*	Cystourethroscopy with transurethral resection or incision of ejaculatory ducts
52601*	Transurethral electrosurgical resection of prostate, including control of postoperative bleeding, complete (vasectomy, meatotomy, cystourethroscopy, urethral calibration and/or dilation, and internal

CPT Code	Description
	urethrotomy are included)
52630*	Transurethral resection; residual or regrowth of obstructive prostate tissue including control of postoperative bleeding, complete (vasectomy, meatotomy, cystourethroscopy, urethral calibration and/or dilation, and internal urethrotomy are included)
55801*	Prostatectomy, perineal, subtotal (including control of postoperative bleeding, vasectomy, meatotomy, urethral calibration and/or dilation, and internal urethrotomy)
55810*	Prostatectomy, perineal radical;
55812*	Prostatectomy, perineal radical; with lymph node biopsy(s) (limited pelvic lymphadenectomy)
55815*	Prostatectomy, perineal radical; with bilateral pelvic lymphadenectomy, including external iliac, hypogastric and obturator nodes
55821*	Prostatectomy (including control of postoperative bleeding, vasectomy, meatotomy, urethral calibration and/or dilation, and internal urethrotomy); suprapubic, subtotal, 1 or 2 stages
55831*	Prostatectomy (including control of postoperative bleeding, vasectomy, meatotomy, urethral calibration and/or dilation, and internal urethrotomy); retropubic, subtotal
55840	Prostatectomy, retropubic radical, with or without nerve sparing;
55842	Prostatectomy, retropubic radical, with or without nerve sparing; with lymph node biopsy(s) (limited pelvic lymphadenectomy)
55845	Prostatectomy, retropubic radical, with or without nerve sparing; with bilateral pelvic lymphadenectomy, including external iliac, hypogastric, and obturator nodes
55866	Laparoscopy, surgical prostatectomy, retropubic radical, including nerve sparing, includes robotic assistance, when performed

*CPT code was added after the second field test and has not been field tested.

Exhibit 12-3. Prostate Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
0VB00ZZ	Excision of Prostate, Open Approach
0VB04ZZ	Excision of Prostate, Percutaneous Endoscopic Approach

ICD-10 PCS Procedure Code	Description
0VB08ZZ	Excision of Prostate, Via Natural or Artificial Opening Endoscopic
0VT00ZZ	Resection of Prostate, Open Approach
0VT04ZZ	Resection of Prostate, Percutaneous Endoscopic Approach
0VT08ZZ	Resection of Prostate, Via Natural or Artificial Opening Endoscopic

13. Rectum Surgery: Algorithm and Codes

A person with rectal cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

1. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of rectosigmoid junction, C19, or rectum, C20, or Carcinoma *in situ* of rectosigmoid junction, D01.1, or rectum, D01.2 (Exhibit 13-1),

   and

2. The person has any CPT procedure code in Exhibit 13-2 associated with (i.e., on the same billing line) a primary diagnosis of C19, C20, D01.1 or D01.2 (Exhibit 13-1),

   and

3. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

1. The person had a primary ICD-10 CM diagnosis of C19, C20, D01.1 or D01.2 (Exhibit 13-1),

   and

2. The person has any ICD-10 PCS procedure code for excision or resection of rectum (Exhibit 13-3). The procedure must be associated with a primary diagnosis of C19, C20, D01.1 or D01.2,

   and

3. The discharge date is before the sample date.

Exhibit 13-1. Rectal Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C19	Malignant neoplasm of rectosigmoid junction
C20	Malignant neoplasm of rectum
D01.1	Carcinoma in situ of rectosigmoid junction
D01.2	Carcinoma in situ of rectum

Exhibit 13-2. Rectal Cancer Surgery: CPT Codes and Descriptions

CPT Code	Description
45110	Proctectomy; complete, combined abdominoperineal, with colostomy

CPT Code	Description
45111	Proctectomy; partial resection of rectum, transabdominal approach
45112	Proctectomy, combined abdominoperineal, pull-through procedure (e.g., colo-anal anastomosis)
45114	Proctectomy, partial, with anastomosis; abdominal and transsacral approach
45116	Proctectomy, partial, with anastomosis; transsacral approach only (Kraske type)
45119	Proctectomy, combined abdominoperineal pull-through procedure (e.g., colo-anal anastomosis), with creation of colonic reservoir (e.g., J-pouch), with diverting enterostomy when performed
45123	Proctectomy, partial, without anastomosis, perineal approach
45160*	Excision of rectal tumor by proctotomy, transsacral or transcoccygeal approach
45171*	Excision of rectal tumor, transanal approach; not including muscularis propria (i.e., partial thickness)
45172*	Excision of rectal tumor, transanal approach; including muscularis propria (i.e., full thickness)
45308*	Proctosigmoidoscopy, rigid; with removal of single tumor, polyp, or other lesion by hot biopsy forceps or bipolar cautery
45309*	Proctosigmoidoscopy, rigid; with removal of single tumor, polyp, or other lesion by snare technique
45315*	Proctosigmoidoscopy, rigid; with removal of multiple tumors, polyps, or other lesions by hot biopsy forceps, bipolar cautery or snare technique
45395	Laparoscopy, surgical; proctectomy, complete, combined abdominoperineal, with colostomy
45397	Laparoscopy, surgical; proctectomy, combined abdominoperineal pull-through procedure (e.g., colo-anal anastomosis), with creation of colonic reservoir (e.g., J-pouch), with diverting enterostomy, when performed

*CPT code was added after the second field test and has not been field tested.

Exhibit 13-3. Rectal Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
0DBP0ZZ	Excision of Rectum, Open Approach
0DBP4ZZ	Excision of Rectum, Percutaneous Endoscopic Approach
0DBP7ZZ	Excision of Rectum, Via Natural or Artificial Opening
0DBP8ZZ	Excision of Rectum, Via Natural or Artificial Opening Endoscopic
0DTP0ZZ	Resection of Rectum, Open Approach
0DTP4ZZ	Resection of Rectum, Percutaneous Endoscopic Approach
0DTP7ZZ	Resection of Rectum, Via Natural or Artificial Opening
0DTP8ZZ	Resection of Rectum, Via Natural or Artificial Opening Endoscopic

14. Stomach Surgery: Algorithm and Codes

A person with stomach cancer would be eligible to receive the Cancer Surgery Survey if the following criteria were met in the 6 months prior to being sampled:

Source of Billing Data: Professional and Outpatient Facility

1. The person had a primary ICD-10 CM diagnosis of malignant neoplasm of the stomach, C16.* (i.e., C16.0, C16.1, C16.2, C16.3, C16.4, C16.5, C16.6, C16.8, C16.9) or carcinoma in situ of stomach, D00.2 (Exhibit 14-1),

   and

2. The person has any CPT procedure code in Exhibit 14-2 associated with (i.e., on the same billing line) a primary diagnosis of C16.* or D00.2 (Exhibit 14-1),

   and

3. The date of discharge is before the sample date.

Source of Billing Data: Inpatient Facility

1. The person had a primary ICD-10 CM diagnosis of C16.* or D00.2 (Exhibit 14-1),

   and

2. The person has any ICD-10 PCS procedure code for excision or resection of esophagogastric junction or stomach (Exhibit 14-3). The procedure must be associated with a primary diagnosis of C16.* or D00.2,

   and

3. The discharge date is before the sample date.

Exhibit 14-1. Stomach Cancer Surgery: Diagnosis Codes and Descriptions

ICD-10 CM Diagnosis Code	Description
C16.0	Malignant neoplasm of cardia
C16.1	Malignant neoplasm of fundus of stomach
C16.2	Malignant neoplasm of body of stomach
C16.3	Malignant neoplasm of pyloric antrum
C16.4	Malignant neoplasm of pylorus
C16.5	Malignant neoplasm of lesser curvature of stomach, unspecified
C16.6	Malignant neoplasm of greater curvature of stomach, unspecified
C16.8	Malignant neoplasm of overlapping sites of stomach

ICD-10 CM Diagnosis Code	Description
C16.9	Malignant neoplasm of stomach, unspecified
D00.2	Carcinoma in situ of stomach

Exhibit 14-2. Stomach Cancer Surgery: CPT Codes and Descriptions

CPT Code*	Description
43611	Excision, local; malignant tumor of stomach
43620	Gastrectomy, total; with esophagoenterostomy
43621	Gastrectomy, total; with Roux-en-Y reconstruction
43631	Gastrectomy, partial, distal; with gastroduodenostomy
43632	Gastrectomy, partial, distal; with gastrojejunostomy
43633	Gastrectomy, partial, distal; with Roux-en-Y reconstruction
43634	Gastrectomy, partial, distal; with formation of intestinal pouch

*All CPT codes were added after the second field test and have not been field tested.

Exhibit 14-3. Stomach Cancer Surgery: PCS Codes and Descriptions

ICD-10 PCS Procedure Code	Description
0DB40ZZ	Excision of Esophagogastric Junction, Open Approach
0DB44ZZ	Excision of Esophagogastric Junction, Percutaneous Endoscopic Approach
0DB47ZZ	Excision of Esophagogastric Junction, Via Natural or Artificial Opening
0DB48ZZ	Excision of Esophagogastric Junction, Via Natural or Artificial Opening Endoscopic
0DB60ZZ	Excision of Stomach, Open Approach
0DB64ZZ	Excision of Stomach, Percutaneous Endoscopic Approach
0DB67ZZ	Excision of Stomach, Via Natural or Artificial Opening
0DB68ZZ	Excision of Stomach, Via Natural or Artificial Opening Endoscopic

ICD-10 PCS Procedure Code	Description
0DB70ZZ	Excision of Stomach, Pylorus, Open Approach
0DB77ZZ	Excision of Stomach, Pylorus, Via Natural or Artificial Opening
0DB78ZZ	Excision of Stomach, Pylorus, Via Natural or Artificial Opening Endoscopic
0DT40ZZ	Resection of Esophagogastric Junction, Open Approach
0DT44ZZ	Resection of Esophagogastric Junction, Percutaneous Endoscopic Approach
0DT60ZZ	Resection of Stomach, Open Approach
0DT64ZZ	Resection of Stomach, Percutaneous Endoscopic Approach
0DT70ZZ	Resection of Stomach, Pylorus, Open Approach
0DT74ZZ	Resection of Stomach, Pylorus, Percutaneous Endoscopic Approach